2022–2023 CATALOG

GRADUATE COLLEGE

B

BOISE STATE UNIVERSITY

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Policy Statement Concerning Catalog Contents

The purpose of the Boise State Catalog is to provide current, articulate and accurate information about Boise State University for guidance of prospective students, for faculty and administrative officers, for students currently enrolled, and for other education or allied agencies.

Catalogs, bulletins, course and fee schedules, etc., are not to be considered as binding contracts between Boise State University and students. The university and its divisions reserve the right at any time, without advance notice, to: (a) withdraw or cancel classes, courses, and programs; (b) change fee schedules; (c) change the academic calendar; (d) change admission and registration requirements; (e) change the regulations and requirements governing instruction in, and graduation from, the university and its various divisions; and (f) change any other regulations affecting students. Changes shall go into force whenever the proper authorities so determine, and shall apply not only to prospective students but also to those who are degree-seeking at the time in the university. When economic and other conditions permit, the university tries to provide advance notice of such changes. In particular, when an instructional program is to be withdrawn, the university will make every reasonable effort to ensure that students who are within two years of completing the graduation requirements, and who are making normal progress toward the completion of those requirements, will have the opportunity to complete the program, which is to be withdrawn.

It is the policy of Boise State University to provide equal educational and employment opportunities, services, and benefits to students and employees without regard to race, color, national origin, sex, creed, age or handicap in accordance with Title VII of the Civil Rights Act of 1964, Title IX of the Educational Amendments of 1972. Sections 799A and 845 of the Public Health Act, and Sections 503 and 504 of the Rehabilitation Act of 1973, where applicable, as enforced by the U.S. Department of Health, Education, and Welfare.

NOTE: The courses contained in this catalog do not preclude or limit the university in its offerings for any semester or session nor do they restrict the university to the time block (semester) represented by the approved academic calendar.

Boise State University attempts to respond to the educational needs and wants of any and all students when expressed. Requests for courses to be offered whenever they are desired will be favorably received providing that a minimum of 12 qualified students enrolls in the class and a competent faculty member is available to teach the course.

2022-2023 Academic Calendar

SUMMER SESSION 2022

Deadlines by Session—Summer 2022								
Session	Fee Payment Deadline	Start Date[1]	Last Date to Register or Waitlist Without Permission Number	Drop Fee Begins	Last Date to Register or Drop without a W. Refund[2]	Last Date to Drop or Completely Withdraw with a W. No Refund	Last Date of Course Instruction	Grades Due[3]
1st 3-week	May 7	May 9	May 9	May 13	May 10	May 20	May 29	May 31
2nd 3-week	July 23	July 25	July 25	July 29	July 26	August 5	August 14	August 16
1st 5-week	May 28	May 31	June 1	June 4	June 2	June 22	July 3	July 5
2nd 5-week	July 2	July 5	July 6	July 9	July 7	July 27	August 7	August 9
1st 7-week	May 7	May 9	May 11	May 13	May 12	June 8	June 26	June 28
2nd 7-week	June 25	June 27	June 29	July 1	June 30	July 27	August 14	August 16
10-week	May 28	May 31	June 2	June 5	June 8	July 15	August 7	August 9
14-week	May 7	May 9	May 13	May 15	May 19	July 12	August 14	August 16

1. Complete withdrawals on or after this date are subject to a nonrefundable $40.00 processing fee.
2. Last date to add with permission number, last date to drop or completely withdraw without a W and receive a refund (less a nonrefundable $40.00 processing fee), last date to change from credit-to-audit or audit-to-credit.
3. Grades will not be considered official until the end-of-term processing has been completed.

Wednesday, December 15 (2021) .... Nonresident Application and Scholarship Priority Deadline. In order to be considered for automatic scholarships, all admission materials for nonresident new and transfer students must be received in Admissions.

Tuesday, February 15 .... Resident Application and Scholarship Priority Deadline. In order to be considered for automatic scholarships, all admission materials for Idaho new and transfer students must be received in Admissions.

Tuesday, February 15 .... Summer 2022 on-campus housing application available at noon.

Tuesday, February 22 .... Registration begins for Summer 2022.

Tuesday, March 1 .... Last day to submit *Application for Admission to Candidacy* form to the Graduate College for graduate degrees and certificates to be awarded August 2022.

Friday, March 4 .... Recommended last day to submit *2021-2022 Free Application for Federal Student Aid* (FAFSA) for financial aid to be ready for Summer 2022 fee payment deadline.

Sunday, May 1 .... Deadline for first-time, degree-seeking, domestic undergraduate students who plan to enroll to submit online *Intent to Enroll* form and accompanying $100.00 enrollment confirmation.

Sunday, May 1 .... Standard application date for undergraduate, degree-seeking applicants to have all admission materials received by Admissions. Applicants who miss this application date will be considered for degree-seeking status on a space available basis. Students who are not eligible for degree-seeking admission may be considered for nondegree-seeking status and are ineligible for financial aid.

Friday, May 27 .... Deadline to apply for graduation for graduate and undergraduate degrees and certificates to be awarded in August 2022. Students apply for graduation on myBoiseState. Late applications will be accepted but a late fee will be assessed.

Monday, May 30 .... Memorial Day (No classes. University offices closed.)

Thursday, June 9 .... Summer financial aid Pell recalculation date. Pell Grant eligibility determined by number of credits registered on this date.

Saturday, June 11 .... Last day for students to work using 2021-2022 work-study awards.

Monday, June 20 .... Juneteenth observed (No classes. University Offices closed.)

Friday, June 24 .... Recommended last day for final oral dissertation, thesis, or project defense for graduate degrees to be awarded in August 2022.

Wednesday, June 29 .... Last day to add graduate assessment (master's preliminary examination, doctoral preliminary examination, thesis proposal, dissertation proposal, master's comprehensive examination, doctoral comprehensive examination), directed research, independent study, internship, practicum, or reading and conference.

Wednesday, June 29 .... Last day to add undergraduate independent study and internship.

Thursday, June 30 .... Last day to submit *2021-2022 Free Application for Federal Student Aid* (FAFSA) to receive financial aid for Summer 2022.

Monday, July 4 .... Independence Day (No classes. University offices closed.)

Friday, July 8 .... Last day for students who received a thesis or dissertation enrollment waiver to submit final version of thesis or dissertation to the Graduate College.

Friday, July 8 .... Last day to submit advisor-approved version of dissertation or thesis with signed *Final Reading Approval, Access Agreement for a Thesis or Dissertation or Embargo Request for a Thesis or Dissertation*, and *Thesis/ Dissertation Checklist* to the Graduate College for graduate degrees to be awarded in August 2022.

Friday, August 5 .... Last day to submit final copies of dissertation or thesis to the Graduate College for graduate degrees to be awarded in August 2022.

Friday, August 12 .... Last day to submit an advisor-approved copy of thesis or dissertation, along with signed *Final Reading Approval, Access Agreement for a Thesis or Dissertation*, and *Thesis/Dissertation Checklist* forms, to the Graduate College to receive a thesis or dissertation enrollment waiver for the subsequent semester.

Tuesday, August 16 .... Grade reports due on myBoiseState.

FALL SEMESTER 2022

Deadlines by Session—Fall 2022								
Session[1]	Tuition and Fee Payment Deadline	Start Date[2]	Last Date to Register or Waitlist Without Permission Number	Drop Fee Begins	Last Date to Register or Drop without a W. Refund[3]	Last Date to Drop or Completely Withdraw with a W. No Refund	Last Date of Course Instruction	Grades Due[4]
Regular	August 20	August 22	August 26	August 29	September 2	October 28	December 9 Final Exams December 12-16	December 20
1st 5-week	August 20	August 22	August 23	August 26	August 24	September 13	September 23	September 27
2nd 5-week	September 24	September 26	September 27	September 30	September 28	October 18	October 28	November 1
3rd 5-week	October 29	October 31	November 1	November 4	November 2	November 28	December 9	December 20
1st 7-week	August 20	August 22	August 24	August 26	August 25	September 21	October 7	October 11
2nd 7-week	October 15	October 17	October 19	October 21	October 20	November 16	December 9	December 20
1st 10-week	August 20	August 22	August 24	August 27	August 30	October 6	October 28	November 1
2nd 10-week	September 24	September 26	September 28	October 1	October 4	November 10	December 9	December 20

1. Special Session 1 (SP1) and Special Session 2 (SP2) deadlines are available on the Registrar's Office website.
2. Complete withdrawals on or after this date are subject to a nonrefundable $40.00 processing fee.
3. Last date to add with permission number, last date to drop or completely withdraw without a W and receive a refund (less a nonrefundable $40.00 processing fee), last date to change from credit-to-audit or audit-to-credit.
4. Grades will not be considered official until the end-of-term processing has been completed.

Friday, October 1 (2021) .... The *2022-2023 Free Application for Federal Student Aid* (FAFSA) can be submitted beginning today.

Wednesday, December 15 (2021) .... Nonresident Application and Scholarship Priority Deadline. In order to be considered for automatic scholarships, all admission materials for nonresident new and transfer students must be received in Admissions.

Saturday, January 15 .... Recommended fall priority application deadline for graduate degree-seeking applicants to have all admission materials received by the Graduate College. In order to receive full consideration for fall admission, all applications must be complete and submitted to the Graduate College prior to the fall application deadline established by the individual graduate program.

Tuesday, February 15 .... 2022-2023 FAFSA filing priority date for continuing students, new freshmen, and transfer students. Eligible students must apply by this date to maximize the amount of aid you receive. The priority filing date is not a deadline, so you may still submit the FAFSA even if the priority filing date has passed.

Tuesday, February 15 .... Idaho Resident Application and Scholarship Priority Deadline. In order to be considered for automatic scholarships for the 2022-2023 school year, all admission materials for Idaho resident new and transfer students must be received in Admissions. Last day for the *Boise State Scholarship Application* (online) to be submitted to the Financial Aid Office. The Boise State Scholarship website contains a list of additional scholarships that require a separate application.

Tuesday, March 8 .... 2022-2023 academic year on-campus sophomore and above housing application available at noon for residence halls.

Tuesday, March 15 .... 2022-2023 academic year on-campus first-year housing application available at noon for residence halls.

Monday, March 28 .... Registration for continuing students begins for Fall 2022 (by appointment).

Monday, April 4 .... Last day to submit *Application for Admission to Candidacy* form to the Graduate College for graduate degrees and certificates to be awarded in December 2022.

Sunday, May 1 .... Deadline for first-time, degree-seeking, domestic undergraduate students who plan to enroll to submit online *Intent to Enroll* form and accompanying $100.00 enrollment confirmation.

Sunday, May 1 .... Standard application deadline for undergraduate, degree-seeking applicants to have all admission materials received by Admissions. Applicants who miss this application deadline will be considered for degree-seeking status on a space-available basis. Students who are not eligible for degree-seeking admission may be considered for nondegree-seeking status and are ineligible for financial aid.

Sunday, May 15 .... Priority date for international student application materials to be received by International Admissions for fall

semester consideration.

Friday, July 1 .... First day students can begin using 2022-2023 work-study awards.

Monday, July 25 .... First installment of payment plan due for residence halls (on-campus housing only).

Monday, August 1 .... Recommended last day to submit a Graduate Admission Application to the Graduate College for Fall 2022 admission consideration.

Friday, August 5 .... Recommended date to finalize student course schedules for Fall 2022 for financial aid purposes.

Monday, August 15 .... University, college, and department activities for faculty begin this week.

Tuesday, August 16 .... Registration for Non-Degree and Open Enrollment begins for Fall 2022

Friday, August 19 .... Convocation

Monday, August 22 .... Course instruction begins.

Friday, August 26 .... Weekend courses begin.

Friday, August 26 .... Last day faculty may submit drops for nonattendance during the first week of the semester to the Registrar's Office.

Friday, August 26 .... Deadline to apply for graduation for graduate and undergraduate degrees and certificates to be awarded in December 2022. Students apply for graduation on myBoiseState. Late applications will be accepted but a late fee will be assessed.

Friday, September 2 .... Last day to submit *Idaho Residency Determination Worksheet* with documentation to Registrar's Office to declare Idaho residency for Fall 2022 consideration.

Friday, September 2 .... Fall financial aid Pell recalculation date. Pell Grant eligibility for financial aid determined by number of credits registered on this date.

Friday, September 2 .... Last day for students living on campus to downgrade residential meal plans.

Friday, September 2 .... Last day to add graduate dissertation, thesis, project, or portfolio credit.

Monday, September 5 .... Labor Day (No classes. University offices closed.)

Wednesday, September 28 .... Last day to add undergraduate internship and independent study.

Wednesday, September 28 .... Last day to add graduate assessment (master's preliminary examination, doctoral preliminary examination, thesis proposal, dissertation proposal, master's comprehensive examination, doctoral comprehensive examination), directed research, independent study, internship/practicum, or reading and conference.

Monday, October 10 .... Columbus Day. Boise State celebrates Indigenous Peoples Day! (Classes in session. University offices open.)

Friday, October 21 .... Recommended last day for final oral dissertation, thesis, or project defense for graduate degrees to be awarded in December 2022.

Wednesday, November 2 .... Second Pell recalculation date for students enrolled in sessions with start dates on/after September 3, 2022

Friday, November 4 .... Last day to submit advisor-approved version of dissertation or thesis with signed *Final Reading Approval, Access Agreement for a Thesis or Dissertation or Embargo Request for a Thesis or Dissertation*, and *Thesis/ Dissertation Checklist* to the Graduate College for graduate degrees to be awarded in December 2022.

Friday, November 4 .... Last day for students who received a thesis or dissertation enrollment waiver to submit final version of thesis or dissertation to the Graduate College.

Friday, November 11 .... Veterans Day (Classes in session. University offices open.)

Monday–Sunday, November 21–27 .... Thanksgiving holiday (No classes. University offices closed November 24-25.)

Friday, December 9 .... Last day to submit final version of dissertation or thesis to the Graduate College for graduate degrees to be awarded in December 2022.

Friday, December 9 .... Course instruction ends.

Sunday, December 11 .... Weekend courses end.

Monday–Friday, December 12–16 .... Final semester examinations for the Regular session. Exam schedule listed on Registrar's Office website.

Friday, December 16 .... Last day to submit an advisor-approved copy of thesis or dissertation, along with signed *Final Reading Approval, Access Agreement for a Thesis or Dissertation or Embargo Request for a Thesis or Dissertation*, and *Thesis/Dissertation Checklist* forms, to the Graduate College to receive a thesis or dissertation enrollment waiver for the subsequent semester.

Saturday, December 17 .... Commencement

Tuesday, December 20 .... Grade reports due on myBoiseState.

Friday–Friday, December 23–30 .... Holiday Break (University offices closed.)

Monday, January 2 .... New Year's Day observed (University offices closed.)

SPRING SEMESTER 2023

Deadlines by Session—Spring 2023

Session[1]	Tuition and Fee Payment Deadline	Start Date[2]	Last Date to Register or Waitlist Without Permission Number	Drop Fee Begins	Last Date to Register or Drop without a W. Refund[3]	Last Date to Drop or Completely Withdraw with a W. No Refund	Last Date of Course Instruction	Grades Due[4]
Regular	January 7	January 9	January 13	January 15	January 23	March 17	April 28 Final Exams May 1- 5	May 9
1st 5-week	January 7	January 9	January 10	January 13	January 11	January 31	February 10	February 14
2nd 5-week	February 11	February 13	February 14	February 17	February 15	March 7	March 17	March 21
3rd 5-week	March 25	March 27	March 28	March 31	March 29	April 18	April 28	May 9
1st 7-week	January 7	January 9	January 11	January 13	January 12	February 8	February 24	February 28
2nd 7-week	March 4	March 6	March 8	March 10	March 9	April 5	April 28	May 9
1st 10-week	January 7	January 9	January 11	January 14	January 18	February 23	March 17	March 21
2nd 10-week	February 11	February 13	February 15	February 18	February 22	March 30	April 28	May 9

1. Special Session 1 (SP1) and Special Session 2 (SP2) deadlines are available on the Registrar's Office website.
2. Complete withdrawals on or after this date are subject to a nonrefundable $40.00 processing fee.
3. Last date to add with permission number, last date to drop or completely withdraw without a W and receive a refund (less a nonrefundable $40.00 processing fee), last date to change from credit-to-audit or audit-to-credit.
4. Grades will not be considered official until the end-of-term processing has been completed.

Thursday, September 15 (2022) .... Recommended spring priority application deadline for graduate degree-seeking applicants to have all admission materials received by the Graduate College. In order to receive full consideration for spring admission, all applications must be complete and submitted to the Graduate College prior to the spring application deadline established by the individual graduate program.

Saturday, October 1 (2022) .... Recommended last day to submit *2022-2023 Free Application for Federal Student Aid* (FAFSA) for financial aid to be ready for Spring 2023 fee payment deadline.

Saturday, October 1 (2022) .... Spring scholarship deadline. Last day to have all admission materials received in Admissions for new freshman and transfer students who want to be considered for scholarships for Spring 2023. The 2022-2023 FAFSA must be filed by this date to be considered for need-based scholarships.

Monday, October 3 (2022) .... Spring 2023 on-campus housing application available at noon for residence halls.

Saturday, October 15 (2022) .... Priority date for international student application materials to be received by International Admissions for spring semester consideration.

Monday, October 31 (2022) .... Registration for continuing students begins for Spring 2023 (by appointment).

Monday, November 7 (2022) .... Last day to submit *Application for Admission to Candidacy* form to the Graduate College for graduate degrees and certificates to be awarded in May 2023.

Thursday, December 1 (2022) .... Standard application deadline for undergraduate, degree-seeking applicants to have all admission materials received by Admissions. Applicants who miss this application deadline will be considered for degree-seeking status on a space-available basis. Students who are not eligible for degree-seeking admission may be considered for nondegree-seeking status and are ineligible for financial aid.

Thursday, December 1 (2022) .... Deadline for first-time, degree-seeking, domestic undergraduate students who plan to enroll to submit online *Intent to Enroll* form and accompanying $100.00 enrollment confirmation.

Monday, December 12 (2022) .... Registration for Non-Degree and Open Enrollment begins.

Monday, December 26 (2022) .... Recommended date to finalize student course schedules for Spring 2023 for financial aid purposes.

Monday, December 26 (2022) .... Recommended last day to submit a *Graduate Admission Application* to the Graduate College for Spring 2023 admission consideration.

Tuesday, January 3 .... University, college, and department activities for faculty begin this week.

Monday, January 9 .... Course instruction begins.

Friday, January 13 .... Weekend courses begin.

Friday, January 13 .... Last day faculty may submit drops for nonattendance during the first week of the semester to the Registrar's Office.

Friday, January 13 .... Deadline to apply for graduation for graduate and undergraduate degrees and certificates to be awarded in May 2023. Students apply for graduation on myBoiseState. Late applications will be accepted but a late fee will be assessed.

Monday, January 16 .... Dr. Martin Luther King, Jr./Idaho Human Rights Day (No classes. University offices closed.)

Monday, January 23 .... Last day for students living on campus to downgrade residential meal plans.

2022-2023 ACADEMIC CALENDAR

Monday, January 23 .... Spring financial aid Pell recalculation date. Pell Grant eligibility determined by number of credits registered on this date.

Monday, January 23 .... Last day to add graduate dissertation, thesis, project, or portfolio credit.

Monday, January 23 .... Last day to submit Idaho Residency Determination Worksheet with documentation to Registrar's Office to declare Idaho residency for Spring 2023 consideration.

Friday, February 17 .... Last day to add undergraduate internship and independent study.

Friday, February 17 .... Last day to add graduate assessment (master's preliminary examination, doctoral preliminary examination, thesis proposal, dissertation proposal, master's comprehensive examination, doctoral comprehensive examination), directed research, independent study, internship/practicum, or reading and conference.

Monday, February 20 .... Presidents' Day (No classes. University offices closed.)

Friday, March 10 .... Recommended last day for final oral dissertation, thesis, or project defense for graduate degrees to be awarded in May 2023.

Friday, March 17 .... Last day for students who received a thesis or dissertation enrollment waiver to submit final version of thesis or dissertation to the Graduate College.

Friday, March 17 .... Last day to submit advisor-approved version of dissertation or thesis with signed *Final Reading Approval, Access Agreement for a Thesis or Dissertation or Embargo Request for a Thesis or Dissertation*, and *Thesis/ Dissertation Checklist* to the Graduate College for graduate degrees to be awarded in May 2023.

Monday–Friday, March 20-24 .... Spring Break (No Classes. University offices open March 20-24.)

Wednesday, March 29 .... Second Pell recalculation date for students enrolled in sessions with start dates on/after January 24

Friday, April 28 .... Course instruction ends.

Friday, April 28 .... Last day to submit final version of dissertation or thesis to the Graduate College for graduate degrees to be awarded in May 2023.

Sunday, April 30 .... Weekend courses end.

Monday–Friday, May 1–5 .... Final semester examinations for the Regular session. Exam schedule listed on the Registrar's Office website.

Friday, May 5 .... Last day to submit an advisor-approved copy of thesis or dissertation, along with signed *Final Reading Approval, Access Agreement for a Thesis or Dissertation or Embargo Request for a Thesis or Dissertation*, and *Thesis/Dissertation Checklist* forms, to the Graduate College to receive a thesis or dissertation enrollment waiver for the subsequent semester.

Saturday, May 6 .... Commencement

Tuesday, May 9 .... Grade reports due on myBoiseState.

An Introduction to Boise State University

The City of Boise

Located along the Boise River in the shadows of the beautiful Rocky Mountain foothills, Boise State is a vital part of Idaho's capital city, a hub of business, the arts, health care, industry, technology and the power and politics of the Idaho Statehouse.

Campus is a 10-minute stroll from downtown Boise where businesses welcome the Bronco community with coffeehouses, restaurants and dance clubs – all part of the city's thriving cultural and entertainment scene. Even with big city amenities, Boise offers a safe, small-town feel and has made numerous Top 10 lists for business, lifestyle and outdoor recreation.

The City of Trees offers unique attractions, including the Basque Museum and Cultural Center, Idaho Anne Frank Human Rights Memorial, the Idaho Shakespeare Festival, the World Center for Birds of Prey and Boise Whitewater Park on the Boise River.

The Boise Greenbelt, a more than 20-mile network of city parks and riverside paths, skirts the edge of campus. The Bob Gibb Friendship Bridge spans the Boise River, linking Boise State to Julia Davis Park, home of the Boise Art Museum, Idaho State Museum, Idaho Black History Museum and Zoo Boise.

Beyond the city is a land of great variety. To the south are rich farmlands, a rugged, high-mountain desert, North America's tallest sand dunes and the famous Snake River Birds of Prey National Conservation Area. To the north lie forests, whitewater rivers and mountain lakes providing opportunities for fishing, hiking, hunting and kayaking. Bogus Basin ski resort is a mere 16 miles from campus. World-famous Sun Valley is less than three hours away.

Campus entertainment includes Idaho Dance Theatre, Opera Idaho, Ballet Idaho, the Gene Harris Jazz Festival, Boise Philharmonic and a variety of other university and civic performing arts groups. Audiences have enjoyed renowned artists, productions and touring companies in the Morrison Center for the Performing Arts and ExtraMile Arena on campus. In addition, ExtraMile Arena hosts a number of campus and national sporting events.

Mission

Boise State provides an innovative, transformative, and equitable educational environment that prepares students for success and advances Idaho and the world.

Themes

Foster Student Success, Advance Idaho, Strengthen a Culture of Innovation and Global Impact

Vision

To be a premier student-success driven research university innovating for statewide and global impact.

Goals and Strategies

Goal: Improve Educational Access and Student Success

Enhance the comprehensive student experience with a focus on student success and post-graduate outcomes.

Strategies:

1. Create and enact a comprehensive, strategic enrollment and student success plan, including components related to supporting the whole student, recruitment, retention, graduation, and addressing equity gaps.
2. Integrate career education and experiential learning opportunities into the curriculum and the student experience to improve career readiness and post-graduation outcomes.
3. Expand educational access for all Idahoans through improved outreach, communication, financial aid, philanthropy, online resources and education.
4. Cultivate a commitment to high-quality, new and innovative learning experiences in all courses, curricula and co-curricula.

Goal: Innovation for Institutional Impact

Expand and implement leading-edge innovations to provide access to integrated high-quality teaching, service, research and creative activities.

Strategies:

1. Create an enduring culture of innovation.
2. Build scalable university structures and align philanthropic and strategic investments that support innovation.
3. Establish individual and collective opportunity and accountability for innovation.

Goal: Advance Research and Creative Activity

Develop research that positively impacts lives and breaks down traditional barriers so researchers and students can collaborate on big problems.

Strategies:

1. Provide the physical space, policies, information systems, technology, budgetary and human resources to sustain and grow research and creative activities.
2. Develop an integrated, transdisciplinary, and accessible research ecosystem dedicated to student excellence and success.
3. Invest in a Grand Challenges initiative to propel a transdisciplinary model for research and creative activity.

Goal: Foster Thriving Community

Promote and advance a fair, equitable, and accessible environment to enable all members of the campus community to make a living, make a life and make a difference.

Strategies:

1. Advance a learning and working environment dedicated to the flourishing, sense of belonging, and freedom of expression among all students, faculty, staff, alumni, and friends of the university.
2. Create a comprehensive, whole-employee experience that aligns university resources and is designed to enhance employee well-being and career growth at the university.
3. Create a transparent, centralized business operations model that responsibly uses university resources, supports collaboration, and promotes consistency across individual campus units.
4. Foster a sustainable campus that is both environmentally and socially responsible as well as economically feasible.

Goal: Trailblaze Programs and Partnerships

Enhance and foster pathbreaking interdisciplinary programs and activities that transcend traditional fields of study and offer students new opportunities to grow, thrive and contribute to our state and our nation.

Strategies:

1. Leverage existing partnerships and programs and develop new opportunities with Idaho employers and private partnerships to address workforce, research, educational, and service needs.
2. Expand partnerships across Idaho to ensure rural communities have access to high-quality educational programming that fits their needs.
3. Create interdisciplinary structures to facilitate meaningful connections and experiences for students, faculty, and staff.

The University's History

In 1932, the Episcopal Church founded Boise Junior College, the first post-secondary school in Idaho's capital city. When the Episcopal Church discontinued its sponsorship in 1934, Boise Junior College became a nonprofit, private corporation sponsored by the Boise Chamber of Commerce and the community. In 1939, the Idaho Legislature created a junior-college taxing district to fund the quickly growing institution.

By the end of the 1930s, Boise Junior College boasted an enrollment of 600 students. Originally located at St. Margaret's Hall near the present site of St. Luke's Regional Medical Center, the college moved in 1940 to its present location beside the Boise River. In 1965, Boise Junior College became Boise College, a four-year institution. In 1969, the college entered the state system of higher education as Boise State College. The Graduate College opened in 1971 and the creation of new graduate programs in 1974 led to the designation of the institution as Boise State University.

Today, Boise State is the largest institution of higher education in Idaho with more than 28,000 students and 100,000 living alumni. During its history, the university has operated under the leadership of seven presidents: Bishop Middleton Barnwell (1932-1934), Dr. Eugene B. Chaffee (1936-1967), Dr. John B. Barnes (1967-1977), Dr. John H. Keiser (1978-1991), Dr. Charles P. Ruch (1993-2003), Dr. Robert W. Kustra (2003-2018), and Dr. Marlene Tromp (2019-present).

Accreditation

Boise State University is accredited by the Northwest Commission on Colleges and Universities (NWCCU).

Accreditation of an institution of higher education by the Northwest Commission on Colleges and Universities indicates that it meets or exceeds criteria for the assessment of institutional quality evaluated through a peer review process. An accredited college or university is one that has available the necessary resources to achieve its stated purposes through appropriate educational programs, is substantially doing so, and gives reasonable evidence that it will continue to do so in the foreseeable future. Institutional integrity is also addressed through accreditation.

Accreditation by the Northwest Commission on Colleges and Universities is not partial, but applies to the institution as a whole. As such, it is not a guarantee of every course or program offered, or the competence of individual graduates. Rather, it provides reasonable assurance about the quality of opportunities available to students who attend the institution.

Inquiries regarding an institution's accredited status by the Northwest Commission on Colleges and Universities should be directed to the administrative staff of the Office of the Provost. Individuals may also contact: Northwest Commission on Colleges and Universities, 8060 165th Avenue N. E., Suite 200, Redmond, WA 98052, (425) 558-4224, nwccu.org.

Many of Boise State University's academic programs have special accreditation or endorsement from one or more of the following organizations:

- ABET, Inc.
- Accreditation Council for Genetic Counseling
- American Chemical Society
- American Council for Construction Education
- American Health Information Management Association
- Association to Advance Collegiate Schools of Business-International
- Commission on Accreditation of Allied Health Education Programs
- Committee on Accreditation of Athletic Training Education (CAATE)
- Committee on Accreditation for Respiratory Care
- Commission on Collegiate Nursing Education (CCNE)
- Council for Accreditation of Counseling and Related Educational Programs
- Council for Accreditation of Educator Preparation (CAEP)
- Council on Social Work Education
- Joint Review Committee on Education in Radiologic Technology
- National Association of Schools of Art and Design
- National Association of Schools of Music
- National Association of Schools of Public Affairs and Administration
- National Association of Schools of Theater
- National Association of State Directors of Teacher Education and Certification
- National Environmental Health Science and Protection Accreditation Council
- Society for Simulation in Healthcare (SSH)

State Authorization and Online Education Beyond Idaho

Boise State University delivers online education programs and courses throughout the United States and internationally and online offerings continue to expand. Idaho's State Board of Education has approved all programs.

Due in part to the increased popularity of online education, many states have prescribed an "authorization" process for out-of-state institutions delivering online programs to its state residents. Through such proactive processes, states are striving to ensure quality post-secondary education, to preserve the integrity of an academic degree and to instill greater consumer protection for its citizens.

Many states have prescribed an "authorization" process for out-of-state institutions delivering online programs to its state residents. Authorization (sometimes referred to as "registration," "licensure," "approval," etc.) indicates that the institution has met certain minimum standards under the laws and regulations of that state. Authorization does not constitute an endorsement of any institution, course or degree program. Credits earned at an institution may not transfer to all other institutions.

Boise State has taken steps to protect its students and operations through nationwide compliance and currently participates in a voluntary State Authorization Reciprocity Agreement (SARA) encompassing all states except California. Boise State can operate without state authorization in California because it is a public accredited institution. More information about state authorization can be found at boisestate.edu/ecampus-center/state-authorization/. More specific information about program availability can be found at: boisestate.edu/online/.

Professional Licensure Disclosures

States and other government entities have established standards of practice for the occupations or professions they have chosen to regulate, and they provide legal permission to practice those professions only to individuals who meet those standards. This is called professional licensure: professions for which people need to meet certain criteria in order to practice in that field.

If considering an academic program that leads to a professional license or certification in your state, it is highly recommended that you first seek guidance from the appropriate licensing agency in your home state **before** beginning the academic program located outside your state, or upon changing states.

Some online programs may not be available in some states or may not be designed to prepare a student for professional licensure. Please contact the academic department before submitting an application.

Information regarding professional licensure requirements in your state can be found at Boise State's Professional Licensure Disclosures website, at: boisestate.edu/provost-licensure/.

Students and Faculty

Students come to Boise State from every county in Idaho, from nearly every state in the nation, and from numerous foreign countries. The university's urban setting attracts and complements this diverse student body, which includes nontraditional students, as well as those enrolling directly from high school.

At Boise State, students can study public health, raptor research, musical performance, educational technology, hydrologic sciences, civil engineering or close to 200 other subjects. The university offers 12 doctoral degrees, 68 master's degrees, 24 graduate certificates, 103 bachelor's degrees, three associate

degrees, and 88 undergraduate certificates. Students can study abroad in more than 50 countries.

Thanks to Boise State's location in the heart of Idaho's largest and most vibrant city, students can enhance classroom learning and gain work experience by interning with the Idaho Legislature, government agencies, or one of the many private businesses or industries in the area. Students have the opportunity to work with and study under respected scientists, artists, researchers and educators. Faculty are dedicated to excellence on campus, but also assisting business, educational institutions, government agencies and professional groups with programs and research-and-development efforts.

Guided by a strategic plan that emphasizes accessibility, student success, partnerships, community, creativity and research, Boise State supports a thriving culture of innovation across disciplines.

A Tour of the Campus

Boise State University's 216-acre main campus is bordered to the north by the Boise River, to the east by Broadway Avenue, to the west by Capitol Boulevard and to the south by Beacon Street with University Drive as the primary artery.

On campus, the Administration Building contains the offices of student services, including Financial Aid and the Registrar. University Health Services—including all medical, counseling, and wellness—are integrated under one roof in the Norco Nursing and Health Sciences Building. The Advising and Academic Support Center and the Testing Center are located in the Simplot/Micron Advising and Success Hub.

Classes take place in a number of buildings, including the Bronco Gym and Department of Kinesiology Building, Micron Business and Economics Building (which houses a financial trading room and a student commons area), Campus School, Education Building, Charles P. Ruch Engineering Building, Liberal Arts Building, Mathematics Building, Micron Engineering Center, Morrison Civil Engineering Building, and the Multipurpose Classroom Building. The Micron Center for Materials Research building holds a materials science and engineering research wing with state-of-the-art research laboratories and equipment, as well as a second wing of classrooms. The Interactive Learning Center supports the latest technology with 12 general-use classrooms, multimedia labs, and a classroom for research and innovation. It also is home to the Center for Teaching and Learning. The award-winning Center for the Visual Arts offers spaces for numerous artistic disciplines while acting as a striking gateway to campus.

Other notable campus features include the Albertsons Library, home to the MakerLab, as well as the Centennial Amphitheatre—an outdoor venue for lectures, concerts and plays. The Velma V. Morrison Center for the Performing Arts houses the Department of Music, the Department of Theatre, Film, and Creative Writing, a 2,000-seat performance hall, a 200-seat recital hall and a 200-seat theater. The Student Recreation Center houses informal recreation, intramural sports, outdoor programs, fitness opportunities, a wellness center and athletic training facilities. The facility includes a 17,000-square-foot Aquatics Center.

Boise State students also enjoy the Student Union, which provides facilities for social, recreational and cultural activities. In addition to dining areas, the Student Union contains a bowling alley and games center, several lounges, the Boise State Bookstore, the Bronco Shop and Transit Center where patrons can wait for shuttles and transportation.

ExtraMile Arena is Idaho's largest multipurpose arena. When not filled with fans of Bronco basketball or gymnastics, ExtraMile Arena is the site of concerts, professional sporting events and family entertainment. Nearby is Albertsons Stadium, with a seating capacity of 36,387 and the university's iconic blue playing field.

Albertsons Library

Interim Dean: Michelle Armstrong

(208) 426-1204 (phone)

Albertsons Library is a vibrant hub of academic activity in the center of campus, providing access to an extensive array of online journals, databases, newspapers, books, e-books, technology, and resources for research and learning, including numerous discipline-specific and specialty databases, U.S. government documents and maps, for more information, see boisestate.edu/library/.

You have access to all library online resources both on and off campus. If the library does not have what you need, we can borrow it from other libraries through a service called Interlibrary Loan. Albertsons Library offers a host of other materials for checkout including laptops, iPads, cables, adaptors, cameras (video and still) and other audiovisual equipment and technology such as Raspberry PI, Arduinos, vinyl cutters, a button maker, and vacuum formers. If your mobile device battery is running low, the library has an array of charging devices.

Study spaces for individuals and groups are available throughout the library. There's a room dedicated to podcast recording and editing, and a Video Production Studio with video recording and green screen technology. As the largest computer lab on campus with the longest hours, there are over 120 desktop computers (Mac and PC) and a variety of printers, including a plotter printer for printing large scale items such as presentation posters.

In the library's MakerLab, students can use 3D printers, a laser cutter, a CNC milling machine, vinyl cutter, thermoforming and heat tools, sewing machines, and other technology, see boisestate.edu/library-makerlab/. Workshops are offered regularly to teach you how to get started in 3D modeling and more. The MakerLab is a radically inclusive community with a clear pipeline to fabrication resources, entrepreneurial support, and information resources. Users come to the space to collaborate, build, hack, invent, share, make, and do.

Special Collections and Archives (SCA) contains manuscripts, rare books, Basque studies material, and the university archives, see archives.boisestate.edu/. Selected unique resources from these collections are being digitized and made available online. SCA houses the papers of Senator Len B. Jordan, Senator Frank Church, and Interior Secretary/Governor Cecil D. Andrus, and the Cecil D. Andrus and Frank Church rooms. Nearby, the Warren McCain Reading Room contains a growing collection of books and materials about the literature, anthropology and history of the American West and the Westward Movement.

The Scholarly Communications and Data Management (SCDM) unit assists researchers with copyright and other author rights questions, developing research data management plans, publishing their work in an open access format, and managing your research profile. SCDM also manages the university's institutional repository, ScholarWorks, see scholarworks.boisestate.edu/, which houses the university's scholarly output including theses, dissertations, faculty articles, data sets, and much more. To support affordable education, the SCDM unit also leads the university's efforts to adopt low cost alternatives to the traditional course textbook.

Library faculty (librarians) provide assistance and research guidance in person, and online via text, chat and email. Schedule an individual research consultations to help you start a thesis or dissertation, or invite them into the classroom to support class assignments and research. Librarians are subject experts who can help you craft effective research assignments, and they welcome opportunities to help you in your pursuit of a degree.

Technology Resources

Public computers and kiosks are located in most campus locations where students attend class and congregate, and provide access to a wide variety of software on Windows and Mac computers. In addition, laptops, tablets, video cameras, microphones, and more are available for you to check out from Zone locations in the Student Union Building and Interactive Learning Center. These Zone locations also provide free concierge support and assistance for personal computers, hardware, and software. For more information, see boisestate.edu/oit.

Boise State University provides Google Workspace accounts for all students, including BroncoMail Gmail accounts.

As a Boise State student, you will have the opportunity to learn to use computers in ways appropriate to your discipline. For more information about the computer skills required in your discipline, please see the major requirements in Chapter 12—*Academic Programs and Courses* or consult your academic advisor.

Athletics

The purpose of the intercollegiate athletic program at Boise State University is twofold. First, to provide opportunities for a meaningful academic and athletic experience for as many students as possible. Second, to develop and maintain a competitive Division I athletic program that competes on a regional and national basis and strives for excellence in both men's and women's athletics within the bounds of integrity and honesty.

The athletic program is an integral part of the university and its total educational purpose. The objectives of the athletic program are in harmony with the mission and role of the university.

The university adheres to the principles of fair play and amateur athletic competition as defined by the NCAA. The health, safety, and welfare of the student-athlete is the university's top priority. The university strives to ensure that every student-athlete has the opportunity and resources to succeed academically and obtain a degree.

The university competes as a member of the Mountain West Conference (MW) in football, men's and women's basketball, men's and women's golf, men's and women's tennis, men's and women's indoor and outdoor track and field and cross country, women's soccer, softball and women's volleyball. The university competes in the Mountain Rim Gymnastics Conference (MRGC) in women's gymnastics, and also sponsors women's beach volleyball. Students who wish to compete in intercollegiate athletics should contact the assistant coach of the sport for which they wish to participate. If the program does not have an assistant coach, please contact the head coach. A listing of coaches is provided on the athletic department website at broncosports.com/.

The *Equity in Athletics Disclosure Report for Boise State University* is available online at ope.ed.gov/athletics/#/. The report provides participation rates, financial support and other information on men's and women's intercollegiate athletic programs.

Questions About Boise State?
- 1-800-632-6586 (toll-free in Idaho)
- 1-800-824-7017 (toll-free nationwide)

College of Arts and Sciences

Dean: Leslie Durham, PhD

Sr. Associate Dean: Doug Bullock, PhD

Associate Dean: Clyde J. Northrup, PhD

Associate Dean: TBD

Associate Dean: TBD

Education Building, 6th Floor, Room 601
(208) 426-1414 (phone)
(208) 426-3006 (fax)
boisestate.edu/coas (website)

General Information

The College of Arts and Sciences offers graduate programs leading to doctoral and master's degrees and graduate certificates in more than thirty fields.

Across these rich and diverse programs, the college is committed to providing students with an outstanding graduate education. Through classroom experiences; research, performance and exhibition opportunities; community outreach and engagement; and close collaboration with internationally recognized experts in their fields, our students hone their burgeoning abilities to seek knowledge, express ideas, and create work that will impact their academic disciplines, their professions, and the communities with which they are connected for generations to come.

Students receive individual mentorship from a faculty advisor and gain additional guidance and broader perspective through interactions with their supervisory committee. Furthermore, students are enhanced both personally and professionally through immersion in the strong graduate culture of the College of Arts and Sciences and by sharing valuable experiences with their graduate student colleagues.

Detailed information about each program, including its admission requirements and procedures, may be obtained directly from its managing academic department (as listed in this catalog).

College of Business and Economics

Dean: Mark Bannister, PhD
Micron Business and Economics Building, Room 3138

Associate Dean, Faculty and Administrative Affairs: Diane Schooley-Pettis, PhD
Micron Business and Economics Building, Room 3140

Associate Dean, Academic Programs: Kit Scott, PhD
Micron Business and Economics Building, Room 3142

Director, COBE Student Services Center: Matt Steuart
Micron Business and Economics Building, Room 1213
(208) 426-3859 (phone)

Director, COBE Career Services Center: Laura Chiuppi
Micron Business and Economics Building, Room 1123
(208) 426-3862 (phone)

boisestate.edu/cobe (website)

General Information

The College of Business and Economics at Boise State University offers graduate programs in accountancy, accountancy in taxation, business administration, and economics through its six academic departments:

- Accountancy
- Economics
- Finance
- Information Technology and Supply Chain Management
- Management
- Marketing

All of our business and accountancy graduate programs are accredited by AACSB International—The gold standard for business schools. Only one-quarter of the 1,200 institutions in the U.S. that grant business degrees have achieved that level of recognition. Our accountancy programs are independently accredited by AACSB International and one of only about 14% of U.S. accounting programs to achieve this recognition.

College of Education

Dean: James Satterfield Jr., EdD
Education Building, Room 704
(208) 426-1611 (phone)
(208) 426-4408 (fax)
boisestatecoe@boisestate.edu (email)

Assistant Dean for Teacher Education: Sherry Dismuke, EdD
(208) 426-1991 (phone)
cheryledismuke@boisestate.edu (email)

Associate Dean: TBD

boisestate.edu/education (website)

General Information

The College of Education is composed of five academic departments offering three doctoral degrees, two education specialist degrees, 12 masters degrees and 14 graduate certificates.

College of Engineering

Dean: JoAnn S. Lighty, PhD
1015 Grant Avenue, 2nd Floor
(208) 426-1153 (phone)
(208) 426-4466 (fax)

Associate Dean for Academic Affairs: Don Plumlee, PhD, PE
(208) 426-3575 (phone)
dplumlee@boisestate.edu (email)

Associate Dean for Research Affairs Jim Browning, PhD
(208) 426-2347 (phone)
jimbrowning@boisestate.edu (email)

Assistant Dean for Student Affairs: Diana Garza
(208) 426-2685 (phone)
dianagarza@boisestate.edu (email)

boisestate.edu/coen (website)

General Information

There are seven departments that grant graduate degrees in the College of Engineering at Boise State University: Civil Engineering, Computer Science, Cybersecurity Programs, Electrical and Computer Engineering, Mechanical and Biomedical Engineering, Micron School of Materials Science and Engineering, and Organizational Performance and Workplace Learning. These departments serve the mission of the College of Engineering by providing accessible, high-quality, nationally recognized programs of instruction, research, and service that prepare students for engineering and other high technology careers, and that support individuals and organizations in Idaho, the Northwest region, and the nation.

The graduate programs in the College of Engineering are offered in a variety of degree options and delivery methods to accommodate student interests and career needs. The Doctor of Philosophy degrees in Computing, Electrical and Computer Engineering, Biomedical Engineering, and Materials Science and Engineering provide students an opportunity to advance their scientific knowledge, make significant technical contributions to the field and promote their career opportunities within academia or industry/governmental research and development facilities. The college also participates in the PhD program in Geosciences.

The Master of Science degrees in Civil Engineering, Electrical and Computer Engineering, Mechanical Engineering and Materials Science and Engineering, are thesis-based programs designed to prepare students for careers that involve a research component in their field. The Master of Engineering degrees are non-thesis programs that may be satisfied by an approved selection of coursework and culminating activities. A number of graduate level courses are available in an online delivery format. The Master of Science in Computer Science offers both a thesis and project option. The Master of Science in Organizational Performance and Workplace Learning offers both thesis and portfolio options and is delivered entirely online.

The graduate faculty members in the College of Engineering are active in their academic and research fields, in their professional societies, and are dedicated to providing the highest quality instruction possible. The research facilities available to graduate students pursuing a degree include a variety of equipment housed in a number of different facilities such as the Center for Materials Characterization, the Idaho Microfabrication Laboratory, the Center for Advanced Energy Studies, the Supercomputing, Visualization and Big Data Facility, Harry Morrison Civil Engineering Laboratory, Engineering Innovation Studio, Nanoscale Materials and Device Laboratory, Northwest Tissue Mechanics Laboratory, the iPerform Laboratory, the Beowulf Cluster Laboratory, and others.

Mission

With an unshakeable focus on learning, we empower all to think critically and solve our world's complex challenges. We excel through I3:

- Inclusion and Diversity
- Innovation
- Integrity

College of Health Sciences

Dean: Tim Dunnagan, EdD

Associate Dean: Joelle Powers, PhD

Assistant Dean: Lutana Haan, EdD

Assistant Dean for Research: Bob Wood, PhD

Norco Nursing and Health Sciences Building, Room 408
(208) 426-4150 (phone)
(208) 426-3469 (fax)

boisestate.edu/healthsciences (website)

Director, School of Allied Health Sciences: Bob Wood, PhD
Norco Nursing and Health Sciences Building, Room 113
(208) 426-3795 (phone)
(208) 426-3929 (fax)

Divisional Dean, School of Nursing: Shelle Poole, PhD
Norco Nursing and Health Sciences Building, Room 433B
(208) 426-3404 (phone)
(208) 426-1370 (fax)

Divisional Dean, School of Public and Population Health: Lillian Smith, PhD
Health Sciences Riverside Building, Room 106
(208) 426-3921 (phone)

Interim Director, School of Social Work: Joelle Powers, PhD
Norco Building, Room 408 and Education Building, Room 717
(208) 426-3600 (phone)
(208) 426-4291 (fax)

boisestate.edu/healthsciences (website)

General Information

As the university's academic unit dedicated to producing leaders in health innovation and discovery, the College of Health Sciences actively engages in its mission to foster partnerships that promote health and quality of life through teaching, research, and service. In teaching and research, the College of Health Sciences offers a graduate curriculum that prepares students to become researchers and leaders who will develop and apply innovative solutions to promote health and quality of life. In service, the college actively engages in developing dynamic community partnerships that enrich and enhance health-related research, teaching and learning, advocacy, and outreach.

To create synergies in the college and across campus, the College of Health Sciences is configured into four Schools; Allied Health Sciences, Nursing, Social Work, and Public and Population Health. University Health Services is also housed in the college and complements the schools by providing integrated care, teaching, and research to the campus community. While the Schools of Nursing, Social Work, and Public and Population Health provide graduate programs related to their respective disciplines, the School of Allied Health Sciences is characterized by its diversity as it houses four departments; Kinesiology, Radiologic Sciences, Genetic Counseling and Respiratory Care, as well as a Value-Based Healthcare certificate program.

College of Innovation and Design

Interim Dean: Shawn Benner, PhD

Associate Dean: TBD

Albertsons Library, Room 201G
(208) 426-2975 (phone)
cid@boisestate.edu (email)
boisestate.edu/cid (website)

General Information

The College of Innovation and Design (CI+D) is a university-wide hub focused on transforming teaching, learning, and research at Boise State. Leveraging the speed, collaboration, and risk-taking of a start-up, the college inspires and supports faculty, students and community members from diverse disciplines to create new pathways of learning that anticipate the demands and opportunities of our ever-changing world and workplace.

Approach to Learning

The College of Innovation and Design serves as an academic laboratory where faculty and students from across the university can share ideas for redesigning learning strategies, research methods, and degrees. Our structure is multifaceted. Through a combination of majors, certificates, badges, and programs, we offer a framework of learning that allows for divergent thinking. CID features a learning platform focused on both finding problems and then creating solutions, and it utilizes new methodologies to increase the analytic capacity of its students. The college goal is to produce graduates who have an interdisciplinary command of the world and who are not constrained in their ability to learn beyond one field of expertise.

Community Partnership

The College of Innovation and Design also plays an important role in how Boise State serves university partners in the community. Because requests for the research expertise of Boise State faculty, students, and staff seldom fall neatly in the jurisdiction of one department or college, we facilitate interdisciplinary collaboration to meet the needs of our community partners. Our focus is placed on opportunity-finding, idea creation, and problem-solving that focuses on the change management process in organizations.

Graduate Programs

The College of Innovation and Design offers a variety of programs from interdisciplinary academic research teams to venture incubators:

- **Harvard Business School Online at Boise State (HBS)** An immersive 9-credit program where students learn financial accounting, business analytics, and economics for managers and earn the Credential of Readiness from Harvard Business School Online.
- **Human-Environment Systems Group** An interdisciplinary, research-intensive community of faculty and students that use community-based research to advance solutions to pressing environmental challenges.
- **Venture College** A co-curricular learning environment that provides students access to expertise, workshops, and a full business incubator. With the support of Venture College staff and their mentor network, students launch their venture ideas beyond the classroom.

School of Public Service

Dean: Angela Bos, PhD

Associate Dean: TBD

Education Building, 7th Floor
(208) 426-1368 (phone)
(208) 426-4318 (fax)
schoolofpublicservice@boisestate.edu (email)
boisestate.edu/sps (website)

General Information

Boise State University's School of Public Service is dedicated to excellence in innovative teaching, cutting edge scholarship, and meaningful community outreach, serving the State of Idaho, region, nation and global communities.

The School is comprised of rich and diverse academic programs, including Criminal Justice (MA), Political Science (MA), Public Policy and Administration (MPA, PhD), and Conflict Management (Graduate Certificate), as well as talented affiliated faculty from departments and programs across the university. The mission of the School is supported by a variety of centers and institutes that facilitate research and public engagement, including the Andrus Center, the Marilyn Shuler Human Rights Initiative, Frank Church Institute, the Energy Policy Institute, and Idaho Policy Institute.

Together, these complementary academic programs, centers, and institutes strive to achieve local relevance with theoretical and applied research, as well as outreach provided to communities, local governments, and businesses. National recognition is achieved with innovative and relevant scholarship that enriches our society.

The School prepares students, public servants, and leaders to think both regionally and globally in an interdependent world. As such, it serves as a centralized resource for policy makers—to assist them in making informed decisions—and for faculty and students to actively connect and engage with the community and participate in policy decisions.

The bridging of disciplines across the university and the larger community enhances the education of students, allowing them to apply their knowledge and skills to the critical challenges facing the public, private, and nonprofit sectors.

Empirical and applied research and the production of new knowledge are central to the mission. Faculty, staff, and students make important contributions that balance theory and practice across diverse areas of contemporary scholarship, including the following:

- Democratic and Collaborative Governance in the New American West
- Policy Analysis
- Regional Planning and Development
- Sustainability
- Systems of Law and Justice

The School uses analytical methods to create and disseminate knowledge highly valued by a variety of consumers of research, including policy makers and leaders in the public, nonprofit, and business worlds.

Finally, the School of Public Service's transdisciplinary approach to knowledge seeks to provide professional expertise and promote public discourse and engagement across groups to produce innovative solutions to pressing and complex political, governmental, social, economic, and environmental concerns.

Graduate College

Interim Dean: Scott E. Lowe, PhD

Riverfront Hall, Room 307
(208) 426-4723 (phone)
(208) 426-2789 (fax)
boisestate.edu/graduatecollege (website)

General Information

The Graduate College at Boise State University provides institutional oversight and advocacy for 140 unique graduate programs and certificates, established across seven academic colleges and schools, with over 3,100 registered graduate students each semester. The Graduate College annually awards over 900 graduate degrees and certificates in programs that span the breadth of graduate education, from certificate and master's programs that prepare students for leadership roles in a wide variety of professional settings, to doctoral programs that develop the next generation of scholars. The Graduate College works closely with the Graduate Council, the deans and graduate faculties of the seven academic colleges and schools, and external accrediting organizations to ensure excellence in all aspects of the graduate experience. The scope of activities embraced by the Graduate College is very broad, including graduate admissions and degree processing, graduate student success initiatives, strategic development of graduate programming, problem resolution for individual faculty members and graduate students, and participation in national organizations that address accreditation and matters of graduate education. The Graduate College is committed to upholding a culture of inclusiveness, collegiality and ethical behavior through its dedication to fairness and integrity.

Division of Extended Studies

Dean: Mark Wheeler

Associate Dean: Christine Bauer, PhD

Associate Dean: Peter Risse

220 E. Parkcenter Boulevard
(208) 426-1709 (phone)
(208) 426-3467 (fax)
extendedstudies@boisestate.edu (email)
boisestate.edu/extendedstudies (website)

Mission

Extended Studies extends higher education beyond traditional boundaries to provide college access and lifelong learning opportunities to people of varying ages and circumstances.

A partner to the academic colleges of the university, Extended Studies champions and serves as an expert resource for the alternative programs, delivery methods and services that address the diverse academic, professional development, and personal enrichment needs of the metropolitan area, Idaho and beyond.

Programs Offered for Academic Credit

Boise State Online

Boise State has over 70 academic degree and certificate programs that are offered online. In addition, over 800 unique courses are available online for students who are unable to attend in-person classes or need the flexibility of online courses.

The format of online classes and programs are comparable to traditional classes regarding workload. Instructors lead the course and provide students with course content, make assignments, set deadlines, and interact on a regular basis with students.

Strategies for success in an online class include dedicating the necessary time each week to reading directions carefully, completing class work, and participating in discussions on a regular basis during each week.

For more information about the programs and classes offered online, visit boisestate.edu/online/.

Summer Sessions

Summer classes are an integral part of Boise State's course offerings. Sessions are facilitated through the Division of Extended Studies.

Summer sessions offer over 700 classes that are available in various formats and session lengths. A wide variety of graduate and undergraduate courses and workshops are offered. The *Boise State University Summer Schedule of Classes* is available to students each spring at my.boisestate.edu. For more information about summer sessions, visit boisestate.edu/summer/ or call (208) 426-1709.

Boise State Outreach Centers

With centers located across Idaho, Boise State offers students more choice in how and where they study. Each Outreach Center offers helps students get started, finish a degree, or connect with resources and support services. Center locations include:

Military Programs
Boise State Center at Gowen Field
3882 W Ellsworth St., Boise ID 83705
(208) 426-4230

Boise State Center at Mountain Home Air Force Base
Education Center
655 Falcon St., Mountain Home AFB, ID 83648
(208) 426-4230

Western Treasure Valley
Boise State Center at College of Western Idaho (CWI)
Nampa Campus, Aspen Classroom Building, Room 128
6002 Birch Lane, Nampa, ID 83687
(208) 562-3423

Magic Valley
Boise State Center at the College of Southern Idaho
College of Southern Idaho Campus, Hepworth Building, Room 144D
315 Falls Ave, Twin Falls, ID 83301
(208) 933-2305

North Idaho
Boise State Outreach Center in North Idaho
Lewis-Clark State College, Coeur d'Alene
1031 N. Academic Way, Suite 144, Coeur d'Alene, ID 83814
(208) 292-2679

For more information about outreach locations and the resources and programs offered at each, visit boisestate.edu/flex/flexible-locations/.

Noncredit Programs

Osher Lifelong Learning Institute

The Osher Lifelong Learning Institute (OLLI) provides a rich array of noncredit lectures and short courses from across the curriculum designed for seasoned adult learners age 50 and over. Membership is open to adults who enjoy the challenge of learning without the stress of tests and grades, and members share the common bond of intellectual curiosity. Lectures and short courses are provided via livestream, available to members at any location. No prerequisites are required for this program. For additional information, visit boisestate.edu/osher/ or call (208) 426-6554.

Professional and Continuing Education

Professional and Continuing Education offers programs designed for professionals who want to reach their fullest potential as leaders, innovators, and change makers to make your community a better place to live, work, and do business. On-campus and online courses are designed for busy professionals and progressive organizations eager to improve knowledge and practical skills while addressing dynamic work challenges. Offerings include individual non-credit courses and full programs in leadership, project management, business communication, human resources, and select specialties. In addition, Professional and Continuing Education brings Boise State University expertise and other subject matter experts directly to businesses and organizations. The program partners with organizations to develop individual training solutions that provide innovative, learning programs designed to improve employee performance, communication and business results. Schedule and location are flexible and adapted to business and operational requirements. Popular topics include:

- Leadership
- Project Management
- Business Communication
- Team Development
- Coaching

Professional and Continuing Education offered by Boise State complies with university standards for awarding Continuing Education Units. Continuing Education Unit (CEU) is a nationally standardized unit documenting participation in noncredit programs, courses or workshops. CEUs cannot be converted to academic credit.

For a complete list of Professional and Continuing Education courses, visit boisestate.edu/pace/ . For more information, call (208) 426-1709.

K-12 Teacher Professional Development

Working closely with local school districts, the Idaho State Department of Education, campus academic departments and the Boise State College of Education, the K-12 Teacher Professional Development program enables teachers and professional employees of school districts to earn professional development credit required for recertification and salary increases. Graduate credits earned through the Professional Development program are offered at a reduced rate. These credits cannot be used to satisfy degree requirements.

Through partnership with such vendors as Customizable Professional Development and Idaho Digital Learning Alliance, Boise State University is able to provide professional education credit for a multitude of courses that are delivered 100% online.

For more information and a list of current offering, visit boisestate.edu/k12pd/.

Questions About Extended Studies?

If you have questions about these programs contact the Division of Extended Studies, 220 E. Parkcenter Blvd., (208) 426-1709 or online at boisestate.edu/extendedstudies.

General Policies

Your Rights and Responsibilities

Boise State University challenges you to reach your highest level of performance, encourages you to excel in academics and sports, and invites you to participate in many cultural and social activities available at the university. At the same time, Boise State expects you to conduct yourself in a manner compatible with the university's function as an institution of higher learning. Therefore, we have published this catalog to acquaint you with your rights and responsibilities as a student.

Confidentiality and Privacy

Students' Rights

For more information see University Policy 2250. The Family Educational Rights and Privacy Act (FERPA) affords you certain rights with respect to your education records. These rights include:

1. The right to inspect and review your education records within 45 days from the day the university receives a request for access.

   You should submit to the registrar, dean, head of the academic department, or other appropriate official, a written request that identifies the record(s) you wish to inspect. The university official will make arrangements for access and notify you of the time and place where the records may be inspected. If the records are not maintained by the university official to whom the request was submitted, the official shall advise you of the correct official to whom the request should be addressed.

2. The right to request the amendment of your education records that you believe are inaccurate, misleading, or otherwise in violation of your privacy rights under FERPA.

   If you wish to ask the university to amend a record, you should write the university official responsible for the record, clearly identify the part of the record you want changed, and specify why it should be changed.

   If Boise State decides not to amend the record as requested, the university will notify you in writing of the decision and your right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to you when you are notified of the right to a hearing.

3. The right to provide written consent before the university discloses personally identifiable information from your education records, except to the extent that FERPA authorizes disclosure without consent.

   The university can disclose education records without your prior written consent under the FERPA exception for disclosure to school officials with legitimate educational interests. A school official has a legitimate educational interest if the official needs to review an education record to fulfill their professional responsibilities for the university. A school official is a person employed by the university in an administrative, supervisory, academic or research, or support staff position (including law enforcement unit personnel and health staff); a person or company with whom the university has contracted as its agent to provide a service instead of using university employees or officials (such as an attorney, auditor, or collection agent); a person serving on the Board of Trustees; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing their tasks.

4. The right to file a complaint with the U.S. Department of Education concerning alleged failures by the university to comply with the requirements of FERPA. The name and address of the office that administers FERPA is: Family Policy Compliance Office, U.S. Department of Education, 400 Maryland Avenue, SW, Washington, DC 20202-8520.

The information listed below is considered directory information:

- your name
- your local address
- your permanent address
- your email address
- your local telephone number
- your major field of study
- the dates you attended Boise State
- your student classification (freshman, sophomore, junior, senior, or graduate)
- your enrollment status (e.g., full-time or part-time)
- the type of degree you have earned from Boise State and the date it was awarded
- the dean's list and other honors

Authorized Disclosure Without Consent

As of January 3, 2012, the U.S. Department of Education's FERPA regulations expanded the circumstances when your education records and personally identifiable information (PII) contained in such records—including your Social Security number, grades, or other private information—may be accessed without your consent. First, the U.S. Comptroller General, the U.S. Attorney General, the U.S. Secretary of Education, or state and local education authorities ("Federal and State Authorities") may allow access to your records and PII without your consent to any third party designated by a Federal or State Authority to evaluate a federal- or state-supported education program. The evaluation may relate to any program that is "principally engaged in the provision of education," such as early childhood education and job training, as well as any program that is administered by an education agency or institution. Second, Federal and State Authorities may allow access to your education records and PII without your consent to researchers performing certain types of studies, in certain cases even when we object to or do not request such research. Federal and State Authorities must obtain certain use-restriction and data security promises from the entities that they authorize to receive your PII, but the authorities need not maintain direct control over such entities. In addition, in connection with Statewide Longitudinal Data Systems, State Authorities may collect, compile, permanently retain, and share without your consent PII from your education records, and they may track your participation in education and other programs by linking such PII to other personal information about you that they obtain from other Federal or State data sources, including workforce development, unemployment insurance, child welfare, juvenile justice, military service, and migrant student records systems.

If you wish to limit access to this information, go to myBoiseState Help at boisestate.edu/oit-myboisestate/ and scroll to Student Center—Personal Information and click on Update FERPA Restrictions link for instructions.

In discharging their official duties, Boise State employees may read, review, photocopy, and distribute to appropriate persons within the university any information contained in your student record. However, before distributing confidential information outside the university—even to members of your family—Boise State faculty and staff must first secure your written permission to do so.

You must complete a *Release of Information* form to allow individuals other than yourself to access your educational or financial records. The form can be located at boisestate.edu/registrar/student-forms/.

Academic Integrity

The university's goal is to foster an intellectual atmosphere that produces educated people who are skilled in the discipline of their choice. Because cheating, plagiarism, and academic misconduct as a whole are at odds with this goal, these actions shall not be tolerated in any form. You are expected to adhere to the rules and regulations as set forth in the *Student Code of Conduct (Policy 2020)*. Therefore, all work you submit must represent your own ideas and effort; when the work does not, you have engaged in academic dishonesty while preventing your own learning and skill development.

Plagiarism occurs when a person tries to represent another person's work as their own or borrows directly from another person's work without proper documentation. For example, academic dishonesty occurs whenever you:

- buy a paper or other project, then seek to receive credit for your learning for that paper or project
- copy from another student's exam, either before, during, or after the exam
- use unauthorized aids of any kind while taking an exam or use information stored in a computer or calculator (if prohibited from doing so)
- allow another person to take an exam in your place or take an exam for another person
- collaborate on take-home exams when such collaboration is forbidden, or overextend collaboration expectations
- copy the work of another person and attempt to receive credit for that work
- fail to properly document source material in a paper or project as the work or idea of another
- receive editorial assistance that falls outside the scope of assisting with your development of a learner and crosses into unauthorized collaboration

Note: The list above is intended only to provide some examples for recognizing and avoiding common types of academic dishonesty. It is in no way an exhaustive or comprehensive list of all the types of academic dishonesty. For more nuance on the topic, please consult the *Student Code of Conduct* (*Policy 2020*).

Instructors of record are responsible for assessing and deciding responsibility/non-responsibility in instances of potential academic misconduct, and are best-supported in offering due process to students when referring incidents to the Academic Integrity Program inside the Office of the Dean of Students. If you are responsible for academic dishonesty, you may be subject to course grade sanctions up to a failing grade for the course, educational/developmental sanctions, and/or sanctions outlined in the Boise State University Student Code of Conduct as suspension or expulsion.

For more detailed information and process guidance about academic honesty and misconduct, see the following publications:

- *Student Code of Conduct (Policy 2020)*
- *Faculty Responsibility to Address Student Academic Misconduct (Policy 4180)*

General Notice of Nondiscrimination

It is the policy of Boise State University to comply with all federal, state and local authorities requiring nondiscrimination, including but not limited to Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990 (ADA), the Age Discrimination Act of 1975, and Executive Orders 12898 (Environmental Justice) and 13166 (Limited English Proficiency). Boise State is an equal opportunity employer.

The university does not exclude from participation in, deny the benefits of, or subject any individual to discrimination on the basis of race, color, national origin, sex, sexual orientation, gender identity, disability, income, protected veteran status, limited English proficiency, or any other status protected under applicable federal, state or local law. For Boise State's nondiscrimination policies and grievance procedures, please see Boise State Policies 1060, 1065, and 1070 at boisestate.edu/policy/.

For more information or if you believe you have been subject to discrimination on the basis of sex, sexual orientation, gender identity, disability, or on any other basis, please contact the Office of Institutional Compliance and Ethics: Riverfront Hall, Suite 306, 1910 University Drive, MS 1215, Boise, ID 83725, telephone: (208) 426-1258, email: reportdiscrimination@boisestate.edu.

You may also file a complaint with: Office for Civil Rights, Seattle Office, U.S. Department of Education, 915 Second Avenue, Room 3310, Seattle, WA 98174-1099, telephone: (206) 607-1600, fax: (206) 607-1601, email: OCR. Seattle@ed.gov.

Providing Equal Access to People with Disabilities

Boise State is committed to creating a diverse and inclusive campus environment by abiding by the letter and spirit of the Americans with Disabilities Act and Section 504 of the Rehabilitation Act. Accordingly, the university does not discriminate against persons with disabilities and strives to provide an exceptional academic experience for students with disabilities by providing reasonable and appropriate accommodations for equitable access.

Boise State's Educational Access Center (EAC) coordinates services to meet the educational needs of students with documented disabilities. The EAC works with students and faculty to arrange reasonable accommodations and promote an environment that is free of both physical and attitudinal barriers. Students with disabilities needing accommodations to participate fully in academic programming should contact the EAC. All accommodations must be approved through the EAC prior to being implemented. To learn more about the accommodation process, visit the EAC's website at boisestate.edu/eac/.

Employees or applicants for employment who require disability-related services or accommodations should contact Human Resource Services located at 2225 W. University Drive, Capitol Village #3, MS 1265, Boise, ID 83725 or by phone at (208) 426-1616. More information on requesting an accommodation is available at boisestate.edu/hrs/.

Boise State's Office of Institutional Compliance and Ethics monitors compliance with Section 504 and the ADA and coordinates the university's response to complaints of discrimination on the basis of disability. Individuals with questions or concerns related to the university's obligations in regard to these laws and those who wish to file a complaint may contact the Office of Institutional Compliance and Ethics: Riverfront Hall, Suite 306, 1910 University Drive, MS 1215, Boise, ID 83725, telephone: (208) 426-1258, email: reportdiscrimination@boisestate.edu.

In addition to the Office of Institutional Compliance and Ethics, inquiries may be directed to the federal department responsible for enforcing Section 504 in the educational context: Office for Civil Rights, Seattle Office, U.S. Department of Education, 915 Second Avenue, Room 3310, Seattle, WA 98174-1099, telephone: (206) 607-1600, fax: (206) 607-1601, email: OCR. Seattle@ed.gov.

Student Records

Boise State University routinely collects, stores, and maintains many kinds of information about prospective, current, and former students. For instance, Admissions maintains a file for each student who has applied for admission to the university for a period of two to five years (see *Graduate Admissions Regulations* for details). Other files at the Registrar's Office contain your permanent transcript. Faculty and departments also may maintain files containing advising records, grades sheets, and correspondence.

In general, you have the right to review the documents that constitute your official record. If you wish to do so, please contact the Registrar's Office, Administration Building, Room 110, (208) 426-4249.

Transcript Records

If you have myBoiseState (my.boisestate.edu/) access, your account connects to the National Student Clearinghouse to place an order and pay. If you do not have myBoiseState access, you can go directly to the National Student Clearinghouse (tsorder.studentclearinghouse.org/school/select) to place an order and pay. You can access unofficial transcripts in your Student Center on myBoiseState. The Registrar's Office makes every effort to ensure your transcript records are up-to-date and accurate. If you believe there is an error or an omission on your transcript, contact the Registrar's Office, Administration Building, Room 110, (208) 426-4249.

Verification of Your Enrollment Status

Your enrollment status is public information, unless you have notified the university that you want it to be treated as confidential (see Confidentiality and Privacy in this chapter). In responding to inquiries from outside the university, Boise State calculates your enrollment status per Table 1. Requests for verification of enrollment status often come from such businesses as employment agencies, insurance companies, and lending agencies.

Table 1 Schedule Used to Determine Graduate Enrollment Status (in Response to Outside Inquiries)	
Number of Credits (Currently enrolled)	*Enrollment Status*
9 or more	Full-Time
6 to 8	Three-Quarter-Time
5	Half-Time
4 or fewer	Less Than Half-Time

Note: If you are receiving benefits under the G. I. Bill, you should contact the Veteran Services Office, located in the Lincoln Garage, on the corner of Lincoln Ave. and University Dr., (208) 426-3744, to determine your enrollment status.

Note: If you are receiving financial aid, please read the Financial Aid for Graduate Students section for additional enrollment requirements to maintain your financial aid eligibility.

Address Changes

Whenever Boise State University policies or procedures call for a university office to send you a written notification, that obligation is fulfilled when that office mails the notification to your last mailing address on record. If you are currently enrolled or have access to a myBoiseState account, you must update address information on myBoiseState on your Student Center (under the personal information section, select Addresses). If you are a past student, and do not have access to a myBoiseState account, submit a *Student Information Update* form (located at boisestate.edu/registrar/student-forms) to the Registrar's Office, Administration Building, Room 110.

Name Changes

You should promptly report a name change. You may do so by going to boisestate.edu/registrar/student-forms, completing a *Student Name Update* form and returning the form to the Registrar's Office, Administration Building, Room 110. You must provide evidence showing that your name has officially changed, such as a valid driver's license or Social Security card.

Note: If you are currently or were previously employed (even as a student), you must report your name change to the Department of Human Resource Services, 2225 W. University Drive Capitol Village, #3, (208) 426-1616 (documentation requirements may differ).

Preferred Name

You may choose to use a preferred name while in attendance. Update your preferred name by accessing your Student Center, on myBoiseState on the Update Personal Info tile. Multiple systems within the university utilize preferred names (e.g., myBoiseState, Canvas, Student Housing, class rosters). Your username and email account may also be generated to match your preferred name. All official documents, academic records (i.e., transcripts) and university reports use only your primary or legal name.

Right of Appeal

You have the right to appeal any academic policy or requirement if either of the following conditions is present:

- Extenuating circumstances make it impossible for you to comply with the policy or requirement.
- An undue hardship would result from a strict application or interpretation of the policy or requirement.

Please note, however, that extenuating circumstances must be beyond your control and that undue hardship must be a condition far more serious than simple inconvenience. Documentation will be required and the timeliness of the appeal will be taken into consideration.

If you appeal an academic policy or requirement, the dean of the college responsible for your major or the University Academic Appeals Committee will most likely review that appeal. For more information about appeals and grievances, see the *Boise State University Policy Manual,* boisestate.edu/policy and the Dean of Students website, boisestate.edu/deanofstudents.

Last Week of Classes and Final Exams

No classes provided by Boise State University will give any test or examination during the last seven calendar days preceding the first day of the officially scheduled final examination period of the fall or spring semester (traditionally referred to as "Dead Week"), except in those particular courses that are offered in an accelerated time frame less than 15 weeks and/or wherein it is deemed necessary by departmental policy (e.g., lab, artistic performance, project presentation, team analysis, etc.). See University Policy 3080. Online courses are expected to adhere to the policy whenever possible, but they are allowed to make exceptions when the course schedule differs from the regular semester schedule.

- In-class final or take-home final exams will be given and/or due during the officially scheduled final examination periods.
- No take home test or exam may be made due during the last week of classes.
- Test or exam dates during the last week of classes are not subject to personal preferences (e.g., faculty preference, class vote, or other means of general consensus).
- Exceptions may be allowed for extenuating circumstances, on an individual student basis, to be arranged at a time agreeable to the faculty member.

Each semester, a schedule for final examinations is published on the Registrar's Office website at boisestate.edu/registrar/boise-state-academic-calendars/final-exam-schedules. This schedule defines the dates and times during which all final examinations must be scheduled.

Questions About These Policies?

If you have questions about these policies, contact the Registrar's Office, Administration Building, Room 110, (208) 426-4249.

Graduate Admission Regulations

Admission Requirements

Minimum Admission Requirements of the Graduate College

The minimum requirements for admission to the Graduate College are:

- At least a baccalaureate degree from a regionally accredited U.S. college or university or a degree from a non-U.S. institution of higher education that is judged equivalent to a U.S. baccalaureate degree by the International Admissions office. Applicants can request an exception to this requirement. Refer to request for an exception to the regionally accredited institution requirement for admission.
- An undergraduate grade point average (GPA) of 3.00 (based on a 4-point scale) computed for all undergraduate credits from the applicant's most recent baccalaureate degree, noted above.

Applicants who are applying as graduate degree-seeking students and were graduate degree-seeking students elsewhere but did not complete the program must demonstrate that they departed that program in good academic standing.

Admission Requirements for a Graduate Degree or Certificate Program

Each graduate program has its own admission criteria, in addition to the minimum admission requirements of the Graduate College. To ensure the best opportunity for admission, you are encouraged to review the specific admission requirements and application procedures provided by the program. Admission is competitive and otherwise qualified applicants may be denied admission based on factors established by each program. In addition to academic merit (as reflected by GPA, test scores, and other information), a program's recommendation may be based on factors including but not limited to:

- program capacity or space limitations,
- the perceived strength of the candidate's application in relation to other applicants,
- the availability of faculty with expertise in an area of study, and
- the candidate's demonstrated ability to write well, work collaboratively, communicate respectfully and effectively, take constructive feedback, work under pressure, and/or otherwise prepare and conduct themselves in a manner consistent with program expectations, professional ethical and/or licensure requirements, and university policies and procedures, including its *Student Code of Conduct* and *Statement of Shared Values*.

Graduate programs may use information submitted as part of the application, as well as additional sources, in the process of evaluating and recommending applicants for admission.

To Apply to a Degree or Certificate Program

Application Deadlines for Degree-Seeking Students

Graduate programs may set one or more standard application deadlines appropriate for management of the program. As a prospective student, you are encouraged to consult the application procedures provided by the program. If the program is not specific about its application deadlines, then the Graduate College recommends submitting all application materials by the following priority dates:

- January 15 for summer and fall admission
- October 1 for spring admission

To apply for admission to a degree or certificate program, complete the following steps before the program deadline:

1. Submit an online application for admission to the Graduate College, along with the nonrefundable application fee.
2. Request official transcripts from each educational institution (excluding Boise State) attended beyond high school. Transcripts should be sent directly from the institution to the Graduate College and can be sent electronically, mailed, or faxed directly. Use the following address if transcripts are mailed: Graduate College, Room 307, Riverfront Hall, Boise State University, 1910 University Drive, Boise, ID 83725-1110. Use the following email address if the transcripts are electronically sent: gradcoll@boisestate.edu. Faxed transcripts can be sent to (208) 426-2789.

Table 2
How to Apply for Admission to the Graduate College at Boise State University

To apply for admission to Boise State University as a graduate student, submit all materials indicated in the list below to the Graduate College. All admission materials must be received by the posted deadline (see Academic Calendar, page 2).

New Degree-Seeking Graduate Applicants

- *Graduate Admission Application*
- Nonrefundable application fee. (Current fee online at boisestate.edu/graduatecollege.)
- Official* transcripts from all postsecondary institutions (excluding Boise State) showing all courses completed and degrees earned.
- Official GRE or GMAT scores, if required.
- Letters of recommendation and/or other materials that may be required by the program to which you are applying.

Note: If you have never attended Boise State University as a graduate student, admission materials are retained for two years after your last date of application. Please submit new materials if you have not attended Boise State within the last two years.

Returning Students Previously Enrolled in a Graduate Degree Program

Boise State graduate students will remain active for 6 consecutive semesters (including summer) before a new *Graduate Admission Application* and nonrefundable application fee are required.

- *Graduate Admission Application*
- Nonrefundable application fee. (Current fee online at boisestate.edu/graduatecollege.)
- Official* transcripts from all other colleges attended, if not previously submitted.
- Official* GRE or GMAT scores, if required and not previously submitted.

Note: Boise State University retains admission materials for five years after your last term of enrollment. Please submit new materials if you have not attended Boise State within the last five years.

Nondegree-Seeking Applicants

- *Graduate Admission Application*
- Nonrefundable application fee. (Current fee online at boisestate.edu/graduatecollege.)
- Official* transcript from institution (excluding Boise State) which granted your highest degree.

Applicants from Other Countries

- *International Graduate Admission Application*
- Nonrefundable application fee. (Current fee online at boisestate.edu/graduatecollege.)
- Official* proof of four-year degree and transcripts from each educational institution attended beyond high school. **
- Official TOEFL or IELTS results.
- Official GRE or GMAT scores, if required.
- Letters of recommendation and other materials required by the program to which you are applying.

*To be official, transcripts must be sent by the issuing institution directly to Boise State University Graduate College. Some programs evaluate admission with unofficial transcripts. Current list at boisestate.edu/graduatecollege/howtoapply/submit-official-transcripts.

**If written in a language other than English, these documents must be accompanied by an official English translation.

3. Complete any standardized exams required by the graduate program. Check the list of Degree Programs available on the Graduate College website (boisestate.edu/graduatecollege) to see if a specific program requires exams. Make sure the exam results are forwarded to the Graduate College. The institutional code for Boise State University for all exams administered by the Educational Testing Service (ETS) is 4018.

4. Submit all required letters of recommendation and other materials required by the graduate program.

Review of an application cannot begin until each of these steps is completed and the Graduate College has received all materials, including materials that are specific to a particular graduate program. You can monitor the status of your application using the "To Do" list found in myBoiseState.

If you are enrolled in and complete graduate credits at Boise State University that are counted towards a degree or certificate program and later apply and are admitted into a different graduate degree or certificate program, the program may recommend to the Graduate College that some of those credits be applied to the requirements of the new degree or certificate program. The application of previously-completed graduate credit to a degree or certificate program is subject to the Restrictions on Certain Courses rules, and any time interval restrictions established under the duration of graduate study policies for degree or certificate programs. The graduate degree or certificate program may define a maximum number of these credits and all final decisions regarding the applicability of these credits rest with the Graduate Dean.

After all application materials have been received, the application is reviewed by the graduate program. Once this review is complete, the program forwards an admission recommendation to the Graduate Dean using the *Program Admission Recommendation* (PAR) process. The Graduate Dean then makes the final determination and notifies the program and the applicant. You are admitted in one of the following categories:

Regular Admission This category is typically used when your undergraduate GPA is 3.00 or higher. In the event that your undergraduate GPA is below 3.00, a program may support a recommendation for regular admission if you have successfully completed nine graduate credits, or a graduate degree, with a graduate GPA of 3.00 or higher. Regular admission indicates full graduate standing in an academic program with no special stipulations.

Conditional Admission This category is used when you have not yet completed an undergraduate degree or the Graduate College has not yet received a final undergraduate transcript with the undergraduate degree posted. Your status will be changed to regular once the Graduate College has received verification of the undergraduate degree.

Provisional Admission This category is typically used when your undergraduate GPA is below 3.00. Provisional admission establishes a probationary period in which you are provisionally admitted and must show that you are able to complete graduate coursework with B or better grades over the first nine graduate credits completed for master's and doctoral students, and three graduate credits for certificate students. Your admission status is changed to regular once the specified provisions have been met.

At this point, you have been officially admitted to the graduate program. All degree-seeking students admitted as regular, conditional, provisional, and special are eligible for financial aid.

Special Admission This category is used when you have not yet submitted, and the Graduate College has not yet received, all official transcripts. Your status will be changed to regular, conditional, or provisional once the Graduate College receives all official transcripts and an official GPA calculation is performed. Admission under Special status may remain in effect for no longer than one semester or term. Your admission status will be changed to nondegree-seeking, and a hold will be assigned if the official transcript(s) are not received prior to the registration cycle for the next semester or term.

Program-Specific Admission Expectations

Programs should clearly articulate program and coursework expectations in their Program Handbooks, and should share these with their admitted students. In those cases in which a (Regular, Provisional or Conditional) admitted student is asked to complete specific coursework or to achieve specific milestones, these expectations should be established in a performance plan, created by the Program Coordinator and shared with the admitted student, as outlined in Satisfactory Progress Policy.

The Graduate College recommends that programs that desire to admit applicants that lack the necessary undergraduate preparation for a graduate degree or certificate program defer their admission decision to a future semester, when the applicants have completed the necessary undergraduate coursework or preparation.

For Students with Provisional Admission

At the end of each enrolled semester (including summers), the Graduate College will review your progress and take one of the following actions:

1. Promote you to regular status if the stipulations of the provisional admission have been met.

2. Dismiss you from the program and Boise State if the stipulations of provisional admission have not been met. If you are dismissed, you will be administratively withdrawn from your courses and cannot register for classes until you are either reinstated to the graduate program or readmitted to the Graduate College.

To request reinstatement you must submit a *Graduate Appeal Form*, including a letter of explanation and a letter from the Program Coordinator. Programs that recommend reinstating you must include a reinstatement plan of study from the Graduate Coordinator. If you request reinstatement (following University Policy 3090) and are granted reinstatement to the program within 30 calendar days, you are not required to reapply to the Graduate College. After 30 days, you must submit a new online admission application and application fee.

In each case, the Graduate College informs you and your graduate program via email (using the student's Boise State email address, according to University Policy 2280).

A student must be in regular status to be eligible for graduation. If a student submits an *Application for Admission to Candidacy* (AAC) form while on provisional status, approval by the Graduate College will be delayed until the provisions have been met and the student has been promoted to regular status.

To Apply as a Nondegree-Seeking Student

If you submit an application but do not specify a degree or certificate program, you are said to be applying as a nondegree-seeking student. Applications from nondegree-seeking students are accepted at any time, but prospective students are advised to submit all application materials well in advance of the desired semester or summer session.

You may apply for admission as a nondegree-seeking student if you have earned a baccalaureate degree or a higher degree from a regionally accredited institution. If you subsequently decide to apply to a degree or certificate program, you will be required to meet the GPA and all other requirements of the program to which you apply. To apply for admission as a nondegree-seeking student, complete the following steps before the deadline specified in the current academic calendar:

1. Submit an online application for admission to the Graduate College, along with the nonrefundable application fee.

2. Request official transcripts from each educational institution (excluding Boise State) attended beyond high school. Transcripts should be sent directly from the institution to the Graduate College and can be sent electronically, mailed or faxed directly. Use the following address if transcripts are mailed: Graduate College, Room 307, Riverfront Hall, Boise State University, 1910 University Drive, Boise, ID 83725-1110. Use the following email address if the transcripts are electronically sent: gradcoll@boisestate.edu. Faxed transcripts can be sent to (208) 426-2789.

Admission Status for Nondegree-Seeking Students

If you are admitted to the Graduate College as a nondegree-seeking student, you may register for courses of interest for which you are eligible as long as you have met the necessary prerequisites and the courses are not restricted. However, you may not work toward a graduate degree or certificate and are not eligible for federal financial aid. If you complete courses at Boise State University as a

nondegree-seeking student and later apply and are admitted to a graduate program, the program may recommend to the Graduate College that courses completed while in non-degree status be applied to the credit requirements of the program. The graduate program may define a maximum number of applicable credits of this type, but the maximum cannot exceed nine (9) credits, and students must apply and be accepted into a graduate degree or certificate program before they have completed the requirements for the degree or certificate – no retroactive degrees or certificates will be conferred. All final decisions regarding the applicability of such credit rest with the Graduate Dean.

Applying for Admission as an International Graduate Student

Boise State welcomes applications from qualified students from around the world. The requirements described below apply to applicants in the United States with a visa or applicants who require a student visa to study in the United States.

As an international applicant, you may apply for admission as a graduate student if you have earned, from an accredited institution, the equivalent of a U.S. four-year baccalaureate degree or a higher degree as determined by the International Admissions Office. To apply for admission to Boise State, you must complete the following steps:

1. Submit a completed *International Student Graduate Application* along with the nonrefundable application fee by one of the following deadlines:
   - January 15 for summer and fall admission,
   - October 15 for spring admission, or
   - the deadline set by the graduate program if that deadline is earlier.
2. Submit official transcripts and proof of degree from each educational institution you have attended beyond high school or the equivalent of high school. Instruct the educational institutions to send the transcripts directly to:
   International Admissions Office
   Center for Global Engagement
   Boise State University
   1910 University Drive
   Boise, ID 83725-1145
   USA

   If written in a language other than English, these documents must be accompanied by an official English translation. If the institutions cannot submit these documents directly to the Boise State University International Admissions Office, certified or attested copies of official academic records and proof of four-year degree may be substituted. The certified copies must be issued or attested by an official of the institution and sent to Boise State in the sealed official envelope of the institution, with the institution's stamp across the seal of the envelope. Boise State University reserves the right to request that applicants submit a professional credential evaluation completed by an independent credential evaluation service in addition to official transcripts. Boise State University accepts evaluations completed by World Education Services (wes.org), Education Credential Evaluators (ece.org/ECE), and Educational Perspectives (edperspective.org).

   You may appeal this requirement in situations that meet all of the following requirements:
   - The transcript is for a degree or certificate that was not completed.
   - The application is for a Boise State graduate program at the same academic level (doctoral, master's, certificate) as the previous incomplete graduate work.
   - You are not transferring any credits from the incomplete degree or certificate.
   - You submit to the Graduate College sufficient documentation showing that application of this requirement would result in an undue hardship. This must be a condition that is far more serious than simple inconvenience.
   The documentation will be carefully reviewed by the Graduate College in consultation with the International Admissions Office and the timeliness of the appeal will be important. You should submit your application and appeal at least 3 weeks before the application deadline for the specific graduate program.

Appeals received after this date will still be reviewed but the review may not be completed in time to meet the specified deadline.

If you appeal this requirement and are admitted to a graduate program, you will be admitted with conditional status pending submission of the official transcript(s).

Guidelines for how to send official transcripts can be found on the International Admissions website: boisestate.edu/globaleducation-international.

3. Submit evidence of English proficiency that meets the minimum requirements for the Graduate College and the graduate program. The English Language Proficiency Requirement can be met by submitting official TOEFL or IELTS scores. Scores must be submitted directly from the testing agency and are valid if scored within two years of application to Boise State. The minimum score required for admission is:
   - TOEFL iBT score of 80
   - IELTS overall score of 6.5 or better
   Some graduate programs may require higher TOEFL or IELTS scores. You should review the admission requirements of the specific program you are interested in.

   Additional options for demonstrating English language proficiency exist. Please refer to the full list of proficiency options at boisestate.edu/globaleducation-international.

   Meeting score requirements does not guarantee admission. Boise State may request additional supporting documentation and/or an interview to validate English proficiency if deemed necessary during application review.

4. Take the Graduate Management Admission Test (GMAT), Graduate Record Examination (GRE), or any other predictive exam required by the program to which you are applying. Ensure that the results of these exams are forwarded to:
   Graduate College
   Riverfront Hall, Room 307
   Boise State University
   1910 University Drive
   Boise, ID 83725-1110

   The institution code number for Boise State for all examinations administered by the Educational Testing Service (ETS) including the TOEFL and GRE is 4018. For information about specific program requirements, see the Graduate College website at: boisestate.edu/graduatecollege.

5. Submit all letters of recommendation and other materials required by the program.

6. Submit documentation sufficient to show sufficient financial resources to cover one calendar year of living expenses, tuition, and fees. Send the documentation to the International Admissions Office after meeting all other requirements for admission and being accepted to a graduate program. This item is only required for students who require an F-1 student visa to complete their graduate program.

   The International Admissions Office will issue an I-20 form if you require an F-1 student visa, meet all admission requirements, supply the necessary financial documentation, and are accepted to a degree program. An I-20 form will be required to apply for an F-1 student visa. If you would like additional information, please contact the International Admissions Office.

Note: All international students are required to enroll in Boise State's health insurance plan. More information is available through the International Student Services office at: boisestate.edu/globaleducation-iss.

Administrative Handling of Admission Documents

The Graduate College coordinates graduate admission processes and can provide additional information and answer questions. All documents received by Boise State University in conjunction with an application for admission become the property of the university. These documents will be duplicated only for use in

admission decisions and student advising at the university. Moreover, the original documents will not be returned to you, or forwarded to any individual unaffiliated with Boise State University, or forwarded to any other agency, organization, college, or university.

Retention of Admission Records

The Graduate College retains your admission file for two to five years. If you applied for graduate admission but never attended Boise State as a graduate student, your official transcripts are retained for two years after your last date of application. If you attended Boise State as a graduate student your official transcripts are retained for five years after your last term of enrollment.

If you reapply to Boise State beyond the retention period you may be asked to furnish new official transcripts if you have not attended Boise State within the last two years.

Applications Policies Regarding Applicants with Behavioral or Criminal Concerns

Boise State University reserves the right to deny or place conditions on admission, continued enrollment, or re-enrollment of applicants, students or former students whose personal behavioral or legal history indicates that their presence at Boise State University may endanger the welfare or property of members of the academic community or interfere with the orderly and effective performance of Boise State University functions.

Applicants for admission to the Graduate College at Boise State University will be required to disclose information concerning prior disciplinary and criminal history on the graduate application for enrollment. The Graduate College and the Pre-Admission Application Review Committee will review all matters pertaining to such applicants. All proceedings and decisions will comply with Federal, state, and local nondiscrimination laws, fairly balancing the obligation of Boise State University to promote the safety and welfare of students, employees, and property with the civil rights of the applicant or student.

Plagiarism and Accuracy of Application Materials Policy

Personal statements and any other accompanying documents that are submitted when an applicant applies to a Graduate Program at Boise State University must be uniquely their own. If any part of an application, including a personal statement, statement of purpose, writing sample, or other submitted writing, is plagiarized, or if an applicant intentionally misstates anything in their application, the application may be denied and/or admission to the Graduate College revoked. The penalty for any plagiarism found in an application is immediate rejection or dismissal from an academic program and from Boise State University, even if discovered after the applicant has been admitted and has matriculated at Boise State University. During application, if any discrepancies are found between the uploaded and official academic records or test scores, or if altered or forged records are submitted, Boise State University reserves the right to rescind any offer of admission. Applicants who submit fraudulent or plagiarized documents may be eligible to reapply after two years.

Questions About These Policies?

If you have questions about these policies, contact:

Graduate College
Riverfront Hall, Room 307
(208) 426-GRAD (4723) (phone)
(208) 426-2789 (fax)
graduatecollege@boisestate.edu (email)
boisestate.edu/graduatecollege (website)

International Admissions Office
Simplot Micron Advising and Success Hub, Room 227
(208) 426-4367 (phone)
interntl@boisestate.edu (email)
boisestate.edu/globaleducation-international (website)

Registration Policies and Procedures

Shortly after you have been admitted to a graduate program, your department will assign a member of the faculty to serve as your academic advisor. Nondegree-seeking students may seek advising in the Graduate College or the department from which you intend to take courses. Prior to registration, all students are encouraged to seek advising.

Registration takes place each semester and summer session. You will be assigned a registration appointment. Beginning at that time and until registration closes, you can log onto your Student Center via myBoiseState and register. The Registrar's Office, Administration Building, Room 110, (208) 426-4249, can assist you if you are not familiar with the web process. You must have your username and password when you register.

Academic Calendar

Boise State's Academic Calendar, which lists all the registration deadline dates for the current catalog year, can be found in the front of this catalog and on the Registrar's website at boisestate.edu/registrar/boise-state-academic-calendars. The Academic Calendar specifies the policy deadlines, by semester and session, for the following: registration, adding and dropping classes, and withdrawals. You are strongly encouraged to familiarize yourself with this calendar, especially the *Deadlines by Session* table located at the top of the Academic Calendar, you will be held accountable for meeting these deadlines.

Academic and Fee Policy

Once you register for classes, you remain registered and are held responsible for the fees and grades assessed for these classes unless you cancel your registration. If you do not pay for or do not attend these classes, you are still held responsible for the fees and grades assessed. If you decide not to attend any classes, you must log in to your Student Center on myBoiseState no later than the deadline and drop all classes (see the *Academic Calendar Deadlines by Session* table and Rules for Dropping a Workshop). This includes any courses and workshops that begin later in the semester and any courses still waitlisted.

If you do not cancel your registration or pay your fees by the fee payment deadline, you will remain registered, you will be charged course fees, and you will be assessed a $50 late penalty.

Note: cancellation of courses may have financial aid impacts. You may be required to repay all, or a portion, of any financial aid awarded to you.

Enrollment Appointments

As a graduate student, you will be initially assigned an enrollment appointment for fall and spring semesters.

- Fall appointments begin late March/early April
- Spring appointments begin late October/early November
- Summer registration begins mid-February

Open registration starts the week before classes begin and runs through the tenth day of the fall and spring semesters. Appointments are not assigned for summer sessions.

Credit/Audit Status

During registration on myBoiseState, you may elect to take a course for audit instead of credit, if space is available in the class. Register by selecting audit status with the understanding that you will receive neither credit nor a grade (A+ through F) and regular course fees apply. On your transcript, audit status indicates that you had a seat in the class, but may or may not have participated in class activities. You may change your registration status from credit-to-audit or audit-to-credit until the appropriate session deadline (see the *Academic Calendar Deadlines by Session* table). If you fail to meet the audit requirements established by the instructor, the instructor may give you a final grade of UAU (Unsatisfactory Audit). For more information, contact the Registrar's Office, Administration Building, Room 110, (208) 426-4249.

Adding Classes

Before the semester begins, you may add classes to your schedule through the Student Center on myBoiseState, if there is space available in the class. If a class is full, you may place yourself on a waitlist to enroll in the class if a seat becomes available. You may continue to add classes after the first day of classroom instruction up to the appropriate session deadline. However, after the fifth day of the semester's regular session, you must obtain the instructor's approval to add the class. Instructors may refuse to grant a permission number if the class is full (see the Academic *Calendar Deadlines by Session* table in the front of this catalog for the exact deadline). They may also refuse permission if your late entry would prevent you from benefiting fully from the class, or would prevent other students in the class from doing so. If you do receive a permission number, enter the number in your Student Center when you register for the class. If you are registering for, or adding, a directed research, an independent study, internship/practicum, or reading and conference, you may do so through the end of the sixth week of the semester (see the *Academic Calendar Deadlines by Session* table).

Waitlisting

When attempting to enroll in a full course, usually you will be given the option to put yourself on the waitlist for the course. Your eligibility to be on the waitlist depends on whether you meet the requisites for the course. Please note that some courses do not provide a waitlist option. Once on a waitlist, if a seat becomes available, you will automatically be added to the course and notified via an email sent to your BroncoMail account. If you are on multiple waitlists for different sections for the same course, you will be removed from the other waitlists at that time. If you no longer wish to enroll in the waitlisted course, it is your responsibility to remove yourself from the waitlist otherwise you will be responsible for any enrollment that occurs. The waitlist process runs five times daily throughout the registration period prior to the last day a class can be added without an instructor's permission (see the *Academic Calendar Deadlines by Session* table). If you are already enrolled in another section of the course that is waitlisted or have time conflicts with other courses, you will not be enrolled via the waitlist process.

21-Credit Cap

You may enroll in a maximum of 21 credits per term. If you want to take more than 21 credits in a term, you will need to work with your advisor to complete the *Request to Exceed 21 Credit Hours* form.

For more information about adding classes, contact the Registrar's Office, Administration Building, Room 110, (208) 426-4249.

Dropping Classes

You may drop regular session classes from your schedule, by accessing your Student Center on myBoiseState through the tenth week of the semester. See the *Academic Calendar Deadlines by Session* table in the front of this catalog for the exact deadline. If you drop a regular session class before the tenth day of the semester, the class will not appear on your transcript. However, if you drop a regular session class after the tenth day of the semester, your transcript will show a grade of W (for withdrawal) for that class. Grades of W will not be used in GPA calculation (see Withdrawals for the maximum number of W grades you can accrue). Workshops, short courses, five-week, and seven-week block courses have different deadline dates. See the *Academic Calendar Deadlines by Session* table in this catalog for the exact deadline.

Drop Fee

You are expected to finalize your class schedule at the beginning of each term. Dropping unwanted courses as the semester begins allows other students the opportunity to add the courses they need. You will have the opportunity to attend the first class session to make a decision to stay enrolled or drop before a $10 drop fee per course is charged. The drop fee deadlines vary by session. See *Academic Calendar Deadlines by Session* table for the deadlines.

For more information about dropping classes, contact Student Financial Services, Administration Building, Room 101, (208) 426-1212.

Workshops

Workshops have special deadlines. Special Session 1 (SP1) is typically utilized for workshop or special event courses that span four days or fewer. This will allow you to add up until the day before the class begins and drop with a W one day before the class ends. If the class is dropped the last day, the drop will result in a grade of F.

Special Session 2 (SP2) is used to schedule courses that fall outside of standard predefined sessions (e.g., 1st 7-week, 2nd 5-week), and that span 5 days or more. This will allow you to add through the first day of class and drop without a W through the second day of class. The last date to drop with a W varies by course, and you are strongly encouraged to access your class schedule on myBoiseState and click on the Deadline link for the specific class to confirm the final penalty date. Courses dropped after the final penalty date will result in a grade of F.

To enroll in a workshop that is full and has not started yet, you must submit a *Registration Override Form*, with the instructor's signature, to the Registrar's Office, Administration Building, Room 110, (208) 426-4249, no later than the day before the workshop starts. Workshops do not have permission numbers.

Appeals to Drop a Class After the Deadline

If you need to drop a class in a current semester after the last drop deadline for the session, but before the session ends, you must submit an appeal using the *Request to Withdraw from a Class After the Deadline* form. Read the instructions, fill out the form, submit a written letter, and provide documentation of extenuating circumstances that would justify an exemption to the drop deadline policy. The instructor may deny the appeal. If the instructor signs the form, then you can proceed to request approval and signature from the dean (or associate dean) of the college offering the course. Once you receive all required signatures, submit the form to the Registrar's Office, Administration Building, Room 110, (208) 426-4249, for processing. The form is located online at boisestate.edu/registrar/student-forms.

Faculty-Initiated Withdrawals

An instructor has the option of withdrawing you from a course if any of the following conditions are present:

- you fail to attend one of the first two meetings of a class that meets more than once each week, or
- you fail to attend the first meeting of a class that meets once each week, or
- you do not satisfy the initial participation requirements of a fully online class.

You should not expect that an instructor will withdraw you for nonattendance. The primary responsibility for course withdrawal rests with you.

To withdraw a student for failing to attend one of the first two meetings of a class that meets more than once each week or the first meeting of a class that meets once each week, the instructor has the option to submit a *Faculty-Initiated Withdrawal Form* to the Registrar's Office, Administration Building, Room 110, (208) 426-4249, within the first five days of the semester. If you are withdrawn from a course for failing to attend these specified class meetings, you may re-enroll in the course with the instructor's permission through the tenth day of the semester (see the *Academic Calendar Deadlines by Session* table in this catalog for the exact deadline of the various sessions). To be withdrawn for failing to satisfy entrance requirements, the instructor or the department must notify you of the impending withdrawal and then request the withdrawal through the Registrar's Office. All faculty-initiated withdrawals will be removed from your record and will not appear on your transcript.

Department-Initiated Withdrawals

To be withdrawn for failing to satisfy entrance requirements, the department must notify you of the impending withdrawal and then request the withdrawal through the Registrar's Office. All department-initiated withdrawals will be removed from your record and will not appear on your transcript. See University Policy 4185 for department-initiated withdrawal reasons.

Attendance Policy

You are responsible for attending courses for which you are enrolled. You are also responsible for making up any work you may have missed by failing to attend class, even if the absence was approved by Boise State University, necessitated by illness, or necessitated by a personal emergency. In this sense, then, there are no "excused" absences.

Please note, you should consult your course syllabus for instructor's class attendance policy.

Complete Withdrawal from Boise State

If you wish to leave the university in good standing, you must drop all your current semester classes and remove yourself from any waitlists by logging in to your Student Center on myBoiseState. See the *Academic Calendar Deadlines by Session* table in the front of this catalog for specific deadlines for the various sessions. If the complete withdrawal for regular session is made after the tenth day of classes and you have not paid your fees, you are still responsible for the entire amount of fees incurred plus a nonrefundable $40.00 administrative processing fee. If you do not cancel your registration or completely withdraw by the appropriate deadline for the session, you will be awarded a final grade of F. See University Policy 4185.

A complete withdrawal after the published deadline may be granted by appeal through the Registrar's Office due to extraordinary circumstances that can be documented. An *Academic Appeal Form* must be completed and submitted. The *Academic Appeal Form* can be found online at boisestate.edu/registrar/home/student-forms. For information on refunds of tuition and fees following a complete withdrawal, see *Tuition and Fees* chapter.

Financial Aid and Withdrawals

If you withdraw from the university, you need to be aware of federal regulations impacting your financial aid eligibility. Withdrawals will impact your compliance with Satisfactory Academic Progress (SAP). Please see the policy at boisestate.edu/financialaid. Complete withdrawals may also result in a financial obligation by you to return the unearned portion of any federal aid that disbursed to you, or your student account. You must repay Boise State for any unearned aid that had applied toward tuition and fee charges. A repayment may also be required for unearned aid disbursed directly to you. A full explanation of this policy, including examples, is available at boisestate.edu/financialaid/home/impacts-on-aid. If you are considering withdrawing from Boise State, we strongly recommend that you review this information. If you still have questions, please contact the Financial Aid Office, (208) 426-1664, for more information.

Administrative Withdrawal from Boise State

An administrative withdrawal is the process by which Boise State formally withdraws you from the university, usually without your consent or cooperation. You may be administratively withdrawn for a variety of reasons, including the following:

- failing to pay library fines, overdue loans, deferred fee payments, housing accounts, or other such charges,
- falsifying information on an admissions application or other university record or document,
- failing to respond to an official summons issued by the university,
- failing to pass prerequisite coursework.
- failing to meet academic standards, or
- exhibiting behavior that constitutes a clear and present danger to yourself or to others.

Administrative withdrawals due to nonpayment of financial obligations (library fines, overdue loans, deferred fees, housing accounts, etc.) are recorded with a grade of W and appear on your transcript if processed after the tenth day of the semester.

Administrative withdrawals due to ineligibility to be in a course or continue in school for reasons other than nonpayment of financial obligations may or may not appear on your transcript.

Notification of administrative withdrawals are sent to your BroncoMail account.

Questions About These Policies?

If you have questions about these policies, contact the Registrar's Office, Administration Building, Room 110, (208) 426-4249.

Grades

Boise State University's Grading System

Boise State University uses a 4.00 grading scale. Table 3 lists the letter grades that instructors use to document their evaluation of your work and your academic status in the class. In addition, Table 3 defines the meaning of each letter grade and specifies the number of quality points that correspond to each grade. Quality points are used to determine your grade-point average (GPA). The procedure for calculating your GPA is described in "How to Calculate Your Grade-Point Average (GPA)."

How to Calculate Your Grade-Point Average (GPA)

Boise State calculates and documents three types of grade-point averages (GPA):

- Cumulative GPA
- Semester or term GPA
- Boise State GPA

Each of the three types of GPA is calculated with the same formula:

Total quality points earned divided by GPA credits attempted = GPA

In calculating your cumulative GPA, Boise State uses courses you have taken at the university in your current career and all courses you have transferred from other post-secondary institutions—but only if you received a final letter grade (A+ through F) in those transferred courses. During any semester you can be enrolled in one of two possible careers: undergraduate or graduate.

In calculating semester GPA, the formula uses only the quality points earned and GPA credits attempted that semester. For Boise State GPA, the formula uses only quality points earned and GPA credits attempted at Boise State in your current career.

All GPA calculations exclude credits for

- pass/fail courses in which you received a final grade of P (note: a grade of F will impact your GPA),
- courses that you registered for, but later dropped from your schedule, even though the course may appear on your transcript with a final grade of W or CW,
- courses you took under audit status (AUD or UAU), and
- courses in which you have received the grade of I, for incomplete; or IP, for in-progress (until the I or IP is changed to a letter grade).

Incomplete Grades

Instructors can enter a grade of I—for incomplete—if both of the following conditions are present:

- You have completed either 80% of the course or 80% of the coursework.
- Extenuating circumstances make it impossible for you to complete the course before the end of the semester.

To receive an incomplete, you and your instructor must agree to a contract stipulating the work you must do and the time in which it must be completed for you to receive a grade in the class. The terms of this contract are viewable on myBoiseState (my.boisestate.edu/) under your Student Center To Do List. The contract time varies as set by the instructor, but may not exceed one year. If no grade other than incomplete has been assigned one year after the original incomplete, a grade of F will automatically be assigned. The grade of F may not be changed without approval of the University Academic Appeals Committee. As long as you have an incomplete in a class, you may not re-enroll in the class during another semester. A grade of incomplete is excluded from GPA calculations until you receive a final grade in the course. You cannot graduate with a grade of I (incomplete) on your record.

You may not remove the incomplete from your transcript by re-enrolling in the class during another semester.

- Courses repeated prior to Fall 1995 use a grade replacement policy. Only the most recent grade was used in calculating the cumulative GPA.
- Courses repeated Fall 1995 through Summer 2001 used a grade averaging policy. Courses repeated during this time period will be averaged, using both grades in the calculation of the GPA.
- Beginning Fall 2001 and on, courses repeated will use a grade replacement policy. Only the most recent grade will be used in calculation of the cumulative GPA.

Table 3 Letter Grades

Letter Grade	Meaning	Quality Points per Credit Hour	Used to Calculate GPA?
A+		4	Yes
A		4	Yes
A-		3.7	Yes
B+		3.3	Yes
B		3	Yes
B-		2.7	Yes
C+		2.3	Yes
C		2	Yes
C-		1.7	Yes
D+		1.3	Yes
D		1	Yes
D-		.7	Yes
F	Failure	0	Yes
P	Pass: satisfactory work equivalent to C or higher; credits earned	0	No
I	Incomplete (See *Incomplete Grades* in this chapter.)	0 (until changed to a letter grade)	No
W	Student withdrew from the course	0	No
AUD	Course was taken under audit status	0	No
UAU	Unsatisfactory Audit (did not meet requirements set by instructor)	0	No
IP	In-Progress (used for dissertation, portfolio, project, and thesis work in progress*)	0 (until changed to a letter grade)	No
CW	Student completely withdrew from all classes that semester	0	No

*Note: if a student voluntarily leaves a graduate program in good standing, any IP grades will be changed to grades of W.

Questions About Grades?

If you have questions about grades, contact the Registrar's Office, Administration Building, Room 110, (208) 426-4249.

Tuition and Fees

In general, the costs of attending Boise State University arise from tuition, institutional fees, and special fees (such as fees for private music lessons or laboratory classes). Your actual costs depend on how many classes you take, the type of classes you take, and your status as a resident or nonresident student. In addition to these fees, you may also have to pay such additional charges as workshop fees or materials charges, depending on the type of classes you take.

This chapter defines the current tuition and fees for attending Boise State University and provides other information about tuition and fees, including information on deadlines, deferred payment, and the senior-citizen rate. Also included in this chapter are some of the more commonly asked questions about Idaho residency requirements.

Deadlines for Paying Tuition, Fees, and Other Charges

You are expected to pay all tuition, fees, and other charges by the deadline specified in the current Academic Calendar. If you register after the deadline, you will be expected to pay all tuition, fees, and other charges when you register. You may pay with electronic check or credit/debit card.

Access your student account on myBoiseState to find out deadlines for paying tuition, fees, and other charges. Boise State does not mail out paper statements. Log in to myBoiseState, select Student Center, then select the Student Financials tile. Please contact Student Financial Services, Administration Building, Room 101 or call (208) 426-2134, for specific fee information. Other financial information is available on the Student Financials website at boisestate.edu/vpfa-student-financial-services.

Deferred Payment of Tuition, Fees, and Other Charges

If you are unable to pay tuition and fees before the deadline established in the current Academic Calendar, you may be able to pay your fees in three equal installments. To do so, you must be registered for two or more billable credits, and must not have delinquent or past-due accounts with the university.

To enroll in the fee payment plan, complete the request on myBoiseState. Select Student Center, then select the Student Financials tile, select Make a Payment, select Payment Plans, follow the prompts. At the time of the submission, your fees will be split into three equal installments. The installments will be due on or before August 25, September 25, and October 25 for the fall semester and on or before January 25, February 25, and March 25 for the spring semester. A $30 enrollment fee will be charged to use the plan. For more information concerning the fee payment plan, visit Student Financial Services, Administration Building, Room 101, or call (208) 426-2134.

The fee payment plan must be submitted before the fee payment deadline to avoid the $50 penalty. In the event that you withdraw from school or are administratively withdrawn after the refund period, any balance owing on the installment plan will be immediately due and payable.

Note: Delinquent balances will be assessed a late charge of 1.75% per month or $10.00, whichever is greater, and you will forfeit any opportunity to defer payment in the future.

If financial aid arrives before your fee payment plan is repaid, the financial aid will be applied to the amount owed. This application of financial aid takes precedence over any other method of repayment. If you defer payment and then withdraw from the university, Boise State will deduct the amount owed on your account from any refund you may be eligible to receive. You will also be charged a $40.00 complete withdrawal fee.

If your tuition, fees or other charges remain unpaid, you may be sent to an outside collection agency and will be responsible for any additional collections fees.

How Boise State Calculates Your Tuition and Fees

Your actual cost to attend Boise State depends on how many classes you take, the type of classes you take, and your status as a resident or nonresident student. In addition to these fees, you may also have to pay such additional charges as workshop fees, e-textbook fees, or materials charges, depending on the type of classes you take.

When you apply for admission to Boise State, you pay a one-time, nonrefundable fee ($50.00) for processing your application. All degree-seeking and readmitted students are also required to pay a New Student Curriculum Fee ($175.00). To calculate your other tuition and fees, Boise State uses a milestone of 9 credits per semester. Once you register for 9 or more credits, you are required to pay the full tuition and fees shown in Table 4, below. See Student Financials website for the most current tuition and fee information at boisestate.edu/vpfa-student-financial-services.

Table 4 Full Tuition and Fees, Per Semester Graduate (9 credits or more)		
Tuition and Fees	*Resident*	*Nonresident*
Tuition	$3,555.18	$12,015.18
Institutional Fees	$1,267.82	$1,263.82
Total (for 9 to 16 credits)	$4,819.00	$13,279.00
Overload Fee*	$252 per credit hour	$252 per credit hour
*An overload fee is imposed if you register for 17 or more credits.		

In determining whether you have reached the milestone of 9 credits per semester, Boise State counts all credit hours on your registration form, including credit hours under audit status, credit hours for courses you are repeating, and credit hours for workshops. In short, nearly every combination of any type of credit hour counts toward that 9-credit milestone. Please note, also, that developmental courses count as 3 credits each toward the 9-credit milestone, even though you earn no credits by taking the course.

Note: Tuition, fees, and other charges are subject to change at any time by the Idaho State Board of Education, acting as the Board of Trustees for Boise State.

Other Fees and Charges

If you enroll for fewer than nine credits, your fees are calculated by the credit hour, as shown in Table 5, below.

Table 5 Part-time Graduate Fees, Per Semester or Session (Less than 9 credits)		
Semester or Session	*Resident Per Credit*	*Nonresident Per Credit*
Fall 2022 and Spring 2022	$469.64	$826.64*
Summer 2023	$367.75	$402.75
*Includes $337.00 nonresident per credit tuition fee.		

Note: Fees are calculated based on the courses you are registering for. If you enroll in private music lessons, you pay a music fee according to the schedule shown in Table 6.

Table 6 Fees for Private Music Lessons		
1 Credit	*2 Credits*	*4 Credits*
$200	$400	$400

Section 103 Compliance Policy (Veterans' Benefits and Transition Act)

The Veterans Benefits and Transition Act of 2018, Section 103, effective August 1, 2019 requires Students using U.S. Department of Veterans Affairs (VA) Post 9/11 G.I. Bill® (Ch. 33) or Vocational Rehabilitation and Employment (Ch. 31) to register for classes, submit a G.I. Bill® Declaration and VA Certificate of Eligibility (COE) for entitlement (or the equivalent award letter) to the Boise State University Veteran Services Center link at boisestate.edu/veterans/veteran-dependent-declaration-of-semester-benefits-form/. This must be done no later than two business days prior to the initial tuition bill deadline for the semester requesting education benefits.

These students will not be restricted in any way for 90 days from the tuition bill deadline, if payment has not been received due to a delay in receipt of benefits from the VA. After the 90 days, the university will review each student on a case by case basis. The student is responsible for payment of any tuition balance not covered by their VA education benefit by the appropriate deadlines.

According to VA, the University may not require a student to use his or her federal financial aid, or other sources of payment for tuition and fees while it awaits VA payments within the 90-day period. Students may choose, however, to utilize federal financial aid, or any sort of aid or loan for tuition/fees during the interim period if the student wishes to do so. Please contact Student Financial Services, Administration Building, Room 101 or call (208) 426-2134.

Idaho Senior Citizen's Fee Reduction

If you are an Idaho resident and are at least 65 years old, you are eligible to audit courses, on a space available basis, at no per credit charge. You will be responsible for any related special course fees (e.g., lab, online, private music, e-textbook, workshop fee). See *Registration Policies and Procedures*, Credit/Audit Status for information on auditing courses. Not all programs are eligible for this rate. If you choose to register on a graded basis and earn academic credit, this rate does not apply and you will be assessed regular tuition and fees. For more information, contact Student Financial Services. All payment deadlines apply.

Refund Policy

In general, if you completely withdraw from Boise State on or before the tenth day of the semester for regular session classes, you are eligible to receive a full refund of the money you paid to register (less a nonrefundable $40.00 complete withdrawal fee). If you withdraw after the tenth day of classroom instruction, you receive no refund. See the Academic Calendar in this catalog for deadlines of the other sessions. No refunds for private music lessons can be granted after the first five days of classroom instruction.

Note: In determining whether you have met the deadline and are therefore eligible for a refund, Boise State considers only the date on which you officially withdraw—not the date on which you stopped attending class. Please note, also, that registering late has no effect on refund deadlines; Boise State cannot extend the deadlines to take into account a late registration. In summary, you must completely withdraw from the university no later than the tenth day of classroom instruction for regular session classes. See the *Academic Calendar Deadlines by Session* table in this catalog for deadlines of the other sessions.

This general refund policy applies to full-time and part-time students regularly enrolled at the time of the withdrawal. However, the policy may not necessarily govern refunds for short courses, workshops, and continuing education classes. Because refund policies for such classes may vary, you should direct any request for a refund to the academic unit or organization offering the class.

In some circumstances, you may be expecting a full refund of tuition and fees, yet receive less than the amount you have paid to Boise State. If you owe money to the university, it will be deducted from the refund before it is issued. Similarly, Boise State will take a deduction from the refund check if you used financial aid to pay all or part of room-and-board costs, tuition, or registration charges. In such cases, Boise State reimburses the government agency or other organization that furnished the financial aid. Any balance that remains is forwarded to you, usually three to four weeks after you withdraw from the university.

Information on fee appeals may be obtained in Student Financial Services, Administration Building, Room 101, (208) 426-2134.

Idaho Residence for Tuition Purposes

Initial Determination of Residency Status

When you apply to Boise State, Admissions determines your status as a resident or nonresident for tuition purposes. After you have been admitted, if you have questions about your residency status, please contact the Registrar's Office at (208) 426-4249.

Procedures to Have Your Residency Status Reviewed

Your legal residence for fee purposes is determined at the time of initial application for admission to Boise State and remains unchanged in the absence of satisfactory written evidence to the contrary. The burden of proof in requesting reclassification to resident status rests with you in providing clear and convincing evidence of residency for tuition purposes as defined by the law. If you are applying to change a nonresident classification from the point of application or are requesting consideration for reclassification based upon satisfying state law, criteria must follow the procedure outlined below:

1. Contact the Residency Coordinator in the Registrar's Office, Room 110, Administration Building.
2. Complete the *Idaho Residency Determination Worksheet* and return it to the Residency Coordinator with supporting documentation. A form requesting reclassification to resident status may be filed after qualifying criteria have been satisfied, but no later than 10 school days after the opening of the semester for which the change in status is requested.
3. The Residency Coordinator will determine if you meet the criteria for residency and will notify you in writing of the decision.
4. You may appeal the decision of the Residency Coordinator in writing to the Residency Appeals Committee. To file an appeal the applicant must specify in writing why you believe you have met the criteria and on what basis you should be given residency. The appeal should be turned in to the Residency Coordinator. You will be notified in writing of the decision of the Residency Appeals Committee.
5. If you contest the determination of the Residency Appeals Committee that you are not a qualified resident, you may petition the State Board of Education for review. The petition must be submitted to the President of Boise State University in writing and must set forth your reasons for contesting the decision. The President will submit the petition to the Executive Director of the Office of the state Board of Education who will determine whether the Board or the Board's designated representatives will hear the appeal. If the Board decides to hear the appeal, it will set forth the scope of review and notify you of the time, date, and place of the hearing. The decision of the Board is final and binding on all parties concerned. You must agree to the release of information to the review body and must comply with deadlines established by the institution for requesting an appeal.

Relevant Law and Regulations

The statutory and regulatory provisions relevant to residency determinations may be found at:

- Idaho Code Section 33-3717B (institutions other than community colleges)
- Idaho Code Section 33-2110A (community colleges) IDAPA 08.01.04.

As an enrolled Boise State student, you may prove classification as an Idaho resident for tuition purposes by meeting the criteria for one of the following options.

1. Dependent Student: You have one or more parent(s)/legal guardian(s) who is domiciled in Idaho and provides at least 50% of your financial support. The parent/legal guardian must have maintained a bona fide domicile in Idaho for at least 12 months prior to the term in which you are applying for residency.
2. Independent Student: You receive less than 50% financial support from a parent/guardian and have continuously resided in, and maintained a bona

fide domicile, in Idaho for purposes other than education for at least 12 months prior to the term in which you are applying for residency.

3. Graduate of an Idaho High School: You are a graduate from an accredited Idaho high school, are domiciled in Idaho, and have an enrolled in an institution within 8 years immediately following secondary school graduation regardless of the domicile of your parent or guardian (except if a non-US citizen (see, definition of non-resident below)).

4. Completed 6 Years of Elementary and Secondary Education in Idaho: You have completed 6 years of elementary and secondary education in Idaho, are domiciled in Idaho, and have matriculated at an institution within 8 years following completion of secondary education.

5. Married to an Idaho Resident: You are married to a person who is classified, or eligible for classification, as an Idaho resident for the purpose of attending an institution, except that if you were enrolled full-time in any term during the 12-month period before the term in which you are proposing to enroll as a resident, then you must independently establish domicile.

6. Armed Forces: You, your spouse, or—if you are a dependent student—your parent/guardian meets one of the following criteria:
   a. Member of the Armed Forces who entered service as an Idaho resident, has maintained Idaho resident status, but is stationed outside of Idaho on military orders
   b. Member of the Armed Forces stationed in Idaho on military orders.
   c. Officer or enlisted member of the Idaho National Guard
   d. Member who has been separated, under honorable conditions, from the Armed Forces after at least 2 years of service
      i. Who at the time of separation designated Idaho as the intended domicile, and within 1 year of the date of separation enters an Institution; or
      ii. Who listed Idaho as the home of record in service, and within 1 year of the date of separation enters an Institution; or
      iii. Who moves to Idaho for the purpose of establishing domicile; provided however, to maintain status as a resident student, such person must actively establish domicile in Idaho within 1 year of registration at an Institution.

7. You are a member of the following Idaho Native American Indian Tribes: Members of the following Idaho Native American Indian Tribes whose traditional and customary tribal boundaries included portions of the state of Idaho, or whose Indian tribe was granted reserved lands within the state of Idaho:
   – Coeur d'Alene
   – Eastern Shoshone
   – Kootenai
   – Nez Perce
   – Shoshone-Bannock
   – Shoshone-Paiute

8. You are a graduate student who has earned a baccalaureate degree from a public institution (or institution pursuant of Idaho Code 33-2402) of higher education and physically resided in Idaho for the final 12 months of undergraduate studies and enrolled as a graduate student no later than 36 months after receiving a baccalaureate degree from the undergraduate institution.

Becoming an Idaho Resident

A domicile is your true, fixed and permanent home, and place of habitation; it is the place where you intend to remain and expects to return to when leaving without establishing a new domicile elsewhere. If you are a dependent student, residency is based on the domicile of your parent or legal guardian. If you are an independent student, residency is based on your domicile or your spouse's.

Domicile may be proved by:

1. If you were attending school full-time, the filing of Idaho state income tax return covering a period of at least 12 months before the term in which the student proposes to enroll as a resident student and permanent full-time employment (30 hours per week, or 120 hours per month) or the

hourly equivalent in Idaho for a period of at least 12 months before the term in which the student proposes to enroll as a resident student.

2. If you weren't attending school full-time in the prior year, proving at least five of the following type of criteria for 12 months before the term for which residency is sought:
   a. Ownership or leasing of a residence in Idaho;
   b. Registration and payment of Idaho taxes or fees, other than sales or income tax;
   c. Registration to vote in Idaho;
   d. Holding an Idaho driver's license or ID card;
   e. Evidence of abandonment of a previous domicile;
   f. Establishment of accounts with Idaho financial institutions;
   g. Other similar factors such as:
      i. Enrollment of dependent children in Idaho elementary or secondary schools
      ii. Acceptance of permanent employment in Idaho
      iii. Documentation of need to care for relative in Idaho
      iv. Utility statements
      v. Employment documentation

Important Definitions

Non-resident student means you meet one of the following:

1. Do not qualify for residency under the above options; or
2. Attend an institution with financial assistance from another country or governmental unit or agency thereof, such non-residency continuing for 1 year after completion of the term for which such assistance is last provided; or
3. Are not a citizen of the United States, unless you can provide verification of lawful presence in the United States. "Lawful presence" is verified through the means set forth in Idaho Code, 67-7903. As a non-citizen who can provide verification of lawful presence in the United States, you must meet one of the seven pathways to establish residency set forth above.

Continuously Resided means you have maintained a physical presence in Idaho for 12 consecutive months. As an independent student you must have continuously resided in Idaho for the 12 months prior to the term for which residency is sought. Evidence of physical presence in Idaho might include: utility statements, rental agreement, bank statements, documentation from an Idaho employer, etc.

Primarily Educational Purposes means enrollment in 12 or more credit hours in any term during the past 12 months.

Armed Forces means the United States Army, Navy, Air Force, Marine Corps, Coast Guard, and the reserve forces of those groups and does not include the National Guard or any other reserve force.

Idaho Residency Laws

The residency laws can be found at legislature.idaho.gov/statutesrules/idstat.

Questions About Tuition and Fees?

If you have questions about tuition and fees, contact the Account Maintenance Center, Administration Building, Room 101, (208) 426-2134.

Questions About Residency Status?

If you have questions about residency status, contact the Registrar's Office, Administration Building, Room 110, (208) 426-4249.

Questions About Other Financial Aid?

If you have questions about financial aid, contact the Financial Aid Office, Administration Building, Room 117, (208) 426-1664.

Financial Aid and Scholarships

As a graduate student at Boise State University, you may apply for a wide variety of financial aid, drawn from an equally wide variety of sources. You should investigate any financial aid that seems appropriate to your circumstances, beginning with financial aid available from your department or your graduate degree program.

Graduate Assistantships

Most departments award teaching or research assistantships that include a stipend and a waiver of tuition and fees. You may obtain an application for an assistantship at boisestate.edu/graduatecollege, from the department in which you are applying, or from the Graduate College, Riverfront Hall, Room 307. For additional information, please see University Policy 7170 at boisestate.edu/policy.

Deadline for Departmental Aid

You should apply for these awards when you apply for admission to the Graduate College—no later than February 15. Some departments require an application deadline the first week in January. If your application is received by the department after the required deadline, it may not be considered until the following year.

The information contained in this publication reflects current procedures and rules affecting the delivery of financial aid. The university reserves the right to change at any time schedules, rules and regulations. Appropriate notice of such changes is given, whenever possible, before they become effective.

Federal, State, and Institutional Aid

As a graduate student, you can apply for loans and work-study through the federal aid programs. Complete the following steps to apply for federal aid:

How to Apply for Financial Aid

1. Complete the *Free Application for Federal Student Aid* (FAFSA). You must submit the FAFSA each year to be determined eligible for federal loans and work study. Some need-based scholarship programs also require the filing of a FAFSA. You may use one of the following methods to apply:
   - Apply using FAFSA on the web (fafsa.gov). If you have applied for aid in prior aid years, use your FSA ID to log in. If this is your first time completing the FAFSA, you will set up an FSA ID as part of the FAFSA application process.
   - Apply using renewal FAFSA on the web (fafsa.gov). If you applied for aid the previous year, the renewal application is simply a FAFSA that contains most of the information you provided last year. Updating the information may be faster for you than filling out a new FAFSA.

Tips on Completing the FAFSA

- Boise State University Title IV Code is 001616.
- Boise State University Financial Aid address: 1910 University Dr., Boise, ID, 83725-1315.
- Ensure that all information you provide on the application is entered correctly. The name you provide must match the name on your Social Security card.
- On the FAFSA website, use the IRS data retrieval tool to expedite the processing of your application. The IRS data retrieval tool will also help ensure accuracy for income and tax questions.

- Provide all required signatures; use your FSA ID as an electronic signature.
- Do not send tax documents or other materials with your application or signature page.
- If you provided an email address on the FAFSA, you will receive an email with a link to your Student Aid Report (SAR). If you leave the email address question blank, you will receive your SAR through the regular mail. Review your SAR and make any necessary corrections.

2. Submit additional materials, if requested. The Financial Aid Office uses myBoiseState and BroncoMail to alert students of the need to provide additional materials. Certain applicants are requested to provide documents to verify the information reported on the FAFSA. Examples of requested documents include:
   - Income verification forms
   - Citizenship documents: A birth certificate, passport, Alien Registration Card, or a Social Security card
   - Additionally, you may be asked to use the "Retrieve IRS data" tool featured in your FAFSA application to migrate income and tax information directly from the IRS into your financial aid application.

3. **Complete actions identified on myBoiseState**
   - Loan entrance counseling and Master Promissory Note online activities will be identified as To Do items if you accept student loans.
   - Aid offer acceptance. Once processing of your application is complete, your aid offer information will appear on your myBoiseState student account. You may accept, reduce, or decline your aid offers on myBoiseState.

4. **Be aware of the following deadlines**
   February 15: Deadline to complete the online scholarship application to be considered for many scholarships. It is also the recommended date to submit your FAFSA for the upcoming academic year.
   June 1: Recommended final date to submit FAFSA application and all documents and other information requested by the Financial Aid Office to ensure that your financial aid will be available for the first disbursement of fall semester.

If you miss these deadlines, you may still apply for federal aid. However, processing of FAFSA applications received after the deadlines may not be completed in time for aid availability by fee payment deadline or when classes begin.

5. **Applying for Summer Aid**
   Most financial aid is offered for use during the fall and/or spring semester(s). Some students may have remaining eligibility for summer loans. See boisestate.edu/financialaid/home/apply-for-aid/summer-aid for details on applying for summer aid, deadlines, etc. For summer 2023 aid consideration, make sure that you have completed the 2022-2023 FAFSA.

6. **Staying Informed**
   Most official correspondence will be sent to your student email address (BroncoMail). Remember to check your BroncoMail at least weekly to determine if additional information is needed. To easily find financial aid updates, review information at boisestate.edu/financialaid . Information is updated regularly on policy changes or other important information that might affect your financial aid. You can also "Like" the Boise State Financial Aid Facebook page to receive updates.

Eligibility Requirements

The following is a summary of the most common criteria affecting your eligibility for financial aid. Eligibility requirements are explained in more detail at: boisestate.edu/financialaid/home/policies.

- Complete the application process after October 1st prior to each aid year for which you desire to be considered for financial aid (see details under "How to Apply for Financial Aid").
- Be admitted to Boise State and be matriculated into a degree-seeking program or a certificate program approved for financial aid.
- Register for classes by the tenth day of the semester.
- Maintain Satisfactory Academic Progress Standards (see details on the following page).
- Have a high school diploma or GED. In most cases, if you have been home-schooled and have been admitted to Boise State into an approved degree or certificate program you will also be eligible.
- Be a U.S. citizen, permanent resident or eligible noncitizen. If you are attending Boise State on a student visa, you are ineligible for federal aid, but may apply for scholarships.
- You must not owe a repayment of any federal aid to Boise State, to any other school previously attended, or to the U.S. Department of Education.
- You must not be in default on a federal student loan or owe a repayment of grant funds.
- Submit all verification materials requested by the Financial Aid Office as soon as possible, but no later than the specified deadlines. Examples of requested materials include citizenship documents and proof of untaxed income. You may also be asked to complete the IRS data retrieval process.
- You must meet all other eligibility requirements. Please contact the Financial Aid Office if you have any questions.

Sources of Financial Aid

William D. Ford Federal Direct Loans

Unsubsidized Direct Loans are long-term loans available to graduate students. The interest rates on newly originated Direct Loans for 2021-2022 is 5.28%. To apply, complete the FAFSA, available at fafsa.gov.

Boise State processes Direct Loan applications throughout the year. If you are offered a Direct Loan, you will need to sign a master promissory note (MPN) if you do not already have one on file. If you have not previously received a Direct Loan, you must complete a loan entrance counseling session (studentloans.gov) before you can receive the funds. Also, the Direct Loan commits you to participating in an exit loan counseling session when you graduate or withdraw from the university.

You are expected to begin repaying the Direct Loan six months after graduation or six months after you have dropped below five credit hours. Please see the exit counseling information link on the following website for more information: studentloans.gov/.

Table 7, below, shows estimated repayment schedules for typical Direct Loans. Your actual debt and repayment plan may not match any of these examples; they are presented here merely to show typical loan amounts and repayment plans.

Table 7
Federal Direct Loan Estimated Repayment Schedule (based on 5.05% interest rate)

Loan Amount	Number of Payments	Monthly Payment	Total Interest	Total Repaid
$5,000.00	120	$54.00	$1,448.00	$6,448.00
$10,000.00	120	$107.00	$4,343.00	$12,895.00
$15,000.00	120	$161.00	$3,813.00	$19,343.00
$25,000.00	120	$269.00	$7,238.00	$32,238.00

Federal Graduate PLUS Loans

Federal Graduate PLUS Loans are available to graduate students who still have an unmet cost of attendance after borrowing through the Direct Loan program, plus any other sources of aid. Other differences between the Federal PLUS Loan for Graduate Students and other federal loan programs include:

- You must not have an adverse credit history, as reported by a national credit reporting agency. If you have an adverse credit history, you may still qualify with an eligible co-signer.
- Repayment begins within 60 days of the last disbursement of the aid year. There is no six-month grace period. You may request a deferment while enrolled at least half-time.
- The interest rate changes annually; the rate for 2021-2022 is 6.28%.
- Annual loan limits are determined by subtracting all other sources of aid from the estimated cost of attendance figure.
- A separate PLUS Master Promissory Note must be signed.
- You must complete separate PLUS loan counseling requirements. In addition to the requirements reported above, you must meet all other eligibility requirements. For more information on the Federal PLUS Loan for Graduate Students, please visit studentloans.gov.

Federal Work-Study Program (FWS)

This program gives you the opportunity to earn money to pay for a portion of your educational expenses. FWS aid is offered to selected graduate students who show financial need. You receive payment based on hours worked. Payment is typically through direct deposit by the payroll office.

Atwell J. Parry Idaho Work-Study Program

This work-study program operates much like the Federal Work-Study Program, giving you the opportunity to earn money to pay for a portion of your educational expenses. Only Idaho residents are eligible for this type of work-study.

The Graduate Gem Nonresident Tuition Waiver

The merit-based Gem Scholarship for graduate students waives nonresident tuition for out-of-state and international graduate students with an overall GPA of at least 3.30 who are accepted into an eligible graduate degree program. (boisestate.edu/graduatecollege/funding/scholarships-and-fellowships/).

You must submit an application; you are not automatically considered for the waiver. Visit boisestate.edu/graduatecollege/funding/scholarships-and-fellowships/ .

For additional information, see the Graduate College website (boisestate.edu/graduatecollege/funding/).

The waiver is renewable for an additional year if you complete a minimum of 18 graduate credits in the first two semesters and maintain a 3.00 GPA.

Scholarships

Information about scholarships can be found at boisestate.edu/scholarships or boisestate.academicworks.com.

Short-Term Loans

Emergency Short Term Loans are available if you have a minimum grade-point average of 2.00. This loan is available if you experience a significant financial emergency during the academic year. The maximum amount available is $250 per semester. Only one loan is given per semester. The loan requires a $25 processing fee, and must be repaid within 90 days. Applications are available in the Student Financial Services Office, Administration Building, Room 101.

Financial Aid for the Summer Session

The university has limited financial aid available for the summer session. If you need financial aid for the summer session, review the information on the Financial Aid website at boisestate.edu/financialaid/home/apply-for-aid/summer-aid. Please note, also, that your FAFSA for the preceding academic year must be submitted by March 15 to ensure your summer aid is ready before your summer classes begin.

Financial Aid for International Students

As part of the admissions process as an international student, you must demonstrate that you have sufficient funding to attend Boise State University for one academic year. You are eligible for scholarships and tuition waivers outlined in this Financial Aid section, except for financial aid provided by the U.S. government or State of Idaho. As you apply for graduate admission to Boise State University, the application packet you receive from International Admissions contains a brochure explaining the various financial resources that are available.

Disbursing Funds

In March, the Financial Aid Office begins notifying scholarship recipients for the upcoming year. Federal loans are offered as applications are processed. In the fall, if you have cleared your To Do items on myBoiseState by July 1, your financial aid will be applied to your student fees approximately one week before the start of classes. Any remaining funds will be electronically deposited into your bank account or a check will be mailed to you prior to the start of classes. Again in the spring, financial aid will be applied to your student account approximately one week prior to the start of classes. Any excess aid will be mailed to you or electronically deposited prior to the start of classes.

Note: All financial aid funds are distributed from the Student Financial Services Office, Administration Building, Room 101. Please direct questions about your balance funds to that office at (208) 426-2134.

Change in Enrollment Status

Any change in your enrollment status may affect your ability to maintain satisfactory academic progress (see Satisfactory Academic Progress below).

Partial Withdrawals

Adjustments may be made to your financial aid eligibility if enrollment changes after disbursement of aid has occurred. Please be aware that withdrawals will negatively impact your satisfactory academic progress performance.

Complete Withdrawals

In general, you will receive no refund of tuition and fees if you withdraw from the university after the tenth day of classroom instruction. Federal financial aid regulations state that eligibility for aid be recalculated whenever you withdraw from Boise State University, either officially or unofficially. The recalculation determines the amount of aid you have "earned," by prorating according to the percent of the term completed before withdrawing. For example, if you withdraw after completing only 30 percent of the term, you will have "earned" only 30 percent of aid eligibility. If you complete more than 60 percent of the term, you

are considered to have "earned" 100 percent of your aid eligibility. Examples of these calculations can be found at: boisestate.edu/financialaid/home/impacts-on-aid/enrollment-impacts/complete-withdrawal. In addition, if you are attending a shorter session (a "module"), you may need to reconfirm future attendance in that term; otherwise, a withdrawal calculation will be done.

Once you officially withdraw, the Financial Aid Office will determine if/what is owed and will provide notification of adjustments to financial aid funding. If you have questions about what will happen when you withdraw, review the information on the website at: boisestate.edu/financialaid/home/impacts-on-aid/enrollment-impacts/complete-withdrawal. After reviewing that information, if you still have questions, contact the Financial Aid Office.

Unofficial Withdrawals

The university is required to verify attendance/participation for any student who unofficially withdraws or receives all F grades for a term. If attendance/participation cannot be verified, students will be required to immediately repay all financial aid received for that term.

Satisfactory Academic Progress

Before you receive federal and state financial aid, federal regulations require that you have met and continue to meet some basic academic progress standards. These standards include maintaining a minimum GPA, a limit on the number of credits that may be attempted toward completion of a degree, and that you are on pace to earn a degree within that credit limit. For a complete description of satisfactory standards, please refer to: boisestate.edu/financialaid/home/impacts-on-aid/sap.

Satisfactory Academic Progress Review

The university reviews your satisfactory academic progress following the end of each semester. If you fall below any of the minimum standards (as defined in the policy), you will be placed on a financial aid warning for a semester. If, at the end of that semester you are still not meeting satisfactory academic progress standards, you will be ineligible for financial aid or veterans education benefits until you are once again making satisfactory academic progress.

Appeals

If there were extenuating circumstances impacting your ability to meet the Satisfactory Academic Progress standards, you have the right to file a written appeal for temporary exemption from this policy. Examples of extenuating circumstances include the death of an immediate family member, illness or injury to the student, or similar circumstances. In filing an appeal, you must document any extenuating circumstances that prevented you from making satisfactory academic progress. You must also address how that circumstance has been addressed and will no longer impact your academic progress. Appeal forms may be downloaded at: boisestate.edu/financialaid/home/impacts-on-aid/sap.

Staying Informed

Official correspondence will be sent to your student email address. Remember to check your BroncoMail at least weekly to determine if additional information is needed. To easily find financial aid updates, review the information at boisestate.edu/financialaid. Information is updated regularly on policy changes or other important information that might affect your financial aid. You can also be a fan of the Boise State Financial Aid Facebook page to receive updates.

Questions About Financial Aid?

If you have questions about financial aid, contact the Financial Aid Office, Administration Building, Room 124, (208) 426-1664 or (800) 824-7017, or by email: financialaid@boisestate.edu.

Housing and Residence Life

The department of Housing and Residence Life provides on-campus housing options for Boise State students in several distinct residential communities, all located within walking distance from campus. You can choose one of four apartment complexes designed for graduate and family housing.

Housing and Residence Life professional and student paraprofessional staff members create an inclusive, safe, learning-centered, and caring community environment where residents develop meaningful and lasting relationships with each other and engage in campus life.

Fair-Housing Policy

Boise State is an equal-opportunity institution, offering its living accommodations and making housing assignments without regard to race, color, national origin, or handicap (as provided for in Title VI and Title IX and Sections 503 and 504 of the Rehabilitation Act of 1973).

Rules and Regulations

Housing and Residence Life community standards, expectations, procedures, as well as Boise State rules and regulations are defined more specifically in the *Residence Hall License Agreement*, *Student Code of Conduct*, and online at boisestate.edu/housing.

Graduate Housing

Housing and Residence Life has identified specific communities that can be conducive to meeting your demands of being a graduate student. All other residential facilities are designed to address the needs of first-year and other undergraduate students.

University Heights and **University Manor** consist of one and two bedroom apartments. Each unit has a wall-unit air conditioning/heating system, stove, and refrigerator. Laundry facilities are located on-site, with machines taking credit and debit cards. The cost of laundry is not included in rent. All utilities (electricity, gas, water, sewer, trash, cable and Internet) are provided for a utilities flat fee.

University Park consists of two and three bedroom apartments. Each unit has a wall-unit air conditioning/heating system, stove, and refrigerator. Laundry facilities are located on-site, with machines taking credit and debit cards. The cost of laundry is not included in rent. All utilities (electricity, gas, water, sewer, trash, and internet) are provided for a utilities flat fee.

University Village consists of two bedroom apartments. Each unit has central air conditioning/heating, stove, refrigerator, and dishwasher. Laundry facilities are located on-site, with machines taking credit and debit cards. The cost of laundry is not included in rent. All utilities (electricity, gas, water, sewer, trash, and internet) are provided for a utilities flat fee.

How to Apply for Housing

To apply online for housing, please go to boisestate.edu/housing and click the Apply for Housing link.

Prospective apartment residents will receive an apartment offer and once that offer has been accepted, you will need to pay a $50 nonrefundable application fee and a $250 refundable security deposit at the time of license agreement signing.

Note: The application process to live with Housing and Residence Life is a separate process from the one to apply for admission to the university. If you apply for housing, it does not constitute acceptance or approval for admission to the university, nor does being accepted for admission to the university signify that your application for housing has been accepted and approved.

Housing Preferences

When your application for on-campus housing is complete, you will be assigned to designated graduate student spaces whenever possible based on the date of your completed application and availability of spaces at the time of assignment.

Questions About On-Campus Student Housing?

If you have any questions about Housing and Residence Life, contact us at (208) 447-1001, housing@boisestate.edu, or online at boisestate.edu/housing.

Student Services

Boise State University provides a variety of services, programs, and activities to help you obtain the maximum benefit from your university experience; most services are free if you are currently enrolled.

Academic Programs and Services

The following services are available to you if you are seeking assistance with academic matters, from improving your writing, reading, and study skills to planning for a career

Advising and Academic Support Center (AASC)

The purpose of the Advising and Academic Support Center (AASC) is to provide advising and academic support with special emphases on first-year and undeclared students, major exploration, and academic performance following probation or reinstatement. AASC also offers student-success courses, academic coaching, access to online tutoring, and coordinates the Boise State Learning Assistant program. AASC's philosophy is that all students can achieve success if they set realistic educational and career goals, and take active steps to develop and practice academic skills. AASC encourages all enrolled students to understand university policies and values, take advantage of university support resources and involvement opportunities, and see themselves as owners of their learning process. Contact AASC at boisestate.edu/aasc, call (208) 426-4049, or email academic@boisestate.edu.

The Boise State Testing Center

The Boise State University Testing Center provides proctoring services for Boise State academic exams. Our services provide both faculty and student support for proctored assessments delivered in Boise State courses. Located in the Simplot Micron Academic Success Hub, 2nd Floor, Room E213. For hours of operation and proctoring information please visit boisestate.edu/testing/ or email testingcenter@boisestate.edu.

Career Services

Career Services helps you achieve your career goals. From your first year to your last, we help you make the most of your Boise State experience. Career Services offers individual appointments and online resources to support your career exploration, career planning, and job search efforts. PathwayU, our web-based career guidance tool, allows you to explore careers based on your interests, personality, and values. Career Services facilitates the university's internship, Work U, and Hometown Challenge programs which provide you with many opportunities to gain experience, develop skills, and build your network. We host events to connect you with employers including career fairs, industry networking events, and on-campus interviews. Through Handshake, you can access on- and off-campus student employment, internships, and career-employment opportunities. BroncoLink is the university's alumni connection and mentoring platform allowing you to seek out the career support of Boise State alumni. Further information is available at boisestate.edu/career or by calling (208) 426-1747.

English Language Support Programs

Free one-on-one English language tutoring and course placement available for multilingual English learners. Call (208) 426-3426 or email englishsupport@boisestate.edu for information. Additional resources for multilingual students are online at boisestate.edu/englishsupport.

Graduate Student Orientation

The Graduate Student Orientation event is designed to ease your transition into the Boise State graduate student community and to equip you with the tools and knowledge that you will need in order to be successful in your graduate program. Graduate Student Orientations are held the week before the start of fall and spring semester classes. At the event you will have the opportunity to meet deans and staff, be introduced to the many support programs and opportunities that Boise State provides, and learn more about Boise State. When you are admitted, you will be notified of your admission status along with the next steps for completing your enrollment. You will also receive an email invitation, sent to your Boise State University email address, to register for the Graduate Student Orientation; participation is encouraged for all Boise State graduate students. Reservations are required to attend.

Proctoring and Academic Services (PACS)

PACS provides a variety of testing services to Boise State students and the community. Tests offered include: Accuplacer (for placement into math courses), CLEP (College Level Equivalency Placement) and DSST exams for credit for prior learning, professional certification exams through multiple vendors (e.g., ETS, PearsonVue, Scantron, PSI, Prometric Kryterion), World Language Placement, International Student Admissions exams (TOEFL) and the Praxis, Miller Analogies and GRE Tests (program and graduate admission). Located in the Chrisway Annex, 1406 Chrisway Dr. For testing hours and appointments, call (208) 426-2761 or go to boisestate.edu/pacs . You can also direct testing questions to pacs@boisestate.edu.

Student Success

Boise State offers a variety of student success (ACAD) courses. ACAD courses promote academic success through intentional assignments that emphasize skill-building, learning awareness, and academic goal setting. For more information, contact the Advising and Academic Support Center at (208) 426-4049 or academic@boisestate.edu.

Test Preparation

Assisting you in preparation for graduate admission exams for graduate school is the focus of the short online courses on the Graduate Record Exam (GRE), the Law School Admissions Test (LSAT), and the Graduate Management Admissions Test (GMAT) offered through Professional and Continuing Education, in the Division of Extended Studies at Boise State. For more information, call (208) 426-1709.

Writing Center

The Boise State Writing Center is a free service open to all members of the campus community—students, faculty, and staff. We offer support and encouragement to all writers, primarily through one-to-one consultations, both in person and online. Each consultation is geared toward the individual needs of the writer and is a collaborative effort between writer and consultant. You can schedule a consultation by visiting us in Liberal Arts, Room 200 or at the Thompson Family Writing Lab in the Micron Business and Economics Building, Room 1101. More information is available at boisestate.edu/writingcenter.

Campus Recreation

The Campus Recreation mission: We build an engaged community that encourages healthy, active people and enhances student success. Campus Recreation offers a wide array of opportunities for informal, instructional, and competitive recreation programs. The 105,000 square foot Student Recreation Center serves as the hub for university students, faculty, staff, and alumni who want to be healthy and active members of the Boise State community. Programs and services include personal training, competitive and recreational sports, club activities, group exercise, outdoor recreation, cardio and strength workout options. The Student Recreation Center is located at 1515 University Drive (located adjacent to the Student Union). For more information call (208) 426-1131, or visit boisestate.edu/recreation/.

Aquatics Programming

The 17,000-square-foot Aquatics Complex addition is a hub for water activities. With a multipurpose pool, recreation pool, and spa, the three bodies of water offer opportunities for lap swim, water exercise, swim lessons, water polo, kayaking instruction, relaxation, and more.

Club Sports Programming

Club sports are student-run organizations for those who have a passion for a particular sport. The Club Sport Program emphasizes leadership, education and service through the sport it offers. There are over 25 existing club sports competing and representing Boise State.

Fitness Programming

The Fitness Program organizes over 40 free drop-in group exercise classes each week during the semester including classes like: cycling, Zumba, yoga, and Insanity™. Motivational help with becoming more active or working to reach a fitness goal is available, including premium classes, incentives, fitness testing, and personal training. Workshops related to fitness and health are offered to educate the Boise State community.

Intramural Sports Programming

If you are interested in an organized athletic activity, the Intramural Sports Program establishes numerous on-campus leagues and tournaments. Both the novice and expert can experience fun competition in team, dual, and individual sports throughout the year.

Outdoor Programming

The Outdoor Program strives to promote student development in an inclusive environment by a hands-on learning experience of the mountains, rivers, and deserts of Idaho and beyond. The Outdoor Program offers a diverse range of recreational and educational opportunities for all levels of experience through its four main areas: trips, climbing gym, team building, and the rental center.

The Cycle Learning Center

The Cycle Learning Center (CLC) is a campus-based service focused on developing healthy and sustainable lifestyles by promoting the use of bicycles and multi-modal transportation options. As the university's centralized source for basic bicycle repair services, instructional clinics, and alternative transportation information, the CLC strives to create a hands-on learning environment that empowers you to explore sustainable transportation through educational programming, retail sales, and services.

Informal Recreation

There are many opportunities to recreate at Boise State. The Student Recreation Center comprises a three-court gymnasium, four racquetball courts, aquatics center, rock climbing wall and bouldering cave, multipurpose rooms, and a full complement of strength and cardio equipment. In addition, there are locker rooms, saunas, equipment check out, and towel service are available.

Center for Global Engagement

The Center for Global Engagement (CGE) is the university division that provides leadership, coordination and support of campus-wide integration of global learning programs, international partnerships and cross-cultural engagement. Home to Global Learning Opportunities (study abroad), International Admissions, International Student Services, International Scholar Services, and the Intensive English Program, the Center for Global Engagement provides a variety of services, programs and activities. The CGE is located in SMASH 227. For more information call (208) 426-3652, or visit boisestate.edu/globaleducation.

Global Learning Opportunities

As a Boise State student, you have the opportunity to participate in academic programs around the world. There are summer, semester, and year-long study abroad options for which you receive academic credit. Most of these opportunities are affordable, with the option of using your financial aid and receiving scholarships. Most sites offer courses taught in English as well as opportunities to enhance foreign language skills.

If you participate in a program abroad, you may take advantage of international service-learning, internships, and volunteerism, as well as regular academic studies. For example, if you study in Puntarenas, Costa Rica, you can volunteer at a marine animal park. If you study in Bilbao, Spain, you can serve as an intern at a local company. If you study in China, you can serve as a conversation partner to Chinese students.

The benefits of an international experience are enormous. You will gain the ability to view your academic field from new perspectives; see and experience what you are studying at a personal level, enhance your cross-cultural communication skills, increase your self-awareness, and understand the American culture better. Additionally, graduates with international experience typically have a distinct advantage in the job market.

To receive credit for Global Learning Opportunities, you must register under the education abroad course number (INTPRGM 400 or INTPRGM 401). The *Course Approval Form* must be completed before departure to ensure proper evaluation of courses when the program is completed. Upon receipt of an official transcript, courses are evaluated and recorded to the Boise State transcript with transcript text indicating the location of study. Additional information, application forms and deadlines, final costs, and program prerequisites can be obtained at boisestate.edu/globaleducation-glo or call Global Learning Opportunities at (208) 426-2630.

International Student Services (ISS)

International Student Services provides comprehensive support to international students as they integrate into the larger campus community. ISS acts as a welcoming center where international student needs can be met directly or referred to the appropriate community resource. ISS serves as the primary source of expertise regarding immigration and cross-cultural issues for the campus at-large, and as a liaison between faculty, staff and international students. ISS provides opportunities for intercultural engagement, supporting university efforts toward internationalization by bringing international and domestic community members together for cultural exchange. International Student Services is located in room 227 of the Simplot Micron Advising and Success Hub. For more information please visit us on the web at boisestate.edu/globaleducation-iss or call International Student Services at (208) 426-3652.

Health Services

Health Services provides the Boise State community with comprehensive health care that focuses on an integrated delivery model. Combining the highly skilled and licensed staff of the Medical, Counseling and Wellness departments enables you to retain, enhance, promote, and improve upon your physical, mental, and spiritual health. Health Services provides specialized resources, and experiential learning opportunities in support of the overall mission of Boise State.

Counseling Services

Provides services that enhance growth and development, help improve personal effectiveness and resilience, and promote success. We are here to help you deal more effectively with concerns that impact your pursuit of personal and academic goals. We have a diverse and experienced staff of psychologists, counselors, social workers, and supervised trainees. We provide a range of services that include individual, multi-person, and group counseling, consultation and crisis intervention, workshops and outreach presentations, all aimed at enhancing student success at Boise State.

Health Insurance and Billing

The Health Insurance and Billing Office can help answer general questions regarding health insurance and can provide you with resources that can assist you with plans on or off of the marketplace.

Affordable Care Act—Health Insurance Exchange Notice

The Marketplace is where individuals and families looking to buy health insurance can shop for, compare, and choose from several health coverage options. It also provides you basic information about eligibility for tax credits or subsidies.

- If you are an Idaho resident, visit the Idaho Marketplace at yourhealthidaho.org.
- If you are an out-of-state student, visit healthcare.gov to access insurance options available from your home state.
- If you are an international student, legally residing in the United States, you can purchase health insurance in the Marketplace; however, you are not eligible for tax credits or subsidies.

For additional information on insurance or finding a plan, contact the Health Insurance Office at (208) 426-2158, or email healthinsurance@boisestate.edu.

Medical Services

Your on-campus family doctor's office. Whether you are sick, injured, or need care for a long-standing medical condition, Medical Services is equipped and staffed to take care of you. Services are located conveniently on campus and affordable. We give special attention to health promotion and disease prevention, and empower patients to take responsibility for their own health by making healthy choices. Appointment and urgent/walk-in services are available. Wellness Services empowers you in your lifelong commitment to health by providing comprehensive wellness resources to the campus community.

Wellness Services

Based in the Health Center, but has programming which occurs throughout campus, Wellness Services contributes to the integration of services by offering Dietitian Services, and Health Coaching. Peer Educators provide outreach and education to students on a variety of health topics while receiving experiential learning opportunities and experiences.

Student Involvement and Leadership Center

As a Bronco, you are destined to do great things, but your success is not wholly defined by personal accomplishments. Success is also defined by the impact you have in the lives of others. The Student Involvement and Leadership Center works to build connections between Boise State students, the campus, and the local community. This is accomplished through leadership development programs, volunteer and service opportunities, student organizations, sororities and fraternities, and campus activities. You can write your own unique involvement story by joining any of the 200+ student organizations. These include academic, cultural, recreational, and social organizations. Meet people and have fun at campus activities like Movie on the Blue and Spring Fling. Become a leader through programs like Catalyst and LeaderShape. Make a difference by serving on a domestic or international Alternative Break. You can get involved, connect with other students, the campus, and the community while learning to reach your full capacity to impact and change the world.

For additional information and ideas on how to get involved, visit us on the second floor of the Student Union Building above the Boise River Café, find us online at boisestate.edu/getinvolved, or call (208) 426-1223.

Associated Students of Boise State University

The Associated Students of Boise State University (ASBSU) advocates on behalf of Boise State students by promoting student engagement on university task forces, committees, and advisory boards, and by serving as a voice for student concerns. Further, ASBSU encourages student participation in campus life by providing financial support to student organizations and supporting free legal assistance via the Office of the Dean of Students. ASBSU is made up of several bodies: elected and appointed student representatives in the Executive Council manage the internal and external affairs of the organization; two representatives from each academic college reside in the Academic Senate, while representatives from non-academic, student populations reside on the General Assembly, both advocate for their respective populations and create legislation to enact University change. The Student Funding Board provides funding allocations for student organizations. The Inclusive Excellence Student Council (IESC) is a branch founded to advocate for underrepresented students and to work for opportunities for the success of all students. ASBSU offices are located within the Student Involvement and Leadership Center on the second floor of the Student Union. For additional information, call (208) 426-4240 or visit boisestate.edu/asbsu.

Other Student Services

Listed below are a number of services and programs provided to students, staff, and faculty, including services offered by the Advising and Academic Enhancement Office, the Veterans Services Office, and the Gender Equity Center.

Children's Center

The nationally accredited University Children's Center provides care for children eight weeks to five years of age. The center is open five days a week during fall and spring semesters and thirteen weeks of summer session. It is located at the corner of Beacon and Oakland Streets. The center is licensed through the City of Boise and accredited through the National Association for the Education of Young Children. The center accepts ICCP. To be considered for enrollment, please refer to the website in regards to the waitlist at this time. For more information or inquiries about hours of operation, please visit boisestate.edu/childrenscenter or email nicholemoos@boisestate.edu.

Office of the Dean of Students

The Office of the Dean of Students (DOS) provides a variety of services designed to support student success and engagement at Boise State. The major service areas of the DOS are:

- **Student Outreach and Assistance** facilitates connections to campus and community resources, including financial, food, legal assistance, and support while navigating barriers and emergencies that impact student success.
- **Student Rights and Responsibilities** serves not just as a disciplinary system, but also as part of the educational system by setting standards and procedures necessary for maintaining and protecting an environment conducive to learning in and out of the classroom.
- **Alcohol Education and Sexual Assault Prevention** oversees online training courses designed to help new students examine the issues of substance abuse, sexual violence and healthy relationships.
- **Campus Food Pantry** offers nourishing meal and snack options, as well as a range of toiletry items, for Boise State students in need of assistance. Simply bring your student ID.

Located in Campus School, Suite 120. Call (208) 426-1527 or visit boisestate.edu/deanofstudents/.

Educational Access Center

The center coordinates academic and housing accommodations for students who have self-identified as having a disability. In addition to working with students to establish reasonable and appropriate accommodations, the Educational Access Center provides students, faculty, and staff with information about specific disabilities and accessibility at Boise State. For further information, visit boisestate.edu/eac or call (208) 426-1583.

Gender Equity Center

The Gender Equity Center (GEC) fosters a thriving community by providing interactive events, no-cost confidential support services, and opportunities to build community. Peer Educators partner with student organizations and campus departments to offer events focused on sexual orientation and gender identity, healthy relationships, violence prevention, and intersectional feminism.

The GEC offers support to all students experiencing personal, financial, or academic challenges and our staff specialize in serving students who have experienced violence or who identify in the LGBTQIA+ community. Specifically, support includes advocacy in moving through university processes, help building a plan to address challenges, a confidential place to access help during a crisis, information about relevant resources, and referrals to counseling and other services.

In addition to offering social events, the Gender Equity Center has a lounge with board games, puzzles, a smart TV with cable channels, and moveable tables, chairs, and couches. The Rainbow Room, a meeting space in the GEC, can be reserved to host club meetings, study groups, or for a quiet place to work.

For a full list of programs and services or to sign up for our e-newsletter, visit boisestate.edu/genderequity/ or stop by the center, located on the second floor of the Student Union Building, Room E2406. For additional information call (208) 426-4259.

Student Equity Center

Located on the second floor of the Student Union Building, (208) 426-5950, the Student Equity Center houses the office of Student Equity and is a place where you can meet with other students in a friendly, inclusive atmosphere. The Student Equity Center promotes inclusive excellence and cultural appreciation through campus-wide cultural awareness programs and through the support of Boise State's student cultural and ethnic organizations' festivals and events, the First-Forward Student Success Program and the MLK Living Legacy Committee. The Student Equity Center also provides a forum for education aimed at advancing the appreciation and understanding of the diversity of cultures on campus and beyond. All of these efforts are an expression of the commitment to a philosophy of Inclusive Excellence at Boise State University applied to the experience of student life on campus. For a clearer understanding of Boise State University's commitment to Inclusive Excellence, see: boisestate.edu/president/statement-of-diversity-and-inclusivity/.

Outreach Locations

Student services such as advising, registration, book sales, and library services are available at most off-campus sites. The outreach locations and phone numbers are listed in this catalog, *An Introduction to Boise State*, in the section about the Division of Extended Studies.

Student Diversity Center

Located on the second floor of the Student Union Building, (208) 426-5950, the Student Diversity Center houses both International and Multicultural Student Services and is a place where you can meet with other students in a relaxed, friendly atmosphere. The Student Diversity Center promotes cultural diversity and appreciation through campus-wide cultural awareness programs and through the support of Boise State's ethnic organizations' festivals and events provided through International Student Services, Multicultural Student Services and the Martin Luther King, Jr. Living Legacy Committee. The Student Diversity Center also provides a forum for education aimed at helping you learn multicultural skills and perspectives that you need for a successful experience at Boise State and beyond. All of these efforts are an expression of our commitment to a philosophy of Inclusive Excellence at Boise State.

Student Employment

Student employment is a great way to explore your interests, develop skills, and gain experience for your future career. Student jobs on campus provide many benefits, including supportive supervisors and career development opportunities. Use Handshake to search for jobs, including on-campus, work-study, off-campus, part-time, summer, temporary, and full-time job opportunities. Handshake is Boise State's job-listing site, hosted by Career Services. There is no charge to use this service. New jobs are posted daily. Further information is available at boisestate.edu/career or by calling (208) 426-1747.

Veteran Services Center (VSC)

The Veteran Services Center (VSC) team consists of one veterans certifying program information coordinator, one school certifying official, one administrative assistant, and one director. The team encourages Veterans, Reservists, National Guardsmen, Active Duty, and Dependents to submit their Declaration, along with their GI Bill® Certificate of Eligibility (COE), as soon as they enroll via their University priority registration date. This must be done on the Boise State University VSC website at boisestate.edu/veterans/veteran-dependent-declaration-of-semester-benefits-form/. More information about education benefits offered by VA is available at the official U.S. government website at benefits.va.gov/gibill . VSC is located in the Lincoln Office Suites adjoining the Lincoln Parking Garage, 1607 University Drive, (208) 426-3744, boisestate.edu/veterans/ or email veteranservices@boisestate.edu.

Note: GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by the VA is available at the official U.S. government website at benefits.va.gov/gibill.

Graduate Academic Regulations

The academic policies described in this chapter apply to all graduate degree and certificate programs and are approved by the faculty through the Graduate Council and administered by the Graduate College. Under this general regulatory umbrella, each graduate program is locally administered by an academic unit assigned by the university. The academic unit may be a department, a college or school, or a specially appointed unit consisting of graduate faculty members from multiple departments or colleges. Although an academic unit may develop local regulations for a specific graduate program under its control, the Graduate Academic Regulations have supremacy over the local regulations; all local regulations must be consistent with these academic policies and are therefore subject to review and approval by the Graduate Council. It is the responsibility of all graduate faculty members and graduate students to become thoroughly familiar with all policies that govern the graduate program in which they participate.

One-Half Requirement

At least one-half (1/2) of the total credits required for a graduate degree or certificate must be earned at Boise State University and must be approved for application by the Graduate College and the program coordinator. Graduate students must apply and be accepted into a graduate degree or certificate program before they have completed the requirements for the degree or certificate – no retroactive degrees or certificates will be conferred.

Restrictions on Certain Courses

All graduate degree and certificate programs must adhere to the following restrictions. A particular graduate degree or certificate program may impose more stringent restrictions, subject to approval by the Dean of the Graduate College.

Aggregate Restriction

No more than one-third (1/3) of the total credit requirement for a graduate degree or certificate, exclusive of culminating activity credits, can be met by the aggregate of credits earned in undergraduate courses, pass-fail courses, and university-wide courses numbered 590, 594-596, 598, and 696 (or equivalent courses that may appear as transfer credits). An exception to this restriction may be considered when the courses are outside the major field of study, are taken to expand interdisciplinary or transdisciplinary educational experiences, and are approved by the program coordinator and the Graduate College through an academic appeal, using the *Graduate Appeal Form*.

Dual-Listed and G-Courses

Lecture-based courses that are offered simultaneously at the upper-division undergraduate level and at the graduate level, scheduled with the same instructor and at the same basic meeting times, may be listed as dual-listed or as G-courses. Graduate students that are enrolled in G-courses and 500-level dual-listed courses must complete all work required of students earning undergraduate credit plus substantial work at the graduate level. The Graduate College strictly limits the application of dual-listed courses to no more than one-half (1/2) of the total credit requirement for a degree or certificate, and the application of G-courses to no more than one-third (1/3) of the total credit requirement for a degree or certificate. Together, the applicable credit earned in G-courses and 500-level dual-listed courses should not exceed one-half (1/2) of the total credit requirement of a graduate certificate or degree. A graduate program may further restrict the application of G-courses and 500-level dual-listed courses.

Undergraduate Courses

In general, all credit applied to a graduate degree or certificate must be graduate-level academic credit, however an undergraduate course may be applied to meet the credit requirements of a graduate certificate or degree, subject to the following restrictions:

1. The course must be an upper-division course and must be in a discipline outside the major field of study of the program.
2. A grade of B or better must be earned in the course.
3. The course cannot represent effort for an undergraduate thesis, internship, practicum, independent study or research, conference or workshop, experiential learning, study abroad, seminar, or colloquium.

4. All applied undergraduate credit must be approved by the Graduate College and the program coordinator of the graduate program that offers the degree or certificate.

Previously Applied Courses

In general, any course that was applied to a previously earned degree of any type at any institution cannot be applied to meet the credit requirements of a graduate certificate or degree at Boise State University. Exceptions to this can be found under Regulation for Master's Programs subsections "Second Master's Degree" and "Accelerated Master's Degree," and in Regulations for Doctoral Programs subsection "Previously Applied Courses."

Each course allowed under these degree-specific Previously Applied Courses exceptions is subject to the following additional restrictions:

1. A grade of B or better must have been earned in the course.
2. The course cannot represent effort for a graduate culminating activity or for experiential learning.

All courses allowed under the Previously Applied Courses exceptions are limited by the One-Half Requirement.

Language Proficiency Requirement

English is the language of instruction at Boise State University. Graduate students must be proficient in English and may be required to demonstrate a prescribed level of ability in one or more other languages. If language ability beyond proficiency in English is required by a graduate program, the means of verification are defined by the program.

Simultaneous Enrollment

Simultaneous enrollment in more than one (1) graduate degree program is prohibited by the Graduate College, except in those situations in which a student applies and is admitted into a single master's degree program while pursuing a doctoral degree (an en route master's degree) or a single Education Specialist (EdS) degree while pursuing a doctoral degree. In these cases graduate students must apply and be accepted into a graduate degree program before they have completed the requirements for the degree–no retroactive degrees will be conferred. Because some of the total credits required for a degree must be earned after admission to the degree program, doctoral students who are interested in acquiring a master's degree or an EdS degree while working toward the doctoral degree should promptly apply to the second degree program.

Simultaneous enrollment in one (1) graduate degree program and/or one or more graduate certificate programs is permitted, subject to the following conditions:

1. The specific policies of each of the degree and certificate programs permit co-enrollment.
2. The co-enrollment is approved by the Graduate College and the program coordinators of the graduate certificate and degree programs.
3. All degree-specific Duration of Graduate Study time constraints imposed by the Graduate College that govern the applicability of the credit must be met for both the graduate certificate program and the graduate degree program.

Because of the One-Half Requirement, a graduate degree-seeking student that is interested in acquiring a graduate certificate as an intermediate step should promptly apply to the certificate program. Students who were previously enrolled in a certificate program but were discontinued must reapply and pay any required admission application fees.

Graduate Student Advising

Thoughtful, comprehensive advising is critical to the success of every graduate student. In this context, the word "advising" is used broadly to encompass both academic planning and professional development. Academic planning includes helping students to map out a plan for completing the degree or certificate requirements, adjusting the plan to accommodate changes that may occur, and

helping students meet the administrative requirements of the program and of Boise State University. Professional development includes helping students make conceptual connections among courses, improve their research skills, build their professional networks, conduct research that contributes to existing knowledge within the discipline, and—when appropriate—make a successful transition from graduate student to working professional.

Comprehensive advising requires an ongoing partnership, lasting from admission to graduation, which is based on mutual respect and understanding and in which all parties work to create a learning experience that allows students to:

- Develop a plan for completing the degree or certificate within a reasonable time and adjust the plan when it is in the student's best interest,
- Develop a level of expertise in a topic,
- Improve their ability to use the methods and technology of their discipline,
- Contribute as a member of a professional community of practice within their discipline, and
- Engage in continued learning after graduation

At Boise State University, graduate students work with an advisor, supervisory committee, and/or procedural advisor.

Advisor

Graduate students must be under the guidance of an advisor if they are not under the guidance of a supervisory committee. An advisor is a member of the graduate faculty and is appointed by the graduate program. It is permissible for the graduate program coordinator to be appointed as the advisor for all students enrolled in the graduate program. It is also permissible for an advisor to guide a master's student (but not a doctoral student) through all graduate activities except for a culminating activity that requires a supervisory committee. Once appointed, the advisor is the primary source of program information and advice and works with graduate students on matters related to both academic planning and professional development.

An advisor is named by the graduate program at the time of admission. However, either the graduate student or the program may subsequently request an advisor change to best match the student's academic interests or professional goals. Any advisor change should be the result of consultation among the graduate student, the current advisor, the proposed advisor, the graduate program coordinator, and—because of possible faculty workload considerations—the department chair or head. The program should inform the Graduate College of any advisor change by sending an email to graduatecollege@boisestate.edu.

Any master's student or doctoral student engaged in thesis or dissertation activity must have a major advisor by the beginning of their second year, otherwise they may be dismissed from the program. No student may remain in a graduate program that requires a thesis or dissertation without a major advisor named as part of the supervisory committee.

Supervisory Committee

A supervisory committee is required for any master's student or doctoral student engaged in thesis or dissertation activity. A supervisory committee is assigned when a student is admitted to a specific graduate degree program, and is composed of members of the graduate faculty who are approved by the Graduate College and charged with graduate student guidance. The committee consists of a major advisor who serves as chair, plus additional members of the graduate faculty who are chosen to provide a broad range of knowledge and expertise to the student. Thesis and dissertation supervisory committees must include at least three (3) but no more than five (5) members of the graduate faculty. The dissertation supervisory committee membership includes any external committee members required by the degree program, but not including the Graduate Faculty Representative (GFR) (see the Graduate Faculty Representative section under Regulations for Doctoral

Programs). The Graduate College strongly encourages doctoral dissertation supervisory committees with at least four (4) members of the graduate faculty.

Graduate students are responsible for identifying their major advisor. The major advisor is the primary mentor for the student and must be a member of the graduate faculty with an endorsement to chair a supervisory committee. At least half of the supervisory committee members must hold appointments in the department(s) responsible for the program or the participating departments in the case of interdisciplinary programs. In all cases, the fundamental principle is that the committee, collectively, should be constituted to provide the best possible guidance throughout the graduate student's career, including the thesis or dissertation work.

Graduate students should take an active role, working with their major advisor, to identify faculty members to serve on their supervisory committee. Once the supervisory committee members are identified, the student completes an *Appointment of Supervisory Committee* form and submits it for signature by the specified committee chair, department chair or graduate program coordinator, and the Graduate College. This form must include a recommended committee membership based on a reasonable match between the student's and faculty's academic interests. The form is then submitted to the Graduate College for review. Once satisfied with the recommended committee, the Dean of the Graduate College formally appoints the committee and sends email notifications to the graduate program coordinator and the graduate student's Boise State email address (according to University Policy 2280). The *Appointment of Supervisory Committee* form should be submitted as early as possible in a graduate career and no later than the time of submission of the *Application for Admission to Candidacy* (AAC) form.

A change in the membership of the supervisory committee can be made after the initial appointment by submitting an updated *Appointment of Supervisory Committee* form. This should be done according to policies and procedures developed by the graduate program and only with the approval of the committee chair, department chair or program coordinator, and the Graduate College.

Procedural Advisor

With prior approval of the Graduate College, a member of the graduate program who does not hold membership in the graduate faculty may be assigned to advise some or all of the students in the program on procedural issues, such as the submission of paperwork, course sequencing, and other matters related to academic planning. The actual position title assigned by the university to procedural advisors can vary from program to program.

Academic Performance

A fundamental requirement for satisfactory academic performance is that graduate students with a cumulative grade point average (GPA) below 3.00, are ineligible for graduation from a graduate degree or certificate program (see the Academic Performance at Graduation section). Some academic programs have their own more stringent cumulative graduate GPA requirements and course-specific grade requirements, in addition to the GPA requirements of the Graduate College. Graduate students with a cumulative GPA that drops below 3.00 at any time should consult with their advisory or graduate program coordinators for advice and possible options.

Cumulative GPA Requirement

All students admitted to the Graduate College, including degree, certificate, and nondegree-seeking students, must meet the cumulative GPA requirements described in this section. All graduate students that are admitted to the Graduate College must maintain a minimum cumulative GPA of 3.00, including transfer courses and undergraduate courses that have been completed as part of their graduate career. If a graduate student's cumulative GPA is below 3.00 at the end of an enrolled semester (including summer), they will be placed on probation. At the end of the next enrolled semester (including summer), the Graduate College reviews the student's progress and takes one of the following actions:

1. Removal from probation if the graduate student's cumulative GPA is 3.00 or above.

2. Continuation on probation if the graduate student's cumulative GPA is below 3.00 and the semester GPA is 3.00 or above. Graduate students are ineligible for graduation if their cumulative GPA is below 3.00 at the end of the graduation semester. Graduate students should consult their advisor or the graduate program coordinator for advice and possible options (see Academic Performance at Graduation).

3. Dismissal from the graduate program and Boise State University if the graduate student's cumulative GPA is below 3.00 and semester GPA is below 3.00. Dismissed graduate students are administratively withdrawn from their courses and cannot register for classes until they are either reinstated to the graduate program or readmitted to the Graduate College. Dismissed graduate students that request reinstatement (following University Policy 3090) within 30 calendar days of their dismissal notification are not required to reapply to the Graduate College. A new online application and application fee is required after 30 days, or when the request for reinstatement is denied.

In each case, the Graduate College informs the graduate student (using the student's Boise State email address, in accordance with University Policy 2280) and the graduate program via email.

Satisfactory Progress Policy

When a graduate student's graduate supervisor (which, depending on the graduate program, may be their major advisor, program coordinator, department chair, or relevant departmental graduate committee) finds that they aren't making satisfactory progress towards their graduate degree or certificate and that satisfactory progress cannot be anticipated, a progress, completion, or performance plan should be created by the graduate supervisor, and the following steps should be taken:

1. Inform the student of the concerns, create a progress, completion, or performance plan with the student, develop a timeline, and inform the student of the potential consequences (for example, dismissal from their academic program or programs) if their progress towards completion is not satisfactory. The progress, completion, or performance plan should be written, signed by both the supervisor and the student, and a copy should be provided to the student.

2. The supervisor should keep in contact with the student to give feedback during the plan timeline and document such contacts (written, email, or otherwise) and their outcomes.

3. At the end of the timeline, if progress is not adequate, the supervisor may recommend dismissal from the program or programs. The recommendation should be sent to the Department Chair, Head, or Program Coordinator and the Dean of the Graduate College, and should include documentation of the steps that have been taken with justification for the dismissal from academic program(s) action.

The recommendation must be referred to the Department Chair, Head, or Program Coordinator and the Dean of the Graduate College for final action. Any student that has been dismissed from their academic program(s) for failure to make satisfactory progress may appeal the decision using the Graduate College Appeals Policy. Academic departments or programs, which invoke this process must have published guidelines explaining the performance indicators, which lead to immediate dismissals from academic program(s), as part of their student handbook or departmental policy.

Academic Performance at Graduation

To obtain a graduate certificate or degree, a graduate student must:
1. Complete the number of credits specified for the graduate degree or certificate
2. Attain the Cumulative GPA and Program GPA Requirements (below)
3. Meet the Individual Course Requirements (below)
4. Not have a grade of I (incomplete) on record
5. Complete all other requirements specified by the program or department offering the degree or certificate
6. Complete the graduation application by the posted deadline

Graduate students that are enrolled in a degree or certificate program must meet the following academic performance requirements at the end of the semester that they intend to graduate: 1) cumulative GPA requirement, 2) program GPA requirement, and 3) individual course requirements.

Cumulative GPA Requirement

Graduate students with a cumulative GPA of 3.00 or above are eligible for graduation at the end of the semester that they intend to graduate. Graduate students with cumulative GPAs below 3.00 are ineligible for graduation and are placed (or will remain) on academic probation until their cumulative GPA is 3.00 or above. Students should consult their advisor or the Graduate Program Coordinator for advice and possible options.

Program GPA Requirement

Graduate students are required to list on their *Application for Admission to Candidacy* form the specific courses to be applied to meet all of the credit requirements defined for the program or certificate. The program grade point average (program GPA) is the grade point average computed for this set of courses. Graduate students with a program GPA less than 3.00 are ineligible for the degree or certificate and should consult their advisor or graduate program coordinator for advice and possible options.

Individual Course Requirements

Graduate students cannot list a course on an *Application for Admission to Candidacy* form if the course is graded lower than C or P. An undergraduate course, G-designated course, or transfer course cannot be listed if it is graded lower than B. If the grade for a specific course that is required by the graduate program is too low to be listed on the *Application for Admission to Candidacy* form, and if that grade cannot be improved under the course repetition policy, the graduate student is ineligible for the degree or certificate and will be dismissed from the graduate program and Boise State. In this case, the graduate student should consult their advisor or graduate program coordinator for advice and possible options.

Boise State University Graduate Students may be eligible for grade exclusions and thus may petition to have certain grades excluded from their GPA calculations in certain situations. Please refer to University Policy 3160 for additional information and procedures.

Repetition of Graduate Courses

Repetition to Improve a Grade

A graduate student that has completed a graduate course for credit may attempt to repeat that course to improve the grade, but only once and only with the written approval of the graduate program coordinator using the *Request to Repeat a Graduate Course* form. If the course is offered by a department or program that is different from the department or program that offers the graduate degree, then the written approval of the Chair, Head, or Director of the Department or Program that offers the course should also be included. The latter approval is the written approval that is required on the *Request to Repeat a Graduate Course* form, available via the Boise State University Registrar's Office website.

Certain graduate courses cannot be repeated to improve a grade, including:
- 590 Practicum/Internship,
- 591 Project
- 592 Portfolio
- 593 Thesis
- 596 Independent Study
- 686 Master's Preliminary Examination
- 687 Doctoral Preliminary Examination
- 690 Master's Comprehensive Examination
- 691 Doctoral Comprehensive Examination
- 693 Dissertation
- 696 Directed Research

Graduate students that repeat a course and earn a grade of W or CW are not permitted to repeat the course again, unless they can document extenuating

circumstances that are clearly beyond their control. A course that has been completed more than once in an attempt to improve a grade can be listed only once on an *Application for Admission to Candidacy* form. The listed semester and grade must be for the most recent completion of the course for credit. All course registrations on record beyond published drop dates for each semester or session appear on the transcript and GPA computations are carried out according to University Policy 2200. To conform to previous policies of the Graduate College on course repetition to improve a grade, a graduate student may not repeat a Boise State course to improve a grade of F, if the grade was initially earned prior to Fall 2003.

Repetition for Credit

The university-wide graduate courses and some departmental courses (such as MUS563 Major Instrument Pedagogy I and MUS564 Major Instrument Pedagogy II) are associated either with specifically defined efforts by an individual student or with content characteristics that can change from semester to semester. These courses and others like them may be repeated for credit and listed multiple times on the *Application for Admission to Candidacy* form subject to all approvals and limitations of the graduate program and the Graduate College.

Transfer Credit

Transfer credit is academic credit that is awarded to a student by another college or university that has not been applied to meet the requirements of a previously earned degree of any type at another institution, and is approved for application to the requirements of a graduate certificate or degree at Boise State University. A graduate student should submit a *Request for Approval of Transfer Credits* (RATC) form, which will be approved by the appropriate Graduate Program Coordinator and the Graduate College, and which will authorize the Graduate College to make changes to the student's Academic Advisement Report (AAR) so that transfer credits can be directed to meet a previous course requirement. Transfer credit must satisfy the following restrictions:

1. Transfer credit must be graduate academic credit representing a grade of B or better, awarded by a regionally accredited U.S. college or university or by a non-U.S. institution of higher education that is approved for transfer purposes by the International Admissions Office. Continuing education units (CEU) and non-academic credits are ineligible as transfer credit.
2. Culminating activity courses, courses where the grade is based only on attendance, and courses representing experiential learning, regardless of the level (undergraduate or graduate), are ineligible as transfer credit.
3. Application of transfer credit must be approved by the graduate program.

The only exception to the transfer credit rule is that credit applied to a master's degree previously awarded at another institution may also be applied as transfer credit to a doctoral degree.

The maximum transfer credit that can be applied to meet the requirements of a graduate certificate or degree is limited by the One-Half Requirement that at least one-half (1/2) of the total credit requirement for a degree or certificate must be earned after admission to the program. A graduate program may impose a more restrictive transfer policy (fewer allowed transfer credits). In the case of a cooperative graduate program offered by Boise State and the University of Idaho and/or Idaho State University, a more liberal transfer policy (more allowed transfer credits) is permissible, but only if the Graduate Council has approved a higher transfer credit limit for the program.

Application of Credit Already Applied to a Graduate Certificate

A graduate certificate is viewed by some programs as an intermediate accomplishment or stepping stone between a baccalaureate degree and a graduate degree. The Graduate College therefore allows graduate credit (but not undergraduate credit) earned at Boise State University and previously applied to meet the requirements of a Boise State graduate certificate to also be

applied to meet the requirements of a Boise State graduate degree. This is known as dual application and is subject to the following stipulations:

1. The dual application of credit must be consistent with those policies of the graduate program that may limit or preclude such application.
2. The dual application of credit must be approved by the graduate program coordinator and the Graduate College.
3. All Duration of Graduate Study time constraints imposed by the Graduate College that govern the applicability of the credit must be met.

In-Service Teacher Education or Professional Education Workshop Courses

Credit earned for in-service teacher education or professional education workshop courses cannot be applied to meet the credit requirements of a graduate degree or graduate certificate (see section V. R.3. a. Viii. of the *Governing Policies and Procedures of the Idaho State Board of Education*).

Challenge Courses

Graduate students may challenge (and receive credit, through a challenge exam,) certain courses if they believe that their background, education, and/or experience has given them sufficient knowledge in a subject area. The graduate program offering the course determines whether a course is available for challenge and may develop screening procedures to determine whether graduate students are eligible to take a challenge exam. Some programs may not offer any challenge exams. Graduate students must have completed 12 credits at Boise State in order to be eligible for a course challenge. Graduate students may not challenge a course to improve a previous grade earned in the course. The process for a course challenge (governed by University Policy 3040) is:

1. Request and approval. This requires
   - a written request to the graduate program for permission to register for a challenge exam,
   - a determination by the graduate program to grant the request. For interdisciplinary courses, this decision will be made by the coordinator of the graduate program to which the course applies, and
   - a determination whether the challenge course will be graded (A-F) or P/F.
2. *Credit for Prior Learning* form (available via the Boise State University Registrar's Office website). This requires:
   - completion of sections 1 and 2 of the form,
   - a checkmark in the "challenge" box in section 2,
   - the signature of the course instructor, and
   - completion of section 3 by the graduate program.
3. Payment. This requires:
   - submitting the signed form to the Boise State University Payment and Disbursement Center,
   - payment of the required fee ($50 for a challenge exam prepared by the department or $20 for an externally prepared exam),
   - completion by the Payment and Disbursement Center of section 4 of the form, and
   - returning the form to the department before taking the challenge exam.
4. Exam and results. This requires:
   - returning the form to the graduate program before taking the challenge exam,
   - completing the challenge exam,
   - completion of section 5 of the form by the graduate program and submission to Registrar's Office, and
   - grades of P or A through C- will be recorded on the transcript. Grades of D+ or lower will not be transcribed.

Graduate Credit Option for Undergraduate Students

Senior-level undergraduate students may request approval to enroll in G- or 500-level courses. Interested students must complete a *Permit for Seniors to Take Graduate Courses* form for each course. Students may apply the courses in one of three ways:

- As graduate credit (Option I)
- As upper-division undergraduate credit (Option II)
- As credit for an accelerated master's program (Option III)

Graduate Credit (Option I)

Graduate credit earned under a *Permit for Seniors to Take Graduate Courses* does not imply that a student will be admitted to a graduate program at Boise State University. If a student completes courses for graduate credit while a senior and is later admitted to a graduate program, the program has the authority to decide which courses (if any) completed as a senior can be applied to the credit requirements of the program. The program also has the authority to define a maximum number of applicable credits of this type for the program, but the maximum cannot exceed one-third (1/3) of the total credit requirement for the degree or certificate.

Upper-Division Undergraduate Credit (Option II)

Students may apply up to two (2) successfully completed 500-level courses to the upper-division credit requirement for a baccalaureate degree.

Accelerated Programs (Option III)

Students that have been admitted into an accelerated master's degree may apply a limited number of graduate-level courses (as approved by the graduate program) to both the undergraduate and graduate degree.

Other Limitations

Undergraduate students may not enroll in 600-level courses. Courses offered as part of the Master of Business Administration program are excluded from enrollment by all undergraduate students. Students that are admitted by the Graduate College to work on an accelerated master's degree are subject to course limitations imposed by the Graduate College and by the participating graduate program or programs.

Admission to Candidacy

Admission to candidacy is a critically important process required of all students enrolled in graduate degree or certificate programs. The candidacy process serves as the official review by the Graduate College of a student's plan of study. This official review allows the Graduate College to identify degree requirements and graduate regulations that may have been overlooked or misinterpreted. If left undetected and uncorrected for too long, these shortcomings can delay progress toward a graduate degree. The candidacy process also helps the Graduate College update the Academic Advisement Report (AAR), which is used for the final degree or certificate audit conducted by the Registrar's Office prior to graduation, and enables the university to fulfill its obligations to accrediting organizations. Because of the importance of the candidacy process, if a graduate student has not been admitted to candidacy, they cannot participate in a final oral examination or apply for graduation.

Candidacy Requirements for a Master's Student

A master's student may be admitted to candidacy if they are in regular status and have completed a set of courses sufficient to satisfy at least one-half (1/2) of the total credit requirement with individual course grades of C or better and a GPA of at least 3.00 (computed for the set of courses).

Candidacy Requirements for a Doctoral Student

A doctoral student may be admitted to candidacy if they are in regular status, have passed the comprehensive examination, have satisfied any language proficiency requirements, and have completed a set of courses sufficient to satisfy at least one-half (1/2) of the total credit requirement with individual course grades of C or better and a program GPA of at least 3.00 (computed for the set of courses).

Candidacy Requirement for a Graduate Certificate Student

A graduate certificate student may be admitted to candidacy if the student is in regular status and has completed a set of courses sufficient to satisfy at least one half (1/2) of the total credit requirement with individual course grades of C or better and a GPA of at least 3.00 (computed for the set of courses). Students should submit their Application for Admission to Candidacy shortly after admission to the certificate program (for certificates that can be completed in one or two semesters) or in the semester for which they are expected to satisfy at least one half (1/2) of the total credit requirement for the certificate.

Application for Admission to Candidacy

Graduate students apply for admission to candidacy by submitting an *Application for Admission to Candidacy* (AAC) form to the Graduate College. The AAC is the result of academic planning done by the graduate student and advisor, and lists the courses proposed to fulfill the total credit requirement for a degree as defined in a particular annual edition of the *Boise State University Graduate Catalog*. Once submitted, the AAC form is reviewed by the graduate program coordinator or designee. If approved, the AAC form is reviewed by the Graduate College. If the AAC is approved by the Graduate College, email notifications are sent to the graduate program and to the graduate student via their Boise State email address (according to University Policy 2280). If any deficiencies are found in the list of courses, the Graduate College notifies the graduate student and the graduate program and helps find acceptable remedies. A change in an approved AAC form, such as in the case where a course is no longer available, can be requested by submitting a *Request for Adjustment of Academic Requirements* form.

Although the academic calendar specifies a submission deadline for the AAC form, the Graduate College recommends that the AAC form be submitted as soon as one-half (1/2) of the total credit requirement for the degree is completed. If a graduate student waits until the deadline specified in the academic calendar and the Graduate College finds deficiencies, the graduate student may not be able to complete the necessary corrective actions before the anticipated graduation date. It is therefore in the best interest of the graduate student to carefully prepare the AAC form and submit it to the Graduate College in a timely manner.

Choice of Graduate Catalog

Graduate students that are enrolled in graduate degree or certificate programs may choose to meet the program requirements as defined in any annual edition of the *Boise State University Graduate Catalog* in effect after the graduate student has been admitted to the program by the Graduate College. The program requirements specified therein will be used by the Graduate College to evaluate the *Application for Admission to Candidacy* (AAC) form, and by the Registrar's Office for the final degree or certificate audit.

Graduate students may select any edition of the catalog, provided that the catalog was published and was valid while they were enrolled at Boise State and provided that the catalog is no older than seven academic years at the time of graduation.

Adjustment of Academic Requirements

The *Boise State University Graduate Catalog* chosen determines the program requirements that must be met. The specific courses that have been approved by the Graduate College as meeting those program requirements are known as the academic requirements, and are listed on the approved *Application for Admission to Candidacy* form. Graduate students may request a change in academic requirements only by submitting a *Request for Adjustment of Academic Requirements* form to the Graduate College for review and approval.

Theses and Dissertations

Graduate students that are engaged in thesis or dissertation research are expected to carry out their research in an ethical and responsible manner. This includes consideration for human subjects and animal subjects.

There are three primary steps to satisfy the thesis or dissertation requirement of a graduate degree program. These steps must be taken in order, and each subsequent step cannot be undertaken until the prior step is successfully completed.

Defense

A thesis or dissertation is defended before a committee known as the defense committee (which always includes the supervisory committee). This event is formally referred to as the final oral examination.

Final Reading Approval

Any modifications that are required by the defense committee should be completed before the revised thesis or dissertation is submitted to the chair of the supervisory committee (or designee) for final reading approval.

Format Review

The thesis or dissertation and supporting documentation is submitted electronically to the Graduate College for a format review, including any corrections that are required by the Graduate College.

- The format review is guided by detailed requirements and procedures described in the *Thesis and Dissertation Guide*, with support from the *Thesis/Dissertation Formatting Checklist*. A thesis or dissertation that does not conform to the standards and guidelines will be returned by the Graduate College to the graduate student for corrections. The issues addressed in the standards and guidelines ensure that the thesis or dissertation is complete in terms of the components required by the Graduate College, that the final version meets technical publication standards (e.g., minimum margins for binding purposes), and that certain legal requirements involving copyright are given proper attention.
- An official format review cannot be initiated until the chair of the supervisory committee (or designee) has granted final reading approval of the thesis or dissertation. However, the Graduate College will provide preliminary advice on request. Graduate students with questions about any aspect of the format review are encouraged to contact the Graduate Student Success Center, at Riverfront Hall, Room 318, online boisestate.edu/graduatecollege-success/, or by phone (208) 426-1026.

Final Version

After a thesis or dissertation has passed the format review, a graduate student submits the final version as an electronic file to the Graduate College for review by the Dean of the Graduate College (or designee) before the deadline published in the academic calendar. The thesis or dissertation requirement of a graduate degree program is not considered satisfied until the final version has been approved by the Dean of the Graduate College. The final version includes a page that contains the research protocol number and a statement that the protocol has been approved by the appropriate Office of Research Compliance (ORC) committee – Institutional Review Board (IRB), Institutional Animal Care and Use Committee (IACUC), or Institutional Biosafety Committee (IBC), if required. Refer to the responsible conduct of research for additional guidance.

1. An *Access Agreement for a Thesis* or *Dissertation or Embargo Request for a Thesis or Dissertation* form must be submitted. Because a thesis or dissertation is a significant contribution to a discipline, the Graduate College requires that all theses and dissertations be archived and made publicly accessible. This is done through ScholarWorks, a digital university repository overseen by the Albertsons Library. The conditions for public access to a thesis or dissertation may vary depending on a variety of circumstances. Approval by the Graduate College of an access agreement or embargo request is a graduation requirement for all students who complete a thesis or dissertation as part of a graduate degree program.
2. Archival, bound paper copies of the thesis or dissertation can be ordered, as required by the department and for personal use. The Graduate College provides an electronic process for a student to order paper copies.

Name Used on a Thesis or Dissertation

The name used on a thesis or dissertation must match the author's name as it appears on official Boise State records. Graduate students may choose to omit a middle name or to use an initial, however the name used must be consistent throughout the thesis or dissertation and the accompanying paperwork (*Defense Committee Approval*, *Final Reading Approval*, *Access Agreement for a Thesis or Dissertation*, and *Embargo Request for a Thesis or Dissertation*).

Graduate students that want to use a different name, such as a nickname, on a thesis or dissertation must first change their diploma name in the official Boise State University records by updating it in Student Center on myBoiseState.

Graduate Student Success Center

The Graduate Student Success Center is a valuable resource for graduate students and faculty, and shares the goal of helping to produce a high quality thesis or dissertation. Graduate students and supervisory committees are responsible for the content and overall quality of the research and the resulting thesis or dissertation. However, the Graduate Student Success Center provides the following resources that can be used from the beginning of the writing process to publication of the thesis or dissertation via *ScholarWorks Standards and Guidelines for Theses and Dissertations*. This document includes information on:

- the thesis and dissertation process,
- thesis/dissertation elements, standards, and guidelines,
- the Graduate College thesis/dissertations template for Microsoft Word, and
- ScholarWorks thesis and dissertation reference manual.

Thesis and Dissertation GradWrite

This writing workshop is held multiple times throughout the school year, including in January, before classes begin for the spring semester, Saturday sessions during the fall and spring semester, and monthly during the summer. An online version (GradWrite With Me) is also available for online/distance students. This workshop includes quiet space and time to write, a trained writing coach (available from 10:00 am to 2:00 pm each day), short (15 to 30 minute) breakout presentations on topics such as the writing process, time management, formatting, or citations, and writing exercises such as writing sprints, reference organization, and peer to peer review. GradWrite is open to all graduate students working on a thesis or dissertation. Information about GradWrite can be found on the Graduate College website at: boisestate.edu/graduatecollege-success/gradwrite.

Group Workshops GradSkills

The Graduate Student Success Center conducts workshops designed to meet the needs of any group of graduate students or faculty members working on a thesis or dissertation. Topics vary and can include formatting, citations, the thesis/dissertation process or anything else related to writing a thesis or dissertation. Upon request, Graduate Student Success Center staff work with student groups, cohorts, and departments to develop new workshops in support of classroom instruction and to address needs expressed by students. Requests can be made by departments, individual faculty, individual students or student groups.

Individual Consultations with Students and/or Faculty

Upon request, Graduate Student Success Center staff will meet individually with graduate students or faculty members. This consultation is available to all graduate students and faculty members regardless of the writing project and can be set up by appointment or on a drop-in basis. Topics can vary, however, the focus is on helping students and faculty members communicate through writing by providing an outside perspective and by exploring diverse writing methods within and outside of their respective disciplines. Graduate students are encouraged to meet with Graduate Student Success Center staff early in their graduate careers to take advantage of this resource.

Culminating Activity

The term culminating activity refers to a summary exercise that is carried out with a high degree of independence, is based on advanced study and accumulated graduate experience, is integrative in nature, and is typically completed at the end of a graduate student's academic career. The traditional culminating activities for master's students and doctoral students are the thesis and dissertation, respectively, but master's students in the United States now engage in many other forms of culminating activity such as a project, portfolio, capstone course, series of practicums, recital (performing arts), and comprehensive examination. Satisfactory completion of a culminating activity (or part of a culminating activity) is normally recorded by a grade in a graduate course set up specifically for that purpose (e.g., 592 Portfolio).

Graduation

Applying for Graduation

When a graduate student nears completion of the requirements for a graduate degree or certificate program, they must apply for graduation and pay the required graduation fee. This initiates a final audit of a graduate student's academic records by the Registrar's Office and reserves an official embossed diploma or certificate. To apply for graduation and pay the graduation fee, log on to myBoiseState.edu in the Student Center and choose the Apply for Graduation option from the drop down box under Academics. This process should be completed no later than the deadline published in the academic calendar for the semester or summer session in which a graduate student intends to complete the degree or certificate requirements. The month of the expected date of graduation is May for spring semester completions, August for summer session completions, and December for fall semester completions. If the expected date of graduation is missed twice, a graduate student is placed on inactive status by the Registrar's Office and the graduate student is required to contact the Registrar's Office before attempting to establish a new graduation date.

Commencement

Candidates for graduate degrees are eligible to participate in commencement if cleared to do so by the Registrar's Office. Graduate students in graduate certificate programs are not eligible to participate in commencement unless they are also candidates for graduate degrees and have been cleared for participation by the Registrar's Office. Diplomas and certificates are mailed after satisfactory completion of a final degree audit of all program requirements by the Registrar's Office.

Program Timelines

All timelines associated with graduate degree and certificate programs are published each semester or summer session in the Boise State University's Academic Calendar. These timelines include application and fee payment deadlines, last day to add and drop courses, starting and ending dates for semesters and sessions, last days for filing program forms, final oral examinations, and the submission deadlines for theses and dissertations. It is a graduate student's responsibility to be familiar with these timelines.

Full-Time Enrollment

For the purpose of verifying enrollment, a graduate student must be enrolled in at least nine (9) credits to be considered full-time. Graduate students that are enrolled in fewer than nine (9) credits are considered to be enrolled proportionally less than full-time. This applies to each fall, spring, and summer semester or session.

In determining whether a graduate student is enrolled full-time, Boise State counts all credit hours on a graduate student's registration form, including courses under audit status, courses being repeated, and credits for workshops. In short, nearly every combination of any type of credit hour counts toward the required credit total. Note also that developmental courses count as three (3) credits each toward the full time credit total, even though no credit is earned for taking the course (see Tuition and Fees).

Exception for International Students

An exception applies if a graduate student is an international student when summer is the first semester in F1 or J1 status. For immigration purposes only a minimum of six (6) credits is required during the summer to be considered full-time. Three (3) of these six (6) credits must be in coursework other than independent study, thesis, or dissertation.

This does not change the requirement if a graduate student is an international student who has a graduate assistantship (GA) to be registered in nine (9) credits during fall and spring, but can maintain a GA without summer registration.

Student Handbook

All graduate programs or graduate academic departments should have handbooks of procedures available for graduate students. These are essential resources and students should visit the program website or contact the Graduate Program Coordinator to obtain a copy.

Graduate Assistantships

Graduate Assistantships (GAships) are awarded competitively for a contract period of at least one full semester or session, but cannot exceed 12 months in duration. To qualify for a GAship, a graduate student must be admitted to a graduate program prior to the start of the contract period, must remain in an admitted status to a graduate degree program during the contract period, and must continue to meet satisfactory degree progress requirements. During the contract period, a Graduate Assistant (GA) cannot work for Boise State University under any compensable arrangement other than the GAship. Although a contract period for a GAship cannot exceed 12 months, a multiple-year GAship offer can be made to a prospective student with the understanding that the GA contract can be renewed annually pending satisfactory performance, adequate degree progress, and the availability of funding.

A GA at Boise State University must hold one of three titles – Graduate Teaching Assistant (GTA), Graduate Research Assistant (GRA) or Graduate Service Assistant (GSA) – although the work done by a GA under the work obligation may be any combination of teaching, research, and service duties. The combination of duties may also vary over the contract period.

Boise State University places limits on the number of hours that the GAship supervisor may assign to the GA in order to satisfy the work obligation (but Boise State University places no limits on the time spent by the GA on educational and developmental activities.) The number of standard hours (per week) assigned as

the work obligation of the GA, averaged over the semester, session, break or interim, cannot exceed a maximum set by Boise State University:

- Fall or spring semester: 20 hours per week
- Spring break, interim, and summer session: 40 hours per week

A full-time GAship must include a salary, payment of tuition and fees (tuition waiver), and fringe costs (including health costs). A GA is not a benefit-eligible employee of Boise State University, and, as such, the fringe costs for a GAship are the non-benefit-eligible fringe costs for student employees as determined by Boise State University. If the full-time GA is classified by Boise State University as a non-resident of Idaho, the total amount of all non-resident tuition and fees is waived by Boise State University as a scholarship. A department may use appropriated funds to pay for regular tuition and fees, however it is against Idaho State Board of Education policy to use appropriated funds to pay for any fees that are associated with self-support programs taken by the GA. An academic department or program, should they choose to do so, may use local funds to pay for the fees associated with a GA's enrollment in self-support programs or coursework.

Graduate Assistant Registration and Health Insurance

A GA is required to register for enough credit during the contract period to ensure satisfactory degree progress and meet applicable state and Federal regulations as interpreted by Boise State University. International GAs must register as full-time graduate students (at least nine credits per semester), regardless of the funding source(s) supporting the GAship, unless authorized to be less than full time by International Student Services. If the GAship is partially or completely funded by state appropriations, full-time tuition and fees are charged to the student account regardless of the number of registered credits (as per Idaho State Board of Education policy).

A GA who is not an international graduate student must register for at least five credits per semester, except that a GA who will complete all degree requirements by the end of the semester need only register for the credits required to graduate (but not fewer than 1 credit). If the GAship is partially or completely funded by state appropriations, full-time tuition and fees are charged to the student account regardless of the number of registered credits (as per Idaho State Board of Education policy).

Every GA must be covered by the Boise State University GA Group health insurance plan (an employee plan) throughout the contract period.

Termination of Graduate Assistants

A GA is an "at will" employee of the University and may be lawfully released or terminated without cause at any time with the approval of the Dean of the Graduate College. GAs may be terminated due to unsatisfactory performance of work obligations, unsatisfactory academic performance, unsatisfactory degree progress, violation of the Boise State University Student Code of Conduct, or any other cause of similar magnitude as determined by the Dean of the Graduate College. Termination of Graduate Assistants is guided by University Policy 7170.

A GA is automatically terminated by the university in any of the following circumstances:

The GA completes the degree, the GA voluntarily withdraws or is administratively withdrawn from the degree program, or the GA resigns the graduate assistantship.

In the event of termination, the graduate assistant's salary will be paid through the termination date or the last day worked. Health insurance coverage stops on the last day of the month or the last day worked. If the termination date is after the first day of class instruction for the semester, tuition and fee payments and waivers remain credited to the student account. If the termination date is before the first day of class instruction, tuition and fee payments and waivers do not remain credited for that semester to the student account.

Additional information about GAs, and about financial aid in general, can be found on the Graduate College website at boisestate.edu/graduatecollege/funding/.

Additional information for departments is available here: boisestate.edu/graduatecollege/funding/ga-information-for-departments/.

GAs are administered according to University Policy 7170. Information about maximum time commitments, minimum credit requirements, etc., can be found in this policy. The procedures for hiring a GA, the *Tuition/Fee Waiver Form*, and GA Group Health Insurance plan information may be found at: boisestate.edu/graduatecollege/funding/ga-information-for-departments/

Regulations for Graduate Certificate Programs

A graduate certificate program is limited in scope relative to a graduate degree program but provides an opportunity for advanced study with a particular focus. Successful completion of a graduate certificate program is a coherent academic accomplishment that leads to an official notation on a graduate student's transcript. Subject to the regulations that govern a specific program, a graduate certificate can often serve as an intermediate accomplishment when a graduate student's ultimate goal is a graduate degree.

Certificate Requirements

The curriculum of a graduate certificate program is a set of academic courses identified by the university as suitable if a graduate student is properly qualified and wishes to study a clearly delineated topic within a disciplinary or interdisciplinary setting. The curriculum may include both specific courses and a selection of elective courses.

Credit Requirements

The total credit requirement must include at least nine graduate credits earned in courses exclusive of university-wide graduate courses 591-598, 686-693, and 696-697.

Any deviation by the certificate curriculum from this stipulation must be approved through appeal to the Graduate College. A limited number of credits earned in undergraduate courses may be applied to meet the credit requirements (see Restrictions on Certain Courses and the rules governing the application of credits already applied to a graduate certificate). In all cases, certificates are subject to the One-Half Requirement.

Culminating Activity

A culminating activity is normally not a requirement of a graduate certificate program but is not precluded from being a requirement. If a culminating activity is required, it must be of limited scope relative to the culminating activity required by the most closely related master's degree program offered by the university. The culminating activity must be represented in the total credit requirements using an appropriate course.

Duration of Graduate Study

All requirements for a graduate certificate (including transfer courses) must be started and completed within a single continuous interval of no more than four (4) years. This single continuous interval includes summers and any semesters in which a graduate student is not enrolled, and must encompass all courses applied to the certificate, including transfer courses.

Regulations for Master's Programs

Although programs leading to a master's degree are very diverse, they generally fall into two categories depending on overall emphasis and the nature of the culminating activity.

- Scholarly programs emphasize research or creative activities and require a thesis that is defended formally in a public setting and made publicly accessible through the university archive.
- Professional programs emphasize the application of advanced knowledge and skills and require a project, capstone course, series of practicums, recital, or comprehensive examination.

Both scholarly and professional master's programs involve substantial study beyond the baccalaureate degree, impart the methodology of discovery or creation in a given discipline, and prepare a graduate student to contribute at an advanced level to the workplace and to the community.

Degree Requirements

Advisor or Supervisory Committee

Graduate students in master's programs must be under the guidance of either a supervisory committee or an advisor appointed soon after admission (see Graduate Student Advising).

Credit Requirements

The program of study leading to a master's degree must include at least 30 total credits. All credit must be approved for application by the graduate program coordinator and by the Graduate College.

Culminating Activity

The program of study leading to a master's degree must include at least one culminating activity that may be a thesis, project, portfolio, capstone course, series of practicums, performance recital or lecture recital, or comprehensive examination. The culminating activity or activities should be represented in the program by nonzero credit but cannot exceed one-third (1/3) of the total credit requirement. Exceptions to the culminating activity requirement can be made by a master's program and must be approved through appeal to the Graduate College.

Final Oral Examination

Graduate students that are enrolled in master's programs with thesis requirements must pass a final oral examination that probes the graduate student's ability to describe and defend all aspects of the thesis in both a public setting and a private conference with a supervisory committee.

Duration of Graduate Study

The minimum duration of study for the master's degree is one (1) academic year after admission to the program. All requirements for a master's degree (including transfer courses) must be started and completed within a single continuous interval of no more than seven (7) years. This single continuous interval includes summers and any semesters in which the graduate student is not enrolled. In addition, it must encompass all courses applied to the degree, including transfer courses.

Thesis

A thesis document is original research or creative activity carried out while a graduate student is enrolled in a master's program. A research thesis is characterized by a clearly stated proposition or hypothesis that is investigated using analysis and synthesis of data or other scholarly evidence. The thesis must include a discussion of the relevant literature and demonstrates a master's student's ability to independently and successfully address a significant intellectual problem with concepts and methods that are accepted in the major field of study. A creative thesis includes works of fiction, poetry, and creative nonfiction and is associated with the Master of Fine Arts in Creative Writing program.

Thesis Proposal

A thesis proposal must be approved in advance by the supervisory committee. The thesis proposal presents the background, objectives, scope, methods, and time lines of the thesis research. Substantive work done prior to the appointment of the supervisory committee or work represented by credit other than 593 Thesis (such as 596 Independent Study and 696 Directed Research) is not acceptable for the thesis under any conditions.

Registration for Thesis Credit

A graduate student that is enrolled in a master's program that requires a thesis must register for at least one (1) credit of 593 Thesis in any semester or session in which they are engaged in thesis activity, including the semester or session of the final oral examination, regardless of the number of 593 Thesis credits already accumulated. A graduate student cannot undertake the final oral examination unless enough 593 Thesis credit has been accumulated to meet the degree requirement for such credit. A graduate student is not required to register for 593 Thesis credit in the semester or session subsequent to the semester or session in which the Graduate College receives the format review copy of the thesis and the *Final Reading Approval* pages signed by each member of the supervisory committee and the Graduate College representative. For thesis-based programs, graduate students must submit the format review copy and the signed *Final Reading Approval* pages to the Graduate College no later than the last day of the final exam week of the semester or session. If a graduate student fails to meet this deadline, they will be required to register for at least one credit of 593 Thesis in the subsequent semester or session.

Thesis Grading

All 593 Thesis credits are graded in-progress (IP) until a final grade of either pass (P) or fail (F) is assigned by the master's program. A grade of pass (P) is assigned to all 593 credits if the final oral examination is passed, and a grade of fail (F) is assigned to all 593 credits if the graduate student fails the final oral examination. See Final Oral Examination and Failure of a Final Oral Examination below.

Final Thesis Approvals and Procedures

A grade of pass (P) in all 593 credits is not sufficient to satisfy the thesis requirement for a master's degree and does not clear a graduate student for graduation. A graduate student that successfully defends their thesis during the final oral examination must also:

1. Be granted final reading approval by the major advisor (chair of the supervisory committee).
2. Include an *Access Agreement for a Thesis or Dissertation* or an *Embargo Request for a Thesis or Dissertation* form describing conditions for archiving and publishing the thesis through ScholarWorks.
3. Include a page that contains the research protocol number and a statement that the protocol has been approved by the appropriate Office of Research Compliance (ORC) committee Institutional Review Board (IRB), Institutional Animal Care and Use Committee (IACUC), or Institutional Biosafety Committee (IBC).
4. Pass the format review of the Graduate College.
5. Be approved by the Dean of the Graduate College.

Project

A project is a substantial exercise that demonstrates a master's student's ability to independently and successfully carry out a professional activity similar to what may be encountered in the workplace. Although a final oral examination for a project is not required by the Graduate College, the master's program may define procedures for such an examination and require it for all students in the program. The Graduate College does not archive projects and does not require that graduate programs archive projects. However, it is permissible for a program to adopt local regulations and implement procedures for archiving some or all projects produced in a particular graduate program. This flexibility acknowledges the great diversity of projects across disciplines and the differing views on their archival value.

Registration for Project Credit

A graduate student that is engaged in project activity during any semester or term, including the semester or term in which the project in final form is assigned a grade, must register for at least one (1) credit of 591 Project, regardless of the number of 591 Project credits that have already been accumulated.

Project Grading

All 591 Project credits are graded in-progress (IP) until a final grade of either pass (P) or fail (F) is assigned by the academic unit responsible for the program. The same grade (P or F) is assigned to all 591 credits that a graduate student registers in during their career in a master's program.

Portfolio

A portfolio is a substantial collection of selected work that demonstrates efforts, progress, and accomplishments in one or more areas of the curriculum. The portfolio is a culminating activity, although graduate students should begin the portfolio process early by discussing with faculty how to plan and organize their portfolio. This is followed by the collection of examples of work throughout the graduate student's academic career that demonstrate, for example, knowledge of a subject, mastery of a learning process, publishable scholarship or completion of special projects, themes, and/or creative activity. A portfolio must contain a graduate student's thoughts about the learning process, demonstrate the grasp of key information and/or exhibit the development of crucial skills. These reflections can take the form of learning logs, reflective journals, and other forms, as appropriate. The credit(s) awarded should reflect the work required to assemble the portfolio.

Registration for Portfolio Credit

The number of required 592 Portfolio credits is determined by the master's program. Register for the number of required 592 Portfolio credits during the semester when the portfolio is expected to undergo final evaluation and be assigned a grade.

Portfolio Grading

All 592 Portfolio credits are graded either pass (P) or fail (F). However, if the final evaluation of a portfolio is delayed, then at the discretion of the academic unit responsible for the program, all 592 Portfolio credits may be assigned a grade of in progress (IP). After the portfolio has undergone final evaluation, the same grade (P or F) is assigned to all 592 credits that the graduate student has registered for during their career in the master's program.

Capstone Course

A capstone course is a graduate course that serves as a final comprehensive assessment of the knowledge and skills of a master's student in the major field of study. As a culminating activity, a capstone course is taken in the last semester of a master's program and may be a grade-point course or pass-fail course. A capstone course may be designated with a program-specific graduate course number or the university-wide graduate course 692 Capstone Course.

If a graduate student receives a grade of fail (F) in a capstone course, they may not graduate in that semester or term, regardless of whether they are otherwise qualified to do so. A failed capstone course may be repeated (see Repetition of Courses in the *Graduate Academic Regulations* section). If repeating a capstone course, a graduate student must enroll in the number of credits required by the course.

Series of Practicums

A practicum is a supervised practical application of previously studied theory that takes place in a professional, clinical, or field setting. The culminating activity for a master's program may be a series of practicums completed primarily during the later phases of the program. A practicum may be designated with a program-specific graduate course number or may use university-wide graduate course 590 Practicum/Internship.

Performance Recital or Lecture Recital

A performance recital or lecture recital coupled with one or more examinations may be used as a culminating activity for a master's program in the performing arts. A performance recital or lecture recital is designated with a program-specific graduate course number and must be a pass-fail course.

Comprehensive Examination

A comprehensive examination assesses depth and breadth of knowledge. When used as the culminating activity or as part of the culminating activity for a master's program, a comprehensive examination cannot be attempted until the student has completed all core courses required by the program and has been admitted to candidacy. The program may impose additional conditions to be met by the student prior to the examination, such as completion of all courses required for the degree.

Considerable autonomy is granted to the graduate program in the design, administration, and evaluation of a master's comprehensive examination. However, graduate students must be registered for at least one (1) credit of 690 Master's Comprehensive Examination during the semester or term of the first attempt at the comprehensive examination, and the examination must be administered in time to process and submit the grade when grade reports are due in the Office of the Registrar. When a graduate student passes their comprehensive examination, a grade of pass (P) is submitted for the 690 credit(s); if the comprehensive examination is failed, then the program follows the procedure described for failure of a comprehensive examination.

Failure of a Comprehensive Examination

Failure of a comprehensive examination (any attempt by a master's student) is documented by submission of a *Report of Failure of a Comprehensive Examination* form to the Graduate College and by submitting the appropriate grade for 690 Master's Comprehensive Examination. A comprehensive examination that is failed on the first attempt can be repeated once, but only if the graduate student requests a second attempt and it is approved by the master's program. The request for a second attempt must be in writing to the graduate program coordinator and must be made within five (5) working days after the graduate student has been notified of the failure. If the graduate student does not request a second attempt, or if a request is made but not approved by the graduate program, then a grade of fail (F) is assigned to the 690 credit(s) and the graduate student is dismissed from the program and Boise State by the Graduate College. If the request for a second attempt is approved by the program, then it must occur within twelve (12) months after the first attempt, and an incomplete grade (I) is assigned to the 690 credit(s) until the result of the second attempt is known. If the graduate student does not make the second attempt within twelve (12) months after the first attempt, or if the graduate student fails the second attempt, then a grade of fail (F) is assigned to the 690 credit(s) and the graduate student is dismissed from the program and Boise State by the Graduate College. Any extension of the twelve-month limit on the second attempt must be appealed using a *Graduate Appeal Form*, and must be approved by the graduate program coordinator and by the Dean of the Graduate College.

Final Oral Examination

The Graduate College requires a final oral examination (also called a defense) for master's students that complete a thesis as a culminating activity. The examination must consist of three sequential parts in which the graduate student presents and defends their thesis research,

- a public presentation,
- a public question and answer session, and
- a private question and answer session with the defense committee.

The final oral examination should occur no later than the date specified in the academic calendar. This date is set to allow time for final revision and processing of the thesis so that, if a graduate student passes the final oral examination, they have a reasonable chance for graduation in the same semester

or session. Announcement of the public presentation to the university community is required and should precede the presentation by at least two (2) weeks; defense notifications received within two weeks of the scheduled defense date will be rejected.

The defense committee is identical to the graduate student's supervisory committee, and the chair of the supervisory committee is responsible for conducting all three parts of the final oral examination according to procedures established by the Graduate College. However, at the graduate student's or the academic unit's request, a graduate faculty representative (GFR) may be appointed as a nonvoting member to the defense committee by the Dean of the Graduate College. The GFR must be a member of the graduate faculty and a member of an academic unit not represented on the supervisory committee. The GFR conducts all three parts of the final oral examination according to procedures established by the Graduate College.

The result of a final oral examination can only be reported as pass or fail. The determination of pass or fail is by a vote of the voting members of the defense committee with a simple majority determining the outcome unless the graduate program requires a unanimous vote for pass. If a tie vote occurs, then the final oral examination is considered to have been failed. A result of pass is immediately documented by the signatures of the voting members of the defense committee on the *Defense Committee Approval* form that is to be bound with the paper copies of the thesis. A result of failure is immediately documented on a *Report of Failure of a Final Oral Examination* form that is submitted to the Graduate College by either the chair of the supervisory committee or the GFR.

Failure of a Final Oral Examination

Failure of a final oral examination (any attempt by a master's student) is documented by submission of a *Report of Failure of a Final Oral Examination* form to the Graduate College and by submitting the appropriate grade for 690 Master's Comprehensive Examination. A final oral examination that is failed on the first attempt can be repeated once, but only if the graduate student requests a second attempt and it is approved by the graduate program. A request for a second attempt must be in writing to the graduate program coordinator and must be made within five (5) working days after the graduate student is notified of the failure. If a second attempt is not requested, or if a request is made but not approved by the graduate program, then a grade of F is assigned to all 593 credits and the graduate student is dismissed from the program and Boise State by the Graduate College. If the request is approved by the academic unit, then the second attempt must occur within twelve (12) months after the first attempt, and IP grades are maintained for all 593 credits until the result of the second attempt is known. If the second attempt is not made within twelve (12) months after the first attempt, or if the graduate student fails the second attempt, then a grade of fail (F) is assigned to all 593 credits and the graduate student is dismissed from the program and Boise State by the Graduate College. Any extension of the twelve-month limit on the repeat attempt must be appealed using a *Graduate Appeal Form*, and must be approved by the graduate program coordinator and by the Dean of the Graduate College.

Second Master's Degree

Graduate students that earned master's degrees from Boise State University may earn a second master's degree in another discipline under the following guidelines:

1. All requirements prescribed for the second degree must be met.
2. Requirements for the second degree that have already been met as part of the first master's degree may be counted toward the second degree with the following stipulations:
   - The supervisory committee and Dean of the Graduate College approve.
   - Credit for culminating activities is automatically excluded from application to both degrees.

   - At least two-thirds (2/3) of the credit applied to the second degree must represent new coursework (that is, courses not already applied to the first degree).
3. All requirements for the second degree, including transfer courses, must be started and completed within a single continuous interval of no more than seven (7) years.
4. A graduate student cannot be admitted to a second master's degree program until all requirements for the first master's degree have been completed.

Accelerated Master's Degree

An academic unit responsible for a specific existing undergraduate degree program and specific existing master's degree program may develop a process that allows certain students in the undergraduate degree program to pursue the master's degree on an accelerated schedule. Undergraduate students that qualify may register for a limited number of graduate courses in the last two (2) semesters of their undergraduate program with the understanding that graduate credits earned in these courses can be used to satisfy both the bachelor's and the master's degree requirements. The remaining requirements for the master's degree are satisfied in the semesters subsequent to the award of the bachelor's degree. All requirements for both the bachelor's degree and master's degree must be met. In addition, the early start on the master's degree requirements must not delay receipt of the bachelor's degree beyond a nominal four-year schedule for that discipline. Students that work toward an accelerated master's degree are subject to all academic performance requirements of the Graduate College, including cumulative GPA, program GPA, and individual course grade requirements.

Because it is critically important to maintain the high intellectual quality of a graduate program, the program is required to carefully consider the overall readiness of an undergraduate student when recommending that they be allowed to pursue a master's degree on an accelerated schedule. The process developed by the program for judging an undergraduate student's overall readiness must require that they meet at least two GPA measures computed after 75 undergraduate credits are completed toward the bachelor's degree:

1. An overall GPA of at least 3.00.
2. A GPA of at least 3.30 computed for undergraduate courses chosen by the graduate program because of their importance to the undergraduate and master's degree programs.

In order to better judge the overall readiness of the student, a graduate program may require higher GPA measures than those indicated here, and may require that the student meet additional stipulations for eligibility. Meeting these eligibility requirements does not guarantee that they will be permitted to pursue an accelerated master's degree. As is the case with all graduate admission decisions, the Dean of the Graduate College is responsible for making the final decision on whether or not an undergraduate student is permitted to work on a master's degree on an accelerated schedule. Undergraduate students at other colleges and universities may be eligible to work on an accelerated master's degree at Boise State University. An undergraduate student that is interested in pursuing an accelerated master's program should contact the relevant Graduate Program Coordinator first. In all cases, students that are interested in accelerated master's degree programs must apply and be admitted as undergraduate students at Boise State University, must apply and be admitted to the accelerated graduate degree program, and must fill out a *Permit for Seniors to Take Graduate Courses* form once admitted to the accelerated graduate degree program.

An undergraduate student that has been admitted to an accelerated master's program is not eligible for a Graduate Assistantship until they have completed their undergraduate degree program, and have matriculated into their graduate degree program.

En Route Master's Degree

Some doctoral programs offer the opportunity for admitted doctoral students to pursue a master's degree (en route), while pursuing their doctoral degree. In all cases, students must apply and be admitted to both degree programs. For a doctoral student that wishes to apply to an en route master's degree program after being admitted to the doctoral program, the student must meet the admission criteria for the desired master's program, and admission to the master's program must be approved by that program's Graduate Program Coordinator. A doctoral student who already holds a master's degree in the discipline for which they have applied to an en route master's degree will not be eligible for the en route master's degree.

Students must submit a separate application and application fee for the second degree program. Relevant coursework may be counted for both programs, subject to program approval and the development of a combined degree plan. In order to receive the master's degree en route to the doctoral degree, all degree requirements, including the culminating activity for the master's degree, must be fulfilled. The culminating activity credits, including master's thesis, project, practicum/internship, and capstone credits from the en route master's programs may not be counted towards the doctoral degree requirements, and doctoral culminating activity credits, including dissertation credits, may not be counted towards the master's degree requirements, unless explicitly articulated as PhD Track Culminating Activity requirements in the master's degree requirements. Research content used for a master's culminating activity may not be used towards a doctoral dissertation or culminating activity.

After graduating from the master's program graduate students will continue to work towards the doctoral degree and doctoral candidacy requirements as outlined by the graduate program and the Graduate College policies.

Regulations for Education Specialist Programs

The Education Specialist (EdS), is an advanced degree specifically designed for students that wish to develop advanced knowledge and theory beyond the master's degree, but may not wish to pursue a doctoral degree. At Boise State University, admission requirements include a master's degree from a regionally accredited U.S. institution of higher education or from a non-U.S. institution of higher education that is judged equivalent to a U.S. master's degree by the International Admissions Office, along with other Graduate College and program-specific requirements.

Degree Requirements

The curriculum of an EdS program is a set of academic courses identified by the university as suitable for properly qualified students. The curriculum may include both specific courses and a selection of elective courses.

Culminating Activity

A culminating activity may not be required for an EdS program but is not precluded from being a requirement. If a culminating activity is required, it must be represented in the total credit requirements using an appropriate course.

Duration of Graduate Study

All requirements for an EdS (including transfer courses) must be started and completed within a single continuous interval of no more than seven (7) years, although a graduate program may require a shorter duration of graduate study. This single continuous interval includes summers and any semesters in which the graduate student is not enrolled. In addition, it must encompass all courses applied to the degree, including transfer courses. Students in the Educational Technology, EdS program that wish to apply transfer credits must have completed those credits within five (5) calendar years of the time of admission to the program.

Regulations for Doctoral Programs

Boise State University offers Doctor of Philosophy (PhD) and Doctor of Education (EdD) degrees. Each requires demonstration of expertise in a major field of study, a working understanding of one or more related disciplines, independent research leading to a significant and original contribution to knowledge, and (in some cases) proficiency in one or more foreign languages. Recipients of the PhD and EdD degree generally engage in careers of active scholarship in a wide variety of employment settings.

Boise State also offers a Doctor of Nursing Practice (DNP) degree. This is the highest degree for practice-focused nurses providing direct or indirect care to patients, families, organizations or populations; engaged as faculty in nursing programs; leading health related organizations; developing and implementing health policy; and translating research into evidence-based practice. Information about the DNP degree can be found on the School of Nursing website at boisestate.edu/nursing-dnp.

This section describes policies that apply to PhD and EdD degree programs.

Degree Requirements

Supervisory Committee

Graduate students that are admitted to PhD or EdD programs must be under the guidance of a supervisory committee. (see the Supervisory Committee section in the *Graduate Academic Regulations* section of this catalog.)

Credit Requirements

The program of study leading to a PhD or EdD degree must include at least 60 total credits, at least half of which must be earned in courses exclusive of dissertation.

Residency

Doctoral programs at Boise State University may impose residency requirements, in which doctoral students must be enrolled in full-time, on-campus graduate study at Boise State. A program-specific residency requirement is developed by the program and approved by the Graduate College.

Comprehensive Examination

Doctoral students must pass a comprehensive examination that assesses:

- depth and breadth of knowledge in the major field of study and in one or more related disciplines and
- readiness to undertake dissertation research.

Dissertation

Doctoral students must prepare a dissertation that is written in clear and effective English that embodies the results of their original scholarly research (see Dissertation below).

Final Oral Examination

Doctoral students must pass a final oral examination that rigorously and deeply probes their ability to describe and defend all aspects of the dissertation research in both a public setting and in a private conference with the defense committee (see Final Oral Examination below).

Duration of Graduate Study

The minimum duration of study for the PhD and EdD degree is three (3) academic years beyond the baccalaureate degree. All requirements for a PhD or EdD degree (including transfer courses) must be started and completed within a single continuous interval of no more than ten (10) years. This single continuous interval includes summers and any semesters in which the doctoral student is not enrolled. In addition, it must encompass all courses applied to the degree, including transfer courses.

Previously Applied Courses

Students who have completed a master's degree from a regionally accredited U.S. institution or non-U.S. institution, if approved by the graduate program coordinator, Graduate College, and the registrar, may be applied to meet the credit requirement of a PhD or EdD degree at Boise State University.

Students who have completed an EdS degree at Boise State and enroll in a related EdD degree may apply all of the credits previously applied to the EdS degree to the EdD degree. This is known as dual application and is subject to the following stipulations:

1. The dual application of credit must be consistent with those policies of the EdD program that may limit or preclude such dual application.
2. The dual application of credit must be approved by the Graduate Program Coordinator and by the Graduate College.
3. All duration of graduate study constraints imposed by the Graduate College that govern the applicability of the credit must be met.

The Previously Applied Courses exceptions identified above are subject to the additional restrictions identified in the Graduate Academic Regulations Chapter of this catalog, as well as the One-Half Requirement.

Comprehensive Examination

Considerable autonomy is granted to the program in the design, administration, and evaluation of the comprehensive examination for a PhD or EdD student. However, a doctoral student must be in regular status and registered for at least one credit of 691 Doctoral Comprehensive Examination during the semester or term of the first attempt at the comprehensive examination, and the examination must be administered in time to process and submit the grade when grade reports are due in the Office of the Registrar. If a doctoral student passes the comprehensive examination, a grade of pass (P) is submitted for the 691 credit(s). If the doctoral student fails the comprehensive examination, then the program follows the procedure described in Failure of the Comprehensive Examination (below).

Failure of the Comprehensive Examination

Failure of the comprehensive examination (any attempt by a PhD or EdD student) is documented by submission of a *Report of Failure of a Comprehensive Examination* form to the Graduate College and by submitting the appropriate grade for 691 Doctoral Comprehensive Examination. A comprehensive examination that is failed on the first attempt can be repeated once, but only if a second attempt is requested and approved by the program. Any request for a second attempt must be in writing to the graduate program coordinator and must be made within five (5) working days after the doctoral student has been notified of the failure. If a second attempt is not requested, or if a request is made but not approved by the program, then a grade of fail (F) is assigned to the 691 credit(s) and the doctoral student is dismissed from the program and Boise State by the Graduate College. If the request is approved by the program, then the second attempt must occur within twelve (12) months after the first attempt, and an incomplete grade (I) is assigned to the 691 credit(s) until the result of the second attempt is known. If a second attempt is not made within twelve (12) months after the first attempt, or if the second attempt is failed, then a grade of fail (F) is assigned to the 691 credit(s) and the doctoral student is dismissed from the program and Boise State University by the Graduate College. Any extension to the twelve-month limit on the second attempt must be appealed using a *Graduate Appeal Form*, and must be approved by the graduate program coordinator and by the Dean of the Graduate College.

Dissertation

Original research at the doctoral level is documented by a dissertation. A dissertation is characterized by a clearly stated proposition or hypothesis that is investigated using analysis and synthesis of data or other scholarly evidence. The dissertation must demonstrate mastery of the relevant literature and the doctoral student's ability to independently and successfully address a substantial intellectual problem with concepts and methods that are accepted in the major field of study.

Dissertation Proposal

A dissertation proposal must be approved in advance of the dissertation research by the supervisory committee. The dissertation proposal presents the background, objectives, scope, methods and time lines of the dissertation research. Substantive work done prior to the appointment of the supervisory committee or work represented by credit other than 689 Dissertation Proposal or 693 Dissertation (such as 596 Independent Study and 696 Directed Research) is not acceptable for the dissertation under any conditions.

Registration for Dissertation Credit

Doctoral students must register for at least one (1) credit of 693 Dissertation in any semester or session in which they are engaged in dissertation activity, including the semester or session of the final oral examination, regardless of the number of 693 Dissertation credits that have already accumulated. Doctoral students cannot undertake the final oral examination unless enough 693 Dissertation credit has been accumulated to meet the degree requirement for such credit. Doctoral students are not required to register for 693 Dissertation credit in the semester or session subsequent to the semester or session in which the Graduate College receives the format review copy of the dissertation and the *Final Reading Approval* pages signed by each member of the supervisory committee and the Graduate College representative. Doctoral students must submit the format review copy and the signed *Final Reading Approval* pages to the Graduate College no later than the last day of the final exam week of the semester or session. Failure to meet this deadline will require the doctoral student to register for at least one credit of 693 Dissertation in the subsequent semester or session.

Dissertation Grading

All 693 Dissertation credits are graded in-progress (IP) until a final grade of either pass (P) or fail (F) is assigned by the academic unit responsible for the program. A grade of pass (P) is assigned to all 693 credits if the final oral examination is passed, and a grade of fail (F) is assigned to all 693 credits if the student fails the final oral examination.

Final Dissertation Approvals and Procedures

A grade of pass (P) in all 693 credits is not sufficient to satisfy the dissertation requirement for a PhD or EdD degree and does not clear a doctoral student for graduation. A dissertation that has been successfully defended by the doctoral student at the final oral examination must also:

1. be granted final reading approval by the major advisor (chair of the supervisory committee);
2. include an *Access Agreement for a Thesis or Dissertation* form describing conditions for archiving and publishing the dissertation through ScholarWorks;
3. include a page that contains the research protocol number and a statement that the protocol has been approved by the appropriate Office of Research Compliance (ORC) committee – Institutional Review Board (IRB), Institutional Animal Care and Use Committee (IACUC), or Institutional Biosafety Committee (IBC);
4. pass the format review of the Graduate College; and
5. be approved by the Dean of the Graduate College.

Final Oral Examination

The final oral examination for a PhD or EdD student (also called a defense) must consist of three sequential parts in which the student presents and defends the dissertation research:

- a public presentation,
- a public question and answer session, and
- a private question and answer session with the defense committee.

The final oral examination should occur no later than the date specified in the academic calendar. This date is set to allow time for final revision and processing of the dissertation so that if the final oral examination is passed, the doctoral student will have a reasonable chance for graduation in the same semester or session. Announcement of the public presentation to the university community is required and should precede the presentation by at least two (2) weeks. The defense committee must include the entire supervisory committee plus a nonvoting Graduate Faculty Representative (GFR), nominated by the student and approved by the Dean of the Graduate College (see below). At the request of the PhD or EdD program, the Dean of the Graduate College may appoint an additional voting member to the defense committee known as the external examiner. The external examiner may be from the university or from outside the university but cannot be a member of the graduate program responsible for PhD or EdD degree. The result of a final oral examination can only be reported as pass or fail. The determination of pass or fail is by a vote of the voting members of the defense committee with a simple majority determining the outcome unless the graduate program requires a unanimous vote for pass. If a tie vote occurs, then the doctoral student is considered to have failed the final oral examination. A result of pass is immediately documented by the signatures of the voting members of the defense committee on the *Defense Committee Approval* form that is to be bound with the paper copies of the thesis. A result of failure is immediately documented on a *Report of Failure of a Final Oral Examination* form that is submitted to the Graduate College by the GFR.

Graduate Faculty Representatives

PhD and EdD candidates, in consultation with their Supervisory Committee Chair (Major Advisor) or Graduate Program Coordinator, are responsible for identifying a Graduate Faculty Representative (GFR) for their supervisory committee and are required to nominate the GFR on their *Appointment of Supervisory Committee* form. The GFR at Boise State University serves as a symbol of campus-wide fairness, upholds the rigor of the graduate process, and is an impartial representative of the Graduate College to the doctoral student and their supervisory committee.

The GFR, as a non-voting member of the supervisory committee, does not count towards any Graduate College supervisory committee composition policies. The GFR is not expected to participate in the doctoral candidate's dissertation work or to meet with the full supervisory committee during the candidacy period. During the final oral defense procedure the GFR conducts all three parts of the oral examination according to procedures established by the Graduate College.

The GFR must be a member of the graduate faculty, cannot be an affiliate, adjunct, or emeritus member of the graduate faculty, and cannot be a member of the graduate program (or affiliated programs in the case of interdisciplinary programs), that is granting the doctoral degree. It is strongly encouraged that doctoral candidates invite GFRs from outside of their colleges. The Graduate College maintains a list of approved graduate faculty from which the doctoral candidate may identify potential GFRs to contact.

Due to the length of many candidacy periods, a doctoral candidate may need to identify a replacement GFR, should the GFR become unable to serve for any reason. This replacement will not impact the candidate's progress, defense, or status at Boise State University – however, the candidate will be expected to identify a replacement GFR, following the same process identified above.

When a candidate is ready to defend their dissertation, the full supervisory committee, including the GFR, should be consulted in order to find a defense day, time, and location that is amenable to all members of the supervisory committee.

Failure of the Final Oral Examination

Failure of a final oral examination (any attempt by a PhD or EdD student) is documented by submission of a *Report of Failure of a Final Oral Examination* form to the Graduate College and by submitting the appropriate grade for 693 Dissertation. A final oral examination that is failed on the first attempt can be repeated once, but only if the doctoral student requests a second attempt and it is approved by the graduate program. The request for a second attempt must be in writing to the Graduate Program Coordinator and must be made within five (5) working days after the doctoral student is notified of their failure. If a second attempt is not requested, or if a request is made but not approved by the program, then a grade of fail (F) is assigned to all 693 credits and the doctoral student is dismissed from the program and Boise State by the Graduate College. If the request is approved by the graduate program, then the second attempt must occur within twelve (12) months after the first attempt, and IP grades are maintained for all 693 credits until the result of the second attempt is known. If the doctoral student does not make a second attempt within twelve (12) months after the first attempt, or if the doctoral student fails the second attempt, then a grade of fail (F) is assigned to all 693 credits and the doctoral student is dismissed from the program and Boise State by the Graduate College. Any extension of the twelve-month limit on the repeat attempt must be appealed using a *Graduate Appeal Form*, and must be approved by the graduate program coordinator, and by the Dean of the Graduate College.

Questions About These Regulations?

Contact the Graduate College
Riverfront Hall, Room 307
(208) 426-GRAD (4723) (phone)
graduatecollege@boisestate.edu (email)
boisestate.edu/graduatecollege (website)

Summary of Programs and Courses

Course Prefixes

All the course prefixes used at Boise State are listed below. A course prefix is the two or more letter code preceding a course number; it indicates the subject area of the course.

University-Wide Course Numbers

A university-wide graduate course represents a certain type of graduate activity with the same course number and title across all academic units. University-wide graduate courses 591 Project, 592 Portfolio, 593 Thesis, 690 Master's Comprehensive Examination, 692 Capstone Course, and 693 Dissertation represent work done on graduate culminating activities and are therefore known as culminating activity courses; some graduate programs have culminating activity courses that are numbered differently than these university-wide courses.

553 Professional Development (Variable 1-3)(F/S/SU). Available at special fee rate (approximately one-third of part-time fee rate). Credit is awarded for professional development only and cannot be applied to a graduate degree program by policy of the State Board of Education. May be repeated for credit. Either graded or pass/fail.

580-589 Selected Topics (Variable 1-6)(F/S/SU). Subjects normally offered and studied in one department can be divided into as many as 10 areas. Each area will be assigned one number of the 580-589 group. Although the topics considered in the courses in any one area may vary from semester to semester, repeated use of any one number implies that the topics continue to be selected from the same area. May be repeated for credit. Either graded or pass/fail.

590 Practicum/Internship (Variable 1-12)(F/S/SU). To earn graduate credit you must have a 3.00 cumulative GPA and no more than 12 credits may be applied toward a graduate degree or second undergraduate degree. Some graduate programs, however, accept only 3 internship credits. Practicum/Internship cannot be repeated to improve a grade. May be repeated for credit. Either graded or pass/fail. PREQ: PERM/INST.

Note: An undergraduate internship is an entry level employment experience related to the discipline. The graduate intern already has an undergraduate degree and is expected to perform with a higher level of responsibility, decision-making authority, and accomplishment.

591 Project (Variable 1-12)(F/S/SU). Execution of a substantial exercise that demonstrates the ability to successfully and independently carry out a professional activity similar to what is encountered in the professional workplace; archival of the results of the project is required according to standards approved by the Graduate College. May be repeated for credit. Pass/fail only. PREQ: PERM/INST.

592 Portfolio (Variable 1-6)(F/S/SU). A broad-based selection of significant student work that is used to appraise student performance and professional development. A portfolio reflects the depth and breadth of a student's educational growth since entering the graduate program. Portfolios may include, but are not limited to, classroom examinations, journals, writing samples, publishable scholarship, professional projects, annotated bibliographies, and artistic endeavors. May be repeated for credit. Pass/fail only.

593 Thesis (Variable 1-12)(F/S/SU). Independent research or creative activity at the master's level resulting in a thesis that must be defended at a final oral examination and archived in the university library. The thesis must be written in clear and effective English and presented in a format that conforms to the standards of the Graduate College. May be repeated for credit. Pass/fail only. PREQ: PERM/INST.

594 Conference or Workshop (Variable 0-4)(F/S/SU). Intensive daily instruction by a recognized expert in a specialized topic over a period of time considerably shorter than a semester. Workshop credits may not transfer. May be repeated for credit. Either graded or pass/fail.

595 Reading and Conference (Variable 1-4)(F/S/SU). The conduct of topical research, assigned readings or literature review. The faculty advisor and the student prepare and sign an agreement describing the amount and type of work to be accomplished. May be repeated for credit. Either graded or pass/fail. PREQ: PERM/INST.

596 Independent Study (Variable 1-6)(F/S/SU). Advanced study of a specialized topic; design and completion of a project may be included in the study. The student works with a high degree of independence to meet well-defined goals under the supervision of a member of the graduate faculty.

Requires submission of a completed Application for Graduate Independent Study prior to the deadline specified in the academic calendar. An independent study cannot be substituted for a course regularly offered at Boise State, nor can independent study credits be used to improve a grade in a course the student has already taken. May be repeated for credit. Either graded or pass/fail. PREQ: PERM/INST.

597 Special Topics [Required Modifier] (Variable 0-4)(F/S/SU). Instruction on a topic that is not included in the catalog of regular graduate courses; the topic is indicated by the required modifier. Descriptions for these courses are given in the Schedule of Classes published each semester. May be repeated for credit. Either graded or pass/fail.

598 Seminar (Variable 1-4)(F/S/SU). Small group meetings for the exchange of ideas, debate of issues, or presentation of research. Format, conduct, and purpose of seminars vary widely among disciplines. May be repeated for credit. Either graded or pass/fail.

686 Master's Preliminary Examination (Variable 1-6)(F/S/SU). An early assessment of a student's potential to complete a master's program satisfactorily. Considerable autonomy is granted to the academic unit in the design, administration, and evaluation of the preliminary examination. Pass/fail only. PREQ: PERM/INST.

687 Doctoral Preliminary Examination (Variable 1-6)(F/S/SU). An early assessment of a student's potential to complete a doctoral program satisfactorily. Considerable autonomy is granted to the academic unit in the design, administration, and evaluation of the preliminary examination. Pass/fail only. PREQ: PERM/INST.

688 Thesis Proposal (Variable 1-6)(F/S/SU). Background, objectives, scope, methods, and timeline of the thesis research. Considerable autonomy is granted to the academic unit in the design, administration, evaluation, and approval of the thesis proposal. Pass/fail only. PREQ: PERM/INST.

689 Dissertation Proposal (Variable 1-6)(F/S/SU). Background, objectives, scope, methods, and timeline of the dissertation research. Considerable autonomy is granted to the academic unit in the design, administration, and evaluation, and approval of the dissertation proposal. Pass/fail only. PREQ: PERM/INST.

690 Master's Comprehensive Examination (Variable 1-6)(F/S/SU). The culminating activity (or part of the culminating activity) for a non-thesis master's program. Considerable autonomy is granted to the academic unit in the design, administration, and evaluation of the comprehensive examination. May be attempted only after completion of all required core courses and admission to candidacy. Other conditions may be imposed by the academic unit responsible for the program. May not be used for a master's thesis defense. Pass/fail only. PREQ: PERM/INST.

691 Doctoral Comprehensive Examination (Variable 1-6)(F/S/SU). Taken when the doctoral student is in Regular Status and has completed a significant number of course credits applicable to the degree requirements. Considerable autonomy is granted to the academic unit in the design, administration, and evaluation of the comprehensive examination. Pass/fail only. PREQ: PERM/INST.

692 Capstone Course (Variable 1-6)(F/S/SU). A final comprehensive assessment of the knowledge and skills of a master's student in the major field of study. A culminating activity taken in the last semester of a master's program. Either graded or pass/fail. PREQ: PERM/INST.

693 Dissertation (Variable 1-12)(F/S/SU). Independent research at the doctoral level resulting in a dissertation that must be defended at a final oral examination and archived in the university library and with UMI. The dissertation must be written in clear and effective English and presented in a format that conforms to the standards of the Graduate College. May be repeated for credit. Pass/fail only. PREQ: PERM/INST.

696 Directed Research (Variable 1-6)(F/S/SU). Research conducted by a graduate student under the supervision of a member of the graduate faculty. Requires the clear statement of a hypothesis or proposition, a review of the relevant literature, analysis and synthesis of data or scholarly evidence, and the

inference of conclusions. The results must be stated in a report written in clear and effective English. Requires submission of an *Application for Directed Research* prior to the deadline specified in the academic calendar. May be repeated for credit. Either graded or pass/fail. PREQ: PERM/INST.

697 Special Topics [Required Modifier] (Variable 0-4)(F/S/SU). Instruction on a topic that is not included in the catalog of regular graduate courses; the topic is indicated by the required modifier. Course topics may be offered no more than three times; after that, the course must be approved by the Curriculum Committee before it can be offered again. May be repeated for credit. Either graded or pass/fail.

How to Read a Course Description

| 1 | 2 | 3 | 4 | 5 | 6 |

BIOL527 Stream Ecology (3-3-4)(F)(Odd years). The biology and ecology of flowing waters is emphasized; their biota, management, and ecology at both the community and ecosystem level will be discussed. PREREQ: Graduate standing or PERM/INST.

7

Course Description Key

Each course at Boise State has a course description that consists of a prefix, course number, title, credit code, semester code, additional information, content description, and list of requisites. These elements of the course description are described below.

1) **Course prefix/subject** The prefix indicates the department or academic unit offering the course. See Table 9 for a complete list of course prefixes.

2) **Course numbering system** Each course offered is assigned a unique number, indicating what type of course it is and what sort of credits may be earned in the course. Courses are numbered as follows:

00–99	non-academic credit courses
100–199	lower-division undergraduate courses
200–299	lower-division undergraduate courses
300–499	upper-division undergraduate courses
500–699	graduate courses

3) **Course title** The official title of the course.

4) **Credits** According to Idaho State Board of Education policy, forty-five (45) clock-hours of student involvement are required for each semester credit, which includes a minimum of fifteen (15) student contact hours for each semester credit.

The unique course number of each course is followed by a sequence of three numbers that indicate the number of lecture hours per week that the course meets, number of lab hours per week that the course meets, and the number of credits a student earns by completing the course. The following examples show typical uses of these additional numbers:

(3-0-3)   a 3-hour lecture class carrying 3 credits

(3-4-5)   a 3-hour lecture class with a corresponding 4-hour laboratory class, carrying 5 credits

(0-4-0)   a 4-hour laboratory class that carries no credit

(0-2-1)   a 2-hour studio art class or fitness activity class, carrying 1 credit

Note: a V is used to indicate variable credits or hours.

5) **Semester code** The semester code indicates the semester(s) and/or term in which the course is offered and is expressed using letter codes F for fall semester, S for spring semester, and SU for summer term, with the full sequence of letter codes enclosed in parentheses. A comma or slash

between letter codes is used to interpret combinations as illustrated in the following examples:

F	fall semester only
S	spring semester only
SU	summer session only
F, S	fall and spring semester
F, SU	fall semester and summer session only
S, SU	spring semester and summer session only
F/S	fall semester, spring semester, or both
F/SU	fall semester, summer session, or both
S/SU	spring semester, summer session, or both
F, S, SU	fall semester, spring semester, and summer session
F/S/SU	fall semester, spring semester, or summer session

If the semester code is not indicated, then the course is offered during the fall and spring semesters and summer session (although there may be some exceptions).

6) **Additional information** Associated with the scheduling of the course or showing the special status of a course, such as a notice of alternate year offering, may be given in parentheses after the semester code.

7) **Requisites** The list of requisites specifies any prerequisites and/or corequisites using the following abbreviations:

PREREQ: prerequisite (condition to be met before enrollment)

COREQ: co-requisite (condition met before or during enrollment)

PERM/INST: permission of instructor required to enroll

PERM/CHAIR: permission of department chair required to enroll

ADM/PROG   admission to program required to enroll

The most common type of prerequisite is a specific course that must be successfully completed prior to enrollment. Typically, a co-requisite is a laboratory course that must be taken during the same semester or term as a related science course.

Course Terminology

A graded course is any course in which the awarded grade is one of the traditional grades (A, B, C, D, or F) and a pass-fail course is any course in which the awarded grade is P (pass) or F (fail). A graduate course is any course offered with a course number between 500 and 699 inclusive; successful completion of a graduate course earns graduate credit.

Cross-listed

Graduate courses are said to be cross-listed if they are offered by multiple academic units and have identical titles, credit codes, and content descriptions in each unit (such as BIOL511 and BMOL511.

Dual-listed

Courses offered by an academic unit at both the 400-level and 500-level with identical titles, credit codes, and content descriptions (such as GEOPH420 and GEOPH575).

G-course

An upper-division undergraduate course marked with a G-suffix (such as ENGL401G); successful completion of a G-course earns graduate credit if the student meets certain requirements (see G-Courses and Dual-Listed Courses in the *Graduate Academic Regulations* section).

Academic Programs and Courses

Department of Accountancy

College of Business and Economics

Chair: Troy Hyatt
Micron Business and Economics Building, Room 3130
(208) 426-3461 (phone)
acct@boisestate.edu (email)
boisestate.edu/cobe-msa (website)

Graduate Faculty: Baxter, Cowan, Cutler, Filzen, Gooden, Hartt, Hyatt, Knox, Mercado, Stallings

Graduate Degrees Offered

- Master of Science in Accountancy
- Master of Science in Accountancy, Taxation
- Graduate Certificate in Accounting Foundations

General Information

The Master of Science in Accountancy (MSA) and Master of Science in Accountancy, Taxation (MSAT) programs provide the opportunity to enhance your professional competence and acquire the skills necessary to offer value-added services to clients. Each program builds upon knowledge and skills previously acquired in foundational accounting courses.

These degree programs are appropriate for students with either or both of the following goals:

1. Accounting professionals who want to expand their knowledge and become familiar with recent developments in the accounting field.
2. Recent undergraduate accounting graduates who want to expand their understanding of accounting and earn enough college credits to meet the minimum required for the CPA Exam.

The department of Accountancy offers three separate routes to earning the MSA degree. The first two options are for those who have either earned an undergraduate degree in accountancy or completed the necessary undergraduate accounting courses required for admission. The third option is for those who did not earn an undergraduate degree in accountancy and have not otherwise completed the necessary undergraduate accounting courses.

- The campus-based MSA program is designed for individuals who are seeking a traditional, in-person experience.
- The online MSA program is similar to the campus-based program, but it is specifically designed for individuals who need the extra flexibility that comes from having a program that is delivered 100% online.
- The MSA Foundations program is designed for individuals who need to begin by taking foundational accounting courses that are designed to prepare them for the more advanced MSA courses they will take later in the program.

The Graduate Certificate in Accounting Foundations is designed for individuals who did not earn an undergraduate degree in accountancy and want to obtain a similar level of foundational accounting knowledge.

MASTER OF SCIENCE IN ACCOUNTANCY

Program Administrator: Trisha Stevens Lamb
Micron Business and Economics Building, Room 4101
(208) 426-3116 (phone)
graduatebusiness@boisestate.edu (email)
boisestate.edu/cobe-msa (website)

Programs Admission Requirements

Complete all of the following
- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: August 1 (fall), December 15 (spring), May 1 (summer)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21

- TOEFL - iBT: 95, pBT (revised): 72, pBT (old): 587, IELTS - 6.5
- Submit Personal Statement
- A personal statement answering one (1) of the following three questions. Your response should be limited to two (2) double-spaced pages. a) Discuss your career goals, both short-term and long-term. How will Boise State University's MSA program help you achieve these goals? b) Discuss two or three situations in the past three years where you have taken a leadership role. How do these events demonstrate your managerial potential? c) Give a brief, candid evaluation of yourself. Include some discussion of your strengths and weaknesses. What do you consider most unique or distinctive about yourself? The personal statement requirement may be waived with Fast Track Admission—see Fast Track Options below.
- Submit Current Resume or Curriculum Vitae (CV)
  - Resume should highlight your professional work experience. Do not be concerned with brevity. Include start and end dates (month and year) for each position held, and indicate full-time or part-time. Provide a separate Reference List showing three references (a person who has been your direct supervisor in a professional setting or your professor in an academic setting). Include name, title, phone number, email address, and reason why this person is a reference.
- Submit Graduate Management Admission Test (GMAT) Scores
  - A GMAT score of 500 or above, LSAT exam score at least 150, or GRE scores of at least 152 for both verbal reasoning and quantitative reasoning sections is required. Exam scores may be waived with one of the Fast Track options—see Fast Track Options below.
- Submit Foundational Coursework for Graduate Study
  - Demonstrate completion of 18 semester credits of upper-division accounting courses listed below:
  - Earned a minimum grade of C in each of the following courses:
    - ACCT302 - Survey of Federal Income Taxation (3)
    - ACCT304 - Intermediate Accounting I (3)
    - ACCT306 - Intermediate Accounting II (3)
    - ACCT314 - Cost Accounting (3)
    - ACCT350 - Accounting Information Systems (3)
    - ACCT405 - Financial Statement Auditing (3)
- Demonstrate completion of at least 15 semester credits from the following business topics (or other approved business topics): Business Communication, Business Law (recommended for CPA exam), Business Leadership, Business Statistics, Economics, Entrepreneurship, Finance, Human Resources, Information Technology, International Business, Management, Marketing, Operations Management, Supply Chain Management.

Fast Track Options

The Fast Track waives the personal statement and GMAT requirement.

- Complete 1 of the following
  - Completed at least 18 semester credits in upper-division (300, 400 or 500 level) accounting courses taken for undergraduate credit and have graduated from a regionally accredited institution and achieved a 3.30/4.00 or better GPA in all their upper-division accounting courses and a 3.30/4.00 or better cumulative GPA.
  - Possess a current CPA, Certified Management Accountant (CMA), or Certified Internal Auditor (CIA). Applicants should request a letter be sent directly to the Graduate College from the appropriate state board or national organization verifying their certification status.
  - Earned an advanced degree (masters, doctorate, etc.) from a regionally accredited institution in any discipline
- Submit Graduate Assistantship Application
  - Deadlines: March 1 (fall), October 1 (spring)
- Application: boisestate.edu/cobe-msat/ga-application-form/

Graduate Assistantships

Campus MSA and MSAT Students may apply for graduate assistantships covering tuition and fees, a stipend and health insurance while working 20 hours a week for the college. Applications for graduate assistantships must be received in the Business Graduate Studies office by March 1 for fall semester or Oct 1 for spring semester. Typical assignments include research assistantships, teaching assistantships, or specific project assignments. To be considered for a GAship raduate assistantship, students should apply to the campus MSA or MSAT program at least one month before the GA application deadline. GA Application: boisestate.edu/cobe-msat/ga-application-form/.

Degree Requirements

Master of Science in Accountancy

Graduate Major Requirements
30 Total Credits
  Complete all of the following
    Take the following:
      ACCT505 - Advanced Auditing (3)
      ACCT512 - Financial Reporting Theory (3)
      ACCT530 - Corporate Tax Law (3)
      ACCT550 - Data Analytics for Accounting and IT Audit (3)
    Take at least 18 credits from the following:
      Accountancy Courses (6 - 15)
      Take any of the following:
        ACCT507 - Forensic Accounting and Fraud Examination (3)
        ACCT510 - Advanced Financial Reporting (3)
        ACCT514 - Advanced Managerial Accounting (3)
        ACCT516 - Financial Analysis and Valuation (3)
        ACCT518 - International Financial Reporting (3)
        ACCT590 - Practicum/Internship (1 - 12)
      Accountancy and Taxation Electives (0 - 12)
      Take any of the following:
        ACCT520 - Tax and Accounting Research (3)
        ACCT525 - Partnership Tax Law (3)
        ACCT535 - Estate and Gift Taxation (3)
        ACCT540 - Taxation of Nonprofit Organizations (3)
        ACCT546 - Accounting for Income Taxes (3)
        ACCT570 - Multi-State Taxation (3)
        ACCT575 - International Taxation (3)
        ACCT579 - Personal Financial Planning (3)
        ACCT580 - Selected Accounting Topics (3)
        ACCT585 - Volunteer Income Tax Assistance (VITA) Program (1)
      Non-Accountancy Electives (0 - 6)
    Electives chosen from non-accountancy graduate courses. No more than 3 credits can come from courses outside of the College of Business and Economics.
Grand Total Credits: 30

MASTER OF SCIENCE IN ACCOUNTANCY (ONLINE PROGRAM)

Graduate Studies Director: Kit Scott
Program Administrator: Trisha Stevens Lamb
Micron Business and Economics Building, Room 4101
(208) 426-3116 (phone)
graduatebusiness@boisestate.edu (email)
boisestate.edu/online/online-master-of-accountancy (website)

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: August 1 (fall), December 15 (spring), May 1 (summer)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit Unofficial Transcripts

- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 95, pBT (revised): 72, pBT (old): 587, IELTS - 6.5
- Submit Personal Statement
  - A personal statement answering one (1) of the following three questions. Your response should be limited to two (2) double-spaced pages. a) Discuss your career goals, both short-term and long-term. How will Boise State University's MSA program help you achieve these goals? b) Discuss two or three situations in the past three years where you have taken a leadership role. How do these events demonstrate your managerial potential? c) Give a brief, candid evaluation of yourself. Include some discussion of your strengths and weaknesses. What do you consider most unique or distinctive about yourself?
  - The personal statement requirement may be waived with Fast Track Admission—see Fast Track Options below.
- Submit Current Resume or Curriculum Vitae (CV)
  - A resume highlighting your professional work experience. Do not be concerned with brevity. Include start and end dates (month and year) for each position held, and indicate full-time or part-time. Provide a separate Reference List showing three references (a person who has been your direct supervisor in a professional setting or your professor in an academic setting). Include name, title, phone number, email address, and reason why this person is a reference.
- Submit Graduate Management Admission Test (GMAT) Scores
  - A GMAT score of 500 or above, LSAT exam score at least 150, or GRE scores of at least 152 for both verbal reasoning and quantitative reasoning sections is required. Exam scores may be waived with one of the Fast Track options—see Fast Track Options below
- Submit Foundational Coursework for Graduate Study
  - Demonstrate completion of the 18 semester credits of upper-division accounting courses listed below:
  - Earned a minimum grade of C in each of the following courses:
    - ACCT302 - Survey of Federal Income Taxation (3)
    - ACCT304 - Intermediate Accounting I (3)
    - ACCT306 - Intermediate Accounting II (3)
    - ACCT314 - Cost Accounting (3)
    - ACCT350 - Accounting Information Systems (3)
    - ACCT405 - Financial Statement Auditing (3)
- Demonstrate completion of at least 15 semester credits needed from the following business topics (or other approved business topics): Business Communication, Business Law (recommended for CPA exam), Business Leadership, Business Statistics, Economics, Entrepreneurship, Finance, Human Resources, Information Technology, International Business, Management, Marketing, Operations Management, Supply Chain Management.

Fast Track Options

The Fast Track waives the personal statement and GMAT requirement
Complete 1 of the following

- Completed at least 18 semester credits in upper-division (300, 400 or 500 level) accounting courses taken for undergraduate credit and have graduated from a regionally accredited institution and achieved a 3.30/4.00 or better GPA in all upper-division accounting courses and a 3.30/4.00 or better cumulative GPA.
- Possess a current CPA, Certified Management Accountant (CMA), or Certified Internal Auditor (CIA). Applicants should request a letter be sent directly to the Graduate College from the appropriate state board or national organization verifying their certification status.
- Earned an advanced degree (masters, doctorate, etc.) from a regionally accredited institution in any discipline.

ACCOUNTANCY

Degree Requirements
Master of Science in Accountancy
Graduate Major Requirements
30 Total Credits

Complete all of the following
Required Accountancy and Taxation Courses
Take the following:
ACCT505 - Advanced Auditing (3)
ACCT512 - Financial Reporting Theory (3)
ACCT530 - Corporate Tax Law (3)
ACCT550 - Data Analytics for Accounting and IT Audit (3)
Accountancy and Taxation Courses
Take at least 18 credits from the following:
ACCT507 - Forensic Accounting and Fraud Examination (3)
ACCT510 - Advanced Financial Reporting (3)
ACCT514 - Advanced Managerial Accounting (3)
ACCT516 - Financial Analysis and Valuation (3)
ACCT518 - International Financial Reporting (3)
ACCT520 - Tax and Accounting Research (3)
ACCT540 - Taxation of Nonprofit Organizations (3)
ACCT546 - Accounting for Income Taxes (3)
ACCT575 - International Taxation (3)
ACCT579 - Personal Financial Planning (3)
ACCT590 - Practicum/Internship (1 - 12)
Grand Total Credits: 30

MASTER OF SCIENCE IN ACCOUNTANCY (FOUNDATIONS PROGRAM)

Program Administrator: Trisha Stevens Lamb
Micron Business and Economics Building, Room 4101
(208) 426-3116 (phone)
graduatebusiness@boisestate.edu (email)

Program Admission Requirements

Complete all of the following
- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: August 1 (fall), December 15 (spring), May 1 (summer)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 95, pBT (revised): 72, pBT (old): 587, IELTS - 6.5
- Submit Personal Statement
  - A personal statement answering one (1) of the following three questions. Your response should be limited to two (2) double-spaced pages. a) Discuss your career goals, both short-term and long-term. How will Boise State University's MSA program help you achieve these goals? b) Discuss two or three situations in the past three years where you have taken a leadership role. How do these events demonstrate your managerial potential? c) Give a brief, candid evaluation of yourself. Include some discussion of your strengths and weaknesses. What do you consider most unique or distinctive about yourself? A personal statement requirement may be waived with Fast Track Admission. Fast Track admission allows you to apply without submitting a GMAT/GRE score or a personal statement—see Fast Track Options below.
- Submit Current Resume or Curriculum Vitae (CV)
  - Resume should highlight your professional work experience. Do not be concerned with brevity. Include start and end dates (month and year) for each position held, and indicate full-time or part-time. Provide a separate Reference List showing three references (a person who has been your direct supervisor in a professional setting or your professor in an academic setting). Include name, title, phone number, email address, and reason why this person is a reference.
- Submit Graduate Management Admission Test (GMAT) Scores

- A GMAT score of 500 or above, LSAT exam score at least 150, GRE scores of at least 152 for both verbal reasoning and quantitative reasoning sections is required or satisfy one of the Fast Track options—see Fast Track Options below.Submit Foundational Coursework for Graduate Study
- Demonstrate completion of the following courses listed below. You may apply to the program while finishing these courses and be admitted with program provisions. Accepted students will not be able to register for program classes until these requirements are met.
- Earned a minimum grade of C- in each of the following courses:
  - ACCT205 - Introduction to Financial Accounting (3)
  - ACCT206 - Introduction to Managerial Accounting (3)
  - FINAN303 - Principles of Finance (3)
- Take at least 1 of the following:
  - BUSSTAT207 - Introduction to Business Analytics (3)
  - MATH254 - Statistical Methods (FM) (3)
- (If admitted) -- All students admitted to the MSA Foundations program have to complete an Excel requirement through MyEducator. This requirement is completed by successfully passing two Excel exams (basic and advanced) with a combined score of 85%. Details regarding this requirement may be viewed at boisestate.edu/online/online-master-of-accountancy/msa-foundations-admissions/#step-4- .

Fast Track Admission Options
- Complete 1 of the following:
  - 3.50 cumulative GPA (or 3.30 if the bachelor's degree is in a STEM field).
  - Earned an advanced degree (master's, doctorate, etc.) from a regionally accredited institution in any discipline.

Degree Requirements
Master of Science in Accountancy
Graduate Major Requirements
33 - 48 Total Credits

Complete all of the following
Take between 3 and 18 credits from the following types of courses:
Required Accountancy Foundations Courses
Take any of the following:
ACCT500 - Foundations of Financial Reporting I (3)
ACCT501 - Foundations of Financial Reporting II (3)
ACCT504 - Foundations of Financial Statement Auditing (3)
ACCT513 - Foundations of Cost Accounting (3)
ACCT529 - Foundations of Federal Income Taxation (3)
ACCT549 - Foundations of Accounting Information Systems (3)
Required Accountancy and Taxation Courses
Take the following:
ACCT505 - Advanced Auditing (3)
ACCT512 - Financial Reporting Theory (3)
ACCT530 - Corporate Tax Law (3)
ACCT550 - Data Analytics for Accounting and IT Audit (3)
Accountancy and Taxation Courses
Take at least 18 credits from the following:
ACCT507 - Forensic Accounting and Fraud Examination (3)
ACCT510 - Advanced Financial Reporting (3)
ACCT514 - Advanced Managerial Accounting (3)
ACCT516 - Financial Analysis and Valuation (3)
ACCT518 - International Financial Reporting (3)
ACCT520 - Tax and Accounting Research (3)
ACCT540 - Taxation of Nonprofit Organizations (3)
ACCT546 - Accounting for Income Taxes (3)
ACCT575 - International Taxation (3)
ACCT579 - Personal Financial Planning (3)
ACCT590 - Practicum/Internship (1 - 12)
Grand Total Credits: 33 - 48

MASTER OF SCIENCE IN ACCOUNTANCY, TAXATION (ALSO AVAILABLE AS CONCURRENT JURIS DOCTORATE PROGRAM WITH UNIVERSITY OF IDAHO'S COLLEGE OF LAW)

Program Administrator: Trisha Stevens Lamb
Micron Business and Economics Building, Room 4101
(208) 426-3116 (phone)
graduatebusiness@boisestate.edu (email)
boisestate.edu/cobe-msat (website)

General Information

The MSAT program is offered on campus. Students may also elect to enroll concurrently in our MSAT program and the University of Idaho's juris doctorate (JD) program in order to earn two coveted degrees in a streamlined fashion.

A student who wishes to participate in this concurrent program must be separately admitted to the MSAT and JD programs under the normal admission process before being considered for admission to the concurrent program. If admitted to the concurrent program, the student must satisfy the requirements of each degree as well as the requirements of the concurrent program.

Up to 12 credits earned in the University of Idaho law courses (prefix LAW) can be applied to meet the requirements of the MSAT program, and up to 12 credits in the Boise State University accountancy courses (prefix ACCT) can be applied to meet the requirements of the JD program. This dual application of credit is governed by additional stipulations specially developed for the concurrent program and students must specifically apply to the concurrent program. Contact the program administrator for details.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: August 1 (fall), December 15 (spring), May 1 (summer)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 95, pBT (revised): 72, pBT (old): 587, IELTS - 6.5
- Submit Personal Statement
  - A personal statement answering one (1) of the following three questions. Your response should be limited to two (2) double-spaced pages. a) Discuss your career goals, both short-term and long-term. How will Boise State University's MSA program help you achieve these goals? b) Discuss two or three situations in the past three years where you have taken a leadership role. How do these events demonstrate your managerial potential? c) Give a brief, candid evaluation of yourself. Include some discussion of your strengths and weaknesses. What do you consider most unique or distinctive about yourself?
  - The personal statement requirement may be waived with Fast Track Admission. See Fast Track Options below.
- Submit Current Resume or Curriculum Vitae (CV)
  - Resume should highlight your professional work experience. Do not be concerned with brevity. Include start and end dates (month and year) for each position held, and indicate full-time or part-time. Provide a separate Reference List showing three references (a person who has been your direct supervisor in a professional setting or your professor in an academic setting). Include name, title, phone number, email address, and reason why this person is a reference.
- Submit Graduate Management Admission Test (GMAT) Scores
  - A GMAT score of 500 or above, LSAT exam score of at least 150, or GRE scores of at least 152 for both verbal reasoning and quantitative reasoning sections is required. Exam scores may be

waived with one of the Fast Track Admission options—see Fast Track Options below.
- Submit Foundational Coursework for Graduate Study
  - Demonstrate completion of 18 semester credits of upper-division accounting courses listed below:
  - Earned a minimum grade of C in each of the following courses:
    - ACCT302 - Survey of Federal Income Taxation (3)
    - ACCT304 - Intermediate Accounting I (3)
    - ACCT306 - Intermediate Accounting II (3)
    - ACCT314 - Cost Accounting (3)
    - ACCT350 - Accounting Information Systems (3)
    - ACCT405 - Financial Statement Auditing (3)
- JD/MSAT concurrent applicants should also bring a strong background in accounting, but the program specifically requires only ACCT 302 Survey of Federal Income Taxation (or its equivalent) prior to enrolling in MSAT courses. Applicants are evaluated on a case-by-case basis and individuals may be required to prepare for MSAT courses by completing specific undergraduate accounting courses.
- Demonstrate completion of at least 15 semester credits from the following business topics (or other approved business topics): Business Communication, Business Law (recommended for CPA exam), Business Leadership, Business Statistics, Economics, Entrepreneurship, Finance, Human Resources, Information Technology, International Business, Management, Marketing, Operations Management, Supply Chain Management.

Fast Track Options

The Fast Track waives the personal statement and GMAT requirement.

- Complete 1 of the following
  - Completed at least 18 semester credits in upper-division (300, 400 or 500 level) accounting courses taken for undergraduate credit and have graduated from a regionally accredited institution and achieved a 3.30/4.00 or better GPA in all upper-division accounting courses and a 3.30/4.00 or better cumulative GPA.
  - Possess a current CPA, Certified Management Accountant (CMA), or Certified Internal Auditor (CIA). Applicants should request a letter be sent directly to the Graduate College from the appropriate state board or national organization verifying their certification status.
  - Earned an advanced degree (masters, doctorate, etc.) from a regionally accredited institution in any discipline.
- Submit Graduate Assistantship Application
  - Deadlines: March 1 (fall), October 1 (spring)
- Application: boisestate.edu/cobe-msat/ga-application-form/

Degree Requirements

Master of Science in Accountancy, Taxation

Graduate Major Requirements
30 Total Credits

Complete all of the following
  Required Taxation Courses
    Take the following:
      ACCT520 - Tax and Accounting Research (3)
      ACCT525 - Partnership Tax Law (3)
      ACCT530 - Corporate Tax Law (3)
    Take at least 21 credits from the following:

    Taxation Courses (6 - 21)
      Take any of the following:
        ACCT535 - Estate and Gift Taxation (3)
        ACCT540 - Taxation of Nonprofit Organizations (3)
        ACCT546 - Accounting for Income Taxes (3)
        ACCT570 - Multi-State Taxation (3)
        ACCT575 - International Taxation (3)
        ACCT579 - Personal Financial Planning (3)
        ACCT585 - Volunteer Income Tax Assistance (VITA) Program (1)
        ACCT590 - Practicum/Internship (1 - 12)

    Accountancy Electives (0 - 15)

Take any of the following:
    ACCT505 - Advanced Auditing (3)
    ACCT507 - Forensic Accounting and Fraud Examination (3)
    ACCT510 - Advanced Financial Reporting (3)
    ACCT512 - Financial Reporting Theory (3)
    ACCT514 - Advanced Managerial Accounting (3)
    ACCT516 - Financial Analysis and Valuation (3)
    ACCT518 - International Financial Reporting (3)
    ACCT550 - Data Analytics for Accounting and IT Audit (3)
    ACCT580 - Selected Accounting Topics (3)
Non-Accountancy Electives (0 - 6)
  Electives chosen from non-accountancy graduate courses. No more than 3 credits can come from courses outside of the College of Business and Economics.
NOTE: Non-Accountancy Electives must be approved by the student's graduate advisor. For students in the concurrent JD/MSAT program, the maximum transfer credits from the University of Idaho is 12 credits. For Taxation Courses, 3 to 12 credits can come from University of Idaho tax law courses. ACCT525 Partnership Tax Law and ACCT530 Corporate Tax Law will not count toward this requirement without the permission of the program advisor.

Grand Total Credits: 30

GRADUATE CERTIFICATE IN ACCOUNTING FOUNDATIONS (ONLINE PROGRAM)

Program Administrator: Trisha Stevens Lamb
Micron Business and Economics Building, Room 4101
(208) 426-3116 (phone)
graduatebusiness@boisestate.edu (email)

Admission Requirements

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: August 1 (fall), December 15 (spring), May 1 (summer)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 95, pBT (revised): 72, pBT (old): 587, IELTS - 6.5
- Submit Personal Statement
  - A personal statement answering one (1) of the following three questions. Your response should be limited to two (2) double-spaced pages. Discuss your career goals, both short-term and long-term. How will Boise State University's Graduate Certificate in Accountancy Foundations program help you achieve these goals? Discuss two or three situations in the past three years where you have taken a leadership role. How do these events demonstrate your managerial potential? Give a brief, candid evaluation of yourself. Include some discussion of your strengths and weaknesses. What do you consider most unique or distinctive about yourself?
- Submit Foundational Coursework for Graduate Study
  - Demonstrate completion of the following courses listed below. You may apply to the program while finishing these courses and be admitted with program provisions. Accepted students will not be able to register for program classes until these requirements are met.
  - Earned a minimum grade of C- in each of the following courses:
    - ACCT205 - Introduction to Financial Accounting (3)
    - ACCT206 - Introduction to Managerial Accounting (3)
    - FINAN303 - Principles of Finance (3)
  - Completed at least 1 of the following:
    - BUSSTAT207 - Introduction to Business Analytics (3)
    - MATH254 - Statistical Methods (FM) (3)

Degree Requirements

Graduate Certificate in Accounting Foundations

Complete all of the following
  Required Accountancy and Taxation Courses
  Take the following:
    ACCT500 - Foundations of Financial Reporting I (3)
    ACCT501 - Foundations of Financial Reporting II (3)
    ACCT504 - Foundations of Financial Statement Auditing (3)
    ACCT513 - Foundations of Cost Accounting (3)
    ACCT529 - Foundations of Federal Income Taxation (3)
    ACCT549 - Foundations of Accounting Information Systems (3)

Grand Total Credits: 18

Course Offerings

ACCT—Accountancy

ACCT500 Foundations of Financial Reporting I (3-0-3)(F,S,SU). Study of financial reporting concepts and preparation of general-purpose financial statements for external users based on U.S. generally accepted accounting principles. Emphasis on income measurement and valuation of assets. PREREQ: Admission to MSA-Foundations program or to Graduate Certificate in Accounting Foundations program.

ACCT501 Foundations of Financial Reporting II (3-0-3)(F,S,SU). Continuation of ACCT500. Covers more advanced financial reporting topics, with a continued focus on preparation of general-purpose financial statements for external users based on U.S. generally accepted accounting principles. Emphasis on measurement and reporting of liabilities and stockholders' equity. PREREQ: ACCT500 with grade of C or better.

ACCT504 Foundations of Financial Statement Auditing (3-0-3)(F,S,SU). Introduction to financial statement audits, which provide the credibility necessary for the financial markets to operate. Topics include professional standards, SEC requirements for auditors in planning, evidence gathering and accumulation, and reporting. Ethical and legal considerations are also discussed. PREREQ: ACCT500 and ACCT549 both with grades of C or better.

ACCT505 Advanced Auditing (3-0-3)(F/S/SU). In-depth study of auditing from an external auditor's perspective. Topics include substantive testing, evidence, planning, reporting, documentation, and case studies. The course includes a major project in external auditing. PREREQ: ACCT501, ACCT504, ACCT513, and ACCT529 all with grades of C or better and Admission to MSA-Foundations program; or Admission to MSA, MSAT, or JD/MSAT program.

ACCT507 Forensic Accounting and Fraud Examination (3-0-3)(S). Introduction to forensic accounting, with an emphasis on fraud auditing. Examines professional standards, licensure requirements, engagement planning, evidence collection, as well as reporting and other professional requirements. Includes the unique role of the forensic accountant as a litigation support specialist and related legal and ethical considerations. PREREQ: ACCT501, ACCT504, ACCT513, and ACCT529 all with grades of C or better and Admission to MSA-Foundations program; or Admission to MSA, MSAT, or JD/MSAT program.

ACCT510 Advanced Financial Reporting (3-0-3)(F/S). Topics include financial reporting for segment and interim reporting, foreign currency transactions and translation, not-for-profit accounting, and other current topics. PREREQ: ACCT501, ACCT504, ACCT513, and ACCT529 all with grades of C or better and Admission to MSA-Foundations program; or Admission to MSA, MSAT, or JD/MSAT program.

ACCT512 Financial Reporting Theory (3-0-3)(F). A critical analysis of the concepts and premises underlying financial reporting practices. Coverage includes the conceptual framework, current accounting standards and their origins, and other current topics in financial reporting. PREREQ: ACCT501, ACCT504, ACCT513, and ACCT529 all with grades of C or better and Admission to MSA-Foundations program; or Admission to MSA, MSAT, or JD/MSAT program.

ACCT513 Foundations of Cost Accounting (3-0-3)(F,S,SU). Development and use of cost information for strategic cost management. Common costing methods, variance analysis, lean accounting, and responsibility accounting. Emphasizes how costs affect managers' decisions. Applies course topics to more realistic and less structured situations. Ethical and strategic aspects of cost accounting. PREREQ: Admission to MSA-Foundations program or to Graduate Certificate in Accounting Foundations program.

ACCT514 Advanced Managerial Accounting (3-0-3)(F/S). Advanced applications of managerial accounting information for strategic management decisions. Coverage includes specialized tools for planning, operating and control decisions such as strategic cost management, strategic performance measurement and incentive systems, and activity- and resource-based costing. Emphasis is placed on the understanding and use of state of the art managerial accounting techniques. PREREQ: ACCT501, ACCT504, ACCT513, and ACCT529 all with grades of C or better and Admission to MSA-Foundations program; or Admission to MSA, MSAT, or JD/MSAT program.

ACCT516 Financial Analysis and Valuation (3-0-3)(F). Study of the theory and practice of financial statement analysis and business valuation. Methods of fundamental analysis and business valuation are examined and applied in problems, cases and projects. PREREQ: ACCT501, ACCT504, ACCT513, and ACCT529 all with grades of C or better and Admission to MSA-Foundations program; or Admission to MSA, MSAT, or JD/MSAT program.

ACCT518 International Financial Reporting (3-0-3)(S). Contemporary accounting practices of the major national economies. Includes directives of the European Community affecting financial reporting and pronouncements and activities of the International Accounting Standards Board. PREREQ: ACCT501, ACCT504, ACCT513, and ACCT529 all with grades of C or better and Admission to MSA-Foundations program; or Admission to MSA, MSAT, or JD/MSAT program.

ACCT520 Tax and Accounting Research (3-0-3)(F). Instruction in all aspects of tax research including legislative, administrative and judicial sources; major tax services, and Internet-based tax research libraries. While the majority of the course focuses on tax research, the course also includes instruction in ethical issues in tax practice and instruction in financial accounting research resources, including the FASB Codification. PREREQ: ACCT501, ACCT504, ACCT513, and ACCT529 all with grades of C or better and Admission to MSA-Foundations program; or Admission to MSA, MSAT, or JD/MSAT program.

ACCT525 Partnership Tax Law (3-0-3)(F). Tax meaning of partnership, formation transactions between partner and partnership; determination and treatment of partnership income; sales and exchanges of partnership interest; distributions; retirement; death of a partner; drafting the partnership agreement. PREREQ: Admission to MSA, MSAT, or JD/MSAT program.

ACCT529 Foundations of Federal Income Taxation (3-0-3)(F,S,SU). Theory and practice of federal income taxation, including concepts of taxation as they apply to businesses, individuals, flow-through entities and corporations. Specific topics include property transactions, individual tax rules, business revenue and expense issues, and state taxation. Emphasizes the social, political and ethical considerations of tax law. PREREQ: Admission to MSA-Foundations program or to Graduate Certificate in Accounting Foundations program.

ACCT530 Corporate Tax Law (3-0-3)(S/SU). Tax considerations in corporate formations, operations, distributions, redemptions, reorganizations, and liquidations. Includes a study of S corporations and an overview of financial accounting for income taxes. PREREQ: ACCT501, ACCT504, ACCT513, and ACCT529 all with grades of C or better and Admission to MSA-Foundations program; or Admission to MSA, MSAT, or JD/MSAT program.

ACCT535 Estate and Gift Taxation (3-0-3)(F/S/SU). Federal estate and gift taxes, including estate planning. PREREQ: Admission to MSA, MSAT, or JD/MSAT program.

ACCT540 Taxation of Nonprofit Organizations (3-0-3)(SU). Overview of tax issues affecting nonprofits. Topics include: qualifying for and maintaining federal tax-exempt status, the unrelated business income tax, private foundations, and charitable deductions. PREREQ: ACCT501, ACCT504, ACCT513, and ACCT529 all with grades of C or better and Admission to MSA-Foundations program; or Admission to MSA, MSAT, or JD/MSAT program.

ACCT546 Accounting for Income Taxes (3-0-3)(F, SU). Focuses on the financial reporting (U.S. GAAP) related to income tax provisions under FASB Accounting Standards Codification Topic 740 (ASC 740). Prepares students to calculate and report income tax amounts related to the income statement, balance sheet, cash flow statement, income tax footnote, and related disclosures. PREREQ: ACCT501, ACCT504, ACCT513, and ACCT529 all with grades of C or better and Admission to MSA-Foundations program; or Admission to MSA, MSAT, or JD/MSAT program.

ACCT549 Foundations of Accounting Information Systems (3-0-3)(F,S,SU). The study of how organizations and accountants design, use, and control systems that provide decision-relevant information to meet their needs. Topics include modeling business processes and relevant databases, analytics in accounting, risk management and internal controls, and information security. Students complete projects using database and analytics tools along with enterprise-level accounting software. PREREQ: Admission to MSA-Foundations program or to Graduate Certificate in Accounting Foundations program.

ACCT550 Data Analytics for Accounting and IT Audit (3-0-3)(S). Advanced coverage of the intersection of accounting, information technology, and analytics. Course includes topics such as IT infrastructure from a controls and security perspective, IT audit principles, data analytic tools, and communication of complex information. PREREQ: ACCT501, ACCT504, ACCT513, and ACCT529 all with grades of C or better and Admission to MSA-Foundations program; or Admission to MSA, MSAT, or JD/MSAT program.

ACCT570 Multi-State Taxation (3-0-3)(F). State income tax issues and sales and use tax issues with a special focus on issues faced by multi-state taxpayers. PREREQ: Admission to MSA, MSAT, or JD/MSAT program.

ACCT575 International Taxation (3-0-3)(F/S/SU). Multinational tax law for domestic corporations with operations abroad and nonresident citizens. PREREQ: ACCT501, ACCT504, ACCT513, and ACCT529 all with grades of C or better and Admission to MSA-Foundations program; or Admission to MSA, MSAT, or JD/MSAT program.

ACCT579 Personal Financial Planning (3-0-3)(S). The course focuses on the tools to help individuals reach their personal financial goals. There will be five main areas of emphasis: investments, insurance coverage/asset protection, income tax planning, retirement planning and estate planning. The areas will be covered in the personal finance framework. PREREQ: ACCT501, ACCT504, ACCT513, and ACCT529 all with grades of C or better and Admission to MSA-Foundations program; or Admission to MSA, MSAT, or JD/MSAT program.

ACCT580 Selected Accounting Topics (3-0-3)(S). Current accounting topics and issues are investigated in this class. Selected Accounting Topics may be taken once, as either ACCT480 or ACCT580. PREREQ: PERM/INST.

ACCT585 Volunteer Income Tax Assistance (VITA) Program (0-2-1)(S). Supervised participation in the Volunteer Income Tax Assistance (VITA) Program. VITA is an IRS initiative designed to promote and support free tax return preparation services for underserved low-to-moderate income individuals, persons with disabilities, the elderly, and those with limited English speaking ability. May be repeated once for a total of 2 credits. PREREQ: ACCT302 or ACCT529 with grade of C or better and Admission to MSA, MSAT, or JD/MSAT program.

Department of Anthropology

College of Arts and Sciences

Chair: John Ziker
Hemingway Center, Room 55
(208) 426-3023 (phone)
(208) 426-4329 (fax)
anthropolograd@boisestate.edu (email)
boisestate.edu/anthropology (website)

Graduate Faculty: Anderson, Demps-Warden, House, Robinson, Snopkowski, Ziker

Graduate Degrees Offered

- Master of Arts in Anthropology
- Master of Applied Anthropology
  - Cultural Resource Management Emphasis
  - User Research and Ethnographic Practice Emphasis
- Graduate Certificate in User Research

General Information

The Department of Anthropology offers two distinct master's degrees and a graduate certificate. The program leading to the Master of Arts in Anthropology degree emphasizes research and requires completion of a thesis. The program leading to the Master of Applied Anthropology (MAA) degree is a professional science program and requires completion of a project representing exemplary professional practice. Students in both programs complete a core of advanced courses providing thorough exposure to modern theory and methods in anthropology.

MASTER OF ARTS IN ANTHROPOLOGY

Graduate Program Coordinator: Kristin Snopkowski
Hemingway Center, Room 55
(208) 426-3055 (phone)
(208) 426-4329 (fax)
kristinsnopkowski@boisestate.edu (email)
boisestate.edu/anthropology/graduate-programs (website)

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 15 (fall priority), June 30 (fall final)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Personal Statement
  - A personal statement that is two pages (500-word) and describes your background, academic interests, career goals, and your reasons for your interest in the program.
- Submit Writing Sample
  - A writing sample of your best undergraduate work.
- Submit Letters of Recommendation
  - Two letters of recommendation from academic faculty. Letters should address your potential for success in a graduate program, strengths and weaknesses, and the benefits you may receive from graduate study.
- Submit Graduate Assistantship Application
  - Deadline: May 1
  - Automatic consideration is given with your application to the program.

Degree Requirements

Master of Arts in Anthropology

Graduate Major Requirements
24 Total Credits
  Complete all of the following
    Core Sequence
      Take the following:
        ANTH501 - Adaptation and Human Behavior (3)
        ANTH502 - Human Evolutionary History and Development (3)
        ANTH503 - History and Theory in Anthropology (3)
        ANTH504 - Statistical Methods in Anthropology (3)
        ANTH513 - Research Design in Anthropology (3)

        With the approval of the supervisory committee, a student may substitute a comparable 3-credit course for ANTH504.
    Elective Courses
      Take at least 9 credits from the following:
        Electives must be approved by the supervisory committee. Application of independent study to the elective requirement is limited to 6 credits. Pass/Fail credits, workshop credits, and practicum/internship credits are not applicable to elective requirements.
Graduate Culminating Activity and Other Requirements
7 Total Credits
  Preliminary Examination
    Take at least 1 credit from the following:
      ANTH686 - Master's Preliminary Examination (1 - 6)
  Culminating Activity
    Take at least 6 credits from the following:
      ANTH593 - Thesis (1 - 12)
Grand Total Credits: 31

MASTER OF APPLIED ANTHROPOLOGY

Graduate Program Coordinator: Kristin Snopkowski
Hemingway Center, Room 55
(208) 426-3055 (phone)
(208) 426-4329 (fax)
kristinsnopkowski@boisestate.edu (email)
boisestate.edu/anthropology/graduate-programs (website)

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 15 (fall priority), June 30 (fall final)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
- Submit Personal Statement
  - A personal statement that is two pages (500-word) and describes your background, academic interests, career goals, and your reasons for your interest in the program.
- Submit Writing Sample
  - A writing sample of your best undergraduate work.
- Submit Letters of Recommendation
  - Two letters of recommendation from academic faculty. Letters should address your potential for success in a graduate program, strengths and weaknesses, and the benefits you may receive from graduate study.
- Submit Graduate Assistantship Application
  - Deadline: May 1
  - Automatic consideration is given with your application to the program.

Degree Requirements

Master of Applied Anthropology

Graduate Major Requirements
27 Total Credits

Complete all of the following
Core Sequence
Take the following:
ANTH501 - Adaptation and Human Behavior (3)
ANTH502 - Human Evolutionary History and Development (3)
ANTH503 - History and Theory in Anthropology (3)
Skill Sequence
Take the following:
ANTH504 - Statistical Methods in Anthropology (3)
ANTH513 - Research Design in Anthropology (3)

In addition, complete either electives totaling 12 credits or one of the following emphases: Cultural Resource Management or User Research and Ethnographic Practice

Take at least 12 credits from the following:
Electives must be approved by an advisor or Cultural Resource Management Emphasis or User Research and Ethnographic Practice Emphasis

Graduate Culminating Activity and Other Requirements
6 Total Credits

Complete all of the following
Culminating Activity
Take at least 6 credits from the following:
ANTH591 - Project (1 - 12)

Grand Total Credits: 33

Cultural Resource Management Emphasis

Complete all of the following
Take the following:
ANTH524 - Introduction to Cultural Resource Management (3)
Take at least 1 of the following:
GEOG560 - Introduction to Geographic Information Systems (3)
HES600 - SES (Social-Ecological Systems) Research Methods (3)
HES610 - Spatial Analysis (3)
Take at least 6 credits from the following:
Electives must be approved by the student's advisor.

Grand Total Credits: 12

User Research and Ethnographic Practice Emphasis

Complete all of the following
Take the following:
ANTH540 - Fundamentals of Design Anthropology (3)
ANTH541 - Ethnography for User Experience Research (3)
ANTH542 - Emerging Digital Cultures (3)
Take at least 3 credits from the following:
Electives must be approved by the student's advisor.

Grand Total Credits: 12

Graduate Certificate in User Research

Graduate Program Coordinator: Kendall House
Mathematics Building, Room 137A
(208) 426-3896 (phone)
(208) 426-4329 (fax)
khouse@boisestate.edu (email)
boisestate.edu/anthropology/graduate-programs/graduate-certificate-ux-research
(website)

General Information

The user research certificate provides students with in-depth knowledge and practical mastery of qualitative research methods rooted in ethnography, with an emphasis on how user research informs design thinking.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials
  - Deadlines: July 1 (fall), November 1 (spring), April 1 (summer)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Personal Statement
  - A personal statement that is 1000 words and explains how this program relates to your broader professional goals. Include what knowledge and skills you hope to acquire from earning the certificate.
- Submit Current Resume or Curriculum Vitae (CV)
- Submit Letters of Recommendation
  - Two letters of recommendation from academic faculty or a supervisor.

Certificate Requirements

Graduate Certificate in User Research

Graduate Major Requirements
9 Total Credits

Complete all of the following
Core Sequence
Take the following:
ANTH540 - Fundamentals of Design Anthropology (3)
ANTH541 - Ethnography for User Experience Research (3)
ANTH542 - Emerging Digital Cultures (3)

Grand Total Credits: 9

Course Offerings

ANTH—Anthropology

ANTH501 Adaptation and Human Behavior (3-0-3)(F). Theories and methods used to address questions related to the proximate (structure of adaptations) and ultimate (adaptive significance) causes of human behavior. Processes occurring on generational and evolutionary time scales with emphasis on procurement, mating, parenting, social exchange and distribution, demographic transition, human universals, and cultural diversity.

ANTH502 Human Evolutionary History and Development (3-0-3)(F). Theories and methods used to address questions related to the ontogenetic (developmental) and phylogenetic (evolutionary) history of humans. Evolutionary time scales with an emphasis on variation within and between human populations and other primates over time, and the interaction of human populations to environmental stress.

ANTH503 History and Theory in Anthropology (3-0-3)(F). A reading-intensive survey of history and theory in anthropology from classical times through the 20th century. A review of history and philosophy of science with emphasis upon innovations in 19th and 20th century theory relevant to current issues and debates.

ANTH504 Statistical Methods in Anthropology (3-0-3)(S). Concepts, methods and models used in analysis of anthropological data. Measures of correlation and central tendency, of probability and analysis of variance. Analysis of anthropological, archaeological and biological data sets. PREREQ: PERM/INST.

ANTH513 Research Design in Anthropology (3-0-3)(S). Design a research project, write a proposal, and initiate search for funding. Familiarization with topics useful for developing career in anthropology, such as approaching funding institutions, publishers and employers, and participating in professional organizations.

ANTH515 Archaeological Science (3-0-3)(F/S). Uses analytical chemistry to study composition of archaeological materials and dating of archaeological sites. Application of archaeological science techniques to cultural resource management, academic research, museum contexts, and the development of budgets to fund such work.

ANTH516 Evolution of Human Technology (3-0-3)(F/SU). Survey of the design and systems-thinking principles that drive the evolution of human technology, from the first use of stone tools, to irrigation canals, to smart phones. Material culture analysis skills and long-term systems-thinking approaches to sustainable engineering.

ANTH517 Bioarchaeology (3-0-3)(F/S)(Intermittently). Human skeletal remains and their interpretation in archaeological contexts using data and theoretical perspectives from the natural and social sciences. Relevant to understanding local culture, environment, lifestyle, and experiences of past populations. Topics include population-level analysis, adaptations to stress, manifestations of violence, inequality and health, the Native American Graves Protection and Repatriation Act, and ethics in research.

ANTH520 Quaternary Environments and Geoarchaeology (3-0-3)(F/S) (Alternate years). Global to site-specific scale review and evaluation of lithostratigraphic and biostratigraphic contexts focusing on the last three million years of human prehistory. Emphasis on integration of chronologic, biotic, geomorphic and isotopic evidence of environmental change on the human time-scale. PREREQ: PERM/INST.

ANTH521 Human Paleoecology of North America (3-0-3)(F/S)(Alternate years). Examines the application of physical and biotic evidence to evaluate changing environments and their relationship to prehistoric human populations. Focus is on past environmental change in western North America placed within continental-scale and global-scale contexts. PREREQ: PERM/INST.

ANTH522 Hunter-Gatherer Ethnoarchaeology (3-0-3)(F/S)(Alternate years). Examination of variability in adaptations by modern hunter-gatherer populations emphasizing subsistence, mobility, and social organization. Focus is on examination of lithic technology, faunal analysis, and site structure as sources of archaeological interpretation.

ANTH523 Advanced Archaeological Field Methods (3-0-3)(SU). Emphasis upon developing research designs, decision-making, and in-field project management. Open to students with previous field experience and graduate work in archaeology. PREREQ: PERM/INST.

ANTH524 Introduction to Cultural Resource Management (3-0-3)(S). Legal and regulatory functions of heritage management within federal and state agencies with a focus on public lands. Emphasizes resource and collections management, tribal consultation, public education, archaeological ethics, and the role of research in cultural resource management.

ANTH530 Advanced Topics in Evolutionary Anthropology (3-0-3)(F/S) (Alternate years). This course provides the theoretical foundation for testing evolutionary hypotheses about human cultural variation, human physiological adaptations and social behavior, and life-history evolution, marriage, reproduction, inheritance, and subsistence. The course provides a broad, empirical view of hominid-behavioral evolution and ecology. PREREQ: PERM/INST.

ANTH531 Economic Anthropology (3-0-3)(F/S)(Alternate years). The comparative study of economic behavior in hunter-gatherer, tribal, and complex societies. The course examines subsistence strategies, craft production and specialization, and exchange, as well as theoretical debates surrounding the economic topic of transition.

ANTH532 Game Theory and Human Cooperation (3-0-3)(F/S)(Alternate years). Designed as an advanced introduction to the origins and development of human sociality from the perspective of game theory and evolutionary biology. This course will review and discuss classic and new papers from anthropology, biology, economics, political science, and psychology. Issues to be explored include widespread pro-social behavior among humans, living in small vs. large groups, rank and status, sexual division of labor, and obstacles to building cooperation and peace on a number of social scales.

ANTH540 Fundamentals of Design Anthropology (3-0-3)(F). Advanced introduction to anthropological contributions to design thinking, and the reciprocal impact of design thinking on the practice of anthropology. Exploration of the principles and practices of participatory design, interaction design, user-centered design, and behavior-centered design.

ANTH541 Ethnography For User Experience Research (3-0-3)(S). Advanced introduction to the ethnographic tradition in anthropology, and its adaptation for applications outside academia. Special emphasis is given to the role of ethnography in user experience research, and the place of user experience in design thinking. Includes practical exercises and training in ethical practices.

ANTH542 Emerging Digital Cultures (3-0-3)(F/S/SU). Explores contemporary ethnographic studies of the cultural impact of emerging digital technologies on multiple dimensions of social life, from the future of work to shopping and leisure, from political life to private experience. Considers influences on design decisions, and how those decisions impact the human condition.

ANTH570 Archaeology Field School (1-20-6)(SU). Six weeks on-site field training in the archaeological techniques of site reconnaissance and excavation. Focus placed on the observation, recording, and recovery of field data. Instruction includes preliminary laboratory processing and artifact analysis. Special fee required for room and board. PREREQ: ANTH103 and PERM/INST.

ANTH580 Selected Topics in Anthropology (V-0-V)(F/S). Philosophical and theoretical issues in anthropology. Developments in methodology and technical advances in anthropological research. Seminar topics will vary.

Department of Art, Design, and Visual Studies

College of Arts and Sciences | School of the Arts

Interim Chair: Dan Scott
Center for Visual Arts, Room 106E
(208) 426-1230 (phone)
(208) 426-1243 (fax)
artdept@boisestate.edu (email)
boisestate.edu/art (website)

Graduate Faculty: AnnieMargaret, Becerra, Blakeslee, Dinkar, Earley, Erpelding, Fox, Grusiecki, Keys, Lee, Peariso, Sadler, Scott, Smulovitz, Snodgrass, Turner, Walker, Wiley

Graduate Degree Offered

- Master of Fine Arts, Visual Arts

General Information

The Department of Art, Design, and Visual Studies offers a full time Master of Fine Arts (MFA) degree in visual arts. The program encourages innovative work in art metals, ceramics, drawing, installation, interdisciplinary studio, new genres, painting, photography, printmaking, sculpture, social practice, time based, etc. The degree requires 60 total credits distributed as follows: 6 credits in art history, 30 credits in studio, 6 credits in Graduate Concourse, 6 credits in Graduate Seminar, 6 credits in thesis and 6 credits in general electives.

Students admitted to the program are provided with private studio space. Graduate faculty hold regular studio visits and consultations.

The MFA degree program fosters students' creative, intellectual, and professional development as artists who produce excellent work, are able to discuss and contextualize their work cogently, and who are prepared to enter various career paths available to artists. Coursework emphasizes applied study, art history, theory and criticism.

A Visiting Artist program that brings a wide range of artists and scholars to campus on a regular basis enhances the MFA experience by providing lectures, workshops, and critiques. The program culminates in an exhibition of a body of work, a written analysis that supports the work, and an oral defense of both.

MASTER OF FINE ARTS, VISUAL ARTS

Graduate Program Director: Lily Lee
Center for Visual Arts, Room 120
(208) 426-4081 (phone)
lilylee@boisestate.edu (email)
boisestate.edu/art-gradprogram (website)

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadline: January 31 (fall)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
  - Field of Study: Art
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
  - An application letter that includes a statement of purpose that addresses why you want to pursue an MFA in Visual Arts at Boise State University.
- Submit Personal Statement
  - A personal statement (artist statement) that addresses the work included in the application portfolio.
- Submit Current Resume or Curriculum Vitae (CV)
  - A resume that lists educational background, exhibition record, awards, grants, reviews, publications, and any other pertinent information.
- Submit Foundational Coursework for Graduate Study
  - Take at least 12 credits from the following:
    - Undergraduate art history prior to taking courses at the graduate level. Undergraduate coursework in Modern and/or Contemporary art history is highly desirable.
  - Portfolio — Complete a Portfolio that includes 20 images or videos of work created within the past three years.
- Submit Letters of Recommendation
  - Three letters of recommendation from professionals in the field addressing your potential for success in an MFA program and the benefits you may receive from graduate study.
- Submit Graduate Assistantship Application
  - Deadline: January 31 (fall)

Graduate Assistantships

Assistantships are available for full-time students and are awarded competitively. Assistantships include an out-of-state tuition waiver, in-state fee waiver, and a stipend. Assistants must enroll for a minimum of five credit hours each semester and must meet any other requirements as set forth by the Graduate College. Applications are available at the Graduate College website and must be submitted to the Department of Art, Design, and Visual Studies on or before January 31.

Degree Requirements

Master of Fine Arts, Visual Arts

Graduate Major Requirements
48 Total Credits
  Complete all of the following
    Take at least 6 credits from the following:
    ART575 - Graduate Seminar (3)

    Take at least 12 credits from the following:
    ART576 - Studio Practices (3)

    Take at least 6 credits from the following:
    ART577 - Graduate Concourse (3)

    Take at least 18 credits from the following:
    ART580 - Selected Topics: Studio (3 - 6)

    Complete 1 of the following
    Take at least 6 credits from the following:
      ART589 - Selected Topics: Art History (3)

    Take at least 6 credits from the following:
    Other Graduate level art history courses

Graduate Culminating Activity and Other Requirements
12 Total Credits
  Complete all of the following
    Advisory Review

    Take at least 6 credits from the following:
    ART683 - Master of Fine Arts Visual Arts Thesis Exhibition (1 - 6)

    Take at least 6 credits from the following:
    Electives at the graduate level

Grand Total Credits: 60

Course Offerings

ART—Art

ART575 Graduate Seminar (3-0-3)(F). Students investigate current theories of art and culture and articulate a critical understanding of researched ideas in relation to contemporary art practice. May be repeated for credit.

ART576 Studio Practices (0-3-3)(F,S). Through intensive group critiques, students develop a body of work. May be repeated for credit. PREREQ: Graduate standing and PERM/INST.

ART577 Graduate Concourse (3-0-3)(S). Through research, readings, and discussions, students develop their ability to situate their studio practice within the context of contemporary art and culture. May also involve at least one class trip to a destination relevant to the contemporary art world. May be repeated for credit. PREREQ: Graduate standing and PERM/INST.

ART580 Selected Topics: Studio (0-V-V)(F/S). Work with practicing fine art professionals from a variety of art and design disciplines either in an emphasis area or in other related media. PREREQ: PERM/INST.

ART588 Selected Topics: Art Education (V-0-V)(F/S). Research issues in art and art education through writing assignments, critical discussion, and other appropriate means in order to consider the various possible relations between art education, theory and practice. PREREQ: PERM/INST.

ART589 Selected Topics: Art History (3-0-3)(S). Research issues in art, art history and visual culture through writing assignments and critical discussion in order to consider the various possible relations between history, theory and practice. May be repeated for credit. PREREQ: PERM/INST.

ART683 Master of Fine Arts Visual Arts Thesis Exhibition (1-6 credits)(F/S). Independent creative activity resulting in a thesis exhibition, written analysis, and final oral defense. May be repeated for credit. Pass/fail only. Recommended graduate standing. (Pass/Fail.) PREREQ: PERM/INST.

Department of Biological Sciences

College of Arts and Sciences

Chair: Kevin Feris
Science Building, Room 107
(208) 426-5498 (phone)
(208) 426-1040 (fax)
boisestate.edu/biology (website)

Graduate Faculty: Albig, Barber, Beard, Belthoff, Bittleston, Buerki, Caughlin, Cruz, de Graaff, Feris, Forbey, Hampikian, Hayden, Heath, Jorcyk, Koetsier, Mitchell, Morrison, Novak, Oxford, Robertson, Rohn, Serpe, Smith, Tinker, White, Wingett

Graduate Degrees Offered

- Doctor of Philosophy in Ecology, Evolution, and Behavior
- Master of Arts in Biology
- Master of Science in Biology
- Master of Science in Raptor Biology

Interdisciplinary Programs

- Doctor of Philosophy in Biomolecular Sciences
- Doctor of Philosophy in Materials Science and Engineering
- Master of Science in Biomolecular Sciences
- Master of Science in Hydrologic Sciences

General Information

We offer a comprehensive graduate education that spans the breadth of the contemporary biological sciences and prepares students for real world careers. We have award winning professors who are passionate about mentoring students and conducting cutting edge research. The general requirements of the Boise State Graduate College govern the graduate programs in biological sciences.

DOCTOR OF PHILOSOPHY IN ECOLOGY, EVOLUTION, AND BEHAVIOR

Graduate Program Coordinator: James Smith
Program Manager: Adil Refaey
Science Building, Room 207
(208) 426-4621 (phone)
eebprogram@boisestate.edu (email)
boisestate.edu/eeb (website)

Participating Departments

- Anthropology
- Biological Sciences
- Geosciences
- Human-Environment Systems

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 15 (fall priority), June 30 (fall final), October 30 (spring)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
  - Field of Study: Biology or a closely related field.
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
  - An application letter that is no more than 750 total words. If needed, please request to be considered for a graduate assistantship in your letter. Describe your overall academic interests and goals. Why do you seek graduate training? What are your career goals? Why are you applying to this program? Include a description of your specific scientific interests. This is a great place to describe your motivation to further your training in science and research in your chosen field. Also, describe why your selected research lab(s) are a good fit with your interests. A summary of your previous research experience or jobs involving laboratory or fieldwork that can not be seen from your CV. Describe a situation where problem-solving and creativity helped you overcome a challenge or obstacle.
- Submit Current Resume or Curriculum Vitae (CV)
  - A resume that outlines your education, skills, and professional experience.
- Submit Letters of Recommendation
  - Three letters of recommendation from academic and/or professional references.
- Submit Graduate Assistantship Application
  - Deadline: August 1
  - Automatic consideration is given with your application to the program.

Student Support

Graduate assistantships that include a stipend, a tuition and fee waiver, and student health insurance may be available from the EEB program on a competitive basis. Alternatively, students may be supported via Research Assistantships from grants awarded to faculty members. Student support will be awarded on an annual basis with the opportunity to renew.

Other forms of financial aid, such as loans or the Federal Work-Study program, are available to graduate students. Prospective students should contact the Boise State Financial Aid Office.

The application file is reviewed by the EEB Graduate Studies Committee for an admission (either acceptance or denial) and financial support recommendation. Applicants are recommended for acceptance to the ecology, evolution and behavior doctoral program only if they appear qualified academically, a major advisor is identified and willing, and funding is available through a research award, fellowship, or graduate assistantship.

Degree Requirements

Doctor of Philosophy in Ecology, Evolution, and Behavior

Graduate Major Requirements
29 Total Credits

Complete all of the following
Take the following:
EEB601 - Principles and Processes in Ecology, Evolution and Behavior (4)
EEB603 - Reproducible Science (3)
EEB604 - Science and Communication II (3)
EEB605 - Current Research in EEB (2)

Quantitative Requirement
Take between 3 and 4 credits from the following:
ANTH504 - Statistical Methods in Anthropology (3)
BIOL601 - Biometry (4)
EEB607 - Quantitative Methods for Population and Habitat Analysis (3)
EEB621 - Advanced Ecological Data Analysis (3)
GEOPH522 - Data Analysis and Geostatistics (3)
GEOS505 - Research Computing in the Earth and Environmental Sciences (3)
HES600 - SES (Social-Ecological Systems) Research Methods (3)
HES610 - Spatial Analysis (3)
MATH572 - Computational Statistics (3)
MATH573 - Time Series Analysis (3)
MATH574 - Linear Models (3)

Approved Electives
Take between 14 and 13 credits from the following types of courses:
Courses in ANTH, BIOL, BMOL, BOT, EEB, GEOS, HEB, ZOOL or related fields as approved by the supervisory committee and by the coordinator of the EEB doctoral program.

Graduate Culminating Activity and Other Requirements
31 Total Credits

Complete all of the following
Take at least 1 credits from the following:
EEB691 - Doctoral Comprehensive Examination (1 - 6)
Take at least 30 credits from the following:
EEB693 - Dissertation (1 - 12)

Grand Total Credits: 60

Doctor of Philosophy in Ecology, Evolution, and Behavior, Global Change Biology Emphasis

Complete all of the following
Take the following:
EEB601 - Principles and Processes in Ecology, Evolution and Behavior (4)
EEB603 - Reproducible Science (3)
EEB604 - Science and Communication II (3)
EEB605 - Current Research in EEB (2)

Human Behavior and Ecology
Take between 3 and 6 credits from the following:
ANTH501 - Adaptation and Human Behavior (3)
ANTH502 - Human Evolutionary History and Development (3)
ANTH521 - Human Paleoecology of North America (3)
ANTH530 - Advanced Topics in Evolutionary Anthropology (3)
ANTH531 - Economic Anthropology (3)
ANTH532 - Game Theory and Human Cooperation (3)

Earth Sciences
Take between 3 and 6 credits from the following:
BIOL628 - Geographic Information Systems in Biology (3)
GEOG570 - Earth System Science and Global Warming (3)
GEOS570 - Earth System Science and Global Warming (3)
GEOS511 - Hydrologic Systems: Land-Atmosphere Interaction (3)
GEOS580 - Selected Topics in Watershed Hydrology (1 - 3)
GEOS585 - Selected Topics in Isotope Geoscience (1 - 3)
GEOS605 - Topics in Geomorphology (3)
GEOS607 - Paleoclimatology and Paleoceanography (3)
GEOS620 - Coupled Land-Atmosphere Modeling (3)
GEOS621 - Global Hydrologic Change (3)

GEOS633 - Contaminant Hydrogeology (3)
CE633 - Contaminant Hydrogeology (3)
GEOS636 - Stable Isotope Geochemistry (3)
GEOS638 - Radiogenic Isotope Geochemistry and Geochronology (3)

Quantitative Requirement
Take between 3 and 4 credits from the following:
ANTH504 - Statistical Methods in Anthropology (3)
BIOL601 - Biometry (4)
EEB607 - Quantitative Methods for Population and Habitat Analysis (3)
EEB621 - Advanced Ecological Data Analysis (3)
GEOPH522 - Data Analysis and Geostatistics (3)
GEOS505 - Research Computing in the Earth and Environmental Sciences (3)
HES600 - SES (Social-Ecological Systems) Research Methods (3)
HES610 - Spatial Analysis (3)
MATH572 - Computational Statistics (3)
MATH573 - Time Series Analysis (3)
MATH574 - Linear Models (3)

Approved Electives
Take between 8 and 1 credits from the following types of courses:
Approved elective courses in ANTH, BIOL, BMOL, BOT, EEB, GEOS, HEB, ZOOL or related fields as approved by the supervisory committee and by the coordinator of the EEB doctoral program.

Graduate Culminating Activity and Other Requirements
31 Total Credits

Complete all of the following
Take at least 1 credits from the following:
EEB691 - Doctoral Comprehensive Examination (1 - 6)
Take at least 30 credits from the following:
EEB693 - Dissertation (1 - 12)

Grand Total Credits: 59 - 60

MASTER OF ARTS IN BIOLOGY

Graduate Program Coordinator: Marie-Anne de Graaff
Program Manager: Adil Refaey
Science Building, Room 107
(208) 426-4621 (phone)
dbsgraduate@boisestate.edu (email)
boisestate.edu/biology/graduate-programs/ma-biology (website)

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 15 (fall), October 1 (spring)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
  - Field of Study: Biology or a closely related field.
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
  - An application letter that is no more than 750 total words. If needed, request to be considered for a graduate assistantship in your letter. Describe your overall academic interests and goals. Why do you seek graduate training? What are your career goals? Why are you applying to this program? Include a description of your specific scientific interests. This is a great place to describe your motivation to further your training in science and research in your chosen field. Also, describe why your selected research lab(s) are a good fit with your interests. A summary of your previous research experience or jobs involving laboratory or fieldwork. Describe a challenge or obstacle you faced as a student, and how you overcame it.
- Submit Letters of Recommendation
  - Three letters of recommendation from academic and/or professional references.

- Submit Graduate Assistantship Application
  - Deadlines: August 1 (fall), January 1 (spring)
  - Automatic consideration is given with your application to the program.

Degree Requirements

Completion of each degree program requires an average grade of B or better for all courses applied to the 30-33 credits required.

Master of Arts in Biology

Graduate Major Requirements
4 Total Credits

Complete all of the following
  Take at least 2 credits from the following:
    BIOL561 - Advanced Topics in Aquatic Biology (1)
    BIOL562 - Advanced Topics in Animal Behavior (1)
    BIOL563 - Advanced Topics in Genetic Analysis (1)
    BIOL564 - Advanced Topics in Molecular Ecology, Evolution and Phylogeography (1)
    BIOL565 - Advanced Topics in Molecular Biology Techniques (1)
    BIOL566 - Advanced Topics in Molecular, Cellular and Developmental Biology (1)
    BIOL567 - Advanced Topics in Extracellular Matrix in Development and Disease (1)

  Take at least 2 credits from the following:
    BIOL579 - Research in the Biological Sciences (1)

Graduate Culminating Activity and Other Requirements
29 Total Credits

Complete 1 of the following
  Complete all of the following
    Take at least 23 credits from the following:
    Electives to be chosen in consultation with advisor and committee: Electives for the MA may include up to a combined total of 6 credits of workshop credits, practicum/internship credits, directed research credits. A combined total of 9 credits may include approved courses taken outside the biological sciences, workshops, practicum/internship, and directed research. Workshop, directed research, and practicum/internship credits are limited to a maximum of 3 credits each.

    Take at least 6 credits from the following:
      BIOL591 - Project (1 - 12)

  Complete all of the following
    Take at least 28 credits from the following:
    Electives to be chosen in consultation with advisor and committee: Electives for the MA may include up to a combined total of 6 credits of workshop credits, practicum/internship credits, directed research credits. A combined total of 9 credits may include approved courses taken outside the biological sciences, workshops, practicum/internship, and directed research. Workshop, directed research, and practicum/internship credits are limited to a maximum of 3 credits each.

    Take at least 1 credits from the following:
      BIOL690 - Master's Comprehensive Examination (1 - 6)

Grand Total Credits: 33

MASTER OF SCIENCE IN BIOLOGY

Graduate Program Coordinator: Marie-Anne de Graaff
Program Manager: Brittany Archuleta
Science Building, Room 107
(208) 426-4621 (phone)
dbsgraduate@boisestate.edu (email)
boisestate.edu/biology/graduate-programs/ms-biology (website)

Program Admission Requirements

Complete all of the following
- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 15 (fall), October 1 (spring)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
  - Field of Study: Biology or a closely related field.

- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
  - An application letter that is no more than 750 total words. If needed, request to be considered for a graduate assistantship in your letter. Describe your overall academic interests and goals. Why do you seek graduate training? What are your career goals? Why are you applying to this program? Include a description of your specific scientific interests. This is a great place to describe your motivation to further your training in science and research in your chosen field. Also, describe why your selected research lab(s) are a good fit with your interests. A summary of your previous research experience or jobs involving laboratory or fieldwork. Describe a challenge or obstacle you faced as a student, and how you overcame it.
- Submit Letters of Recommendation
  - Three letters of recommendation from academic and/or professional references.
- Submit Graduate Assistantship Application
  - Deadlines: August 1 (fall), January 1 (spring)
  - Automatic consideration is given with your application to the program.

Student Support

Teaching Assistantships that include a stipend, a tuition and fee waiver, and student health insurance may be available to MS students on a competitive basis. Additional support for master's research projects may be available from faculty members in the form of research assistantships. Other forms of financial aid, such as loans or the Federal Work-Study program, are available to graduate students. Prospective students should contact the Boise State Financial Aid Office.

Degree Requirements

Completion of each degree program requires an average grade of B or better for all courses applied to the 30-33 credits required.

Master of Science in Biology

Graduate Major Requirements
24 Total Credits

Complete all of the following
  Take the following:
    BIOL601 - Biometry (4)

  Complete 1 of the following
    Take at least 2 credits from the following:
      BIOL598 - Seminar (1 - 4)

    Take at least 2 credits from the following:
      BIOL561 - Advanced Topics in Aquatic Biology (1)
      BIOL562 - Advanced Topics in Animal Behavior (1)
      BIOL563 - Advanced Topics in Genetic Analysis (1)
      BIOL564 - Advanced Topics in Molecular Ecology, Evolution and Phylogeography (1)
      BIOL565 - Advanced Topics in Molecular Biology Techniques (1)
      BIOL566 - Advanced Topics in Molecular, Cellular and Developmental Biology (1)
      BIOL567 - Advanced Topics in Extracellular Matrix in Development and Disease (1)

  Take at least 18 credits from the following:
    Electives from course offerings that follow: Electives may include a maximum of six credits of Directed Research, must be approved by the student's thesis committee, and may not include workshop, pass/fail or practicum/ internship credits.

Graduate Culminating Activity and Other Requirements
6 Total Credits

  Take at least 6 credits from the following:
    BIOL593 - Thesis (1 - 12)

Grand Total Credits: 30

MASTER OF SCIENCE IN RAPTOR BIOLOGY

Graduate Program Coordinator: Marie-Anne de Graaff
Program Manager: Adil Refaey
Science Building, Room 107
(208) 426-4621 (phone)
dbsgraduate@boisestate.edu (email)
boisestate.edu/biology/graduate-programs/masters-in-raptor-biology (website)

Program Admission Requirements

Complete all of the following
- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 15 (fall), October 1 (spring)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
  - Field of Study: Biology or a closely related field.
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
  - An application letter that is no more than 750 total words. If needed, request to be considered for a graduate assistantship in your letter. Describe your overall academic interests and goals. Why do you seek graduate training? What are your career goals? Why are you applying to this program? Include a description of your specific scientific interests. This is a great place to describe your motivation to further your training in science and research in your chosen field. Also, describe why your selected research lab(s) are a good fit with your interests. A summary of your previous research experience or jobs involving laboratory or fieldwork. Describe a challenge or obstacle you faced as a student, and how you overcame it.
- Submit Letters of Recommendation
  - Three letters of recommendation from academic and/or professional references.
- Submit Graduate Assistantship Application
  - Deadlines: August 1 (fall), January 1 (spring)
  - Automatic consideration is given with your application to the program.

Student Support

Teaching Assistantships that include a stipend, a tuition and fee waiver, and student health insurance may be available to MS students on a competitive basis. Additional support for master's research projects may be available from faculty members in the form of research assistantships. Other forms of financial aid, such as loans or the Federal Work-Study program, are available to graduate students. Prospective students should contact the Boise State Financial Aid Office.

Degree Requirements

Completion of each degree program requires an average grade of B or better for all courses applied to the 30-33 credits required.

Master of Science in Raptor Biology
Graduate Major Requirements
24 Total Credits
  Complete all of the following
    Take the following:
      BIOL601 - Biometry (4)
      BIOL605 - Applied Raptor Biology (2)
      BIOL606 - Raptor Ecology (3)
    Complete 1 of the following
      Take at least 2 credits from the following:
        BIOL598 - Seminar (1 - 4)
      Take at least 2 credits from the following:
        BIOL561 - Advanced Topics in Aquatic Biology (1)
        BIOL562 - Advanced Topics in Animal Behavior (1)
        BIOL563 - Advanced Topics in Genetic Analysis (1)
        BIOL564 - Advanced Topics in Molecular Ecology, Evolution
and Phylogeography (1)
        BIOL565 - Advanced Topics in Molecular Biology Techniques (1)
        BIOL566 - Advanced Topics in Molecular, Cellular and
Developmental Biology (1)
        BIOL567 - Advanced Topics in Extracellular Matrix in
Development and Disease (1)
    Take at least 13 credits from the following:
    Electives from course offerings that follow: Electives may include a maximum of six credits of Directed Research, must be approved by the student's thesis committee, and may not include workshop, pass/fail, or practicum/ internship credits.
  Graduate Culminating Activity and Other Requirements
  6 Total Credits
    Take at least 6 credits from the following:
      BIOL593 - Thesis (1 - 12)
Grand Total Credits: 30

Course Offerings

BIOL—Biology

BIOL344G Molecular and Cell Biology Laboratory (0-8-3)(F). Modern molecular and cellular techniques including cloning, computer analysis of DNA sequences, karyotyping, DNA amplification, and use of Southern and Western blots for transgene detection and expression analysis. Some laboratory time will be arranged. COREQ: BIOL310 and PERM/INST.

BIOL500 Organic Evolution (3-0-3)(S). Philosophical basis of evolutionary theory. Detailed examination of genetic variation, mechanisms of evolutionary change, adaptation, speciation, and phylogeny. Genetics recommended. PREREQ: Graduate standing or PERM/INST.

BIOL504 Protected Areas (1-0-1)(F). Focuses on the role of protected areas in a changing world. Course emphasis is a multi-day field trip to the Frank Church River of No Return Wilderness, the largest wilderness in the lower 48 states. Discussion topics include the current extinction crisis, habitat loss and degradation, fragmentation, climate change, sensory pollution, and a critical analysis of the strategies and techniques to restore imperiled species and ecosystems.

BIOL506 Science and Society (3-0-3)(S). Showcases scientific advances made by local biologists from academia, government agencies, and private organizations who conduct research that intersects with societal issues and needs. Offers social opportunities to develop networks with these researchers and gain career advice in a variety of fields and institutions. Upon completing this course, students will understand how biological concepts, theory, and practice link to policy and how to communicate science to the public through outreach activities.

BIOL509 Molecular Ecology (3-0-3)(F)(Odd years). Theory and methodologies. Use of molecular genetic markers to study ecological phenomena (e.g., mating systems, parentage and kinship, population structure, gene flow, dispersal, natural selection). Emphasis on an hypothesis-testing approach. Appropriateness of particular molecular techniques to specific research questions. PREREQ: Graduate standing or PERM/INST.

BIOL510 Pathogenic Bacteriology (2-6-4)(S). Medically important bacteria, rickettsia, and chlamydia are surveyed with emphasis on their pathogenicity, host-parasite relationships, and the clinical and diagnostic aspects of the diseases they produce in humans and animals. PREREQ: BIOL303 and BIOL320.

BIOL511 (BMOL511) Advanced Cell Biology (3-0-3)(S). Contemporary and frontier topics in the biology of microbial, plant, and animal cells covering signal transduction, protein trafficking, membrane structure and transport, cell to cell communication, cellular compartmentalization, and cell biotechnology applications. May be taken for BIOL or BMOL credit, but not both. PREREQ: BIOL320 or PERM/INST.

BIOL512 General Parasitology (2-3-3)(Intermittently). Study of animal parasites with emphasis on those of man and his domestic animals. Lectures cover general biology, life history, structure, function, distribution, and

significance of parasites. Laboratory provides experience in identification and detection. PREREQ: BIOL320 or PERM/INST.

BIOL513 Symbiosis (3-0-3)(S)(Odd years). Explores parasitic, commensalistic, and mutualistic relationships among different organisms. The diversity, evolution and ecology of symbioses will be analyzed through discussion of primary research articles. Students lead discussion sessions and prepare a mini-review essay. PREREQ: Graduate standing.

BIOL514 (BMOL514) Flow Cytometry Research Techniques (0-3-1)(F/S/SU). Provides a basic understanding of flow cytometry principles and applications in research and clinical setting. Students gain 'hands-on' experience including staining and separating blood cells, staining of DNA for cell cycle analysis, and purification of rare cell types using a cell sorter. Students apply flow cytometry to a specific research topic. May be taken for BIOL or BMOL credit, but not both. PREREQ: BIOL320 or equivalent.

BIOL515 Applied and Environmental Microbiology (3-3-4)(S). Microbial populations and processes in soil and water. Water- and food-borne pathogens. Microbial and biochemical methods of environmental assessment. PREREQ: BIOL303, and CHEM301 or CHEM307-308, or PERM/INST.

BIOL516 Microbial Ecology (3-0-3)(S)(Odd years). Focuses on the relationships among and biogeochemical role of microorganisms in natural communities. Course topics are structured to demonstrate the linkages between microbial ecology, diversity, and evolution; ecological interactions and ecosystem processes catalyzed by microorganisms; and understanding the role of microbial metabolism in controlling elemental cycling on local to global scales. PREREQ: Graduate standing or PERM/INST.

BIOL520 Immunology (3-0-3)(S). Principles of immunology, host defense mechanisms, the immune response, immune disorders, serology, and related topics. PREREQ: BIOL320.

BIOL521 Immunology Laboratory (0-6-2)(F/S). Modern immunological laboratory techniques including flow cytometry, immune system physiology, antibody-based assays including ELISA, vaccine design, and immuno-bioinformatics. COREQ: BIOL520.

BIOL522 Conservation Biology (3-0-3)(S)(Odd years). An introduction to the field of conservation biology, the applied science concerned with understanding the effects of human activities on natural biological systems and with developing practical approaches to prevent the loss of biodiversity. Topics covered will include conservation genetics, demographic analysis, habitat degradation, overexploitation, and restoration ecology. Discussion of the social, political, and economic aspects of conservation biology. PREREQ: Graduate standing or PERM/INST.

BIOL524 Sensory Ecology (2-2-3)(F)(Odd years). Sensory ecology aims to understand how signals are produced, how they travel through the environment, how they are detected, how the receiver responds to them and ultimately how signals have evolved and shaped ecological processes such as trophic interactions and species' distributions. Labs will focus on sensory techniques and experimental design. PREREQ: Graduate standing or PERM/INST.

BIOL525 Basic and Applied Data Analysis in Biology (2-0-2)(F/S). Univariate statistics using computer software (JMP, SAS Institute, Inc.) with applications to biology, natural resources, health care, education, industry, and other professional disciplines. PREREQ: Graduate standing or PERM/INST.

BIOL526 Insect Ecology (3-0-3)(S)(Even years). An in-depth exploration of insect ecology, evolution and behavior. Topics include life history evolution, insect-plant interactions, predation and parasitism, reproduction, insect societies, chemical ecology, biodiversity and pest management. PREREQ: Graduate standing or PERM/INST.

BIOL527 Stream Ecology (3-3-4)(F)(Odd years). The biology and ecology of flowing waters is emphasized; their biota, management, and ecology at both the community and ecosystem level will be discussed. PREREQ: Graduate standing or PERM/INST.

BIOL528 Fish Biology and Management (3-3-4)(F)(Even years). Examines the biology, ecology, and management of freshwater fish. Field sampling,

identification and demographic techniques are used to develop an understanding of fishery management principles for economically important species. PREREQ: Graduate standing.

BIOL531 Pharmacology (3-0-3)(F). Basic pharmacological principles including mechanisms of drug action in relation both to drug-receptor interactions and to the operation of physiological and biochemical systems. Pharmacokinetics, metabolism, receptor theory and an examination of major classes of therapeutic agents used in humans. PREREQ: BIOL227-228 or BIOL191-192, and BIOL320.

BIOL532 Ecology of Disturbance and Recovery (3-0-3)(F)(Alternate years). Focuses on how natural disturbances - including wildfire, drought, invasive species, etc. - play a significant role in shaping the composition, structure, and function of terrestrial ecosystems. Evaluates and discusses the concepts of disturbance and disturbance regimes, synergistic effects of multiple disturbances, the human influence on disturbance regimes, and disturbance risks across ecosystems under both current and future conditions. Addresses post-disturbance recovery processes in the context of ecosystem stability and resilience, including restoration and natural succession. Course activities will include reading primary literature, participating in class discussion and activities, working with data, and presenting student research for feedback. Recommended: one previous ecology course. PREREQ: PERM/INST.

BIOL533 Behavioral Ecology (3-0-3)(F)(Odd years). This course focuses on the evolutionary significance of animal behavior in relation to the ecology of the organisms. Using theoretical background and recent empirical evidence, mating systems, foraging, parental care, selfishness and altruism, competition, territoriality, and other behavioral patterns will be assessed in relation to the survival and reproduction of animals. PREREQ: Graduate standing or PERM/INST.

BIOL534 Principles of Fisheries and Wildlife Management (3-0-3)(S). Integrative approach to managing game and non-game populations and habitat. Tools to determine population status, strategies to increase or decrease populations, and the implementing of monitoring programs. Current quantitative approaches within context of the ecosystem-based view of wildlife and habitat management. PREREQ: Graduate standing or PERM/INST.

BIOL535 Ecosystem Ecology (3-0-3)(F)(Even years). Integrated study of biotic and abiotic components of ecosystems and their interactions. With emphasis on current topics such as global climate change, land-use change and species invasions. PREREQ: Graduate standing or PERM/INST.

BIOL540 General and Molecular Toxicology (3-0-3)(F/S). General and molecular principles of mammalian toxicology including toxicant disposition, mechanisms of toxicity, target organ toxicity, and major classes of toxic agents. PREREQ: BIOL320 or PERM/INST.

BIOL541 Molecular Biology of Cancer (3-0-3)(S). A treatment of the basic biology of cancer and the process of tumor progression. Topics examined will include oncogenes, tumor suppressor genes, and the causes of cancer. PREREQ: BIOL310, BIOL320.

BIOL542 Molecular Neurobiology (3-0-3)(F). Emphasis will be on the molecular aspects of neurobiology. Topics will include: cells of the nervous system, neurochemical transmission, nerve terminals, membrane structure and function, electrical signaling, neural development, process outgrowth and myelination and glia, and specific neural diseases including Alzheimer's disease, Parkinson's disease, and Lou Gehrig's disease. PREREQ: BIOL320 and PHYS112, or PERM/INST.

BIOL543 Advanced Developmental Biology (1-6-2)(F)(Odd years). Application of molecular and cellular methods to current topics in developmental biology. Analysis of current literature in biology with emphasis on the coordinated regulation of gene expression, cellular differentiation and migration. Laboratory studies include model systems such as chick, zebrafish, sea urchin and mouse, utilizing cell/tissue culture, histology, immunohistochemistry, RT-PCR, protein purification, SDS-PAGE, western blot and others. Previous enrollment in BIOL344 and ZOOL351 recommended.

BIOL544 Vaccinology (3-0-3)(S). Discussion of the history, safety, epidemiology, molecular biology and immunology of vaccines. Development of the next generation of vaccines to combat infectious disease of global importance, such as HIV, malaria and tuberculosis, also will be discussed. PREREQ: BIOL320 or PERM/INST.

BIOL545 Human Genetics (3-0-3)(S)(Intermittently). Discussion of important aspects of human heredity. Topics include the reproductive system, single gene disorders, chromosome abnormalities, hemoglobinopathies, inborn errors of metabolism, somatic cell and molecular genetics, immunogenetics, gene screening, and human variation and evolution. PREREQ: BIOL310 or PERM/INST.

BIOL546 Bioinformatics (3-0-3)(F). Practical training in bioinformatics methods: accessing sequence data bases, BLAST tools, analysis of nucleic acid and protein sequences, detection of motifs and domains of proteins, phylogenetic analysis, gene arrays, and gene mapping. PREREQ: BIOL310 or PERM/INST.

BIOL547 Forensic Biology (3-0-3)(F). Analysis and interpretation of biological evidence in forensic contexts. Topics include entomology, botany, fingerprints, toxicology, DNA, pathology, anthropology and odontology. PREREQ: BIOL310.

BIOL548 PERL for Bioinformatics Applications (3-0-3)(F/S). The PERL programming language is used to introduce skills and concepts to process and interpret data from high-throughput technologies in the biological sciences. Key bioinformatics concepts are reinforced through lectures, computer demonstrations, weekly readings, and programming exercises from biological sequence analysis and real-world problems in proteomics and genetics. PREREQ: BIOL446 or PERM/INST.

BIOL549 Genomics (3-0-3)(F/S). A fusion of biology, computer science, and mathematics to answer biological questions. Topics include analyzing eukaryotic, bacterial, and viral genes and genomes; locating genes in genomes and identifying their biological functions; predicting regulatory sites; assessing gene and genome evolution; and analyzing gene expression data. PREREQ: BIOL310 and MATH254, or PERM/INST.

BIOL551 Developmental Biology (2-6-4)(S)(Odd years). Germ cell development, comparative patterns of cleavage and gastrulation, neurulation and induction, and development of human organ systems with emphasis on molecular and cellular mechanisms. Laboratory studies of sea urchin, frog, chick, and pig development. PREREQ: BIOL191-192 or PERM/INST.

BIOL561 Advanced Topics in Aquatic Biology (1-0-1)(F/S). An exploration of the current primary literature of aquatic biology. Topics vary, and may include community dynamics of algae, fish, zooplankton, and benthic invertebrates; tropic relationships; stream and reservoir management; primary and secondary production; organic matter and nutrient dynamics; and wetland ecology. May be repeated once for credit. PREREQ: Graduate standing or PERM/INST.

BIOL562 Advanced Topics in Animal Behavior (1-0-1)(F/S). Exploration of current animal behavior and behavioral ecology literature through group discussion and presentations. May be repeated once for credit. PREREQ: BIOL433 or BIOL533 or ZOOL434 or ZOOL534 and PERM/INST.

BIOL563 Advanced Topics in Genetic Analysis (1-0-1)(S). Presentation and discussion of topics such as human chromosome evolution, forensic DNA analysis, artificial evolution, mutation and disease, genetic patents, drug target development. May be repeated once for credit. PREREQ: BIOL310 and PERM/INST.

BIOL564 Advanced Topics in Molecular Ecology, Evolution, and Phylogeography (1-0-1)(F/S). Presentations and group discussion of molecular aspects of ecology, evolution, and phylogeography. May be repeated once for credit. PREREQ: BIOL401 or PERM/INST.

BIOL565 Advanced Topics in Molecular Biology Techniques (1-0-1)(F). Discussion of scientific literature with emphasis on modern molecular biology techniques. Students lead discussions and present articles from relevant primary literature. May be repeated once for credit. PREREQ: BIOL310 and PERM/INST.

BIOL566 Advanced Topics in Molecular, Cellular, and Developmental Biology (1-0-1)(S). Discussion of current research. Students lead discussions and present articles, as well as monitor recent relevant primary literature. Previous enrollment in BIOL465 or BIOL565 recommended. May be repeated once for credit. PREREQ: BIOL310 and PERM/INST.

BIOL567 Advanced Topics in Extracellular Matrix in Development and Disease (1-0-1)(F,S). Review, presentation and discussion of current literature. Students present original research in context of current literature, including statement of hypothesis, review of literature, analysis and discussion of original data, in written and oral presentation format. May be repeated once for credit. PREREQ: PERM/INST.

BIOL570 Genetic Engineering and Biotechnology (3-0-3)(F/S). Applications of biotechnology, genetic engineering, and recombinant DNA technology in medical diagnosis and therapy, agriculture, microbial biology and environmental systems. The principles and application of recombinant DNA technology in industrial, agricultural, pharmaceutical, and biomedical fields are discussed. PREREQ: BIOL310.

BIOL577 (ME577)(MSE577) Biomaterials (3-0-3)(F/S). Theory of biomaterials science. Medical and biological materials and their applications. Selection, properties, characterization, design and testing of materials used by or in living systems. May be taken for BIOL, ME, or MSE credit, but not from more than department. PREREQ: CHEM112 or MSE101.

BIOL579 Research in Biological Sciences (1-0-1)(F/S). Seminars by biologists on a wide range of subjects. Students will attend seminars, write summaries, and search for relevant literature. May be repeated once for credit. (Pass/Fail.)

BIOL601 Biometry (4-0-4)(F). An application of statistical methods to problems in the biological sciences. Basic concepts of hypothesis testing; estimation and confidence intervals; t-tests and chi-square tests. Linear and nonlinear regression theory and analysis of variance. Techniques in multivariate and nonparametric statistics.

BIOL602 Population and Community Ecology (3-0-3)(F). The structure of populations and communities. Competition, predation, life history strategies, demography, population regulation, and species diversity are examined from experimental and theoretical perspectives. PREREQ: Graduate standing or PERM/INST.

BIOL603 Advanced Biometry (3-3-4)(S)(Even years). A survey of experimental design and selected multivariate techniques. The course is designed to assist students in selecting proper statistical techniques for gathering and analyzing biological data, and correctly interpreting the statistical analysis of their data. Prior experience with Statistical Analysis System (SAS) is helpful. PREREQ: BIOL601 or PERM/INST.

BIOL604 Introduction to College Biology Teaching (1-0-1)(F). An introduction to evidence-based instructional practices and how they can be applied in college biology courses. Discussion of unique challenges of being a graduate teaching assistant (TA), explore campus resources available to support TAs, and reflect on teaching practices. PREREQ: Graduate standing.

BIOL605 Applied Raptor Biology (0-3-2)(F)(Odd years). A study of the techniques appropriate to the study of the ecology, behavior, and physiology of raptors and other birds. Field trips will be taken in addition to regularly scheduled class. PREREQ: Graduate standing in Biology or Raptor Biology or PERM/INST.

BIOL606 Raptor Ecology (3-0-3)(F)(Even years). Theoretical ecology as applied to birds of prey. Strategies of reproduction, habitat selection, foraging and spacing; theory of competition and predator-prey interactions; niche theory and community structure; raptor management. PREREQ: Graduate standing or PERM/INST.

BIOL613 (BMOL 613) Molecular Genetics (3-0-3)(F/S). An advanced study of genetics in microbial, animal and plant systems, focused on the biochemical and molecular aspects of genetic structure and function.

Information obtained from recent genomic analysis and comparisons will be included as well as discussion of contemporary molecular biology techniques and applications and an introduction to genomics. May be taken for BIOL or BMOL credit, but not both. PREREQ: BIOL310 or equivalent.

BIOL617 Species and Speciation (3-0-3)(F)(Odd years). Species definitions are fundamental for all investigations in the biological sciences. This course will investigate the numerous species concepts proposed over the last 100 years with an emphasis on primary literature. Concepts to be discussed will include biological, phylogenetic, genealogical, and evolutionary species concepts. The second part of the course will emphasize the processes involved in speciation, looking at both micro- and macroevolutionary events. PREREQ: BIOL400 or BIOL500 or PERM/INST.

BIOL623 Advanced Immunology (1-0-1)(S). Advanced study of the cellular and molecular regulation of the immune response. The course will include formal lectures, student presentations, and in-depth discussion of selected topics using the current literature. PREREQ: BIOL520 or PERM/INST.

BIOL628 Geographic Information Systems in Biology (3-0-3)(S). Discussion of the use of Geographic Information Systems to apply spatial data to ecological problems. Analysis of the ways that spatial relations affect patterns, processes, and decision making at multiple scales. Specific topics covered include GAP analysis, habitat modeling, spatially-explicit population modeling, landscape ecology, home range analysis, interpretation of satellite imagery, and natural resource issues. PREREQ: Graduate standing or PERM/INST.

BIOL629 Modern Methods in Ecology and Behavior (2-3-3)(S)(Odd years). Instruction in the theory, practice, and analysis of modern methods used in ecological and evolutionary studies will be provided. Methods to be covered include: cytology, isozyme electrophoresis, DNA restriction site analysis, DNA sequencing, and RAPD analysis. PREREQ: PERM/INST.

BIOL650 Writing for Biomedical Sciences (1-0-1)(F/S). This writing course is designed for graduate students in biomedical science disciplines who are ready to begin, or who are currently working on, a manuscript. Examination of principles and practice of writing research manuscripts, articles, abstracts, and oral presentations will be included. Detailed examination of scientific publication process includes issues of style, organization, and ethics. Students draft, critique, and revise their own manuscripts and learn to review the manuscripts of others. PREREQ: PERM/INST.

BOT—Botany

BOT302G Plant Anatomy and Microtechnique (3-3-4)(S)(Odd years). A study of the structure and development of vascular plant tissues, regions, and organs. Emphasis will be placed on the Angiosperms. Laboratory work includes preparation of hand and paraffin sections, staining, and observation of plant tissues using various types of light microscopy. PREREQ: BIOL191-192.

BOT305G Systematic Botany (2-6-4)(S). Fundamental problems of taxonomy. Discussion of historical development of classification systems and comparison of recent systems. Instruction on use of keys and manuals. PREREQ: BIOL191-192 or PERM/INST.

BOT330G Mycology (3-3-4)(F). A study of the biology of fungi with emphasis on their classification, morphology and development, identification, ecology, and economic significance. Laboratory work will include projects and field trips. PREREQ: BIOL191-192 or PERM/INST.

BOT501 Plant Physiology (3-3-4)(F)(Odd years). A study of plant biophysical and biochemical processes. Includes coverage of cell, tissue, and organ function, photosynthesis, water relations, mineral nutrition, transport mechanisms, growth and development, secondary metabolites, and plant responses to the environment. PREREQ: BIOL191-192 and BIOL320.

BOT524 Plant Community Ecology (3-3-4)(F)(Even years). Properties, structure, method of analysis, classification, and dynamic nature of plant communities. Strengths and weaknesses of various sampling techniques, role of disturbance events and succession on community structure, and role of biological interaction as factors influencing assembly of communities.

Vegetation sampling methods and habitat type classification of local plant communities. Methods of analyzing and reporting data. BOT305 highly recommended. PREREQ: Graduate standing or PERM/INST.

BOT530 Molecular and Cellular Biology of Plants (3-0-3)(S)(Odd years). Discussion of plant development, plant responses to abiotic factors, and interactions between plants and other organisms from a molecular and cellular perspective. Examination of molecular approaches used to improve plant traits that facilitate sustainable agriculture and remediation of environmental problems. Students conduct a long term experiment to gain experience in plant transformation. PREREQ: BIOL320 or PERM/INST.

BOT541 Plant Developmental Biology (3-3-4)(S)(Even years). A description of plant development from a molecular and cellular perspective. Topics discussed include gene expression and cell signaling pathways, and their roles in the control of embryogenesis, plant growth, flowering, and fruit maturation. Examination of techniques and model systems used in the study of plant development. Each student will complete a project. PREREQ: BIOL320.

EEB—Ecology, Evolution, and Behavior

EEB501 Sensory Ecology and Evolution (3-0-3)(F/S). Examination of how information transmission, via various sensory systems, mediates animal behavior and shapes biological processes, such as predator/prey interactions and species' distributions. Discussion of the impacts of anthropogenic sensory pollution on ecological function.

EEB601 Principles and Processes in Ecology, Evolution and Behavior (3-3-4)(F). Discusses principal ecological processes and interactions, both biotic and abiotic, that organisms rely on and perform to acquire the necessary energy, water, carbon, and nutrients for growth, metabolism, and reproduction. Mechanisms driving evolutionary responses at the species and population levels are discussed in the context of how evolutionary processes influence ecosystem level responses to a variety of factors, including changing climate, anthropogenic use patterns, species invasions, and nutrient cycles.

EEB603 Reproducible Science (3-0-3)(F). Examines the reproducibility crisis in the scientific community. Focuses on evidence and causes supporting this crisis and highlights factors that can boost reproducibility in the sciences. Provides a framework for gathering, storing, sharing, preparing and analyzing data and communicating results to the scientific community. Introduction to open source research software may include R, RStudio, RMarkdown (incl. knitr) and GitHub. PREREQ: ADM/PROG or PERM/INST.

EEB604 Science and Communication II (3-0-3)(S). Continues the focus, skills development and practice begun in EEB604. PREREQ: EEB603.

EEB605 Current Research in EEB (2-0-2)(F/S). Invited and contributed presentations on current topics in ecology, evolution, and behavior. Examines presentation style and effective techniques. Examination of literature on current topics, contributing to speaker scheduling and hosting. May be repeated for credit.

EEB606 Science and Society in the Great Basin (3-0-3)(F/S). Case studies by local biologists from academia, government agencies, and private organizations using science to solve ecological problems in the Great Basin. Examines how different stakeholders study, manage, and conserve the wildlife, plants, soils and climate that shape the Great Basin. Includes applied communication of science to the public through outreach that promotes management of healthy landscapes and wildlife in local ecosystems.

EEB607 Quantitative Methods for Population and Habitat Analysis (2-2-3)(F/S). Theory and methods of how to use empirical data to make valid inferences about populations and habitats. Uses software and literature applied to various types of analyses of population and habitat data and models, including traditional, Bayesian, and hierarchical models that explain survival, occupancy, and abundance. Focus on reliable estimation of population parameters, measures of precision for estimates, and use of covariates to explain population patterns.

EEB608 Spatial Ecology (3-0-3)(F/S). Focuses on both techniques (geospatial mapping and modeling) and problems (landscape connectivity, animal

movement strategies associated with spatial ecology). Examination of mechanisms that can cause spatial pattern formation in species distributions and of metapopulation dynamics and dispersal strategies. Selection and use of appropriate software for spatial analyses. Includes both theoretical sessions and computer exercises.

EEB609 Advanced Community Ecology (3-0-3)(F/S). Fundamentals of community ecology and current theories and quantitative tools for determining community assembly rules, describing diversity patterns, and linking community structure to community functions.

EEB610 Microbial Ecology (3-0-3)(F/S). Focuses on the relationships among and biogeochemical role of microorganisms in natural communities. Topics structured to demonstrate the linkages between microbial ecology, diversity, and evolution. Strengths, limitations, and caveats of modern microbial methods for assessing ecological interactions. Role of microbial metabolism in controlling elemental cycling on local to global scales.

EEB611 Chemical Ecology and Evolution (3-0-3)(F/S). Surveys topics related to the chemical ecology and co-evolutionary interactions between plant and herbivores. Material focuses on quantifying doses of chemical defenses in plants and responses of herbivores to those defenses from an evolutionary, physiological, pharmacological and ecological perspective. Design, conduct, analyze and present an experiment testing an hypothesis related to chemical ecology and evolution.

EEB612 Plant Ecophysiology (3-0-3)(F/S). Responses of plants in terrestrial ecosystems to, and interaction with, environmental conditions. Physiological responses of plants and their ecosystems to environmental factors and stressful conditions. Interaction of plants with environment to capture, use and cycle resources such as carbon, water and nutrients. Emphasis on plant responses and plant-soil-atmosphere interactions from a global environmental change perspective such as increased carbon dioxide concentration and temperature and altered precipitation patterns.

EEB613 Landscape and Conservation Genomics (3-0-3)(F/S). Application of evolutionary analysis to real-world biological problems. Use of large data sets and diverse computational approaches in analyzing population structure, signatures of natural selection, and demographic and disease-related processes. Emphasizes human-driven global changes that accentuate or disrupt natural evolutionary processes and linkages at the individual, population, community, and species levels. Includes a focus on the consequences of landscape-level patterns to the spatial genetic structure of populations.

EEB614 Phylogenetics and Advanced Evolution (3-0-3)(F/S). Explores the basics of phylogenetics, applications, and current software used to generate histories of organisms. Interpretation of macro-evolutionary processes using phylogenetic history. Topics include multiple sequence alignment, genomic data analysis, generation of phylogenetic trees via parsimony, likelihood and Bayesian methods as well as networks. Examines phylogenetic trees for ancestral character state reconstruction, molecular dating, biogeography, climate shifts, and species trees.

EEB615 Biodiversity and Ecosystem Function (3-0-3)(F/S). Quantifies patterns of biodiversity and discusses the ecological implications of biodiversity loss at the level of the community, ecosystem and landscape. Community ecology focus on biotic interactions such as competition, trophic interactions, bottom-up and top-down control and stability of food webs. Biodiversity impacts on interactions between organisms and the abiotic environment. Landscape level focus on effects of changes in biodiversity on structure and dynamics of natural and cultural landscapes.

EEB616 The Carbon Dilemma (3-0-3)(F/S). Explores tradeoffs between different ecosystem functions and services provided by carbon. Several (interlinked) scientific questions important for resolving or managing carbon are discussed and novel research questions are identified.

EEB617 Ecosystem Ecology (3-0-3)(F/S). Influence of biological, ecological and physical processes on energy and elemental cycling (C, N, P). Consideration of roles of microorganisms, plants and animals and whole ecosystems. Factors regulating the ecosystem function, including soils, climate,

disturbance, and human activities, are considered from the molecular to the global scale.

EEB618 Earth's Biogeochemical Cycles and Climate Change (3-0-3)(F/S). Examines the underlying natural science of global change. Presents and evaluates major processes affecting C, N, and P cycles at ecosystem levels with biogeochemical ecosystem models. At the global scale level, the C, N, and P cycles are examined across the Earth's compartments. Emphasizes how these cycles are linked and how regulation among cycles takes place. Functioning of natural cycles and the anthropogenic effects on these cycles are assessed.

EEB619 Modeling Social Behavior (3-0-3)(F/S). A survey of modeling approaches used to analyze social behavior from an evolutionary/ecological perspective. Focus on analytical, agent-based, and statistical modeling.

EEB620 Population Genetics (3-0-3)(F/S). Theoretical population genetics and its relationship to natural and experimental populations. Single locus and multilocus systems, history of a gene in a population, diffusion approximations, suitability of models to natural and experimental populations. Theories of selection, neutrality, drift, recombination, mutation, and isolation and statistical tests and experimental methods for detecting these forces.

EEB621 Advanced Ecological Data Analysis (3-0-3)(F/S). Utilizes existing datasets. Provides 'hands-on' training in data analysis with goal of publishable article. Focuses on data issues, selection of appropriate models and problems of interpretation. Topics vary by participants, but may include mixed models, non-linear modeling, scripting, and manipulating data.

EEB622 Statistical Approaches In Ecology (3-0-3)(F/S). Examines statistical models for ecological data. Includes probability distributions, generalized linear models. PREREQ: Graduate standing, and BIOL601 or PERM/INST.

EEB623 Coding in Earth Engine (1-0-1)(F). Learn the Earth Engine coding software platform (based in Java and Python). Useful for those needing to take advantage of cloud computing to acquire land cover products. May be repeated once for credit. PREREQ: PERM/PROG.

EEB624 Time Series Analysis of Remote Sensing (1-0-1)(F/S/SU). A working group for advanced students interested in cutting-edge remote sensing aimed at landscape ecology and land cover change. This is a student-driven course that emphasizes a sense of community between students. It is not appropriate for students that are looking for an introduction or general overview of these materials. May be repeated twice for credit.

EEB698 Seminars in Ecology, Evolution, and Behavior (1-0-1)(F,S). Introduces students to current topics in ecology, evolution, and behavior. Students engage in professional development activities for future careers. May include oral presentations, academic writing, networking, and developing an Internet presence. May be repeated for credit. PREREQ: PERM/INST.

ZOOL—Zoology

ZOOL301G Comparative Vertebrate Anatomy (2-6-4)(F). The evolutionary development of vertebrate anatomy, fishes through mammals. Dissection of the shark, salamander, and cat plus demonstrations of other vertebrate types. PREREQ: BIOL191-192 or PERM/INST.

ZOOL305G Entomology (3-3-4)(F). The general anatomy, physiology, and developmental biology of insects, and ecological and evolutionary relationships and interactions of insects with humans. Field trips to collect and identify local species. PREREQ: BIOL191-192 or PERM/INST.

ZOOL500 Vertebrate Histology (2-6-4)(S)(Even years). Microscopic anatomy of cells, tissues, and organ systems of vertebrates. Major emphasis will be on mammalian systems. PREREQ: BIOL320 or ZOOL301.

ZOOL501 Human Physiology (3-0-3)(S). Functional aspects of human tissues and organ systems with emphasis on regulatory and homeostatic mechanisms. PREREQ: Graduate standing or PERM/INST.

ZOOL503 (KINES503) Head and Neck Anatomy (2-2-3)(F,S). Use of human cadavers to study prosections of head and neck with emphasis on clinical relevance. Integument, osteology, myology, circulatory systems, lymphatics, oral and dental tissues, neuroanatomy, cranial nerves, general

innervation, and salivary glands. May be taken for KINES or ZOOL credit but not both. PREREQ: BIOL191-192 or BIOL227-228 or PERM/INST.

ZOOL509 General and Comparative Physiology (3-3-4)(S). Physiological principles common to all forms of animal life are discussed. Physiological adaptations required to live in a variety of environments are presented. PREREQ: Graduate standing or PERM/INST.

ZOOL511 Human Physiology Laboratory (0-3-1)(S). Laboratory for ZOOL501 Human Physiology. Methods in the functional aspects of human tissues and organ systems with emphasis on regulatory and homeostatic mechanisms. COREQ: ZOOL501.

ZOOL521 Mammalogy (2-3-3)(S)(Even years). The biology of mammals: ecology, life histories, reproduction, classification, identification, distribution, and adaptations. One weekend field trip. PREREQ: Graduate standing or PERM/INST.

ZOOL525 Aquatic Entomology (3-3-4)(F)(Even years). The taxonomy and ecology of the insects most commonly encountered in freshwater environments. Emphasis on identification and biology of individual taxa, aquatic insect community ecology, environmental pollution assessment, and natural resource management. PREREQ: Graduate standing or PERM/INST.

ZOOL534 Animal Behavior (3-3-4)(F)(Even years). This course focuses on the concepts and processes of animal behavior, with particular emphasis on proximate perspectives. The history of the study of animal behavior, behavioral genetics, the nervous system and behavior, hormones and behavior, ontogeny of behavior, learning and motivation, and other aspects of behavior such as migration, orientation, and navigation will be presented. PREREQ: Graduate standing or PERM/INST.

ZOOL541 Ornithology (3-3-4)(S)(Odd years). Birds as examples of biological principles: classification, identification, ecology, behavior, life histories, distribution, and adaptations of birds. Two weekend field trips. PREREQ: BIOL304, BIOL323.

ZOOL615 Avian Physiology (3-0-3)(F)(Odd years). The physiology of flight, cardiovascular, pulmonary, digestive, water and electrolyte, egg, and reproductive physiology are covered. Correlations between unique aspects of avian structure and function are emphasized. PREREQ: Graduate standing or PERM/INST.

ZOOL635 Behavioral Endocrinology (3-0-3)(F)(Even years). An examination of the endocrine system and the hormonal mechanisms associated with social behavior and aggression, reproductive and parental behavior, biological rhythms, etc. Each student is expected to investigate and lead a discussion on an assigned topic. PREREQ: Graduate Standing or PERM/INST.

Biomedical Engineering

College of Engineering | College of Health Sciences

DOCTOR OF PHILOSOPHY IN BIOMEDICAL ENGINEERING

Program Director: Trevor Lujan
Program Associate Director: Tyler Brown
Program Administrator: Ashley Holden
Charles P Ruch Engineering Building, Room 201
(208) 426-4095 (phone)
(208) 392-1589 (fax)
bmephd@boisestate.edu (email)
boisestate.edu/bme (website)

Participating Departments

- Biological Sciences
- Electrical and Computer Engineering
- Kinesiology
- Materials Science and Engineering
- Mechanical and Biomedical Engineering
- Physics

General Information

The Biomedical Engineering (BME) program is designed to give students the technical skills and fundamental knowledge needed to address significant challenges related to human health. This transdisciplinary doctoral program integrates biomedical researchers across Boise State's campus to offer students multiple tracks of study within the biomedical engineering field. These tracks include, but are not limited to, biomechanics, human performance, biomaterials, and mechanobiology. More information about the tracks can be found on the BME program website.

Program Admission Requirements

Complete all of the following
- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 15 (fall priority), May 15 (fall final), August 15 (spring priority), October 15 (spring final)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Personal Statement
  - A personal statement (no more than two pages) describing your academic and professional background, research experiences and interests, career goals, and motivation for graduate study. This statement should clearly state the study track(s) of interest and at least one Ph.D. faculty member as a prospective advisor.
- Submit Current Resume or Curriculum Vitae (CV)
- Submit Letters of Recommendation
  - Three letters of recommendation from academic and/or professional references.

- Submit Graduate Assistantship Application
  - Deadlines: January 15 (fall), August 15 (spring)
  - Automatic consideration is given with your application to the program.

Degree Requirements

Doctor of Philosophy in Biomedical Engineering

Graduate Major Requirements
21 - 22 Total Credits

Complete all of the following
Select one course from each of the following areas, or alternative course(s) as approved by the program coordinator:
Engineering
Take at least 1 of the following:
KINES520 - Advanced Biomechanics (3)
ME520 - Advanced Biomechanics (3)
Life Sciences
Take at least 1 of the following:
KINES510 - Physiology of Activity (3)
KINES560 - Motor Learning (3)
ZOOL501 - Human Physiology (3)
Research Methods
Take at least 1 of the following:
BIOL601 - Biometry (4)
EEB603 - Reproducible Science (3)
KINES551 - Research Design in Exercise and Sport (3)
KINES552 - Applied Statistical Methods (3)
Take at least 9 credits from the following:
Track courses approved by the program coordinator and the student's advisor.
Take at least 3 credits from the following:
Elective course(s) approved by the student's advisor.
Graduate Culminating Activity and Other Requirements
42 Total Credits
Complete all of the following
Take at least 2 credits from the following:
BME598 - Seminar (1 - 4)
Take the following:
BME601 - Graduate Professional Development (1)
Take at least 1 credits from the following:
BME689 - Dissertation Proposal (1 - 6)
Take at least 2 credits from the following:
BME691 - Doctoral Comprehensive Examination (1 - 6)
Take at least 3 credits from the following:
BME696 - Directed Research (1 - 6)
Take at least 33 credits from the following:
BME693 - Dissertation (1 - 12)
Grand Total Credits: 63 - 64

Course Offerings

BME—Biomedical Engineering

BME601 Graduate Professional Development (1-0-1)(F). Explores procedures specific to the degree program, research methods and ethics in the field, project management strategies, scientific writing for conferences and journals, and tools for sustained career success. (Pass/Fail.) PREREQ: ADM/PROG.

Biomolecular Sciences Programs

College of Arts and Sciences

Science Building, Room 105A
(208) 426-2844 (phone)
(208) 392-1430 (fax)
biomolecularphd@boisestate.edu (email)
boisestate.edu/biomolecularsciences (website)

Graduate Degrees Offered

- Doctor of Philosophy in Biomolecular Sciences
- Master of Science in Biomolecular Sciences

Participating Departments

- Biological Sciences
- Chemistry and Biochemistry
- Physics

DOCTOR OF PHILOSOPHY IN BIOMOLECULAR SCIENCES

Graduate Program Director: Denise Wingett
Program Administrator: Beth Gee
Science Building, Room 105A
(208) 426-2844 (phone)
(208) 392-1430 (fax)
biomolecularphd@boisestate.edu (email)

General Information

The interdisciplinary program leading to the degree of Doctor of Philosophy (PhD) in Biomolecular Sciences is delivered by faculty members drawn from the Departments of Biological Sciences, Chemistry and Biochemistry, and Physics. This degree requires completion of a prescribed course of study, satisfactory performance on preliminary and comprehensive examinations, and completion of a dissertation representing an original and significant research contribution in the biomolecular sciences. Each student works under the guidance of a supervisory committee chaired by the student's major advisor.

Program Admission Requirements

Complete all of the following
- Submit Graduate Admission Application and Admission Materials, see page
  - Deadlines: January 10 (fall priority) August 1 (fall final), September 15 (spring)
- Submit Baccalaureate Degree and 3.00 GPA, see page
  - Field of Study: In an appropriate scientific discipline.
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Personal Statement
  - A personal statement (no more than 1750 words) describing your academic and professional background, career goals, and faculty members that you are most interested in working with.

- Submit Current Resume or Curriculum Vitae (CV)
  - A resume that includes your educational training, awards, publications, poster presentations, and grants.
- Submit Foundational Coursework for Graduate Study
  - Previous undergraduate coursework that includes cell biology, biochemistry, calculus, and general physics.
- Submit Writing Sample
  - A scientific writing sample.
- Submit Letters of Recommendation
  - Three letters of recommendation from academic and/or professional references.
- Submit Graduate Assistantship Application
  - Deadlines: January 10 (fall)
  - Automatic consideration is given with your application to the program.

Degree Requirements

Doctor of Philosophy in Biomolecular Sciences

Graduate Major Requirements
34 Total Credits

Complete all of the following
Core Sequence
Take the following:
BMOL601 - Biomolecules I (4)
BMOL602 - Biomolecules II (4)
BMOL603 - Biophysical Instrumentation and Techniques (4)

Additional Required Courses
Take at least 1 of the following:
BIOL511 - Advanced Cell Biology (3)
BMOL511 - Advanced Cell Biology (3)

Take the following:
BMOL516 - Responsible Conduct in Research (1)
BMOL606 - Proposal Writing (2)
BMOL607 - Graduate Research Presentation (1)
PHYS504 - Molecular and Cellular Biophysics (4)

Take at least 6 credits from the following:
BMOL598 - Seminar (1 - 4)
BMOL605 - Current Scientific Literature (1)

*BMOL598 and BMOL605 are one-credit courses that can be applied to meet degree requirements. No more than two credits of BMOL605 and four credits of BMOL598 can be applied towards degree requirements.

Take at least 5 credits from the following:
Approved Electives

Graduate Culminating Activity and Other Requirements
32 Total Credits

Complete all of the following
Examinations
Take at least 1 credits from the following:
BMOL687 - Doctoral Preliminary Examination (1 - 6)

Take at least 1 credits from the following:
BMOL691 - Doctoral Comprehensive Examination (1 - 6)

Culminating Activity
Take at least 30 credits from the following:
BMOL693 - Dissertation (1 - 12)

Grand Total Credits: 66

MASTER OF SCIENCE IN BIOMOLECULAR SCIENCES

Graduate Program Director: Denise Wingett
Program Administrator: Beth Gee
Science Building, Room 105A
(208) 426-2844 (phone)
(208) 392-1430 (fax)
biomolecularphd@boisestate.edu (email)

General Information

The interdisciplinary program leading to the degree of Masters of Science (MS) in Biomolecular Sciences is delivered by faculty members drawn from the Departments of Biological Sciences, Chemistry and Biochemistry, and Physics. This degree requires completion of a prescribed course of study, and completion of an approved culminating activity in biomolecular sciences. Each student works under the guidance of a supervisory committee chaired by the student's major advisor.

Program Admission Requirements

Complete all of the following
- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 10 (fall priority), August 1 (fall final), September 15 (spring)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Personal Statement
  - A personal statement (no more than 1750 words) describing your academic and professional background, career goals, and faculty members that you are most interested in working with.
- Submit Current Resume or Curriculum Vitae (CV)
  - A resume that includes your educational training, awards, publications, poster presentations, and grants.
- Submit Foundational Coursework for Graduate Study
  - Previous undergraduate coursework that includes cell biology, biochemistry, calculus, and general physics.
- Submit Writing Sample
  - A scientific writing sample.
- Submit Letters of Recommendation
  - Three letters of recommendation from academic and/or professional references.

Degree Requirements

Master of Science in Biomolecular Sciences
Graduate Major Requirements
23 Total Credits

Complete all of the following
  Core Sequence
  Take the following:
    BMOL601 - Biomolecules I (4)
    BMOL602 - Biomolecules II (4)
    BMOL603 - Biophysical Instrumentation and Techniques (4)
  Additional Required Courses
  Take at least 1 of the following:
    BIOL511 - Advanced Cell Biology (3)
    BMOL511 - Advanced Cell Biology (3)
  Take the following:
    BMOL516 - Responsible Conduct in Research (1)
    BMOL605 - Current Scientific Literature (1)
    PHYS504 - Molecular and Cellular Biophysics (4)
  Take at least 2 credits from the following:
    BMOL598 - Seminar (1 - 4)

Graduate Culminating Activity and Other Requirements
7 Total Credits

Complete all of the following
  Additional graduate courses and a culminating activity chosen from one of the following options:
  Complete 1 of the following
    Complete all of the following
      Project
      Take at least 7 credits from the following:
        BMOL591 - Project (1 - 12)
    Complete all of the following
      Thesis
      Take at least 7 credits from the following:
        BMOL593 - Thesis (1 - 12)
    Complete all of the following
      Comprehensive Examination (PhD Track Only)
      Take the following:
        BMOL606 - Proposal Writing (2)
        BMOL607 - Graduate Research Presentation (1)
      Take at least 1 credits from the following:
        BMOL687 - Doctoral Preliminary Examination (1 - 6)
      Take at least 1 credits from the following:
        BMOL691 - Doctoral Comprehensive Examination (1 - 6)
      Take at least 2 credits from the following:
        Approved Electives
Grand Total Credits: 30

Course Offerings

BMOL—Biomolecular Sciences

BMOL511 (BIOL511) Advanced Cell Biology (3-0-3)(S). Contemporary and frontier topics in the biology of microbial, plant, and animal cells covering signal transduction, protein trafficking, membrane structure and transport, cell to cell communication, cellular compartmentalization, and cell biotechnology applications. May be taken for BIOL or BMOL credit, but not both. PREREQ: BIOL320 or PERM/INST.

BMOL514 (BIOL514) Flow Cytometry Research Techniques (0-3-1)(F/S/SU). Provides a basic understanding of flow cytometry principles and applications in research and clinical setting. Students gain 'hands-on' experience including staining and separating blood cells, staining of DNA for cell cycle analysis, and purification of rare cell types using a cell sorter. Students apply flow cytometry to a specific research topic. May be taken for BIOL or BMOL credit, but not both. PREREQ: BIOL320 or equivalent.

BMOL516 Responsible Conduct in Research (1-0-1)(F). Basic concepts, principles and practices governing research compliance and Responsible Conduct for Research (RCR) in the biomolecular and biomedical areas. The course will utilize on-line Collaborative Institutional Training Initiative (CITI) training modules and group discussions of case studies or lectures presented by professionals in the field. PREREQ: Graduate standing.

BMOL555 Applied Calculus for Biomolecular Sciences (1-0-1)(S). Review and practice of calculus methods and techniques relevant to qualitative and quantitative descriptions of complex phenomena in the biomolecular sciences. PREREQ: MATH170; and PHYS112 or PHYS212.

BMOL601 Biomolecules I (4-0-4)(F). An in-depth study of the metabolism of both DNA and RNA at the molecular/mechanistic level. This course will cover the mechanisms of DNA replication, transcription, translation, transposition and repair, as well as those for RNA interference, catalysis, silencing and splicing. Molecular genetics and bioinformatics approaches for studying DNA/RNA and their interactions with proteins will be discussed. PREREQ: BIOL320; CHEM431 or CHEM350 and PHYS307; MATH170, PHYS112.

BMOL602 Biomolecules II (4-0-4)(S). An in-depth study of proteins focusing on amino acid chemistry, protein structure, protein folding, protein function, membrane biochemistry as well as small molecules, lipids and carbohydrates. This course will discuss modern methods of protein characterization and the use of bioinformatics in understanding the chemistry/function of proteins. Recent developments in proteomics and high-throughput approaches to identifying and

assessing protein function will be presented. PREREQ: BIOL320; CHEM431 or CHEM350 and PHYS307; MATH170, PHYS112; or BMOL601 or BMOL603.

BMOL603 Biophysical Instrumentation and Techniques (3-3-4)(F/S). Applications and principles of key physical methods and instruments used for the characterization of the structural, functional, and dynamical properties of biological molecules and their interactions. Methods include single-molecule detection and manipulation; mass spectroscopy; X-ray, electron, and neutron diffraction; spectroscopy (optical, IR, UV, Raman); magnetic resonance (NMR, EPR, MRI); plasmon resonance; birefringence; electrophoresis; and hydrodynamic techniques. PREREQ: BIOL320; CHEM431 or CHEM350 and PHYS307; MATH170, PHYS112; or BMOL601 or BMOL602.

BMOL605 Current Scientific Literature (1-0-1)(F). Written and oral presentation of current topics from the published literature in areas of biomolecular sciences aimed at integrating material from the various related disciplines. Course will be multidisciplinary involving in depth discussion and critical analysis of current literature by the students. PREREQ: Admitted to program.

BMOL606 Proposal Writing (0-2-2)(F/S). Written and oral presentation of a research proposal in an area of biomolecular sciences related to the student's proposed dissertation research project. PREREQ: Admitted to program and BMOL601.

BMOL607 Graduate Research Presentation (1-0-1)(S). Oral presentation on research activity by third year students in the Biomolecular Sciences program. PREREQ: BMOL601, BMOL602, BMOL603.

BMOL613 (BIOL613) Molecular Genetics (3-0-3)(F/S). An advanced study of genetics in microbial, animal and plant systems, focused on the biochemical and molecular aspects of genetic structure and function. Information obtained from recent genomic analysis and comparisons will be included as well as discussion of contemporary molecular biology techniques and applications and an introduction to genomics. May be taken for BIOL or BMOL credit, but not both. PREREQ: BIOL310 or equivalent.

BMOL615 Research in the Biomolecular Sciences (0-3-1)(F). Research conducted by graduate students under the supervision of faculty in Biomolecular Sciences. Students rotate through different research laboratories during the semester to learn new research techniques, review relevant scientific literature, experience different mentoring styles and laboratory environments, and contribute to a research team's generation of hypotheses and data interpretation. PREREQ: PERM/INST.

Master of Business Administration Programs

College of Business and Economics

Graduate Studies Director: Kit Scott
Micron Business and Economics Building, Room 3136
(208) 426-3116 (phone)
graduatebusiness@boisestate.edu (email)
boisestate.edu/cobe/graduate-programs-overview (website)

Graduate Degrees Offered

- Executive Master of Business Administration (MBA)
- Master of Business Administration (MBA), Full-Time Program
- Master of Business Administration (MBA), Online Program
  - Construction Management Emphasis
  - Healthcare Leadership Emphasis
  - Management Emphasis
  - Marketing Leadership Emphasis
- Master of Business Administration (MBA), Professional Program
- Master of Business Administration (MBA), Professional Program Concurrent with UI JD

General Information

The College of Business and Economics offers four separate routes to a Master of Business Administration (MBA) degree.

- The Career Track MBA is a full-time, day program for recent graduates with little to no work experience.
- The Professional MBA is for individuals with at least two years of managerial work experience who wish to complete an MBA program at night while continuing to work full-time.
- The Online MBA is for mid-career individuals with at least two years of managerial work experience who wish to complete an MBA program completely online. Students may choose to take a full-time or part-time course load.
- The Executive MBA program is for experienced working professionals who wish to complete an MBA program with similarly-experienced individuals while continuing to work full-time.

MASTER OF BUSINESS ADMINISTRATION FULL TIME PROGRAM (CAREER TRACK)

Program Administrator: Trisha Stevens Lamb
Micron Business and Economics Building, Room 4104
(208) 426-1120 (phone)
graduatebusiness@boisestate.edu (email)
boisestate.edu/cobe-careertrackmba (website)

General Information

The Career Track MBA is a full-time, cohort-based program designed for high-potential individuals with limited work experience or career changers looking to go to school full-time. The unique design provides graduates with tools to get their career going and to move up more quickly in an organization.

First year courses provide a foundation in business as students learn about marketing, finance, accounting, operations, etc. Classroom material is reinforced through interactions and applications with operating businesses to prepare the student for a full-time summer internship. Students earn course credit and gain valuable work experience during their summer internship.

Second year courses emphasize a hands-on approach as students gain experience by developing new products for operating businesses or working on their own ideas.

Program Admission Requirements

Complete all of the following
- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadline: August 1 (fall)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Personal Statement
  - A personal statement that is double spaced. The required elements should be in essay style: a) Tell us about a time when you tried to reach a goal or a task that was challenging, difficult, or frustrating. What did you learn from the experience? (maximum 500 words) b) Each of our applicants is unique. Describe how your background, values, academics, and/or leadership skills influenced your career goals. How do you expect a Boise State MBA to help you achieve these goals? (maximum 750 words) c) Optional: Is there anything you would like to share with the MBA Admissions Committee in considering your application? (maximum 500 words) Required for re-applicants only: Since your previous application, what are the steps you've taken to strengthen your candidacy?
- Submit Current Resume or Curriculum Vitae (CV)
  - A resume that includes a separate reference list.
- Submit Graduate Management Admission Test (GMAT) Scores or Graduate Record Examination (GRE) Scores
  - A GMAT score of 500 or above, or a GRE score of 300 combined or better in the verbal reasoning and quantitative reasoning sections or satisfy one of the Fast Track waiver requirements:
    - An undergraduate GPA of 3.30 for STEM majors or 3.50 GPA for all other majors (GPA calculated using the last 30 credit hours).
    - Three years of significant management experience and a 3.30 GPA in your undergraduate career.
    - You already possess a masters or doctoral degree with a minimum 3.30 GPA.
- Interview — Final candidates will be invited for an interview.
- Submit Letters of Recommendation
  - Two letters of recommendation from professional references. Recommendations should come from a person who has been your direct supervisor in a professional setting or your professor in an academic setting.
- Graduate Assistantship Deadline: March 1 (fall)

Degree Requirements

Master of Business Administration Full Time Program
Year 1
27 Total Credits

Complete all of the following
Business Fundamentals
Take the following:
MBA501 - Accounting for Managers (3)
MBA502 - Fundamentals of Marketing (3)
MBA503 - Managing Successful Projects (3)
MBA507 - Statistical Thinking and Business Analytics (3)
MBA508 - Corporate Financial Management (3)
MBA509 - Data Management and Analytics (3)
MBA510 - Operations and Supply Chain Management (3)
MBA512 - Management and Oral Communication (3)
Take at least 3 credits from the following:
MBA590 - Practicum/Internship (1 - 12)
Students will need to meet with Program Coordinator to coordinate summer internship.

Year 2
24 Total Credits

Complete all of the following
Business Applications
Take the following:
MBA505 - Strategy for Competitive Advantage (3)
MBA506 - Discipline Integration: Live Cases (3)
MBA511 - Business Law and Social Responsibility (3)
MBA514 - Innovation Driven Advantage (3)
MBA522 - Leading People and Organizations (3)
MBA526 - Business Economics (3)
MBA527 - Applied Capstone Project Start (3)
MBA528 - Applied Capstone Project Finish (3)
Grand Total Credits: 51

MASTER OF BUSINESS ADMINISTRATION PROFESSIONAL PROGRAM

Program Administrator: Ally Daniels
Micron Business and Economics Building, Room 4100
(208) 426-3116 (phone)
graduatebusiness@boisestate.edu (email)
boisestate.edu/cobe-parttimemba (website)

General Information

The Professional MBA is a two year, part-time, cohort-based program designed for high-potential individuals with at least two years of professional management experience. The program is designed for mid-career individuals who wish to create career options or move up more quickly in an organization while continuing to work full-time.

The Professional MBA program offers a relevant, applicable business education to help equip students to be better contributors and leaders. Students learn how to ask the right questions and design customer-centric solutions. Beginning with a strategic perspectives course, students learn about creativity, innovation, and design thinking to bring a human-centered approach to problem solving at their organization. In addition to top faculty, the program uses experienced business professionals to teach one-credit courses in communications, IT, and human resources. These professionals teach real-world, hands-on skills from a leadership perspective.

Courses are offered in-person during the evenings in fall and spring semesters. Summer classes are largely remote with minimal in-person requirements. The program provides a foundation in all aspects of business including marketing, finance, accounting, supply chain, and operations. Course topics are reinforced through application at the student's place of work and in-class discussion among the cohort of experienced working professionals from a broad variety of industries.

Program Admission Requirements

Complete all of the following
- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: March 15 (early admission for summer and fall), May 1 (priority admission for summer and fall), June 15 (fall admission only)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Personal Statement
  - A personal statement (500-750 words) covering your career goals and objectives, which addresses all three of the following prompts: a) Describe how your background and values have influenced your professional relationships and leadership style. b) If admitted, how will you apply your MBA education to your current position? What strengths will you build upon, and what skills or qualities will you seek to improve? c) Where do you think an MBA from Boise State will take your career?

- Submit Current Resume or Curriculum Vitae (CV)
  - A resume or curriculum vitae that includes the start and end dates (month and year) for each position held and indicate full or part-time employment. The Admissions Committee is looking for at least two years of full-time management or professional work experience where you have managed either people, budgets or customer accounts beyond a basic supervisory level. Brevity should not be a concern.
- Submit Graduate Management Admission Test (GMAT) Scores or Graduate Record Examination (GRE) Scores
  - A GMAT score of 500 or above, or a GRE score of 147/148 or better in the verbal reasoning and quantitative reasoning sections or satisfy one of the Fast Track waiver requirements:
    - Three years (3) of significant management experience and a 3.00 GPA in your undergraduate career.
    - Five years (5) of significant management experience and a 2.75 GPA in your undergraduate career.
    - You already possess a masters or doctoral degree with a minimum 3.00 GPA.
- Interview - Final candidates will be invited for an interview.
- Submit Letters of Recommendation
  - Two letters of recommendation from professional references. A recommendation should come from your current supervisor (preferred but not required). Select recommenders who can provide details about your professional work and ability to be successful in an MBA program. Recommendations from academics (professors) may be accepted, but are not preferred. At least one letter should be from a person you have worked with professionally.

Degree Requirements

Master of Business Administration Professional Program
Year 1
19 Total Credits

Complete all of the following
Core Requirements - Year 1
Take the following:
MBA530 - MBA Foundations (1)
MBA531 - Strategic Perspectives (3)
MBA532 - Organizational Issues and Leadership (3)
MBA533 - Communication Skills for Managers (1)
MBA536 - Strategic Marketing (4)
MBA541 - Managerial Accounting (3)
MBA552 - Strategic Human Resources (1)
MBA558 - Business Law and Ethics (3)

Year 2
14 Total Credits

Complete all of the following
Core Requirements - Year 2
Take the following:
MBA543 - Managing Corporate Finance (3)
MBA546 - Strategic Management (3)
MBA559 - Issues in Supply Chain Management (3)
MBA563 - Information Technology Management (1)
MBA571 - Capstone Integration (4)

Graduate Major Requirements
10 Total Credits

Complete all of the following
MBA Electives
Take 10 credits from: -
MBA549 - Successful Project Management (3)
MBA562 - Business Modeling (3)
MBA565 - New Value Creation (4)
MBA597 - Special Topics

Grand Total Credits: 43

MASTER OF BUSINESS ADMINISTRATION PROFESSIONAL PROGRAM CONCURRENT WITH UNIVERSITY OF IDAHO JURIS DOCTORATE

Program Administrator: Ally Daniels
Micron Business and Economics Building, Room 4100
(208) 426-3116 (phone)
graduatebusiness@boisestate.edu (email)
boisestate.edu/cobe-parttimemba/jdmba-2 (website)

General Information

Students may elect to concurrently pursue a Boise State MBA degree while also matriculating towards a Juris Doctorate degree from the University of Idaho's School of Law. Admission to the concurrent program requires admission to each of the two individual programs under their respective criteria. Interested students are encouraged to contact our program administrator for details since careful planning is required if one is to earn both degrees in only three academic years.

Concurrent students complete their first year of law school classes at University of Idaho separately. During their second and third law school years, they concurrently enroll in MBA courses at Boise State. Concurrent students become part of a cohort of students in our Professional MBA program, taking classes with others who are exclusively pursuing an MBA degree. Law school courses are traditionally during the day with MBA courses in the evening. Concurrent students have the unique opportunity to earn a dual degree with a transfer of twelve credits between each program - saving time and money on their educational plan. Concurrent students graduate with a comprehensive business, law and leadership background that is truly differentiated and valuable. Classroom material is reinforced through interactions and applications with operating businesses designed to prepare the student for a career in management.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: April 15 (fall priority), May 31 (fall final)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Personal Statement
  - A personal statement (500-750 words) covering your career goals and objectives, which addresses all three of the following prompts: a) Describe how your background and values have influenced your professional relationships and leadership style. b) If admitted, how will you apply your MBA education to your current position? What strengths will you build upon, and what skills or qualities will you seek to improve? c) Where do you think an MBA from Boise State will take your career?

- Submit Current Resume or Curriculum Vitae (CV)
  - A resume or curriculum vitae that includes the start and end dates (month and year) for each position held and indicate full or part-time employment. The Admissions Committee is looking for at least two years of full-time management or professional work experience where you have managed either people, budgets or customer accounts beyond a basic supervisory level. Brevity should not be a concern.
- Submit Foundational Coursework for Graduate Study
  - You must complete Year 1 of JD curriculum at the University of Idaho Law School before beginning MBA courses.
- Interview - Final candidates will be invited for an interview.
- Submit Letters of Recommendation
  - Two letters of recommendation from professional references. A recommendation should come from your current supervisor (preferred but not required). Select recommenders who can provide details about your professional work and ability to be successful in an MBA program. Recommendations from academics (professors) may be accepted, but are not preferred. At least one letter should be from a person you have worked with professionally.

Degree Requirements

Master of Business Administration Professional Program Concurrent with University of Idaho Juris Doctorate

Year 1
14 Total Credits
  Complete all of the following
    Core Requirements - Year 1
    Take the following:
      MBA530 - MBA Foundations (1)
      MBA531 - Strategic Perspectives (3)
      MBA532 - Organizational Issues and Leadership (3)
      MBA536 - Strategic Marketing (4)
      MBA541 - Managerial Accounting (3)

Year 2
14 Total Credits
  Complete all of the following
    Core Requirements - Year 2
    Take the following:
      MBA533 - Communication Skills for Managers (1)
      MBA543 - Managing Corporate Finance (3)
      MBA546 - Strategic Management (3)
      MBA559 - Issues in Supply Chain Management (3)
      MBA571 - Capstone Integration (4)

Graduate Major Requirements
10 Total Credits
  Complete all of the following
    MBA Approved Electives
    Take 3 credits from: -
      MBA549 - Successful Project Management (3)
      MBA562 - Business Modeling (3)
      MBA565 - New Value Creation (4)
      MBA597 - Special Topics
  Take at least 12 credits from the following:
    Approved Directed Electives from UI School of Law

Grand Total Credits: 43

MASTER OF BUSINESS ADMINISTRATION ONLINE

Program Administrator: Ally Daniels
(855) 290-3840 (phone)
onlinemba@boisestate.edu (email)
boisestate.edu/cobe-onlinemba (website)

General Information

The Online MBA is designed for high-potential individuals who desire to complete their degree entirely online. The program is particularly well-suited for mid-career individuals who wish to create career options or move up more quickly in an organization while continuing to work full-time.

The program has a 37 credits of core curriculum which focuses on managerial decision making in business disciplines like marketing, finance, operations, etc. An additional 12-20 credits are completed in emphasis areas where students can specialize in areas of management, construction management, marketing leadership, or healthcare leadership. Team projects in courses enhance collaboration and create networking opportunities for students.

Students have the flexibility to finish in as few as 12 months or to pace their progress as desired. The program supports six start dates in each calendar year so students can begin the program at any time. All students must enroll in BUSMBA500 and BUSMBA501 during their first semester and BUSMBA555 during their last session but can take any of the other ten courses in any order.

Program Admission Requirements

Complete all of the following
- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: Three weeks prior to the intended start session.
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
  - Applicants with a GPA less than 3.00 may be considered for provisional admission.
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Personal Statement
  - A personal statement (500-750 words) covering your career goals and objectives, which addresses all three of the following prompts: a) Describe how your background and values have influenced your professional relationships and leadership style. b) If admitted, how will you apply your MBA education to your current position? What strengths will you build upon, and what skills or qualities will you seek to improve? c) Where do you think an MBA from Boise State will take your career?
- Submit Current Resume or Curriculum Vitae (CV)
  - A resume or curriculum vitae that includes the start and end dates (month and year) for each position held and indicate full or part-time employment. The Admissions Committee is looking for at least two years of full-time management or professional work experience where you have managed either people, budgets or customer accounts.
- Submit Graduate Management Admission Test (GMAT) Scores or Graduate Record Examination (GRE) Scores
  - A GMAT score of 500 or above, or a GRE score of 147/148 or better in the verbal reasoning and quantitative reasoning sections or satisfy one of the waiver requirements:
    - Three years (3) of significant management experience and a 3.00 GPA in your undergraduate career.
    - Five years (5) of significant management experience and a 2.75 GPA in your undergraduate career.
    - You already possess a masters or doctoral degree with a minimum 3.30 GPA.

- Submit Letters of Recommendation
  - Two letters of recommendation from professional references. A recommendation should come from your current supervisor (preferred but not required). Select people who can provide details about your professional work and ability to be successful in an MBA program.

Degree Requirements

Master of Business Administration Online Program
Graduate Major Requirements
49 - 57 Total Credits

Complete all of the following
Take the following:
BUSMBA500 - Introduction and Business Foundations (1)
BUSMBA501 - Design Thinking and Strategic Management (4)
BUSMBA505 - Marketing Strategy (4)
BUSMBA510 - People and Organizations (4)
BUSMBA515 - Corporate Finance (4)
BUSMBA520 - Global Economics: Policy and Trade (4)
BUSMBA525 - Managerial Accounting (4)
BUSMBA545 - Business Law and Ethics (4)
BUSMBA550 - Operations and Supply Chain Management (4)
BUSMBA555 - Integrated Capstone (4)
In addition, complete either the following coursework to graduate with a Master of Business Administration (without an emphasis) or complete the courses listed under one of the emphases below to graduate with a Master of Business Administration with an emphasis.

Complete 1 of the following
Elective courses approved by the program director.
Take at least 12 credits from the following:
OR
Take at least 20 credits from the following:
Take any of the following:
BUSMBA521 - Leadership in Architecture, Engineering, and Construction. (4)
BUSMBA522 - Architecture, Engineering, and Construction (AEC) Project Management (4)
BUSMBA523 - Architecture, Engineering, and Construction (AEC) Company Management (4)
BUSMBA530 - Leadership and Communication (4)
BUSMBA531 - Leadership for Health Professionals (4)
BUSMBA532 - Healthcare Systems and Delivery (4)
BUSMBA533 - Healthcare Operations and Financial Management (4)
BUSMBA535 - Information Technology and Business Alignment (4)
BUSMBA540 - Managing Successful Projects (4)
or BUSMBA597 Special Topics

Grand Total Credits: 49 - 57

Construction Management Emphasis
Graduate Major Requirements
12 Total Credits

Take the following:
BUSMBA521 - Leadership in Architecture, Engineering, and Construction. (4)
BUSMBA522 - Architecture, Engineering, and Construction (AEC) Project Management (4)
BUSMBA523 - Architecture, Engineering, and Construction (AEC) Company Management (4)

Grand Total Credits: 12

Healthcare Leadership Emphasis
Graduate Major Requirements
12 Total Credits

Take the following:
BUSMBA531 - Leadership for Health Professionals (4)
BUSMBA532 - Healthcare Systems and Delivery (4)
BUSMBA533 - Healthcare Operations & Financial Management (4)

Grand Total Credits: 12

Management Emphasis

Graduate Major Requirements
12 Total Credits

Take the following:
BUSMBA530 - Leadership and Communication (4)
BUSMBA535 - Information Technology & Business Alignment (4)
BUSMBA540 - Managing Successful Projects (4)

Grand Total Credits: 12

Marketing Leadership Emphasis

Graduate Major Requirements
12 Total Credits

Take the following:
BUSMBA541 - Marketing Leadership (4)
BUSMBA542 - Digital Marketing Management (4)
BUSMBA543 - Strategic Product Management (4)

Grand Total Credits: 12

EXECUTIVE MASTER OF BUSINESS ADMINISTRATION

Program Administrator: Brian O'Morrow
Micron Business and Economics Building, Room 4105
(208) 426-3008 (phone)
emba@boisestate.edu (email)
boisestate.edu/cobe-emba (website)

General Information

The Executive MBA program is designed for experienced business professionals who wish to complete an MBA degree while continuing to work full-time.

The curriculum develops flexible, innovative leaders with a strong foundation of business education, collaboration, and exposure to creative processes and strategic problem-solving methods. Individual coaches provide one-on-one development of leadership and communication skills. Courses are integrated to better reflect the interconnected world of business and were developed with the assistance of many local organizations.

The program lasts two academic years (21 months) including a summer break. Courses meet once per month, typically for three or four consecutive days. Two week-long residencies, one of which is international, are included. Classroom material is reinforced through interactions with many guest speakers and business leaders. The pace is reasonable for those working full time and for those with busy travel schedules.

Program Admission Requirements

Complete all of the following
- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: May 15 (fall priority), June 15 (fall final)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Current Resume or Curriculum Vitae (CV)
- Submit Additional Materials
  - Complete a Company Sponsor Letter
- Interview — Final candidates will be invited for an interview.
- Submit Letters of Recommendation
  - Three letters of recommendation from people whom you have worked with in the past three (3) years.

Degree Requirements

Executive Master of Business Administration

Year 1
20 Total Credits

Take the following:
EMBA511 - Business Perspectives (2)
EMBA512 - Assessing Business Opportunities (5)
EMBA513 - Creating Competitive Advantage I (3)
EMBA514 - Creating Competitive Advantage II (3)
EMBA515 - Fostering Innovation (4)
EMBA516 - Leadership and Teamwork Skills (2)
EMBA517 - Issues in Leadership I (1)

Year 2
12 Total Credits

Take the following:
EMBA521 - Business in a Global Environment (5)
EMBA522 - Rescuing Distressed Business Units (2)
EMBA523 - Management of Products and Services (2)
EMBA524 - Partnerships, Acquisitions, and Divestitures (2)
EMBA525 - Issues in Leadership II (1)

Graduate Culminating Activity and Other Requirements
8 Total Credits

Complete all of the following
Culminating Activity (Second Year)
Take at least 8 credits from the following:
EMBA591 - Project (1 - 12)

Grand Total Credits: 40

Course Offerings

BUSCOM—Business Communication

BUSCOM538 Managing Technical Communication (3-0-3)(F/S). An advanced study of technical communication for managers and technical professionals who must originate, specify, and/or approve technical instructions, proposals, reports, and related documents. Students will acquire proficiency in writing and designing these documents by applying syntactic, semantic, and pragmatic theory and visual design principles to applied problems in document design, information access, and human information processing.

BUSMBA—Master of Business Administration Online

BUSMBA500 Introduction and Business Foundations (0-0-1)(F/S/SU). Provides self-paced initial foundation or refresher in basic financial accounting, micro-economics, statistics, and spreadsheets. Also includes an introduction to the online learning environment, the learning management system used by the students, and Boise State University academic policies and resources. (Pass/Fail.) PREREQ: ADM/PROG. COREQ: BUSMBA501.

BUSMBA501 Design Thinking and Strategic Management (4-0-4)(F/S/SU). Examines collaborative innovation processes that are transforming business and driving industry life cycles. Includes a first exposure to the creation of functional, business-level, and corporate-level strategies. Special consideration of organizational design, diversification, mergers and acquisitions, and measures of strategic performance including use of Balanced Scorecards. Interpersonal skills enhanced via online collaboration with classmates. PREREQ: ADM/PROG. COREQ: BUSMBA500.

BUSMBA505 Marketing Strategy (4-0-4)(F/S/SU). Focuses on revenue-generating opportunities with special attention to evaluating market opportunities for new products or services. Examines methods to segment markets, target customers and position products or services in the marketplace. Considers managerial decisions of product, price, promotion, and distribution. COREQ: BUSMBA500 and BUSMBA501.

BUSMBA510 People and Organizations (4-0-4)(F/S/SU). Emphasizes integrated manager-employee relations in an organization. Includes HR planning, employee recruitment, selection, performance appraisal, discipline, coaching, compensation, and termination issues. Also focuses on collaboration, group dynamics, motivation, leadership, problem-solving, negotiation, and self-

management. Interpersonal skills enhanced via online collaboration with classmates. COREQ: BUSMBA500 and BUSMBA501.

BUSMBA515 Corporate Finance (4-0-4)(F/S/SU). Examines the three major decisions in corporate finance affecting value of the firm: investment, financing and cash distribution. Includes the methods used to measure corporate value and evaluate financial performance. Issues in each of the three decision areas are examined within the context of their impact on the valuation model and financial performance metrics. Includes financial modeling project in industry sector of student's choosing. COREQ: BUSMBA500 and BUSMBA501.

BUSMBA520 Global Economics: Policy and Trade (4-0-4) (F/S/SU). Reviews how economies work, the differences between economic systems, factors that influence international trade, exchange rates, labor economics, and government polices related to trade. Includes a survey on the economies of the world, current topics in global economics, data sources for international economic trends, and an introduction to major international trade agencies/associations. Includes application project in industry sector of student's choosing. COREQ: BUSMBA500 and BUSMBA501.

BUSMBA521 Leadership in Architecture, Engineering, and Construction (AEC) (4-0-4)(F/S/SU). Focus on management and leadership strategies as they apply to the architecture, engineering and construction industries. Topics include decision-making, effective communication and negotiating skills, change and conflict management, team building, leadership and ethics. COREQ: BUSMBA500 and BUSMBA501.

BUSMBA522 Architecture, Engineering, and Construction (AEC) Project Management (4-0-4)(F/S/SU). Topics related to the management of AEC projects including; scope, time, cost, quality, contracts, risk management and sustainability. Includes a focus on project administration and project controls, project scheduling and project cost accounting. COREQ: BUSMBA500 and BUSMBA501.

BUSMBA523 Architecture, Engineering, and Construction (AEC) Company Management (4-0-4)(F/S/SU). Preparation for planning, organizing, staffing, executing, and controlling operations for ongoing management of an AEC company. Topics include organizational structures, financial management and accounting, sales and marketing, and personnel administration. COREQ: BUSMBA500 and BUSMBA501.

BUSMBA525 Managerial Accounting (4-0-4)(F/S/SU). Examines various cost-based accounting concepts and practices. Particular emphasis on the challenges involved in using them to evaluate past performance and plan future deployment of firm resources. Interpersonal skills enhanced via online collaboration with classmates to solve managerial accounting problems. COREQ: BUSMBA500 and BUSMBA501.

BUSMBA530 Leadership and Communication (4-0-4)(F/S/SU). In-depth discussion of management and leadership strategies as they apply to varied business environments. Emphasis on oral and written communication, change management, organizational culture, and staff development. Topics include interpersonal relationships, team leadership, stakeholder analysis, and ethics as they relate to managerial decision making. COREQ: BUSMBA500 and BUSMBA501.

BUSMBA531 Leadership for Health Professionals (4-0-4) (F/S/SU). In-depth discussion of management and leadership strategies as they apply to healthcare. Emphasis on oral and written communication in the healthcare field, change management, program planning, organization, and staff development. Examination of data management, compliance, and ethics as they relate to management decision making. COREQ: BUSMBA500 and BUSMBA501.

BUSMBA532 Healthcare Systems and Delivery (4-0-4)(F/S/SU). Explores health care economics, delivery, and payment systems from the perspective of key stakeholders. Discussion of current issues in health policy and the impact to cost, quality, and access of care. Analysis of various healthcare delivery models including accountable care and fee for service. COREQ: BUSMBA500 and BUSMBA501.

BUSMBA533 Healthcare Operations and Financial Management (4-0-4)(F/S/SU). Discussion of technology and practices for defining, measuring, and improving quality in healthcare. Exploration of financial decisions in a changing landscape with topics including revenue cycles, risk sharing, portfolio management and budgeting. Focus on data collection and analysis as tools for operational decision-making. COREQ: BUSMBA500 and BUSMBA501.

BUSMBA535 Information Technology and Business Alignment (4-0-4)(F/S/SU). Examines the role of information technology in business process integration, strategic alignment, and business analytics. Includes application project in industry sector of student's choosing. COREQ: BUSMBA500 and BUSMBA501.

BUSMBA540 Managing Successful Projects (4-0-4)(F/S/SU). Introduces and provides experience in the front-end issues of project management such as team formation, communication strategies, conflict management, project constraints, and risk analysis. Includes use of the project management tools: PERT/Critical Path, resource utilization, project monitoring and tracking, and critical chain analysis. Includes application project in industry sector of student's choosing. COREQ: BUSMBA500 and BUSMBA501.

BUSMBA541 Marketing Leadership (4-0-4)(F/S/SU). Examines the role of the marketing leader in an organization. Presents best practices for brand stewardship, and how to manage the internal and external communications that drive an organization's reputation with its stakeholders. Prepares students to lead the marketing department, the sales force, and internal innovation processes. COREQ: BUSMBA501.

BUSMBA542 Digital Marketing Management (4-0-4)(F/S/SU). Covers the tools of digital marketing and how to combine them for maximum effect. Connects those tools to common marketing metrics in order to monitor promotion effectiveness and maximize ROI. COREQ: BUSMBA501.

BUSMBA543 Strategic Product Management (4-0-4)(F/S/SU). Considers the challenges of simultaneously managing multiple products and services, each of which is at a different stage of the Product Life Cycle. Focuses on value propositions including pricing strategies. COREQ: BUSMBA501.

BUSMBA545 Business Law and Ethics (4-0-4)(F/S/SU). Introduces managers to major legal and ethical issues in the business environment. Covers legal and ethical reasoning, the legal system, government regulation of business, torts, contracts, product liability, intellectual property, business organizations, agency, and employment law. Includes application project in industry sector of student's choosing. COREQ: BUSMBA500 or BUSMBA501.

BUSMBA550 Operations and Supply Chain Management (4-0-4)(F/S/SU). Introduces product and service movement within the firm and between the firm and its partners up and down the supply chain. Focus on logistics management, supplier relationships, and creating operational excellence within the firm. Includes operations modeling project in industry sector of student's choosing. COREQ: BUSMBA500 and BUSMBA501.

BUSMBA555 Integrated Capstone (4-0-4)(F/S/SU). Integrates previous coursework via the development of a business plan for a publicly traded organization, providing recommendations for strategic decisions and associated implications for the organization. COREQ: BUSMBA500, BUSMBA501, BUSMBA505, BUSMBA510, BUSMBA515, BUSMBA520, BUSMBA525, BUSMBA545, and BUSMBA550.

EMBA—Executive Master of Business Administration

Courses with the EMBA prefix are available only to students enrolled in the EMBA program, and are offered according to a schedule determined by the start semester of each cohort.

EMBA511 Business Perspectives (V-V-2)(F). Provides an introduction to how managers can assess business opportunities, create competitive advantage, and foster innovation throughout the life cycle of products and organizations. PREREQ: EMBA Program Admission.

EMBA512 Assessing Business Opportunities (V-V-5)(F). Provides an integrated foundation in accounting, economics, operations management, marketing, and strategic planning in the context of assessing business opportunities while operating in a global environment. PREREQ: EMBA511.

EMBA513 Creating Competitive Advantage I (V-V-3)(S). Provides an initial integrated foundation in finance, human resource management,

marketing, operations management, and strategic planning in the context of creating competitive advantage while operating in a global environment. PREREQ: EMBA512.

EMBA514 Creating Competitive Advantage II (V-V-3)(S). Continues the integrated foundation in finance, human resource management, marketing, operations management, and strategic planning in the context of creating competitive advantage while operating in a global environment. PREREQ: EMBA513.

EMBA515 Fostering Innovation (V-V-4)(S). Provides a foundation in methods managers can use to foster innovation within organizations. Emphasis is on the early stages of innovation including brainstorming, idea generation, and rough estimations of viability. PREREQ: EMBA514.

EMBA516 Leadership and Teamwork Skills (V-V-2)(F). Examines personal styles in the workplace with emphasis on group dynamics. Also includes a personalized assessment of each participant's leadership strengths and weaknesses followed by the creation of a customized development plan. (Pass/Fail.) PREREQ: EMBA Program Admission.

EMBA517 Issues in Leadership I (V-V-1)(S). Continues execution of the leadership development goals identified in EMBA516. (Pass/Fail.) PREREQ: EMBA516.

EMBA521 Business in a Global Environment (V-V-5)(F). Builds a foundation in U.S. business law, ethics, corporate governance, and critical thinking. Includes the opportunity to solve business problems with executives from other cultures and learn about their legal and ethical issues. Requires a passport and travel out of the United States for one week. PREREQ: EMBA515 and EMBA517.

EMBA522 Rescuing Distressed Business Units (V-V-2)(F). Builds skill in creating strategies to return distressed business units to effectiveness. Project based with particular emphasis on finance and bankruptcy law. PREREQ: EMBA521

EMBA523 Management of Products and Services (V-V-2)(F). Builds broad skill in product management, new product development, branding, qualitative marketing research, pricing, and portfolio analysis. Case-based with particular emphasis on business strategy and marketing issues. PREREQ: EMBA521.

EMBA524 Partnerships, Acquisitions, and Divestitures (V-V-2)(S). Builds skill in examining growth strategies founded upon business partnerships, acquisitions, and divestitures. Project based with particular emphasis on financial considerations, legal aspects, and issues surrounding the blending of company cultures. PREREQ: EMBA521.

EMBA525 Issues in Leadership II (V-V-1)(S). Continues execution of the leadership development goals identified in EMBA516. (Pass/Fail.) PREREQ: EMBA517.

MBA—Master of Business Administration

MBA501 Accounting for Managers (3-0-3)(F). An in-depth examination of financial statement use in business decision-making. A user's perspective focuses study on interpreting the output of the accounting system rather than on details of statement preparation. Examines various cost-based accounting concepts and practices. Particular emphasis is directed to the challenges involved in using cost data to evaluate past performance and plan future deployment of firm resources. PREREQ: ADM/PROG.

MBA502 Fundamentals of Marketing (3-0-3)(S). Focuses on strategies to generate revenue for the firm. Includes segment analysis, customer choice behavior, branding, marketing tactics, personal selling, and the development of marketing plans. PREREQ: ADM/PROG.

MBA503 Managing Successful Projects (3-0-3)(S). Introduces the front-end issues of project management including team formation, communication strategies, conflict management, project constraints, risk analysis, and tools for project planning. Hands-on experience with the tools of project management including PERT/Critical Path, resource utilization, project monitoring and tracking, and critical chain analysis. PREREQ: ADM/PROG.

MBA505 Strategy for Competitive Advantage (3-0-3)(F). A first exposure to the analyses and processes used to create functional, business-level, and corporate-level strategies. Special consideration of organizational design, diversification, mergers and acquisitions, and measures of strategic performance including use of Balanced Scorecards. PREREQ: ADM/PROG.

MBA506 Discipline Integration: Live Cases (3-0-3)(F). Integrates current course topics via application to operating businesses. PREREQ: ADM/PROG.

MBA507 Statistical Thinking and Business Analytics (3-0-3)(F). Introduces descriptive business analytics techniques for transforming data into information decision-makers can use including visual techniques and numerical measures tools for presenting statistical data, using probability to measure uncertainty, sampling techniques, statistical inference, and predictive business analytics tools. PREREQ: ADM/PROG.

MBA508 Corporate Financial Management (3-0-3)(F). A framework to analyze investment opportunities and identify appropriate financing strategies. Emphasizes the key techniques of corporate financial decision-making, including risk and return, capital budgeting, discounted cash flow valuation, capital structure, and payout policy PREREQ: ADM/PROG.

MBA509 Data Management and Analytics (3-0-3)(S). Explores the development, use and management of databases in an organization. Provides an overview of the analytics process from business and data understanding through modeling and evaluation. Introduces fundamental data and text modeling techniques that can be incorporated into the analytics process. PREREQ: ADM/PROG.

MBA510 Operations and Supply Chain Management (3-0-3)(S). Explores the flow of products and services from suppliers, within the firm, and to customers. Topics include forming strategic supplier and customer relationships, developing operations excellence through continuous improvement, lean methodologies, and logistics management. PREREQ: ADM/PROG.

MBA511 Business Law and Social Responsibility (3-0-3)(S). Introduces legal concepts that are important for business decision-making, including agency and business associations, torts, contracts and sales, product liability, and employment law. Addresses current trends in corporate social responsibility and the triple bottom line of social, environmental, and economic responsibility. PREREQ: ADM/PROG.

MBA512 Management and Oral Communication (3-0-3)(F). A hands-on introduction to managerial oral communication including informal exchanges, elevator pitches, meetings, and persuasive formal presentations. Addresses OB concepts such as negotiation, leadership, and team dynamics. PREREQ: ADM/PROG.

MBA514 Innovation Driven Advantage (3-0-3)(F). Introduces Design Thinking, a hands-on, technique-based training in the process of creating new, market-viable products and services. Special focus on disruptive technologies, reconstructing market boundaries, ethnographic research, and needs-based product positioning strategies. Examines the start-up phase of business, whether an entirely new entity or within an existing organization. Emphasis on opportunity recognition, commercialization, and business plan development. PREREQ: ADM/PROG.

MBA522 Leading People and Organizations (3-0-3)(F). Examines best practices for fostering individual, group, and organizational effectiveness. Explores current principles for building and leading teams, considering issues of motivation, conflict resolution, building interpersonal trust, and performance management. Develops personal growth by encouraging self-awareness and leadership skill development. PREREQ: ADM/PROG.

MBA526 Business Economics (3-0-3)(S). A structured approach to thinking through trends, cycles, and fluctuations in market prices and quantities, as well as the economic conduct of consumers, suppliers, producers and competitors. Includes consideration of the classical perfectly competitive market and the implications of restricted competition, imperfect information, and externalities on the practical application to production and marketing decisions. Relates government economic and international trade policies to aggregate economic

activity such as inflation, unemployment, GDP, exchange rates, and trade balances. Draws managerial implications for demand forecasting, anticipating interest rates, and understanding costs. PREREQ: ADM/PROG.

MBA527 Applied Capstone Project Start (3-0-3)(S). Initiates team capstone project for a client organization. Provides hands-on experience in project planning and design PREREQ: ADM/PROG.

MBA528 Applied Capstone Project Finish (3-0-3)(S). Completes execution of capstone project for a client organization. Provides real-world experience. PREREQ: ADM/PROG. COREQ: MBA527.

MBA530 MBA Foundations (1-0-1)(F). Provides self-paced foundation or refresher in basic business topics. Includes introduction to the Professional MBA program, academic policies, resources, goal setting, and career guidance. PREREQ: Admitted to MBA, Professional Program or MBA Professional Program Concurrent with UI JD.

MBA531 Strategic Perspectives (3-0-3)(F). Examines the major forces transforming business that enable creativity and innovation, and that drive industry life cycle and evaluation. A novel business plan is developed using collaborative, structured innovation processes. Defines what constitutes a sustainable competitive strategy. PREREQ: ADM/PROG or PERM/INST.

MBA532 Organizational Issues and Leadership (3-0-3)(F). Geared toward managers and the application of concepts to practical experience. Introduces team formation and group dynamics issues and strategies. Includes leadership, understanding people, ethical decision making and reasoning, negotiation and conflict, and change management. PREREQ: ADM/PROG or PERM/INST.

MBA533 Communication Skills for Managers (1-0-1)(F). A hands-on introduction to managerial communication including persuasive formal presentations, informal exchanges, elevator pitches, and meetings. Emphasis placed on team-oriented communication tactics. PREREQ: ADM/PROG or PERM/INST.

MBA536 Strategic Marketing (4-0-4)(SU). Focuses on design and implementation of marketing activities to execute a firm's strategy in target markets. Special emphasis on evaluating opportunities for new products or services. Exploration of consumer economics topics including pricing, competitive forces, and demand. Includes segment analysis, customer choice behavior, branding, marketing tactics, and the evaluation of market opportunities. PREREQ: Admitted to MBA, Professional Program or MBA Professional Program Concurrent with UI JD.

MBA540 Marketing Strategy (3-0-3)(F). Focuses on revenue-generating opportunities with special emphasis on evaluating opportunities for new products or services. Includes segment analysis, customer choice behavior, branding, marketing tactics, personal selling, and the development of marketing plans. PREREQ: ADM/PROG or PERM/INST.

MBA541 Managerial Accounting (3-0-3)(S). Analyzes the nature of costs and how costs can be used to manage and control the activities of firms. Particular emphasis is placed on the uses of accounting numbers to motivate employees and managers. PREREQ: ADM/PROG or PERM/INST.

MBA543 Managing Corporate Finance (3-0-3)(S). Examines the three major decisions in Corporate Finance affecting value of the firm: Investment, Financing and Cash Distribution. Includes the methods used to measure corporate value and evaluate financial performance. Issues in each of the three decision areas are examined within the context of their impact on the valuation model and financial performance metrics. PREREQ: ADM/PROG.

MBA544 Global Economics: Policy and Trade (3-0-3)(S). Reviews how economies work, the differences between economic systems, factors that influence international trade, exchange rates, and government polices related to trade. Includes a survey on the economies of the world, current topics in global economics, data sources for international economic trends, and an introduction to major international trade agencies/associations. PREREQ: ADM/PROG or PERM/INST.

MBA546 Strategic Management (3-0-3)(S). Analysis, formulation, and implementation of business and corporate strategies. Integrates prior functional area coursework. PREREQ: ADM/PROG, MBA531.

MBA548 Opportunity Assessment (1-0-1)(S). Small groups develop a problem statement, value proposition, and initial pre-market estimate of revenue potential for a new commercialization opportunity. PREREQ: ADM/PROG, MBA532.

MBA549 Successful Project Management (3-0-3)(SU). Introduces and provides experience in the front-end issues of project management such as team formation, communication strategies, conflict management, project constraints, risk analysis, or tools for project planning. Also explores use of the tools of project management including PERT/Critical Path, resource utilization, project monitoring and tracking, and critical chain analysis. PREREQ: ADM/PROG or PERM/INST.

MBA552 Strategic Human Resources (1-0-1)(S). Guides conversations as students explore the various ways that managers can strategically partner with HR for successful human capital initiatives. Emphasis placed on strategic workforce recruitment, hiring, and retention. Topics include compensation and benefits administration, performance evaluation, and training. PREREQ: Admitted to MBA, Professional Program or MBA Professional Program Concurrent with UI JD.

MBA556 Feasibility and Planning I (1-0-1)(F). Teams develop a revenue stream plan for their chosen commercialization opportunity. Includes customer segmentation, pricing, and channel issues. PREREQ: ADM/PROG, MBA548.

MBA557 Managing Human Resources (3-0-3)(S). An applied approach to managing people in organizations. Includes legal constraints, strategic HR planning, recruiting and selecting talent, managing employee performance and rewards, and discipline and organizational exit. PREREQ: ADM/PROG or PERM/INST.

MBA558 Business Law and Ethics (3-0-3)(F). Introduces future managers to the major legal issues involved in the business environment. Covers legal reasoning and the legal system, agency and business associations, torts, contracts, intellectual property, employment law, sales, and product liability. The course will also focus on ethics in business issues and provide a methodology for evaluating and addressing ethical dilemmas in the workplace. PREREQ: Admitted to MBA, Professional Program.

MBA559 Issues in Supply Chain Management (3-0-3)(S). Introduces product and service movement within the firm and between the firm and its partners up and down the supply chain. Focus on logistics management, supplier relationships, and creating operational excellence within the firm. PREREQ: ADM/PROG or PERM/INST.

MBA560 Feasibility and Planning II (1-0-1)(S). Teams develop a cost structure plan for their chosen commercialization opportunity. Includes staffing, production planning, and supply chain issues. PREREQ: ADM/PROG, MBA556.

MBA562 Business Modeling (3-0-3)(SU). Advanced development and interpretation of optimization models using spreadsheets and computer simulation tools. Applications integrate finance, operations, and supply chain issues. PREREQ: ADM/PROG, MBA543, MBA559 or PERM/INST.

MBA563 Information Technology Management (1-0-1)(F). Guides conversations as students explore the various ways that Information Technology (IT) contributes to an organization's competitive advantage. Discover how technology extends to organizational planning and goals, beyond infrastructure and cost savings. Weekly topics include IT governance, IT communication, evaluating IT investment, change management, cybersecurity, risk management, and incident response. PREREQ: Admitted to MBA, Professional Program or MBA Professional Program Concurrent with UI JD.

MBA565 New Value Creation (4-0-4)(SU). Focuses on customer-centric value creation and the implementation of marketing concepts in growth-oriented companies. Discussions and assignments will provide real world examples of how entrepreneurs (and intrapreneurs) are creating new markets

and disrupting others. Students will understand the patterns of value creation, leverage the experience and skills of their team, avoid wasting time with ideas that won't work, and design, test, and deliver products and services customers want. PREREQ: Admitted to MBA, Professional Program or MBA Professional Program Concurrent with UI JD.

MBA567 Business Plan Development (4-0-4)(F). Teams develop full business plans for their chosen IP commercialization project. PREREQ: ADM/PROG.

MBA569 Information Technology and Process Management (3-0-3)(S). Explores state of the art approaches to capturing, storing, retrieving, and representing enterprise data. Introduction to management of the IT function. Introduction to process management approaches for enhancing efficiency, insuring compliance, and managing to ISO and certification standards. PREREQ: ADM/PROG or PERM/INST.

MBA570 Business Plan Capstone (1-0-1)(S). Teams present their IP commercialization projects to gain seed funding. PREREQ: ADM/PROG and MBA567.

MBA571 Capstone Integration (4-0-4)(S). Culminating project in which students develop or introduce a new product or service to an existing organization. Students complete an individual intrapreneurship project which incorporates content covered in prior courses and develops a business case with both strategic and tactical elements to bring new opportunities or efficiencies to the company. Special focus on change management for large-scale projects, including stakeholder communication. Includes close mentoring support from faculty and collaboration with classmates to enhance cross-learning. PREREQ: MBA531, MBA532, MBA541, MBA543, MBA546, and admitted to MBA, Professional Program or MBA Professional Program Concurrent with UI JD.

Department of Chemistry and Biochemistry

College of Arts and Sciences

Chair: Owen McDougal
Science Building, Room 153-154
(208) 426-3964 (phone)
(208) 426-1311 or (208) 426-3027 (fax)
chemistry@boisestate.edu (email)
boisestate.edu/chemistry (website)

Graduate Faculty: Ausman, Brown, Callahan, Charlier, Cornell, Dumais, Lee, LeMaster, McDougal, Nagarajan, Novak, Oxford, Russell, Schimpf, Shadle, D. Warner, L. Warner

Graduate Degrees Offered

- Master of Science in Chemistry

Interdisciplinary Participation

- Doctor of Philosophy in Biomolecular Sciences
- Master of Science in Biomolecular Sciences
- Master of Science in Hydrologic Sciences

MASTER OF SCIENCE IN CHEMISTRY

Program Coordinator: Lisa Warner
Science Building, Room 154D
(208) 426-1031 (phone)
chemgrad@boisestate.edu (email)
boisestate.edu/chemistry/graduate (website)

General Information

The Master of Science in Chemistry program provides students with advanced training in modern chemical research methods.

The intended audience is students needing further education and research experience prior to seeking a PhD in Chemistry (or another physical science) or for advancement in their current career.

Program Admission Requirements

Complete all of the following
- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 15 (fall priority), August 1 (fall final), September 15 (spring priority), December 15 (spring final)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
  - An application letter (no more than two pages) describing your background, academic interests, career goals, and how our program will help you achieve these goals. Indicate which faculty members you are most interested in conducting research with. For a current list of faculty accepting graduate students, visit boisestate.edu/chemistry/graduate/graduate-research-opportunities/ .
- Submit Current Resume or Curriculum Vitae (CV)
  - A resume listing your educational training, GPA, awards, research experience, publications, poster presentations, grants, etc.
- Submit Foundational Coursework for Graduate Study
  - Demonstrate completion of Calculus (1 year), Physics (1 year), Organic Chemistry (1 year), Physical Chemistry (1 year), and Analytical Chemistry (1 semester)
- Submit Letters of Recommendation
  - Two letters of recommendation from academic faculty and/or recent employers.

- Submit Graduate Assistantship Application
  - Deadlines: January 31 (fall), September 15 (spring)
  - Automatic consideration is given with your application to the program.

Degree Requirements

Master of Science in Chemistry

Graduate Major Requirements
20 Total Credits
  Complete all of the following
    Take the following:
      CHEM500 - Research Methods in Chemistry & Biochemistry (1)
    Take at least 9 credits from the following:
    One course each from three different subdisciplines of Chemistry (CHEM580-589, CHEM597 or any dual-listed course cannot be used for the above requirement.)
    Take at least 4 credits from the following:
      CHEM598 - Seminar (1 - 4)
    Electives Course
    Take at least 3 credits from the following:
    Any 500 or 600 level Chemistry or Biochemistry course
    Take at least 3 credits from the following:
    Any 500 or 600 level Science, Math or Engineering electives approved by the supervisory committee

Graduate Culminating Activity and Other Requirements
10 Total Credits
  Complete all of the following
    Take at least 1 credits from the following:
      CHEM688 - Thesis Proposal (1 - 6)
    Take at least 9 credits from the following:
      CHEM593 - Thesis (1 - 12)

Grand Total Credits: 30

Course Offerings

BIOCHEM—Biochemistry

BIOCHEM510 Advanced Protein Chemistry (3-0-3)(S)(Alternate years). An in-depth study of proteins that focuses on amino acid chemistry, protein structure, protein folding, and protein function. Discussion of methods of protein characterization and the use of bioinformatics in understanding the chemistry/function of proteins. Given the recent developments in the proteomics, several of the high-throughput approaches to identifying proteins assessing function will also be investigated. Students will make extensive use of primary literature. PREREQ: CHEM322 and CHEM432 or PERM/INST.

BIOCHEM511 Nucleic Acid Metabolism (3-0-3)(S)(Alternate years). An in-depth study of the metabolism of both DNA and RNA at the molecular/ mechanistic level. This course will cover the mechanisms DNA replication, transcription, translation, transposition and repair, as well as those for RNA splicing, catalysis, silencing and interference RNA. Bioinformatics approaches and modern techniques for studying DNA/RNA and their interactions with proteins will be discussed. Students will make extensive use of primary literature. PREREQ: CHEM432 or PERM/INST.

BIOCHEM512 Intermediary Metabolism (3-0-3)(S)(Alternate years). An investigation into several anabolic, catabolic, and signaling processes in the cell. Special attention will be given to molecular mechanisms and regulation. Students will make extensive use of primary literature. PREREQ: CHEM432 or PERM/INST.

BIOCHEM513 Advanced Enzymology (3-0-3)(S)(Alternate years). A deeper look into the catalytic and kinetic mechanisms of enzymes. Modern methods for studying enzymes will be included as well as learning strategies for studying steady state and transient enzyme kinetics. Students will make extensive use of primary literature. PREREQ: CHEM322 and CHEM433 or PERM/INST.

BIOCHEM514 Drug Discovery and Design (3-0-3)(On Demand). An overview of the process of drug discovery and development from the identification of novel drug targets to clinical trials. In-depth investigations of the drug discovery and design process may include target identification, lead optimization, classification and kinetics, fragment-based drug discovery, structure-based drug discovery. PREREQ: CHEM301-CHEM307 or CHEM350-CHEM431.

CHEM—Chemistry

CHEM500 Research Methods in Chemistry and Biochemistry (1-0-1)(F). An introduction to project planning, literature assessment, report writing, and data management. PREREQ: Admission to chemistry graduate program.

CHEM501 Advanced Inorganic Chemistry (3-0-3)(F). Atomic structure, molecular structure using valence bond and molecular orbital theories, elementary group theory, transition metal coordination chemistry, acids and bases, descriptive transition and nontransition metal chemistry. PREREQ: CHEM322 or PERM/INST.

CHEM507 Physical Organic Chemistry (3-0-3)(S)(Alternate years). Mechanisms of organic chemical reactions, stereochemistry, and conformational analysis. The important types of organic reactions are discussed. Basic principles are emphasized; relatively little attention is paid to the scope and synthetic applications of the reactions. PREREQ: CHEM309 and CHEM322 or PERM/INST.

CHEM508 Synthetic Organic Chemistry (3-0-3)(F)(Alternate years). The scope and limitations of the more important synthetic reactions are discussed within the framework of multistep organic synthesis. PREREQ: CHEM309 or PERM/INST.

CHEM509 Introduction to Polymer Chemistry (3-0-3)(F)(Alternate years). An introduction to the concepts of polymer synthesis, characterization, structure, properties, and basic fabrication processes. Emphasis is on practical polymer preparation, on the fundamental kinetics and mechanisms of polymerization, and on structure-property relationship. PREREQ: CHEM309 or PERM/INST.

CHEM510 Organic Polymer Synthesis (3-0-3)(S)(Alternate years). A study of the synthesis and reactions of polymers. Emphasis is on practical polymer preparation and on the fundamental kinetics and mechanisms of polymerization reactions. Topics include relationship of synthesis and structure, characterization of polymer structure, step-growth polymerization, chain-growth polymerization via radical, ionic and coordination intermediates, copolymerization. PREREQ: CHEM309 or PERM/INST.

CHEM511 Advanced Analytical Chemistry (3-0-3)(F). Stoichiometry involved in separations and instrumental methods of analysis. The course will be flexible in nature to adapt to the varied background of the students. PREREQ: CHEM322 or PERM/INST.

CHEM521 Quantum Chemistry (3-0-3)(F)(Alternate years). Formal introduction to quantum mechanics, Dirac notation, angular momentum and operator algebra. Emphasis will be placed on electronic structure theory, reaction mechanisms and the use of modern quantum chemistry theoretical packages. PREREQ: CHEM322, or PHYS309 and PHYS432, or PERM/INST.

CHEM522 Spectroscopy (3-0-3)(F)(Alternate years). Concepts and practical usage of modern chemical spectroscopic techniques, including electronic absorption, infrared/Raman, X-Ray/EXAFS, magnetic resonance and magnetic circular dichroism. Emphasis will be placed on the application of these techniques to the structure/function characterization of chemical and biochemical systems. PREREQ: CHEM521 or PERM/INST.

CHEM523 Chemical Kinetics (3-0-3)(F)(Alternate years). A comprehensive study of the role of quantum chemistry and thermodynamics in chemical reactions. Emphasis will be placed on determining reaction coordinates and transition states. Extensive use will be made of modern computational chemical computer programs for calculating potential energy surfaces and transition states. PREREQ: CHEM322, or PHYS309 and PHYS432, or PERM/INST.

CHEM540 Spectrometric Identification (3-0-3)(S). Laboratory course to accompany CHEM 540. PREREQ: CHEM309 and CHEM321.

CHEM541 Spectrometric Identification Laboratory (0-3-1)(S). Identification of compounds using modern spectrometric techniques. COREQ: CHEM540.

CHEM551 Bioinorganic Chemistry (3-0-3)(S)(Alternate years). Exploration of the vital roles that metals play in biochemical systems. Emphasis is on transition metals in biology. Course will focus on structural, regulatory, catalytic, transport and redox functions of bioinorganic systems. PREREQ: CHEM322 or PERM/INST.

CHEM552 Organometallic Chemistry (3-0-3)(S)(Alternate years). An examination of the organometallic chemistry of the main group and transition elements. Topics to include structure and bonding of complexes having pi ligands; transition metal mediated organic synthesis; homogeneous catalysis. PREREQ: CHEM401 or 501 or PERM/INST.

CHEM560 Introduction to Nmr Spectroscopy (1-3-2)(On Demand). This course will instruct students on the theory and practice of one-and two-dimensional NMR spectroscopy. Emphasis will be placed on using the NMR spectrometer to solve a variety of chemical and biological problems. PREREQ: CHEM322, or PHYS309 and PHYS432, or PERM/INST.

CHEM561 Introduction to Molecular Modeling and Computational Chemistry (3-0-3)(On Demand). Overview of modern computational chemistry. Use of computational chemistry tools and their application to problems of chemical and biological interest. PREREQ: CHEM322 or PHYS309 and PHYS432.

Department of Civil Engineering

College of Engineering

Chair: Nick Hudyma
Charles P. Ruch Engineering Building, Room 338
(208) 426-1045 (phone)
boisestate.edu/coen-ce (website)

Graduate Faculty: Chittoori, Farid, Hamilton, Khanal, Lu, Miller, Roche, Sadegh

Graduate Degrees Offered

- Master of Engineering in Civil Engineering
- Master of Science in Civil Engineering

Interdisciplinary Participation

- Doctor of Philosophy in Computing
- Doctor of Philosophy in Geosciences
- Master of Science in Hydrologic Sciences

General Information

The Department of Civil Engineering offers two distinct graduate degree programs. The program leading to the Master of Science in Civil Engineering (MS CE) is a thesis-based program designed to prepare students for research, professional-development, and further study at the doctoral level. The program leading to the Master of Engineering in Civil Engineering (MEngr CE) is a non-thesis program with a focus on professional development.

MASTER OF ENGINEERING IN CIVIL ENGINEERING

Graduate Program Coordinator: Bhaskar Chittoori
Charles P. Ruch Engineering Building, Room 338b
(208) 426-3794 (phone)
bhaskarchittoori@boisestate.edu (email)
boisestate.edu/coen-ce/graduate-students/ (website)

Program Admission Requirements

Complete all of the following
- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 15 (fall priority), May 15 (fall final), September 15 (spring priority), December 1 (spring final)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
  - Field of Study: Civil Engineering or a related field.
  - Applicants with a GPA less than 3.00 may be considered for provisional admission.
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
- Submit Personal Statement
  - A personal statement that describes your overall academic interests and goals, specific scientific interests, summarize previous research experience and give a situation where problem-solving and creativity helped you overcome a challenge. Choose an emphasis area and justifying the selection choice.
- Submit Current Resume or Curriculum Vitae (CV)
  - A resume that includes your education, work experience, extracurricular activities, software, and other skills.
- Submit Letters of Recommendation
  - Three letters of recommendation from professors addressing your potential for success in a graduate program, strengths and weaknesses, and the benefits you may receive from graduate study.

- Submit Graduate Assistantship Application
  - Deadlines: April 1 (fall), November 1 (spring)
  - Automatic consideration is given with your application to the program.

Degree Requirements

Master of Engineering in Civil Engineering

Graduate Major Requirements
30 Total Credits

Complete all of the following
  Take at least 12 credits from the following:
    Core Graduate Courses—courses vary by focus area*.
  Complete 1 of the following
    Take at least 18 credits from the following:
      Elective Civil Engineering Courses—courses vary by focus area*.
    Complete all of the following
      Take at least 6 credits from the following:
        Elective Civil Engineering Courses—courses vary by focus area*.
      Take at least 12 credits from the following:
        Other Elective Courses—courses vary by focus area*.
  *Focus Areas: Environmental Engineering, Geotechnical/Geoenvironmental Engineering, Sustainable Infrastructure Materials, Transportation Geotechnics, Transportation Systems, or Water Resource Engineering. All courses to be selected and approved by the advisor or supervisory committee.

Graduate Culminating Activity and Other Requirements
1 Total Credits

  Take at least 1 credits from the following:
    CE690 - Master's Comprehensive Examination (1 - 6)

Grand Total Credits: 31

MASTER OF SCIENCE IN CIVIL ENGINEERING

Graduate Program Coordinator: Bhaskar Chittoori
Charles P. Ruch Engineering Building, Room 338b
(208) 426-3794 (phone)
bhaskarchittoori@boisestate.edu (email)
boisestate.edu/coen-ce/graduate-students/ (website)

Program Admission Requirements

Complete all of the following
- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 15 (fall priority), May 15 (fall final), September 15 (spring priority), December 1 (spring final)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
  - Field of Study: Civil Engineering or a related field.
  - Applicants with a GPA less than 3.00 may be considered for provisional admission.
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
- Submit Personal Statement
  - A personal statement that describes your overall academic interests and goals, specific scientific interests, summarize previous research experience and give a situation where problem-solving and creativity helped you overcome a challenge. Choose an emphasis area and justifying the selection choice.
- Submit Current Resume or Curriculum Vitae (CV)
  - A resume that includes your education, work experience, extracurricular activities, software, and other skills.

- Submit Letters of Recommendation
  - Three letters of recommendation from from professors addressing the your potential for success in a graduate program, strengths and weaknesses, and the benefits you may receive from graduate study.
- Submit Graduate Assistantship Application
  - Deadlines: April 1 (fall), November 1 (spring)
  - Automatic consideration is given with your application to the program.

Degree Requirements
Master of Science in Civil Engineering
Graduate Major Requirements
24 Total Credits

Complete all of the following
Take at least 12 credits from the following:
Core Graduate Courses—courses vary by focus area*.

Complete all of the following
Take between 3 and 12 credits from the following types of courses:
Elective Civil Engineering Courses—courses vary by focus area*.
Take between 9 and 0 credits from the following types of courses:
Other Elective Courses—courses vary by focus area*.

*Focus Areas: Environmental Engineering, Geotechnical/ Geoenvironmental Engineering, Sustainable Infrastructure Materials, Transportation Geotechnics, Transportation Systems, or Water Resource Engineering. All courses to be selected with student input and approved by the advisor or supervisory committee.

Graduate Culminating Activity and Other Requirements
6 Total Credits

Take at least 6 credits from the following:
CE593 - Thesis (1 - 9)

Grand Total Credits: 30

Special Rule on Transfer Credit

The normal transfer credit policies of the Graduate College hold except that up to 15 transfer credits earned in combination at the University of Idaho and Idaho State University may be applied to either degree program (MS or MEngr) with the approval of the supervisory committee.

Course Offerings

CE—Civil Engineering

CE502 Computational Techniques (3-0-3)(F/S). Introduction of numerical methods to solve Civil Engineering problems with emphasis on Geotechnical Engineering problems. In-depth treatment of finite difference and integrated finite difference. Brief introduction to finite element methods and programming using MATLAB. PREREQ: CE360, MATH333, or PERM/INST.

CE510 Engineering Hydrology (3-0-3)(F). Integrated approach to hydrology, using the hydrologic/system or control volume as a mechanism for analyzing hydrologic problems and hydrologic processes - water cycle, atmospheric water, surface and subsurface water, hydrologic analysis and design, design storms and peak flow and design flow estimation; hydrologic design methods; snowmelt runoff and evapotranspiration. PREREQ: CE330, MATH275 or PERM/INST.

CE512 (GEOS512) Hydrologic Systems: Groundwater (3-0-3)(S). Analysis of the hydrologic cycle focusing on subsurface water and its relationships to surface water. Physics of flow through porous media, physical properties of aquifer systems, methods to determine aquifer characteristics, groundwater modeling and relationships between groundwater and streamflow. May be taken for GEOS or CE credit, but not both. PREREQ: PERM/INST.

CE520 Environmental Process Chemistry (3-0-3)(S)(Even years). Chemical principles of water and wastewater treatment processes and reactions in receiving waters. Topics include chemical thermodynamics, reaction kinetics, acid-base equilibria, mineral precipitation/dissolution, and electrochemistry. PREREQ: CE320 or PERM/INST.

CE522 Hazardous Waste Engineering (3-0-3)(F/S). Physical, chemical, and biological treatment of hazardous wastes. Consideration of legal and political issues. PREREQ: CHEM112.

CE523 Air Pollution Control Engineering (3-0-3)(F/S). Surveys the sources, fates, effects and control of air pollutants. Covers industrial, agricultural, and municipal contributions to acid rain, smog, and toxic air pollutants in fish and humans. Students demonstrate skill in the use of mathematical and computer predictions for the fate of air pollutants in the design of air pollution control systems and communicate engineering concepts in oral presentations and in writing. PREREQ: CE320 or PERM/INST.

CE524 Water Treatment Design (3-0-3)(F/S). Theoretical and practical engineering aspects of advanced chemical and physical phenomena and processes applicable to the design for removal of impurities from ground and surface water sources, including experimental problem analysis, conveyance systems and optimal treatment solution reporting. PREREQ: PERM/INST.

CE525 Wastewater Treatment Design (3-0-3)(F/S). Theoretical and practical engineering aspects of advanced chemical, physical and biological phenomena and processes applicable to the design for removal of impurities from wastewater and industrial wastes and to their transformation in receiving waters, including experimental problem analysis, collection system conveyance and optimal treatment solution reporting. PREREQ: PERM/INST.

CE526 (GEOS526) Aqueous Geochemistry (3-0-3)(F/S). Basic tools and topics of aqueous geochemistry with an emphasis on low temperature processes in natural waters. Essentials of thermodynamics, kinetics, aqueous speciation, mineral-water interaction, and elemental cycling in the context of surficial earth processes and environmental challenges. May be taken for CE or GEOS credit, but not both. PREREQ: PERM/INST.

CE536 Hydraulics (3-0-3)(F)(Even years). Applied principles of fluid mechanics, pipe flow, open channel flow, flow nets, and hydraulic machinery. Design. PREREQ: CE330.

CE537 GIS in Water Resources (3-0-3)(F/S)(Odd years). Applications of Geographic Information Systems (GIS) in pre- and post-processing of model inputs and outputs, digital elevation models, flow direction and flow accumulation, spatial analysis and interpretation, Model Builder, data model, tools, functionality and examples of real-world water and natural resource problems and integration of external models (e.g., SWAT). PREREQ: CE416, GEOG360, or PERM/INST.

CE538 Water Resources Engineering (2-3-3)(F/S). Flood frequency analysis, reservoir characteristics and design, open channel flow applications, water project design, model studies, pump and turbine hydraulics and other water resources engineering topics. PREREQ: CE330.

CE540 Pavement Analysis and Design (3-0-3)(F/S). Pavement design processes, materials selection and characterization methods, analysis and design of flexible pavements, analysis and design of rigid concrete pavements, pavement condition survey and ratings, distress evaluation, and maintenance and rehabilitation techniques. PREREQ: CE340 or PERM/INST.

CE542 Microstructure, Properties, and Performance of Concrete (3-0-3)(F/S). Basic properties of cements and mineral aggregates and their interactions in concrete from a microstructural perspective. Special emphasis on: properties of hydrated products and hardened concrete; modifications through admixtures; production, handling, and placement problems; specifications; quality control and acceptance testing; lightweight, heavyweight, and other special concrete mixtures. A supplemental understanding to the practical behaviors of concrete will be examined through the concrete's microstructural characteristics. Integration of concrete's sustainability. Project topics will include design and testing of advanced concrete concepts for durable, sustainable, and resilient infrastructure. Design projects will include lifecycle analysis of concrete such as

materials selection, mix design, construction, maintenance, and final disposal. PREREQ: PERM/INST.

CE550 Reinforced Concrete Design (2-3-3)(F/S). Design of reinforced concrete structures, such as beams, columns, one way slabs, and simple footings, in accordance with latest ACI Code for Reinforced Concrete. PREREQ: ME352.

CE551 Structural Dynamics (3-0-3)(F/S). Examines free vibration and response to harmonic and general dynamic loading of the single degree of freedom system, Fourier analysis and response in the frequency domain, response spectra, framed structures modeled as discrete multi-degree-of-freedom systems, dynamic analysis of nonlinear systems. Response of structural systems to earthquake excitation. PREREQ: ME472.

CE552 Structural Steel Design (2-3-3)(F/S). Design of steel structures, such as beams and columns, in accordance with latest AISC Manual of Steel Construction, LRFD edition. PREREQ: CE352.

CE554 Timber Design (3-0-3)(F/S). Design of wood, and wood composite, structures and systems based on mechanical and structural characteristics and specifications. PREREQ: CE352.

CE555 Structures II (3-0-3)(F/S). Analysis and design of structural systems. Stiffness method including the development of element properties, coordinate transformations, and global analysis theory. Three-dimensional building systems and an introduction to the Finite Element Method. PREREQ: CE352.

CE556 Masonry Design (3-0-3)(F/S). Design of masonry structures and systems based on mechanical and structural characteristics and specifications. PREREQ: CE352.

CE560 Geotechnical Engineering Design I (3-0-3)(F/S). Subsoil exploration and site investigation methodologies. Soil mechanics in design of earth retaining structures, shallow and deep foundations. PREREQ: CE360 and CE361.

CE562 Geotechnical Engineering Design II (3-0-3)(F/S). Application of soil mechanics in the design of embankments, slopes, and excavations. PREREQ: CE360 and CE361.

CE564 Seepage, Drainage, Flow Nets and Embankments (3-0-3)(F/S). Emphasis on the applied aspects of groundwater flow and seepage through porous media from a theoretical point of view; examination and development of governing field equations; flow net construction, modeling techniques, filter design, construction dewatering; simplified design of small earthfill dams and slope stability of embankments. PREREQ: CE360, CE361.

CE566 Ground Improvement Design (3-0-3)(F/S). Introduction to ground improvement techniques for various problematic soils necessitated by the growing demand for construction in challenging geologies. Emphasis on understanding methods available to strengthen existing ground before recommending costly foundation designs. Exploration of pros and cons of multiple ground improvement techniques, under four, broad categories: mechanical, hydraulic, chemical/thermal, and physical. Ability to design and implement the most appropriate ground improvement technique for a given geological condition. PREREQ: PERM/INST.

CE567 Advanced Soil Mechanics (3-0-3)(S). Develop an advanced understanding of soil behavior. Topics covered: soil mineralogy, soil composition, and engineering properties. Discussions on shear strength, consolidation, elements of constitutive modeling, and critical state soil mechanics. PREREQ: CE360.

CE570 Highway Systems Design (3-0-3)(F/S). Design of urban and rural highway systems. Use of computer-aided-design software is required. PREREQ: CE360, CE370, or PERM/INST.

CE572 Transportation Planning (3-0-3)(F/S). Theory and practice of transportation planning at the metropolitan as well as regional levels. Use of software and completion of a project is required. Recent advances in transportation planning will be introduced. PREREQ: CE370 or PERM/INST.

CE575 Traffic Systems Design (3-0-3)(F/S). Design of operations, control, and management of traffic systems. Use of software and completion of a project is required. PREREQ: CE370 or PERM/INST.

CE623 (GEOPH623)(GEOS623) Advanced Hydrogeology (3-0-3)(F). Treatment of groundwater occurrence and flow, theory fundamental mechanisms, hydrologic parameters, flow regimes and systems, geologic controls. May be taken for credit in GEOS, GEOPH, or CE, but not for more than one department. PREREQ: MATH275, MATH333, and GEOS412 or GEOS512 or CE412 or CE512 or PERM/INST.

CE624 (GEOPH624)(GEOS624) Applied Hydrogeology (3-0-3)(S). Quantitative determination of hydrologic parameter values and groundwater flow conditions. Conceptual models and geologic context, boundary condition, analytical and numerical solution techniques, measurement methods, applications to engineering and environmental problems. May be taken for credit in CE, GEOPH, or GEOS, but not for more than one department. PREREQ: CE623 or GEOPH623 or GEOS623 or PERM/INST.

CE630 (GEOS630) Vadose Zone Hydrology (3-0-3)(F)(Even years). Laboratory and field methods for characterizing physical and hydraulic properties of soils, solution of variably saturated flow problems using analytical and numerical techniques. Computer simulations of flow and transport in variably saturated soils. May be taken for CE or GEOS credit, but not for both. PREREQ: CE412, GEOS412, CE512, or GEOS512 or PERM/INST.

CE633 (GEOS633) Contaminant Hydrogeology (3-0-3)(F)(Odd years). The fate and transport of dissolved solutes and non-aqueous phase liquids in groundwater systems. Students will analyze field data and develop conceptual models for contaminated sites. The role of engineers and hydrologists in environmental litigation will be addressed through case studies. May be taken for CE or GEOS credit, but not for both. PREREQ: CE412 or CE512 or GEOS412 or GEOS512, or PERM/INST.

Department of Computer Science

College of Engineering

Chair: Amit Jain
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Graduate Faculty: Andersen, Buffenbarger, Cutchin, Dagher, Dit, Eisty, Ekstrand, Fails, Henderson, Hou, Jain, Kennington, Long, Mehrpouyan, Olschanowsky, Pera, Serra, Sherman, Spezzano, Xiao, Yeh

Graduate Degrees Offered

- Master of Science in Computer Science
- Graduate Certificate in Computer Science Teacher Endorsement
- Graduate Certificate in Machine Learning

Interdisciplinary Participation

- Doctor of Philosophy in Computing
- Graduate Certificate in Computer Science Teacher Endorsement

MASTER OF SCIENCE IN COMPUTER SCIENCE

Graduate Program Coordinator: Jerry Fails
City Center Plaza, Room 257
(208) 426-5783 (phone)
jerryfails@boisestate.edu (email)
boisestate.edu/coen-cs/academics/masters-program (website)

General Information

The Master of Science in Computer Science program has been designed for people who have a good background in computer science at the undergraduate level—that is, either:

- a baccalaureate degree in computer science, or
- a degree in a related field with significant coursework in computer science.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 15 (fall priority), May 1 (fall final), September 15 (spring priority), October 15 (spring final)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Personal Statement
  - A personal statement addressing: 1) Why you want to pursue an MS in Computer Science at Boise State University? 2) (optional) Feel free to share your personal path to graduate school. Boise State University has a commitment to enabling access to quality education to an inclusive student body including (but not limited to) first-generation students. 3) Describe your strengths and how your experience has prepared you to pursue an MS in Computer Science at Boise State. 4) Describe your preparedness with computer science material and courses, including core computer science courses: CS1, CS2, and Data Structures, and appropriate Math (e.g., Calculus and Discrete Math) For example: Describe what you have done in these areas, and reference evidence in your transcript or resume that illustrates this preparation. 5) Explain what you anticipate contributing to the CS master's program (e.g. research, tutoring, community). 6) (optional) Share a computer science-related problem that you worked on and how you approached it. Describe and address issues and weaknesses in your

application materials. 7) (optional) Research focus: Who are you interested in working with or what area are you interested in working in? What is your preparation for this research focus? 8) (optional) Have you interviewed with a potential advisor? (not required)

- Submit Current Resume or Curriculum Vitae (CV)
  - A resume that includes your educational experience, work experience, technical skills, publications, and other relevant items.
- Submit Foundational Coursework for Graduate Study
  - Demonstrate experience in CS1, CS2, Data Structures and Algorithms, and appropriate Math (e.g., Calculus and Discrete Math)
- Submit a Portfolio. This is not required, but encouraged if you have items to share. Links to descriptions/pictures of projects, online applications, a GitHub repository, or research papers are appropriate.
- Submit Letters of Recommendation
  - Two or more Letters of Recommendation. At least one of the letters should come from someone that can speak to your academic abilities. In cases where technical abilities are not clear from a transcript, you should have a letter speaking to your particular technical programming abilities. Beyond the above recommendations, work (management and/or peers) are acceptable. Please inform the writers that we will look for the following information: 1) What is your perception of the candidate's ability to work successfully and effectively with a variety of people (faculty, staff, peers, administrators)? Share examples.2) Collaboration and cooperation are critical to being effective in this position. How would you rate the candidate's ability to be a team player? 3) Please describe your perception of the candidate's work ethic. 4) In what way(s) was your organization better off by having employed the candidate? 5) If given the opportunity to hire the candidate, would you? Why, or why not? 6) Share any additional relevant information not previously addressed.
- Submit Graduate Assistantship Application
  - Deadlines: January 15 (fall), September 15 (spring)
  - Automatic consideration is given with your application to the program.

Degree Requirements

Master of Science in Computer Science

Graduate Major Requirements
30 Total Credits

Complete all of the following
Take at least 30 credits from the following:
Graduate Courses related to Computer Science (21 - 27)
Graduate courses in computer science or a related field; all courses to be selected with student input and approved by the supervisory committee.

Complete 1 of the following
Culminating Activity
Project (3 - 6)
Take any of the following:
CS591 - Project (1 - 9)
Thesis (6 - 9)
Take any of the following:
CS593 - Thesis (1 - 9)
Capstone Course (3)
Take any of the following:
CS695 - Capstone Course (3)

Grand Total Credits: 30

GRADUATE CERTIFICATE IN COMPUTER SCIENCE TEACHER ENDORSEMENT

Graduate Program Coordinator: Amit Jain
City Center Plaza, Room 364
(208) 426-5766 (phone)
ajain@boisestate.edu (email)

General Information

Students who complete this program and who hold an Idaho State Teaching Certificate will be eligible to apply for the Idaho State Computer Science Teacher Endorsement. This graduate certificate is intended for students who want to develop professional skills and knowledge to successfully teach computer science in high school. The program will enable students to develop expertise to teach computer science courses in high school, including "Exploring Computer Science" and "AP Computer Science Principles."

Program Admission Requirements

Complete all of the following
- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: March 1 (summer priority), April 15 (summer final)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
- Submit Current Resume or Curriculum Vitae (CV)
  - A resume or curriculum vitae that includes your teaching experience in K12.
- Interview — All applicants are invited for an interview.
- Submit Letters of Recommendation
  - One letter of recommendation from a principal or school/district administrator.

Certificate Requirements

Graduate Certificate in
Computer Science Teacher Endorsement

Graduate Major Requirements
20 Total Credits

Complete all of the following
  Take the following:
    CS501 - Computer Science Principles (3)
    CS503 - Teaching and Learning Computer Science I (5)
    CS505 - Teaching and Learning Computer Science II (4)
    CS518 - Inclusive Strategies for Teaching Computer Science to Women and Minorities (2)
  Take at least 6 credits from the following:
    CS321 - Data Structures (3)
    CS516 - Introduction to Web Development (3)
    CS517 - Mobile Application Development (3)

Grand Total Credits: 20

GRADUATE CERTIFICATE IN MACHINE LEARNING

Graduate Program Coordinator: Casey Kennington
City Center Plaza, Room 254
(208) 426-5731 (phone)
caseykennington@boisestate.edu (email)

General Information

Machine learning is an increasingly important skill set for students, particularly at the graduate level. This certificate is geared towards students gaining practical experience as well as understanding of the math, data analysis, machine learning pipelines, standard libraries, and other machine learning-related concepts to prepare them for work in academia or industry. Students who take any of the courses must adhere to the prerequisite requirements for those courses.

Program Admission Requirements

Complete all of the following
- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: August 1 (fall), December 15 (spring)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
- Submit Personal Statement
- Submit Foundational Coursework for Graduate Study
  - Completed the following:
    - CS533 - Introduction to Data Science (3)

Certificate Requirements

Graduate Certificate in Machine Learning

Graduate Major Requirements
12 Total Credits

Complete all of the following
  Take the following:
    CS534 - Machine Learning (3)
  Take at least 9 credits from the following:
    CS535 - Large-Scale Data Analysis (3)
    CS536 - Natural Language Processing (3)
    CS537 - Introduction to Information Retrieval (3)
    CS538 - Recommender Systems and Online Personalization (3)
    CS539 - Social Media Mining (3)
    CS557 - Artificial Intelligence (3)
    CS633 - Research Methods of Deep Learning (3)

Grand Total Credits: 12

Course Offerings

CS—Computer Science

CS501 Computer Science Principles (3-0-3)(SU). Introduction to the central ideas, practices and impact of computer science and computational thinking. Covers the big ideas in computer science: creativity, abstraction, data and information, algorithms, programming, the Internet, and global impact. Computational thinking practices: connecting computing, creating computational artifacts, abstracting, analyzing problems and artifacts, communicating, and collaborating. In-depth projects using at least one visual and one text-based programming language. Adapting content to high school courses. PREREQ: Admission to the Master of Arts in Education, Curriculum and Instruction or Graduate Certificate in Computer Science Teacher Endorsement program.

CS503 Teaching and Learning Computer Science I (4-3-5)(F). Problem solving and object-oriented programming. Software development process. Data and expressions, conditionals and loops, arrays and lists, and classes and interfaces. Introduction to graphical user interfaces and UML diagrams. Approaches and techniques to teach CS I material in grades 6-12. PREREQ: Admission to the Master of Arts in Education, Curriculum and Instruction or Graduate Certificate in Computer Science Teacher Endorsement program.

CS505 Teaching and Learning Computer Science II (4-0-4)(S). Program correctness, testing and analysis of time and space complexity. Graphical user interfaces. Object-oriented programming and design, including hierarchy and inheritance. Basic data structures: lists, collections, stacks and queues. Basic searching and sorting. Approaches and techniques to teach CS II material in grades 6-12. PREREQ: Admission to the Master of Arts in Education, Curriculum and Instruction or Graduate Certificate in Computer Science Teacher Endorsement program, and CS503.

CS507 Computing Foundations for Computational Science (3-0-3)(F). Introduction to the basic techniques, tools and principles of writing high-quality code In scientific computing. Topics include: overview of relevant compiled and interpreted languages, data structures, algorithms, complexity of algorithms, sorting and searching, writing, testing, and debugging scientific code, profiling and improving performance, portability and scalability. PREREQ: Admitted to PhD in Computing, Computational Science and Engineering Emphasis or PhD in Computing, Cybersecurity Emphasis, or MS in Cybersecurity or PERM/INST.

CS508 Network and System Foundations for Cybersecurity (3-0-3)(S). Introduction to system programming and networking for cybersecurity. Topics include: shell scripting; process management; network models; routing protocols; TCP/IP basics, applications, and security; system and network vulnerabilities and attacks. PREREQ: Admitted to PhD in Computing, Cybersecurity Emphasis or Cybersecurity MS.

CS510 Databases (3-0-3)(S). Foundations of database management systems. Database models: relational, object and other models. Database design: entity relationship modeling, logical relational schema design, physical design, functional dependencies and normalization, and database tuning. Database application development using database interfaces embedded in host languages. PREREQ: CS321 or Admitted to one of the following: Computing PhD, Computer Science MS, or Cybersecurity MS.

CS512 Advanced Topics in Databases (3-0-3)(F/S). Parallel and distributed database system architectures, distributed database design, client/server database systems. Selected topics from new developments in: extended relational databases, multimedia databases, information retrieval systems, object-oriented databases, temporal databases. PREREQ: CS410 or CS510 or regular admission to Doctor of Philosophy in Computing or Master of Science in Computer Science.

CS516 Introduction to Web Development (3-0-3)(F/S). An introduction to the technologies used for client-side and server-side web development. Learn fundamentals behind competing web technologies, best practices for design and usability, and build rich, dynamic, n-tier secure web applications. Tools used are mainly open source such as PHP, Javascript, XML, HTML, CSS, MySQL, and the Apache web server. PREREQ: Admission to the Master of Arts in Education, Curriculum and Instruction or Graduate Certificate in Computer Science Teacher Endorsement program, and CS505.

CS517 Mobile Application Development (3-0-3)(F/S). A project-intensive course on mobile development using either iOS or Android as a platform. Overview of mobile platforms and their characteristics, mobile interface design and best practices using such technologies as GPS, camera, persistence, notifications and others. Platform will be announced before the beginning of each semester. PREREQ: Admission to the Master of Arts in Education, Curriculum and Instruction or Graduate Certificate in Computer Science Teacher Endorsement program, and CS505.

CS518 Inclusive Strategies for Teaching Computer Science to Women and Minorities (2-0-2)(SU). Readings and discussions of methodologies and teaching CS to women and minorities in group settings. (Pass/Fail.) PREREQ: Admission to the Master of Arts in Education, Curriculum and Instruction or Graduate Certificate in Computer Science Teacher Endorsement program.

CS521 Design and Analysis of Algorithms (3-0-3)(F)(Even years). Asymptotic analysis, recurrences, and amortized analysis. Divide-and-conquer, dynamic programming, greedy algorithms, back tracking, and heuristic search. Advanced graph algorithms and network flows. NP-hardness and beyond. Approximation algorithms. PREREQ: Regular admission to Doctor of Philosophy in Computing or Master of Science in Computer Science.

CS523 Cyber-Physical Systems (3-0-3)(S)(Even years). Studies principles, methods, and techniques for safety and security analysis of cyber-physical systems. Topics will include system design, monitoring, real-time scheduling, feedback control, attack and defense mechanisms, verification and validation, and emerging applications of cyber-physical systems. PREREQ: Admitted to one of the following: Computing PhD, Computer Science MS, or Cybersecurity MS.

CS524 Cyber Security of Critical Infrastructures (3-0-3)(S)(Odd years). Explores vulnerabilities, threats, and mitigating controls of critical infrastructures. Examines industry standards, and protocols for protection of critical infrastructures. Discusses environmental, operational, and economic impacts of attacks and supporting mitigating controls. PREREQ: Admitted to PhD in Computing, or MS in Computer Science, or MS in Cybersecurity.

CS525 Computer Networks (3-0-3)(F). Concepts and implementation of TCP/IP Inter-networking: link, network, and transport layer protocols. Application layer services. Wireless networking basics. PREREQ: Admitted to one of the following: Computing PhD, Computer Science MS, or Cybersecurity MS.

CS530 Parallel Computing (3-0-3)(F)(Even years). Models of parallel computation. Fundamental design patterns used in parallel algorithms: embarrassingly parallel, partitioning, divide and conquer, software pipelining, synchronous computations and load balancing. Implementation of parallel programs using MPI, GPUs and Map-Reduce on parallel clusters. PREREQ: CS253 and CS321, or regular admission to Doctor of Philosophy in Computing or Master of Science in Computer Science.

CS531 Advanced Programming Languages (3-0-3)(F)(Odd years). Advanced topics in programming-language theory, design, and implementation. Topics include: data types; binding, scope, and extent; abstraction, extensibility, and control mechanisms; formal semantics and program verification. Emphasis on alternative programming-language paradigms. PREREQ: CS354 or regular admission to Doctor of Philosophy in Computing or Master of Science in Computer Science.

CS533 Introduction to Data Science (3-0-3)(F). Foundational paradigms, techniques, and tools for data science. Formulating tractable research questions, identifying relevant data, designing and carrying out analyses, and presenting results. Best practices for storing and managing data, source code, analysis scripts, and results in data science workflows. Efficient management of and computation over medium-sized data sets. Projects and methods drawn from a variety of applications. PREREQ: CS321 and MATH360/361 or MATH471;

or regular admission to Doctor of Philosophy in Computing or Master of Science in Computer Science.

CS534 Machine Learning (3-0-3)(S). Foundation of machine learning through real data applications. Topics include: supervised techniques such as logistic regression, support vector machine (with kernels), classification tree; unsupervised learning techniques such as clustering algorithms, association rule mining algorithms and outlier detection techniques; advanced machine learning techniques such as boosting algorithms, graphical models and dimensionality reduction methods. Equal emphasis will be given to theory and applications. PREREQ: CS533.

CS535 Large-Scale Data Analysis (3-0-3)(F)(Odd years). Covers algorithms and infrastructures for managing large-scale data, applying efficient algorithms based on MapReduce and other paradigms using current software packages for distributed data analysis. Storage of large-scale data using distributed file systems and distributed databases. Identifying and handling common pitfalls in large-scale data analysis. COREQ: CS533.

CS536 Natural Language Processing (3-0-3)(S)(Odd years). Introduces probability theory, information theory, and linguistics and goes into depth on machine learning techniques and tasks applied to language data. Generative and discriminative classification and their application to language modeling, syntactic parsing, sequence tagging, and lexical semantics. PREREQ: Regular admission into Master of Science in Computer Science or regular admission into Doctor of Philosophy in Computing.

CS537 Introduction to Information Retrieval (3-0-3)(F)(Odd years). Introduction to fundamental concepts and terminology related to Information Retrieval (IR) and design methodologies and issues of IR applications. Covers central IR topics including text processing, search, ranking, indexing, classification/clustering, fundamental IR models (e.g., Boolean, Vector Space, and Probabilistic models), and evaluation strategies. PREREQ: Regular admission into Master of Science in Computer Science or regular admission into Doctor of Philosophy in Computing.

CS538 Recommender Systems and Online Personalization (3-0-3)(S)(Odd years). Introduces foundational principles and current research in recommendation and personalization: User modeling, content-based and collaborative filtering techniques for item recommendation, offline and online evaluation, human factors, and ethical issues in recommendation and personalized computing. PREREQ: CS533.

CS539 Social Media Mining (3-0-3)(F)(Even years). An introduction to fundamentals of social networks and social media analysis and mining. Topics include graph essentials and graph mining, properties of real-world networks, social network generative models, information diffusion, link prediction, community mining, and user behavior analytics. PREREQ: CS321 or regular admission to Doctor of Philosophy in Computing or Master of Science in Computer Science.

CS541 (ECE532) Computer Architecture (3-0-3)(F). Structure of computer systems using processors, memories, and input/output (I/O) devices as building blocks. Computer system instruction set design and implementation, including memory hierarchies, microprogramming, pipelining and multiprocessors. Issues and trade-offs involved in the design of computer system architectures with respect to the design of instruction sets. Cyber-physical security implications of architectural design choices. May be taken for either CS or ECE credit, but not both. PREREQ for CS541: regular admission to Doctor of Philosophy in Computing or Master of Science in Computer Science.

CS542 Quantitative Computer Architecture (3-0-3)(S). Quantitative analysis on computer architectures and software optimizations with static and dynamic simulation techniques. Design implications of memory latency and bandwidth limitations. Performance enhancement via within-processor and between-processor parallelism. In particular, the study of pipelining, instruction-level parallelism, memory hierarchy design, storage systems, and multiprocessors are emphasized. PREREQ: CS441 or regular admission to Doctor of Philosophy in Computing or Master of Science in Computer Science.

CS546 Computer Security (3-0-3)(F). Computer and network security. Public-key and private-key cryptography, authentication, digital signatures, key exchange, key management, certification authorities, and distributed trust models. File system security, mail system security, and web security. Intruders, trojan horses, and viruses. Covert channels. Projects will involve using currently available security tools. PREREQ: Admitted to one of the following: Computing PhD, Computer Science MS, or Cybersecurity MS.

CS547 Digital Forensics (3-0-3)(F)(Odd years). Explores principles and practices of digital forensics, including identification, collection, acquisition, authentication, preservation, examination, analysis, and presentation of digital evidence. Discusses computer forensics, network forensics, cell phone forensics, and other types of digital forensics. PREREQ: Admitted to PhD in Computing, or MS in Computer Science, or MS in Cybersecurity.

CS550 Programming Language Translation (3-0-3)(S)(Odd years). Theory and practice of formal language translation, experience with compiler construction tools under UNIX. Students work on significant projects. PREREQ: CS253 and CS321 and CS354, or regular admission to Doctor of Philosophy in Computing or Master of Science in Computer Science.

CS551 Advanced Topics in Compilation (3-0-3)(F/S). Code generation, analysis, and optimization. Projects will use a simple framework for performing analysis and optimizations at the assembly level. PREREQ: CS450 or CS550 or regular admission to Doctor of Philosophy in Computing or Master of Science in Computer Science.

CS552 Operating Systems (3-0-3)(F,S). Process management, concurrency, interprocess communication, synchronization, scheduling, memory management, file systems and security. Case studies of multiple operating systems. PREREQ: CS253 and CS321, or admitted to PhD in Computing, or MS in Computer Science, or MS in Cybersecurity.

CS554 Advanced Operating Systems (3-0-3)(S)(Even Years). Operating system kernels: process management, memory management, file systems, security and protection. Advanced concurrent programming techniques. Operating system design and construction techniques. Modifying operating system code to observe behavior, add new functionality and run experiments. Support for soft and hard real-time systems, big data, cybersecurity, virtual machines and other domains. PREREQ: CS552, or regular admission to Doctor of Philosophy in Computing or Master of Science in Computer Science.

CS555 Distributed Systems (3-0-3)(S)(Even years). Principles and paradigms of distributed systems. Communication, processes, naming, synchronization, consistency and replication, fault tolerance and security. In-depth coverage of Remote Procedure Call (RPC), Remote Method Invocation (RMI) and socket programming. Survey of major distributed systems. Several software projects. PREREQ: CS253 and CS321 or Admitted to one of the following: Computing PhD, Computer Science MS, or Cybersecurity MS.

CS557 Artificial Intelligence (3-0-3)(F)(Odd years). Survey of artificial intelligence topics, including: informed and uninformed search techniques; propositional and first order logic, game playing, probabilistic reasoning, planning under uncertainty, Bayesian belief networks, learning, reinforcement learning. PREREQ: CS321 and CS354; or regular admission to Doctor of Philosophy in Computing or Master of Science in Computer Science.

CS561 Theory of Computation (3-0-3)(F)(Odd years). Regular languages and finite automata, minimization of automata. Context-free language, normal forms and pushdown automata. Turing machine and its variations. Extensive theoretical treatment of decidability and reducibility. Introduction to computational complexity. PREREQ: Regular admission to Doctor of Philosophy in Computing or Master of Science in Computer Science.

CS564 Visualization Techniques (3-0-3)(F)(Even years). Fundamentals of visualization including data sources, representations, and graphical integrity. Visualization of scalars, vectors, tensors, flows and high-dimensional data. Visual perception and color theory. Applications from medical imaging, social media, sports, and seismology domains. CS464 or MATH275 or MATH301 recommended. PREREQ: CS321 or regular admission to Doctor of Philosophy in Computing or Master of Science in Computer Science.

CS565 (MATH565) Introduction to Numerical Methods (3-0-3)(F). Approximation of functions, solutions of equations in one variable and of linear and nonlinear systems. Polynomial, cubic spline, and trigonometric interpolation. Numerical integration. Programming assignments. Cross-listed with MATH565, may be taken once for credit. PREREQ: MATH365.

CS566 (MATH566) Numerical Linear Algebra (3-0-3)(S). Matrix theory and computations that arise in linear systems, least squares problems, and eigenvalue problems. Algorithms include LU, QR and SVD decompositions, and Krylov methods. Programming assignments. Cross-listed with MATH 566, may be taken once for credit. PREREQ: CS565 or MATH465 or MATH565.

CS567 Applied Cryptography (3-0-3)(F)(Even years). A study of how modern cryptographic protocols and schemes work, and how they are used in real-world applications. Topics include stream ciphers, block ciphers, public-key cryptography, RSA cryptosystem, public-key cryptosystems based on the discrete logarithm problem, digital signatures, and hash functions. PREREQ: Admitted to PhD in Computing, or MS in Computer Science, or MS in Cybersecurity.

CS569 Human Computer Interaction (3-0-3)(S)(Odd years). Science-based theories and models of user interface design and development. Graphical user interfaces for desktop, web, and mobile devices. Usability assessment by quantitative and qualitative methods. Task analysis, usability tests, expert reviews, and continuing assessments of working products by interviews, surveys, and logging. Building of low-fidelity paper mockups, and a high-fidelity prototype using contemporary tools and programming environments. PREREQ: Regular admission to Doctor of Philosophy in Computing or Master of Science in Computer Science.

CS572 Object-Oriented Design Patterns (3-0-3)(S). Reviews object-oriented design principles, explains the goals and form of design patterns, and examines several well-known patterns. PREREQ: CS321 or regular admission to Doctor of Philosophy in Computing or Master of Science in Computer Science.

CS573 Advanced Software Engineering (3-0-3)(F). A study of software development processes and methodologies. Topics include: so ware process models, requirements analysis, design principles, formal specification, validation and verification techniques, and so ware metrics. PREREQ: CS471 or regular admission to Doctor of Philosophy in Computing or Master of Science in Computer Science.

CS574 Advanced Software Quality (3-0-3)(S)(Odd years). Study of verification techniques beyond testing and static analysis, including model checking and symbolic execution. Integrates formal specification of program requirements. Illustrates application of verification techniques to concurrent programs. Software-quality literature review and exploration of advanced software quality topics. PREREQ: Regular admission to Doctor of Philosophy in Computing or Master of Science in Computer Science

CS575 Software Security (3-0-3)(S)(Even years). Principles, techniques, and best practices for developing secure software. Emphasizes the security ramifications for different activities of software development processes. Topics include security policies, security requirements analysis, threat modeling, secure design, secure programming, and security testing and verification. PREREQ: Admitted to one of the following: Computing PhD, Computer Science MS, or Cybersecurity MS.

CS577 Software Maintenance and Evolution (3-0-3)(S)(Odd years). Exploration of leading research in software maintenance and evolution. Topics include concept location, impact analysis, traceability link recovery, bug triaging, developer recommendations, program comprehension, application of information retrieval in software maintenance, application of data mining and machine learning in software engineering, software repositories mining, reproducibility of experiments, and user studies. PREREQ: Regular admission to Doctor of Philosophy in Computing or Master of Science in Computer Science.

CS622 Advanced Network Security (3-0-3)(S)(Odd years). Research methods of Deep Learning including applications and methods for machine learning with deep learning and artificial neural networks. Presentation and implementation of deep learning algorithms and application of existing toolkits to address tasks such as image processing, sequential classification, and general classification. PREREQ: CS525, CS546; Admitted to Computing PhD, Computer Science MS, or Cybersecurity MS.

CS633 Research Methods of Deep Learning (3-0-3)(F)(Odd years). Applications and methods for machine learning with deep learning and artificial neural networks. Implementation of deep learning algorithms and application of existing toolkits to address tasks such as image processing, sequential classification, and general classification. PREREQ: CS536; and MATH301 or regular admission into Master of Science in Computer Science or regular admission into Doctor of Philosophy in Computing.

CS637 Advanced Topics in Information Retrieval (3-0-3)(S)(Even years). An exploration of diverse areas of study related to information retrieval. Topics include query suggestion, question answering, recommendation systems, and (social) web search. Emphasis on exploring state-of-the-art research and future trends via reading assignments and topic presentations. PREREQ: CS537.

CS667 (MATH667) Advances in Applied Cryptography (3-0-3)(S)(Even Years). Secure two-party and multiparty computation, proof by simulation, cryptographic commitments, sigma protocols, zero-knowledge proofs, advanced authenticated key exchange protocols, identification protocols and their security. PREREQ: CS567 or MATH508 or MATH509, and regular admission to Doctor of Philosophy in Computing or Master of Science in Computer Science or Master of Science in Mathematics.

CS695 Capstone Course (1-2-3)(S). Capstone course: project scoping, proposal writing, defending proposal, revising, and presenting a written report and oral presentation describing the project. (Pass/Fail.) PREREQ: PERM/INST.

Computing

College of Arts and Sciences | College of Engineering

Graduate Program Co-Directors: Tim Andersen and Jodi Mead
Program Administrator: Keela Cooper
City Center Plaza, Room 364
(208) 426-5767 (phone)
computingphd@boisestate.edu (email)
boisestate.edu/computing (website)

Graduate Degrees Offered

- Doctor of Philosophy in Computing
  - Computational Mathematics Science and Engineering Emphasis
  - Computer Science Emphasis
  - Cybersecurity Emphasis
  - Data Science Emphasis
- Graduate Certificate in Computational Sciences
- Graduate Certificate in Cybersecurity
- Graduate Certificate in Data Science

Participating Departments

- Biological Sciences
- Chemistry and Biochemistry
- Civil Engineering
- Computer Science
- Electrical and Computer Engineering
- Geosciences
- Materials Science and Engineering
- Mathematics
- Mechanical and Biomedical Engineering
- Physics

DOCTOR OF PHILOSOPHY IN COMPUTING

Graduate Program Co-Directors: Tim Andersen and Jodi Mead
Program Administrator: Keela Cooper
City Center Plaza, Room 364
(208) 426-5767 (phone)
computingphd@boisestate.edu (email)
boisestate.edu/computing (website)

General Information

The computing program is designed to provide students, through scholarship and research, the computational knowledge and skills to address significant technical challenges in one of the following emphasis areas:

- Computational Science and Engineering: Focus on construction of mathematical models, quantitative analysis techniques and use of computers to analyze and solve scientific and engineering problems.
- Computer Science: Focus on theory, design, development, application of computer and software systems, and the development of algorithms for data search, manipulation, and analysis.
- Cyber Security: Focus on protection of computers, networks, programs, industrial control systems, and data from unintended or unauthorized access, change, or destruction.
- Data Science: Focus on statistical, mathematical and scientific methods to extract knowledge or insights from data.

Program Admission Requirements

Complete all of the following
- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 5 (fall priority), April 15 (fall final)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Demonstrate completion of coursework in computer programing or equivalent experience. Applicants will provide a statement on programming experience in the Computing Admission Questionnaire.
- Submit Additional Materials
  - Complete a Computing Admission Questionnaire boisestate.edu/computing/future-students/admission-questionnaire/
- Submit Application Letter
- Submit Current Resume or Curriculum Vitae (CV)
- Submit Letters of Recommendation
  - Three letters of recommendation from academic and/or professional references. Letters should address your preparation for graduate study.
- Submit Graduate Assistantship Application
  - Deadline: January 5 (fall)
- Automatic consideration is given with your application to the program.

Emphasis Admissions Requirements

- Computational Mathematics Science and Engineering Emphasis: Computational Math Science and Engineering Emphasis: Upper-division undergraduate coursework in differential equations and linear algebra. The equivalent courses at Boise State are MATH301 and MATH333.
- Computer Science Emphasis: Upper-division undergraduate coursework in data structures and algorithms. The equivalent courses at Boise State are CS321 and CS421.
- Cybersecurity Emphasis: Upper-division undergraduate coursework in data structures and introductory systems programming. The equivalent courses at Boise State are CS253 and CS321.
- Data Science Emphasis: Upper-division undergraduate coursework in linear algebra and calculus-based statistics. The equivalent courses at Boise State are MATH301 and MATH361.

Degree Requirements

Doctor of Philosophy in Computing

Graduate Culminating Activity and Other Requirements
32 Total Credits

Complete all of the following
Take the following:
COMPUT601 - Introduction to Graduate Studies (1)
Take at least 1 credits from the following:
COMPUT691 - Doctoral Comprehensive Examination (1 - 6)
Take at least 30 credits from the following:
COMPUT693 - Dissertation (1 - 12)
Area of Emphasis Select one from the following four emphases: Computational Science and Engineering, Computer Science, Cybersecurity, or Data Science. Each area of emphasis has specific requirements listed below

Grand Total Credits: 32

Computational Mathematics Science and Engineering Emphasis
Graduate Major Requirements
28 Total Credits

Complete all of the following
Take the following:
COMPUT571 - Parallel Scientific Computing (3)
CS507 - Computing Foundations for Computational Science (3)
MATH567 - Numerical Methods for Differential Equations (3)

Take at least 1 of the following:
CS566 - Numerical Linear Algebra (3)
MATH566 - Numerical Linear Algebra (3)

Other Graduate Courses
Take at least 16 credits from the following:
Additional elective courses approved by the supervisory committee and program directors.

Grand Total Credits: 28

Computer Science Emphasis
Graduate Major Requirements
28 Total Credits

Complete all of the following
Take at least 1 of the following:
CS521 - Design and Analysis of Algorithms (3)
CS561 - Theory of Computation (3)

Take the following:
CS552 - Operating Systems (3)
CS573 - Advanced Software Engineering (3)

Other Graduate Courses
Take at least 19 credits from the following:
Additional elective courses approved by the supervisory committee and program directors.

Grand Total Credits: 28

Cybersecurity Emphasis
Graduate Major Requirements
28 Total Credits

Complete all of the following
Take the following:
CS546 - Computer Security (3)

Take at least 1 of the following:
CS567 - Applied Cryptography (3)
MATH508 - Advanced Asymmetric Cryptography and Cryptanalysis (3)
MATH509 - Symmetric Key Cryptography and Cryptanalysis (3)

Take at least 1 of the following:
CS575 - Software Security (3)
CS622 - Advanced Network Security (3)

Other Graduate Courses
Take at least 19 credits from the following:
Additional elective courses approved by the supervisory committee and program directors.

Grand Total Credits: 28

Data Science Emphasis
Graduate Major Requirements
28 Total Credits

Complete all of the following
Take the following:
CS533 - Introduction to Data Science (3)
CS534 - Machine Learning (3)
MATH562 - Probability and Statistics (3)
MATH572 - Computational Statistics (3)

Other Graduate Courses
Take at least 16 credits from the following:
Additional elective courses approved by the supervisory committee and program directors.

Grand Total Credits: 28

GRADUATE CERTIFICATE IN COMPUTATIONAL SCIENCES

Graduate Program Co-Directors: Tim Andersen and Jodi Mead
Program Administrator: Keela Cooper
City Center Plaza, Room 364
(208) 426-5767 (phone)
computingphd@boisestate.edu (email)
boisestate.edu/computing (website)

Program Admission Requirements

Complete all of the following
- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: April 15 (fall)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Additional Materials
  - Complete a Computing Admission Questionnaire boisestate.edu/computing/future-students/admission-questionnaire/ for the program-specific form section.
- Submit Foundational Coursework for Graduate Study
  - Upper-division undergraduate coursework in differential equations and linear algebra (equivalent to MATH 333 and 301).

Certificate Requirements

Graduate Certificate in Computational Sciences
Graduate Major Requirements
9-12 Total Credits

Complete 1 of the following
Take the following:
COMPUT571 - Parallel Scientific Computing (3)
CS507 - Computing Foundations for Computational Science (3)
MATH566 - Numerical Linear Algebra (3)
MATH567 - Numerical Methods for Differential Equations (3)

Take the following:
CS530 - Parallel Computing (3)
MATH566 - Numerical Linear Algebra (3)
MATH567 - Numerical Methods for Differential Equations (3)

Grand Total Credits: 9-12

GRADUATE CERTIFICATE IN CYBERSECURITY

Graduate Program Co-Directors: Tim Andersen and Jodi Mead
Program Administrator: Keela Cooper
City Center Plaza, Room 364
(208) 426-5767 (phone)
computingphd@boisestate.edu (email)
boisestate.edu/computing (website)

Program Admission Requirements

Complete all of the following
- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: April 15 (fall), September 15 (spring)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
- Submit Current Resume or Curriculum Vitae (CV)
- Submit Foundational Coursework for Graduate Study
  - Upper-division undergraduate coursework in data structures and introductory systems programming. (equivalent to CS 321 and CS 253 at Boise State)
- Submit Additional Materials
  - Complete the Admission Questionnaire boisestate.edu/computing/future-students/admission-questionnaire/ for the program-specific form section.

Certificate Requirements

Graduate Certificate in Cybersecurity

Graduate Major Requirements
12 Total Credits

Complete all of the following
Take the following:
CS546 - Computer Security (3)

Take at least 3 credits from the following:
CS567 - Applied Cryptography (3)
MATH508 - Advanced Asymmetric Cryptography and Cryptanalysis (3)
MATH509 - Symmetric Key Cryptography and Cryptanalysis (3)

Take at least 3 credits from the following:
CS575 - Software Security (3)
CS622 - Advanced Network Security (3)

Take at least 3 credits from the following:
Cybersecurity Elective approved by program directors

Grand Total Credits: 12

GRADUATE CERTIFICATE IN DATA SCIENCE

Graduate Program Co-Directors: Tim Andersen and Jodi Mead
Program Administrator: Keela Cooper
City Center Plaza, Room 364
(208) 426-5767 (phone)
computingphd@boisestate.edu (email)
boisestate.edu/computing (website)

Program Admission Requirements

Complete all of the following
- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: April 15 (fall)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Current Resume or Curriculum Vitae (CV)
- Submit Foundational Coursework for Graduate Study
  - Demonstrate completion of upper-division undergraduate coursework in linear algebra and calculus-based statistics from the following or equivalent.
    - Completed the following:
      - MATH301 - Introduction to Linear Algebra (3)
      - MATH361 - Probability and Statistics I (3)
- Submit Additional Materials
  - Complete the Admission Questionnaire for the program-specific form section.

Certificate Requirements

Graduate Certificate in Data Science

Graduate Major Requirements
12 Total Credits

Take the following:
CS533 - Introduction to Data Science (3)
CS534 - Machine Learning (3)
MATH562 - Probability and Statistics (3)
MATH572 - Computational Statistics (3)

Grand Total Credits: 12

Course Offerings

COMPUT—Computing

COMPUT 571 PARALLEL SCIENTIFIC COMPUTING (3-0-3)(S). Practical aspects of parallel computing for effective use of distributed memory platforms and graphics processing units (GPUs). Includes speed-up, weak and strong scaling and parallel I/O in theory and practice. Parallel programming libraries such as Message Passing Interface (MPI), CUDA-C (for Nvidia GPUs), OpenACC, and parallel processing capabilities in Python. Applications from a broad selection of scientific domains. PREREQ: CS117 or MATH365 or regular admission to Doctor of Philosophy in Computing program or PERM/INST.

COMPUT 601 INTRODUCTION TO GRADUATE STUDIES (1-0-1)(F). Preparation for incoming students for dissertation research and an introduction to program research areas. Includes strategies for working with an advisor and committee, writing workshops, expectations of graduate students, applying for fellowships, resources available for graduate students, and responsible conduct of research. PREREQ: Admission to Doctor of Philosophy in Computing program.

Department of Counselor Education

College of Education

Chair: Aida Midgett
Education Building, Room 421
(208) 426-1219 (phone)
counseloreducation@boisestate.edu (email)
boisestate.edu/education-counselored (website)

Graduate Faculty: Doumas, Gonzales, Midgett, Miller, Russo

Graduate Degrees Offered

- Doctor of Philosophy in Counselor Education and Supervision
- Master of Arts in Counseling, Addiction Counseling Cognate
- Master of Arts in Counseling, School Counseling Cognate

General Information

The Master of Arts in Counseling prepares individuals in counseling related careers. The program is accredited by the Council for the Accreditation of Educator Preparation (CAEP) and the Northwest Commission of Colleges and Universities (NWCCU). The program meets the State Board of Occupational Licenses' criteria for licensure as a professional counselor. The school and addiction cognates are both accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP).

Coursework is offered in sequence, primarily during evenings and weekends of fall and spring semesters, with students enrolling in six to eleven credits each semester and enrolling in six to seven credits offered in the daytime and evening during the summer sessions.

The PhD in Counselor Education and Supervision (CES) is an innovative apprentice model doctoral program to train graduates as future CES faculty members and leaders in the field. Students receive individual faculty mentorship in theoretical study and practice, and have the opportunity to co-teach in the master's level course. This apprentice model allows for intensive mentoring, providing students with opportunities to work with faculty in the areas of teaching, supervision, research and service. Doctoral students complete a practicum (100 clock-hours) and internship (600 clock-hours) where they deepen their clinical skills, have the opportunity to teach masters level counseling courses, provide supervision and conduct research in collaboration with program faculty. The program includes a dissertation in which the student conducts a guided investigation of a significant CES issue and development of a research agenda for publication. The PhD in CES is accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP).

Students in both the MA and PhD programs are required to complete an *Adjudication Form* upon admission and yearly while enrolled. Students are required to disclose criminal backgrounds and professional licensure and/or certification standing. Information disclosed or otherwise obtained can determine faculty decisions regarding continuation in the program, endorsement by program faculty for students to enroll in practicum and/or internship, endorsement for any field-based placement, and disclosure by program faculty to potential internship and/or other field-based site or individual supervisors.

DOCTOR OF PHILOSOPHY IN COUNSELOR EDUCATION AND SUPERVISION

Graduate Program Coordinator: Aida Midgett
Education Building, Room 421
(208) 426-1219 (phone)
counseloreducation@boisestate.edu (email)
boisestate.edu/education-counselored/phdces (website)

Program Admission Requirements

Complete all of the following
- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadline: February 1 (fall)
  - This program is competitive and traditionally receives applications from more candidates than we have space to enroll. Your application will be rigorously reviewed and admission is not guaranteed.
  - Decision: Early-April
- Submit Baccalaureate and Master's Degree and 3.00 GPA, see page 19
  - Field of Study: Counseling
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Personal Statement
  - A personal statement that includes a description of your professional experiences and the relevance of those experiences to doctoral study in CES. Include a statement of career goals, a statement addressing how our apprentice program will be a good fit for your educational and professional goals. Describe your research interests and how they overlap with program faculty. Prior to applying for Ph.D, students should communicate with and research faculty with whom they would like to work. This will assist students in selecting an advisor upon admission to the program. Indicate if you would like to be considered for a graduate assistantship position.
- Submit Current Resume or Curriculum Vitae (CV)
- Submit Graduate Record Examination (GRE) Scores
  - A GRE waiver may be considered on a case-by-case basis.
- Submit Additional Materials
  - (if admitted) Complete the Adjudication and Informed Consent form.
- Interview — Final candidates are invited for an interview.
- Submit Writing Sample
  - A writing sample from a recent scholarly and/or professional writing.
- Submit Letters of Recommendation
  - Three letters from academic and/or professional references. Letters should address your academic aptitude for doctoral-level study, fitness for the profession, including self-awareness and emotional stability, and potential for scholarship.
- Submit Graduate Assistantship Application
  - Deadline: February 1 (fall)
  - Automatic consideration is given with your application to the program.

Doctor of Philosophy in Counselor Education and Supervision

Graduate Major Requirements
53 Total Credits

    Complete all of the following
        Core Requirements
        Take at least 2 credits from the following:
            COUN592 - Portfolio (1 - 6)
        Take the following:
            COUN602 - Theories and Research in Counseling (3)
            COUN603 - Instructional Theory in Counselor Education and Supervision (1)
            COUN609 - Advanced Culturally Aware Counseling (3)
            COUN610 - Advanced Leadership & Advocacy in Counseling (2)
            COUN613 - Advanced Group Counseling (3)
        Take at least 6 credits from the following:
            COUN614 - Advanced Practicum (3)
            COUN616 - Introduction to Supervision (3)
        Take the following:
            COUN620 - Scholarship in Counselor Education and Supervision (2)
            COUN624 - Advanced Supervision and Consultation (3)
            COUN626 - Doctoral Internship I (3)
            COUN628 - Doctoral Internship II (3)
        Take at least 4 credits from the following:
        Electives
        Research Core
        Take the following:
            COUN612 - Research and Program Evaluation in Counseling (3)
            EDU555 - Analysis of Variance in Educational Research (3)
            EDU556 - Multiple Regression of Educational Data (3)
            EDU650 - Analysis of Research Perspectives (3)
            EDU652 - Quantitative Approaches to Research (3)
            EDU653 - Qualitative Approaches to Research (3)

Graduate Culminating Activity and Other Requirements
13 Total Credits

    Complete all of the following
        Comprehensive Examination
        Take at least 1 credits from the following:
            COUN691 - Doctoral Comprehensive Examination (1 - 6)
        Culminating Activity
        Take at least 12 credits from the following:
            COUN693 - Dissertation (1 - 12)

Grand Total Credits: 66

MASTER OF ARTS IN COUNSELING

Graduate Program Coordinators:
    Addiction Counseling: Michael Russo
    School Counseling: Shelby Gonzales
Education Building, Room 421
(208) 426-1219 (phone)
counseloreducation@boisestate.edu (email)

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
    - Deadline: February 1 (fall)
    - This program is competitive and traditionally receives applications from more candidates than we have space to enroll. Your application will be rigorously reviewed and admission is not guaranteed.
    - Decision: Early April
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
    - Applicants with a GPA less than 3.00 may be considered for provisional admission.
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
    - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Personal Statement
    - A personal statement that includes your professional experiences as they support your desire to be a counselor in a school or addiction setting. Give the reasons for your interest in this program including your vision of the role of a counselor in a school or addiction setting. Outline your career goals.
- Submit Current Resume or Curriculum Vitae (CV)
- Submit Additional Materials
    - (if admitted) Complete the Adjudication and Informed Consent form.
- Interview — Final candidates are invited for an interview.
- Submit Letters of Recommendation
    - Three letters from academic and/or professional references. Recommendations from family, friends, other students, or personal counselor, co-workers are not appropriate. Letters should address your academic and/or professional standards which demonstrate (where appropriate) your preparedness for the program, aptitude for the counseling field, personal and professional integrity, and/or any other relevant information about you.

Degree Requirements

Master of Arts in Counseling

Graduate Major Requirements
46 Total Credits

Take the following:
COUN501 - Foundations and Ethics in Counseling (3)
COUN502 - Counseling Theories (3)
COUN504 - Assessment and Testing in Counseling (3)
COUN505 - Counseling Skills (3)
COUN506 - Lifespan Development (3)
COUN507 - Career Development and Vocational Counseling (3)
COUN509 - Culturally Aware Counseling (3)
COUN512 - Research and Program Evaluation (3)
COUN513 - Group Counseling (3)
COUN514 - Counseling Practicum (3)
COUN526 - Counseling Internship I (3)
COUN528 - Counseling Internship II (3)
COUN529 - Applied Evaluation of Counseling Practice (1)
COUN530 - Suicide Prevention and Crisis Intervention for Counselors (2)
COUN549 - Motivational Interviewing (1)
COUN550 - Diagnoses, Assessment, and Treatment Planning (3)
COUN551 - Psychopharmacology (1)
COUN567 - Clinical Supervision Principles and Practice (1)
COUN568 - Seminar: Professional Counseling (1)

Graduate Culminating Activity and Other Requirements
14 Total Credits

Complete all of the following
Take at least 1 credits from the following:
COUN690 - Master's Comprehensive Examination (1 - 6)
Take at least 5 credits from the following:
Electives
Cognate Area (Select One)
Complete 1 of the following
Addiction Counseling Cognate
Take the following:
COUN541 - Addiction and the Family System (2)
COUN545 - Foundations of Addiction Counseling (3)
COUN548 - Addiction and Behavioral Health Assessment and Intervention (3)
School Counseling Cognate
Take the following:
COUN533 - Introduction to School Counseling (3)
COUN534 - Counseling Children and Adolescents (3)
COUN535 - Classroom Management and Counseling Students with Exceptional Needs (2)

Grand Total Credits: 60

Course Offerings

COUN—Counseling

COUN501 Foundations and Ethics in Counseling (3-0-3)(SU). Provides an introduction to professional, ethical, legal, theoretical, cultural, social, and practice aspects of counseling. Students examine theories and responsibilities of counselors; professional organizations and associations; and professional preparation standards. Ethical decision-making models are introduced and explored within a counseling context. Historical, cultural and social contexts along with emerging professional issues and directions are included. PREREQ: Admission to the Master of Arts in Counseling program.

COUN502 Counseling Theories (3-0-3)(F). Examines historical and contemporary theories of counseling to assist in student identification of personal theoretical orientation and aid in client conceptualization. PREREQ: Admission to Master of Arts in Counseling Program and PERM/INST.

COUN504 Assessment and Testing in Counseling (3-0-3)(SU). Access theory and practice of standardized test development and procedures; applications and limitations of standardized tests; techniques of administering individual/group tests and of interpreting assessment instruments and profiles; and communication strategies with clients, parents, school personnel, and relevant professionals. PREREQ: Admission to Master of Arts in Counseling Program.

COUN505 Counseling Skills (2-2-3)(S). Orientation to basic and advanced counseling skills. Students acquire effective and ethical counseling skills through recorded role-played practice. PREREQ: COUN502.

COUN506 Lifespan Development (3-0-3)(F/S). Provides an overview of lifespan development for counselors-in-training. Covers theories of individual and family development, both typical and atypical, across the lifespan. Students practice conceptualizing individuals from a developmental lens, considering biological, neurological, and physiological, systemic, and environmental factors that contribute to development and functioning. Students also learn strategies for promoting resilience and wellness across the lifespan. Cultural and individual differences are explored. PREREQ: Admission to Master of Arts in Counseling Program.

COUN507 Career Development and Vocational Counseling (3-0-3)(F/S/SU). Provides an overview of the major career development theories, vocational guidance and occupational/educational information sources and systems. Career development program planning, resources computerized information systems, and evaluation is included. Emphasis is placed on how career counseling and vocational guidance are practice by professional counselors in school and agency settings. PREREQ: Admission to the Master of Arts in Counseling Program or PERM/INST.

COUN509 Culturally Aware Counseling (3-0-3)(S/SU). Theoretical course with an experiential component to develop awareness, knowledge, and skills for counselors-in-training preparing to work in a pluralistic society. PREREQ: COUN502.

COUN512 Research and Program Evaluation (2-2-3)(S). Introduces students to quantitative, qualitative, and mixed methods research methods for the purposes of critiquing research and informing counseling practice. Students also learn statistical methods and other data analysis strategies for evaluating counseling and program outcomes. PREREQ: COUN501.

COUN513 Group Counseling (2-2-3)(F/S/SU). Students will focus on the concepts and skills necessary to understand and lead counseling groups in schools and other settings. PREREQ: Completion of COUN505 with grade of at least B.

COUN514 Counseling Practicum (3-1-3)(F). Students apply theoretical knowledge and basic counseling skills in closely supervised individual and group counseling sessions. Students engage in weekly individual and/or triadic and group supervision with a focus on reviewing video recorded sessions and discussing client conceptualizations, ethical considerations, and multicultural competencies. Students must complete a minimum of 100 clock hours, including at least 40 direct contact hours. PREREQ: PERM/INST.

COUN516 Advanced Practicum (3-2-3)(S). Students continue developing their theoretical knowledge and counseling skills in field-based counseling settings. Students participate in on-campus group supervision and site-based individual and/or triadic supervision. Students must complete a minimum of 200 clock hours, including at least 80 direct contact hours. PREREQ: PERM/INST.

COUN526 Counseling Internship I (1-4-3)(F/S). Students apply their skills, training, and knowledge with increasing autonomy as primary supervision shifts towards an onsite counseling supervisor. Students are observed and evaluated as they engage in a wide range of counseling-related activities. (Pass/Fail.) PREREQ: COUN516 with grade of at least B-, COUN548 or COUN534, and PERM/INST.

COUN528 Counseling Internship II (1-4-3)(F/S). In this culminating component of internship, student assumes all functions of a counselor in his/ her site while under site-based (primary) and university supervision, providing the range of counseling services from crisis intervention to promotion of personal development and environmental enhancement. (Pass/Fail.) PREREQ: Recommendation of COUN526 Supervisors and PERM/INST.

COUN529 Applied Evaluation of Counseling Practice (1-0-1)(F/S). Applies principles of counseling practice evaluation with an emphasis on evidence-based practice and accountability. Students evaluate their counseling practice at their internship site under the supervision of the

course instructor. PREREQ: COUN512 or equivalent graduate statistics course. COREQ: COUN526 or COUN528.

COUN530 Suicide Prevention and Crisis Intervention for Counselors (2-0-2) (F). Examines the diverse crisis situations counselors may experience in a variety of settings. Presents theoretical perspectives and techniques in crisis intervention and crisis counseling. Covers the history, models, current trends, and systemic issues of crisis counseling. PREREQ: PERM/INST.

COUN531 Counseling Practicum Intensive (1-4-3)(F/S). A supervised skill review and experientially intensive practicum that may be required of a student needing additional time on skill development before advancing to Internship. PREREQ: PERM/CHAIR.

COUN532 Counseling Internship Intensive (1-4-3)(F/S). A supervised skill review and experientially intensive internship that may be required of a student needing additional time on skill development before enrolling in COUN528 Counseling Internship II. PREREQ: PERM/CHAIR.

COUN533 Introduction to School Counseling (3-0-3)(F/S/SU). Introduces the organization, planning, management, and evaluation of comprehensive school counseling programs. Topics include appropriate roles and functions of school counselors at elementary, middle, and high school levels, coordination of professional services, and ethical and legal considerations. Emphasis on the Idaho Comprehensive School Counseling Program Model and the ASCA National Model. PREREQ: Admission to Counseling Program or PERM/INST.

COUN534 Counseling Children and Adolescents (3-0-3)(F/S/SU). An overview of developmentally appropriate approaches to counseling children and adolescents in school and mental health settings. Addresses individual and group work, expressive and talk therapies, assessment of treatment progress, working with parents and teachers, and ethical and legal considerations in working with this population. PREREQ: COUN505 or PERM/INST.

COUN535 Classroom Management and Counseling Students with Exceptional Needs (2-0-2)(SU). Introduces classroom management techniques appropriate for school counselors, including, activities, techniques, strategies, and theories related to effective classroom management. Explores etiologies of mild/moderate disabilities, current educational trends, and the importance of multidisciplinary teams. PREREQ: PERM/INST

COUN541 Addiction and the Family System (2-0-2)(SU). Addresses the multigenerational impact of chemical and behavioral addiction on the family system, as well as the role family systems can play in the treatment and recovery process. Covers risk and protective factors, stages of change, and continuum of care considerations within the family context. PREREQ: COUN545 or PERM/INST.

COUN543 Assessing and Managing Adolescent Substance Abuse and Mental Health Risks (2-0-2)(S/SU)(Odd years). Introduction to comprehensive adolescent risk assessment and treatment planning. Examination of current and available comprehensive adolescent assessments, current and available specialized assessments, report writing approaches and effective treatment processes.

COUN545 Foundations of Addiction Counseling (3-0-3)(F/S). An overview of the field/foundations of chemical dependency, including theories of prevention, addiction, treatment approaches, the physiology and psychology of addiction, and an in-depth understanding of the effects of different drugs on the individual and society, including physiological, biological, spiritual, cultural, and behavioral effects. PREREQ: Admission to Masters of Arts in Counseling Program or PERM/INST.

COUN548 Addiction and Behavioral Health Assessment and Intervention (3-0-3)(S). Prepares future licensed professional counselors to work with clients with addiction and behavioral health issues. Includes theories/approaches to working with clients with addiction and behavioral health issues, bio-psycho-social assessment, and evidence based counseling techniques and interventions. PREREQ: Admission to Counseling Program or PERM/INST.

COUN549 Motivational Interviewing (1-0-1)(F/S). Provides a basic understanding of motivational interviewing, the trans-theoretical model, harm reduction, screening, and brief intervention. PREREQ: COUN505 with a grade of B or better.

COUN550 Diagnoses, Assessment, and Treatment Planning (3-0-3)(F/S). Examines concepts of "mental disorders," DSM classification systems, and the diagnostic benefits and diagnostic problems inherent in such systems. An introduction and overview of the major psychopathological syndromes of adolescents and adults (especially in the area of Co-morbidity of Substance Use Disorders and other DSM 5 diagnoses) to facilitate appropriate use of assessment-diagnostic-treatment links (including treatment planning). PREREQ: PERM/INST.

COUN551 Psychopharmacology (1-0-1)(SU). Examines common psychopharmacology issues covering a wide range of disorders. PREREQ: PERM/INST.

COUN552 Introduction to Neurofeedback (2-1-3)(SU). Provides an introduction to the integration of neurofeedback (NFB) into counseling practice. NFB is a form of biofeedback used to empower individuals to regulate their brainwave patterns (via electroencephalogram readings). Designed to prepare students for practicing NFB in a supervised clinical setting, meet the Biofeedback Certification International Alliance (BCIA) didactic requirements for certification, and helps to prepare students to sit for the BCIA certification exam.

COUN558 Depression (1-0-1)(F/S). An overview of the symptoms and underlying causal factors associated with the range of depression-based disorders. Depression-based problems are discussed in terms of the interactions between cognitive, behavioral, affective factors, and related treatments are presented. (Pass/Fail.)

COUN559 Fears and Phobias (1-0-1)(F/S). An overview of the symptoms and underlying causal factors associated with the range of anxiety-based problems. Anxiety-based problems are discussed in terms of the interactions between cognitive, behavioral, affective factors, and related treatments are presented. (Pass/Fail.)

COUN567 Clinical Supervision Principles and Practice (1-0-1)(F/S). Theory and skill development for practitioners who are supervising interns and/or professionals in school, agency, and other settings. Topics include ethical issues in clinical supervision, models and best practices, documentation, and troubleshooting problematic dynamics. PREREQ: COUN526 or PERM/INST.

COUN568 Seminar: Professional Counseling (0-1-1)(F/S). Discussions and research into the evolving culturally competent role of professional counselors in all settings, emphasizing ethical decision-making and licensure and certification considerations. COREQ: COUN528.

COUN602 Advanced Theories and Research in Counseling (3-0-3)(F/S/SU). Theoretical bases for counseling efficacy, applicability to multicultural populations, and ethical/legal considerations. Various methods for evaluating counseling effectiveness, research base for existing counseling theories, and effectiveness of models and treatment strategies of crisis, disasters, and other trauma-causing events. Doctoral students engage in curriculum development, instruction, videotape review, role-plays, and grading of students in corresponding Master's level course. PREREQ: COUN502 or equivalent.

COUN603 Instructional Theory in Counselor Education and Supervision (1-0-1)(F/S). Prepares the student for the role of professor in counselor education. An examination of instructional theories and methods relevant to counselor education including models and methods of appraisal is explored. PREREQ: Admitted to Counselor Education and Supervision PhD. COREQ: COUN602.

COUN606 Advanced Lifespan Development (3-0-3)(F/S/SU). Study of theoretical constructs related to developmental processes, both typical and atypical, and analysis of developmentally based behavior patterns across the age spectrum (birth to death) through a variety of contemporary cultures and beliefs. Doctoral students engage in curriculum development, instruction, and grading of students in corresponding Master's level course. PREREQ: COUN506 or equivalent.

COUN607 Advanced Career Development and Vocational Counseling (3-0-3)(F/S/SU). Different theoretical and applied approaches to career development and vocational counseling as well as increase awareness, knowledge,

and skills related to ethical, multicultural, and social justice issues related to career and vocational counseling. Doctoral students engage in curriculum development, instruction, and grading of students in corresponding Master's level course. PREREQ: COUN507 or equivalent.

COUN609 Advanced Culturally Aware Counseling (3-0-3)(F/S/SU). Advocacy models and current multicultural issues as they relate to social change theories. Also student will learn models, leadership roles, and strategies for responding to community, national, and international crisis and disasters, as well as understand current topical and political issues in counseling and how those issues affect the daily work of counselors and the counseling profession. Doctoral students engage in curriculum development, instruction, and grading of students in corresponding Master's level course. PREREQ: COUN509 or equivalent.

COUN610 Advanced Leadership and Advocacy in Counseling (2-0-2)(F/S). Examines the theories, research, and processes that influence leadership, and advocacy within the profession. Fosters the development of specific philosophies, skills, and intervention strategies required to perform effectively in these functions. Doctoral students engage in curriculum development, instruction, and grading of students in a Master's level Advocacy course. PREREQ: Admitted to Counselor Education and Supervision PhD., COUN602.

COUN612 Research and Program Evaluation in Counseling (3-0-3)(F/S/SU). Overview of research methods, program evaluation, and statistics for counselors. Topics include design, implementation, and analysis of quantitative and qualitative research; models and methods of assessment and use of data in program evaluation; and models and methods of instrument design. Doctoral students engage in curriculum development, instruction, and grading of students in corresponding master's level courses and/or other master's level research courses. PREREQ: Admitted to Counselor Education and Supervision PhD., COUN602.

COUN613 Advanced Group Counseling (3-0-3)(F/S/SU). Concepts and skills necessary to understand and lead counseling groups in schools and other settings. Doctoral students will engage in curriculum development, instruction, role-plays, supervision, and providing feedback to students in the corresponding Master's level course. PREREQ: Admitted to Counselor Education and Supervision PhD., COUN513 or equivalent.

COUN614 Advanced Practicum (3-0-3)(F/S/SU). Students apply advanced theoretical and counseling skills in supervised counseling sessions. Students participate in individual and/or triadic and group supervision. Students must complete a minimum of 100 clock-hours, including at least 40 direct client contact hours. Students demonstrate advanced conceptualization of theory, ethical decision making, and multicultural considerations. Supervised practicum of a minimum of 100-clock-hours (40 direct/60 indirect). PREREQ: Admitted to Counselor Education and Supervision PhD., COUN514 and COUN516.

COUN616 Introduction to Supervision (3-V-3)(F/S/SU). Students will learn supervision models, theory, ethical decision-making, and cultural considerations. Students will conduct group and/or individual supervision. PREREQ: Admitted to Counselor Education and Supervision PhD., COUN614.

COUN620 Scholarship in Counselor Education and Supervision (2-0-2)(F/S). Examines professional scholarship and assists students with developing a scholarly identity and research agenda. Focuses on submission and publication of manuscripts to peer-reviewed journals, submission of scholarly presentations for presentation at professional conferences, and will include an overview to the process of grant writing. PREREQ: COUN602.

COUN624 Advanced Supervision and Consultation (3-0-3)(F/S/SU). Students will develop advanced knowledge of supervision and consultation theory and practice. Students will teach the master's level counseling practicum, as well as provide individual and triadic supervision to master's level counselor education students. PREREQ: COUN614 and COUN616.

COUN626 Doctoral Internship I (3-0-3)(F/S/SU). Culminating internship in which the student assumes all functions of a counselor and a supervisor while under faculty supervision, providing the range of counseling services from crisis intervention to promotion of personal development and environmental enhancement (300 clock hours). (Pass/Fail.) PREREQ: COUN526 or equivalent.

COUN628 Doctoral Internship II (3-0-3)(F/S/SU). Culminating internship in which the student assumes all functions of a counselor and a supervisor while under faculty supervision, providing the range of counseling services from crisis intervention to promotion of personal development and environmental enhancement (300 clock hours). (Pass/Fail.) PREREQ: Admitted to Counselor Education and Supervision PhD., COUN626.

COUN664 Professional Orientation to Counseling Leadership (3-0-3)(F/S/SU). Purpose, theoretical framework and models, roles and relationships, and legal/ethical/multicultural issues associated with supervision and consultation. Additionally, the course will cover major roles, responsibilities, and activities of counselor educators, instructional theory and methods, and ethical/legal/multicultural issues associated with teaching and counselor preparation training. Also, issues related theories and skills of leadership are addressed. PREREQ: PERM/INST.

Criminal Justice Program

School of Public Service

Library Building, Room 166
(208) 426-3407 (phone)
crimjust@boisestate.edu (email)
boisestate.edu/sps-criminaljustice/ma-cj (website)

Graduate Faculty: Alward, Bostaph, Giacomazzi, Gillespie, Jorgensen, L. King, W. King, Lee, Wells

Graduate Degree Offered

- Master of Arts in Criminal Justice

MASTER OF ARTS IN CRIMINAL JUSTICE

Graduate Program Coordinator: William King
Library Building, Room 166C
(208) 426-3240 (phone)
billking@boisestate.edu (email)

General Information

The master's degree in criminal justice is designed to provide a foundation in research and theory in substantive areas of criminal justice and focused scholarship on issues of importance to the field. Curricula are organized into three sections. The Foundation Series is a set of core classes that provide students with the intellectual skills needed for the study of more complex material. The Seminar Series promotes the development of scholarship in particular substantive areas in criminal justice. The Elective Series allows students to take elective coursework that is relevant to their course of study from anywhere in the university. For their culminating activity, students take a comprehensive examination or can apply to complete a thesis.

Program Admission Requirements

Complete all of the following
- Submit Graduate Admission Application and Admission Materials, see page
  - Deadlines: January 15 (fall priority), April 1 (fall final), September 15 (spring priority), November 1 (spring final)
- Submit Baccalaureate Degree and 3.00 GPA, see page
  - Field of Study: Criminal Justice, Criminology, or a related social/behavioral science.
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page
  - TOEFL - iBT: 95, pBT (revised): 72, pBT (old): 587, IELTS - 6.5
- Submit Application Letter
- Submit Letters of Recommendation
  - Three letters of recommendation, with at least two coming from academic faculty. Letters should address your strengths and weaknesses, as well as your potential for success in a graduate program.
- Submit Graduate Assistantship Application
  - Deadlines: January 15 (fall), September 15 (spring)

Degree Requirements

Master of Arts in Criminal Justice

Graduate Major Requirements
16 Total Credits

Complete all of the following
Foundation Series
Take the following:
CJ500 - Proseminar (1)
CJ501 - Crime and Criminal Justice (3)
CJ506 - Theories of Crime (3)
CJ513 - Victimology (3)
SPS501 - Social Science Research Design (3)
SPS502 - Quantitative Methods for the Social Sciences (3)

Graduate Culminating Activity and Other Requirements
18 Total Credits

Complete all of the following
Take at least 18 credits from the following:
Seminar Series (9 - 15)
Students are required to complete nine credits and a maximum of fifteen credits from the following list of courses. It is recommended that core courses be completed prior to enrolling in seminar series courses.
Take any of the following:
CJ502 - Seminar: Organization and Management of Criminal Justice (3)
CJ505 - Seminar: Law and Social Control (3)
CJ507 - Seminar: Contemporary Issues in Policing (3)
CJ508 - Seminar: Contemporary Issues in Courts & Sentencing (3)
CJ509 - Seminar: Juvenile Justice (3)
CJ514 - Seminar: Contemporary Issues in Corrections (3)
CJ515 - Seminar:Topics in Criminal Justice (3)
CJ516 - Social Diversity and Crime (3)
Electives (0 - 6)
Electives may be in the Seminar Series or in other graduate programs in the university but must be approved by the CJ graduate program lead. Boise State graduates with any listed course in undergraduate work which applied to the undergraduate degree may not apply that course to the graduate degree.
Complete 1 of the following
Thesis (6)
Take any of the following:
CJ593 - Thesis (1 - 9)
Comprehensive Examination (3)
Take any of the following:
CJ690 - Master's Comprehensive Examination (1 - 6)

Grand Total Credits: 34

Course Offerings

CJ—Criminal Justice

CJ500 Proseminar (1-0-1)(F/S). Focuses on writing, research, conference presentations, and other professional issues concerning both academic and practitioner career paths in criminal justice and criminology. PREREQ: Criminal Justice Graduate standing.

CJ501 Crime and Criminal Justice (3-0-3)(F). Locates the profession of criminal justice within historical, theoretical, and political perspectives. Defines the nature and scope of the discipline. Discusses the relationships among theory, policy, and practice.

CJ502 Seminar: Organization and Management of Criminal Justice (3-0-3) (S)(Even years). The structures, operations, and functions of criminal justice organizations are analyzed. Issues within these areas are approached with attention to their cultural, social, and political implications. The relationship between formal and informal structures and their social, political and legal environment is examined.

CJ505 Seminar: Law and Social Control (3-0-3)(F)(Odd years). A focus on the nature of law and legal institutions and the relationships between law and

other forms of social control. Theory and research on the development of law and its implementation at various stages of the legal process is reviewed.

CJ506 Theories of Crime (3-0-3)(S). Major explanations of crime and its control. Efforts toward an integration of existing approaches are explored and consideration of the development of general theory is discussed.

CJ507 Seminar: Contemporary Issues in Policing (3-0-3)(S)(Odd years). In-depth consideration of issues affecting policing today. Examines police organization, management and leadership, policy formulation, community policing and related issues. Focuses on the role of police officers in a changing society.

CJ508 Seminar: Contemporary Issues in Courts and Sentencing (3-0-3)(F) (Even years). Considers specific aspects of criminal adjudication, including prosecution and defense, bail determination, plea-bargaining, jury decision-making, and sentencing practices.

CJ509 Seminar: Juvenile Justice (3-0-3)(S)(Even years). Examines the historical development and current practices of juvenile courts and juvenile correctional institutions. Emphasis on program evaluation and developments in delinquency theory as related to practice.

CJ513 Victimology (3-0-3)(F/S). An exploration of the theory, research, and practices related to crime victimization. The role of victims in the crime triangle, prevalence of various forms of victimization, the effects of crime on its victims, and the criminal justice/social services response to victimization will be discussed.

CJ514 Seminar: Contemporary Issues in Corrections (3-0-3)(F)(Odd years). Examines issues affecting corrections today. Focuses on correctional organization, management and leadership, policy formulation, institutional and community corrections and related issues. Considers the contribution of rehabilitative and deterrent philosophies to the diverse contemporary perspectives on corrections.

CJ515 Seminar: Topics in Criminal Justice (3-0-3)(F)(Even years). Explores current or emerging issues affecting crime and/or the criminal justice system. Detailed focus on one topic of the instructor's choice per course offering.

CJ516 Social Diversity and Crime (3-0-3)(S)(Odd years). Explores the influence of, and interplay among, the various aspects of social diversity on offending, victimization, and the criminal justice system.

CJ521 Criminal Justice Issues and Policy Analysis (3-0-3)(S). Problem-solving and policy implementation. Focuses on criminal justice policies from different components of the system.

CJ522 Juvenile Offenders, Crime, and Criminal Justice (3-0-3)(F). Examines current processes in juvenile justice, policy, probation, and utilization of community based resources in Idaho. Emphasizes understanding issues and policy applications at the local and state level. PREREQ: CJ509 or CJ514.

CJ523 Rural Criminal Justice (3-0-3)(F). Addresses problems of criminal justice in a rural setting. Provides perspective on the organization and delivery of criminal justice, the types of crime confronted by small criminal justice agencies, and how those problems are addressed.

CJ527 White-Collar Crime (3-0-3)(F/S). Nature and extent of upper-class criminality, including measures, reporting, and categories. Emphasis on organizational, occupational, and governmental crime. Functions of social control, punishment, and regulatory agencies examined.

CJ528 The Death Penalty in America (3-0-3)(F/S). Historical, philosophical, and empirical examination of capital punishment with an emphasis on race/ethnicity, class, gender, and religion. Legal issues including jury-decision making, ineffective legal representation, cruel and unusual punishment, mental illness, wrongful conviction, costs, international law, and other policy issues examined. Living and working on death row, methods of execution, and philosophies of punishment explored.

CJ564 Contemporary Issues in Offender Rehabilitation (3-0-3)(F/S). Study of the major contemporary issues facing the treatment of offenders at the local, state, and federal levels of government. Topics include, but are not limited to, treatment-centered programming and advances in rehabilitation of high-risk offenders.

Curriculum and Instruction Doctorate

College of Education

Graduate Program Coordinator: Keith Thiede
Education Building, Room 722
(208) 426-1278 (phone)
(208) 426-4408 (fax)
eddoctorate@boisestate.edu (email)
boisestate.edu/education-edd (website)

Participating Departments

- Curriculum, Instruction, and Foundational Studies
- Early and Special Education
- Educational Technology
- Literacy, Language, and Culture

DOCTOR OF EDUCATION IN CURRICULUM AND INSTRUCTION

General Information

The doctoral program in curriculum and instruction, leading to an EdD degree, is designed to develop graduates who will be effective leaders in educational improvement. The coursework provides students with the basis for a thorough understanding of what schools are and can be, insights into the complexities of teaching and learning, and collaborative opportunities to work towards making a measurable and positive effect upon current education programs and student learning.

Program Admission Requirements

Complete all of the following
- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: February 1 (fall), October 1 (spring), February 1 (summer)
- Submit Baccalaureate and Master's Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
  - An application letter that provides a description of your professional experiences and the relevance of those experiences to doctoral study in education. Include a statement of career goals, and your interest in a particular area of specialization (i.e., educational leadership, mathematics education, counselor education, special education, bilingual education, kinesiology, or literacy). Also, describe your research interests to be pursued in the program.
- Submit Current Resume or Curriculum Vitae (CV)
- Submit Writing Sample
  - A writing sample that includes a recent sample of scholarly and/or professional writing (e.g., master's thesis or project, scholarly papers or publications, project reports, grant proposals, etc.).
- Interview — All applicants meeting minimum requirements will be invited for a interview. The interview will be arranged once your application file is complete.
- Submit Letters of Recommendation
  - Three letters of recommendation from people who can speak to your potential to complete a doctoral program. Please address your aptitude for and commitment to doctoral study in education, professional effectiveness, potential for influencing education, scholarly abilities and dispositions, personal and professional integrity, and any other relevant information.
- Submit Graduate Assistantship Application
  - Deadline: March 1

Degree Requirements

Doctor of Education in Curriculum and Instruction

Graduate Major Requirements
57 Total Credits

Complete all of the following
  Core Requirements
  Take the following:
    EDU610 - The American Culture & the Context of Schooling (3)
    EDU660 - Learning and Cognition (3)
    EDU662 - Curriculum (3)

  Research Core
  Take at least 3 credits from the following:
    EDU555 - Analysis of Variance in Educational Research (3)
    EDU556 - Multiple Regression of Educational Data (3)
  Take the following:
    EDU650 - Analysis of Research Perspectives (3)
    EDU651 - Evaluation (3)
    EDU652 - Quantitative Approaches to Research (3)
    EDU653 - Qualitative Approaches to Research (3)
  Take at least 1 credits from the following:
    EDU691 - Doctoral Comprehensive Examination (1 - 6)
  In addition, complete either a Cognate Area* or the following coursework to graduate with an EdD in Curriculum and Instruction with an emphasis in Educational Leadership.
  Take at least 26 credits from the following:
  Cognate Area*
  *A cognate is an area of specialization. Approved cognates are bilingual education, curriculum and instruction, early childhood education, educational technology, kinesiology, literacy, mathematics education, special education.

Graduate Culminating Activity and Other Requirements
9 Total Credits

  Take at least 9 credits from the following:
    EDU693 - Dissertation (1 - 12)

Grand Total Credits: 60

Residency

Boise State University requires that students accepted into the doctoral program be in continuous enrollment and complete a minimum of 23 semester credits of graduate level coursework during the first 15 months of the program.

Course Offerings

EDU—Education

EDU555 Analysis of Variance in Educational Research (3-0-3)(F/S/SU). Distribution theory and assumptions of parametric statistical models. Approaches to analysis of variance (ANOVA), including one-way and two-way factorial ANOVA, repeated-measures ANOVA, analysis of covariance, and post hoc tests associated with ANOVA. Data analyses and interpretation procedures via computer-based statistical packages. PREREQ: Any introductory course that addresses inferential statistics.

EDU556 Multiple Regression of Educational Data (3-0-3)(F/S/SU). Assumptions of general linear models (simple and multiple regression) and testing whether data conform to these assumptions; dealing with missing data; techniques of multiple regression, including dealing with categorical data and interaction terms; logistic regression; and introduction to path analysis and structural modeling. Data analyses and interpretation procedures via computer-based statistical packages. PREREQ: Any introductory course that addresses inferential statistics.

EDU610 The American Culture and the Context of Schooling (3-0-3)(F/S/SU). Explores the roles of schools in American society, including cross-cultural analyses; identify political forces influencing school policy-making in local, state, national and international arenas; investigate the economics of school improvement proposals; and consider the historical contexts of contemporary improvement efforts. Emphasizes the effects on American culture and the

school of changing demographics, the challenges of an increasingly diverse society, and the impact of technology and the ongoing information revolution. PREREQ: ED-CIFS505, ED-CIFS506 or equivalents.

EDU611 School Culture and the Problems of Change (3-0-3)(F/S/SU). Explores the cultures and organizational dynamics of schools, and obstacles to change in an increasingly diverse society. Examines case studies of past change efforts for their lessons for contemporary improvement efforts. Examines research and theory about systemic change in schools and other organizations as a basis for developing working theories and leadership skills necessary to guide school improvement efforts. PREREQ: EDU610.

EDU650 Analysis of Research Perspectives (3-0-3)(F/S/SU). Overview and critical analysis of research paradigms. Assumptions, standards, and methods for critiquing, generating and communicating interpretations. PREREQ: ED-CIFS503 or equivalent.

EDU651 Evaluation (3-0-3)(F/S/SU). Methods of evaluation with emphasis on making judgments about such educational issues as school effectiveness, individual performances, and other educational endeavors. Ethical issues in assessment and evaluation and analysis of social, cultural, and political influences affecting assessment and evaluation procedures.

EDU652 Quantitative Approaches to Research (3-0-3)(F/S/SU). Appropriate research designs and data analysis techniques in quantitative research and related design and measurement issues. Conduct a quantitative study.

EDU653 Qualitative Approaches to Research (3-0-3)(F/S/SU). Analysis of various approaches to qualitative research methods, including case studies and biographical, phenomenological, ethnographic, interactional, and critical analyses. Students conduct a qualitative study. PREREQ: EDU650. COREQ: EDU662.

EDU654 Advanced Applications of Qualitative Research Methods (3-0-3) (F/S/SU). Advanced applications in a representative range of qualitative research methods for doctoral and advanced master's students, including the use of questionnaires, focus groups, surveys, case studies, discourse and content analysis. PREREQ: EDU653 or equivalent.

EDU660 Learning and Cognition (3-0-3)(F/S/SU). Learning theories and processes with emphasis given to cognitive and situated learning. PREREQ: Graduate status.

EDU662 Curriculum (3-0-3)(F/S/SU). Focuses on major theories, research bases, and significant societal factors in school curricula. Includes historical and philosophical foundations of curricular development; analysis of factors and issues influencing curricular determinations, including cultural influences and technological contributions; and consideration of likely future curricular evolution. PREREQ: ED-CIFS536 or equivalent. COREQ: EDU653.

Department of Curriculum, Instruction, and Foundational Studies

College of Education

Chair: Heather Williams
Education Building, Room 515
(208) 426-2234 (phone)
hpwilliams@boisestate.edu (email)
boisestate.edu/education-cifs (website)

Graduate Faculty: Carney, Dismuke, Fry, Gabbard, Hagenah, Hicks, Siebert, Snow, Thiede, Williams, Zenkert

Graduate Degrees Offered

- Education Specialist in Executive Educational Leadership
- Master in Teaching in Elementary Education
- Master in Teaching in Secondary Education
- Master of Arts in Education, Curriculum and Instruction
- Master of Education in Educational Leadership
- Master of Science in Program Evaluation, Measurement, and Statistics
- Graduate Certificate in Mathematics Instruction, Learning, and Leadership

EDUCATION SPECIALIST IN EXECUTIVE EDUCATIONAL LEADERSHIP

Graduate Program Coordinator: Heather Williams
Education Building, Room 515
(208) 426-2234 (phone)
hpwilliams@boisestate.edu (email)
boisestate.edu/education-cifs/eds-eel (website)

General Information

The College of Education offers an education specialist degree in Executive Educational Leadership, designed to develop effective leaders in educational settings. The interdisciplinary coursework provides students with the basis for a thorough understanding of leadership, management, and reform within educational systems. Students will have collaborative opportunities to effectively influence current education reform and student learning. The sequence of instruction uses a closed cohort model, in which all students begin the program with ED-CIFS 676 in the fall and proceed together to complete the sequence of courses. Only one course is offered each semester.

Conceptual Framework

The conceptual framework for the College of Education at Boise State University is grounded in the theory and practice of the reflective practitioner. Reflective practitioners think critically about pedagogy, subject matter, and the needs and backgrounds of all students and clients. Accordingly, they choose appropriate content and adapt their approaches as needed, while maintaining high standards. Successful professionals are committed students of the disciplines in which they work. They remain current with professional ideas and use these to guide decision making. They are constantly assessing their instructional and clinical effectiveness.

Program Admission Requirements

Complete all of the following
- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: February 1 (fall priority), August 1 (fall final)
- Submit Baccalaureate and Master's Degree and 3.00 GPA, see page 19
  - Field of Study: Education or related field
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
  - An application letter that discusses your career goals.
- Interview — All applicants are invited for an interview.

- Submit Letters of Recommendation
  - Two letters of recommendation from academic and/or professional references.

Degree Requirements

Education Specialist in Executive Educational Leadership

Graduate Major Requirements
24 Total Credits

Take the following:
   ED-CIFS676 - Foundations of Leading Complex Educational Organizations (6)
   ED-CIFS677 - Leading Continuous System-Wide Improvement of Learning (6)
   ED-CIFS678 - The Superintendency and Executive Level Leadership: Theory and Research (6)
   ED-CIFS679 - The Superintendency and Executive Level Leadership: Clinical Experience (6)

Graduate Culminating Activity and Other Requirements
6 Total Credits

Take the following:
   ED-CIFS680 - The Superintendency and Executive Level Leadership: Capstone Course (6)

Grand Total Credits: 30

MASTER OF ARTS IN EDUCATION, CURRICULUM AND INSTRUCTION

Graduate Program Coordinator: Ramey Uriarte
Education Building, Room 412
(208) 426-1672 (phone)
rameyuriarte@boisestate.edu (email)
boisestate.edu/education-cifs/ma-eci (website)

General Information

The Master of Arts in Education, Curriculum and Instruction is designed to improve instructional, curricular and leadership skills among practicing educators. Graduates of the program will be able to adapt research based techniques to meet the requirements of their professional situations and be able to assess and reflect on the efficacy of their efforts. Students may select from three culminating experiences. This degree requires completion of a minimum of 30 credits. The MA in Education, Curriculum and Instruction does not lead to initial teacher certification nor does it require certification for admission.

Program Admission Requirements

Complete all of the following
- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 15 (fall priority), August 1 (fall final), September 15 (spring priority), December 15 (spring final), February 15 (summer priority), April 15 (summer final)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
  - An application letter that is 1-2 -pages detailing your motivation for pursuing a graduate degree in education, academic goals for your graduate studies, and your professional goals.
- Submit Letters of Recommendation
  - Two letters of recommendation from academic or professional references. Your letters should address your potential for success in a graduate program, strengths and weaknesses, and the benefits the you may receive from graduate study.

Degree Requirements

Master of Arts in Education, Curriculum and Instruction

Graduate Major Requirements
15 Total Credits

Complete all of the following
Take the following:
ED-CIFS503 - Fundamentals of Education Research (3)
ED-CIFS506 - Issues and Equity in Education (3)
Take the following:
ED-CIFS536 - Curriculum: Theory and Design (3)
Or Course(s) to be selected with student input and approved by the Program Coordinator
Take the following:
ED-CIFS537 - Instruction: Theory and Design (3)
Or Course(s) to be selected with student input and approved by the Program Coordinator
Take the following:
ED-CIFS568 - Equity and Access Issues in Education (3)

Graduate Culminating Activity and Other Requirements
15 Total Credits

Complete all of the following
Take at least 15 credits from the following:
Cognate and Culminating Experience
Cognate (9 - 12)
Students can design their own specialized curriculum and instruction cognate with their advisor's supervision or select a pre-existing pathway. See Program Coordinator for a list of the current pathways.
Culminating Experience (3 - 6)
Project (3 cr or 6 cr)
Take any of the following:
ED-CIFS591 - Project (1 - 12)
Thesis (6 cr)
Take any of the following:
ED-CIFS593 - Thesis (1 - 9)
Capstone (Curriculum & Instruction) (3 cr)
Take any of the following:
ED-CIFS692 - Capstone Course (1 - 4)

Grand Total Credits: 30

MASTER OF EDUCATION IN EDUCATIONAL LEADERSHIP

Program Coordinator: Rob Winslow
Education Building, Room 408
(208) 426-2806 (phone)
robinwinslow@boisestate.edu (email)
boisestate.edu/education-cifs/med-el (website)

General Information

The College of Education offers a master's degree in Educational Leadership, designed to develop effective leaders in educational settings. The interdisciplinary coursework provides students with the basis for a thorough understanding of leadership, management and reform within educational institutions. Students will have collaborative opportunities to effectively influence current education programs and student learning.

Conceptual Framework

The conceptual framework for the College of Education at Boise State University is grounded in the theory and practice of the reflective practitioner. Reflective practitioners think critically about pedagogy, subject matter, and the needs and backgrounds of all students and clients. Accordingly, they choose appropriate content and adapt their approaches as needed, while maintaining high standards. Successful professionals are committed students of the disciplines in which they work. They remain current with professional ideas and use these to guide decision making. They are constantly assessing their instructional and clinical effectiveness.

Program Admission Requirements

Complete all of the following
• Submit Graduate Admission Application and Admission Materials, see page 19
  – Deadline: July 1 (fall)
• Submit Baccalaureate Degree and 3.00 GPA, see page 19
• Submit English Proficiency*, see page 21
  – TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
• Submit Application Letter
  – An application letter that includes a description of your professional goals and why you feel the program is a good fit for you.
• Interview — All applicants are invited for an interview.
• Submit Letters of Recommendation
  – Two letters of recommendation from a recent supervisor. Letters should address your potential for success in a graduate program, strengths and weaknesses, and the benefits you may receive from graduate study.

Degree Requirements

Master of Education in Educational Leadership

Graduate Major Requirements
30 Total Credits

Complete all of the following
Take the following:
ED-CIFS576 - Leadership Foundation (6)
ED-CIFS577 - Leading Teaching and Learning (6)
ED-CIFS578 - Learning System Change (6)
ED-CIFS579 - Educational Leadership Clinical Experience (6)
Take at least 6 credits from the following:
ED-CIFS692 - Capstone Course (1 - 4)

Grand Total Credits: 30

Students who complete the MEd in Educational Leadership have the option to apply for the Idaho School Principal (Pre-K-12) endorsement. To apply for the principal endorsement students must verify a minimum of four years of certified work in a K-12 setting by the time they apply for the principal endorsement. Please contact the Boise State University Teacher Education department at (208) 426-1528 to apply for the principal endorsement.

MASTER OF SCIENCE IN PROGRAM EVALUATION, MEASUREMENT, AND STATISTICS

Graduate Program Coordinator: Carl Siebert
Education Building, Room 408, Mail Stop 1745
(208) 426-3270 (phone)
carlsiebert@boisestate.edu (email)
boisestate.edu/education-cifs/ms-pems (website)

General Information

The Master of Science in Program Evaluation, Measurement and Statistics program provides students with advanced coursework in measurement and applied statistics as it relates to conducting research, and provide students with comprehensive knowledge and skills on how to conduct program evaluations for both the private and public sectors. The M.S. program emphasize the acquisition of research and statistical skills that students will demonstrate by completing a three-credit capstone course or project as the culminating activity. The intended audience is students or individuals in the community seeking skills in research methods, measurement, and data analysis to advance in their current profession or who are interested in advanced knowledge and skills in program evaluation.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: August 1 (fall), December 15 (spring), April 15 (summer)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
- Submit Current Resume or Curriculum Vitae (CV)

Degree Requirements

Master of Science in Program Evaluation, Measurement, and Statistics

Graduate Major Requirements
15 Total Credits

Take the following:
ED-CIFS503 - Fundamentals of Education Research (3)
ED-CIFS506 - Issues and Equity in Education (3)
ED-CIFS510 - Introductory Statistics in Educational Research (3)
ED-CIFS511 - Assessment and Evaluation (3)
EDU651 - Evaluation (3)

Graduate Culminating Activity and Other Requirements
15 Total Credits

Complete all of the following
Select 12 credits from the following:
Take at least 12 credits from the following:
ED-CIFS554 - Survey Design and Data Collection (3)
ED-CIFS555 - Multilevel Modeling of Educational Data (3)
ED-CIFS556 - Longitudinal Data Analysis (3)
ED-ESP558 - Assessment in Early Intervention and Special Education (3)
ED-LLC556 - Applied Research in Large-Scale Literacy Assessment (3)
EDU555 - Analysis of Variance in Educational Research (3)
EDU556 - Multiple Regression of Educational Data (3)
EDU652 - Quantitative Approaches to Research (3)
EDU653 - Qualitative Approaches to Research (3)
Culminating Activity
Take at least 3 credits from the following:
ED-CIFS591 - Project (1 - 12)
ED-CIFS692 - Capstone Course (1 - 4)

Grand Total Credits: 30

MASTER IN TEACHING IN ELEMENTARY EDUCATION

Graduate Program Coordinator: Angel Larson
Education Building, Room 411
(208) 426-1788 (phone)
angelnlarson@boisestate.edu (email)
boisestate.edu/education-cifs/mit-elementary (website)

General Information

The Master in Teaching (MIT) in Elementary Education is a rigorous, cohort program leading to initial grades K-8 teaching certification from the Idaho State Department of Education. This program is hybrid, in that some courses are online, while others are in person. The program begins each January and includes four semesters: spring, summer, fall, spring.

Prior to admission into the program, MIT in Elementary Education students must complete an approved endorsement of at least 20-semester credits hours. The endorsement is not only a State of Idaho requirement, but also supports teachers in becoming an expert in a content area and may allow teachers to teach that content at the junior high/middle school level. Note that some content areas require specific courses within those totals; a degree in a subject may not necessarily include the specific content and courses required for

certification. Interested students must complete a transcript audit with the program coordinator to determine whether or not prerequisites have been met.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadline: September 1 (spring)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 95, pBT (revised): 72, pBT (old): 587, IELTS - 6.5
- Submit Application Letter
  - An application letter (1-2 pages) that describes your experience and/or potential for working with children and/or schools.
- Interview — An interview is required and all applicants will be invited for an interview. The interview is a group interview with other applicants. Details will be shared with you via email after the admissions deadline.
- Submit Letters of Recommendation
  - Two letters of recommendation from academic and/or professional references. Letters should address your experience or potential for working with children or schools.

Degree Requirements

Master in Teaching in Elementary Education

Graduate Major Requirements
44 Total Credits

Take the following:
ED-CIFS507 - Foundations of American Education (3)
ED-CIFS508 - Student Learning and Classroom Interactions (4)
ED-CIFS509 - Curriculum, Instruction, and Assessment (4)
ED-CIFS512 - Content-Specific and Integrated Methods for Teaching and Learning (3)
ED-CIFS550 - Seminar on Teaching and Learning (1)
ED-CIFS551 - Professional Practice (1)
ED-CIFS567 - MIT in Elementary Education Student Teaching Experience (9)
ED-ESP510 - Foundations of Practice (3)
ED-LLC512 - Literacy Field Experiences (1)
ED-LLC545 - Writing Instruction for Diverse Populations (3)
ED-LLC549 - Idaho Comprehensive Literacy Course (3)
ED-LLC561 - Advanced Integrated Disciplinary Literacy in the Social Sciences (3)
MATHED524 - Teaching and Learning Geometry (3)
MATHED557 - Teaching and Learning Number Concepts with Problem Solving (3)

The Master in Teaching in Elementary Education degree aligns with Idaho teaching certification in the following area: All Subjects (K-8). In addition, candidates select a second, supplemental subject-area endorsement with additional requirements. Additional requirements beyond coursework in the degree box are needed to earn an institutional recommendation for certification.

Grand Total Credits: 44

MASTER IN TEACHING IN SECONDARY EDUCATION

Graduate Program Coordinator: Serena Morales
Education Building, Room 518
(208) 426-1663 (phone)
serenamorales@boisestate.edu (email)
boisestate.edu/education-cifs/mit-secondary (website)

General Information

The Master in Teaching (MIT) in Secondary Education is a rigorous, cohort program leading to initial grades 6-12 teaching certification from the Idaho State Department of Education. This program is hybrid, in that some courses are online, while others are in-person. The program begins each May and includes three semesters: summer, fall, spring.

MIT Secondary Education students must satisfy the State requirements for coursework and credits in the area(s) in which they wish to endorse; a degree in a subject may not necessarily include the specific content and courses required for certification. Interested students must complete a transcript audit with the program coordinator to determine whether or not prerequisites have been met.

Program Admission Requirements

Complete all of the following
- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: December 1 (summer priority), March 15 (summer final)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
  - An application letter that describes why you want to enter the field of education. What skills and experiences contribute to your capacity to teach?
- Interview — All applicants are invited for an interview.
  - (if admitted) A Criminal Background Check
- Submit Letters of Recommendation
  - Two letters of recommendation from academic and/or professional references. Letters should address your potential to work with youth.

Degree Requirements

Master in Teaching in Secondary Education

Graduate Major Requirements
33 - 37 Total Credits

Complete all of the following
Take the following:
ED-CIFS507 - Foundations of American Education (3)
ED-CIFS508 - Student Learning and Classroom Interactions (4)
ED-CIFS509 - Curriculum, Instruction, and Assessment (4)
ED-CIFS550 - Seminar on Teaching and Learning (1)
ED-CIFS551 - Professional Practice (1)
ED-CIFS566 - MIT in Secondary Education Student Teaching Experience (12)
ED-ESP550 - Teaching Secondary Students with Exceptional Needs (3)
ED-LLC544 - Content Literacy in Secondary Schools (3)
Take between 2 and 6 credits from the following:
ART322 - Elementary School Art Methods for Art Education Majors (3)
ART351 - Secondary School Art Methods (3)
ED-CIFS534 - Teaching Secondary Social Studies (3)
ENGL380 - Teaching Readers of Literary Texts in English Language Arts Classrooms (3)
ENGL480 - Integrating the English Language Arts in Curriculum and Instruction (3)
STEM-ED410 - STEM Teaching Methods (3)
THEA318 - Methods Teach Secondary School Theater (2)
WORLD410 - Theories and Methods for Teaching a Second Language in Secondary Classrooms (3)
WORLD510 - Foundations of Second Language Development (3)

The Master in Teaching in Secondary Education degree aligns with Idaho teaching certification in the target content area(s) students select. Additional requirements beyond coursework in the degree box are needed to earn an institutional recommendation for certification.

Grand Total Credits: 33 - 37

GRADUATE CERTIFICATE IN MATHEMATICS INSTRUCTION, LEARNING, AND LEADERSHIP

Graduate Program Coordinator: Ramey Uriarte
Education Building, Room 319
(208) 426-1672 (phone)
rameyuriarte@boisestate.edu (email)
boisestate.edu/education-cifs/gc-mill/ (website)

General Information

The Graduate Certificate in Mathematics Instruction, Learning, and Leadership (GC-MILL) is focused on preparing and building the skills of individuals who are interested in improving their mathematical skills and understanding related to K-8 classroom instruction, coaching teachers, or becoming mathematics teacher leaders.

The program aim is to develop participants' expertise in the following areas:
- Knowledge and use of current and seminal research literature related to learning theories and progressions to improve instructional practice and student achievement for under-resourced populations
- Facilitate continuous improvements in student learning through examination of classroom instructional practices with a focus on meaningfully building all students' learning and application of the content and mathematical practice standards
- Facilitate evaluation of student work, discourse, and assessment data and determine appropriate instructional response(s) utilizing that information
- Demonstrate ability to facilitate mathematics professional development and collaboration among teachers, including support through professional learning communities
- Knowledge of learning theories and their meaningful application in multiple educational environments through the use of varied instructional resources

The GC-MILL program includes a variety of course options along with the required courses. The courses in the GC-MILL program are all taken for graduate credit and may be applied to other master's or doctoral level programs.

Program Admission Requirements

Complete all of the following
- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: August 1 (fall), December 15 (spring), April 15 (summer)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
- Submit Current Resume or Curriculum Vitae (CV)
  - A resume that includes your teaching experience, type, and state location of certification.

Certificate Requirements

Graduate Certificate in
Mathematics Instruction, Learning, and Leadership

Graduate Major Requirements

21 Total Credits

Complete all of the following

Take at least 3 of the following:

ED-CIFS540 - Foundations of Mathematics Instruction and Learning K-3 (3)

ED-CIFS541 - Applications of Teaching Early Numeracy and Operations (3)

ED-CIFS542 - Foundations of Mathematics Teaching & Learning 4-8 (3)

ED-CIFS543 - Applications of Teaching Rational Numbers and Proportional Reasoning (3)

ED-CIFS544 - Foundations of Mathematics Instructions and Learning 6-12 (3)

ED-CIFS545 - Applications of Teaching Algebra Topics (3)

Take the following:

ED-CIFS546 - Building Teacher Leaders of Mathematics (3)

ED-CIFS547 - Applications of Teaching Measurement & Geometry (3)

ED-CIFS548 - Applications of Teaching Data Analysis, Statistics, and Probability (3)

ED-CIFS549 - Action Research in a Mathematics Classroom (3)

Grand Total Credits: 21

Course Offerings

ED-CIFS—Curriculum, Instruction, and Foundational Studies

ED-CIFS501 Advanced Educational Psychology (3-0-3)(On Demand). A study of contemporary issues involving both theoretical and methodological considerations in the history and systems of educational psychology. Special emphasis will be given to group behavior in terms of principles relevant to educational objectives. PREREQ: ED-CIFS203 and PSYC 101.

ED-CIFS502 Comparative Education (3-0-3)(F/S/SU). A comparative analysis of multiple countries' educational systems. Contemporary educational systems are analyzed as instruments of national development, human development and social transformation.

ED-CIFS503 Fundamentals of Education Research (3-0-3)(F/S/SU). Examine the elements of research design. Learn to conduct systematic searches for current education research. Learn to annotate and analyze research articles, develop a research proposal, and discuss the complexity of ethics in research.

ED-CIFS504 Instructional Supervision (3-0-3)(F/S/SU). Designed to improve the instructional leadership skills of educators. Emphasis is placed on a variety of observation and learning-centered pedagogies designed to improve instruction.

ED-CIFS505 Philosophy of Education (3-0-3)(S,SU). Students will analyze and evaluate past and contemporary philosophies and the values derived from them as they apply to education. A formal paper will be required.

ED-CIFS506 Issues and Equity in Education (3-0-3)(F/S/SU). Examine historical and contemporary issues influencing access, equity, and excellence in U.S. education, in particular K-12 schooling. Learn about the complex workings of U.S. education and how that history impacts students, families, and communities today. Learn how to write for academic audiences, develop a white paper, and discuss the complexity of the U.S. education systems.

ED-CIFS507 Foundations of American Education (3-0-3)(S/SU). Historical, philosophical, sociological foundations of American education. Study of the historical development of public education in the United States, with special emphasis given to questions of power, equity, and inclusion; explore major schools of educational thought, as well as the philosophy of inclusion; and apply historical understanding and philosophical analysis to contemporary issues. PREREQ: Admitted to Elementary Education MIT or Secondary Education MIT.

ED-CIFS508 Student Learning and Classroom Interactions (2-2-4)(F). Theories of psychological and social development of children and adolescents as they apply to learning, motivation, and interaction, including the ranges of abilities and interests found in typical classrooms. Culturally appropriate classroom management strategies, including context, environment, procedures, tiered support for student behavior. PREREQ: ED-CIFS551.

ED-CIFS509 Curriculum, Instruction, and Assessment (2-2-4)(F). Curriculum and lesson planning, including the principles of backwards design and inquiry-based learning. Best practice instructional strategies, assessment of student learning, and differentiated instruction. PREREQ: ED-CIFS551.

ED-CIFS510 Introductory Statistics in Educational Research (3-0-3)(F). Basic parametric and non-parametric statistical procedures commonly used in educational research, including z-test, t-test, one-way analysis of variance, simple correlation, simple regression, and chi-square. Data analyses and interpretation procedures via computer-based statistical packages.

ED-CIFS511 Assessment and Evaluation (3-0-3)(F/S). Investigates formal and informal assessments of student, class, district, state, and national performance and achievement, and evaluation using appropriate standards. Practical applications creating relevant assessments of classroom learning are emphasized.

ED-CIFS512 Content-Specific and Integrated Methods for Teaching and Learning (3-0-3) (F). Content-specific teaching methods for content areas including but not limited to math, science, technology, engineering, the arts, physical education and wellness, literacy, and social studies. Additionally, a focus on cross-disciplinary instructional strategies centered on the meaningful integration. PREREQ: Admission to Master in Teaching in Elementary Education.

ED-CIFS520 Foundations of Gifted and Talented Education (3-0-3)(F/S/SU). An overview of gifted/talented education. Topics may include identification, assessments, talent areas, curriculum adaptations, social needs, critical and creative thinking, legal aspects, and resources. PREREQ: PSYC 101 and ED-CIFS203 or ED-CIFS302, or PERM/INST.

ED-CIFS521 Creativity and Critical Thinking Skills (3-0-3)(F/S/SU). Definition, identification, and facilitation of creativity and critical thinking skills. Topics may include overview, cognitive development, related brain research, assessment instruments, creative people, processes, and conditions for fostering creativity and models of critical thinking including creative problem solving. Demonstration of competency in identifying, fostering, assessing, demonstrating, and describing programs that foster creativity and critical thinking are required. PREREQ: PSYC 101 and ED-CIFS203 or ED-CIFS302, or PERM/INST.

ED-CIFS522 Social and Emotional Needs of Gifted and Talented Learners (3-0-3)(F/S/SU). Identification and basic intervention for basic affective needs of gifted and talented learners. Topics covered may include: emotional aspects of giftedness, suicide, perfectionism, underachievement, peer relations, gender issues, risk taking, family relations, cultural factors, twice exceptional, self-esteem, career counseling, asynchronous development, and counseling skills for teachers. PREREQ: PSYC 101 and ED-CIFS203 or ED-CIFS302, or PERM/INST.

ED-CIFS530 Advanced Practices and Principles in Teaching Social Science (3-0-3)(F). A comprehensive study of the practices and principles in social science education, including objectives, social problems, unit development, work-study skills, organization of the program materials and media, and research findings basic to social studies will be developed.

ED-CIFS531 Advanced Practices and Principles in Teaching Elementary School Mathematics (3-0-3)(S). Emphasis on creative methods and strategies for teaching elementary school mathematics. Also includes a review of current research, curriculum trends and exploration of experimentation with unique materials for teaching mathematics.

ED-CIFS533 Advanced Practices and Principles in Teaching Elementary Science (3-0-3)(F). Current practices and principles in modern elementary science concepts are developed. Emphasis is placed on the selection and organization of content and experimental activities.

ED-CIFS534 Teaching Secondary Social Studies (3-0-3)(F/S). This course will prepare teachers to engage young people in an inquiry about fundamental ideas and values from history and/or social science disciplines as well as to assist and encourage them to become informed, active participants in a democratic society. Students will examine professional literature on best teaching practices. PREREQ: Admission to Graduate Secondary Teacher Certification and ED-ESP550. COREQ: ED-LLC544 and ED-CIFS561.

ED-CIFS535 Secondary School Science Methods (3-0-3)(F/S). Students will examine local, state and national science curricula and standards. Students will use a variety of materials and methods, including appropriate instructional technologies, to develop science lessons which help all learners to develop scientific inquiry skills, an understanding of the nature of science, and critical understanding of selected science concepts and procedures. Students will also analyze current science educational journal articles and research. PREREQ: Admission into Graduate Teacher Certification and ED-ESP550. COREQ: ED-LLC544 and ED-CIFS561.

ED-CIFS536 Curriculum: Theory and Design (3-0-3)(F/S/SU). Examine multiple curriculum theories and practices. Develop an understanding of curriculum design, organization, implementation, and evaluation. Examine historical and current issues in curriculum. Apply theory to curriculum design and development.

ED-CIFS537 Instruction: Theory and Design (3-0-3)(F/S/SU). Examine multiple instructional theories, research, and practices. Analyze learning, development, and teaching theories as they relate to models of instruction. Learn how to design instruction to achieve specific purposes in a variety of educational settings and communicate with other professionals and laypeople about instruction-related issues.

ED-CIFS539 Curriculum Adaptations for Gifted and Talented Students (3-0-3)(F/S/SU). Curriculum adaptations for gifted and talented learners including curriculum compacting, independent study, project-based learning, research-based learning, enrichment programs, mentoring programs, acceleration, dual enrollment, and more. PREREQ: PSYC 101 and ED-CIFS203 or ED-CIFS302, or PERM/INST.

ED-CIFS540 Foundations of Mathematics Instruction and Learning K-3 (3-0-3)(F/S/SU). Examines how children develop an understanding of number sense, addition, subtraction, multiplication, division and algebraic reasoning. Emphasizes an investigative approach involving problem solving, reasoning and proof, connections, representations, and communication.

ED-CIFS541 Applications of Teaching Early Numeracy and Operations (3-0-3)(F/S/SU). Develops understanding of the important content and pedagogical knowledge in order to help children learn the concepts of early numeracy, counting, and early operations. Emphasis placed on an investigative approach including problem solving, reasoning and proof, representations, and communication.

ED-CIFS542 Foundations of Mathematics Teaching and Learning 4-8 (3-0-3) (SU). Examines how children develop an understanding of the foundational structure of rational numbers, rational number operations and algebraic reasoning. Emphasizes an investigative approach involving problem solving, reasoning and proof, connections, representations, and communication.

ED-CIFS543 Applications of Teaching Rational Numbers and Proportional Reasoning (3-0-3)(F/S/SU). Develops understanding of the important content and pedagogical knowledge in order to help children learn the concepts of rational numbers, algebraic reasoning and proportional thinking. Emphasis placed on an investigative approach including problem solving, reasoning and proof, representations, and communication.

ED-CIFS544 Foundations of Mathematics Instructions and Learning 6-12 (3-0-3)(F/S/SU). Examines how children develop an understanding of the foundational structure of equality, algebraic reasoning, generalizing, functions and modeling. Emphasizes an investigative approach involving problem solving, reasoning and proof, connections, representations, and communication.

ED-CIFS545 Applications of Teaching Algebra Topics (3-0-3)(F/S/SU). Develops understanding of the important content and pedagogical knowledge in order to help children learn the concepts of advanced algebraic concepts and calculus. Emphasis placed on an investigative approach including problem solving, reasoning and proof, representations, and communication.

ED-CIFS546 Building Teacher Leaders of Mathematics (3-0-3)(S). Explores leadership and coaching in the mathematics education field. Topics include professional development, coaching frameworks and skills as well as skills and strategies for teaching and working with adult learners. PREREQ: complete 2 of the following: ED-CIFS541, ED-CIFS543, ED-CIFS545, ED-CIFS547, ED-CIFS548.

ED-CIFS547 Applications of Teaching Measurement and Geometry (3-0-3)(F/S/SU). Develops understanding of the important content and pedagogical knowledge in order to help children learn the concepts of unit, zero, transitivity, conservation, shape and space. Emphasis placed on an investigative approach including problem solving, reasoning and proof, representations, and communication.

ED-CIFS548 Applications of Teaching Data Analysis, Statistics, and Probability (3-0-3)(F/S/SU). Develops understanding of the important content and pedagogical knowledge in order to help children learn the concepts of experimental and theoretical probability, the law of large numbers, sample space, independent and dependent events, central tendencies, and variation. Emphasis placed on an investigative approach including problem solving, reasoning and proof, representations, and communication.

ED-CIFS549 Action Research in a Mathematics Classroom (3-0-3)(S). Examines seminal and current research in mathematics education and instruction. Students focus on implementation of research based practices into classrooms and reflection. In addition, students will summarize and evaluate their findings based on their implementation. PREREQ: ED-CIFS541 or ED-CIFS543 or ED-CIFS545.

ED-CIFS550 Seminar on Teaching and Learning (1-0-1)(S). This seminar will focus on synthesizing field experiences. Teaching as decision-making, teacher inquiry, classroom learning environments, employment preparation, adaptation of instruction, collaboration, and legal issues affecting classrooms will be addressed. COREQ: ED-CIFS566, or ED-CIFS567 or PERM/INST.

ED-CIFS551 Professional Practice (1-0-1)(SU). Professional practice topics directly related to preparation for certification with an emphasis on professional dispositions for teacher education. PREREQ: Admitted to Elementary Education MIT or Secondary Education MIT.

ED-CIFS554 Survey Design and Data Collection (3-0-3)(F/S/SU). Introduction to the theory and strategies involved in survey design and data collection. Topics include best practices related to conducting interviews and focus groups, observational data collection efforts, and surveys that use both paper and online questionnaires. Emphasis is on experiencing data collection while focused on gathering quality and unbiased information from respondents. PREREQ: ED-CIFS510 or PERM/INST.

ED-CIFS555 Multilevel Modeling of Educational Data (3-0-3)(F/S/SU). Introduction to the theory and application of multilevel models to answer research questions with nested data structures. Topics include assumptions, model diagnostics, fixed and random effects, two- and three-level models, generalized multilevel linear models, and estimation. PREREQ: EDU556 or PERM/INST.

ED-CIFS556 Longitudinal Data Analysis (3-0-3)(F/S/SU). Overview of statistical models for analyzing repeated measures/longitudinal data. Topics include general linear model and linear mixed models for analyzing correlated continuous data, generalized linear models and transition models for analyzing correlated discrete data, diagnostics and model checking, and missing data and non-response issues. PREREQ: EDU556 or PERM/INST.

ED-CIFS558 Supervised Clinical Field Experience (1-6 credits)(F/S/SU). Required supervision for candidates adding an endorsement to current teaching certificate or for alternate route initial certification. Full-time classroom placement with performance assessment aligned with state certification requirements. Placement and credits required determined by Office of Teacher Education.

ED-CIFS561 Professional Year—Teaching Experience I (0-10-3)(F). Students work with master teachers for 150 hours. They observe the teaching/learning process and demonstrate competence in a K-12 school setting. (Pass/Fail.) PREREQ: Admission to Graduate Certificate in Secondary/K-12 Teaching.

ED-CIFS562 Professional Year—Elementary Teaching Experience II K-12 Option (1-40-6)(S). This course is reserved for students who are seeking an endorsement to teach in specific disciplines in grades 1-8. Students are given assignments in elementary schools where they observe and teach for one-half semester under the supervision of a master teacher and a university supervisor. Available for Art, Music, and Physical Education majors only. (Pass/Fail.) PREREQ: Admission to Graduate Certificate in Secondary/K-12 Teaching and approval for placement in an appropriate classroom setting.

ED-CIFS566 MIT in Secondary Education Student Teaching Experience (1-40-12)(S). Supervised student teaching experience, including activities related to planning and preparation, classroom environments, curriculum and instruction, and professional responsibilities. Students will complete a full-time teaching experience consistent with the calendar of the assigned partnership school in his/her target endorsement areas under the supervision of university faculty. (Pass/Fail.) PREREQ: Admission to Secondary Education MIT.

ED-CIFS567 MIT in Elementary Education Student Teaching Experience (0-32-9)(S). Student teaching experience in a K-8 school, including activities related to planning and preparation, classroom environments, curriculum and instruction, and professional responsibilities. Students will complete a full-time teaching experience consistent with the calendar of the assigned partnership school. (Pass/Fail.) PREREQ: Admitted to Elementary Education MIT.

ED-CIFS568 Equity and Access Issues in Education (3-0-3)(S/SU). Students explore equity, access, and social justice issues in informal and formal educational spaces. In addition to reading and making connections across relevant sets of literature, students apply the ideas from literature to a research project.

ED-CIFS574 Action Research and Practicum in Gifted and Talented Education (0-10-3)(F/S/SU). Emphasizes the application of knowledge and skills to the development and administration of gifted and talented programs. All students are required to complete a 150 hour practicum during which they demonstrate the required competencies for the gifted and talented endorsement. Students design and conduct an action research project related to the field of gifted and talented education.

ED-CIFS575 Teacher Leadership (6-0-6)(F/S/SU). Emphasizes essential knowledge, skills and dispositions to serve as the foundational framework for instructional leadership. Emphasis includes developing collaborative cultures at the classroom, team, school and district levels. Participation in simulations is required of all students.

ED-CIFS576 Leadership Foundation (6-0-6)(F/S/SU). This module emphasizes essential knowledge, skills and dispositions to serve as the foundation for candidates pursuing positions of leadership, including study of the political, social, cultural and economic systems that support and affect schools and the theoretical principles underlying effective leadership. Emphasis includes developing conceptual frameworks to lead and manage 1) schools and school systems, 2) change and improvement, and 3) self, others and relationships. Participation in simulations is required of all students.

ED-CIFS577 Leading Teaching and Learning (6-0-6)(F/S/SU). This module emphasizes the knowledge, skills and dispositions of an effective instructional leader who is expected to influence, manage, monitor and ensure the quality of curriculum, instruction and assessment in schools and classrooms. Students will investigate aspects of curriculum theory, supervision, characteristics of effective teaching for diverse learners, strategies for assessment, and professional development. Participation in simulations is required of all students. PREREQ: ED-CIFS576.

ED-CIFS578 Leading System Change (6-0-6)(F/S/SU). This module emphasizes the knowledge, skills and dispositions necessary to create school and district cultures, conditions and capabilities that support high levels of achievement for all students. Students learn to build relationships with all stakeholders, to use processes for creating system change, and to optimize the use of school funding. Participation in simulations is required of all students. PREREQ: ED-CIFS576.

ED-CIFS579 Educational Leadership Clinical Experience (1-15-6)(F). This module places candidates in approved partnership schools. Candidates meet in scheduled university classes throughout the experience. Individual work plans are developed collaboratively with candidate, mentor, and advisor. Contracts include required and elective activities, performance outcomes, reading requirements. (Pass/Fail.) PREREQ: ADM/PROG or PERM/INST.

ED-CIFS 612 Strategies for School Improvement (3-0-3)(F/S/SU). Students will explore contemporary strategies being tried or proposed to bring about ongoing improvement in the schools. There will be an emphasis on participatory approaches to school change, collaboration and partnership building, the role of technology, attention to cultural diversity, and conflict resolution strategies. Students will work on projects through which they will transform their emerging theories of change into plans for making change happen in their schools. Special emphasis will be placed on preparation for school-based decision making. PREREQ: Graduate status.

ED-CIFS 620 Field Experience: Underachieving Learners (0-4-2)(F/S/SU). This field experience enables participants to bridge the current knowledge base on effective practice and program design with the needs of underachieving learners, their families, schools, and community agencies. Through in-depth field study, students will gain better understanding of underachieving learners and programs designed to meet their needs. PREREQ: EDU653.

ED-CIFS 621 Field Experience: School Improvement (0-4-2)(F/S). Students will participate in schools and other educational settings that are involved in exemplary educational improvement projects; curriculum development efforts; and professional development activities, including the planning, implementation, and evaluation of such programs. PREREQ: ED-CIFS 620.

ED-CIFS 661 Pedagogical Practices in Education (3-0-3)(F/S/SU). Pedagogical practices and professional development including social, political, cultural and historical influences, and practices of instructional leadership. PREREQ: ED-CIFS537.

ED-CIFS 664 Seminar in Curriculum and Instruction (3-0-3)(F/SU). In this culminating seminar, students will synthesize their learning from prior coursework and field experiences and examine educational issues relevant to their respective professional careers. PREREQ: EDU660 and EDU662.

ED-CIFS 676 Foundations of Leading Complex Educational Organizations (6-0-6)(F/S/SU). Introduces several constructs related to leading complex educational organizations, including leadership theory, organizational theory, how policy works, the moral imperative of educational leadership in addressing persistent problems of practice, and the role of district-level leaders in improving learning. Explores connections between leadership and learning, as well as the role of superintendent and district-level leadership in promoting systemic innovation and change. PREREQ: Admission to Executive Educational Leadership Program.

ED-CIFS 677 Leading Continuous System-Wide Improvement of Learning (6-0-6)(F/S/SU). Students examine the role of the superintendent and district-level leadership in continuous improvement of learning on three levels—student learning, professional learning, and system learning. Students explore the meaning and the implications for leaders of contemporary reform movements in the public school. Students investigate the nature and dynamics of organizations within large educational systems, exploring how organizations are designed and function, how policy works, and how systems change, adapt, and learn. Finally, students consider the role of superintendent and district-level leadership in fostering partnerships with local, state, and national entities to enhance system-wide educational opportunities for all students. PREREQ: ED-CIFS676.

ED-CIFS 678 The Superintendency and Executive Level Leadership: Theory and Research (6-0-6)(F/S/SU). Students investigate the theory, research, and practice related to the contemporary demands of the superintendency and other executive-level leadership roles. Critical issues and problems of practice are explored, including effective and efficient governance of the district; budgeting processes; personnel management and development; staff relations; superintendent-board relations; bond issues; facilities planning; and superintendent as instructional leader. Students examine the procedures and techniques pertinent to the management of organizational conflict, including collective bargaining, grievance procedures, mediation, fact-finding, and arbitration. Emphasis is placed on examining the dynamics of the interface between the public schools and the community. PREREQ: ED-CIFS677.

ED-CIFS 679 The Superintendency and Executive Level Leadership: Clinical Experience (6-0-6)(F/S/SU). This module places candidates in approved partnership districts for an extended clinical experience focus. Introduces students to systematic inquiry—fundamental ideas about knowing and knowledge, data and evidence, and the applications of these ideas in settings that invite leadership action to address educational issues. Individual student work plans are developed collaboratively with mentor and advisor. PREREQ: ED-CIFS678.

ED-CIFS 680 The Superintendency and Executive Level Leadership: Capstone Course (6-0-6)(F/S/SU). Students engage in systematic inquiry in the context of their on-going clinical experience, creating viable, rigorous designs for action-oriented research into local problems of practice. Students develop data collection tools, produce high-quality quantitative and qualitative data, and construct evidence for claims. This module equips system-level leaders with the skills, knowledge, and dispositions to foster a district-wide culture of inquiry and continuous improvement evidenced by authentic and productive strategic planning, high-quality program evaluation, and other forms of data-based decision making. PREREQ: ED-CIFS679.

Cyber Operations and Resilience Program

College of Engineering

Department of Electrical and Computer Engineering
Micron Engineering Center, Room 403K/411B
(208) 426-5921 (phone)
cybergrad@boisestate.edu (email)
core@boisestate.edu (email)

Program Director: Sin Ming Loo

Graduate Degrees Offered

- Master of Science in Cyber Operations and Resilience
- Graduate Certificate in CORe Analyst and Threat Intelligence
- Graduate Certificate in CORe Governance Policy Administration
- Graduate Certificate in CORe Resilience Engineering

Program Statement

A holistic system approach is at the heart of the Cyber Operations and Resilience (CORe) program. CORe prepares learners to think about the system being managed, the risks presented and how resilience can be achieved. It is not just cybersecurity; it is not just cyber and physical. CORe is also about understanding the interdependencies interacting with the system in order for it to operate. It emphasizes the interrelations of people, process, and technology and how understanding and strengthening these interdependencies can lead to a more resilient system.

CORe is designed around the realities of today's broad cyber landscape; that breaches will occur in any system over time and building resilience into systems to detect, respond, and return in a timely and orderly fashion is needed. The Master of Science in Cyber Operations and Resilience, and three graduate certificates (CORe Analyst and Threat Intelligence, Governance Policy Administration and Resilience Engineering) enable students who have a technical or non-technical degree, military members and working professionals with an undergraduate degree in any field to participate.

MASTER OF SCIENCE IN CYBER OPERATIONS AND RESILIENCE

Graduate Program Coordinator: Sin Ming Loo
Program Administrator: Michelle Steffens
Micron Engineering Center, Room 403K/411A
(208) 426-1896 (phone)
core@boisestate.edu (email)
boisestate.edu/online/masters-cyber-operations-and-resilience (website)

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page
  - Deadlines: July 15 (fall), December 1 (spring), April 15 (summer)
- Submit English Proficiency*, see page
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Personal Statement
  - A personal statement that addresses how this program of study directly connects to your career goals and/or advancement, as well as your professional motivation to complete the program.
- Submit Current Resume or Curriculum Vitae (CV)
  - A resume or curriculum vitae that includes your work experience in a technology-related or non-technology-related profession.

Degree Requirements

Master of Science in Cyber Operations and Resilience

Graduate Major Requirements
10 Total Credits

Complete all of the following
  Take the following:
    CORE500 - Cyber Systems Thinking (3)
    CORE501 - Cyber Risk Assessment (1)
  Complete all of the following
    Take at least 6 credits from the following:
      CORE502 - Cyber Threat Modeling (1)
      CORE503 - Information Assurance (1)
      CORE510 - Applied Cybersecurity Programming (1)
      CORE511 - Artificial Intelligence and Machine Learning (1)
      CORE512 - Introduction to Deep Learning (1)
      CORE513 - Internet of Things Architecture (1)
      CORE514 - Cyber Informed Engineering (1)
      CORE520 - Cyber Security Operations Center (1)
      CORE521 - Cyber Business and Regulatory Operations (1)
      CORE522 - Cyber Red and Blue Teams (1)
    or 6 credits of Approved Electives

Graduate Culminating Activity and Other Requirements
20 Total Credits
  Complete 1 of the following
    Take at least 18 credits from the following: CORE courses
      Complete 2 of the following
        Governance Policy Administration
          Take the following:
            CORE570 - Cyber Risk Management (3)
            CORE571 - Cyberlaw, Ethics, and Policy (3)
            CORE572 - Cybersecurity Governance and Compliance (3)
        Resilience Engineering
          Take the following:
            CORE560 - Cyber Resilience Systems Design (3)
            CORE561 - Network Design and Exploitation Techniques (3)
            CORE562 - Resilience Coding and Architecture of Devices (3)
        Analyst and Threat Intelligence
          Take the following:
            CORE550 - Cyber Threat Intelligence (3)
            CORE551 - Cyber Warfare and Conflicts (3)
            CORE552 - Cyber Digital and Signal Intelligence (3)
    Take at least 2 credits from the following:
      CORE591 - Project (1 - 12)
      CORE578 - Teaching (1)
      CORE579 - Certification (1)

Grand Total Credits: 30

GRADUATE CERTIFICATE IN CORE ANALYST AND THREAT INTELLIGENCE

Graduate Program Coordinator: Sin Ming Loo
Program Administrator: Michelle Steffens
Micron Engineering Center, Room 403K/411A
(208) 426-1896 (phone)
core@boisestate.edu (email)
boisestate.edu/online/graduate-certificate-analyst-and-threat-intelligence (website)

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: July 15 (fall), December 1 (spring), April 15 (summer)
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Personal Statement
  - A personal statement that addresses how this program of study directly connects to your career goals and/or advancement, as well as your professional motivation to complete the program.
- Submit Current Resume or Curriculum Vitae (CV)
  - A resume or curriculum vitae that includes your work experience in a technology-related or non-technology-related profession.

Certificate Requirements

Graduate Certificate in CORe Analyst and Threat Intelligence

Graduate Major Requirements
9 Total Credits
Take the following:
  CORE550 - Cyber Threat Intelligence (3)
  CORE551 - Cyber Warfare and Conflicts (3)
  CORE552 - Cyber Digital and Signal Intelligence (3)
Grand Total Credits: 9

GRADUATE CERTIFICATE IN CORE GOVERNANCE POLICY ADMINISTRATION

Graduate Program Coordinator: Sin Ming Loo
Program Administrator: Michelle Steffens
Micron Engineering Center, Room 403K/411A
(208) 426-1896 (phone)
core@boisestate.edu (email)
boisestate.edu/online/graduate-certificate-governance-and-policy-administration (website)

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: July 15 (fall), December 1 (spring), April 15 (summer)
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Personal Statement
  - A personal statement that addresses how this program of study directly connects to your career goals and/or advancement, as well as your professional motivation to complete the program.
- Submit Current Resume or Curriculum Vitae (CV)
  - A resume or curriculum vitae that includes your work experience in a technology-related or non-technology-related profession.

Certificate Requirements

Graduate Certificate in CORe Governance Policy Administration

Graduate Major Requirements
9 Total Credits
Take the following:
  CORE570 - Cyber Risk Management (3)
  CORE571 - Cyberlaw, Ethics, and Policy (3)
  CORE572 - Cybersecurity Governance and Compliance (3)
Grand Total Credits: 9

GRADUATE CERTIFICATE IN CORE RESILIENCE ENGINEERING

Graduate Program Coordinator: Sin Ming Loo
Program Administrator: Michelle Steffens
Micron Engineering Center, Room 403K/411A
(208) 426-1896 (phone)
core@boisestate.edu (email)
boisestate.edu/online/graduate-certificate-resilience-engineering (website)

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: July 15 (fall), December 1 (spring), April 15 (summer)
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Personal Statement
  - A personal statement that addresses how this program of study directly connects to your career goals and/or advancement, as well as your professional motivation to complete the program.
- Submit Current Resume or Curriculum Vitae (CV)
  - A resume or curriculum vitae that includes your work experience in a technology-related or non-technology-related profession.

Certificate Requirements

Graduate Certificate in CORe Resilience Engineering

Graduate Major Requirements
9 Total Credits
Take the following:
  CORE560 - Cyber Resilience Systems Design (3)
  CORE561 - Network Design and Exploitation Techniques (3)
  CORE562 - Resilience Coding and Architecture of Devices (3)
Grand Total Credits: 9

Course Offerings

CORE—Cyber Operations and Resilience

CORE500 Cyber Systems Thinking (3-0-3)(F,S,SU). An introduction to systems thinking, lateral thinking, and resilience thinking as they relate to cybersecurity. Topics include understanding the complexity/interconnectedness of cybersecurity, applying lateral thinking in solving cyber problems, interacting among people, processes, and technologies, and managing disturbances/surprises/uncertainty to be more resilient.

CORE501 Cyber Risk Assessment (1-0-1)(F,S,SU). A study of risk assessment and management techniques, methods, and models used in industry to minimize, control and communicate risks, including NIST and OWASP. COREQ: CORE500

CORE502 Cyber Threat Modeling (1-0-1)(S). A study of the practice of identifying and prioritizing potential threats and security mitigations to protect something of value. COREQ: CORE500.

CORE503 Information Assurance (1-0-1)(S). An introduction to the practice of using people, process, technology, and metrics to assure security of information and risk management. COREQ: CORE500

CORE510 Applied Cybersecurity Programming (1-0-1)(SU). An introduction to Python and Powershell, and how these can be used to simplify cyber related tasks. COREQ: CORE500

CORE511 Artificial Intelligence and Machine Learning (1-0-1)(F). An overview of how machine learning and artificial intelligence can be applied to cybersecurity. COREQ: CORE500

CORE512 Introduction to Deep Learning in Cybersecurity (1-0-1)(S). An introduction to deep learning algorithms and how to design deep learning for cyber security. PREREQ: CORE511. COREQ: CORE500

CORE513 Internet of Things Architecture (1-0-1)(S). An introduction to embedded systems, basic concepts of IoT, and making smart things. This covers IoT architecture including sensor, hardware, firmware, internet connection, and data mining. COREQ: CORE500

CORE514 Cyber Informed Engineering (1-0-1)(F). An overview of how to embed cyber security in systems design. COREQ: CORE500

CORE520 Cyber Security Operations Center (1-0-1)(F). An overview of centralized security functions where people, processes, and technology are employed to continuously monitor and improve an organization's security posture while preventing, detecting, analyzing, and responding to cybersecurity incidents. COREQ: CORE500

CORE521 Cyber Business and Regulatory Operations(1-0-1)(SU). An introduction to existing regulations that companies and organizations must follow to safeguard information and systems. COREQ: CORE500

CORE522 Cyber Red and Blue Teams (1-0-1)(S). A study of how how to think like a blue team and how to think like a red team. COREQ: CORE500

CORE550 Cyber Threat Intelligence (3-0-3)(F,S). A study and experimentation of platforms, open source tools, and techniques for cyber threat intelligence. The connection between cyber threat intelligence and risk assessment. Advanced practicum in artificial intelligence applications in cyber threat intelligence. COREQ: CORE500

CORE551 Cyber Warfare and Conflicts (3-0-3)(F,SU). An examination of cyber warfare and conflicts. An international issue that spans across nation-state borders and how it impacts cyber and physical infrastructure interdependencies. COREQ: CORE500

CORE552 Cyber Digital and Signal Intelligence (3-0-3)(S,SU). A study of cryptographic mechanisms and cryptographic threat assessments to critical information infrastructures. Topics include the advances in electronics hardware, software, network, and quantum computing. Side channel attacks and signal intelligence/collection. COREQ: CORE500

CORE560 Cyber Resilience Systems Design (3-0-3)(F,S). A study of resilient systems, networks and infrastructure design on the ability to anticipate, withstand, recover from, and adapt to adverse conditions, stresses, attacks, or compromises. COREQ: CORE500

CORE561 Network Design and Exploitation Techniques (3-0-3)(F,SU). A study of information technology and industrial networking exploitation. An examination of advances in network attacks and exploitation techniques. Analyze the layers of design to increase infrastructure interconnection network resiliency. COREQ: CORE500

CORE562 Resilience Coding and Architecture of Devices (3-0-3)(S,SU). A study and application of how low-level hardware and software can be exploited and defended. The architecture of devices and systems for resiliency. The use of secure coding and defense against counterfeiting devices. COREQ: CORE500

CORE570 Cyber Risk Management (3-0-3)(F,SU). An overview of cyber security risk management frameworks and practices. Students will model cybersecurity risks and apply both qualitative and quantitative risk assessment methods.

CORE571 Cyberlaw, Ethics, and Policy (3-0-3)(F,S). An examination of laws, regulations, ethics, policy, and executive orders for data protection and privacy. Topics include national security issues, ethics, data protection, digital forensics, physical evidence, incident response, and event administration and management. COREQ: CORE500

CORE572 Cybersecurity Governance and Compliance (3-0-3)(S,SU). A study and application of organization cyber governance, risk, and compliance management in cyberspace. Learners will look into the business context of key stakeholders, corporate culture, and organization risks. Industry standards and frameworks will be used. COREQ: CORE500

CORE578 Teaching (0-0-1)(F,S,SU). One semester/one course of teaching in the area of cyber and physical resilience teaching at regional community college or university. (Pass/Fail.)

CORE579 Certification (0-0-1)(F,S,SU). Obtain one industry certification. (Pass/Fail.)

CORE591 Project (1-12 credits)(F,S,SU). Execution of a substantial exercise that demonstrates the ability to successfully and independently carry out a professional activity similar to what is encountered in the professional workplace; archival of the results of the project is required according to standards approved by the Graduate College. May be repeated for credit. (Pass/Fail.) PREREQ: PERM/INST.

Master of Science in Cybersecurity

College of Arts and Sciences | College of Business and Economics | College of Engineering

MASTER OF SCIENCE IN CYBERSECURITY

Department of Computer Science
Program Coordinator: Jyh-haw Yeh
City Center Plaza, Room 247
(208) 426-3034 (phone)
jhyeh@boisestate.edu (email)

Department of Information Technology and Supply Chain Management
Program Coordinator: Doug Twitchell
Micron Business and Economic Building, Room 2110
(208) 426-1095 (phone)
dougtwitchell@boisestate.edu (email)

Department of Mathematics
Program Coordinator: Liljana Babinkostova
Mathematics Building, Room 237A
(208) 426-2896 (phone)
liljanababinkostova@boisestate.edu (email)

boisestate.edu/ms-cybersecurity/ (website)

Graduate Degree Offered

- Master of Science in Cybersecurity

General Information

The Master of Science in Cybersecurity builds knowledge and skills of security specialists to effectively protect the safety and prosperity of companies, communities and the nation. The mission of the program is to engage students in an interdisciplinary approach on the security aspects of software, modern cryptographic systems, and security program management.

Program Admission Requirements

Complete all of the following
- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: August 1 (fall), December 15 (spring)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
  - Applicants with a GPA less than 3.00 may be considered for provisional admission.
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Personal Statement
- Submit Current Resume or Curriculum Vitae (CV)

Degree Requirements

Master of Science in Cybersecurity

Computer Science Emphasis
Graduate Major Requirements
27 Total Credits

Complete all of the following
  Take the following:
    CYBER500 - Introduction to Cybersecurity (3)
    CS507 - Computing Foundations for Computational Science (3)
    CS508 - Network and System Foundations for Cybersecurity (3)
  Take at least 4 of the following:
    CS524 - Cyber Security of Critical Infrastructures (3)
    CS523 - Cyber-Physical Systems (3)
    CS547 - Digital Forensics (3)
    CS567 - Applied Cryptography (3)
    CS575 - Software Security (3)
    CS622 - Advanced Network Security (3)
  Complete all of the following

Take at least 2 of the following:
  CS510 - Databases (3)
  CS525 - Computer Networks (3)
  CS552 - Operating Systems (3)
  CS554 - Advanced Operating Systems (3)
  CS555 - Distributed Systems (3)
  ITM556 - Information Security Management (3)
  ITM557 - Security Analytics (3)
  MATH508 - Advanced Asymmetric Cryptography and Cryptanalysis (3)
  MATH509 - Symmetric Key Cryptography and Cryptanalysis (3)
Or other courses approved by the program.

Graduate Culminating Activity and Other Requirements
3 Total Credits

Complete 1 of the following
  Take at least 3 credits from the following:
    CYBER590 - Practicum/Internship (1 - 12)
  Take at least 3 credits from the following:
    CYBER692 - Cyber Capstone Course (1 - 4)

Grand Total Credits: 30

Cryptanalysis and Signals Analysis Emphasis
Graduate Major Requirements
27 Total Credits

Complete all of the following
  Take the following:
    CYBER500 - Introduction to Cybersecurity (3)
    MATH504 - Number Theory (3)
    MATH572 - Computational Statistics (3)
  Take at least 4 of the following:
    ECE650 - Stochastic Signals and Systems (3)
    MATH508 - Advanced Asymmetric Cryptography and Cryptanalysis (3)
    MATH509 - Symmetric Key Cryptography and Cryptanalysis (3)
    MATH510 - Quantum and Post Quantum Cryptography (3)
    MATH667 - Advances in Applied Cryptography (3)
  Complete all of the following
    Take at least 2 of the following:
      CS523 - Cyber-Physical Systems (3)
      CS534 - Machine Learning (3)
      CS561 - Theory of Computation (3)
      ECE650 - Stochastic Signals and Systems (3)
      ECE651 - Information and Coding Theory (3)
      ITM556 - Information Security Management (3)
      MATH506 - Advanced Algebra (3)
      MATH562 - Probability and Statistics (3)
      MATH667 - Advances in Applied Cryptography (3)
    Or other (not dual-listed) courses approved by the program.

Graduate Culminating Activity and Other Requirements
3 Total Credits

Complete 1 of the following
  Take at least 3 credits from the following:
    CYBER590 - Practicum/Internship (1 - 12)
  Take at least 3 credits from the following:
    CYBER692 - Cyber Capstone Course (1 - 4)

Grand Total Credits: 30

Management Emphasis
Graduate Major Requirements
28 - 31 Total Credits

Complete all of the following
  Take at least 1 of the following:
    CYBER500 - Introduction to Cybersecurity (3)
    ITM555 - Information Security (3)
  Take the following:
    BUSMBA500 - Introduction and Business Foundations (1)
    ITM556 - Information Security Management (3)
    ITM557 - Security Analytics (3)
  Take at least 1 of the following:
    BUSMBA501 - Design Thinking and Strategic Management (4)
    MBA514 - Innovation Driven Advantage (3)
    MBA531 - Strategic Perspectives (3)

Take at least 1 of the following:
  BUSMBA540 - Managing Successful Projects (4)
  MBA503 - Managing Successful Projects (3)
  MBA549 - Successful Project Management (3)
Take at least 1 of the following:
  BUSMBA510 - People and Organizations (4)
  MBA522 - Leading People and Organizations (3)
  MBA532 - Organizational Issues and Leadership (3)
Complete all of the following
  Take at least 9 credits from the following:
    BUSMBA535 - Information Technology & Business Alignment (4)
    CS524 - Cyber Security of Critical Infrastructures (3)
    CS546 - Computer Security (3)
    CS575 - Software Security (3)
    ITM530 - Predictive Analytics (3)
    ITM560 - Cloud Computing (3)
    MATH508 - Advanced Asymmetric Cryptography and
      Cryptanalysis (3)
    MATH509 - Symmetric Key Cryptography and Cryptanalysis (3)
    MBA509 - Data Management and Analytics (3)
    MBA510 - Operations and Supply Chain Management (3)
    MBA569 - Information Technology & Process Management (3)
  Or other courses approved by the program.

Graduate Culminating Activity and Other Requirements
3 Total Credits
  Complete 1 of the following
    Take at least 3 credits from the following:
      CYBER590 - Practicum/Internship (1 - 12)
    Take at least 3 credits from the following:
      CYBER692 - Cyber Capstone Course (1 - 4)
Grand Total Credits: 31 - 34

Course Offerings

CYBER—Cybersecurity

CYBER500 Introduction to Cybersecurity (3-0-3)(F/S). Introduction to various aspects of cybersecurity, including roles and responsibilities, threats and vulnerabilities, policies, risk management, information assurance, quantifying information content, algorithmic, software and hardware storage, transport and safeguarding of information, technology and human factors.

CYBER692 Cyber Capstone Course (1-4 credits)(F,S). A final comprehensive assessment of the knowledge and skills of a master's student in the major field of study. A culminating activity taken in the last semester of a master's program. Either graded or pass/fail.

Drone Operations for Visualization, Research, and Resource Management

College of Innovation and Design

Director: Jen Schneider
Albertsons Library, Room 201J
(208) 426-2975 (phone)
dronecertificate@boisestate.edu (email)
boisestate.edu/dronecertificate (website)

Graduate Faculty: Cattau, Caughlin, Johnson

Graduate Certificate Offered

- Graduate Certificate in Drone Operations for Visualization, Research, and Resource Management

GRADUATE CERTIFICATE IN DRONE OPERATIONS FOR VISUALIZATION, RESEARCH, AND RESOURCE MANAGEMENT

Program Coordinator: Megan Cattau
Environmental Research Building, Room 4135
(208) 426-2958 (phone)
megancattau@boisestate.edu (email)

General Information

Drone Operations for Visualization, Research, and Resource Management (DOVRR) is an interdisciplinary graduate certificate program that trains participants to plan, lead, and implement projects using drone technology, or Unoccupied Aerial Systems (UAS). Upon completing the program, students will be licensed drone operators with the skills to enter the workforce as capable drone practitioners and researchers.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 15 (fall priority) August 1 (fall final), September 15 (spring priority), December 15 (spring final)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
  - An application letter that is no more than 1000 words. Explaining your interest in the program and how the program relates to your broader educational and professional goals.
- Submit Letters of Recommendation
  - A letter of recommendation from a supervisor or academic instructor. The letter should address your suitability for success in a graduate certificate program, your engagement with and knowledge of your chosen field of study, and your potential ability to lead projects using UAS (i.e. drone) technology.

Degree Requirements

Graduate Certificate in Drone Operations for Visualization, Research, and Resource Management

Graduate Major Requirements
Complete all of the following
  Take the following:
    COID581 - Introduction to Unoccupied Aerial Systems (UAS) Flying (1)
    COID582 - Unoccupied Aerial Systems (UAS) Flight Planning and Operations (2)
    COID583 - Federal Aviation Administration (FAA) Unoccupied Aerial Systems (UAS) Pilot Licensing Material (1)
  Complete 1 of the following
    Take at least 3 credits from the following:
      GEOG562 - Geographic Information Analysis (3)
      GEOS661 - Advanced Image Processing (3)
      HES610 - Spatial Analysis (3)
      or a 3-credit course approved by the program coordinator.
  Complete 1 of the following
    Take at least 3 credits from the following:
      COID584 - Unoccupied Aerial Systems (UAS) Geographic Information Systems (GIS) and Spatial Analysis (3)
    or a 3-credit course approved by the program advisor.
  Grand Total Credits: 10

Course Offerings

COID—College of Innovation and Design

COID581 Introduction to Unoccupied Aerial Systems (UAS) Flying (1-0-1)(F/S). Introduction to UAS technology. Practice manipulating the equipment with controllers to increase proficiency in flight skills. Gain exposure to how drones are used across various disciplines and industries. Prepares students to craft a vision for how UAS could be used in graduate research. PREREQ: Must have a class standing of graduate.

COID582 Unoccupied Aerial Systems (UAS) Flight Planning and Operations (2-0-2)(F/S). Introduces the primary components of the drone-based workflow from start to finish. Overview of defining goals, selecting equipment, safety and regulations, mission planning (software and principles), fieldwork (piloting, equipment planning and preparation, geolocation), data management, data products and analysis (photogrammetry and spatial analysis), communication, visualization, and innovation. Prepares students to create and implement a start to finish workflow using UAS. PREREQ: COID581 or PERM/INST.

COID583 Federal Aviation Administration (FAA) Unoccupied Aerial Systems (UAS) Pilot Licensing Material (1-0-1)(F/SU). Companion study course that prepares students to master the test required to be an FAA-certified drone pilot and receive a Part 107 license. Topics may include regulations, airspace, weather, UAS loading, emergency procedures, crew resource management, radio communication, determining the performance of UAS, pilot performance, decision-making and judgment, airport operations, maintenance, and preflight inspection procedures (subject to change in accordance with current FAA requirements). Students analyze airspace and regulations at the site of their work. Students register for the exam at a qualified testing center and receive their license upon passing the exam. (Pass/Fail.) PREREQ: Must have a class standing of graduate.

COID584 Unoccupied Aerial Systems (UAS) Geographic Information Systems (GIS) and Spatial Analysis (3-0-3)(F/S). Visualize and analyze UAS-derived spatial data with advanced GIS tools. Working with UAS-derived spectral and structural products, integration with other datasets, spatial analysis, and cartographic principles. Students plan and execute a project from start to finish comprehensively and independently. PREREQ: COID582, COID583; one of the following: GEOG560, GEOG561, GEOG562, GEOS661, HES610 or a student may propose a course (3 credits) that has a focus on spatial analysis with instructor approval or PERM/INST.

Department of Early and Special Education

College of Education

Chair: Patricia Hampshire
Education Building, Room 205
(208) 426-5464 (phone)
patriciahampshire@boisestate.edu (email)
boisestate.edu/education-esp (website)

Graduate Faculty: Beymer, Carter, Ford, Hampshire, Humphrey, Nelson, Pool

Graduate Degrees Offered

- Master of Education in Early and Special Education
- Master in Teaching in Special Education
- Graduate Certificate in Assistive Technology
- Graduate Certificate in Behavioral Interventions and Supports

MASTER OF EDUCATION IN EARLY AND SPECIAL EDUCATION

Graduate Program Coordinator: Patricia Hampshire
Education Building, Room 209
(208) 426-1548 (phone)
patriciahampshire@boisestate.edu (email)
boisestate.edu/education-esp/med-ese (website)

General Information

The Master of Education (MEd) in Early and Special Education degree program at Boise State University is designed to offer enhanced professional development in the related fields of early childhood intervention and special education for experienced educators and other professionals who provide supports and services to individuals with disabilities. These individuals may be employed as early childhood interventionists, P-12 general or special education teachers, or may work with or on behalf of young children with disabilities and their families in community or agency settings. This program allows flexibility for students to structure a program around their professional interests and also allows students to complete a graduate certificate program concurrently. The MEd in Early and Special Education does not lead to initial teacher certification nor does it require certification for admission.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: February 1 (fall priority), March 1 (fall final), March 1 (summer)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
  - An application letter that includes the following: a) A description of your career goals and professional interests and how the program will help you attain them, and b) An explanation of why you are choosing the program and why you will be a successful graduate student.

- Submit Writing Sample
  - Candidates are provided with scenarios at the time of the personal interview, You will be expected to respond to the prompts from the perspective of a future teacher.
- Interview — All applicants are invited for an interview. The interview is a group interview with a faculty panel.
- Submit Letters of Recommendation
  - Two letters of recommendation from those who are in a position to speak knowledgeably of your ability to work with individuals with diverse learning and behavior needs.
- Submit Graduate Assistantship Application
  - Deadline: March 1

Degree Requirements

Master of Education in Early and Special Education

Graduate Major Requirements
27 Total Credits

Complete all of the following
  Take the following:
    ED-ESP556 - Evidence-Based Practices for Students with Support Needs (3)
  Take at least 1 of the following:
    ED-ESP517 - Universal Behavior Support Systems (3)
    ED-ESP549 - Multi-Tiered Systems of Support (3)
  Leadership
  Take at least 3 credits from the following:
    ED-ESP523 - Issues & Advocacy in Early Childhood Education (3)
    ED-ESP559 - Coaching and Leadership in Special Education (3)
  Research
  Take at least 6 credits from the following:
    ED-CIFS503 - Fundamentals of Education Research (3)
    ED-CIFS510 - Introductory Statistics in Educational Research (3)
    ED-ESP560 - Single-Case Research Design (3)
  Behavior Support
  Take at least 3 credits from the following:
    ED-ESP512 - Positive Behavior Interventions and Supports in Early Childhood (3)
    ED-ESP517 - Universal Behavior Support Systems (3)
    ED-ESP518 - Targeted & Intensive Behavior Support Systems (3)
    ED-ESP548 - Autism Spectrum Disorders (3)
    ED-ESP554 - Positive Behavior Programs (3)
  Early Childhood Education/Early Childhood Special Education
  Take at least 3 credits from the following:
    ED-ESP512 - Positive Behavior Interventions and Supports in Early Childhood (3)
    ED-ESP513 - Family Systems and Collaboration (3)
    ED-ESP514 - ECSE Methods (3)
    ED-ESP520 - Environmental Design and Documentation of Learning in Early Childhood (3)
    ED-ESP521 - Principles and Practices in Early Childhood Place Based and Outdoor Education (3)
    ED-ESP522 - Inquiry Supportive Curriculum Design (3)
    ED-ESP523 - Issues & Advocacy in Early Childhood Education (3)
  Instructional Design
  Take at least 3 credits from the following:
    ED-ESP514 - ECSE Methods (3)
    ED-ESP522 - Inquiry Supportive Curriculum Design (3)
    ED-ESP552 - Language Arts for Special Educators (4)
    ED-ESP557 - Universal Design and Assistive Technology (3)
    ED-ESP570 - Mathematics for Special Educators (3)
  Assessment
  Take at least 3 credits from the following:
    ED-ESP520 - Environmental Design and Documentation of Learning in Early Childhood (3)
    ED-ESP558 - Assessment in Early Intervention and Special Education (3)
Graduate Culminating Activity and Other Requirements
7 Total Credits

Complete all of the following

Take at least 6 credits from the following:
Approved Graduate Electives

Culminating Activity
Take at least 1 credits from the following:
    ED-ESP591 - Project (1 - 12)

Grand Total Credits: 34

MASTER IN TEACHING IN SPECIAL EDUCATION

Graduate Program Coordinator: Patricia Hampshire
Education Building, Room 529
(208) 426-2804 (phone)
patriciahampshire@boisestate.edu (email)
boisestate.edu/education-esp/mit-sped (website)

General Information

The Master in Teaching (MIT) in Special Education culminates in both a Master's degree and initial teacher certification in the State of Idaho for either: a) Exceptional Child Generalist (K-8) plus Early Childhood Special Education (ages 3-5), or b) Exceptional Child Generalist (K-12). Certification may or may not be reciprocated in other states. This certification focuses on working with children and youth in special education settings.

Students in the MIT in Special Education participate in extensive learning communities in a program that takes approximately one, two, or three years depending on the track chosen by the student. The program includes an emphasis on collaboration and teamwork in classroom and clinical settings. Students have field-based opportunities to directly apply strategies learned in coursework with the support of both university and school-based supervisors and peers. The MIT program requires a minimum of 15 hours per week of instructional time in an approved setting with a consistent schedule in the fall and spring semesters for the ED-ESP572 and ED-ESP573 courses. Additional hours may be necessary in order to complete course and program requirements.

Program Admission Requirements

Complete all of the following
- Submit Graduate Admission Application and Admission Materials, see page 19
    - Deadline: February 1 (fall priority), March 1 (fall final), March 1 (summer)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
    - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
    - An application letter outlining your interest and desire for becoming a teacher.
- Submit Writing Sample
    - Candidates are provided with scenarios at the time of the personal interview, You will be expected to respond to the prompts from the perspective of a future teacher.
- Interview — All applicants are invited for an interview. The interview is a group interview with a faculty panel.
- Submit Letters of Recommendation
    - Two letters of recommendation from academic and/or professional references. Letters should come from professionals who can speak to your potential as a future teacher.

Degree Requirements

Master in Teaching in Special Education

Graduate Major Requirements
40 - 44 Total Credits
    Complete all of the following
    Take the following:
        ED-ESP510 - Foundations of Practice (3)
        ED-ESP513 - Family Systems and Collaboration (3)
        ED-ESP518 - Targeted and Intensive Behavior Support Systems (3)
        ED-ESP540 - Disability/Special Education and the Law (3)
        ED-ESP552 - Language Arts for Special Educators (4)
        ED-ESP556 - Evidence-Based Practices for Students with Support Needs (3)
        ED-ESP557 - Universal Design and Assistive Technology (3)
        ED-ESP558 - Assessment in Early Intervention and Special Education (3)
        ED-ESP570 - Mathematics for Special Educators (3)

    Complete 1 of the following
    Complete all of the following
        K-12 (Kindergarten to 12th Grade) Option
        Take the following:
            ED-ESP541 - Secondary Transition (3)
            ED-ESP554 - Positive Behavior Programs (3)
        Complete all of the following
        P-3 (Preschool to 3rd Grade) Option
        Take the following:
            ED-ESP512 - Positive Behavior Interventions and Supports in Early Childhood (3)
            ED-ESP514 - ECSE Methods (3)
        Complete all of the following
        P-12 (Preschool to 12th Grade) Option
        Take the following:
            ED-ESP514 - ECSE Methods (3)
            ED-ESP541 - Secondary Transition (3)
        Take at least 1 of the following:
            ED-ESP512 - Positive Behavior Interventions and Supports in Early Childhood (3)
            ED-ESP514 - ECSE Methods (3)

    Complete all of the following
    Take at least 1 credits from the following:
        ED-ESP571 - Professional Practice I (1 - 2)
    Take at least 2 credits from the following:
        ED-ESP572 - Professional Practice II (1 - 2)
    Take at least 2 credits from the following:
        ED-ESP573 - Professional Practice III (1 - 2)
    Take the following:
        ED-ESP574 - Professional Practice IV (1 - 2)

The Master in Teaching in Special Education degree aligns with Idaho teaching certification. The K-12 option aligns with the following endorsement: Exceptional Child Generalist (K-12). The P-8 option aligns with the following endorsements: (a) Exceptional Child Generalist (K-8), and (b) Early Childhood Special Education (Pre-K-3). The P-12 option aligns with the following endorsements: (a) Exceptional Child Generalist (K-12), and (b) Early Childhood Special Education (Pre-K-3). Additional requirements beyond coursework in the degree box are needed to earn an institutional recommendation for certification.

Grand Total Credits: 40 - 44

GRADUATE CERTIFICATE IN ASSISTIVE TECHNOLOGY

Graduate Program Coordinator: Gena Nelson
Education Building, Room 209
(208) 426-1548 (phone)
genanelson@boisestate.edu (email)
boisestate.edu/education-esp/gc-at/ (website)

General Information

The Graduate Certificate in Assistive Technology is designed for current or prospective education professionals who want to expand their knowledge of Assistive Technology. Assistive Technology refers to any device that provides greater independence for those with disabilities, including assistive, adaptive, and rehabilitative devices. Students can complete this program as a standalone certificate or in combination with a masters degree. For students in the MEd in Early and Special Education, this degree can be completed with no additional coursework. All EDTECH required coursework can be counted as electives within the degree plan.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: May 1 (fall), November 1 (spring), May 1 (summer)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
- Submit Letters of Recommendation
  - Two letters of recommendation from academic and/or professional references.

Certificate Requirements

Graduate Certificate in Assistive Technology

Graduate Major Requirements
12 Total Credits

Complete all of the following

Take the following:
EDTECH510 - Creating Accessible & Inclusive Online Learning (3)
EDTECH541 - Integrating Technology into the Classroom Curriculum (3)
ED-ESP549 - Multi-Tiered Systems of Support (3)
ED-ESP557 - Universal Design and Assistive Technology (3)

Grand Total Credits: 12

GRADUATE CERTIFICATE IN BEHAVIORAL INTERVENTIONS AND SUPPORTS

Graduate Program Coordinator: Gena Nelson
Education Building, Room 215
(208) 426-1548 (phone)
genanelson@boisestate.edu (email)
boisestate.edu/education-esp/gc-bis (website)

General Information

The Graduate Certificate in Behavioral Interventions and Supports is designed for current or prospective education professionals who want to expand their knowledge of interventions and supports for individuals from birth through adulthood who engage in challenging behaviors that make inclusion in school and community-based settings a challenge. This certificate program can be pursued individually or may be completed concurrently with the MEd in Early and Special Education.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: May 1 (fall), November 1 (spring), May 1 (summer)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
- Submit Letters of Recommendation
  - Two letters of recommendation from academic and/or professional references.

Certificate Requirements

Graduate Certificate in Behavioral Interventions and Supports

Graduate Major Requirements
12 Total Credits

Complete all of the following
Take at least 3 credits from the following:
ED-ESP512 - Positive Behavior Interventions and Supports in Early Childhood (3)
ED-ESP517 - Universal Behavior Support Systems (3)
ED-ESP554 - Positive Behavior Programs (3)
Take the following:
ED-ESP518 - Targeted & Intensive Behavior Support Systems (3)
ED-ESP559 - Coaching and Leadership in Special Education (3)
Take at least 3 credits from the following:
Approved graduate electives

Grand Total Credits: 12

Course Offerings

ED-ESP—Early and Special Education

ED-ESP510 Foundations of Practice (3-0-3)(SU). Overview of student ability and disability from early intervention through the postsecondary transition process including, a) typical and atypical development, b) characteristics of students with disabilities, c) legal requirements for educating students with disabilities, d) instructional decision-making, and e) developing a personal view of special education.

ED-ESP512 Positive Behavioral Interventions and Supports in Early Childhood (3-0-3)(F). Implementation of positive behavioral interventions and supports at program, classroom and individual-student levels. Focus on implementing positive, preventive and function-based interventions in school, home and community environments.

ED-ESP513 Family Systems and Collaboration (3-0-3)(SU). Exploration of family engagement models, ranging from Early Intervention approaches to K-12 collaboration with parents and multi-disciplinary teams. Emphasis on family systems theory and its' implications for working with students with disabilities and their families.

ED-ESP514 ECSE Methods (2-3-3)(S). Application of a linked system of assessment, goal development, intervention and evaluation to provide services across developmental domains. Fieldwork required.

ED-ESP515 Early Intervention, Birth to Three: ECE/ECSE (3-0-3)(F,S). Development of infants, both typically developing and those with delays and disabilities. Focus on learning in naturalistic environments, coaching families, and designing and implementing interventions. Minimum of 20 hours of fieldwork is required in specific early intervention agency settings.

ED-ESP517 Universal Behavior Support Systems (3-0-3)(F). Focus on designing, implementing, and evaluating universal practices within a comprehensive, three-tiered model of prevention to support the behavioral and social-emotional learning of all children.

ED-ESP518 Targeted and Intensive Behavior Support Systems (3-0-3)(S). Data, systems and practices to provide high quality targeted and intensive

interventions to students who are non-responsive to universal prevention strategies. Addresses functional behavioral assessment and the development of individualized behavior support plans. PREREQ: ED-ESP512 or ED-ESP517 or ED-ESP554 or PERM/INST.

ED-ESP520 Environmental Design and Documentation of Learning in Early Childhood (3-0-3)(F). Assessment of quality indoor and outdoor learning environments, exploring the roles of children's learning, adult engagement, and the environment as the third teacher. Significant focus will be placed on the relationship between observation of children's strengths and interests and design of early learning environments to provoke wonder, exploration, collaboration, and hands-on learning. Students will also learn to document children's learning to make it visible to the larger community.

ED-ESP521 Principles and Practices in Early Childhood Place Based and Outdoor Education (3-0-3)(S). Exploration of the role of place and outdoor experience in young children's development. Students will apply place-based and nature-based strategies to support the whole child and utilize these strategies to inform curriculum design for all young children. Students will also analyze the opportunities and challenges of implementing place-based education.

ED-ESP522 Inquiry Supportive Curriculum Design (3-0-3)(F). This course examines the relationship between inquiry thinking and play in all young children's learning and development. Focus on curiosity and wonder in guiding early STEAM (science, technology, engineering, arts, and mathematics) supportive opportunities. Emphasis will be placed on utilizing children's interests to engage in an inquiry process that encourages children to ask questions, test theories and synthesize big ideas.

ED-ESP523 Issues and Advocacy in Early Childhood Education (3-0-3) (S). Examines current issues related to the delivery of inclusive, inquiry-based early childhood education. This course explores leadership as a means of inspiring, coaching and driving change. Students will be introduced to Action Research methodology. Analysis of early education policy at local, state and national levels will serve as a foundation for students to engage in an action research or advocacy project.

ED-ESP540 Disability/Special Education and the Law (3-0-3)(SU). Advanced coverage of the American legal system as relevant to individuals with disability (P-age 21), using the six principles of P. L. 94-142 as a framework.

ED-ESP541 Secondary Transition (2-3-3)(S). Essential components of career development and transition education for persons with disabilities from middle school through adulthood. Emphasis is placed on IDEA requirements, comprehensive transition assessment, person centered planning, and issues and trends in transition education and services. Fieldwork required.

ED-ESP548 Autism Spectrum Disorders (3-0-3)(F)(Intermittently). Advanced professional knowledge and skills relevant to providing services to individuals with Autism Spectrum Disorder, including historical context, definitions, identification, characteristics, and social and educational interventions and services.

ED-ESP549 Multi-Tiered Systems of Support (3-0-3)(S). Essential components of a responsive instruction and intervention approach, including screening, instruction, intervention, progress monitoring, and fidelity of implementation.

ED-ESP550 Teaching Secondary Students with Exceptional Needs (3-0-3) (SU). Education of students with exceptional needs at the secondary level. Characteristics of students with disabilities, relevant legislation, assessment techniques, curricular adaptations and accommodations, and collaboration.

ED-ESP552 Language Arts for Special Educators (2-3-4)(F). Advanced professional knowledge and skills in developing and implementing programs for students with disabilities, including data analysis in programmatic decision-making. Fieldwork required.

ED-ESP554 Positive Behavior Programs (2-3-3)(F). Current best practices in development and implementation of instructional and behavioral programs for students with challenging behaviors. Fieldwork required.

ED-ESP556 Evidence-Based Practices for Students with Support Needs (3-0-3) (SU). The role of educators in identifying, understanding and implementing evidence-based practices is examined, with focus on the characteristics of learners with significant support needs.

ED-ESP557 Universal Design and Assistive Technology (3-0-3)(SU). Principles of universal design for learning that promote inclusive learning. Focus on theoretical frameworks and practical applications of instructional design. Adaptive and assistive technology to support the specific needs of students with disabilities.

ED-ESP558 Assessment in Early Intervention and Special Education (2-3-3) (F). Various types of assessment that inform the screening, progress, diagnosis, evaluation, eligibility, and program planning for students with disabilities are reviewed. Concepts of assessment and direct experience with both formal and informal assessment tools for EI/ECSE and K-12 are addressed. Students also gain experience with interpreting and analyzing assessment data to inform instructional decision-making. Fieldwork required.

ED-ESP559 Coaching and Leadership in Special Education (3-0-3)(S). Focus on leadership and collaboration in special education settings with an emphasis on coaching. Academic and behavioral coaching strategies and frameworks explored.

ED-ESP560 Single-Case Research Design (3-0-3)(S). Overview of single-case research designs and methods of data analysis. Critical analysis of research articles and development of a single-subject research proposal are required.

ED-ESP563 Teaching Experience in Early and Special Education (0-V-V)(F/S). Teaching experience in a P-12 special education classroom for students pursuing an Early Childhood Special Education endorsement or completing an alternate route to the special education or ECE/ECSE blended certificate. Experience is consistent with state certification standards and with relevant NAEYC, DEC and CEC standards of practice (Pass/Fail.) PREREQ: Complete required Praxis II examinations and PERM/INST.

ED-ESP570 Mathematics for Special Educators (2-3-3)(S). Advanced research-based instruction and teaching strategies in mathematics for students with disabilities. Response to Intervention (RTI), integrated formative assessment and interventions in mathematics. Fieldwork required.

ED-ESP571 Professional Practice I (1-2 credits)(SU). Professional practice topics directly relate to preparation for certification with an emphasis on professional dispositions for teacher education. (Pass/Fail.) PREREQ: Admission to MIT in Early Childhood Intervention or Admission to MIT in Special Education; COREQ: ED-ESP510, ED-ESP540, and ED-ESP556, or PERM/INST.

ED-ESP572 Professional Practice II (1-2 credits)(F). Professional practice topics directly relate to field experiences. Emphasis on inquiry and basic skills related to planning and preparation, classroom environments, curriculum and instruction, and professional responsibilities. (Pass/Fail.) PREREQ: ED-ESP571; COREQ: ED-ESP552, ED-ESP512 or ED-ESP554, and ED-ESP552 or ED-ESP558, or PERM/INST.

ED-ESP573 Professional Practice III (1-2 credits)(S). Professional practice topics directly relate to field experiences. Emphasis on performance assessment and proficient skills related to planning and preparation, classroom environments, curriculum and instruction, and professional responsibilities. (Pass/Fail.) PREREQ: ED-ESP572; COREQ ED-ESP514 or ED-ESP518, ED-ESP515 or ED-ESP541, and ED-ESP570, or PERM/INST.

ED-ESP574 Professional Practice IV (1-2 credits)(SU). Professional practice topics with reflection on field experiences. Emphasis on specialized knowledge and skill in the areas of a) learner and learning, b) content knowledge and professional foundations, c) instructional pedagogy, and d) professionalism and collaboration. (Pass/Fail.) PREREQ: ED-ESP573; COREQ: ED-ESP513 and ED-ESP557, or PERM/INST.

Department of Economics

College of Business and Economics

Chair: Anne Walker
Micron Business and Economics Building, Room 3246
(208) 426-3308 (phone)
econdept@boisestate.edu (email)
boisestate.edu/cobe-economics (website)

Graduate Faculty: Black, Chen, Fragkias, Hansen, Hu, Islam, Lowe, Parton, Paudel

Graduate Degrees Offered

- Master of Economics
- Master of Science in Economics
- Graduate Certificate in Econometrics

General Information

The Department of Economics offers two distinct graduate programs. The Master of Economics program requires the completion of a capstone course as the culminating activity. The intended audience is students or others in the community seeking advancement in their career, and/or seeking careers in more quantitative and analytical fields.

The Master of Science in Economics program emphasizes research and requires completion of a thesis. The intended audience is students or others in the community seeking further education and research experience prior to pursuing a doctoral degree in economics and related fields.

Both programs provide students with advanced training in current microeconomic theory, quantitative economics, econometrics, and other fields of economics as well as rigorous research methods.

MASTER OF ECONOMICS

Program Coordinator: Samia Islam
Micron Business and Economics Building, Room 3204
(208) 426-1042 (phone)
econgrad@boisestate.edu (email)
boisestate.edu/cobe-economics/graduate-programs (website)

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
    - Deadlines: February 15 (fall priority), August 1 (fall final)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
    - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
- Submit Current Resume or Curriculum Vitae (CV)
- Submit Graduate Record Examination (GRE) Scores
    - The GRE may be waived if you meet the Fast Track GRE requirement waiver. The Fast Track waiver is available for Boise State economics majors or minors who achieved a 3.50 GPA in 300-level and 400-level economics courses and have a cumulative GPA of 3.30 or better.
- Submit Writing Sample
    - A writing sample of an academic paper or essay written as part of your college coursework.
- Submit Letters of Recommendation
    - Three letters of recommendation, with at least two coming from academic faculty.

- Submit Graduate Assistantship Application
    - Deadline: February 15
    - Automatic consideration is given with your application to the program.

Degree Requirements

Master of Economics

Graduate Major Requirements
16 Total Credits

Take the following:
ECON501 - Mathematics for Economists (2)
ECON511 - Microeconomic Theory I (3)
ECON512 - Microeconomics Theory II (3)
ECON521 - Mathematical Statistics and Introduction to Advanced Econometrics (4)
ECON522 - Advanced Econometrics (4)

Graduate Culminating Activity and Other Requirements
15 Total Credits

Complete all of the following
Take at least 12 credits from the following:
Elective Courses: Twelve credits in approved courses that represents a disciplinary or interdisciplinary focus area. Courses must be approved by the graduate program director and cannot include more than 3 undergraduate credits. At least three credits must be economics electives.
Culminating Activity
Take at least 3 credits from the following:
ECON692 - Capstone Course (1 - 4)

Grand Total Credits: 31

MASTER OF SCIENCE IN ECONOMICS

Program Coordinator: Samia Islam
Micron Business and Economics Building, Room 3204
(208) 426-1042 (phone)
econgrad@boisestate.edu (email)
boisestate.edu/cobe-economics/graduate-programs (website)

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
    - Deadlines: February 15 (fall priority), August 1 (fall final)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
    - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
- Submit Graduate Record Examination (GRE) Scores
    - The GRE may be waived if you meet the Fast Track GRE requirement waiver. The Fast Track waiver is available for Boise State economics majors or minors who achieved a 3.50 GPA in 300-level and 400-level economics courses and have a cumulative GPA of 3.30 or better.
- Submit Foundational Coursework for Graduate Study
    - Completed at least 1 of the following:
        - MATH160 - Survey of Calculus (4)
        - MATH170 - Calculus I (4)
    - Completed at least 1 of the following:
        - BUSSTAT207 - Introduction to Business Analytics (3)
        - BUSSTAT208 - Business Analytics (3)
    - Completed at least 1 of the following:
        - MATH254 - Statistical Methods (3)
        - MATH361 - Probability and Statistics I (3)

- Submit Writing Sample
  - A writing sample of an academic paper or essay written as part of your college coursework.
- Submit Letters of Recommendation
  - Three letters of recommendation, with at least two coming from academic faculty.
- Submit Graduate Assistantship Application
  - Deadline: February 15 (fall)
  - Automatic consideration is given with your application to the program

Degree Requirements

Master of Science in Economics

Graduate Major Requirements
16 Total Credits

Take the following:
ECON501 - Mathematics for Economists (2)
ECON511 - Microeconomic Theory I (3)
ECON512 - Microeconomics Theory II (3)
ECON521 - Mathematical Statistics and Introduction to Advanced Econometrics (4)
ECON522 - Advanced Econometrics (4)

Graduate Culminating Activity and Other Requirements
15 Total Credits

Complete all of the following
Take at least 9 credits from the following:
Elective Courses: Nine credits in approved courses that represents a disciplinary or interdisciplinary focus area. Courses must be approved by the graduate program director and cannot include more than 3 undergraduate credits. At least three credits must be economics electives.
Culminating Activity
Take at least 6 credits from the following:
ECON593 - Thesis (1 - 12)

Grand Total Credits: 31

GRADUATE CERTIFICATE IN ECONOMETRICS

Program Coordinator:
Micron Business and Economics Building, Room
(208) 426-(phone)
econgrad@boisestate.edu (email)
boisestate.edu/cobe-economics/graduate-programs (website)

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page
  - Deadlines: January 15 (fall priority), February 15 (fall final), September 15 (spring)
- Submit Baccalaureate Degree and 3.00 GPA, see page
- Submit English Proficiency*, see page
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Personal Statement
- Submit Current Resume or Curriculum Vitae (CV)
- Submit Foundational Coursework for Graduate Study
  - Demonstrate completion of MATH 160 (or MATH 170) and MATH 361 (or MATH 254).
- Submit Writing Sample
  - A writing sample of an academic paper or essay written as part of your college coursework.
- Submit Letters of Recommendation
  - Three letters of recommendation from academic and/or professional references. At least two letters should be from academic faculty.

Certificate Requirements

Graduate Certificate in Econometrics

Graduate Major Requirements
13 Total Credits

Take the following:
ECON501 - Mathematics for Economists (2)
ECON521 - Mathematical Statistics and Introduction to Advanced Econometrics (4)
ECON522 - Advanced Econometrics (4)
Take at least 1 of the following:
ECON511 - Microeconomic Theory I (3)
ECON512 - Microeconomics Theory II (3)
ECON531 - Regional Economics (3)
ECON532 - Urban Economics (3)
ECON533 - Natural Resource Economics (3)
ECON534 - Environmental Economics (3)
ECON540 - Health Economics (3)
ECON555 - Decisions, Choices, and Happiness in Behavioral Economics (3)
ECON560 - Economics of Public Policy (3)
ECON571 - Economic Growth (3)
ECON574 - Sustainability and Economic Policy (3)

Grand Total Credits: 13

Course Offerings

ECON—Economics

ECON501 Mathematics for Economists (2-0-2)(SU). Intensive course in essential mathematics for entering graduate students in Economics. Topics covered include matrix algebra, functions, limits, differentiation, comparative statistics, linear algebra, and constrained and unconstrained optimization. Application of these mathematical techniques in economic analysis.

ECON510 Public Finance (3-0-3)(F). Examines the roles of government and market systems in modern economies using the tools of economic analysis to evaluate major public policy decisions. The theory and rationale of government spending, taxing, and indebtedness are examined, as well as the effects of government activity on resource allocation, income distribution, and economic efficiency. Draws on the tools of microeconomic theory to develop analytical tools such as cost-benefit analysis to examine public spending projects. PREREQ: PERM/INST.

ECON511 Microeconomic Theory I (3-0-3)(S). Study of decision theory, consumer choice and production models. Emphasizes value and distribution theories, and introduces general equilibrium theory and welfare economics. PREREQ: ECON501.

ECON512 Microeconomic Theory II (3-0-3)(S). Topics may include: microeconomics of strategy; the economics of imperfect information and uncertainty, externalities and public goods, and imperfect competition, game theory, including the choice and voting models. PREREQ: ECON511.

ECON521 Mathematical Statistics and Introduction to Advanced Econometrics (4-1-4)(F). Covers the basic mathematical statistics topics necessary for a deep understanding of applied econometrics. Topics include random variables, probability theory, probability and density functions, sampling hypothesis testing, and point and interval estimation. Introduction to the basic concepts of statistics and OLS regression, and their application to the analysis of economic data. The theory of econometric estimation of single equation models. Laboratory includes computational research methods with an introduction to important statistical packages: STATA, R, and/or Python. PREREQ: PERM/INST.

ECON522 Advanced Econometrics (4-1-4)(S). Econometric techniques working with cross-sectional and/or panel data. Topics may include interpreting regression, maximum likelihood estimation, panel data, correlated errors and clustering, count models, duration models, choice models, weak and many instruments, quantile regressions, matching estimators, and regression discontinuity. Laboratory includes computational

research methods using important statistical packages: STATA, R, and/or Python. PREREQ: ECON521.

ECON531 Regional Economics (3-0-3)(F). Application of economic analysis to regional problems of structure, growth, and policy. Location theory, various growth models, and specific techniques such as input-output analysis, base multipliers, and cost/benefit analysis are developed. PREREQ: ADM/PROG or PERM/INST.

ECON532 Urban Economics (3-0-3)(S). Focus on the structure of the urban areas, locational patterns, housing, crime, pollution, poverty, financial, and transportation problems. Tools of economic analysis used to analyze the problems and existing and proposed policies. PREREQ: ADM/PROG or PERM/INST.

ECON533 Natural Resource Economics (3-0-3)(S). Uses economic concepts and empirical evidence to address a broad range of natural resource policy and management issues. Concepts developed may include public goods, social welfare, discounting, dynamic efficiency, and resource scarcity. Applications may include fossil fuels, metals, minerals, forest resources, fisheries, biodiversity, water, land, soil, and ecosystem services. PREREQ: ADM/PROG or PERM/INST.

ECON534 Environmental Economics (3-0-3)(S). Addresses the role of the environment in the theory and practice of economics. The first section focuses on the ways in which markets fail to allocate resources efficiently, and addresses policies that may be used to correct for these market failures. The second section focuses on non-market valuation and the empirical techniques that economists use to put values on environmental attributes, services and commodities. PREREQ: ADM/PROG or PERM/INST.

ECON540 Health Economics (3-0-3)(F). Examines the economic issues associated with those individual and social decisions that influence the health of particular groups. Examines the production and delivery of health care and the economic and ethical aspects of health policy issues. Various economic approaches to the analysis of health policy are presented and evaluated. The focus is on the U.S. health care system. Comparisons may also be made to the health care systems of other nations. PREREQ: ADM/PROG or PERM/INST.

ECON555 Decisions, Choices, and Happiness in Behavioral Economics (3-0-3)(F). Discusses how psychological considerations can create "behavioral anomalies," ways in which economists incorporate those considerations into

their theories, and the implications for market outcomes and public policies. The role of intangibles such as locational /environmental amenities / employment status on happiness, the implications of social and personal motives (such as virtue ethics, altruism, status, procrastination, self-control, or image) are also considered. PREREQ: ADM/PROG or PERM/INST.

ECON560 Economics of Public Policy (3-0-3)(F). Contribution of economic analysis to the justification, design and implementation of economic policy, especially as it relates to private property, the market economy, and the benefits and costs associated with government intervention. PREREQ: ADM/PROG or PERM/INST.

ECON565 Managerial Economics and Strategy (3-0-3)(F). Illustrates how to apply economic theory to business decision-making using actual examples and real data. Covers important empirical tools used by practicing managers in applied demand analysis such as linear and non-linear programming, sensitivity analysis, demand estimation and forecasting. Students build mathematical models, solve constrained optimization problems, find and explore optimal solutions with spreadsheets. PREREQ: ADM/PROG or PERM/INST.

ECON571 Economic Growth (3-0-3)(F). Examines the question, "Why are some countries so rich while other countries are so poor?" Theoretical and empirical investigation considering factors that affect living standards such as population growth, physical capital and human capital accumulation, the state of technology, geography and the availability of natural resources, and culture and governmental policies. PREREQ: ADM/PROG or PERM/INST.

ECON574 Sustainability and Economic Policy (3-0-3)(S). Presents concepts, theories, data and empirical findings critical for analyzing sustainability problems and developing solutions in communities, cities, countries and regions. Explores how economics relates to the three pillars of sustainability: economic, social and environmental, emphasizing tradeoffs and synergies across the pillars. Topics may include: the meaning and history of sustainable development and the link between sustainability and well-being; sustainability indicators and metrics; natural resource (green) accounting; the valuation of biodiversity and ecosystem services; climate change; urbanization and sustainability; and business, international finance and sustainability. PREREQ: ADM/PROG or PERM/INST.

Department of Educational Technology

College of Education

Department Chair: Lida Uribe-Flórez
Education Building, Room 311
(208) 426-1966 (phone)
edtech@boisestate.edu (email)
boisestate.edu/education-edtech (website)

Graduate Faculty: Baek, Ching, Friesen, Hsu, Hung, Lowenthal, Perkins, Rice, Shelton, Snelson, Trespalacios, Uribe-Flórez, Yang

Graduate Degrees Offered

- Doctor of Education in Educational Technology
- Education Specialist in Educational Technology
- Master of Educational Technology
- Graduate Certificate in Designing Accessible Online Education
- Graduate Certificate in Educational Games and Simulations
- Graduate Certificate in Instructional Technology Coaching
- Graduate Certificate in Online Teaching
- Graduate Certificate in Technology Integration Specialist

DOCTOR OF EDUCATION IN EDUCATIONAL TECHNOLOGY

Program Coordinators: Ross Perkins and Patrick Lowenthal
Education Building, Room 311
(208) 426-1966 (phone)
edtechdoc@boisestate.edu (email)
boisestate.edu/education-edtech/edd-et (website)

General Information

The doctoral program in educational technology, leading to an EdD degree, has as its goal the development of innovative leaders in the field. Students in this program explore the use of current and emerging technologies for effective and efficient teaching in a dynamic, global society. Areas of particular focus include online teaching and learning, technology integration, academic technology leadership, innovative teaching in K-12 and higher education, educational software development for the web and mobile platforms, and educational Games and simulations.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: November 1 (fall priority), February 1 (fall final)
- Submit Baccalaureate and Master's Degree and 3.00 GPA, see page 19
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 95, pBT (revised): 72, pBT (old): 587, IELTS - 6.5
- Submit Application Letter
  - An application letter that includes a statement of your career goals and how the degree factors into them. A description of your professional experiences and the relevance of those experiences to doctoral study in education Include a statement of interest in a particular area of specialization within educational technology (e.g., online education, games and simulations, learning from multimedia, etc.). Specify the questions you have that you might want to research rather than solely indicating the general area. For full details see the EdD EDTECH Application Guidebook.
- Submit Current Resume or Curriculum Vitae (CV)
  - A resume or curriculum vitae that includes the following sections: a) education, b) professional certifications and licenses, c) work

experience, d) courses/workshops taught, e) publications or presentations, f) grants, g) awards and honors, h) service contributions, and i) professional memberships. For full details see the EdD EDTECH Application Guidebook.
- Submit Writing Sample
  - A scholarly paper you have written. For full details see the EdD EDTECH Application Guidebook.
- Submit Letters of Recommendation
  - Two letters of recommendation from academic and/or professional references. For full details see the EdD EDTECH Application Guidebook.

Degree Requirements

Doctor of Education in Educational Technology

Graduate Major Requirements
27 Total Credits

Complete all of the following
Core Courses
Take the following:
EDTECH601 - Doctoral Studies Orientation (3)
EDTECH603 - Global and Cultural Perspectives in Educational Technology (3)
EDTECH604 - Leadership in Educational Technology (3)
EDTECH606 - Research Writing (3)

Research Courses
Take the following:
EDTECH650 - Research in Educational Technology (3)
EDTECH651 - Introduction to Statistics for Educational Technology (3)
EDTECH652 - Quantitative Research Methods (3)
EDTECH653 - Qualitative Research Methods (3)

Take at least 3 credits from the following:
Research Elective: A graduate-level research course applicable to education, educational technology, or a related field.

Graduate Culminating Activity and Other Requirements
33 Total Credits

Complete all of the following
Cognate Area
Take at least 9 credits from the following:
A series of three graduate courses (from a relevant field) that are connected by a common thread or theme.

Take at least 9 credits from the following:
Electives: Graduate courses in education, educational technology, or a related field; all courses are selected with student input and approved by the supervisory committee.

Doctoral Seminar
Take at least 4 credits from the following:
EDTECH698 - Seminar in Educational Technology (1)

Culminating Examination
Take at least 1 credits from the following:
EDTECH691 - Doctoral Comprehensive Examination (1 - 6)

Culminating Activity
Take at least 10 credits from the following:
EDTECH693 - Dissertation (1 - 12)

Grand Total Credits: 60

Residency

Students in the online Doctor of Educational Technology Program are not required to be physically present on campus for classes, presentations, etc. Some synchronous elements of classes or meetings may be required, but can be done at a distance. Students are required to enroll in seven graduate credit hours per semester for the first two years of the program (unless transfer courses exempt them in some way). Students are expected to be enrolled in at least one credit hour each semester after the first two years up through the semester in which they defend their dissertation, even if they have completed all other credit requirements.

EDUCATION SPECIALIST IN EDUCATIONAL TECHNOLOGY

Program Coordinator: Ross Perkins
Education Building, Room 311
(208) 426-4875 (phone)
edtechdoc@boisestate.edu (email)
boisestate.edu/education-edtech/eds-et (website)

General Information

The Education Specialist in Educational Technology degree program is intended to expand the experiences and deepen the knowledge of those who hold a master's degree in the field (or a closely related degree). Students in the program will become more effective in educational settings as teachers, designers, or administrators. Students are encouraged to pursue (in parallel) a graduate certificate offered by the Department of Educational Technology in order to create a cognate and thus develop further expertise. EdS graduates are expected to understand the relationship of research and theory to practical applications of Ed Tech.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: July 1 (fall priority), August 1 (fall final), November 1 (spring priority), December 1 (spring final), March 1 (summer priority), April 1 (summer final)
- Submit Baccalaureate and Master's Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
  - An application letter that is no more than two (2) pages (600-800 words) in 12pt font, include a discussion of the following elements: a) background, b) philosophy, c) expectations and goals, d) project, e) explain deficiencies, f) achievements. For full details see the EdS in Ed Tech Application Guidebook
- Submit Current Resume or Curriculum Vitae (CV)
  - A resume or curriculum vitae that includes the following sections: a) education, b) professional certifications and licenses, c) work experience, d) courses/workshops taught, e) publications or presentations, f) grants, g) awards and honors, h) service contributions, and i) professional memberships. For full details see the EdS in Ed Tech Application Guidebook
- Submit Letters of Recommendation
  - One letter of recommendation from academic or professional reference. For full details see the EdS in Ed Tech Application Guidebook

Degree Requirements

Education Specialist in Educational Technology

Graduate Major Requirements
12 Total Credits

Complete all of the following
   Core Requirements
   Take the following:
      EDTECH602 - Emerging Trends in Educational Technology (3)
      EDTECH604 - Leadership in Educational Technology (3)
      EDTECH650 - Research in Educational Technology (3)
      EDTECH651 - Introduction to Statistics for Educational Technology (3)

Graduate Culminating Activity and Other Requirements
21 Total Credits

Complete all of the following
   Take at least 9 credits from the following:
   Cognate: Available cognates include technology integration, blended and online teaching and learning, educational games and simulations, e-learning design, and technology leadership.
   Take at least 9 credits from the following:
   Electives
   Culminating Activity
   Take the following:
      EDTECH680 - Education Specialist Final Project (3)

Grand Total Credits: 33

MASTER OF EDUCATIONAL TECHNOLOGY

Graduate Program Coordinator: Chareen Snelson
Education Building, Room 311
(208) 426-1966 (phone)
edtech@boisestate.edu (email)
boisestate.edu/education-edtech/met (website)

General Information

The master's degree offered in the Department of Educational Technology supports the study and practice of facilitating and improving learning of a diverse population by creating, using, managing, and evaluating appropriate technological processes and resources. Believing technology is a tool that enhances and expands the educational environment, we promote the use of current and emergent technologies for teaching and learning in a dynamic global society. Educational technologists are leaders and innovators, serving in institutions of higher education, public or private school settings, federal, state or local educational agencies, community organizations, and the private sector.

The Master of Science in Educational Technology is research oriented, with the program designed specifically to give students in-depth experience with empirical study in the field. The MS thesis is the culminating project, which represents original research or development in educational technology. The thesis must be first successfully proposed and then defended with written and oral examinations.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: August 1 (fall), December 15 (spring), May 1 (summer)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
  - An application letter describing your educational and professional background, career goals, and how the coursework will help you to attain them. Also, tell us why you are choosing our program and why you will be a successful graduate student.
- Submit Additional Materials
  - Complete the Program Development Form.

Degree Requirements

Master of Educational Technology

Graduate Major Requirements
27 Total Credits

Complete all of the following
Take the following:
EDTECH501 - Introduction to Educational Technology (3)
EDTECH502 - Creating Educational Websites (3)
EDTECH503 - Instructional Design (3)
EDTECH504 - Theoretical Foundations of Educational Technology (3)
EDTECH505 - Evaluation for Educational Technologists (3)
Take at least 12 credits from the following:
Approved electives.

Graduate Culminating Activity and Other Requirements
3 Total Credits

Take at least 3 credits from the following:
EDTECH592 - Portfolio (1 - 6)

Grand Total Credits: 30

GRADUATE CERTIFICATE IN DESIGNING ACCESSIBLE ONLINE EDUCATION

Graduate Program Coordinator: Patrick Lowenthal
Education Building, Room 311
(208) 426-1966 (phone)
edtech@boisestate.edu (email)
boisestate.edu/education-edtech/gc-daoe (website)

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: August 1 (fall), December 15 (spring), May 1 (summer)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
  - An application letter describing professional and educational background, career goals and how coursework will help to attain them.
- Submit Additional Materials
  - Complete the Program Development Form.

Certificate Requirements

Graduate Certificate in Designing Accessible Online Education

Graduate Major Requirements
12 Total Credits

Complete all of the following
Take the following:
ED-ESP557 - Universal Design and Assistive Technology (3)
EDTECH510 - Creating Accessible & Inclusive Online Learning (3)
EDTECH512 - Online Course Design (3)
EDTECH513 - Multimedia (3)

Grand Total Credits: 12

GRADUATE CERTIFICATE IN EDUCATIONAL GAMES AND SIMULATIONS

Graduate Program Coordinator: Yu-Chang Hsu
Education Building, Room 311
(208) 426-4055 (phone)
edtech@boisestate.edu (email)
boisestate.edu/education-edtech/gc-egs (website)

General Information

The Graduate Certificate in Educational Games and Simulations program is designed for those who wish to: analyze recent research and best practices for effective teaching and learning with educational games and with simulations in virtual worlds; design, teach, and evaluate teaching and learning activities in virtual worlds; and, design 2D and 3D games for learning and evaluate for educational effectiveness. Students admitted to the certificate program are required to be familiar with all policies of the Graduate College that govern graduate certificate programs.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 15 (fall priority), August 1 (fall final), September 15 (spring priority), December 15 (spring final)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
  - An application letter that describes your interests in and goals for pursuing the Graduate Certificate in Educational Games and Simulations.
- Submit Current Resume or Curriculum Vitae (CV)

Certificate Requirements

Graduate Certificate in Educational Games and Simulations

Graduate Major Requirements
12 Total Credits

Complete all of the following
Take the following:
EDTECH511 - Interactive Courseware Development (3)
EDTECH532 - Educational Simulations (3)
EDTECH536 - Educational Game Design (3)
Take at least 3 credits from the following:
EDTECH534 - Mobile App Design for Teaching and Learning (3)
EDTECH535 - Digital Engagement for Learning (3)
EDTECH538 - Maker Tech: Physical Computing for STEAM Education (3)
EDTECH563 - Quest-Based Learning Design (3)

Grand Total Credits: 12

Special Relationships with Other Programs

A student may be simultaneously enrolled in any graduate degree program (EdD, EdS, MSET, or MET) and the Graduate Certificate in Educational Games and Simulations program subject to the approval of the chair of the student's supervisory committee and the graduate program coordinators of both programs.

A student who is not enrolled in any graduate degree program at Boise State University may be enrolled in the Graduate Certificate in Educational Games and Simulations program and one other graduate certificate program.

GRADUATE CERTIFICATE IN INSTRUCTIONAL TECHNOLOGY COACHING

Graduate Program Coordinator: Kerry Rice
Education Building, Room 311
(208) 426-1966 (phone)
edtech@boisestate.edu (email)
boisestate.edu/education-edtech/gc-itc (website)

General Information

The Graduate Certificate in Instructional Technology Coaching provides advanced training in the role, skills, knowledge and responsibilities of serving as a school and/or district technology coach. This program emphasizes the role of the instructional technology coach in supporting educators in meeting the needs of students in content area standards with a focus on college and career readiness. Knowledge and skills in the effective practice of technology integration is paramount to success and technology coaches can serve as a vital form of support for teachers in their efforts.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 15 (fall), September 15 (spring), August 1 (summer)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
  - An application letter describing professional and educational background, career goals, and how coursework will help to attain them.
- Submit Additional Materials
  - Complete the Program Development Form.

Certificate Requirements

Graduate Certificate in Instructional Technology Coaching

Graduate Major Requirements
12 Total Credits

Complete all of the following
  Take the following:
    EDTECH521 - Online and Blended Teaching in the K-12 Environment (3)
    EDTECH544 - Instructional Technology Coaching (3)
  Take at least 1 of the following: :
    EDTECH541 - Integrating Technology into the Classroom Curriculum (3)
    EDTECH554 - Managing Technology Integration in Schools (3)
  Take at least 1 of the following:
    EDTECH523 - Advanced Online and Blended Teaching (3)
    EDTECH538 - Maker Tech: Physical Computing for STEAM Education (3)
    EDTECH542 - Technology-Supported Project Based Learning (3)
    EDTECH543 - Social Network Learning (3)
Grand Total Credits: 12

Special Relationships with Other Programs

A student may be simultaneously enrolled in any graduate degree program (EdD, EdS, MSET, or MET) and the Graduate Certificate in Technology Integration Specialist program subject to the approval of the chair of the student's supervisory committee and the graduate program coordinators of both programs.

A student who is not enrolled in any graduate degree program at Boise State University may be enrolled in the Graduate Certificate in Technology Integration Specialist program and one other graduate certificate program.

GRADUATE CERTIFICATE IN ONLINE TEACHING

Graduate Program Coordinator: Chareen Snelson
Education Building, Room 311
(208) 426-1966 (phone)
edtech@boisestate.edu (email)
boisestate.edu/education-edtech/gc-ot (website)

General Information

The Graduate Certificate in Online Teaching program is designed for those who wish to learn methodologies for online instruction with an emphasis on designing and moderating online courses. Students admitted to the certificate program are required to be familiar with all policies of the Graduate College that govern graduate certificate programs.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: August 1 (fall), December 15 (spring), May 1 (summer)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
  - An application letter describing professional and educational background, career goals, and how coursework will help to attain them.
- Submit Additional Materials
  - Complete the Program Development Form.

Certificate Requirements

Graduate Certificate in Online Teaching

Graduate Major Requirements
9 Total Credits
  Complete 1 of the following
    For teachers of K-12 students
      Take the following:
        EDTECH521 - Online and Blended Teaching in the K-12 Environment (3)
        EDTECH523 - Advanced Online and Blended Teaching (3)
    For teachers of adult learners
      Take the following:
        EDTECH512 - Online Course Design (3)
        EDTECH522 - Online Teaching for Adult Learners (3)
  Electives:
    Take at least 3 credits from the following:
      A list of approved electives is maintained on the Department of Educational Technology website boisestate.edu/education-edtech.
Grand Total Credits: 9

Special Relationships with Other Programs

A student may be simultaneously enrolled in any graduate degree program (EdD, EdS, MSET, or MET) and the Graduate Certificate in Online Teaching program subject to the approval of the chair of the student's supervisory committee and the graduate program coordinators of both programs.

A student who is not enrolled in any graduate degree program at Boise State University may be enrolled in the Graduate Certificate in Online Teaching program and one other graduate certificate program.

GRADUATE CERTIFICATE IN TECHNOLOGY INTEGRATION SPECIALIST

Graduate Program Coordinator: Chareen Snelson
Education Building, Room 311
(208) 426-1966 (phone)
edtech@boisestate.edu (email)
boisestate.edu/education-edtech/gc-tis (website)

General Information

The Graduate Certificate in Technology Integration Specialist is designed for K-12 teachers who wish to develop skills in computer technology to support the teaching and learning process. Students admitted to the certificate program are required to be familiar with all policies of the Graduate College that govern graduate certificate programs.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: August 1 (fall), December 15 (spring), May 1 (summer)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
  - An application letter describing professional and educational background, career goals and how coursework will help to attain them.
- Submit Additional Materials
  - Complete the Program Development Form.

Certificate Requirements

Graduate Certificate in Technology Integration Specialist

Graduate Major Requirements
9 Total Credits

Take the following:
EDTECH502 - Creating Educational Websites (3)
EDTECH541 - Integrating Technology into the Classroom Curriculum (3)
EDTECH542 - Technology-Supported Project Based Learning (3)

Grand Total Credits: 9

Special Relationships with Other Programs

A student may be simultaneously enrolled in any graduate degree program (EdD, EdS, MSET, or MET) and the Graduate Certificate in Technology Integration Specialist program subject to the approval of the chair of the student's supervisory committee and the graduate program coordinators of both programs.

A student who is not enrolled in any graduate degree program at Boise State University may be enrolled in the Graduate Certificate in Technology Integration Specialist program and one other graduate certificate program.

Idaho K-12 Online Teaching Endorsement

K-12 Online Teaching Endorsement Coordinator: Kerry Rice
Education Building, Room 305
(208) 426-4036 (phone)
edtech@boisestate.edu (email)

General Information

The endorsement in K-12 online teaching is a state approved endorsement program open to licensed teachers in the state of Idaho. Eligibility requirements are available on the program website: boisestate.edu/education-edtech. A student can be recommended for the endorsement to the Idaho State Department of Education after all requirements have been met. The Educational Technology program offers both a credit and a competency-based option for completion. Credits for the endorsement can be applied to Educational Technology degree programs.

Course Offerings

EDTECH—Educational Technology

EDTECH501 Introduction to Educational Technology (3-0-3)(F/S/SU). Overview of the field of educational technology emphasizing current issues, leadership in technology use planning, and evaluation/synthesis of research.

EDTECH502 Creating Educational Websites (3-0-3)(F/S/SU). Design and develop instructional web pages using HTML, CSS, and Adobe Dreamweaver. Apply instructional strategies when creating educational websites while taking into consideration issues of copyright and accessibility.

EDTECH503 Instructional Design (3-0-3)(F/S/SU). Focuses on systematic design of instruction and alternative models based on learning theories and research. Emphasis is placed on effective planning, developing, and evaluating the instructional process. Project required.

EDTECH504 Theoretical Foundations of Educational Technology (3-0-3) (F/S/SU). Overview of classic and contemporary theories of learning and their applications in educational technology and emerging orientations; implications for practice. PREREQ: EDTECH501.

EDTECH505 Evaluation for Educational Technologists (3-0-3)(F/S/SU). Procedures for evaluating educational programs, training systems, and emergent-technology applications. PREREQ: EDTECH501, EDTECH503.

EDTECH506 Graphic Design for Learning (3-0-3)(F/S/SU). Select, arrange, and design visual representations (e.g., text, graphics, tables) based on theories, models, and principles of visual literacy and graphic design.

EDTECH510 Creating Accessible and Inclusive Online Learning (3-0-3)(F/ S/SU). Explores current trends and issues with creating accessible, usable, and inclusive online learning and instructional materials.

EDTECH511 Interactive Courseware Development (3-0-3)(F/S/SU). Learning the tools for development of instructional courseware, which is the graphic interface for delivery of online instruction. Development of functional and instructionally effective courseware. PREREQ: EDTECH503 or PERM/INST.

EDTECH512 Online Course Design (3-0-3)(F/S/SU). Emphasizes web-based instructional design for the development of online courses. Consideration is given to various models of online delivery, content organization and presentation, and graphic design. Course participants create a fully developed online course. PREREQ: EDTECH502 or PERM/INST.

EDTECH513 Multimedia (3-0-3)(F/S/SU). Research-based principles of multimedia learning are combined with technical skills of multimedia production to produce a series of digital multimedia projects for classroom and online applications.

EDTECH521 Online and Blended Teaching in the K-12 Environment (3-0-3)(F/S/SU). Examines research-supported practices in online and blended classrooms. Emphasizes technology supported teaching and learning, classroom management, lesson design, learner engagement, and individualized instruction.

EDTECH522 Online Teaching for Adult Learners (3-0-3)(F/S/SU). Emphasizes andragogy and best practice in online teaching, analyzing online teaching tools, planning, facilitating, and assessing collaborative and interactive e-learning experiences, and gaining practical experience teaching online.

EDTECH523 Advanced Online and Blended Teaching (3-0-3)(F/S/SU). Utilizes a project-based approach emphasizing content-specific instructional strategies, improved communication, assessment, and evaluation of quality learning experiences in technology supported online and blended instruction. Experience with web-based conference tools recommended. Project required. PREREQ: EDTECH521 or EDTECH522.

EDTECH524 Field Experience in Online Teaching (0-9-3)(F/S). Observation/field experience in a K-12 online classroom. (Pass/Fail.) PREREQ: PERM/INST.

EDTECH531 Teaching and Learning in Virtual Worlds (3-0-3)(F/S/SU). Explores teaching and learning in virtual worlds. Project-based design, facilitation, and evaluation of instruction, research, and other resources.

EDTECH532 Educational Simulations (3-0-3)(F/S/SU). Explores the theory and implementation of educational simulations for improved instructional engagement. Uses a hands-on approach to explore the theories and practical aspects of evaluating and implementing educational simulations for teaching and learning. Organized into three parts: exploring theories of educational simulation, designing, and developing simulations using a software.

EDTECH533 Youtube for Educators (3-0-3)(F/S/SU). Produce educational video for YouTube using digital video cameras and editing software. Design and develop appropriate instructional activities that integrate online video. Examine the benefits and controversial aspects of video sharing in the classroom.

EDTECH534 Mobile App Design for Teaching and Learning (3-0-3)(F/SU). Students leverage the potential of mobile technologies by exploring, analyzing, and designing mobile apps for use in various settings such as teaching, learning, and work.

EDTECH535 Digital Engagement for Learning (3-0-3)(F/S/SU). Provides an overview of instructional elements in digital engagement (e.g., cartoons, TV programs, movies, and digital games). Students conduct research on the practical application of digital engagement in classroom settings through experimentation and play.

EDTECH536 Educational Game Design (3-0-3)(F/S/SU). Provides novice students with programming opportunities for designing an instructional digital game. Students enter, analyze, and modify source codes that are provided and create a new game, focusing on short and simple games for selected platforms.

EDTECH537 Blogging in the Classroom (3-0-3)(F/S/SU). Focuses on the use of blogs in education, including creating and maintaining blogs, using RSS readers and microblogging. Examines the nature and purpose of blogging, types of blog entries, blog promotion, disclosure guidelines, and building a blogging community.

EDTECH538 Maker Tech: Physical Computing for STEAM Education (3-0-3)(F/S/SU). Analyze, make, and apply maker tech for teaching and learning contexts. Leverage the power of programming and tinker with digital and physical artifacts for learning/practicing/applying knowledge in science, technology, art, engineering, and mathematics (STEAM).

EDTECH541 Integrating Technology into the Classroom Curriculum (3-0-3)(F/S/SU). Examination and practice in technology integration strategies in classroom environments, using various applications, instructional, and productivity software, evaluating tools and resources, and developing integrated instructional activities.

EDTECH542 Technology-Supported Project-Based Learning (3-0-3)(F/S/SU). Examines the Project-Based Learning Model, including development of PBL-based instructional units that engage learners in projects requiring investigation, analysis, synthesis, and presentation in real-world scenarios.

EDTECH543 Social Network Learning (3-0-3)(F/S/SU). Explore collaborative and emergent pedagogies, tools, and theory related to the use of social networks in learning environments. Gain hands-on experience with a variety of social networking tools, create a community-based resource, and develop a global professional network for educational technologists.

EDTECH544 Instructional Technology Coaching (3-0-3)(F). Focuses on the instructional coaching relationship, practical strategies to increase student engagement and learning, and the ability to integrate technology into classrooms in ways that support best practice.

EDTECH551 Technical and Grant Writing (3-0-3)(F/S/SU). Project-based instruction entailing various kinds of technical writing, all focusing on a completed grant proposal. Includes evaluating writing for print versus electronic display. Additional focus on writing proficiencies, as needed.

EDTECH552 Introduction to Network Administration (3-0-3)(F/S/SU). Introduction to technical competencies for school technology coordinators, addressing network administration, topography, and devices. Preparation for the CCENT (Cisco Certified Entry Networking Technician) or CCNA (Cisco Certified Network Associate) certificate.

EDTECH554 Managing Technology Integration in Schools (3-0-3)(F/S/SU). Explores strategies for planning and implementing technology integration on an organizational level and examines larger scale professional development models. Develops skills for taking a leadership role in district technology use planning, implementation and assessment.

EDTECH560 Varsity Esports (3-0-3)(F/S). Teaches prospective leaders to effectively prepare, launch, and administer an eSports program. Explores the methodologies of organizational design and investigation of competitive systems.

EDTECH563 Quest-Based Learning Design (3-0-3)(F/S/SU). Emphasizes the knowledge, skills, and pedagogy of quest based learning as applied to emerging gaming techniques and technologies.

EDTECH564 Gamified Augmented Reality and Mobile (3-0-3)(F/S/SU). Analysis of emerging technologies that combine virtual and augmented realities, with specific support for mobile applications.

EDTECH565 Advanced Educational Game Design (3-0-3)(F/S/SU). Examines advanced digital games design for K-12 implementations. PREREQ: EDTECH536.

EDTECH570 Online Skills and Strategies (1-0-1)(On Demand). Students learn the fundamentals of learning online. This course gives students the conceptual and software tools that will help them be successful in the online Educational Technology Master's degree program.

EDTECH582 Selected Topics: Online Teaching (Variable 1-3)(F/S/SU). Developing an online teaching portfolio, evaluation of online teaching competencies, etc. as part of the requirement of K-12 Online Teaching Endorsement. (Pass/Fail.) PREREQ: PERM/INST.

EDTECH601 Doctoral Studies Orientation (3-0-3)(F/S/SU). Introduction to the purpose and nature of doctoral studies in educational technology. Explores processes and procedures specific to the degree program, tools for collaboration and research, conferences and journals in the field, and graduate faculty research initiatives. Must be taken in first semester enrolled in doctoral program. PREREQ: ADM/PROG.

EDTECH602 Emerging Trends in Educational Technology (3-0-3)(F/S/SU). Explores current topics and trends in educational technology research and their applications. Reviews literature and practices to identify emerging trends in the field.

EDTECH603 Global and Cultural Perspectives in Educational Technology (3-0-3)(F/S/SU). Explores the implementation of information and communications technologies (ICT) in educational systems outside of the United States. Examines promises and challenges of ICT integration in both developed and developing countries as impacted by different contexts.

EDTECH604 Leadership in Educational Technology (3-0-3)(F/S/SU). Examines principles that guide innovative leadership of educational technology

programs and initiatives. Focuses on the synthesis of theories, models, and processes that guide policy creation and active project implementation. Emphasis on team building, organizational psychology, people and resources, and change management.

EDTECH605 Project Management in Educational Settings (3-0-3)(F/S/SU). Introduction to best practices and principles related to the management of projects in educational organizations (all levels, traditional or online). Emphasis on team building and leadership, establishing relationships, benchmarks and evaluative practices. Review and use of various project management software tools. PREREQ: EDTECH601.

EDTECH606 Research Writing (3-0-3)(F/S/SU). Introduces students to different types of scholarly writing expected of advanced graduate students, including how to form research articles and each part of a dissertation, with special focus on the literature review. PREREQ: EDTECH601.

EDTECH640 Innovative Practices in Educational Technology (variable 1-3 credits)(F/S/SU). The application of skills and knowledge about educational technology to a novel challenge, issue, or context directly related to the field. A proposal that addresses practical dimensions of the problem, their relationship to theoretical constructs, learning goals, and project management details is required before students can enroll in the course. Culminating activities include a work log and a final reflective paper in addition to other artifacts that may be required. May be repeated for credit. (Pass/Fail.) PREREQ: PERM/INST.

EDTECH650 Research in Educational Technology (3-0-3)(F/S/SU). Examines the foundations for and processes of conducting research using quantitative and qualitative approaches. Emphasizes critical steps in the process of research, reviewing and analyzing research studies in educational technology.

EDTECH651 Introduction to Statistics for Educational Technology (3-0-3) (F/S/SU). Measures of central tendency and variability, one and two sample tests, confidence intervals, chi-square, introduction to bivariate correlation, and analysis of variance. PREREQ: EDTECH650 or doctoral status.

EDTECH652 Quantitative Research Methods (3-0-3)(F/S/SU). Overview of quantitative research approaches in educational research. Covers concepts of, and practice with, parametric and non-parametric tests and predictive analysis. Introduction to experimental design, survey sampling, and advanced statistical analysis. Purchase of statistical analysis software is required. PREREQ: EDTECH561.

EDTECH653 Qualitative Research Methods (3-0-3)(F/S/SU). Overview of qualitative research approaches in educational research. Reviews the theory, epistemological assumptions, and application of major methodologies. Focuses on developing skills in creating field notes, planning and conducting interviews, collecting relevant artifacts, analyzing data, and writing reports. Introduction to computer-assisted qualitative data analysis.

EDTECH662 Survey Research and Analysis (3-0-3)(F/S/SU). Explores advanced concepts of survey research theory and data analysis methods. Guides selection and application of multiple, appropriate levels of analysis to selected research questions. Purchase of statistical analysis software is required. PREREQ: EDTECH651.

EDTECH663 Advanced Qualitative Research Methods (3-0-3)(F/S/SU). Explores specific qualitative methodologies in depth. Extensive practice in analysis of data based on a selected qualitative tradition, followed by the presentation of results. Focuses on the development, planning, and conduct of an applicable project. Includes further practice with computer-assisted qualitative data analysis. PREREQ: EDTECH653

EDTECH671 Data Mining Research Methods for Education (3-0-3)(F/S/SU). Introduction to fundamental algorithms and methodologies for data mining and machine learning. Topics include techniques in pattern discovery and predictive modeling. PREREQ: EDTECH561, EDTECH652.

EDTECH672 Design-Based Research (3-0-3)(F/S/SU). Study and application of design-based research methodology, aimed to improve educational practices through iterative analysis, design, development, implementation, and generation back to theory. Emphasis on collaboration among researchers and practitioners in real-world settings. PREREQ: EDTECH650.

EDTECH680 Education Specialist Final Project (3-0-3)(F/S/SU). Culminating activity for the Education Specialist in Educational Technology (EdS) program. The student-generated project topic must be approved by program coordinator prior to enrollment. Final project is a substantial written product and multi-media representation(s) of the work. Taken after all EdS core courses and cognate courses have been completed. (Pass/Fail.) PREREQ: PERM/INST.

EDTECH698 Seminar in Educational Technology (1-0-1)(F/S). A one-credit hour per semester seminar taken by doctoral students over the first four regular semesters of the program, for a total of four credit hours. All course meetings will be online, with some required synchronous sessions. Students will work with faculty and peers to examine topics germane to the profession, collaborate on papers and presentations, discuss current research, and focus their area(s) of study for the doctoral dissertation. May be repeated for credit. (Pass/Fail.) PREREQ: EDTECH601.

Department of Electrical and Computer Engineering

College of Engineering

Chair: Nader Rafla
Engineering Building, Room 240
(208) 426-5788 (phone)
(208) 426-2470 (fax)
ece@boisestate.edu (email)
boisestate.edu/coen-ece (website)

Graduate Faculty: Ahmed-Zaid, Barney Smith, Browning, Campbell, Cantley, Chen, Chiasson, Johnson, Kandadai, Kuang, Loo, Mehrpouyan, Mitkova, Rafla, Subbaraman, Smith, Welch

Graduate Degrees Offered

- Doctor of Philosophy in Electrical and Computer Engineering
- Master of Engineering in Electrical and Computer Engineering
- Master of Science in Cyber Operations and Resilience
- Master of Science in Electrical and Computer Engineering
- Graduate Certificate in CORe Analyst and Threat Intelligence
- Graduate Certificate in CORe Governance Policy Administration
- Graduate Certificate in CORe Resilience Engineering

DOCTOR OF PHILOSOPHY IN ELECTRICAL AND COMPUTER ENGINEERING

Doctoral Program Coordinator: Kurtis Cantley
Micron Engineering Center, Room 202B
(208) 426-5715 (phone)
(208) 426-2470 (fax)
kurtiscantley@boisestate.edu (email)
boisestate.edu/coen-ece (website)

General Information

The Department of Electrical and Computer Engineering (ECE) offers a Doctor of Philosophy (PhD) degree in Electrical and Computer Engineering. The degree requires completion of a prescribed course of study in ECE, satisfactory performance on the comprehensive examination and dissertation proposal, and original research resulting in a publicly-defended dissertation that contributes to the discipline. Please refer to Regulations for the Doctor of Philosophy Programs in the front of this catalog for additional information.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 15 (fall priority), July 1 (fall final), July 15 (spring priority), December 1 (spring final)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
  - Field of Study: Electrical and Computer Engineering
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Personal Statement
  - A personal statement that includes a list of potential advisors.
- Submit Current Resume or Curriculum Vitae (CV)
- Submit Letters of Recommendation
  - Three letters of recommendation from academic and/or professional references. Letters should address your potential for success in a graduate program, strengths and weaknesses, your ability to perform research, and the benefits you may receive from graduate study.

- Submit Graduate Assistantship Application
  - Deadlines: February 28 (fall), November 15 (spring)
  - Automatic consideration is given with your application to the program.

Graduate Assistantships

Applications received by the priority dates listed above are automatically considered for funding, while late applications may be considered at the department's discretion. All funding is awarded on a competitive basis, and offers are subject to change as dictated by availability of funds.

Degree Requirements

Doctor of Philosophy in Electrical and Computer Engineering

Graduate Major Requirements
9 Total Credits

Take at least 9 credits from the following:
ECE500 - Applied Electromagnetics (3)
ECE510 - Digital Integrated Circuit Design (3)
ECE520 - Advanced Device Design and Simulation (3)
ECE530 - Digital Hardware Design (3)
ECE540 - Intro to Integrated Circuit Processing (3)
ECE540L - Intro to Integrated Circuit Processing Lab (1)
ECE572 - Power Electronics (3)
ECE650 - Stochastic Signals and Systems (3)
ECE660 - Linear Systems (3)

Graduate Culminating Activity and Other Requirements
57 Total Credits

Complete all of the following
Take at least 57 credits from the following:
Major Area of Concentration (12- 15)
Emphasis (Minor) Area (6- 9)
Electives (with supervisory committee approval) (7)
Take any of the following:
ECE691 - Doctoral Comprehensive Examination (1 - 6)
Take any of the following:
ECE689 - Dissertation Proposal (1 - 6)
(24- 30)
Take any of the following:
ECE693 - Dissertation (1 - 12)

Grand Total Credits: 66

Program Notes

Areas of Concentration Six areas of concentration are available in electrical and computer engineering. These areas of concentration are denoted by the middle digit of the course number of ECE courses: Computer engineering (middle digit 3), circuits and devices (middle digit 1 or 2), power and control (middle digit 6 or 7), electromagnetics and optics (middle digit 0 or 8), semiconductor processes and devices (middle digit 2 or 4), and signals and systems (middle digit 5 or 6). However, each student's program of study may deviate from these guidelines if approved by their supervisory committee and the graduate program coordinator.

Major and Emphasis (Minor) Areas At least 12 credits of coursework are required in a major area of concentration. These credits are to be earned in graduate courses selected from one of the six areas defined above. In addition, at least 6 additional credits of graduate coursework is required in an emphasis (minor) area selected from a second area of concentration as defined in the list above. No more than 3 course credits total may be satisfied by either directed research or independent study.

Doctoral-Level Courses At least 12 course credits must be at the 600-level. The 600-level course credits may be counted towards core course requirements, major-area courses, minor-area courses, or approved electives.

MASTER OF ENGINEERING/MASTER OF SCIENCE

Graduate Program Coordinator: Jennifer Smith
Charles P Ruch Engineering Building, Room 222
(208) 426-5743 (phone)
jasmith@boisestate.edu (email)

General Information

The ECE Department offers two distinct engineering graduate degree programs. The first leads to a Master of Engineering in Electrical and Computer Engineering (MEngr in ECE). This is a non-thesis program with a focus on professional development. The second program leads to a Master of Science in Electrical and Computer Engineering (MS in ECE) and is designed to prepare students for research.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: August 1 (fall), December 1 (spring)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
  - Field of Study: Engineering, Science, or Math.
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
- Submit Current Resume or Curriculum Vitae (CV)
- Submit Letters of Recommendation
  - Three letters of recommendation from employers or academic faculty. At least one letter should come from academic faculty. Letters should address your potential for success in a graduate program, strengths and weaknesses, and the benefits you may receive from graduate study.

MASTER OF ENGINEERING IN ELECTRICAL AND COMPUTER ENGINEERING

Degree Requirements

Master of Engineering in Electrical and Computer Engineering

Graduate Major Requirements
30 Total Credits

Complete all of the following
Take at least 30 credits from the following:
Graduate Courses Related to Electrical and Computer Engineering (18 - 30)
Graduate courses in electrical engineering, computer engineering, or computer science; all courses to be selected with student input and approved by supervisory committee.

Other Graduate Courses (0 - 12)
Graduate courses in electrical and computer engineering or related field; all courses to be selected with student input and approved by supervisory committee.

Graduate Culminating Activity and Other Requirements
1 Total Credits

Take at least 1 credits from the following:
ECE690 - Master's Comprehensive Examination (1 - 6)

Grand Total Credits: 31

MASTER OF SCIENCE IN ELECTRICAL AND COMPUTER ENGINEERING

Degree Requirements

Master of Science in Electrical and Computer Engineering

Graduate Major Requirements
24 Total Credits

Complete all of the following
Take at least 24 credits from the following:
Graduate Courses Related to Electrical and Computer Engineering (15 - 24)
Graduate courses in electrical engineering, computer engineering, or computer science; all courses to be selected with student input and approved by supervisory committee.

Other Graduate Courses (0 - 9)
Graduate courses in electrical and computer engineering or related field; all courses to be selected with student input and approved by the supervisory committee.

Graduate Culminating Activity and Other Requirements
6 Total Credits

Take at least 6 credits from the following:
ECE593 - Thesis (1 - 12)

Grand Total Credits: 30

Course Offerings

ECE—Electrical and Computer Engineering

ECE500 Applied Electromagnetics (3-0-3)(S). An applied study of electromagnetic theory and its applications to wave propagation in bounded structures, scattering and diffraction, antenna theory, S-parameters, and microwave engineering.

ECE510 Digital Integrated Circuit Design (3-0-3)(F). An introduction to CMOS IC design, layout, and simulation. MOSFET operation and parasitics. Digital design fundamentals: digital logic families, latches, flip-flops, sequential logic and datapath subsystems. EDA tools for design, simulation, parasitic extraction and chip tape-out.

ECE511 CMOS Analog Ic Design (3-0-3)(S). An introduction to CMOS analog integrated circuit design. High-frequency models for MOSFET, current mirrors, voltage references, negative feedback systems and stability, amplifiers, frequency compensation and op-amps.

ECE512 Biomedical Instrumentation and Brain-Machine Interfaces (3-0-3)(S) (Even years). Overview of instrumentation and techniques used in biomedical research and clinical medicine. Concepts from circuit theory and signal processing will be leveraged for their application to biomedical instrumentation. Biological signals and physiology will be discussed from an electrical engineering perspective. By unifying key engineering, biomedical, and neuroscience concepts, students will design and evaluate systems such as ECG, EMG, EEG, cochlear and retinal implants, and brain-machine interfaces. Students will gain exposure to recent developments in research and industry.

ECE513 RF Design (3-0-3)(S). Design of wireless systems and RF circuits including amplifiers, oscillators, mixers, filters, and matching networks. Comparison of semiconductor device type characteristics and applications. Use of various analysis, simulation, characterization, and measurement tools for low-noise design, stability analysis, distortion analysis and mitigation, frequency synthesis, and transmission line characterization.

ECE518 Memory and PLL IC Design (3-0-3)(S)(Odd years). Transistor-level design of memory and clock synchronization circuits: DRAM, SRAM, Flash, and ReRAM, design and analysis of Phase-locked Loops (PLLs), Delay-locked Loops (DLLs) and Clock-Data Recovery (CDR) circuits. PREREQ: ECE410 or ECE510.

ECE520 Advanced Device Design and Simulation (3-0-3)(S). Energy band formation, semiconductor carrier statistics, and carrier transport including

recombination and generation mechanisms. Physical operation and design of metal-semiconductor contacts, pn-junction diodes, MOS capacitors, and MOSFETs with both analytical and numerical approaches. Scaling rules, short-channel effects, and nanoscale transistors are also discussed.

ECE521 Advanced Topics in Semiconductor Devices (3-0-3)(F/S). Study of advanced semiconductor devices, particularly photonic, microwave, power, and high temperature/radiation resistant devices, including physics and applications. TCAD simulation and modeling of these devices will be included. PREREQ: ECE420/520.

ECE522 Microwave Semiconductor Devices (3-0-3)(F/S). Covers the various aspects of design, fabrication, and characterization of ultra-low-power, RF-CMOS devices. Short-channel CMOS device physics, Parasitic CMOS device elements, Advanced small-signal bulk and SOI RF-CMOS device models, Ultra-low-power device and circuit design techniques, On-wafer microwave measurement and calibration techniques, and S-parameter device evaluation methods. PREREQ: ECE420/520.

ECE530 Digital Hardware Design (3-0-3)(F). Advanced topics in digital system design emphasizing the specification and design of complex digital hardware systems. Applications include design of synchronous state machines, asynchronous digital systems, and simple digital control circuits using hardware descriptive languages for field programmable gate arrays and complex programmable logic.

ECE532 (CS541) Computer Architecture (3-0-3)(F). Structure of computer systems using processors, memories, and input/output (I/O) devices as building blocks. Computer system instruction set design and implementation, including memory hierarchies, microprogramming, pipelining and multiprocessors. Issues and trade-offs involved in the design of computer system architectures with respect to the design of instruction sets. Cyber-physical security implications of architectural design choices. May be taken for either CS or ECE credit, but not both. PREREQ for CS541: regular admission to Doctor of Philosophy in Computing or Master of Science in Computer Science.

ECE533 Embedded and Portable Computing Systems (3-0-3)(S). Microcontrollers and their use in embedded systems and sensor applications. Power consumption, software development, interprocessor communication, and interfacing with sensors, actuators, and input/output devices. Cyber-physical systems security topics including secure coding, buffer overflow, and physical security. An embedded system project is designed and built.

ECE534 Computer Networks (3-0-3)(F/S). Concepts of computer networks and architectures. Network topology, connectivity analysis, delay analysis, local access design. Physical layer, data link layer, higher layer protocols. Study of networks as distributed embedded systems. Routing, flow control, congestion control. Local area networks.

ECE535 Systems for Multimedia Processing (3-0-3)(F/S). Study of the general information theory and its applications in speech, imaging, and video processing. Focuses on the underlying structures and architectures for efficient algorithm implementation of video and speech processing systems. Current and future trends in processing, storing, coding, decoding, restoring, and transmission of multimedia information. PREREQ: ECE457 or ECE557, and ECE430 or ECE530.

ECE536 Digital Systems Rapid Prototyping (3-0-3)(F/S). Use of hardware description languages and hardware programming languages as a practical means to simulate/implement hybrid sequential and combinational systems. Rapid prototyping techniques will be utilized during the implementation. This course focuses upon the actual design and implementation of sizeable digital design problems using the most up-to-date industry Computer Aided Design tools and Field-programmable Gate Arrays. PREREQ: ECE430/530.

ECE537 ASIC Chip Design (3-0-3)(F/S). Study of phases of ASIC development implementing standard, specialized and DSP applications. Course covers specifications and pre-design analysis mapping design units into architectures, evaluation of early design choices using CAD behavioral synthesis tools and design libraries, simulation, functional and timing verification issues, synthesis, design optimization, testing, and evaluation. The course supports individual and group projects to build ASICs implementing RISCs/DSPs/Superscalars/Fuzzy Logic based systems using standard ASIC design CAD tools. PREREQ: ECE430/530 and ECE432/532.

ECE540 Intro to Integrated Circuit Processing (3-0-3)(F). Fundamentals of integrated circuit fabrication technology; semiconductor substrates; theory of unit processes such as diffusion, oxidation, ion implantation, rapid thermal processing, photolithography, wet etching and cleaning, dry etching, thin-film deposition; chemical mechanical polishing; process integration; metrology; statistical process control; TCAD. COREQ: ECE540L.

ECE540L Intro to Integrated Circuit Processing Lab (0-3-1)(F). Semiconductor clean-room practices including safety requirements, processes such as oxidation and diffusion, film deposition, photolithography, wet and dry etching, and chemical mechanical polishing. Fabrication and test of simple structures in lab. COREQ: ECE540.

ECE541 Advanced Topics in Silicon Technology (3-0-3)(S). Advanced technologies for unit processes such as diffusion, oxidation, ion implantation, thin film deposition, etching, rapid thermal processing, chemical mechanical polishing, and lithography. CMOS, bipolar, and process integration. PREREQ: ECE440 or ECE540.

ECE542 Photolithography (3-0-3)(S). Principles of optics, diffraction, interference, superposition of waves, imaging systems, fundamentals of microlithography, resolution, contact and projection lithography, photoresist processing, metrology. Phase shift masks, anti-reflective coatings, deep-ultraviolet lithography, off-axis annular illumination. Use of TCAD lithography simulation software. PREREQ: PERM/INST.

ECE542L Photolithography Lab (0-3-1)(F/S). Cleanroom lab experience accompany ECE542, utilizing a projection-printing wafer stepper, photoresist wafer track, SEM, and optical metrology equipment. Use of TCAD lithography simulation software. COREQ: ECE542.

ECE543 Introduction to MEMS (3-0-3)(F/S). Overview of MEMS; MEMS device physics including beam theory, electrostatic actuation, capacitive and piezoresistive sensing, thermal sensors and actuators; basic MEMS fabrication techniques; MEMS technologies: bulk micromachining, surface micromachining, and LIGA; MEMS design and modeling; case studies in various MEMS systems. PREREQ: ECE440 or ECE540.

ECE551 Communication Systems (3-0-3)(S). Signals, noise, propagation and protocol in analog and digital communication systems. Bandwidth, Fourier transforms, signal to noise ratio and receiver noise figures. Introduction to modern wireless communication systems such as cellular, wireless data and satellite data systems.

ECE552 Wireless Communications (3-0-3)(F). Modern cellular communication systems, including propagation, handoff, noise, and interference studies. CDMA and other spread-spectrum systems. PREREQ: ECE451 or ECE551.

ECE554 Digital Signal Processing (3-0-3)(F). Modern digital signal processing in engineering systems. Review of continuous-time and discrete-time signals, spectral analysis; design of FIR and IIR digital filters. Fast Fourier Transform, two-dimensional signals, realization structure of digital filters, and filter design.

ECE556 Pattern Recognition and Machine Learning (3-0-3)(Offered as Justified). Basic concepts of statistical and neural pattern recognition. Structure of pattern classification problems. Mathematics of statistical decision theory; multivariate probability functions, discriminant, parametric and nonparametric techniques. Bayesian and maximum likelihood estimation, feature selection, dimensionality reduction, neural network and deep learning recognition, and clustering. Includes applications to cyber-physical security.

ECE557 Digital Image Processing (3-0-3)(F). Pictures and their computer representation. Image digitization, transformation, and prediction methods. Digital enhancement techniques, histogram equalization, restoration, filtering

and edge detection. Color models and transformations. Wavelets and morphological algorithms.

ECE561 (ME561) Control Systems (3-0-3)(S). Time and frequency domain analysis and design of feedback systems using classical and state space methods. Observability, controllability, pole placement, and observers. May be taken for ECE or ME credit, but not both.

ECE564 (ME564) Robotics and Automated Systems (3-0-3)(F/S). An introduction to robotics with emphasis on automated systems applications. Topics include: basis components of robotic systems; selection of coordinate frames; homogeneous transformations; solutions to kinematic equations; velocity and force/torque relations; manipulator dynamics; digital simulation of manipulator motion; motion planning; actuators of robots; sensors of robots; obstacle avoidance; and control design. Cross-listed with ME564, may be taken once for credit.

ECE570 Electric Machines (3-0-3)(S). Magnetic materials and magnetic circuits, Transformers. Principles of electromechanical energy conversion, energy and coenergy concepts, forces and torques of electromagnetic origin. Introduction to rotating machines including synchronous machines and induction machines.

ECE572 Power Electronics (3-0-3)(F). Power electronic switches, diode and controlled rectifiers, AC-AC phase control, DC-DC converters, inverters, introduction to electric drives and power quality fundamentals.

ECE573 Power System Analysis I (3-0-3)(F). Three-phase AC systems, generators, transformers, transmission lines, one-line diagrams, per-unit system, network calculations, load flow studies, power system operation.

ECE574 Power System Analysis II (3-0-3)(S). Fault analysis, symmetrical components, power system transients, protection and relaying, transient stability, power system operation and control, power system economics, power quality, and power system reliability. PREREQ: ECE473 or ECE573.

ECE601 Advanced Electromagnetic Theory (3-0-3)(S)(Even years). Advanced topics in static and dynamic electromagnetic field theory for engineering applications including bounded structures and radiators; solution of scalar and vector boundary value problems; Kirchhoff radiation theory; geometrical diffraction theory, and numerical methods. PREREQ: ECE500.

ECE602 Plasma and Electron Devices (3-0-3)(F)(Even years). Advanced topics in plasma devices including plasma waves, plasma generation, and device applications for plasma processing and vacuum electronics. Advanced topics in microwave vacuum electron devices including oscillators and amplifiers for both high power and high frequency. PREREQ: ECE500 and ECE603.

ECE603 Plasma Engineering (3-0-3)(F)(Odd years). An introduction to plasma principles and the use of plasmas in semiconductor processing. The course provides an introduction to the basic concepts of the Debye length, plasma sheaths, and the properties of waves in plasmas. The principles involved in the chemistry and the physical aspects of plasma discharges are covered related to etch, deposition, and ion implantation.

ECE614 Advanced Analog IC Design (3-0-3)(F)(Even years). Advanced analog design consideration including: noise analysis, feedback, fully-differential opamp design and simulation, behavioral modeling, switched capacitor circuits design and simulation, sample-and-hold circuits, offset-cancellation, autozeroing, and chopping. Comparators, introduction to Nyquist-rate ADCs (Flash, pipelined, SAR, folding) and DACs. PREREQ: ECE411 or ECE511.

ECE615 Mixed-Signal IC Design (3-0-3)(F)(Odd years). Data Conversion and spectral estimation fundamentals, delta-sigma modulator (DSM) architectures, decimation filters, discrete-time (switched-capacitor) as well continuous-time (CT) DSM design, cascaded DSMs, bandpass and complex DSMs. Behavioral modeling, simulation and circuit non-idealities in DSMs. PREREQ: ECE411 or ECE511.

ECE621 Electrical Characterization (3-0-3)(Offered as Justified). A focus on theoretical and practical considerations associated with fundamental electrical measurement techniques used to characterize common semiconductor materials and devices. Includes current-voltage and capacitance-voltage methods for determining properties such as resistivity and doping density, oxide charge, interface trap density, contact/series resistance, and carrier mobility. An integrated lab component will involve measurement of devices including four-point probe structures, diodes, metal-oxide-semiconductor (MOS) capacitors, and MOSFETs.

ECE624 Amorphous Semiconductor Devices (3-0-3)(Offered as Justified). Introduction to amorphous semiconductors, structure, defects, gap states, electronic transport, optical properties, photoconductivity, and applications.

ECE625 Organic Electronic Devices (3-0-3)(Offered as Justified). Introduction to organic-based devices, challenges, recent advances. Topics include metal-molecule interfaces and electron transfer considerations, physics of organic semiconductors, molecular functional groups and their electrical properties, challenges and considerations of device fabrication, recent advances and emerging materials, and applications ranging from photovoltaics, flexible solar cells, and sensors to emerging applications. Topics can be varied depending upon interest.

ECE629 Quantum Effects in MOS Devices (3-0-3)(F/S). Computational methods will be used to examine quantum mechanical effects in MOS devices. Effects such as tunneling, triangular quantum well effects and poly-Si depletion will be examined. PREREQ: ECE320 and PHYS309L.

ECE630 Digital Systems Verification (3-0-3)(S)(Odd years). Application-oriented and practical aspects of digital hardware design verification methods, including traditional functional simulation, assertion-based verification methodology and a subset of formal verification techniques. Topics include functional simulation, coverage metrics, testbench design and automation, and event-and assertion-based verification. PREREQ: ECE530.

ECE631 Digital System Testing and Testable Design (3-0-3)(F/S). In-depth theory and practice of fault analysis, test set generation, and design for testability of digital systems. Topics include system modeling; fault sources and types; fault simulation methods; automatic test pattern generation (ATPG) for combinatorial and sequential circuits; testability measures; design-for-testability; scan design; test compression methods; logic-level diagnosis; built-in self-testing (BIST); VLSI testing issues; processor and memory testing. Advance research issues, including topics on mixed signal testing are also discussed. PREREQ: ECE430/530, and ECE410/510.

ECE632 Advanced Computer Architecture (3-0-3)(F/S). Study of up-to-date multiprocessor systems and parallel computing architectures. Covers basic architectural concepts and their performance evaluation, design principles of VLIW and superscalar architectures, multithread and data-flow computers, shared and distributed memory MIMDS, associative and neural architectures. Focuses on significant trends in building systems on a chip. PREREQ: ECE432/532.

ECE634 Large Scale Distributed Systems Design (3-0-3)(F/S). Fundamental principles, critical issues and latest techniques involved in the design of advanced computer controlled systems. Emphasizes using design requirements, hardware-software tradeoffs, redundancy, and testability to develop highly reliable systems. Topics include software-hardware tradeoffs, memory hierarchy design, calculation of availability, simulation, and communication requirements. Tools and techniques used to develop systems. Incorporates case studies of actual systems. A design project will be included and consists of designing a system driven by embedded computers. PREREQ: ECE432/532.

ECE635 Hardware Implementation of DSP Algorithms (3-0-3)(F/S). Implementation methods of DSP algorithms in programmable logic environment. Hardware required for DSP implementation: architectures; arithmetic; digital filters including FIR, IIR and CIC. Course will also cover the efficient implementation of these algorithms and their impact on the implementation process and product costs. PREREQ: ECE454/554 and ECE430/530.

ECE636 Hardware/Software Codesign (3-0-3)(F/S). Covers system level design of embedded systems with a top-down design approach. The students will learn various design steps starting from system specifications to hardware/software implementation and will experience process optimization while considering various design decisions. Students will gain design experience with project/case studies using contemporary high-level methods and tools. PREREQ: ECE436/536.

ECE637 System on a Programmable Chip (3-0-3)(F/S). Covers the design of embedded system within a single integrated circuit. Such a system consists of multiple intellectual property cores interconnected by common infrastructure. This course will also explore the challenges to design and test a complete system on chip. Exercises/projects will be given to design, synthesize, and simulate using modern computer aided design (CAD) tools. Resulting systems will be targeted in reprogrammable hardware. PREREQ: ECE436/536.

ECE640 Advanced Microfabrication (3-0-3)(F/S). Advanced micro/nano-fabrication techniques; advanced process modeling and simulation of thermal processes, ion implantation, thin-film deposition, dry etching, CMP, and lithography; CMOS/device integration; process variability and control; metrology; parametric test. PREREQ: ECE440/540.

ECE646 Frontiers of IC Processing (3-0-3)(F/S). Recent and proposed developments in semiconductor process technology Course modules: Lithography, Deposition, Doping and Etch processes. PREREQ: ECE440/540.

ECE650 Stochastic Signals and Systems (3-0-3)(S). Probability theory for countable and uncountable sample spaces. Topics include random variables, conditional probability, independence, transformation of random variables and their distributions, conditional expectation, mean-square estimation and the orthogonality principle. Stochastic processes studied include Bernoulli, geometric, Poisson, white noise, random walk, and Brownian motion.

ECE651 Information and Coding Theory (3-0-3)(F/S). Information measures, characterization of information sources, coding for discrete sources, the noiseless coding theorems, construction of Huffman codes. Discrete channel characterization, channel capacity, noisy-channel coding theorems, reliability exponents, and rate distortion theory. PREREQ: ECE451 or ECE551, and ECE650.

ECE652 Advanced Communications Theory (3-0-3)(F/S). Principles of modern communication systems. Elements of information theory, source encoding, efficient signaling with coded waveforms, convolutional codes; carrier recovery and synchronization under AGN channel; adaptive equalization; maximum likelihood estimation, Viterbi algorithm. PREREQ: ECE451 or ECE551, and ECE650.

ECE657 Advanced Digital Image Processing (3-0-3)(F/S). Advanced course in digital image processing. Topics will include image storage formats, image compression techniques, acquisition system calibration, geometric transformations, edge detection and image segmentation, adaptive techniques, video, halftoning, 3D images and topics of specific student interest. PREREQ: ECE557 or equivalent.

ECE660 Linear Systems (3-0-3)(F). Methods of analysis for linear time-invariant systems. Topics include linear algebra, concept of state, modes, controllability, observability, canonical forms, state transition matrices, transfer functions, minimal realizations, and state feedback for trajectory tracking and disturbance rejection.

ECE661 Nonlinear Systems (3-0-3)(F/S). Phenomena peculiar to nonlinear systems. Linearization, iteration and perturbation procedures. Describing function stability analysis. Phase plane methods. Relaxation oscillations and limit cycles. Stability analysis by Lyapunov's method. Popov's theorem. Adaptive control systems. Sensitivity analysis. PREREQ: ECE660.

ECE662 Deep Learning with Python (3-0-3)(F). Convolutional neural networks with many (deep) layers used for classification and object recognition. Recurrent neural networks including long short-term memory (LSTM) on time series for language translation and natural language processing. The Python-based interface for artificial neural networks provided by Keras/TensorFlow is used. Python will be introduced as part of the course. It is recommended students have an understanding of probability theory, linear algebra, mathematical maturity, and programming experience.

ECE666 Multivariable Control Systems (3-0-3)(S). Linearization of state variable models. Time response of linear time invariant systems. Controllability, observability, and stability of linear systems. Pole placement by state and output feedback. Observers. Linear quadratic regulator control. PREREQ: ECE660.

ECE670 Electric Machine Dynamics (3-0-3)(Offered as Justified). Dynamic modeling and simulation of AC machines using reference-frame theory and matrix transformations. Three-phase synchronous and induction machine models. Transfer functions and standstill parameter identification. Linearized machine equations and reduced-order models. Unregulated single-machine and multi-machine simulations. Introduction to steady-state and transient stability analysis. PREREQ: ECE570.

ECE671 Power System Dynamics (3-0-3)(Offered as Justified). Dynamic modeling and simulation of power system components and their controls. Transient and steady-state stability analysis, stabilization of electromechanical oscillations via excitation control. Methods of coherency identification and dynamic equivalencing. Flexible AC Transmission (FACTS) devices. Subsynchronous resonance in power systems. Voltage stability and control. PREREQ: ECE573 and ECE670.

ECE672 Control of Electric Machines (3-0-3)(Offered as Justified). Analysis of symmetrical three-phase induction machines using reference-frame theory and space phasors. Scalar control, vector (field-oriented) control, and direct-torque control of induction motor drives. Squirrel-cage, wound-rotor, doubly-fed, and series-connected induction machines for wind generation. Control of single-phase induction machines and special machines. PREREQ: ECE570.

ECE681 MMIC Design (3-0-3)(F/S). Technology, design and analysis of monolithic microwave integrated circuits; passive and active microwave circuit elements; high frequency substrates, individual design projects utilize modern computer-aided design software. PREREQ: ECE500.

ECE682 Quantum Electronics (3-0-3)(F). Quantized electromagnetic field, interaction of radiation and atomic systems, laser oscillation, semiconductor lasers, parametric amplification, phase conjugate optics. PREREQ: PHYS412 or PHYS512.

Master of Science in Genetic Counseling

College of Health Sciences | School of Allied Health Sciences

MASTER OF SCIENCE IN GENETIC COUNSELING

Graduate Program Director: Jennifer Eichmeyer
Norco Building, Room 113D
(208) 426-3987 (phone)
jennifereichmeye@boisestate.edu (email)
boisestate.edu/geneticcounseling (website)

General Information

This online program is designed for individuals with a baccalaureate degree to pursue a Master of Science in Genetic Counseling (MSGC) degree. Program curriculum follows the rigorous accreditation standards regulated by the American Board of Genetic Counselors (ACGC) and expands on the standards by developing all coursework specific for the genetic counseling discipline delivered as a comprehensive, cohesive personalized learning experience for online students. Diverse in person fieldwork provides clinical training to create advocates, translators, and experts in the field of genetics and genomics, and capstone projects develop research skills to give graduates an ability to contribute meaningfully to the genetic counseling community. Professional development will focus on interprofessional education, learning to engage in a culturally, economically, and diverse community, and the aspects of business in healthcare giving students the skills to be leaders and entrepreneurs.

This program admits students to an annual cohort and courses are to be taken sequentially, culminating in a research-based capstone course. Students will be required to enroll in two seven-week courses per semester; however, each course will be taken independently. This 56-credit program, offered solely online, is a unique opportunity for baccalaureates interested in pursuing an advanced degree in genetic counseling. Students will gain a graduate-level understanding of the impact of genetic disease on public health and will be prepared to and encouraged by the MSGC faculty to pursue presentation or publication of their research topics. Additionally, graduates will be prepared with the advanced clinical knowledge necessary to pursue the required credentialing exams offered by the American Board of Genetic Counseling (ABGC). This program has been designed with Genetic Counselors working throughout the healthcare system in mind and students accepted to this program can expect to complete the course sequence in two years.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadline: December 15 (fall)
  - Pay an additional $20.00 application fee.
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Personal Statement
  - A personal statement that includes the following elements: a) Life Experience, Education, and Volunteer Experience: Describe how your personal life experiences, formal education, and/or volunteer work have contributed to your decision to seek admission to the graduate genetic counseling program and selecting genetic counseling as a career (This should be about your experiences). b) Genetic Counseling: Reflect on your perception of the role of a genetic counselor and why you would be a good addition to the field of genetic counseling (This should be about how your skills, qualities, and passions are a good fit for genetic counseling). c)

Diversity: Discuss how contact with persons who differ from you in race, ethnicity, gender, sexual orientation, economic class, political perspectives, religion, or cultural background have affected your personal philosophy, values and worldview. d) Personal Strengths: Describe how your strengths will contribute to your success in graduate genetic counseling education. Because of the online nature of the program it will be important to highlight cooperative work as well as examples of self-directed learning.

- Submit Current Resume or Curriculum Vitae (CV)
  - A curriculum vitae (CV) that is composed as if you are applying for a position in genetic counseling. It should include any paid or unpaid genetic counseling, research, advocacy, and leadership experience (including volunteering), all shown in chronological order, with the most recent activity listed first. Divide your cv into sections. Each section should have: a) The title in bold so as to clearly separate b) The sections should appear in the following order, but need not be numbered on your document: 1) Education - A listing of completed degrees and/or any degrees you expect to complete with granting institution(s), The year in which the degree was completed or the anticipated graduation date should be listed starting with the most recent (reverse chronological order) 2) Work Experience - List each paid or unpaid genetic counseling, research, advocacy, and leadership experiences in the following format: Agency/Company name city and state where it is located, the start and end dates (mm/dd/yyyy), position title, major responsibilities of the position. 3) Prerequisite Courses – List all prerequisite coursework and any additional relevant courses in the following format: Course title, university start and end dates (mm/dd/yyyy), credit hours, and grades. 4) Service Contributions - Describe any relevant leadership or service activities you might provide to organizations with which you are involved. 5) Other - If there is other pertinent and professionally relevant information not listed in the sections above, but which you would like to include, list it If you do not have anything to include here, indicate "none" for this section.
- Submit Foundational Coursework for Graduate Study
  - Demonstrate completion of the following courses or equivalent.
    - Completed the following:
      - BIOL191 - Biology I: Introduction to Cell and Molecular Biology (4)
      - BIOL451 - Developmental Biology (3)
      - CHEM111 - General Chemistry I (3)
      - CHEM111L - General Chemistry I Laboratory (1)
      - PSYC101 - Introduction to Psychology (3)
    - Earned a minimum grade of B- in each of the following courses:
      - BIOL310 - Genetics (3)
      - CHEM350 - Fundamentals of Biochemistry (3)
    - A statistics course (1 semester)
- Submit Background Check
  - (If admitted) Complete a CastleBranch BP27 Criminal Background Check (additional costs)
- Interview — Final candidates will be invited for an interview.
- Submit Letters of Recommendation
  - Two letters of recommendation from academic and/or professional references. Preferably, one letter from an academic reference and one letter from a professional reference, but will accept both letters from a professional reference. Recommendations should be from those who can evaluate your potential for academic success in a graduate program including academic accomplishments, work ethic, and inclusion of others and ideas. Letters should address your graduate study in genetic counseling, professional effectiveness, scholarly abilities and dispositions, personal and professional integrity, and any other relevant information.

Degree Requirements

A student may not receive a grade that is less than B (B- or below) in a single course and a course grade of less than a B (B- or below) may not be used to meet the MSGC degree requirements.

Master of Science in Genetic Counseling

Graduate Major Requirements
51 Total Credits

Take the following:
GENCOUN501 - Wellness Seminar (1)
GENCOUN510 - Principles of Human Genetics (3)
GENCOUN511 - Developmental Anatomy and Embryology (2)
GENCOUN515 - Health Care Principles and Public Health (2)
GENCOUN521 - Clinical Genetics I (3)
GENCOUN522 - Clinical Genetics II (3)
GENCOUN530 - Principles & Practices of Genetic Counseling I (3)
GENCOUN531 - Principles & Practices of Genetic Counseling II (3)
GENCOUN532 - Principles & Practices of Genetic Counseling III (3)
GENCOUN533 - Principles & Practices of Genetic Counseling IV (3)
GENCOUN540 - Professional Issues I (1)
GENCOUN541 - Professional Issues II (1)
GENCOUN542 - Professional Issues III (2)
GENCOUN543 - Professional Issues IV (2)
GENCOUN545 - Research Methods and Statistics (3)
GENCOUN549 - Fieldwork I (1)
GENCOUN550 - Fieldwork II (5)
GENCOUN551 - Fieldwork III (5)
GENCOUN552 - Fieldwork IV (5)

Graduate Culminating Activity and Other Requirements
4 Total Credits

Take the following:
GENCOUN570 - Scholarly Project I (1)
GENCOUN571 - Scholarly Project II (1)
GENCOUN572 - Scholarly Project III (1)
GENCOUN692 - Capstone (1)

Grand Total Credits: 55

Course Offerings

GENCOUN—Genetic Counseling

GENCOUN501 Wellness Seminar (1-0-1)(F). Overview of MS GC degree program with discussion of the program philosophy and student expectations for success. Emphasis on the personal and professional anticipatory wellness aspects including mind, body, and spiritual needs. PREREQ: Admission to the MSGC Program.

GENCOUN510 Principles of Human Genetics (3-0-3)(F). Basic principles of human and molecular genetics as it applies to the basis of human variation and disease susceptibility. Population and quantitative genetics topics include Mendelian and non-Mendelian inheritance and risk calculation using Bayesian statistics. PREREQ: Admitted to Genetic Counseling MS.

GENCOUN511 Developmental Anatomy and Embryology (2-0-2)(F). Focuses on the fundamental concepts of human embryology and anatomical development as well as the underlying genetic etiologies of normal and abnormal human development, teratogenicity, and pre/post-natal diagnosis. Human reproduction, genetic etiologies of infertility, the advancements in assisted reproductive techniques (ART), preimplantation and prenatal diagnosis will also be covered. COREQ: GENCOUN510.

GENCOUN515 Health Care Principles and Public Health (2-0-2)(SU). Explores the U.S. health care system in relation to other countries, insurance, billing and reimbursement principles, and public health specific to genetics and genomics in medicine. Legislative, privacy, and confidentiality topics will also be covered in the context of advanced patient care. PREREQ: GENCOUN510.

GENCOUN520 Prenatal Genetics and Assisted Reproductive Technologies (2-0-1)(F). Reviews topics unique to prenatal genetic counseling. Subject matter includes: prenatal session terminology, screening and diagnostic testing, ultrasound anomalies, teratogens, infertility and assisted reproductive technologies, and inclusive pedigree construction. Complex scenarios will be discussed to highlight some of the more challenging situations that may occur in a prenatal genetic counseling session. Specific prenatal cases will also be examined. May be repeated once for credit. COREQ: GENCOUN510.

GENCOUN521 Clinical Genetics I (3-0-3)(S). Concepts of clinical cytogenetics, cancer genetics and pharmacogenetics as well as relevant laboratory and diagnostic techniques. Students will gain an understanding of general principles and terminology as well as the role of genetic counseling and genetic testing. PREREQ: GENCOUN510.

GENCOUN522 Clinical Genetics II (3-0-3)(S). Introduces types of research methods used in both healthcare and educational research. Emphasis is on the principles, methods, and statistical techniques used in modern health and educational environments. Students work to develop and refine the research question(s), review of literature, and proposed methodology for a capstone project of the student's choosing. COREQ: GENCOUN511, GENCOUN521.

GENCOUN530 Principles and Practices of Genetic Counseling I (3-0-3) (F). Principles and Practices of Genetic Counseling I, II, III, and IV represent a series of sequential skill building courses providing necessary education for the practice of genetic counseling. Basic principles and tools of genetic counseling are discussed and illustrated. Theory of counseling principles and applications as well as code of ethics for the profession of genetic counseling. PREREQ: Admission to the MSGC Program.

GENCOUN531 Principles and Practices of Genetic Counseling II (3-0-3) (S). Basic counseling/communication skills and interviewing techniques, active listening, effectively reading verbal and nonverbal cues. Person-centered practices specific to genetic counseling are addressed including communicating risk and uncertainty, facilitated decision-making, non-directiveness. Topics of self care and self-disclosure included. PREREQ: GENCOUN510 and GENCOUN530.

GENCOUN532 Principles and Practices of Genetic Counseling III (3-0-3) (F). Advanced genetic counseling skills and continued exploration of psychosocial issues relevant to genetic counseling such as psychosocial development, impact of chronic illness and disability, group and family dynamics, grief and bereavement, and crisis intervention. Students will apply intensive listening skills and incorporate multiple counseling strategies and techniques with a foundational knowledge and skills needed to provide clinical counseling services to diverse populations in a culturally competent manner. PREREQ: GENCOUN515 and GENCOUN531.

GENCOUN533 Principles and Practices of Genetic Counseling IV (3-0-3) (S). Complex concepts encountered in the practice of genetic counseling including diagnostic challenges, teaching principles and methodologies, health literacy, counseling individuals with special challenges. Dynamics of grief and bereavement, crisis intervention, clinical supervision, interprofessional skills/relationships, and ABGC Board Preparation. PREREQ: GENCOUN522 and GENCOUN532.

GENCOUN540 Professional Issues I (1-0-1)(F). Introductory overview to the evolving landscape of genetic and genomics in medicine. Topics include professional roles and responsibilities of individuals working in the field of genetics/genomics and different delivery models to meet patient needs in a variety of demographic settings. Ethical principles, inter-disciplinary relationships, and professional issues as they relate to genetics in healthcare will also be explored. PREREQ: Admission to the MSGC Program.

GENCOUN541 Professional Issues II (1-0-1)(S). Focuses on the professional skills needed in the practice of genetic counseling. Medical documentation and writing, clinical genetics literature, computerized databases, professional organizations, and society position/policy statements. Discussion of ethical dilemmas. Students will participate in teaching experiences. PREREQ: GENCOUN501, GENCOUN511, and GENCOUN540.

GENCOUN542 Professional Issues III (2-0-2)(F). Focuses on the topic of professionalism in genetic counseling, and will allow students to explore one's own individualized definition of this term. Topics will help students formulate essential professional skills for successful career development including collaboration, participation in professional societies, organizations, and resources that serve the genetics and scientific communities. PREREQ: GENCOUN515 and GENCOUN541.

GENCOUN543 Professional Issues IV (2-0-2)(S). Ties together the foundational elements of professional issues in genetic counseling and one's own professional development through the completion of the Professional Portfolio assignment. Students will also acquire and refine the skills necessary for success employment searches such as résumé building, networking, and negotiation. PREREQ: GENCOUN542.

GENCOUN545 Research Methods and Statistics (3-0-3)(S). Focuses on basic concepts and ethical principles of research methodology, evidence based medicine, epidemiology, and biostatistics. Application and understanding of these principles is through review of and critical thinking associated with relevant published literature. PREREQ: GENCOUN511.

GENCOUN549 Fieldwork I (0-1-1)(SU). Focuses on introducing both clinical and non-clinical genetic counseling settings to expose students to a variety of roles in the profession. Students will be expected to participate in a variety of supplementary and field experiences during this course. PREREQ: GENCOUN511, GENCOUN540.

GENCOUN550 Fieldwork II (0-5-5)(SU). Focuses on the foundational principles of clinical genetic counseling from a theoretical to practical approach. Students will be expected to work in clinical rotations in the prenatal, pediatric, adult, cancer, and general genetics settings to meet case-specific requirements for ABGC board certification eligibility upon graduation. PREREQ: GENCOUN522, GENCOUN531, and GENCOUN549.

GENCOUN551 Fieldwork III (0-5-5)(F). Continuation from Clinical Rotation II: Students will be expected to work in clinical rotations in the prenatal, pediatric, adult, cancer, and general genetics settings to meet case-specific requirements for ABGC board certification eligibility upon graduation. PREREQ: GENCOUN550.

GENCOUN552 Fieldwork IV (0-5-5)(F/S/SU). Continuation from Clinical Rotation II-III: Students will be expected to work in clinical rotations in the prenatal, pediatric, adult, cancer, and general genetics settings to gather additional experiences and complete their case-specific requirements for ABGC board certification eligibility upon graduation. A final comprehensive exam will be administered in this course. PREREQ: GENCOUN551.

GENCOUN570 Scholarly Project I (1-0-1)(F). Culminating immersive project or practice experience with a population of interest that includes student identification of project topic and literature review process. Students will identify a project and provide background research. Student will learn project management and presentation skills. (Pass/Fail.) PREREQ: GENCOUN522, GENCOUN542. COREQ: GENCOUN545.

GENCOUN571 Scholarly Project II (1-0-1)(F). Continuation of Scholarly Project I, student will refine and finalize project leading to written proposal, approval, and execution of project launch. Students will learn project management, written and presentation skills with review by Capstone Project Coordinator. (Pass/Fail.) COREQ: GENCOUN570.

GENCOUN572 Scholarly Project III (1-0-1)(S). Continuation of Scholarly Project II, student will continue with project, collection of data, and beginning to assess for outcomes. Students will apply coordination skills with involved professionals and peers. (Pass/Fail.) COREQ: GENCOUN571.

GENCOUN692 Capstone (1-0-1)(F/S/SU). Continuation of Scholarly Project III, student will complete project with final evaluation of the scholarly project by written report of completed work and oral presentation with review by program director, involved professionals, and peers. (Pass/Fail.) COREQ: GENCOUN572.

Department of Geosciences

College of Arts and Sciences

Chair: James McNamara
Environmental Research Building, Room 1160
(208) 426-2902 (phone)
boisestate.edu/earth (website)

Graduate Faculty: Benner, Brand, Brandt, Enderlin, Flores, Glenn, Johnson, Kohn, Liberty, Marshall, McNamara, Mikesell, Niu, Northrup, Pierce, Schmitz, Viskupic, Wanless, Wilkins

Graduate Degrees Offered

- Doctor of Philosophy in Geophysics
- Doctor of Philosophy in Geosciences
- Master of Earth Science
- Master of Science in Geophysics
- Master of Science in Geoscience
- Graduate Certificate in Geographic Information Analysis

Interdisciplinary Participation

- Doctor of Philosophy in Computing
- Doctor of Philosophy in Ecology, Evolution, and Behavior
- Master of Science in Hydrologic Sciences

DOCTOR OF PHILOSOPHY IN GEOPHYSICS

Program Coordinator: Jeffrey Johnson
Environmental Research Building, Room 3165
(208) 426-1404 (phone)
jeffreyBJohnson@boisestate.edu (email)
boisestate.edu/earth/degrees/graduate/ (website)

General Information

The Doctor of Philosophy in Geophysics degree requires completion of a prescribed course of study in geophysics and an area of emphasis outside of geophysics, satisfactory performance on a comprehensive examination, and independent completion of original research that results in a publicly defended dissertation that contributes significantly to geophysical knowledge.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 3 (fall priority), February 15 (fall final), September 15 (spring priority), October 15 (spring final)
  - This program is competitive and traditionally receives applications from more candidates than we have space to enroll. Your application will be rigorously reviewed and admission is not guaranteed.
  - Decisions: Mid-February (fall), Mid-October (spring)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
  - Field of Study: A science, technology, engineering, or mathematics (STEM) field.
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 95, pBT (revised): 72, pBT (old): 587, IELTS - 6.5
- Submit Application Letter
  - An application letter that is a maximum of two (2) pages in length and in 11pt font size or larger. Identify one or more scientific challenges that motivate you to join our graduate program. Outline approaches you might take to address those challenges. Describe how your research interests would benefit from mentorship and interaction with one or more specific faculty at Boise State and how your interests align with their ongoing research.

- Submit Current Resume or Curriculum Vitae (CV)
  - A resume or curriculum vitae that lists your educational training, employment and internship history, list of awards, publications including significant technical reports, poster presentations, and grant applications.
- Submit Additional Materials
  - Submit three (3) additional program-specific forms: Holistic Review Questions Form, Course Summary Form, and Advisor Interest Form. a) The Holistic Review Questions Form is designed to assess dimensions of your preparation for graduate study beyond what is reflected in transcripts, resumes/CVs, letters of recommendation, etc. Download this Microsoft Word document c) Download the Advisor Interest list of faculty and select the names of any faculty with whom you would like to conduct research or receive advising.
- Submit Letters of Recommendation
  - Three letters of recommendation from academic and/or professional references.
- Submit Graduate Assistantship Application
  - Deadlines: February 15 (fall), October 15 (spring)
  - Automatic consideration is given with your application to the program.

Graduate Teaching and Research Fellowships

Graduate fellowships including tuition and fee waivers are funded from three sources: appropriated state funds, endowments, and research grants and contracts. Applicants to the PhD in Geophysics program who submit all documents required by the admission procedure by December 15 (September 15) of any given year will be considered for a state appropriated or endowed graduate fellowship to start the following fall (spring) semester. Notification of successful applicants will be during March (October). Information on graduate fellowships funded by research grants and contracts is available from the Coordinator of the geophysics doctoral program or individual graduate faculty.

Degree Requirements

Doctor of Philosophy in Geophysics

Graduate Major Requirements
28 Total Credits
  Complete all of the following
    Take the following:
      GEOPH501 - Properties and Processes in Geophysics I (4)
      GEOPH502 - Properties and Processes in Geophysics II (4)
    Take at least 9 credits from the following:
      Geophysics courses approved by the supervisory committee and by the graduate programs committee.
    Take at least 8 credits from the following:
      Additional elective courses in related fields as approved by the supervisory committee and by the graduate programs committee.
    Take the following:
      GEOS601 - Introduction to Research Program Development (2)
    Take at least 1 credits from the following:
      GEOS598 - Graduate Seminar (1 - 3)
Graduate Culminating Activity and Other Requirements
32 Total Credits
  Complete all of the following
    Take at least 1 credits from the following:
      GEOPH687 - Doctoral Preliminary Examination (1 - 6)
    Take at least 1 credits from the following:
      GEOS691 - Doctoral Comprehensive Examination (1 - 6)
    Take at least 30 credits from the following:
      GEOPH693 - Dissertation (1 - 12)

Grand Total Credits: 60

Graduate Seminar

On-campus graduate students are required to enroll for GEOPH598 Graduate Seminar each and every time it is offered but GEOPH598 may not be applied to meet the geophysics elective requirement.

DOCTOR OF PHILOSOPHY IN GEOSCIENCES

Program Coordinator: Jeffrey Johnson
Environmental Research Building room 4151
(208) 426-5907 (phone)
lejoflores@boisestate.edu (email)
boisestate.edu/earth/degrees/graduate/ (website)

General Information

Boise State University offers a Doctor of Philosophy in Geosciences through the Department of Geosciences. The degree requires completion of a prescribed course of study in geosciences, satisfactory performance on a comprehensive examination, and independent completion of original research that results in a publicly defended dissertation that contributes significantly to geoscientific knowledge.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 3 (fall priority), February 15 (fall final), September 15 (spring priority), October 15 (spring final)
  - This program is competitive and traditionally receives applications from more candidates than we have space to enroll. Your application will be rigorously reviewed and admission is not guaranteed.
  - Decisions: Mid-February (fall), Mid-October (spring)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
  - Field of Study: A science, technology, engineering, or mathematics (STEM) field.
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 95, pBT (revised): 72, pBT (old): 587, IELTS - 6.5
- Submit Application Letter
  - An application letter that is a maximum of two (2) pages in length and in 11pt font size or larger. Identify one or more scientific challenges that motivate you to join our graduate program. Outline approaches you might take to address those challenges. Describe how your research interests would benefit from mentorship and interaction with one or more specific faculty at Boise State and how your interests align with their ongoing research.
- Submit Current Resume or Curriculum Vitae (CV)
  - A resume or curriculum vitae that lists your educational training, employment and internship history, list of awards, publications including significant technical reports, poster presentations, and grant applications.
- Submit Additional Materials
  - Submit three (3) additional program-specific forms: Holistic Review Questions Form, Course Summary Form, and Advisor Interest Form. a) The Holistic Review Questions Form is designed to assess dimensions of your preparation for graduate study beyond what is reflected in transcripts, resumes/CVs, letters of recommendation, etc. Download this Microsoft Word document c) Download the Advisor Interest list of faculty and select the names of any faculty with whom you would like to conduct research or receive advising.

- Submit Letters of Recommendation
  - Three letters of recommendation from academic and/or professional references.
- Submit Graduate Assistantship Application
  - Deadlines: February 15 (fall), October 15 (spring)
  - Automatic consideration is given with your application to the program.

Graduate Teaching and Research Fellowships

Graduate fellowships including tuition and fee waivers are funded from three sources: appropriated state funds, endowments, and research grants and contracts. Applicants to the PhD in Geosciences program who submit all documents required by the admission procedure by February 1 of any given year will be considered for a state appropriated or endowed graduate fellowship to start the following fall semester; notification of successful applicants will be during March and April. Information on graduate fellowships funded by research grants and contracts is available from the coordinator of the doctoral program in geosciences.

Degree Requirements

Doctor of Philosophy in Geosciences

Graduate Major Requirements
28 Total Credits
  Complete all of the following
    Take at least 13 credits from the following:
      Geosciences courses (GEOG, GEOPH, or GEOS) approved by the supervisory committee and by the graduate programs committee
    Take at least 12 credits from the following:
      Additional elective courses in related fields as approved by the supervisory committee and by the graduate programs committee
    Take the following:
      GEOS601 - Introduction to Research Program Development (2)
    Take at least 1 credits from the following:
      GEOS598 - Graduate Seminar (1 - 3)
Graduate Culminating Activity and Other Requirements
32 Total Credits
  Complete all of the following
    Take at least 1 credits from the following:
      GEOS687 - Doctoral Preliminary Examination (1 - 6)
    Take at least 1 credits from the following:
      GEOS691 - Doctoral Comprehensive Examination (1 - 6)
    Take at least 30 credits from the following:
      GEOS693 - Dissertation (1 - 12)
Grand Total Credits: 60

Graduate Seminar

On-campus graduate students are required to enroll for GEOS598 graduate seminar each and every semester it is offered but GEOS598 may not be applied to meet the Geosciences elective requirement.

MASTER OF EARTH SCIENCE

Graduate Program Coordinator: James McNamara
Environmental Research Building, Room 4165
(208) 426-1354 (phone)
jmcnamar@boisestate.edu (email)
boisestate.edu/earth/degrees/graduate/ (website)

General Information

The Master of Earth Science (MESci) is a professional science degree program without a thesis requirement designed for students who are in the workforce or considering a career path where a thesis would not be a requirement. The curriculum in the MESci is built around proven course strengths in our MS Geosciences, Geophysics, and Hydrologic Sciences programs. The MESci requires the student to select from one of three emphasis areas, with core content in each paralleling those other programs. This provides the MESci student with similar core skills, knowledge base, and focus as in the thesis-based programs, skills which have proved vital to a broad range of fields, including policy, regulation, or management, in the areas of environment, natural resources, and urban planning. A student would fill the remaining program requirements with coursework agreed to by their committee and the department's Graduate Programs Committee (GPC). The Master of Earth Science is a graduate degree platform that will provide its graduates with a rigorous degree that will enhance their competitive edge in the job marketplace.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: December 15 (fall priority), February 15 (fall final), September 15 (spring priority), October 15 (spring final)
  - This program is competitive and traditionally receives applications from more candidates than we have space to enroll. Your application will be rigorously reviewed and admission is not guaranteed.
  - Decisions: Mid-February (fall), Mid-October (spring)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
  - Field of Study: A science, technology, engineering, or mathematics (STEM) field.
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 95, pBT (revised): 72, pBT (old): 587, IELTS - 6.5
- Submit Application Letter
  - An application letter that is a maximum of two (2) pages in length and in 11pt font size or larger. Identify one or more scientific challenges that motivate you to join our graduate program. Outline approaches you might take to address those challenges. Describe how your research interests would benefit from mentorship and interaction with one or more specific faculty at Boise State and how your interests align with their ongoing research.
- Submit Current Resume or Curriculum Vitae (CV)
  - A resume or curriculum vitae that lists your educational training, employment and internship history, list of awards, publications including significant technical reports, poster presentations, and grant applications.
- Submit Writing Sample
  - A writing sample responding to the set questions designed to assess dimensions of your preparation for graduate study beyond what is reflected in your transcripts, resumes/CVs, letters of recommendation, etc. Download this Microsoft Word document and respond to the questions in the document.

- Submit Letters of Recommendation
  - Three letters of recommendation from academic and/or professional references.
- Submit Graduate Assistantship Application
  - Deadlines: February 15 (fall), October 15 (spring)
  - Automatic consideration is given with your application to the program.

Graduate Teaching and Research Fellowships

Graduate fellowships including tuition and fee waivers are funded from three sources: appropriated state funds, endowments, and research grants and contracts. Applicants to the MS in Geophysics program who submit all documents required by the admission procedure by December 15 (September 15) of any given year will be considered for a state appropriated or endowed graduate fellowship to start the following fall (spring) semester. Notification of successful applicants will be during March (October). Information on graduate fellowships funded by research grants and contracts is available from the Coordinator of the geophysics doctoral program or individual graduate faculty.

Degree Requirements

Master of Earth Science

Graduate Major Requirements
35 - 36 Total Credits
  Complete all of the following
    Complete 1 of the following
    Geology Core
    Take at least 4 of the following:
      GEOS523 - Advanced Geomorphology (3)
      GEOS525 - Whole Earth Geochemistry (3)
      GEOS541 - Plate Tectonics (3)
      GEOS560 - Volcanology (3)
      GEOS607 - Paleoclimatology and Paleoceanography (3)
    Hydrologic Science Core
    Take at least 4 of the following:
      CE512 - Hydrologic Systems: Groundwater (3)
      CE526 - Aqueous Geochemistry (3)
      GEOS512 - Hydrologic Systems: Groundwater (3)
      GEOS516 - Hydrology (3)
      GEOS518 - Modeling Earth and Environmental Systems (3)
      GEOS611 - Basin Analysis (3)
    Complete 1 of the following
      Elective coursework in geosciences and related fields.
      Take at least 23 credits from the following:
      OR
      Take at least 24 credits from the following:
      Elective coursework must be approved by the student's supervisory committee and the department's graduate programs committee.
Graduate Culminating Activity and Other Requirements
2 Total Credits
  Complete all of the following
    Take at least 1 credits from the following:
      GEOS598 - Graduate Seminar (1 - 3)
    Take at least 1 credits from the following:
      GEOS690 - Master's Comprehensive Examination (1 - 6)
Grand Total Credits: 37 - 38

MASTER OF SCIENCE IN GEOPHYSICS

Graduate Program Coordinator: Jeffrey Johnson
Environmental Research Building, Room 3165
(208) 426-1404 (phone)
jeffreyBJohnson@boisestate.edu (email)
boisestate.edu/earth/degrees/graduate/ (website)

General Information

The program leading to the degree of Master of Science (MS) in Geophysics is designed to prepare students for professional careers or further graduate studies in geophysical sciences. Completion of the program requires completion of an individually tailored curriculum approved by the graduate program committee, and original research that culminates in a publicly defended thesis. Opportunities for research span a wide range of fundamental and applied geophysics topics. Students are encouraged to contact individual faculty members for further information.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 3 (fall priority), February 15 (fall final), September 15 (spring priority), October 15 (spring final)
  - This program is competitive and traditionally receives applications from more candidates than we have space to enroll. Your application will be rigorously reviewed and admission is not guaranteed.
  - Decisions: Mid-February (fall), Mid-October (spring)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
  - Field of Study: A science, technology, engineering, or mathematics (STEM) field.
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 95, pBT (revised): 72, pBT (old): 587, IELTS - 6.5
- Submit Application Letter
  - An application letter that is a maximum of two (2) pages in length and in 11pt font size or larger. Identify one or more scientific challenges that motivate you to join our graduate program. Outline approaches you might take to address those challenges. Describe how your research interests would benefit from mentorship and interaction with one or more specific faculty at Boise State and how your interests align with their ongoing research.
- Submit Current Resume or Curriculum Vitae (CV)
  - A resume or curriculum vitae that lists your educational training, employment and internship history, list of awards, publications including significant technical reports, poster presentations, and grant applications.
- Submit Additional Materials
  - Submit three (3) additional program-specific forms: Holistic Review Questions Form, Course Summary Form, and Advisor Interest Form. a) The Holistic Review Questions Form is designed to assess dimensions of your preparation for graduate study beyond what is reflected in transcripts, resumes/CVs, letters of recommendation, etc. Download this Microsoft Word document c) Download the Advisor Interest list of faculty and select the names of any faculty with whom you would like to conduct research or receive advising.
- Submit Letters of Recommendation
  - Three letters of recommendation from academic and/or professional references.
- Submit Graduate Assistantship Application
  - Deadlines: February 15 (fall), October 15 (spring)
  - Automatic consideration is given with your application to the program.

Degree Requirements

Master of Science in Geophysics

Graduate Major Requirements
11 Total Credits
  Complete all of the following
    Take the following:
      GEOPH501 - Properties and Processes in Geophysics I (4)
      GEOPH502 - Properties and Processes in Geophysics II (4)
      GEOS601 - Introduction to Research Program Development (2)
    Take at least 1 credits from the following:
      GEOS598 - Graduate Seminar (1 - 3)
Graduate Culminating Activity and Other Requirements
20 Total Credits
  Complete all of the following
    Take at least 13 credits from the following:
    Elective courses approved by the supervisory committee and by the Coordinator of the geophysics graduate program. (At least 6 credits must be at the GEOPH500- level or GEOPH600-level.)
    Take at least 6 credits from the following:
      GEOPH593 - Thesis (1 - 12)
Grand Total Credits: 30

MASTER OF SCIENCE IN GEOSCIENCE

Graduate Program Coordinator: Jeffrey Johnson
Environmental Research Building, Room 5155
(208) 426-5907 (phone)
jeffreyBJohnson@boisestate.edu (email)
boisestate.edu/earth/degrees/graduate/ (website)

General Information

The program leading to the degree of Master of Science (MS) in geosciences is designed to prepare students for professional careers or further graduate studies in earth, environmental, or hydrological sciences. Completion of the program requires completion of an individually tailored curriculum approved by the graduate program committee, and original research that culminates in a publicly defended thesis. Opportunities for research span a wide range of fundamental and applied science topics in earth, environmental and hydrological sciences. Students are encouraged to contact individual faculty members for further information.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: December 15 (fall priority), February 15 (fall final), September 15 (spring priority), October 15 (spring final)
  - This program is competitive and traditionally receives applications from more candidates than we have space to enroll. Your application will be rigorously reviewed and admission is not guaranteed.
  - Decisions: Mid-February (fall), Mid-October (spring)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
  - Field of Study: A science, technology, engineering, or mathematics (STEM) field.
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 95, pBT (revised): 72, pBT (old): 587, IELTS - 6.5
- Submit Application Letter
  - An application letter that is a maximum of two (2) pages in length and in 11pt font size or larger. Identify one or more scientific challenges that motivate you to join our graduate program. Outline approaches you might take to address those challenges. Describe how your research interests would benefit from mentorship and interaction with one or more specific faculty at Boise State and how your interests align with their ongoing research.

- Submit Current Resume or Curriculum Vitae (CV)
  - A resume or curriculum vitae that lists your educational training, employment and internship history, list of awards, publications including significant technical reports, poster presentations, and grant applications.
- Submit Additional Materials
  - Submit three (3) additional program-specific forms: *Holistic Review Questions Form*, *Course Summary Form*, and *Advisor Interest Form*. a) The *Holistic Review Questions Form* is designed to assess dimensions of your preparation for graduate study beyond what is reflected in transcripts, resumes/CVs, letters of recommendation, etc. Download this Microsoft Word document and respond to the questions in the document. b) Download and fill out the College Course Summary Excel template. c) Download the Advisor Interest list of faculty and select the names of any faculty with whom you would like to conduct research or receive advising.
- Submit Letters of Recommendation
  - Three letters of recommendation from academic and/or professional references.
- Submit Graduate Assistantship Application
  - Deadlines: February 15 (fall), October 15 (spring)
  - Automatic consideration is given with your application to the program.

Degree Requirements

Master of Science in Geoscience

Graduate Major Requirements
14 Total Credits

Complete all of the following
  Complete 1 of the following
    Take at least 12 credits from the following:
    12 credits of GEOG, GEOPH, or GEOS courses approved by student's supervisory committee.

    Take at least 4 of the following:
      GEOS525 - Whole Earth Geochemistry (3)
      GEOS541 - Plate Tectonics (3)
      GEOS551 - Principles of Soil Science (3)
      GEOS560 - Volcanology (3)
      GEOS607 - Paleoclimatology and Paleoceanography (3)

  Take the following:
    GEOS601 - Introduction to Research Program Development (2)

  Take at least 1 credits from the following:
    GEOS598 - Graduate Seminar (1 - 3)

Graduate Culminating Activity and Other Requirements
15 Total Credits

Complete all of the following
  Take at least 6 credits from the following:
    GEOS593 - Thesis (0 - 5)

  Take at least 9 credits from the following:
  Additional elective courses as approved by the supervisory committee and by the coordinator of the MS Geoscience program.

Grand Total Credits: 30

GRADUATE CERTIFICATE IN GEOGRAPHIC INFORMATION ANALYSIS

Graduate Program Coordinator: Edwin DeYoung
Environmental Research Building, Room 4165
(208) 426-1354 (phone)
edwindeyoung@boisestate.edu (email)

General Information

This certificate program is interdisciplinary in its application of geospatial technologies towards solving problems with spatial elements, and is open to graduate students of any major where geospatial information technologies and analysis may be applied. The prescribed and elective coursework is designed to meet the demands in industry and research where demonstrable literacy is required in these technologies. Applicants must be seeking a graduate degree for admission to this program.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: December 15 (fall priority), February 15 (fall final), September 15 (spring priority), October 15 (spring final)
  - This program is competitive and traditionally receives applications from more candidates than we have space to enroll. Your application will be rigorously reviewed and admission is not guaranteed.
  - Decisions: Mid-February (fall), Mid-October (spring)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 95, pBT (revised): 72, pBT (old): 587, IELTS - 6.5
- Submit Application Letter
- Submit Current Resume or Curriculum Vitae (CV)

Certificate Requirements

Graduate Certificate in Geographic Information Analysis

Graduate Major Requirements
15 Total Credits

Complete all of the following
  Take at least 2 of the following:
    GEOG560 - Introduction to Geographic Information Systems (3)
    GEOG561 - Remote Sensing and Image Processing (3)
    GEOG562 - Geographic Information Analysis (3)
    GEOS661 - Advanced Image Processing (3)

Electives:
  Take at least 9 credits from the following:
  Nine credits in courses that represent a disciplinary or interdisciplinary focus area. Courses must be approved by the graduate program coordinator and cannot include more than 3 undergraduate credits. Examples of focus areas include Landscape Ecology, Watershed Processes, Geologic Hazards, Resource Management and Land Use, Environmental Quality, Crime, and Urban and Regional Planning.

Grand Total Credits: 15

Course Offerings

GENSCI—General Science

GENSCI501 History of Science (3-0-3)(F/S). This is a survey of humanity's efforts to understand the natural world. "Ancient Science" is presented as an introduction to the evolution of science since the 16th century. "Modern Science" is presented with emphasis on the development of modern scientific thought. Historical illustrations of the nature of scientific research in the evolution of science are presented.

GEOG—Geography

GEOG530 Geographic Information Systems Data and Communication (2-2-3)(F). Concepts of spatial data evaluation and map creation with the application of visualizing spatial information for map communication with geographic information systems. PREREQ: GEOG560

GEOG560 Introduction to Geographic Information Systems (2-2-3)(F/S). Theory, concepts, principles, and practice of spatial data capture, storage, analysis, and display within a geographic information systems environment.

GEOG561 Remote Sensing and Image Processing (3-0-3)(F/S). Fundamentals and applications of single frequency (including lidar), multispectral, and hyperspectral remote sensing for physical, natural, engineering, and social sciences. Emphasis on acquiring, processing, integrating, and interpretation of

imagery. Completion of one year of college physics strongly recommended. PREREQ: GEOG560 or PERM/INST.

GEOG562 Geographic Information Analysis (2-2-3)(F/S). For graduate students with previous GIS experience or coursework. Covers the operations and spatial analysis capabilities of a GIS, including spatial data models and data structure, spatial data management, and the spatial statistical analyses used to solve various problems. Lab fee. PREREQ: GEOG561 or PERM/INST.

GEOG570 (GEOS570) Earth System Science and Global Warming (3-0-3) (F/S). Survey of interactions among physical biogeochemical processes involved in climate and climate feed back. Explore in detail scenarios of global warming for the next century and their reliability. May be taken for GEOG or GEOS credit but not both. PREREQ: PERM/INST.

GEOPH—Geophysics

GEOPH501 Properties and Processes in Geophysics I (3-2-4)(F). Study of the physical processes that operate within the solid Earth and the subsurface properties that govern those processes. Emphasis on mechanical deformation and seismic and electromagnetic wave propagation. Required core class for all geophysics graduate students. PREREQ: PERM/INST.

GEOPH502 Properties and Processes in Geophysics II (3-2-4)(S). Study of the physical processes that operate within the solid Earth and the subsurface properties that govern those processes. Emphasis on thermal processes and the dynamics of fluids. Required core class for all geophysics graduate students. PREREQ: GEOPH501 and GEOS412, or PERM/INST.

GEOPH510 Borehole Geophysics (2-3-3)(Offered as Justified). Principles of geophysical, geological, and hydrological measurements in boreholes with emphasis on applications to hydrogeology and petroleum geology. Geological interpretation and formation evaluation of conventional petroleum industry well logs. Integration of borehole geophysics, seismic reflection data, and geology for water resource studies and petroleum exploration. PREREQ: PERM/INST.

GEOPH511 Integrated Reservoir Analysis (3-1-3)(S). Integration of fundamentals and applications from geology, geophysics, and reservoir engineering to characterize petroleum and geothermal reservoirs. Students will work with real data and computer software to develop a reservoir. PREREQ: MATH170, GEOS220 or GEOS315, or PERM/INST.

GEOPH513 Hydrogeophysics (2-2-3)(S)(odd years). Application of geophysical methods to problems in groundwater hydrology including in situ estimation of aquifer parameters, evaluation of groundwater resources, delineation of thermal and chemical pollution of groundwater, and mapping of saltwater intrusion. PREREQ: GEOS343, GEOS512, or PERM/INST.

GEOPH515 Stratigraphic Interpretation of Seismic Data (3-0-3)(S). Seismic sequence and seismic facies analysis, isochronous reflections, seismic stratigraphy of depositional systems, sea level cycles, seismic modeling, hydrocarbon indicators, lithology from velocity and seismic amplitude variation with offset, use of shear waves and vertical seismic profiling. Interpretation project involving seismic modeling. PREREQ: GEOS465 or GEOPH565.

GEOPH520 Geophysical Applications of Digital Signal Processing (2-3-3) (F/S). Review of digital linear system theory. Digital representation of geophysical data. Geophysical applications of convolution, fast-Fourier transform (FFT), correlations, least squares filters, deconvolution, multi-channel, and two-dimensional operations. Emphasis on processing of seismic reflection data, potential field maps, and earthquake seismograms. Computer laboratory exercises. PREREQ: MATH333.

GEOPH522 Data Analysis and Geostatistics (3-0-3)(F). Review of basic statistics to cover traditional and recent data analysis techniques, with focus on spatial datasets. Parametric and non-parametric probability density functions, monte-carlo and bootstrap resampling, and principal component analysis. GIS software with focus on using quantitative geostatistical techniques for spatial interpolation and analysis, such as variogram modeling, kriging, and co-

kriging. Some experience with programming recommended. PREREQ: PERM/INST.

GEOPH555 Gravimetric and Magnetic Methods (2-2-3)(F/S). Comprehensive discussion of modern gravimetric and magnetic methods of subsurface investigation. Applications to exploration geology (mining and petroleum), engineering geology, hydrogeology, and crustal geology. PREREQ: GEOS101 or PERM/INST.

GEOPH560 Electrical and Electromagnetic Methods (2-2-3)(F/S). Comprehensive discussion of modern electrical and electromagnetic methods of subsurface investigation, including ground penetrating radar. Applications to exploration geology (mining and petroleum), engineering geology, hydrogeology, and crustal geology. PREREQ: GEOS101 or PERM/INST.

GEOPH565 Seismic Methods (2-2-3)(F/S). Comprehensive discussion of modern seismic methods of subsurface investigation. Applications to exploration geology (mining and petroleum), engineering geology, hydrogeology, and crustal geology. PREREQ: GEOS101 or PERM/INST.

GEOPH566 Snow and Ice Physics (3-0-3)(S)(Even years). Physics of water in its solid form at a wide range of spatial and temporal scales. Micro-scale processes including formation of solid precipitation, deposition, metamorphism, sublimation, melt, transition to firn, and ice deformation. Medium-scale processes including snow redistribution, energy balance, stratigraphy, slope stability, and avalanche dynamics. Large-scale processes including snowmelt, regional avalanche forecasting, glacier/ice sheet hydrology, ice cores, permafrost and sea ice. PREREQ: MATH175.

GEOPH567 Snow Science Field Methods (0-3-2)(S). Introduction to traditional and cutting-edge methods for measuring snow properties for snow hydrology and avalanche applications. Weekly hands-on measurements in nearby Dry Creek and Reynolds Creek Experimental Watersheds to monitor snow conditions during the winter and spring. PREREQ: PERM/INST.

GEOPH575 Geophysical Applications of Digital Signal Processing (2-2-3) (F/S). Review of digital linear system theory. Digital representation of geophysical data. Geophysical applications of convolution, fast-Fourier transform (FFT), correlations, least squares filters, deconvolution, multi-channel and two-dimensional operations. Emphasis is on processing of seismic reflection data, potential field maps, and earthquake seismograms. Computer laboratory exercises. PREREQ:GEOS343 or PERM/INST.

GEOPH559 Geophysical Fluid Dynamics (3-0-3)(S)(Even years). This course will focus on the development of an understanding of the fundamental physical principles of dynamical fluids with a broad range of viscosities, including the atmosphere, oceans, glaciers, and solid Earth. The course will integrate lectures, discussions, and hands-on activities to build both intuitive and mathematical understandings of fluids. Students will leave the course with knowledge of the governing principles of fluid dynamics, including the Navier-Stokes equations, as well as practical applications in geosciences. PREREQ: PERM/INST.

GEOPH605 Inversion Theory and Geophysical Applications (3-0-3)(F). Application of the concepts of inverse theory to problems in geophysics and geophysical imaging. Continuous (integral) and discrete methods, with emphasis on latter. Review of linear algebra, eigenvalue decomposition, basis functions, basis vectors, metrics, objective functions, transformation and representation, error analysis, linear and nonlinear inverse methods, gradient descent methods, grid searches, simulated annealing. Computer laboratory exercises. PREREQ: MATH301.

GEOPH610 Geophysical Methods in Geothechnical Engineering (3-0-3) (F)(Odd years). Application of geophysical methods to earthquake engineering, soil dynamics, and vibrations due to construction. Methods for the geophysical assessment of soil profiles with emphasis on the amplification and propagation of stress waves. Response of soils, foundations, and structures built on or out of soils to waves and vibrations created by earthquakes or heavy construction and pile driving. Estimation of seismic hazards, characterization of strong ground motion, wave propagation, local site effects, and different representations of soil dynamics.

GEOPH623 (CE623)(GEOS623) Advanced Hydrogeology (3-0-3)(F). Treatment of groundwater occurrence and flow, theory fundamental mechanisms, hydrologic parameters, flow regimes and systems, geologic controls. May be taken for CE, GEOPH, or GEOS credit, but not for more than one department. PREREQ: MATH275, MATH333, and GEOS412 or GEOS512 or CE412 or CE 512, or PERM/INST.

GEOPH624 (CE624)(GEOS624) Applied Hydrogeology (3-0-3)(S). Quantitative determination of hydrologic parameter values and groundwater flow conditions. Conceptual models and geologic context, boundary condition, analytical and numerical solution techniques, measurement methods, applications to engineering and environmental problems. May be taken for CE, GEOPH, or GEOS credit, but not for more than one department. PREREQ: CE623 or GEOPH623 or GEOS623 or PERM/INST.

GEOPH630 Estimation of Earthquake Ground Motion (2-2-3)(F/S). Procedures for estimation of earthquake ground motion for applications such as the siting and design of critical facilities, city and land use planning, building codes, and evaluation of insurance needs. Topics include seismicity, seismotectonic features, regional seismic attenuation, ground motion parameters, response spectra, local amplification, and estimation of uncertainty. Students interested in earthquake ground motion are also encouraged to consider GEOPH610 as a related course. Scheduled offering based on student interest. PREREQ: GEOPH677; GEOS314, or PERM/INST.

GEOPH640 Electromagnetic and Seismic Wave Propagation (3-0-3)(S) (Odd years). Derivation of wave equations and solutions in idealized media including layered media. Source effects. Attenuation in earth materials. Numerical computation of wave fields including finite-element and finite-difference methods. Computer laboratory exercises. COREQ: GEOPH502 or PERM/INST.

GEOPH641 (GEOS641) Geodynamics (3-0-3)(F/S). Identifies and quantitatively analyzes the processes governing the dynamic behavior of Earth at a variety of spatial and temporal scales. Offered upon sufficient student interest. May be taken for GEOPH or GEOS credit, but not both. PREREQ: PERM/INST.

GEOPH653 Design of Geophysical Monitoring Systems for Surface Or Subsurface Processes (2-2-3)(F/S). Application of design principles to in situ geophysical monitoring systems for time-dependent surface or subsurface processes such as slope instabilities and migration of contaminants in groundwater. Scheduled offering based on student interest. PREREQ: GEOS343, GEOPH502, GEOPH605; or PERM/INST.

GEOPH660 Volcano Geophysics (1-6 credits)(Offered as Justified). Focus on multi-parametric observations and interpretation of geophysical data collected at active volcanoes. Studies grounded in broadband seismology. Acquisition, signal processing, interpretation, and presentation of volcano data in written and oral format. Preparation should include advanced math and computer skills. PREREQ: PERM/INST.

GEOPH667 Soil and Rock Physics (3-1-3)(Offered as Justified). Fundamentals of rock and soil mechanics, from elastic rock deformation to rock failure. Rock physics concepts integrated into geophysical applications for the understanding of rock types, pore fluids, and pressures acting on the rocks. Lab experiments and/or modeling. PREREQ: PERM/INST.

GEOPH677 Earthquake Seismology (3-0-3)(F)(Even years). Physics of the earthquake source, with special emphasis on earthquakes at volcanoes, tectonic earthquakes, volcano-tectonic earthquakes, long-period earthquakes, volcanic tremor, seismometry, earthquake location, fault-plane solutions, earthquake source mechanism, interpretation of seismograms, earthquake magnitude, surface waves, waveform modeling, Earth structure, mainshock-aftershock sequences, earthquake swarms, and b-values. PREREQ: MATH333 or PERM/INST.

GEOS—Geoscience

GEOS505 Research Computing in the Earth and Environmental Sciences (2-2-3)(F)(Alternate years). Prepares students for data- and computing-enabled research in the Earth and environmental sciences by equipping them with knowledge and skills to use computing platforms, programming languages, and practices common in contemporary research. Topics include the linux computing environment, version control using Git, and programming with Python and R. Exercises analyze data related to climate change, geomorphology, landscape ecology, remote sensing, and hydrology. PREREQ: GEOS557 or PERM/INST.

GEOS511 Hydrologic Systems: Land-Atmosphere Interaction (3-0-3)(F). Analysis of the hydrologic cycle focusing on the interface between the land surface and atmosphere. Examines the biophysical processes responsible for the exchange of water, energy, and carbon between the integrated land-atmosphere system at scales ranging from plant leaves to large watersheds. Analysis of data to quantify land-atmosphere exchanges is emphasized. PREREQ: MATH175.

GEOS512 (CE512) Hydrologic Systems: Groundwater (3-0-3)(S). Analysis of the hydrologic cycle focusing on subsurface water and its relationships to surface water. Physics of flow through porous media, physical properties of aquifer systems, methods to determine aquifer characteristics, groundwater modeling and relationships between groundwater and streamflow. May be taken for GEOS or CE credit, but not both. PREREQ: MATH 175.

GEOS513 Hydrologic Systems: Watershed Processes (3-1-3)(F). Analysis of the hydrologic cycle focusing on surface processes in watersheds. Emphasizes watershed water balance through a lens of storage dynamics in snow and soil and streamflow as emergent from interactions between these storage reservoirs and other interfaces. Application of quantitative techniques to solve water resource problems. PREREQ: PERM/INST.

GEOS516 Hydrology (3-0-3)(F). Interdisciplinary earth science concerned with movement and occurrence of water. Watershed-based hydrologic phenomena including hydrologic cycle water-cycle analysis, precipitation, evapotranspiration, snow-snowmelt, streamflow, floods, routing and surface runoff events. Application of analytical techniques to solve water resource problems. PREREQ: MATH175 or PERM/INST.

GEOS518 Modeling Earth and Environmental Systems (2-2-3)(F) (Alternate years). Computational models are tools used to describe, predict, and reveal new understanding about Earth and environmental systems. Develops the mindset and skills needed to apply, develop, and diagnose models of Earth and environmental processes. Knowledge and skills developed allow students to appraise existing models in the context of specific problems. Particular attention is paid to modeling hydrologic, geomorphic, atmospheric, critical zone, and ecological processes.

GEOS523 Advanced Geomorphology (V-V-3)(F/S). Study of Quaternary dating methods, applications of geomorphology to environmental problems, mapping and landscape analysis using GIS, soils, geomorphic response to Quaternary climate change, and climatic, tectonic and autocyclic controls on geomorphic processes. Field trips and a field-based research project required. PREREQ: PERM/INST.

GEOS525 Whole Earth Geochemistry (3-0-3)(F/S). Basic tools and topics of modern geochemistry with an emphasis on solid-earth applications. Essentials of thermodynamics, kinetics, radiogenic and stable isotopes, and trace element chemistry necessary to study Earth processes in the crust, mantle, hydrosphere and atmosphere. PREREQ: PERM/INST.

GEOS526 (CE 526) Aqueous Geochemistry (3-0-3)(F/S). Basic tools and topics of aqueous geochemistry with an emphasis on low temperature processes in natural waters. Essentials of thermodynamics, kinetics, aqueous speciation, mineral-water interaction, and elemental cycling in the context of surficial earth processes and environmental challenges. May be taken for CE or GEOS credit, but not both. PREREQ: PERM/INST.

GEOS529 Field Hydrogeologic Methods (1-4-3)(Offered as Justified). Field observations and data collection at active drilling projects. Survey course covering water well design and construction, geologic data collection from well cuttings, geophysical methods, and other technical, legal and environmental aspects of water well drilling and operation.

Requires weekly 4-hour field trips to local drill sites. PREREQ: GEOS512 and PERM/INST.

GEOS531 Geology and Tectonics of Western North America (3-0-3)(F/S). Class traces the timeline of processes and events that shaped the continental architecture of Western North America by integrating all relevant aspects of geology and geophysics. A research paper is required. PREREQ: Graduate standing or PERM/INST.

GEOS535 Introduction to Geoinformatics (3-0-3)(F/S). Explores theory and practice of digital information systems applied to the geosciences. Databases, GIS, schemas, standards and protocols, and examples. PREREQ: PERM/INST.

GEOS540 Tectonics Seminar (2-0-2)(F/S). Examination of specific orogenic systems, tectonic environments, and tectonic processes. PREREQ: GEOS314, PERM/INST.

GEOS541 Plate Tectonics (3-0-3)(On Demand). Reviews and clarifies geologic and geophysical foundations of plate tectonic theory. Characteristics of modern tectonic environments and their use in interpreting the Earth's geologic history. PREREQ: PERM/INST.

GEOS550 (HES550) Race and Racism in Earth and Environmental Science (1-0-1)(F). This seminar provides a critical examination of race and racism in the Earth and Environmental Sciences (EES). Readings and discussion will explore the complex relationship between EES-related disciplines and racial injustice, structural issues that give rise to the racial makeup of practitioners in the EES, and evidence-based practices that serve to enhance access and participation in the EES. This seminar targets students in EES fields who are interested in a deeper understanding of how race and racism have played a role in shaping their field and how it can be made more accessible and inclusive. Cross-listed with HES550, may be taken once for credit.

GEOS551 Principles of Soil Science (3-0-3)(F/S)(Offered as Justified). Physical, chemical, and biological characteristics of soils, the factors that govern soil formation, soils as a tool for interpreting landscape evolution and climatic change, and the feedbacks among geologic, hydrologic, and ecologic systems that influence pedogenesis. Demonstration laboratory exercises and field trips will be required. Background in geology and chemistry encouraged. PREREQ: PERM/INST.

GEOS552 Terroir Studies (1-5-2)(F/S). Examines geographic and geologic factors influencing production of wine grapes. Review of major growing regions, including soils, geology, climate, geomorphology, and vineyard management practices. Examples from local vineyard districts. Application of field methods and relevant literature review. PREREQ: PERM/INST.

GEOS560 Volcanology (3-0-3)(F)(Alternate years). Study of volcanic processes and deposits, with focus on advances in volcanology since 1980 eruption of Mt. St. Helens. Course content aimed at students desiring to improve skills in working with volcanic rocks in the context of the geologic record, as well as students interested in volcanic hazards assessment. Field trip required. PREREQ: Graduate standing in geosciences or PERM/INST.

GEOS561 Earth Science Teaching Techniques (3-0-3 or 4-0-4)(F/S). This course is a study of the objectives, methods, and materials of instruction in Earth Sciences. Emphasis will be placed on the preparation and presentation of lectures, laboratory exercises and field trips. This course provides the student with internship experience in the laboratory and lecture classroom. PREREQ: Graduate status or PERM/INST.

GEOS562 Advanced Field Methods in Volcanology (2-V-3)(F). Students increase their aptitude for observing and interpreting volcanic deposits in the field through field discussion and field reports that 1) clearly distinguish observation from interpretation, and 2) support interpretations with field observations and reference to the published literature. Class time is used to discuss volcanic processes and field observations. Field trips required. PREREQ: GEOS460 or GEOS560 or PERM/INST

GEOS570 (GEOG570) Earth System Science and Global Warming (3-0-3)(F/S). Survey of interactions among physical biogeochemical processes involved in climate and climate feed back. Explore in detail scenarios of global warming for the next century and their reliability. May be taken for GEOG or GEOS credit, but not both. PREREQ: PERM/INST.

GEOS580 Selected Topics in Watershed Hydrology (1-3 credits)(F). Detailed investigation of select hydrologic processes and applications. Topics will vary each year and may include runoff generation, snow hydrology, watershed management, hydrologic modeling, sediment transport, land-use hydrology and field methods among others. Repeatable for credit. PREREQ: PERM/INST.

GEOS582 Selected Topics in Hydrogeophysics (1-0-1)(As Justified). Selected topics in hydrogeophysics such as petrophysics, pore-scale numerical simulation, laboratory hydrological and geophysical testing, hydrological and geophysical case studies critical zone, aquifer characterization, contamination remediation, and geotechnical engineering. May be repeated for a maximum of 3 credits. PREREQ: PERM/INST.

GEOS583 Selected Topics in Geomorphology (1-3 credits)(F/S). Selected topics in geomorphology such as environmental geomorphology, soils and geomorphology, and post-fire erosion. May be repeated for credit. PREREQ: PERM/INST.

GEOS584 Selected Topics in Tectonics (1-3 credits)(S)(Odd years). Exploration of an individual topic chosen from within the discipline of tectonics. Subject of study in a given semester may be based on geography (e.g., evolution of the Cordilleran Orogen) or tectonic process (e.g., continental rifting and extension). May be repeated for credit. PREREQ: PERM/INST.

GEOS585 Selected Topics in Isotope Geoscience (1-3 credits)(Offered as Justified). Investigation of selected isotope geoscience methods and applications. Topics vary and may include aspects of stable, cosmogenic, rare gas, and radiogenic isotope geochemistry. May be repeated for credit. PREREQ: PERM/INST.

GEOS586 Selected Topics in Volcanology (1-3 credits)(F/S). Explores research questions, methods and recent advancements in volcanology through discussions on a series of volcanology research papers. Repeatable for credit. PREREQ: PERM/INST.

GEOS598 Graduate Seminar (0-1 to 0-3). The preparation and presentation of oral and written reports on topics in earth science and/or science education. Presentation of oral reports may take the form of debate. Preparation of visual aids and geologic illustrations will be emphasized. PREREQ: Admission to candidacy or PERM/INST.

GEOS601 Introduction to Research Program Development (2-0-2)(F). Build skills for successful research program development including time management, use of scientific literature, written communication and proposal writing, communicating with data, contributing to an equitable and collegial work environment, and career planning.

GEOS605 Topics in Geomorphology (3-0-3)(F/S). Topical investigation of geomorphic processes, including the influences of geology, hydrology, biology, climate, tectonics, and time on landscape evolution and ecosystems development. Includes field investigations. May be repeated for credit. PREREQ: PERM/INST.

GEOS606 Graduate Writing Seminar (2-0-2)(On Demand). Transforms graduate student writing habits and improves the quality of writing through goal-setting, peer writing groups, and peer accountability. Exercises throughout the course help students improve organization, logic, and writing clarity. PREREQ: Graduate standing.

GEOS607 Paleoclimatology and Paleoceanography (3-0-3)(F/S). Will survey the driving forces of atmospheric and oceanic circulation, and how this information can be retrieved from the geological record from physical, biotic, trace element, and isotopic proxies. PREREQ: PERM/INST.

GEOS611 Basin Analysis (3-0-3)(S). Study of the formation and evolution of sedimentary basins. Emphasis on the concepts and qualitative tools necessary to understand how sedimentary basins are formed, their specific stratigraphic architectures, and modern approaches to correlation. PREREQ: PERM/INST.

GEOS615 Time-Series Analysis of the Geologic Record (3-0-3)(F/S).
Analysis of modern methods for the quantification of time in the geologic record, including bio-, chemo-, magneto- and physical stratigraphy, high precision geochronology, and orbital tuning. Application to elucidating the records of tectonic reconstruction, paleobiological evolution, and paleoclimate change. PREREQ: PERM/INST.

GEOS616 Watershed Processes (3-0-3)(F). Hydrologic processes operating in watersheds, and relationships among hydrologic, biogeochemical, and geomorphologic processes. PREREQ: PERM/INST.

GEOS620 Coupled Land-Atmosphere Modeling (2-2-3)(F)(Offered even years). Overview of hydrometeorological theory underlying contemporary hydrometeorologic modeling. Application to the use of state-of-the-art research coupled land-atmosphere models, particularly the Weather Research and Forecasting (WRF) model. PREREQ: GEOS505 or PERM/INST.

GEOS621 Global Hydrologic Change (3-0-3)(F)(Offered odd years). In-depth study of projected changes to the global hydrologic cycle associated with climate change. Review of theory and recent literature on global hydrologic change and process-oriented, quantitative analysis of outputs of the Fifth Coupled Model Intercomparison Project.

GEOS623 (CE623)(GEOPH623) Advanced Hydrogeology (3-0-3)(F).
Treatment of groundwater occurrence and flow, theory fundamental mechanisms, hydrologic parameters, flow regimes and systems, geologic controls. May be taken for CE, GEOPH, or GEOS credit, but not for more than one department. PREREQ: MATH275, MATH333, and GEOS412 or GEOS512 or CE412 or CE512, or PERM/INST.

GEOS624 (CE624)(GEOPH624) Applied Hydrogeology (3-0-3)(S).
Quantitative determination of hydrologic parameter values and groundwater flow conditions. Conceptual models and geologic context, boundary condition, analytical and numerical solution techniques, measurement methods, applications to engineering and environmental problems. May be taken for CE, GEOPH, or GEOS credit, but only in one department. PREREQ: CE623 or GEOPH623 or GEOS623 or PERM/INST.

GEOS630 (CE630) Vadose Zone Hydrology (3-0-3)(F)(Even years).
Laboratory and field methods for characterizing physical and hydraulic properties of soils, solution of variably saturated flow problems using analytical and numerical techniques. Computer simulations of flow and transport in variably saturated soils. May be taken for CE or GEOS credit, but not for both. PREREQ: CE412, GEOS412, CE512, or GEOS512 or PERM/INST.

GEOS633 (CE633) Contaminant Hydrogeology (3-0-3)(F)(Odd years). The fate and transport of dissolved solutes and non-aqueous phase liquids in groundwater systems. Students will analyze field data and develop conceptual models for contaminated sites. The role of engineers and hydrologists in environmental litigation will be addressed through case studies. May be taken for CE or GEOS credit, but not for both. PREREQ: CE412 or CE512 or GEOS412 or GEOS512, or PERM/INST.

GEOS636 Stable Isotope Geochemistry (3-0-3)(F/S). Comprehensive overview of theory, methods, and applications of stable isotope geochemistry to a wide range of earth science problems. PREREQ: PERM/INST.

GEOS638 Radiogenic Isotope Geochemistry and Geochronology (3-0-3)(F/S). Comprehensive overview of theory, methods, and applications of radiogenic isotope geochemistry and geochronology to a wide range of earth science problems. PREREQ: PERM/INST.

GEOS641 (GEOPH641) Geodynamics (3-0-3)(F/S). Identifies and quantitatively analyzes the processes governing the dynamic behavior of Earth at a variety of spatial and temporal scales. May be taken for GEOPH or GEOS credit, but not both. PREREQ: PERM/INST.

GEOS643 Advanced Structural Geology (2-3-3)(F)(Alternate years).
Geometric, kinematic and dynamic analysis of plutonic rocks and

metamorphic tectonites. Structural elements in plutons, their formation and interpretation as indicators of the tectonic environment during emplacement. Mesoscopic and microscopic study of rock fabrics, the mechanisms and processes of their formation and deformation, and their use as kinematic and strain indicators. PREREQ: PERM/INST.

GEOS645 Physics and Chemistry of Mountain Building (3-0-3)(F/S). An introduction to modern methods for analyzing the pressure-temperature-time paths and histories of metamorphic terrains comprising modern and ancient mountain belts; subjects to include quantitative geothermobarometry, chemical diffusion and closure temperature theory, geochronology and thermochronology, the thermal structure and evolution of mountain belts. PREREQ: PERM/INST.

GEOS647 Advanced Igneous Petrology (3-0-3)(S)(Odd years). A study of igneous rocks with emphasis on their origin and the processes responsible for their diversity. Exercises will make use of the petrographic microscope and the departmental computer facilities. A field trip is required. PREREQ: PERM/INST.

GEOS652 Methods in Hydrologic Sciences (1-V-3)(S). Application of laboratory and field methods to problems in hydrology, biogeochemistry, and aqueous geochemistry, inclusive of experimental design, sampling techniques, analytical methods and data analysis. PREREQ: PERM/INST.

GEOPH559 Geophysical Fluid Dynamics (3-0-3)(S)(Even years). This course will focus on the development of an understanding of the fundamental physical principles of dynamical fluids with a broad range of viscosities, including the atmosphere, oceans, glaciers, and solid Earth. The course will integrate lectures, discussions, and hands-on activities to build both intuitive and mathematical understandings of fluids. Students will leave the course with knowledge of the governing principles of fluid dynamics, including the Navier-Stokes equations, as well as practical applications in geosciences. PREREQ: PERM/INST.

GEOS661 Advanced Image Processing (2-2-3)(S). Techniques for data derived in the visible, infrared, and microwave spectra. Concepts of laser altimetry and terrestrial laser scanning (TLS) through hands-on field training and data acquisition and image processing. Topics may include preprocessing, endmember analysis, point cloud analysis, spectral unmixing, classification, and accuracy assessment. Practical application of theory for graduate student to apply in thesis and dissertation research. PREREQ: GEOG561 or PERM/INST.

GEOS680 Selected Topics in Hydrometeorologic Modeling (1-4 credits) (Offered as Justified). Topics related to simulation of hydrologic systems including coupled land-atmosphere modeling, hydrologic forecasting and data assimilation, modeling biogeochemical cycling, land modeling in integrated Earth system modeling, and physics-based watershed modeling.

GEOS681 Selected Topics in Remote Sensing (1-3 credits)(F/S). Theory and techniques of using remotely sensed data for mapping and analysis of the environment. Topics will vary within a focus on image processing techniques for selected hydrologic, biogeochemical, geomorphologic, and ecological processes. May be repeated for credit. PREREQ: PERM/INST.

GEOS683 Selected Topics in Soil Science (1-4 credits)(Offered as Justified). Selected topics related to aspects of soil science, including the physical, chemical, and biological characteristics of soils. May be presented in lectures, laboratory exercises and field trips. PREREQ: Background in geology and chemistry.

GEOS685 Selected Topics in Biogeochemistry (1-4 credits)(Offered as Justified). Topics related to aspects of biogeochemistry including biogeochemical cycling, nutrient and contaminant fate in the environment, ecohydrology, reactive transport modeling, microbial processes in the environment, and climate change processes. May be presented in lectures, laboratory exercises and field trips. PREREQ: Background in chemistry, environmental sciences.

Department of History

College of Arts and Sciences

Chair: Lisa M. Brady
Library Building, Room 192
(208) 426-4309 (phone)
historygradbsu@boisestate.edu (email)
boisestate.edu/history (website)

Graduate Faculty: Bieter, Brady, Gill, Hadley, Huntley, Klein, Krohn, Madsen, McClain, Meftahi, Miller, Nichols, Oestreicher, Reinhardt, Wakild, Walker

Graduate Degree Offered

- Master of Arts in History

General Information

The History Department offers a Master of Arts (MA) in History with a choice of three tracks: Academic, Educator, and Public. The Academic Track involves training to be a research historian where you will complete a master's thesis, preparing you for pursuing a PhD in history. The Public History track emphasizes engagement with the wider community in sharing expertise of history, and involves completing a public history project. The Educator track is a non-thesis option offered remotely (online, synchronous) that maximizes historical content instead of the thesis and prepares secondary education teachers to teach concurrent enrollment (high school classes that earn college credits) in Idaho schools. You can complete the Master's degree in two years as a full-time student. Graduate faculty are deeply involved in research and writing in their respective major fields (for more information on the faculty, see the department webpage: boisestate.edu/history). The Department of History encourages a collegial atmosphere in which students and faculty work closely together. Its main goal is to prepare students for further study or for a successful career in history or history education. Besides a faculty rich in its diversity and talents, the location of the university in Boise, the capital city of Idaho, gives students access to the Idaho State Archives, Idaho State Museum, the Idaho State Law Library, the Frank Church Archive, and other research facilities. Boise State University's Albertsons Library has a collection of over 550,000 bound volumes and periodicals and subscribes to more than 4,900 serials. It is also a selective U.S. Government and Canadian document depository, as well as an Idaho State depository. The interlibrary loan system makes the holdings of other excellent collections accessible to Boise State students. Several large corporations with home offices in Boise have opened their archives to students and faculty doing research on department-supported topics.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 15 (fall priority), April 15 (fall final)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
  - Field of Study: History or a history minor or 20 credit hours of history courses.
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 95, pBT (revised): 72, pBT (old): 587, IELTS - 6.5
- Submit Application Letter
  - An application letter that describes your reason for attaining a graduate degree in history. Answers, what are your specific history related goals, and what are the areas of historical interest that you would like to research? Your area of historical interest might require research in a language other than English. If so please explain your proficiency in that language. Explain anything that might cause concern in your transcripts.
- Submit Writing Sample
  - A writing sample that is a history research paper that includes primary sources. A senior seminar type of paper is ideal.

- Submit Letters of Recommendation
  - Two letters of recommendation from academic faculty. Letters should address your potential for following through to completion of a graduate program. Discuss your writing abilities and aptitude for analytical research.
- Submit Graduate Assistantship Application
  - Deadline: January 15
  - Automatic consideration is given with your application to the program.

Graduate Assistantships

Applications to the program must be received by January 15th to be considered for a graduate assistantship, if available.

MASTER OF ARTS IN HISTORY

Graduate Program Coordinator: David Walker
Library Building, Room 187
(208) 426-2992 (phone)
historygradbsu@boisestate.edu (email)
boisestate.edu/history/graduate/master-of-arts-in-history (website)

Degree Requirements

Master of Arts in History
Graduate Major Requirements
6 Total Credits

Take the following:
HIST500 - The Nature of History (3)
HIST501 - The Practice of History (3)

Graduate Culminating Activity and Other Requirements
27 Total Credits

Complete 1 of the following
Complete all of the following
Take at least 24 credits from the following:
Academic Track
Take the following:
HIST502 - Public History in Theory and Practice (3)
Approved History Electives (9-18 cr)
Approved Electives Outside of History (0-9 cr)
Thesis (6 cr)
Take any of the following:
HIST593 - Thesis (1 - 12)
Complete all of the following
Take at least 24 credits from the following:
Educator Track
Take the following:
HIST503 - Methods of Teaching History (3)
Approved History Electives in Major Field (12 cr)
Approved History Electives in Minor Field (6 cr)
Additional History Electives (0-3 cr)
Approved Electives Outside of History (0-3 cr)
Portfolio (3 cr)
Take any of the following:
HIST592 - Portfolio (1 - 6)
Complete all of the following
Take at least 24 credits from the following:
Public Track
Take the following:
HIST502 - Public History in Theory and Practice (3)
Approved History Electives (6-15 cr)
Approved non-history electives (0-9 cr)
Internship (3-12)
Take any of the following:
HIST590 - Practicum/Internship (1 - 12)
Project (6 cr)
Take any of the following:
HIST591 - Project (1 - 12)
Grand Total Credits: 33

Course Offerings

HIST—History

HIST500 The Nature of History (3-0-3)(F). Analysis of what historians do and how the discipline has developed over time. Examines the major controversies over method and interpretation. Oral and written participation and a major paper are required. PREREQ: Admission to History graduate program or PERM/INST or PERM/GRAD COORD.

HIST501 The Practice of History (3-0-3)(S). Historical research methods course focusing on critical analyses of historical sources and scholarship. Emphasis placed upon honing research, writing, and other professional skills. In addition to evaluating published historical scholarship, students will design and conduct an original, article-length historical research project based on primary and secondary sources and engage in critical peer review of their peers' work. PREREQ: Admitted to History MA.

HIST502 Public History in Theory and Practice (3-0-3)(F). Examines different modes of publicly-oriented and -engaged historical research, analysis, and narrative generally referred to as "public history," explores conceptual and practical challenges and opportunities within public history, and introduces a variety of careers and vocations in public history. PREREQ: Admitted to History MA.

HIST503 Methods of Teaching History (3-0-3)(S/SU). Explores pedagogical practices focusing on selected applications. Emphasizes integrating historical thinking skills with content, demonstrated through submitted lesson plans. PREREQ: Admitted to History graduate program.

HIST580 Selected Topics: Graduate Seminar Eastern Hemisphere History (3-0-3)(F/S/SU). Critical analyses of source materials and historical scholarship on topics of restricted scope in the Eastern Hemisphere (Africa, Asia, Europe, the Middle East). Emphases placed upon student reports, class discussions, individual research on relevant topics, and the writing of historical papers. May be repeated for credit. PREREQ: Admitted to History MA.

HIST581 Selected Topics: Graduate Seminar in Western Hemisphere History (3-0-3)(F/S/SU). Critical analyses of source materials and historical scholarship on topics of restricted scope in Western Hemisphere history (Canada, the Caribbean, Central America, South America, the United States). Emphases placed upon student reports, class discussions, individual research on relevant topics, and the writing of historical papers. May be repeated for credit. PREREQ: Admitted to History MA.

HIST582 Selected Topics: Graduate Seminar in Global/Transnational History (3-0-3)(F/S/SU). Critical analyses of source materials and historical scholarship on topics of restricted scope in global or transnational history. Emphases placed upon student reports, class discussions, individual research on relevant topics, and the writing of historical papers. May be repeated for credit. PREREQ: Admitted to History MA.

HIST585 Selected Topics: Themes in History (3-0-3)(F/S/SU). Critical analyses of historical scholarship and source materials on a selected topic in history. Emphases placed upon analyzing scholarship, class discussion, and the nature of historical research. Intensive reading and writing. May be repeated for credit. COREQ: HIST500 or Admission to History graduate program or PERM/INST.

Human-Environment Systems

College of Innovation and Design

Director: Jen Schneider
Albertsons Library, Room 201J
(208) 426-2975(phone)
hes@boisestate.edu (email)
boisestate.edu/hes (website)

Graduate Faculty: Brandt, Cattau, Hillis, Hopping, Schneider, Williamson

Graduate Certificate Offered

- Graduate Certificate in Human-Environment Systems

GRADUATE CERTIFICATE IN HUMAN-ENVIRONMENT SYSTEMS

Program Coordinator: Vicken Hillis
Environmental Research Building, Room 4133
(208) 426-4251(phone)
vickenhillis@boisestate.edu (email)

General Information

The Human-Environment Systems (HES) program offers two distinct graduate certificates and one undergraduate certificate. HES is an interdisciplinary, research-intensive community of faculty and students that uses community-based research to advance solutions to pressing environmental challenges. Students will develop a foundational understanding of the theories, methods, and applications of HES science.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 15 (fall priority) July 1 (fall final), September 15 (spring priority), November 1 (spring final)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Personal Statement
  - A personal statement that explains your interest in the program and how the program relates to broader educational and professional goals.
- Submit Current Resume or Curriculum Vitae (CV)
- Submit Letters of Recommendation
  - Two letters of recommendation from a supervisor or academic instructor. The letters should address your suitability for success in a graduate certificate program, your engagement with and knowledge of your chosen field of study, and your potential ability to become a leader in the environmental field.

Degree Requirements

Graduate Certificate in Human-Environment Systems
Graduate Major Requirements
  Complete all of the following
    Take the following:
      HES500 - Foundations in Human-Environment Systems Science (3)
      HES600 - SES (Social-Ecological Systems) Research Methods (3)
    Take at least 3 credits from the following:
      CS533 - Introduction to Data Science (3)
      EEB603 - Reproducible Science (3)
      EEB621 - Advanced Ecological Data Analysis (3)
      SPS502 - Quantitative Methods for the Social Sciences (3)
    Or 3 credits approved by the Program Coordinator.

Grand Total Credits: 9

Master of Science in Hydrologic Sciences

College of Arts and Sciences | College of Engineering

MASTER OF SCIENCE IN HYDROLOGIC SCIENCES

Department of Geosciences
Graduate Program Coordinator: CJ Northrup
Program Administrator: Susan Hamblin
Environmental Research Building, Room 1160
(208) 426-1419 (phone)
(208) 426-4061 (fax)
susanhamblin@boisestate.edu (email)
boisestate.edu/earth/graduate-degrees (website)

General Information

The program leading to the degree of Master of Science (MS) in Hydrologic Sciences requires completion of a core curriculum in the hydrologic sciences, elective courses chosen to meet student goals, and original research that culminates in a publicly defended thesis. The emphasis is on the scientific principles governing the movement of water and water-borne material through natural systems, the interaction of water with geological and biological systems, and tools to quantify and predict those movements and interactions. Participation by faculty members from the Department of Geosciences, Department of Biological Sciences, and the Department of Civil Engineering provides enriched delivery of courses and enhanced student guidance.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: December 15 (fall priority), February 15 (fall final), September 15 (spring priority), October 15 (spring final)
  - This program is competitive and traditionally receives applications from more candidates than we have space to enroll. Your application will be rigorously reviewed and admission is not guaranteed.
  - Decisions: Mid-February (fall), Mid-October (spring)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
  - Field of Study: science, technology, engineering, or math (STEM) field.
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 95, pBT (revised): 72, pBT (old): 587, IELTS - 6.5
- Submit Application Letter
  - An application letter no more than 2 pages (11pt font or larger), identify one or more scientific challenges that motivate you to join our graduate program. Outline approaches you might take to address those challenges. Describe how your research interests would benefit from mentorship from and interaction with one or more specific faculty at Boise State and how your interests align with their ongoing research.

- Submit Current Resume or Curriculum Vitae (CV)
  - A resume or curriculum vitae that includes a list of your educational training, employment and internship history, list of awards, publications including significant technical reports, poster presentations, and grant applications.
- Submit Additional Materials
  - Submit three (3) additional program-specific forms: *Holistic Review Questions Form*, *Course Summary Form*, and *Advisor Interest Form*. a) The *Holistic Review Questions Form* is designed to assess dimensions of your preparation for graduate study beyond what is reflected in transcripts, resumes/CVs, letters of recommendation, etc. Download this Microsoft Word document and respond to the questions in the document. b) Download and fill out the College Course Summary Excel template. c) Download the Advisor Interest list of faculty and select the names of any faculty with whom you would like to conduct research or receive advising.
- Submit Letters of Recommendation
  - Three letters of recommendation from academic or professional references.
- Submit Graduate Assistantship Application
  - Deadlines: February 15 (fall), October 15 (spring)
  - Automatic consideration is given with your application to the program.

Graduate Teaching and Research Fellowships

Graduate fellowships including tuition and fee waivers are funded from three sources: appropriated state funds, endowments, and research grants and contracts. Applicants to the MS in Hydrologic Science program who submit all documents required by the admission procedure by February 1 of any given year will be considered for a state appropriated or endowed graduate fellowship to start the following fall semester. Information on graduate fellowships funded by research grants and contracts is available from the coordinator of the graduate program in hydrologic science. Prospective students are encouraged to contact individual faculty members for further information about research projects.

Degree Requirements

Master of Science in Hydrologic Sciences

Graduate Major Requirements
24 Total Credits
  Complete all of the following
    Take at least 3 credits from the following:
      GEOS598 - Graduate Seminar (1 - 3)
      GEOS601 - Introduction to Research Program Development (2)
    Take at least 21 credits from the following:
      Graduate courses related to hydrologic sciences, approved by the program coordinator
Graduate Culminating Activity and Other Requirements
6 Total Credits
  Complete 1 of the following
    Take at least 6 credits from the following:
      BIOL593 - Thesis (1 - 12)
    Take at least 6 credits from the following:
      CE593 - Thesis (1 - 9)
    Take at least 6 credits from the following:
      GEOS593 - Thesis (0 - 5)
Grand Total Credits: 30

Interdisciplinary Studies Program

College of Arts and Sciences

MASTER OF ARTS OR MASTER OF SCIENCE IN INTERDISCIPLINARY STUDIES

Program Director: Nicole Molumby
Education Building, Room 601
(208) 426-1414 (phone)
(208) 426-3006 (fax)
nicolemolumby@boisestate.edu (email)

Graduate Degrees Offered

- Master of Arts in Interdisciplinary Studies
- Master of Science in Interdisciplinary Studies

General Information

Boise State University offers a Master of Arts/Master of Science degree program in Interdisciplinary Studies. In consultation with faculty, students may combine courses from more than one college or more than one department to create an individualized program of educational experience. The program is designed for mature students who wish to continue education at the graduate level but do not seek specialized training in a major area. The program is not a substitute for the traditional master's degree; rather, it is intended for students with broader interests in several fields or those whose career goals do not match fully with a single, identifiable academic unit or department. Emphasis is placed on continued intellectual and cultural development in a constantly changing society where new intellectual and career interests may extend over several traditional specializations.

The Interdisciplinary Studies (IDS) Program is housed in the College of Arts and Sciences, and directly supervised by the Director of Interdisciplinary Studies. A university-wide Interdisciplinary Studies Committee consists of the Graduate Dean or Associate Dean and members from a broad range of disciplines appointed by the appropriate Dean. The Director of Interdisciplinary Studies serves as the chair of that committee and oversees the program. Each student in the program also has a graduate committee composed of three faculty members from the disciplines making up the student's interdisciplinary program. The student's graduate committee has the responsibility of helping the student select a particular program of study and recommends to the Interdisciplinary Studies Committee that it be accepted as the student's formal plan of study, thereby indicating that the members of the committee regard it as a viable program of graduate study. The Interdisciplinary Studies Committee is responsible for approving the members of the proposed graduate committee and for deciding whether to approve the student's plan of study.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: October 15 (fall), March 15 (spring)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
  - A pre-application consultation is required.
- Submit Additional Materials
  - Complete an IDS Degree Plan form.
  - Complete an IDS Learning Goals and Objectives, Outcomes, and Assessment form.
  - Complete an IDS Statement of Justification.
- Submit Letters of Recommendation
  - Two letters of recommendation from academic and/or professional references.

Degree Requirements

Master of Arts or Master of Science in Interdisciplinary Studies

Complete all of the following
Take at least 33 credits from the following:
Each program is developed individually according to the student's interests and background but must be intellectually defensible and clearly interdisciplinary in nature. In addition to any Graduate College requirements not mentioned here, the requirements of the IDS Program are as follows:

1) Coursework must be selected from a minimum of two academic areas.
2) No more than 6 credits of work completed prior to approval of the degree plan by the IDS Committee may be included in the program.
3) No more than 11 credits of 300G or 400G courses may be applied toward the program.
4) No more than 9 transfer credits may be included in the program.
5) No more than 9 credits of independent study (596) may be included in the program.
6) Courses may not be challenged for credit.
7) The degree will consist of a total of no less than 33 credits, of which no more than 16 credits may be earned in the College of Business. Students may select (with IDS Committee approval) from a thesis/project option or a written examination option. The thesis/project will carry 6 credits. Under either option, the student will be required to draw critically upon the two or more disciplines studied and to integrate disciplinary insights.
8) Students completing the thesis/project option will, upon completion of that option, meet with their 3-person graduate committee for a final review of the thesis or project.
9) Students completing the examination option will take a written examination prepared by their 3-person graduate committee, with whom they will subsequently meet for a review of results.
10) Minor revisions to the plan of study may be approved by the Director of Interdisciplinary Studies upon the recommendation of the student's graduate advisor; major changes must be approved by the university-wide IDS Committee.
11) All work toward the MA degree in Interdisciplinary Studies must be completed within a period of seven years.

Department of Kinesiology

College of Health Sciences | School of Allied Health Sciences

Chair: Lynda Ransdell
Bronco Gymnasium, Room 209
(208) 426-4270 (phone)
(208) 426-1894 (fax)
lyndaransdell@boisestate.edu (email)
boisestate.edu/kinesiology (website)

Graduate Faculty: Brown, Conger, Ford, Gao, Hammons, Johnson, Kempf, Lucas, Ludwig, Martin, McChesney, Moorcroft, Petranek, Ransdell, Shimon, Simonson, Zhang

Graduate Degrees Offered

- Master of Athletic Leadership
- Master of Athletic Training
- Master of Kinesiology
- Master of Science in Kinesiology

MASTER OF ATHLETIC LEADERSHIP

Program Coordinator: Scott Moorcroft
Bronco Gymnasium, Room 108C
(208) 426-4274 (phone)
malprogram@boisestate.edu (email)

General Information

The Master of Athletic Leadership (MAL) is designed to enhance the leadership skills of current and future athletic leaders for service in intercollegiate, interscholastic, and/or youth sport athletic programs. The program is practitioner-oriented with a strong emphasis on participant development of essential leadership competencies for creating and maintaining athlete-centered athletic programs.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: February 1 (summer priority) June 1 (summer final)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
  - An application letter describing your primary reasons for pursuing the MAL program. Also, detail the benefits of pursuing the MAL program.
- Submit Current Resume or Curriculum Vitae (CV)
- Interview — All applicants will be invited for an interview. The interviews are phone interviews or virtual interviews.
- Submit Letters of Recommendation
  - Three letters of recommendation from academic or professional references. These letters should address your preparation for graduate study, potential for success in a graduate program, strengths and weaknesses, and the benefits you may receive from graduate study.

Degree Requirements

Master of Athletic Leadership

Graduate Major Requirements
30 Total Credits

Take the following:
KIN-AL501 - Foundations of Athletic Leadership (3)
KIN-AL502 - Athletic Organizational Communication (3)
KIN-AL503 - Athletic Program Management (3)
KIN-AL504 - Philosophy of Sport and Athletic Leadership (3)
KIN-AL505 - Sociology of Sport and Athletic Leadership (3)
KIN-AL506 - Psychological Aspects of Athletic Leadership (3)
KIN-AL507 - Athletic Leadership Academy (2)
KIN-AL508 - Athletic Leadership Practicum I (5)
KIN-AL509 - Athletic Leadership Practicum II (5)

Graduate Culminating Activity and Other Requirements
2 Total Credits
Take at least 2 credits from the following:
KIN-AL592 - Portfolio (1 - 6)

Grand Total Credits: 32

MASTER OF ATHLETIC TRAINING

Program Coordinator: Dave Hammons
Bronco Gymnasium, Room 131
(208) 426-4863 (phone)
davidhammons@boisestate.edu (email)

General Information

The Master of Athletic Training (MAT) program is a professional degree for entry into the athletic training profession. Admission to AT courses requires admission to the MAT. The program focus is developing future clinicians through in depth study and skill attainment in the following areas of health care for the physically active population: pathology of injuries and illness, evaluation and management of acute and chronic orthopaedic injury and medical conditions, risk management and injury prevention, physical rehabilitation and conditioning, applied nutrition, psychosocial intervention, and health care administration. The MAT includes both an academic and clinical component designed for full-time students over a continuous 2 year (24 month) period. In addition to academic requirements commitment to clinical experiences is expected with an average weekly time commitment of 20 hours.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: November 15 (summer priority), February 15 (summer final)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 95, pBT (revised): 72, pBT (old): 587, IELTS - 6.5
- Submit Application Letter
- Submit Personal Statement
  - A personal statement that answers the following: a) Why I want to be an Athletic Trainer. b) What are my five-year goals and ambitions after receiving the Master of Athletic Training degree.
- Submit Current Resume or Curriculum Vitae (CV)
- Submit Foundational Coursework for Graduate Study
  - Demonstrate completion of coursework in anatomy and physiology with labs (8 credits), chemistry with lab, general physics with lab (or biomechanics), college-level algebra or higher, psychology, Introduction to Athletic Injuries / Care and Prevention (or equivalent experience in the field), exercise physiology, CPR/AED for Healthcare provider certification or equivalent, functional (applied) anatomy (preferred), and biomechanics (preferred).

- Submit Background Check
  - Complete a CastleBranch Criminal Background Check (for an additional fee)
- Submit Additional Materials
  - Complete a Boise State University Athletic Training Program Immunization Requirements form. Submit copies of your Immunization Records.
  - (If admitted) Complete an Athletic Training Technical Standards Certification form.
  - (If admitted) Complete a New Patient Health History and Health Physical form.
- Interview — Final candidates are invited for an interview.
- Submit Letters of Recommendation
  - Two letters of recommendation from academic and/or professional references. It is recommended that at least 1 of the recommendations be from an individual who directly supervised you and can speak to any prior sports medicine experiences you have gained.

Degree Requirements

Master of Athletic Training

Graduate Major Requirements
49 Total Credits

Complete all of the following
Take the following:
MAT500 - Foundations of Clinical Practice in Athletic Training (1)
MAT503 - Principles of Athletic Training (4)
MAT505 - Fundamentals of Clinical Diagnosis and Therapeutic Interventions (2)
MAT510 - Clinical Practice in Athletic Training I (3)
MAT512 - Therapeutic Interventions: Modalities (2)
MAT514 - Diagnosis and Therapeutic Interventions I: Lower Extremity (4)
MAT520 - Clinical Practice in Athletic Training II (3)
MAT523 - Diagnosis and Therapeutic Interventions II: Upper Extremity (4)
MAT525 - Research Methods in Athletic Training (3)
MAT530 - Clinical Practice in Athletic Training III (1)
MAT532 - Diagnosis and Therapeutic Interventions IV: Medical Conditions and Pharmacology (2)
MAT534 - Advanced Nutrition and Exercise Prescription (2)
MAT536 - Administration in Athletic Training (2)
MAT540 - Clinical Practice in Athletic Training IV (3)
MAT543 - Diagnosis and Therapeutic Interventions III: Head, Face, and Spine (4)
MAT545 - Behavioral Health & the Physically Active Patient (3)
MAT550 - Clinical Practice in Athletic Training V (3)
MAT552 - Current Evidence and Topics in Athletic Training (2)
Take at least 1 credits from the following:
MAT598 - Seminar (1 - 4)

Graduate Culminating Activity and Other Requirements
1 Total Credits
Take at least 1 credits from the following:
MAT591 - Project (1 - 12)

Grand Total Credits: 50

MASTER OF KINESIOLOGY/MASTER OF SCIENCE IN KINESIOLOGY

Graduate Program Coordinator: Shelley Lucas
Bronco Gymnasium, Room 109
(208) 426-2446 (phone)
smlucas@boisestate.edu (email)

General Information

The Master of Kinesiology (MK) and the Master of Science in Kinesiology (MSK) are designed to accommodate students with diverse academic backgrounds.

The MK is a 32 credit program that allows students the flexibility to design a plan of study that concludes with a practicum and project experience. Students select 21 credits of elective coursework to support their educational and career goals. The MK program is designed to be practitioner-oriented. Students who complete this degree pursue careers in a variety of fields including health, fitness, sport, and educational settings.

The MSK is a 32 credit program that allows students the flexibility to design a plan of study to complement the required research thesis. In addition to a research core, students select 15 credits of elective coursework to support their goals. The MSK is designed to be research-oriented. Students who complete this degree pursue careers in a variety of fields including research, medical settings, and private business, or they seek to continue their education at the doctoral level.

Program Admission Requirements

Complete all of the following
- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: February 1 (fall priority), August 1 (fall final)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
  - An application letter describing your background, academic interests, career goals, how this degree will assist you in achieving those goals, and identify a potential faculty mentor.
- Submit Current Resume or Curriculum Vitae (CV)
- Submit Graduate Record Examination (GRE) Scores
  - No minimum scores are required for the GRE. Boise State Kinesiology majors with a 3.50 GPA or higher do not need to submit GRE scores.
- Submit Foundational Coursework for Graduate Study
  - Demonstrate completion of exercise physiology.
- Submit Letters of Recommendation
  - Three letters of recommendation from academic and/or professional references. Letters should address your potential for success in a graduate program, strengths and weaknesses, and the benefits you may receive from graduate study.
- Submit Graduate Assistantship Application
  - Deadline: February 1
  - Automatic consideration is given with your application to the program.

Degree Requirements

Master of Kinesiology

Graduate Major Requirements
29 Total Credits

Complete all of the following
Take at least 2 credits from the following:
KINES598 - Seminar (1 - 4)
(Enrollment is required each Fall semester of all graduate students in residence; two credits may be applied toward graduation.)

Methods of Inquiry
Take the following:
KINES551 - Research Design in Exercise and Sport (3)
Take at least 1 of the following:
HIST500 - The Nature of History (3)
KINES552 - Applied Statistical Methods (3)
KINES572 - Grant Writing (3)
SOC500 - Advanced Social Statistics (3)
SOC502 - Qualitative Social Research Methods (3)
SOC571 - Feminist Sociological Theory (3)
Take at least 21 credits from the following:
Electives approved by the Graduate Program Coordinator

Graduate Culminating Activity and Other Requirements
3 Total Credits

Complete all of the following
Take at least 2 credits from the following:
KINES590 - Practicum/Internship (1 - 12)
Take at least 1 credits from the following:
KINES591 - Project (1 - 6)

Grand Total Credits: 32

Master of Science in Kinesiology

Graduate Major Requirements
26 Total Credits

Complete all of the following
Take at least 2 credits from the following:
KINES598 - Seminar (1 - 4)
Enrollment is required each Fall semester of all graduate students in residence; two credits may be applied toward graduation.
Take at least 3 credits from the following:
KINES595 - Reading and Conference (1 - 4)
KINES596 - Independent Study (1 - 6)
KINES696 - Directed Research (1 - 6)
Three credit enrollment is required during Year 1, ideally in Semester 1.
Take at least 15 credits from the following:
Electives approved by the Graduate Program Coordinator
Methods of Inquiry
Take the following:
KINES551 - Research Design in Exercise and Sport (3)
Take at least 1 of the following:
HIST500 - The Nature of History (3)
KINES552 - Applied Statistical Methods (3)
KINES572 - Grant Writing (3)
SOC500 - Advanced Social Statistics (3)
SOC502 - Qualitative Social Research Methods (3)
SOC571 - Feminist Sociological Theory (3)

Graduate Culminating Activity and Other Requirements
6 Total Credits

Complete all of the following
Take at least 1 credits from the following:
KINES688 - Thesis Proposal (1 - 6)
Take at least 5 credits from the following:
KINES593 - Thesis (1 - 12)

Grand Total Credits: 32

Course Offerings

KIN-AL—Kinesiology–Athletic Leadership

KIN-AL501 Foundations of Athletic Leadership (3-0-3)(SU). Emphasizes the knowledge, skills, and dispositions needed of leaders in athletic programs. Includes a study of advanced leadership theory and its application to athletic programs and a focus on personal leadership development. PREREQ: ADM/PROG.

KIN-AL502 Athletic Organizational Communication (3-0-3)(SU). Analysis of organizational communication theory and research as related to athletic leadership. Examines communicative practices associated with relationship development, leadership, and collaboration. PREREQ: ADM/PROG.

KIN-AL503 Athletic Program Management (3-0-3)(SU). Examines managerial responsibilities of athletic leaders including legal liability, sport law, finance and marketing, personnel management, and program evaluation. PREREQ: ADM/PROG.

KIN-AL504 Philosophy of Sport and Athletic Leadership (3-0-3)(F/S). Examines philosophical and ethical issues within sport and society and their corresponding relevancy to athletic leadership settings. PREREQ: ADM/PROG.

KIN-AL505 Sociology of Sport and Athletic Leadership (3-0-3)(F/S). Examines sociological and cultural issues within sport and society and their corresponding relevancy to athletic leadership settings. PREREQ: ADM/PROG.

KIN-AL506 Psychological Aspects of Athletic Leadership (3-0-3)(SU). Examines individual differences and environmental factors relevant to athletic leadership as identified by sport and exercise psychology theory and research. Focuses on applying psychological skills training programs to athletes, coaches, and administrators. PREREQ: ADM/PROG.

KIN-AL507 Athletic Leadership Academy (2-0-2)(F/S). Provides training and mentoring from current and former athletic leaders from Boise State University and other institutions regarding various facets of athletic leadership. PREREQ: ADM/PROG.

KIN-AL508 Athletic Leadership Practicum I (0-5-5)(F/S). Provides students with a supervised practical experience in athletic leadership under the direct supervision of a qualified mentor. PREREQ: ADM/PROG.

KIN-AL509 Athletic Leadership Practicum II (0-5-5)(F/S). Continuation of KIN-AL508. PREREQ: KIN-AL508.

KINES—Kinesiology

KINES503 (ZOOL503) Head and Neck Anatomy (2-2-3)(F,S). Use of human cadavers to study prosections of head and neck with emphasis on clinical relevance. Integument, osteology, myology, circulatory systems, lymphatics, oral and dental tissues, neuroanatomy, cranial nerves, general innervation, and salivary glands. May be taken for KINES or ZOOL credit but not both. PREREQ: BIOL191-192 or BIOL227-228 or PERM/INST.

KINES506 Sports Nutrition (3-0-3)(F)(Odd years). An integration of exercise physiology and nutrition, this course will investigate nutrition as it relates to exercise performance. PREREQ Admission to MK or MS in Kinesiology program, or PERM/INST.

KINES510 Physiology of Activity (3-0-3)(F,S,SU). A study of the various factors affecting human performance and subsequent adaptations of the body to single and repeated bouts of exercise.

KINES511 Environmental Physiology (3-0-3)(F)(Even years). Focuses on the effects of environmental stressors on human physiology to provide understanding of regulatory physiology. Includes thermoregulation, cardiovascular hemodynamics, pulmonary ventilation, and plasma volume regulation. Provides experiential learning through laboratory activities and an optional field experience. Requires a course fee for the laboratory activities and an additional fee for the optional field experience. PREREQ: KINES330 or ZOOL401, or PERM/INST.

KINES512 Laboratory for Environmental Physiology (0-2-1)(F)(Even years). Explores the physics (pressure, fluid dynamics, gas laws, gravity, light, and temperature) of the environment, flora and fauna adaptations to this environment, and the human experience within these environments. Includes completion of the Professional Association of Dive Instructors (PADI) Open Water Scuba Certification and an international dive and service trip where course concepts are further demonstrated and explored and conservation activities undertaken. (Pass/Fail.) COREQ: KINES511. PREREQ: Ability to swim 400 yards, tread water for 15 minutes and carry a ten-pound weight 25 yards, and PERM/INST.

KINES515 Exercise Physiology Lab (2-2-3)(F,S,SU). Practical application of the principles that govern response and adaptation of the human body to exercise, utilizing laboratory equipment to collect data and analyze results. PREREQ: KINES510 or PERM/INST.

KINES516 Neuromechanics (3-0-3)(F/S). Explores the neural aspects of human movement. Topics include neuroanatomy, voluntary and involuntary motor control, neural aspects of motor behaviors and systems-level functions and dysfunctions of the nervous system.

KINES520 (ME520) Advanced Biomechanics (3-0-3)(F). Mechanical principles and analytical methods used in traditional and contemporary biomechanics. Topics include functional anatomy, joint kinematics, inverse dynamics, mechanical properties of biological materials, and modeling of the musculoskeletal system. May be taken for KINES or ME credit, but not both. PREREQ: ENGR220 or PERM/INST.

KINES525 (ME525) Laboratory Techniques in Biomechanics (3-0-3)(S). An introduction to the analysis techniques used to study the mechanics of human motion. Topics include cinematography, videography, force transducers, electromyography and computer analysis techniques. May be taken for KINES credit or ME credit, but not both. PREREQ: KINES520/ME520 or PERM/INST.

KINES530 Psychology of Exercise and Sport (3-0-3)(F,S,SU). A study of psychological factors as they relate to exercise, sport and performance. Content includes personality traits, motivation, anxiety/arousal, and intervention/coping strategies.

KINES531 Physical Activity and Aging (3-0-3)(F/S). Physiological aspects of aging and the influence of physical activity on the aging process, functional abilities, independence, and quality of life.

KINES532 Applied Sport Psychology (3-0-3)(F/S). Examines issues related to the psychological impact of competition and examines psychological skills training applicable to physical educators, coaches, and athletes, as well as how these skills may be useful in the psychological rehabilitation of the injured athlete and career termination.

KINES535 Sociology of Sport and Physical Activity (3-0-3)(F)(Even years). Uses a critical perspective to examine sport and other forms of physical activity as significant social and cultural institutions, and to explore relationships to sexism, racism, homophobia, ableism, classism and other forms of oppression.

KINES540 Applied Principles of Conditioning (2-2-3)(F,S,SU). Advanced study of the conditioning process. Emphasis on application of the conceptual to practical situations. Involves program planning, objectives, exercise analysis for conditioning specificity, exercise prescription and other conditioning variables affecting performance. PREREQ: KINES510 or PERM/INST.

KINES543 Medical Aspects of Exercise (3-0-3)(F/S). Explores the role of exercise and physical activity in the prevention and treatment of chronic disease. Focuses on pathophysiology, exercise responses, and benefits of exercise specific to many of the most prevalent chronic diseases impacting society. PREREQ: KINES510 or PERM/INST.

KINES545 Clinical Exercise Physiology and Prescription (3-0-3)(F,S,SU). The study of clinical exercise physiology through special considerations: risk detection and reduction; age-related adaptations; various chronic illnesses; cardiovascular, musculoskeletal, and metabolic diseases; and their application to exercise prescription.

KINES550 Philosophy of Exercise and Sport (3-0-3)(F,S,SU). A study of the philosophical foundations underlying exercise and sport. Topics include values development, design and evaluation of individual and program philosophy and goal structuring.

KINES551 Research Design in Exercise and Sport (3-0-3)(F). Includes critical analysis of published research in terms of research design, statistical procedures, concepts of validity, experimentation and control; classification of various research methods; various types of research problems; and the relevant attributes of experimental designs. A research proposal is a requirement of the course.

KINES552 Applied Statistical Methods (3-0-3)(F,S). An introduction to statistical techniques utilized in the treatment of data. The techniques to be covered include measures of central tendency and variability, correlation measures, probability, analysis of variance, and regression analysis. PREREQ: Completion of an undergraduate statistics course and graduate standing in MPH or Kinesiology, or PERM/INST.

KINES560 Motor Learning (3-0-3)(F,S,SU). A study of the relevant empirical evidence and research in the field of motor learning and performance, including the learning process, feedback, timing, information processing, transfer, perception, motivation and practice conditions.

KINES561 Developmental Issues in Youth Sport (3-0-3)(F/S/SU). Raises critical awareness of the developmental issues (motor, cognitive, and social) surrounding youth sport and specialization. Explores issues from a motor behavior perspective, integrating expertise literature from motor learning and applying concepts of sport readiness and developmentally appropriate activities from the motor development literature.

KINES570 Health Promotion (3-0-3)(F/S). Coverage of individual, interpersonal, and group/community theories of health behavior change, with emphasis on designing, implementing, and evaluating theory-based interventions. Other topics include studying the impact of diversity and social and economic factors on health, and improving the effectiveness of health behavior change programs for underserved groups.

KINES572 (MPH 572) Grant Writing (3-0-3)(SU). Examination of the process of securing resources from external entities. Students will learn and apply a variety of techniques employed in proposal development and grant authorship. May be taken for KINES or MPH credit, but not both.

KINES574 Health Promotion and Optimal Aging (3-0-3)(F)(Even years). Focus on promoting healthful behavior and quality of life among older adults. Application of theory, research, and practice to gerontological health promotion and wellness.

Selected Topics:

　KINES581 Selected Topics in Youth Sport (3-0-3)(F/S).

　KINES582 Selected Topics in Sport History (3-0-3)(F/S).

　KINES583 Selected Topics in Sports Nutrition (3-0-3)(F/S).

MAT—Master of Athletic Training

MAT500 Foundations of Clinical Practice in Athletic Training (0-4-1)(SU). Introduction to foundational behaviors of an athletic trainer as a provider in the health care system and basic clinical skills necessary for patient-care. Students engage in clinical practice under the supervision of an athletic trainer or other licensed health care provider. PREREQ: Admission to the Master of Athletic Training program.

MAT503 Principles of Athletic Training (3-2-4)(SU). Examines the knowledge and skills necessary to prevent and provide care for injuries and illnesses in the physically active patient, including: injury/illness epidemiology, injury prevention, emergency management, environment conditions, orthopedic taping and bracing. PREREQ: Admission to the Master of Athletic Training program.

MAT505 Fundamentals of Clinical Diagnosis and Therapeutic Interventions (2-0-2)(SU). Introduction to orthopaedic clinical diagnosis and associated treatment protocols. Use of evidence based practice in formulating differential diagnosis and utilization of therapeutic exercise for effective patient outcomes. PREREQ: Admission to the Master of Athletic Training program.

MAT510 Clinical Practice in Athletic Training I (0-11-3)(F). Application of associated clinical proficiencies during direct or simulated patient care. Students engage in clinical practice under the direct supervision of an athletic trainer or other licensed health care provider. PREREQ: MAT500.

MAT512 Therapeutic Interventions: Modalities (2-1-2)(F). Examines the theory and application of therapeutic modalities in patient care including an in-depth study of the healing process. Emphasis on the application of therapeutic modalities in a clinical setting, including appropriate parameters, patient set-up, and indications/contraindications of use. PREREQ: Admission to the Master of Athletic Training program.

MAT514 Diagnosis and Therapeutic Interventions I: Lower Extremity (3-2-4)(F). Investigation and application of orthopaedic differential diagnosis and associated treatment protocols of the lower extremity. PREREQ: Admission to the Master of Athletic Training program.

MAT520 Clinical Practice in Athletic Training II (0-11-3)(S). Application of associated clinical proficiencies during direct or simulated patient care. Students engage in clinical practice in a variety of settings under the direct supervision of an athletic trainer or other licensed health care provider. PREREQ: MAT510.

MAT523 Diagnosis and Therapeutic Interventions II: Upper Extremity (3-2-4)(S). Investigation and application of orthopedic differential diagnosis and associated treatment protocols of the upper extremity. PREREQ: Admission to the Master of Athletic Training program.

MAT525 Research Methods in Athletic Training (3-0-3)(S). The course facilitates an understanding of the principles, processes and techniques used in medical science inquiry. Students will use key concepts and methods to evaluate the literature and carry out strategic data-driven review for effective decision-making in their evidence based practice. Defining the research question and the application of appropriate methodology is at the core of this class. In addition, this course develops the ability to assess research related to health care for the physically active and statistical analysis. PREREQ: Admitted to MAT or PERM/INST.

MAT530 Clinical Practice in Athletic Training III (0-4-1)(SU). Application of associated clinical proficiencies during direct or simulated patient care. Students engage in clinical practice in a variety of settings under the direct supervision of an athletic trainer or other licensed health care provider. PREREQ: MAT520.

MAT532 Diagnosis and Therapeutic Interventions IV: Medical Conditions and Pharmacology (2-0-2)(SU). Examination of common medical conditions and associated pharmacologic interventions in the physically active population. PREREQ: Admission to the Master of Athletic Training program.

MAT534 Advanced Nutrition and Exercise Prescription (2-1-2)(SU). Theory and application of nutrition and exercise prescription in relation to the physiology of physical activity. Emphasis on an evidenced based approach to nutrition and exercise planning with consideration of the impact dietary supplementation has on patient health. PREREQ: Admission to the Master of Athletic Training program.

MAT536 Administration in Athletic Training (2-0-2)(SU). Exploration of the principles and issues of health care administration related to the athletic training profession. Topics include: leadership strategies, insurance and billing practices in relation to medical and business value models, information and facility management, ethical and legal best practices in athletic training. PREREQ: Admission to the Master of Athletic Training program.

MAT540 Clinical Practice in Athletic Training IV (0-11-3)(F). Application of associated clinical proficiencies during direct or simulated patient care. Students engage in clinical practice in a variety of settings under the direct supervision of an athletic trainer or other licensed health care provider. PREREQ: MAT530.

MAT543 Diagnosis and Therapeutic Interventions III: Head, Face, and Spine (3-2-4)(F). Investigation and application of orthopaedic and neurologic differential diagnosis and associated treatment protocols of the head, face and spine. PREREQ: Admission to the Master of Athletic Training program.

MAT545 Behavioral Health and the Physically Active Patient (3-0-3)(F). Issues related to the mental impact of sport and physical activity are examined. Behavioral disorder recognition and psychological skills training applicable to the health care provider are explored. PREREQ: Admitted to MAT or PERM/INST.

MAT550 Clinical Practice in Athletic Training V (0-11-3)(S). Application of associated clinical proficiencies during direct or simulated patient care. Students engage in clinical practice in a variety of settings under the direct supervision of an athletic trainer or other licensed health care provider. PREREQ: MAT540.

MAT552 Current Evidence and Topics in Athletic Training (2-0-2)(S). Exploration and discussion of current trends in the practice and research of athletic training. PREREQ: Admission to the Master of Athletic Training program.

MAT591 Project (V-V-V)(F/S/SU).

MAT598 Seminar (V-V-V)(F/S/SU).

Leadership in Action

School of Public Service

Director: Heidi Reeder
Environmental Research Building, Room 2143
(208) 426-2404 (phone)
(208) 426-1634 (fax)
leadcertificate@boisestate.edu (email)
boisestate.edu/leadershipcertificate/grad-certificate (website)

Graduate Faculty: Orme, Thompson

Graduate Certificate Offered

- Graduate Certificate in Leadership in Action

GRADUATE CERTIFICATE IN LEADERSHIP IN ACTION

Program Coordinator: Heidi Reeder
Environmental Research Building, Room 2143
(208) 426-2404 (phone)
hreeder@boisestate.edu (email)

General Information

The Leadership in Action graduate certificate program offers a 15-credit immersive and rigorous experience for current and future leaders who are committed to driving meaningful change within themselves, their teams, and their broader environment. The curriculum is focused on developing both the strategic and relational skills needed to lead in public, private, or non-profit environments.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials
  - Deadlines: July 15 (fall), December 1 (spring), April 15 (summer)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Personal Statement
  - A personal statement of at least 500 words that includes: a) A discussion of how the student's personal and professional goals will be enhanced by enrolling in the Leadership in Action certificate, and b) An example of effective or ineffective leadership from the student's prior experience

Degree Requirements

Graduate Certificate in Leadership in Action

Graduate Major Requirements
15 Total Credits
  Take the following:
    LEAD501 - Leading Self (3)
    LEAD503 - Leading Systems (3)
    LEAD504 - Leading Decision Making (3)
    LEAD505 - Leading Change (3)
    LEAD502 - Leading Teams (3)

Grand Total Credits: 15

Course Offerings

LEAD—Leadership

LEAD501 Leading Self (3-0-3)(As Justified). Based on the premise that all leadership begins with developing the self. Topics include leader self-awareness, guiding values, emotional intelligence, and personal vision.

LEAD502 Leading Teams (3-0-3)(As Justified). Based on the premise that leadership is grounded in collaborative relationships. Key concepts include facilitating a productive team culture, managing team conflict and difficult conversations, and skillfully motivating and influencing. Topics include identifying real and perceived differences, and leveraging both similarities and differences to strengthen teams.

LEAD503 Leading Systems (3-0-3)(As Justified). Based on the premise that leadership is complex. The primary focus is understanding how the needs of various stakeholders and subcultures impact how we lead, and developing the ability to analyze the system and engage productively.

LEAD504 Leading Decision Making (3-0-3)(As Justified). Based on the premise that contemporary organizations consist of diverse ways of thinking and working, which leaders must leverage to drive an informed decision making process. Focuses on selecting an appropriate decision-making model for the team or system, and an appropriate medium for clearly communicating decisions to all relevant parties.

LEAD505 Leading Change (3-0-3)(As Justified). Based on the premise that today's organizations thrive through effective and ongoing development and change. Key concepts include understanding your role as a change manager and leader, supporting your team through the discomfort of conflict and change, and developing resilience throughout the organization.

Department of Literacy, Language, and Culture

College of Education

Chair: Eun Hye Son
Education Building, Room 503
(208) 426-3206 (phone)
eunhyeson@boisestate.edu (email)
boisestate.edu/education-llc/programs/ (website)
Graduate Faculty: Boothe, Carter, Deng, Guo, Mulhern, Peralta, Rodriguez, Son, Wright

Graduate Degree Offered

- Master of Arts in Education, Language, Literacy, and Culture
- Graduate Certificate in Bilingual Education, K12
- Graduate Certificate in Digital Literacies Instruction
- Graduate Certificate in English Language Development Pre-K-12
- Graduate Certificate in Literacy Instruction
- Graduate Certificate in Literacy Instruction for Students with Exceptional Needs
- Graduate Certificate in Literacy Partnership
- Graduate Certificate in Teaching English to Speakers of Other Languages, K12

General Information

The Department of Literacy, Language, and Culture offers courses that reflect a balanced approach to literacy learning and prepares educational professionals to work effectively with diverse student populations in K-8 general, bilingual, and Teaching English to Speakers of Other Languages (TESOL) classrooms. The coursework prepares candidates to apply foundational knowledge from literacy, linguistics and language acquisition theory and to develop, implement, and manage culturally and linguistically responsive instruction, performance tasks, and assessments in the K-8 classroom.

MASTER OF ARTS IN EDUCATION, LANGUAGE, LITERACY, AND CULTURE

Graduate Program Coordinator: Katherine Wright
Education Building, Room 509
(208) 426-2809 (phone)
katherinewright@boisestate.edu (email)
boisestate.edu/education-llc/ma-literacy (website)

General Information

The Master of Arts in Education, Language, Literacy, and Culture is designed to extend each candidate's academic and professional background in the field of literacy and language learning and development through the combination of course requirements that meet the standards for reading professionals recommended by the International Literacy Association. Certified teachers will have the option of earning an Idaho State Literacy endorsement.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 15 (fall priority), August 1 (fall final), September 15 (spring priority), December 15 (spring final), May 1 (summer)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
  - An application letter that is no more than two (2) pages: Identify your personal and professional goals. Describe your academic and professional experiences related to this degree program. Be sure to explicitly identify teaching certifications and experiences (if any). Detail your purpose in pursuing this program, and why you think it is a good fit for your personal and professional goals.
- Submit Current Resume or Curriculum Vitae (CV)
  - In a resume provide contact information for at least one professional reference.

Degree Requirements

Master of Arts in
Education, Language, Literacy, and Culture

Graduate Major Requirements
28 - 30 Total Credits

Complete all of the following
Take the following:
ED-LLC501 - Language, Literacy, and Cultural Diversity (3)
ED-LLC540 - Applied Theoretical Foundations of Language Learning and Literacy Instruction (3)
ED-LLC545 - Writing Instruction for Diverse Populations (3)
ED-LLC548 - Applied Linguistics, Language Diversity, and Language Acquisition (3)
ED-LLC551 - Language, Literacy, and Leadership in Culturally and Linguistically Diverse Communities (3)
ED-LLC560 - Interpreting Research in Literacy and Multilingual Education (3)

Take at least 1 of the following:
ED-LLC509 - Field Experience in Bilingual Classrooms (1 - 3)
ED-LLC510 - Field Experience in ESL Classrooms (1 - 3)
ED-LLC542 - Practicum Experience in Language, Literacy, and Culture (3)

Take at least 9 credits from the following:
Electives may be taken anywhere in the university but must be approved by the student's graduate advisor and the Graduate Program Coordinator. The student must demonstrate how the electives fit into the student's program of study centered around language, literacy, and culture.

Graduate Culminating Activity and Other Requirements
3 - 6 Total Credits

Complete 1 of the following
Complete all of the following
Capstone
Take at least 1 credits from the following:
ED-LLC672 - Capstone Proposal (1)
Take at least 2 credits from the following:
ED-LLC692 - Capstone Course (1 - 4)
Complete all of the following
Thesis
Take at least 6 credits from the following:
ED-LLC593 - Thesis (1 - 6)

Grand Total Credits: 31 - 36

Strategic selection of electives can lead to eligibility for the Idaho Literacy Endorsement or the Idaho English as a Second Language Endorsement to be added to a current Idaho teaching credential.

GRADUATE CERTIFICATE IN BILINGUAL EDUCATION, K12

Graduate Program Coordinator: Katherine Wright
Education Building, Room 509
(208) 426-2809 (phone)
katherinewright@boisestate.edu (email)
boisestate.edu/education-llc/gc-bilingual (website)

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 15 (fall priority), August 1 (fall final), September 15 (spring priority), December 15 (spring final), May 1 (summer)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
  - An application letter that is no more than two (2) pages: Identify your personal and professional goals. Describe your academic and professional experiences related to this degree program. Be sure to explicitly identify teaching certifications and experiences (if any). Detail your purpose in pursuing this program, and why you think it is a good fit for your personal and professional goals.
- Submit Current Resume or Curriculum Vitae (CV)
  - Please provide contact information for at least one professional reference.

Certificate Requirements

Graduate Certificate in Bilingual Education, K12

Graduate Major Requirements
19 - 21 Total Credits
Complete all of the following
Take the following:
ED-LLC501 - Language, Literacy, and Cultural Diversity (3)
ED-LLC502 - Methods of Teaching English Language Learners (3)
ED-LLC503 - Applied Theoretical Foundations of Bilingual Education/ESL and Multiculturalism (3)
ED-LLC504 - Literacies for Bilingual and English Language Learners (3)
ED-LLC510 - Field Experience in ESL Classrooms (1 - 3)
ED-LLC531 - Advanced Assessment of Learners in the Bilingual/ESL Classroom (3)
Take at least 1 of the following:
ED-LLC505 - Applied Linguistics: From Theory to Practice (3)
ED-LLC548 - Applied Linguistics, Language Diversity, and Language Acquisition (3)

This certificate does not lead to an initial teacher licensure in the State of Idaho. If students would like to add a Bilingual Education Endorsement to an existing teaching license, the following criteria must also be met: 20 Credit hours (minimum) required; coursework must be less than 7 years old; must have taken three upper-division Spanish language courses, undergraduate or graduate level, for a total of 6 credit hours, at least one in writing and one in literature; must pass the ESOL Praxis (5362) and achieve an advanced level score on the ACTFL.

Grand Total Credits: 19 - 21

GRADUATE CERTIFICATE IN DIGITAL LITERACIES INSTRUCTION

Graduate Program Coordinator: Katherine Wright
Education Building, Room 509
(208) 426-2809 (phone)
katherinewright@boisestate.edu (email)
boisestate.edu/education-llc/gc-dli (website)

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 15 (fall priority), August 1 (fall final), September 15 (spring priority), December 15 (spring final), May 1 (summer)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
  - An application letter that is no more than two (2) pages: Identify your personal and professional goals. Describe your academic and professional experiences related to this degree program. Be sure to explicitly identify teaching certifications and experiences (if any). Detail your purpose in pursuing this program, and why you think it is a good fit for your personal and professional goals.
- Submit Current Resume or Curriculum Vitae (CV)
  - Please provide contact information for at least one professional reference.

Certificate Requirements

Graduate Certificate in Digital Literacies Instruction

Graduate Major Requirements
12 Total Credits
Take the following:
ED-LLC545 - Writing Instruction for Diverse Populations (3)
ED-LLC550 - Advanced Content Area Literacy (3)
EDTECH521 - Online and Blended Teaching in the K-12 Environment (3)
EDTECH541 - Integrating Technology into the Classroom Curriculum (3)

Grand Total Credits: 12

GRADUATE CERTIFICATE IN ENGLISH LANGUAGE DEVELOPMENT PRE-K-12

Graduate Program Coordinator: Katherine Wright
Education Building, Room 509
(208) 426-2809 (phone)
katherinewright@boisestate.edu (email)
boisestate.edu/education-llc/gc-eldpk12 (website)

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 15 (fall priority), August 1 (fall final), September 15 (spring priority), December 15 (spring final), May 1 (summer)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
  - An application letter that is no more than two (2) pages: Identify your personal and professional goals. Describe your academic and professional experiences related to this degree program. Be sure to explicitly identify teaching certifications and experiences (if any). Detail your purpose in pursuing this program, and why you think it is a good fit for your personal and professional goals.
- Submit Current Resume or Curriculum Vitae (CV)
  - Please provide contact information for at least one professional reference.

Certificate Requirements

Graduate Certificate in English Language Development Pre-K-12

Graduate Major Requirements
12 Total Credits

Complete all of the following
Take at least 1 of the following:
ED-LLC501 - Language, Literacy, and Cultural Diversity (3)
ED-LLC559 - Language, Literacy and Culture (3)
Take the following:
ED-LLC502 - Methods of Teaching English Language Learners (3)
ED-LLC503 - Applied Theoretical Foundations of Bilingual Education/ESL and Multiculturalism (3)
ED-LLC505 - Applied Linguistics: From Theory to Practice (3)

Grand Total Credits: 12

GRADUATE CERTIFICATE IN LITERACY INSTRUCTION

Graduate Program Coordinator: Katherine Wright
Education Building, Room 509
(208) 426-2809 (phone)
katherinewright@boisestate.edu (email)
boisestate.edu/education-llc/gc-li (website)

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 15 (fall priority), August 1 (fall final), September 15 (spring priority), December 15 (spring final), May 1 (summer)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
  - An application letter that is no more than two (2) pages: Identify your personal and professional goals. Describe your academic and professional experiences related to this degree program. Be sure to explicitly identify teaching certifications and experiences (if any). Detail your purpose in pursuing this program, and why you think it is a good fit for your personal and professional goals.
- Submit Current Resume or Curriculum Vitae (CV)
  - Please provide contact information for at least one professional reference.

Certificate Requirements

Graduate Certificate in Literacy Instruction

Graduate Major Requirements
21 Total Credits

Complete all of the following
Take at least 1 of the following:
ED-LLC540 - Applied Theoretical Foundations of Language Learning and Literacy Instruction (3)
ED-LLC549 - Idaho Comprehensive Literacy Course (3)
Take the following:
ED-LLC541 - Best Practices in Literacy Assessment (3)
ED-LLC542 - Practicum Experience in Language, Literacy, and Culture (3)
ED-LLC545 - Writing Instruction for Diverse Populations (3)
ED-LLC546 - Advanced Study of Children's Literature (3)
ED-LLC548 - Applied Linguistics, Language Diversity, and Language Acquisition (3)
Take at least 1 of the following:
ED-LLC550 - Advanced Content Area Literacy (3)
ED-LLC561 - Advanced Integrated Disciplinary Literacy in the Social Sciences (3)

Grand Total Credits: 21

GRADUATE CERTIFICATE IN LITERACY INSTRUCTION FOR STUDENTS WITH EXCEPTIONAL NEEDS

Graduate Program Coordinator: Katherine Wright
Education Building, Room 509
(208) 426-2809 (phone)
katherinewright@boisestate.edu (email)
boisestate.edu/education-llc/gc-lisen (website)

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
- Deadlines: January 15 (fall priority), August 1 (fall final), September 15 (spring priority), December 15 (spring final), May 1 (summer)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
  - An application letter that is no more than two (2) pages: Identify your personal and professional goals. Describe your academic and professional experiences related to this degree program. Be sure to explicitly identify teaching certifications and experiences (if any). Detail your purpose in pursuing this program, and why you think it is a good fit for your personal and professional goals.
- Submit Current Resume or Curriculum Vitae (CV)
  - Please provide contact information for at least one professional reference.

Certificate Requirements

Graduate Certificate in Literacy Instruction for Students with Exceptional Needs

Graduate Major Requirements
13 Total Credits

Complete all of the following
Take at least 1 of the following:
ED-ESP549 - Multi-Tiered Systems of Support (3)
ED-ESP552 - Language Arts for Special Educators (4)
ED-LLC545 - Writing Instruction for Diverse Populations (3)
Take at least 1 of the following:
ED-LLC540 - Applied Theoretical Foundations of Language Learning and Literacy Instruction (3)
ED-LLC549 - Idaho Comprehensive Literacy Course (3)

Grand Total Credits: 13

GRADUATE CERTIFICATE IN LITERACY PARTNERSHIP

Graduate Program Coordinator: Katherine Wright
Education Building, Room 509
(208) 426-2809 (phone)
katherinewright@boisestate.edu (email)
boisestate.edu/education-llc/gc-lp (website)

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 15 (fall priority), August 1 (fall final), September 15 (spring priority), December 15 (spring final), May 1 (summer)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
  - An application letter that is no more than two (2) pages: Identify your personal and professional goals. Describe your academic and professional experiences related to this degree program. Be sure to explicitly identify teaching certifications and experiences (if any). Detail your purpose in pursuing this program, and why you think it is a good fit for your personal and professional goals.
- Submit Current Resume or Curriculum Vitae (CV)
  - Please provide contact information for at least one professional reference.

Certificate Requirements

Graduate Certificate in Literacy Partnership

Graduate Major Requirements
12 Total Credits

Take the following:
ED-LLC541 - Best Practices in Literacy Assessment (3)
ED-LLC542 - Practicum Experience in Language, Literacy, and Culture (3)
ED-LLC545 - Writing Instruction for Diverse Populations (3)
ED-LLC546 - Advanced Study of Children's Literature (3)

Grand Total Credits: 12

GRADUATE CERTIFICATE IN TEACHING ENGLISH TO SPEAKERS OF OTHER LANGUAGES, K12

Graduate Program Coordinator: Katherine Wright
Education Building, Room 509
(208) 426-2809 (phone)
katherinewright@boisestate.edu (email)
boisestate.edu/education-llc/gc-tesol (website)

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 15 (fall priority), August 1 (fall final), September 15 (spring priority), December 15 (spring final), May 1 (summer)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
  - An application letter that is no more than two (2) pages: Identify your personal and professional goals. Describe your academic and professional experiences related to this degree program. Be sure to explicitly identify teaching certifications and experiences (if any). Detail your purpose in pursuing this program, and why you think it is a good fit for your personal and professional goals.
- Submit Current Resume or Curriculum Vitae (CV)
  - Please provide contact information for at least one professional reference.

Certificate Requirements

Graduate Certificate in Teaching English to Speakers of Other Languages, K12

Graduate Major Requirements
16-18 Total Credits

Take the following:
  ED-LLC501 - Language, Literacy, and Cultural Diversity (3)
  ED-LLC502 - Methods of Teaching English Language Learners (3)
  ED-LLC503 - Applied Theoretical Foundations of Bilingual Education/ESL and Multiculturalism (3)
  ED-LLC510 - Field Experience in ESL Classrooms (1 - 3)
  ED-LLC531 - Advanced Assessment of Learners in the Bilingual/ESL Classroom (3)
Take at least 1 of the following:
  ED-LLC505 - Applied Linguistics: From Theory to Practice (3)
  ED-LLC548 - Applied Linguistics, Language Diversity, and Language Acquisition (3)
This Certificate does not lead to an initial teacher licensure in the State of Idaho. If students would like to add an English as a Second Language Endorsement to an existing teaching license, the following criteria must also be met: 20 Credit hours (minimum) required; coursework must be less than 7 years old; must have 4 credit hours in a modern foreign language; must pass the ESOL Praxis (5362).

Grand Total Credits: 16-18

Course Offerings

ED-LLC—Literacy, Language, and Culture

ED-LLC500 The Bilingual/ESL Curriculum: Creating, Planning, Implementation (3-0-3)(F/S). For teachers preparing to teach bilingual and/or English language learners. Theory and best practices of planning and creating an effective curriculum for bilingual and ESL classrooms. Participants examine both planned curriculum based upon specific objectives, and generative curriculum based on learners' needs, experiences and interests. Students will design a model curriculum for a bilingual and/or ESL classroom.

ED-LLC501 Language, Literacy, and Cultural Diversity (3-0-3)(F/S). Through the use of ethnographic tools, including community engagement, students will gain a better understanding of culture as it impacts language and literacy acquisition in their schools, and local and global communities. In this course, we investigate the ways social structuring, cultural assumptions and language bear on student and family participation in such areas as the classroom, government, social service agencies, business and industry.

ED-LLC502 Methods of Teaching English Language Learners (3-0-3)(F/S). Informed by a pedagogy of teaching English language learners that maximizes language, literacy and biliteracy acquisition. Students will learn how to develop content subject material that is pedagogically responsible to linguistically and culturally diverse learners by learning pedagogical scaffolds that place students at the center of the learning process.

ED-LLC503 Applied Theoretical Foundations of Bilingual Education/ESL and Multiculturalism (3-0-3)(F/S). The study and analysis of successful bilingual education, English as a Second Language, and Multicultural program practices. Students research and critique the foundations of Bilingual/ESL program policy and practices (Federal and State Law) that demonstrate the characteristics of successful bilingual, ESL, and multicultural classrooms (i.e., teachers' ability to articulate pedagogy used in the classroom).

ED-LLC504 Literacies for Bilingual and English Language Learners (3-0-3)(SU). Theoretical foundations and methods of teaching literacy to emergent bilinguals in multiple settings including bilingual (Spanish-English), general education, and English language development classrooms. Participants learn the processes and effective strategies for teaching reading and writing to bilingual and English language learners. Taught in Spanish and English.

ED-LLC505 Applied Linguistics: From Theory to Practice (3-0-3)(SU). Aids teachers in building a meta-linguistic awareness through an exploration of foundations of language as a system including: phonology, morphology, syntax, semantics, pragmatics, and discourse. Includes an emphasis on teaching implications of linguistics for emergent bilinguals in various educational contexts and understanding the role of linguistics, including socio-linguistics, when considering the ELD standards.

ED-LLC506 Multicultural Literature: Promoting Social Justice (3-0-3)(F/S). Students examine multicultural literature by engaging in critical literacy, substantive discussion, reflective writing, visual representation, and dramatic enactment. A main theme throughout this class is how to use the collection of literature as a tool for curriculum transformation, to promote social justice and encourage empowerment. Students will learn to take the words from the page to inform and transform their worlds.

ED-LLC507 Parental Involvement: Building a Community of Bilingual/ESL Learners (2-0-2)(F/S/SU). Participants critically examine why school-community partnerships are particularly valuable in multicultural settings. They examine texts of parental involvement in schooling and actual practices and address questions of power relations, politics of exclusion and the privilege of race, gender, class, and culture. Students explore practices that respect diversity and honor all parents, students, community members, and teachers.

ED-LLC508 Advanced Theories of Second Language Acquisition (3-0-3)(F/S/SU). Psycholinguistic processes and strategies by which readers and writers construct and reconstruct the message of a text. Application of theoretical conclusions to the teaching practices. Exploration and discussion of major theoretical arguments from current theorists and the pedagogical

implications of second language acquisition research that focuses on language, literacy, and learning. Participants will apply knowledge to teaching primary and secondary children the English language.

ED-LLC509 Field Experience in Bilingual Classrooms (0-V-V)(F/S). Participants gain experience planning, instructing and assessing learners in a bilingual setting and document evidence of their impact on learners. Includes some observation and collaboration with mentor teachers and/or university supervisor. Fifty clock hours per credit minimum.

ED-LLC510 Field Experience in ESL Classrooms (0-V-V)(F/S). Participants gain experience planning, instructing and assessing learners in an educational setting with ELLs and document evidence of their impact on learners. Includes some observation and collaboration with colleagues, mentor teachers and/or university supervisor. Fifty clock hours per credit minimum.

ED-LLC511 Contemporary Issues in Bilingual Education/ESL (2-0-2)(F/S/SU). Current issues and their political ramifications in the fields of bilingual/multicultural education, and English as a second language. Critique of current trends in education and creating an awareness of how teachers can enhance their advocacy for students, parents and stakeholders.

ED-LLC512 Literacy Field Experiences (0-3-1)(S). Forty-hour literacy-based field experience supporting the transition from theory to practice in reading and writing pedagogy. May be repeated for credit. COREQ: ED-LLC545 and ED-LLC549.

ED-LLC531 Advanced Assessment of Learners in the Bilingual/ESL Classroom (3-0-3)(F/S). Exploration of issues of assessment for emergent bilinguals including purposes, advantages, biases and limitations of assessments and accommodations. Knowledge of standards-based language proficiency assessments used for identification and exit from language support programs. Development of performance-based assessment tools and techniques to inform classroom instruction. COREQ: ED-LLC502.

ED-LLC532 Advanced Principles and Practices in Teaching Language Arts (3-0-3)(F/SU). Study of the theoretical constructs of reading, the psychological and pedagogical foundations of reading instruction, and learn to create and improve reading education programs in elementary and secondary classrooms.

ED-LLC540 Applied Theoretical Foundations of Language Learning and Literacy Instruction (3-0-3)(F/S/SU). Students examine and analyze theoretical constructs underlying language, literacy and multicultural education programs, and the psychological, pedagogical and historical foundations of language and literacy instruction. Students research and critique approaches for improving education programs that promote language and literacy acquisition for diverse populations of learners, which include the theoretical underpinnings that join research, theory and practice.

ED-LLC541 Best Practices in Literacy Assessment (3-0-3)(S). Students study, evaluate, and practice diagnostic, standardized, and informal (performance-based) assessment procedures for elementary and secondary students with literacy difficulties. Students will learn to make recommendations for instruction based upon assessment results. PREREQ: Admission to graduate program.

ED-LLC542 Practicum Experience in Language, Literacy, and Culture (2-1-3)(SU). Focuses on best practices for supporting the academic and motivational needs of diverse groups of students. Students will conduct assessments and administer literacy intervention with a K-12 child. PREREQ: ED-LLC540 or ED-LLC549.

ED-LLC543 Seminar in Literacy Education (3-0-3)(F/S/SU). Covers current issues and trends in literacy education and leadership techniques. PREREQ: ED-LLC540 or PERM/INST.

ED-LLC544 Content Literacy in Secondary School (3-0-3)(SU). Emphasis on using instructional materials in the various content subjects and developing instructional skills to meet the reading, writing, and studying needs of all learners in today's diverse society. Students will examine professional literature on best teaching practices. PREREQ: Admission to Graduate Secondary

Teacher Certification and ED-ESP550. Instructor permission to waive prerequisites may be given to all students not enrolled in the secondary education certification program (Block I-III). COREQ: ED-CIFS561 and the content methods course for the declared major.

ED-LLC545 Writing Instruction for Diverse Populations (3-0-3)(S). Focuses on ways to teach, assess, and motivate all K-12 writers. Emphasizes the writing process and writing in a variety of genres and modalities, including digital media, and ways to support diverse populations, including gifted and talented, multilingual learners, and those with learning difficulties.

ED-LLC546 Advanced Study of Children's Literature (3-0-3)(F/SU). In-depth literary analysis of children's literature from preschool to early adolescence, including multicultural literature. Development of children's literature activities for classroom, libraries, and other settings.

ED-LLC547 Advanced Young Adult Literature (3-0-3)(SU). Offers an update in diverse young adult literature, as well as research, critical analysis and instructional strategies for a variety of settings. Intended for teachers, librarians, media generalists, and others working with young adults.

ED-LLC548 Applied Linguistics, Language Diversity, and Language Acquisition (3-0-3)(F). Aids teachers in building their linguistic and meta-linguistic awareness through an exploration of foundations of language as a system such as: phonology, morphology, syntax, semantics, pragmatics, and discourse. Linguistic knowledge is applied to facilitating the development of academic language and literacies of diverse students. Addresses theories including second language acquisition, language development standards, and teaching implications for multilingual learners.

ED-LLC549 Idaho Comprehensive Literacy Course (3-0-3)(F/S/SU). Research-based best reading practices focused on language structure and literacy instruction, comprehension research, material selection, and assessment and intervention strategies. Contemporary and historical perspectives will be examined.

ED-LLC550 Advanced Content Area Literacy (3-0-3)(F/SU). Examines newest research in content literacy and explores in greater depth fundamental topics. Includes vocabulary, comprehension, writing to learn, study strategies, and coaching of content teachers. For students seeking Idaho State Literacy Endorsement. Undergraduate content area literacy course recommended.

ED-LLC551 Language, Literacy, and Leadership in Culturally and Linguistically Diverse Communities (3-0-3)(S). This course focuses on the roles and responsibilities of educational leaders, with special attention to how leaders attend to literacy, advocate for and support multilingual learners, and engage with families/communities. Participants develop leadership skills by exploring theory related to leadership and by collaborating with families and educators to promote in and out of school learning experiences that respect diversity and honor all students, families, community members, and teachers. PREREQ: Two of the following: ED-LLC501, ED-LLC540, ED-LLC545, ED-LLC548, ED-LLC560.

ED-LLC552 Technology and Literacy (3-0-3)(SU). Examines appropriate and effective uses of technology in literacy development. Explores impact of technology on definition of literacy. New literacies are defined and explored.

ED-LLC554 Review of Literacy Processes and Practices (3-0-3)(F/S/SU). Examines the interrelationship of the literacy processes through the examination of epistemological, philosophical, theoretical, and pedagogical literacy models.

ED-LLC555 Directing and Supervising Reading Programs (3-0-3)(F/SU). The literacy specialist's leadership role in the planning and delivery of reading instruction from goal setting, program planning, decision-making, problem solving, program supervision, and program evaluation for students from varied cultural and linguistic backgrounds will be examined. Students serve as mentors for undergraduates and graduate students in tutoring children with literacy challenges.

ED-LLC556 Applied Research in Large-Scale Literacy Assessment (3-0-3)(F). Explores the research base for large-scale assessment as it relates to literacy assessment; examines current approaches to large-scale assessment, assessment

design, research methodologies and specific assessments such as PIRLS, PISA, NAEP, state level tests, etc. with emphasis given to how these data are being interpreted and used for social and political purposes.

ED-LLC557 Research Base for Contemporary Literacy Curricula (3-0-3) (F/S). Investigates contemporary issues related to research on literacy in terms of theoretical frameworks, research methods, and implications for curriculum, instruction, and assessment. Applies relevant theories and models to the design and development of school curricula in the area of literacy.

ED-LLC558 Advanced Writing Processes and Assessment (3-0-3)(F/S). Examines theoretical and praxis knowledge about cognitive, physical, social, and affective processes of writing and their interactions with writing development. Provides opportunities to delve into issues of struggling writers and second language learners. PREREQ: ED-LLC345 or ED-LLC545 or PERM/INST.

ED-LLC559 Language, Literacy and Culture (3-0-3)(F). Introduces students to the ways in which social structuring, cultural assumptions, and language use bear on public policy formation and interactions in such areas as the classroom, professions, government, business and industry, and social service agencies.

ED-LLC560 Interpreting Research in Literacy and Multilingual Education (3-0-3)(F/S). Examines research in literacy and multilingual education involving the generation and refinement of models, theories, and methodologies. Students will understand and apply strategies in interpreting and analyzing the professional literature.

ED-LLC561 Advanced Integrated Disciplinary Literacy in the Social Sciences (3-0-3)(F). Integrated disciplinary literacy in the Social Sciences (K-8). Knowledge, strategies, and tools for integrating comprehension, vocabulary and written text through elementary social studies curricula, philosophies, and methodologies. Prepares pre-service teachers for Standard 2 of the Idaho Comprehensive Literacy Assessment. Focus is on cross disciplinary literacy skills within the ten strands of social studies to develop an integrated unit emphasizing critical thinking, values in a democratic and pluralistic society, and global issues.

ED-LLC672 Capstone Proposal (1-0-1)(F/S). Students create a proposal, including a preliminary literature review, for the capstone project. (Pass/Fail.)

Department of Mathematics

College of Arts and Sciences

Chair: Margaret Kinzel
Mathematics Building, Room 235
(208) 426-1172 (phone)
(208) 426-1356 (fax)
mathoffice@boisestate.edu (email)
boisestate.edu/math (website)

Graduate Faculty: Babinkostova, Brill, Bullock, Calhoun, Cavey, Champion, Clemens, Coskey, Goo, Harlander, Holmes, Kaiser, Kinzel, Ko, Kopera, Lee, Mead, Scheepers, Teitler, Wang, Wright, Zubik-Kowal

Graduate Degrees Offered

- Master of Science in Mathematics
- Graduate Certificate in Cryptology Security Analyst

Interdisciplinary Participation

- Doctor of Philosophy in Computing

MASTER OF SCIENCE IN MATHEMATICS

Program Coordinator: Grady Wright
Mathematics Building, Room 140B
(208) 426-4674 (phone)
gradywright@boisestate.edu (email)
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General Information

The Master of Science in Mathematics degree provides a solid foundation in the theoretical and applied aspects of mathematics and the opportunity for concentration in an area of special interest. Students complete a required core course in analysis and choose an area of emphasis that reflects faculty expertise. The choice of culminating activity depends on student goals and may be a comprehensive examination, a project, or a thesis.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 15 (fall priority), August 1 (fall final), August 15 (spring priority), December 15 (spring final)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
  - Field of Study: Mathematics or closely related field.
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 95, pBT (revised): 72, pBT (old): 587, IELTS - 6.5
- Submit Application Letter
  - An application letter that outlines your career objective, field of interest, and interest in a teaching assistantship or research fellowship.
- Submit Personal Statement
- Submit Graduate Record Examination (GRE) Scores
- Submit Foundational Coursework for Graduate Study
  - Candidates must demonstrate substantial coursework in mathematics from a regionally accredited U.S. college or university or a degree from a non-U.S. institution of higher education that is judged equivalent to a U.S. baccalaureate degree by the International Admissions office.
- Submit Letters of Recommendation
  - Three letters of recommendation from academic or professional references. These letters should address your preparation for graduate study.
- Submit Graduate Assistantship Application
  - Deadline: April 15
  - Automatic consideration is given with your application to the program.

Graduate Assistantships

Students interested in applying for a graduate teaching or research assistantship should contact the graduate program coordinator for further information.

Degree Requirements

Master of Science in Mathematics

Graduate Major Requirements
11 Total Credits
  Complete all of the following
    Required Core Graduate Mathematics Course
    Take the following:
      MATH515 - Real and Linear Analysis (3)
      MATH598 - Graduate Seminar I: Introduction and Research (1)
      MATH599 - Graduate Seminar II: Professional Preparation (1)
    Complete 1 of the following
      Complete all of the following
        Applied Mathematics
        Take at least 2 of the following:
          MATH537 - Principles of Applied Mathematics (3)
          MATH566 - Numerical Linear Algebra (3)
          MATH567 - Numerical Methods for Differential Equations (3)
          MATH568 - Inverse Theory (3)
      Complete all of the following
        Mathematics Education
        Take at least 2 of the following:
          MATHED510 - Mathematics Curriculum (3)
          MATHED523 - Teaching & Learning Algebra & Functions (3)
          MATHED525 - Teaching and Learning Calculus (3)
          MATHED526 - Teaching and Learning Statistics (3)
      Complete all of the following
        Pure Mathematics
        Take at least 2 of the following:
          MATH506 - Advanced Algebra (3)
          MATH507 - Advanced Number Theory (3)
          MATH509 - Symmetric Key Cryptography & Cryptanalysis (3)
          MATH512 - Advanced Topology (3)
          MATH522 - Advanced Set Theory (3)
      Complete all of the following
        Statistics
        Take the following:
          MATH562 - Probability and Statistics (3)
        Take at least 1 of the following:
          MATH572 - Computational Statistics (3)
          MATH573 - Time Series Analysis (3)
          MATH574 - Linear Models (3)
Graduate Culminating Activity and Other Requirements
21 - 22 Total Credits
  Complete 1 of the following
    Complete all of the following
    Comprehensive Examination
    Take at least 21 credits from the following:
    Seven courses totaling at least 21 credits
    Take at least 1 credits from the following:
      MATH690 - Master's Comprehensive Examination (1 - 6)

    Complete all of the following
    Project
    Take at least 18 credits from the following:
    Six courses totaling at least 18 credits
    Take at least 3 credits from the following:
      MATH591 - Project (1 - 12)
      MATHED591 - Project (1 - 12)

Complete all of the following
Take at least 15 credits from the following:
Five courses totaling at least 15 credits
Take at least 6 credits from the following:
   MATH593 - Thesis (1 - 12)
   MATHED593 - Thesis (1 - 12)
Grand Total Credits: 32 - 33

GRADUATE CERTIFICATE IN CRYPTOLOGY SECURITY ANALYST

Program Coordinator: Liljana Babinkostova
Mathematics Building, Room 237A
(208) 426-2896 (phone)
liljanababinkostova@boisestate.edu (email)
boisestate.edu/math/security/ (website)

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: August 1 (fall), December 15 (spring)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
- Submit Current Resume or Curriculum Vitae (CV)

Certificate Requirements

Graduate Certificate in Cryptology Security Analyst

Graduate Major Requirements
12 Total Credits
Complete all of the following
Take at least 6 credits from the following:
   MATH508 - Advanced Asymmetric Cryptography and
     Cryptanalysis (3)
   MATH509 - Symmetric Key Cryptography and Cryptanalysis (3)
   MATH510 - Quantum and Post Quantum Cryptography (3)
Select from the list below or any other non-dual-listed graduate
course approved by the program.
Take at least 6 credits from the following:
   CORE502 - Cyber Threat Modeling (1)
   CORE503 - Information Assurance (1)
   CORE512 - Introduction to Deep Learning (1)
   CORE514 - Cyber Informed Engineering (1)
   CORE552 - Cyber Digital and Signal Intelligence (3)
   CS667 - Advances in Applied Cryptography (3)
   MATH667 - Advances in Applied Cryptography (3)
   CYBER500 - Introduction to Cybersecurity (3)
Grand Total Credits: 12

Course Offerings

MATH—Mathematics

Additional work will be required to receive graduate credit for undergraduate G courses.

Graduate offerings in mathematics are limited to those courses for which there is sufficient student demand as determined by the Department of Mathematics.

MATH502 Logic and Set Theory (3-0-3)(S). Structured as three five-week components: formal logic, set theory, and topics to be determined by the instructor. The logic component includes formalization of language and proofs, the completeness theorem, and the Lowenheim-Skolem theorem. The set theory component includes orderings, ordinals, the transfinite recursion theorem, and the Axiom of Choice and some of its equivalents. PREREQ: MATH314.

MATH503 Linear Algebra (3-0-3)(F). Concepts of linear algebra from a theoretical perspective. Topics include vector spaces and linear maps, dual vector spaces and quotient spaces, eigenvalues and eigenvectors, diagonalization, inner product spaces, adjoint transformations, orthogonal and unitary transformations, Jordan normal form. PREREQ: MATH189 and MATH301; or admitted to one of the following: Data Science GC, Computational Sciences GC, Computing PhD, Computational Mathematics Science, and Engineering emphasis, or Computing PhD, Data Science emphasis.

MATH504 Number Theory (3-0-3)(F). Quadratic residues, Representing numbers as sums of squares, Continued fractions, Diophantine equations Including Pell's equation, arithmetic functions and Mobius Inversion, the distribution of prime numbers, primality testing, factoring natural numbers. PREREQ: MATH287 or MATH305; or admitted to Mathematics MS, Cybersecurity MS, or Computing PhD.

MATH505 Abstract Algebra (3-0-3)(F)(Odd years). Topics in group theory, ring theory and field theory with emphasis on finite and solvable groups, polynomials and factorization, extensions of fields. PREREQ: MATH301 and MATH305.

MATH506 Advanced Algebra (3-0-3)(S)(Even years). The study of algebraic topics taken from mappings, semi-groups, groups, Sylow Theorems, group actions, rings, ascending and descending chain conditions, polynomial rings, fields, field extensions, Galois theory, Modules, Tensor products. PREREQ: MATH405 or MATH505.

MATH507 Advanced Number Theory (3-0-3)(S)(Even years). Arithmetic functions, Mobius Inversion, Fundamental algorithm, Prime numbers, Factoring, quantification of number theoretic results. PREREQ: MATH404 or MATH504, or PERM/INST.

MATH508 Advanced Asymmetric Cryptography and Cryptanalysis (3-0-3) (F). An in-depth study of elliptic curves, asymmetric cryptography, pairing-based cryptography, digital signatures, and analysis of cryptographic security. PREREQ: MATH305 or MATH307; or admitted to Computing PhD, Mathematics MS, or Cybersecurity MS.

MATH509 Symmetric Key Cryptography and Cryptanalysis (3-0-3) (S). With the emergence of 5G and the Internet of Things (IoT) there is a significant shift and new developments in the field of symmetric key cryptography and in the security analysis of symmetric key cryptographic protocols. This course gives an overview of block ciphers, S-box design, algebraic structure of standard as well as lightweight symmetric cryptographic protocols. Security evaluation of modern symmetric key ciphers based on algebraic-, linear-, differential- cryptanalysis and side channel attacks. PREREQ: MATH305 or MATH307; or admitted to Mathematics MS, Cybersecurity MS, or Computing PhD.

MATH510 Quantum and Post Quantum Cryptography (3-0-3)(S). Introduction to quantum technologies, necessary mathematical tools, quantum key distribution protocols and attacks on them, quantum hashing, principles of post-quantum cryptography. PREREQ: MATH305 or MATH308 or PHYS309; or admitted to Mathematics MS, Cybersecurity MS, or Computing PhD.

MATH511 Introduction to Topology (3-0-3)(F)(Even years). Sets, metric and topological spaces, product and quotient topology, continuous mappings, connectedness and compactness, homeomorphisms, fundamental group, covering spaces. PREREQ: MATH314.

MATH512 Advanced Topology (3-0-3)(S)(Odd years). Introduction into concepts of algebraic and geometric topology: homotopy and homology groups, cohomology, manifolds, duality theorems, special topics. PREREQ: MATH411 or MATH511 or PERM/INST.

MATH514 Real Analysis (3-0-3)(S). An advanced course in real analysis: Riemann integration, the fundamental theorem of calculus, sequences and series of functions, multivariable calculus. Additional topics may include Fourier series, analysis of metric spaces, the Baire property, and advanced topology of Euclidean space. PREREQ: MATH275 and MATH314.

MATH515 Real and Linear Analysis (3-0-3)(F). Lebesgue measure on the reals, construction of the Lebesgue integral and its basic properties. Advanced linear algebra and matrix analysis. Fourier analysis, introduction to functional analysis. PREREQ: MATH414 or MATH514.

MATH522 Advanced Set Theory (3-0-3)(F). Topics in modern set theory may be drawn from forcing, choiceless set theory, infinitary combinatorics, set-theoretic topology, descriptive set theory, inner model theory, and alternative set theories. PREREQ: MATH402 or MATH502 or PERM/INST.

MATH526 Complex Variables (3-0-3)(S)(Odd years). Complex numbers, functions of a complex variable, analytic functions, infinite series, infinite products, integration, proofs and applications of basic results of complex analysis. Topics include the Cauchy integral formulas, the residue theorem, the Riemann mapping theorem and conformal mapping. PREREQ: MATH275.

MATH527 Introduction to Applied Mathematics for Scientists and Engineers (3-0-3)(F). Introduction to applied mathematics in science and engineering: Vector calculus, Fourier series and transforms, series solutions to differential equations, Sturm-Liouville problems, wave equation, heat equation, Poisson equation, analytic functions, and contour integration. PREREQ: MATH275 and MATH333.

MATH533 Ordinary Differential Equations (3-0-3)(S)(Odd years). Theory of linear and nonlinear ordinary differential equations and their systems, including dynamical systems theory. Properties of solutions including existence, uniqueness, asymptotic behavior, stability, singularities and boundedness. PREREQ: MATH333; admitted to the following: Computational Sciences GC; admitted to one of the following: Computing PhD, Computational Mathematics Science, and Engineering emphasis.

MATH536 Partial Differential Equations (3-0-3)(S)(Even years). Theory of partial differential equations and boundary value problems with applications to the physical sciences and engineering. Detailed analysis of the wave equation, the heat equation, and Laplace's equation using Fourier series and other tools. PREREQ: MATH275 and MATH333, or PERM/INST.

MATH537 Principles of Applied Mathematics (3-0-3)(S). Finite and infinite dimensional vector spaces, spectral theory of differential operators, distributions and Green's functions applied to initial and boundary value problems. Discrete Fourier transforms. Variational principles. Potential theory, and conformal mappings. Asymptotic methods and perturbation theory. Exact content determined by the instructor. PREREQ: MATH427 or MATH527.

MATH556 Linear Programming (3-0-3)(SU)(On Demand). Linear optimization problems and systems of linear inequalities. Algorithms include simplex method, two-phase method, duality theory, and interior point methods. Programming assignments. PREREQ: MATH301.

MATH562 Probability and Statistics (3-0-3)(F). Provides a solid foundation in the mathematical theory of statistics. Topics include probability theory, distributions and expectations of random variables, transformations of random variables, moment-generating functions, basic limit concepts and brief introduction to theory of estimation and hypothesis testing: point estimation, interval estimation and decision theory. PREREQ: MATH275, MATH301, and MATH361; or admitted to the following: Data Science GC; or admitted to the Data Science emphasis of the Doctor of Philosophy in Computing program.

MATH565 (CS565) Introduction to Numerical Methods (3-0-3)(F). Approximation of functions, solutions of equations in one variable and of linear and nonlinear systems. Polynomial, cubic spline, and trigonometric interpolation. Numerical integration. Programming assignments. Cross-listed with CS565, may be taken once for credit. PREREQ: MATH365; or admitted to Computational Sciences GC; or admitted to Computing PhD, Computational Mathematics Science and Engineering Emphasis.

MATH566 (CS566) Numerical Linear Algebra (3-0-3)(S). Matrix theory and computations that arise in linear systems, least squares problems, and eigenvalue problems. Algorithms include LU, QR and SVD decompositions, and Krylov methods. Programming assignments. Cross-listed with CS566,

may be taken for credit once. PREREQ: CS565 or MATH465 or MATH565; or admitted to one of the following: Computational Sciences GC; or admitted to Computing PhD, Computational Mathematics Science and Engineering Emphasis.

MATH567 Numerical Methods for Differential Equations (3-0-3)(F). Numerical techniques for initial and boundary value problems. Elliptic, parabolic, hyperbolic, and functional differential equations. Finite difference, finite volume, finite element, and spectral methods. Efficiency, accuracy, stability and convergence of algorithms. Programming assignments. PREREQ: MATH333, and MATH465 or MATH565; or admitted to one of the following: Computational Sciences GC; or admitted to Computing PhD, Computational Mathematics Science and Engineering Emphasis.

MATH568 Inverse Theory (3-0-3)(F/S/SU). Data driven techniques with quantitative models to extract information and make inferences about physical quantities or systems of interest. Topics include conditioning, regularization, iterative and stochastic algorithms, and constrained optimization with applications. PREREQ: MATH361, and MATH275 or MATH301 or MATH333; or admitted to one of the following: Data Science GC, Computational Sciences GC, Computing PhD, Computational Mathematics Science and Engineering emphasis, or Computing PhD, Data Science Emphasis.

MATH571 Data Analysis (3-0-3)(F). Applications of statistical data analysis in various disciplines, introduction to statistical software, demonstration of interplay between probability models and statistical inference. Topics include introduction to concepts of random sampling and statistical inference, goodness of fit tests for model adequacy, outlier detection, estimation and testing hypotheses of means and variances, analysis of variance, regression analysis and contingency tables. PREREQ: MATH361; or admitted to one of the following: Data Science GC, or Computing PhD, Data Science Emphasis.

MATH572 Computational Statistics (3-0-3)(S). Introduction to the trend in modern statistics of basic methodology supported by state-of-art computational and graphical facilities, with attention to statistical theories and complex real world problems. Includes: data visualization, data partitioning and resampling, data fitting, random number generation, stochastic simulation, Markov chain Monte Carlo, the EM algorithm, simulated annealing, model building and evaluation. A statistical computing environment will be used for students to gain hands-on experience of practical programming techniques. PREREQ: MATH361; or admitted to one of the following: Data Science GC, Computing PhD, or Computing PhD, Data Science Emphasis.

MATH573 Time Series Analysis (3-0-3)(S)(Even years). Introduction to time series analysis with an emphasis on application to interdisciplinary projects using SAS/ETS; autoregressive-moving average models, seasonal models, model identification, parameter estimation, model checking, forecasting, estimation of trends and seasonal effects, transfer function models, and spectral analysis. PREREQ: MATH361; or admitted to one of the following: Data Science GC, Computing PhD, or Computing PhD, Data Science Emphasis.

MATH574 Linear Models (3-0-3)(S)(Odd years). Introduction to the Gauss-Markov model with use of relevant statistical software. Includes linear regression, analysis of variance, parameter estimation, hypothesis testing, model building and variable selection, multicollinearity, regression diagnostics, prediction, general linear models, split plot designs, repeated measures analyses, random effects models. PREREQ: MATH361; or admitted to one of the following: Computing PhD, Data Science Emphasis or Data Science GC.

MATH575 Statistical Learning (3-0-3)(S). Introduction to statistical learning methods with an emphasis on statistical reasoning, theoretical foundations, hands-on experience, and applications to real-world data in diverse disciplines using R programming. The topics include regression, classification, dimension reduction, clustering, regularization, model selection, support vector machines, and neural networks. PREREQ: MATH361.

MATH579 Teaching College Mathematics (1-0-1)(F,S,SU). Development of skills in the teaching of college mathematics. Effective use of class time, syllabus and

test construction, learning styles, and disability issues. Lecturing, use of group work, and other teaching techniques. (Pass/Fail.) PREREQ: PERM/INST.

Selected Topics (1-3 Variable). To be offered as staff availability permits:

MATH580 Set Theory

MATH581 Logic

MATH582 Topology

MATH583 Computational Mathematics

MATH584 Computational Algebra

MATH585 Cryptology

MATH586 Statistics

MATH587 Differential Equations

MATH598 Graduate Seminar I: Introduction and Research (1-0-1)(F). Introduction to the mathematics graduate program. Overview of the research areas of faculty. Research presentations by faculty and graduate students. (Pass/Fail.) PREREQ: PERM/INST.

MATH599 Graduate Seminar II: Professional Preparation (1-0-1)(S). Continuation of MATH598. Introduction to all aspects of the profession, career and Ph.D. opportunities, responsibility and ethics in teaching and research. Writing in mathematics: thesis, publications, grant proposals. Speaking on mathematics: Thesis defense, presenting in seminars and conferences. Presentations by faculty and graduate students. (Pass/Fail.) PREREQ: MATH598.

MATH667 (CS 667) Advances in Applied Cryptography (3-0-3)(F)(Odd Years). Secure two-party and multiparty computation, proof by simulation, cryptographic commitments, sigma protocols, zero-knowledge proofs, advanced authenticated key exchange protocols, identification protocols and their security. PREREQ: CS567 or MATH508 or MATH509 or MATH510, or admitted to one of the following: Computing PhD, Computer Science MS, Mathematics MS, or Cybersecurity MS.

MATH698 Seminar in Mathematics (1-0-1)(F/S). Seminars by mathematicians on a wide range of subjects, including advanced mathematical topics selected from texts, mathematical journals, and current research. Format may include student presentation and discussion. Students will attend seminars, write summaries, and search for relevant literature. May be repeated for credit. (Pass/Fail.) PREREQ: PERM/INST.

MATHED—Mathematics Education

MATHED courses are designed to provide extra experience in mathematics and the teaching of mathematics for practicing teachers. They may be used to meet course requirements for master's degrees in education. They are not available for undergraduate credit.

MATHED510 Mathematics Curriculum (3-0-3)(F/S/SU). Study of the design, development and analysis of mathematics curriculum materials. Includes careful examination of national standards, curriculum reports, and instructional materials from mathematical, pedagogical, and developmental perspectives.

MATHED511 Survey of Research in Mathematics Education (3-0-3)(F/S/SU). Introduction to the scholarly discipline of mathematics education through review of the literature. Includes exploration of major themes, concepts, and strategies for conducting mathematics education research.

MATHED512 Mathematics Education Research Design (3-0-3)(F/S/SU). Perspectives and strategies for applied research in mathematics education. Includes development of research questions and exploration of paradigms and methodologies for designing mathematics education research.

MATHED523 Teaching and Learning Algebra and Functions (3-0-3)(F/SU). Contemporary approaches to teaching algebra based on mathematics education research. Topics include selected concepts in algebra, teaching methods and materials, and research on the conceptual development of algebraic ideas.

MATHED524 Teaching and Learning Geometry (3-0-3)(SU). Investigations of geometry and measurement content in elementary and middle grades. Topics include shapes, congruence and similarity, transformations, properties, and geometric reasoning. Emphasis on problem-solving, modeling, and related literature on the teaching and learning of geometry.

MATHED525 Teaching and Learning Calculus (3-0-3)(F/S/SU). Investigations of contemporary approaches to teaching and learning calculus based on mathematics education literature. Topics include selected concepts of differential and integral calculus, teaching methods and materials, research on student thinking, and the historical development of calculus.

MATHED526 Teaching and Learning Statistics (3-0-3)(F/S/SU). Investigations of contemporary approaches to teaching statistics based on educational literature. Topics include selected concepts in data collection, descriptive and inferential statistics, probability, strategies for teaching statistics, and research on student thinking.

MATHED527 Teaching and Learning of Discrete Mathematics (3-0-3)(F/S/SU). Contemporary approaches to teaching discrete mathematics based on educational literature. Topics include selected concepts in sets, logic, number theory, sequences, combinatorics, and graph theory.

MATHED547 History of Mathematics (3-0-3)(F/S/SU). The historical development of systems for doing mathematics. Includes solving problems using historical methods, and making connections to the teaching and learning of modern mathematics.

MATHED557 Teaching and Learning Number Concepts with Problem Solving (3-0-3)(S). Investigations of number and operations content in elementary and middle grades. Topics include integers, the real number system, number bases, operations and algorithms, divisibility, and proportional reasoning. Emphasis on multiple representations, problem-solving, modeling, and related literature on the teaching and learning of numbers.

MATHED564 Teaching and Learning of Mathematical Modeling (3-0-3)(F/S/SU). Principles and techniques for using mathematics to iteratively investigate real world phenomena. Includes deterministic and stochastic approaches, with connections to the teaching and learning of mathematics.

Department of Mechanical and Biomedical Engineering

College of Engineering

Chair: Todd Otanicar
Charles P. Ruch Engineering Building, Room 201
(208) 426-5702 (phone)
(208) 426-1589 (fax)
mbegradapps@boisestate.edu (email)
boisestate.edu/coen-mbe (website)

Graduate Faculty: Deng, Fitzpatrick, Lighty, Lujan, Mamivand, Mannen, Otanicar, Pakala, Plumlee, Satici, Theodossiou, Uzer

Graduate Degrees Offered

- Master of Engineering in Mechanical Engineering
- Master of Science in Mechanical Engineering

Interdisciplinary Participation

- Doctor of Philosophy in Biomedical Engineering
- Doctor of Philosophy in Computing

General Information

The Department of Mechanical and Biomedical Engineering offers two distinct engineering graduate degree programs. The Master of Science in Mechanical Engineering (MS ME) program is a thesis-based program designed to prepare students for research and development and further study at the doctoral level. The Master of Engineering (MEngr ME) program is a non-thesis program with a focus on professional development.

Graduate Assistantships

Graduate assistantships within the department are highly competitive and may consist of a stipend and a tuition and fee waiver. Typical assignments include research assistants, teaching assistants or assignments related to specific areas. Graduate assistantships are awarded for one year and may be renewed for an additional year.

MASTER OF ENGINEERING IN MECHANICAL ENGINEERING

Program Coordinator: Trevor Lujan
Charles P. Ruch Engineering Building, Room 235
(208) 426-2857 (phone)
trevorlujan@boisestate.edu (email)
boisestate.edu/coen-mbe/graduate/ (website)

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 15 (fall priority), May 15 (fall final), August 15 (spring priority), October 15 (spring final)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
  - Field of Study: Mechanical Engineering or in a closely related field.
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Personal Statement
- Submit Letters of Recommendation
  - Three letters of recommendation from academic and/or professional references.

Degree Requirements

Master of Engineering in Mechanical Engineering

Graduate Major Requirements
30 Total Credits

Complete all of the following
Mechanical Engineering and Mathematics Core
Take the following:
ME501 - Engineering Professional Development (1)
ME510 - Continuum Mechanics (3)
Take at least 1 of the following:
MATH527 - Introduction to Applied Mathematics for Scientists and Engineers (3)
MATH536 - Partial Differential Equations (3)
MATH537 - Principles of Applied Mathematics (3)
Take at least 1 of the following:
MATH565 - Introduction to Numerical Methods (3)
MATH571 - Data Analysis (3)
MATH572 - Computational Statistics (3)
ME536 - Computational Fluid Dynamics (3)
ME570 - Finite Element Methods (3)
ME571 - Parallel Scientific Computing (3)
OR Another course with a computational emphasis approved by the student's advisor.

Complete all of the following
Take at least 20 credits from the following:
Mechanical Engineering Graduate Courses (11 - 20)
Courses with ME prefix to be selected with student input and approved by the supervisory committee.
Non-Mechanical Engineering Graduate Courses (0 - 9)

Graduate Culminating Activity and Other Requirements
1 Total Credits

Take at least 1 credits from the following:
ME690 - Master's Comprehensive Examination (1 - 6)

Grand Total Credits: 31

MASTER OF SCIENCE IN MECHANICAL ENGINEERING

Program Coordinator: Trevor Lujan
Charles P. Ruch Engineering Building, Room 235
(208) 426-2857 (phone)
trevorlujan@boisestate.edu (email)
boisestate.edu/coen-mbe/graduate/ (website)

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 15 (fall priority), May 15 (fall final), August 15 (spring priority), October 15 (spring final)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
  - Field of Study: Mechanical Engineering or in a closely related field
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Personal Statement
- Submit Letters of Recommendation
  - Three letters of recommendation from academic and/or professional references.
- Submit Graduate Assistantship Application
  - Deadlines: January 15 (fall), August 15 (spring)
  - Automatic consideration is given with your application to the program.

Degree Requirements

Master of Science in Mechanical Engineering

Graduate Major Requirements
24 Total Credits
  Complete all of the following
    Mechanical Engineering and Mathematics Core
      Take the following:
        ME501 - Engineering Professional Development (1)
        ME510 - Continuum Mechanics (3)
      Take at least 1 of the following:
        MATH527 - Introduction to Applied Mathematics for Scientists and Engineers (3)
        MATH536 - Partial Differential Equations (3)
        MATH537 - Principles of Applied Mathematics (3)
      Take at least 1 of the following:
        MATH565 - Introduction to Numerical Methods (3)
        MATH571 - Data Analysis (3)
        MATH572 - Computational Statistics (3)
        ME536 - Computational Fluid Dynamics (3)
        ME570 - Finite Element Methods (3)
        ME571 - Parallel Scientific Computing (3)
        OR Another course with a computational emphasis approved by the student's advisor.
  Complete all of the following
    Take at least 14 credits from the following:
      Mechanical Engineering Graduate Courses (8 - 14)
        Courses with ME prefix to be selected with student input and approved by the supervisory committee.
      Non-Mechanical Engineering Graduate Courses (0 - 6)
Graduate Culminating Activity and Other Requirements
6 Total Credits
  Take at least 6 credits from the following:
    ME593 - Thesis (1 - 12)
Grand Total Credits: 30

Special Rule on Transfer Credit

The normal transfer credit policies of the Graduate College hold except that up to 15 transfer credits earned in combination at the University of Idaho and Idaho State University may be applied to either degree program (MS ME or MEngr ME) with the approval of the supervisory committee.

Course Offerings

ME—Mechanical Engineering

ME501 Engineering Professional Development (1-0-1)(F). Explores best-practices in technical communication of advanced engineering concepts, develops professional skills for career advancement, and increases awareness of engineering ethics. (Pass/Fail.)

ME505 Mechanical Engineering Teaching Experience (1-3-2)(F/S). Provide teaching support in a mechanical engineering class under faculty supervision. Duties may include teaching a lab section, holding office hours, and overseeing projects. Content includes basic pedagogy and teaching skills. (Pass/Fail.)

ME510 Continuum Mechanics (3-0-3)(F/S). Development and analysis of fundamental relationships and constitutive equations for deformation, strain, and stress of materials occupying a continuous domain. Eulerian and Lagrangian methods are covered. Vector and tensor techniques developed. PREREQ: Graduate standing or PERM/INST.

ME520 (KINES520) Advanced Biomechanics (3-0-3)(F). Mechanical principles and analytical methods used in traditional and contemporary biomechanics. Topics include functional anatomy, joint kinematics, inverse dynamics, mechanical properties of biological materials, and modeling of the musculoskeletal system. May be taken for KINES or ME credit, but not both. PREREQ: ENGR220 or PERM/INST.

ME522 Advanced Thermodynamics (3-0-3)(F/S). Advanced topics selected from Statistical Thermodynamics, Thermodynamics of Chemically Reacting Gases, Thermodynamics Property Formulation for Computer Applications and others at the discretion of the professor. PREREQ: ME420.

ME525 (KINES525) Laboratory Techniques in Biomechanics (3-0-3)(S). An introduction to the analysis techniques used to study the mechanics of human motion. Topics include cinematography, videography, force transducers, electromyography and computer analysis techniques. May be taken for KINES credit or ME credit, but not both. PREREQ: KINES520/ME520 or PERM/INST.

ME526 Renewable Energy Systems (3-0-3)(F/S). A survey of renewable energy systems including solar, wind biomass, as compared to traditional electric power production and distribution. PREREQ: ENGR 240, and CE330.

ME530 Advanced Fluid Mechanics (3-0-3)(F/S). Theory and physics of viscous flows. Conservation laws. Vorticity dynamics and transport. Laminar flows and elementary lubrication theory. Flow instability. Introduction to boundary layer theory and turbulence. Some exact solutions to the Navier-Stokes equations. PREREQ: ME323; ME320 and ME330.

ME532 Acoustics (3-0-3)(F/S). Basic theories of acoustics, wave equations, acoustic response, sound generation, transmission, and attenuation. Measurement techniques and nomenclature. PREREQ: CE330, and MATH333.

ME536 Computational Fluid Dynamics (3-0-3)(F/S). Theory and numerical modeling in fluid dynamics. Finite difference, finite volume, and finite element techniques will be treated. The course will include projects and research applications in engineering and environmental flows. PREREQ: CE330, and PERM/INST.

ME537 Conduction Heat Transfer (3-0-3)(F/S). Steady and unsteady conduction of heat through solids, liquids, and gases. Analytical and numerical solution methods for ordinary and partial differential equations modeling heat transfer. PREREQ: Graduate standing or PERM/INST.

ME538 Convective Heat Transfer (3-0-3)(F/S). Treatment of energy and linear momentum conservation equations; laminar and turbulent forced convective HT in internal and external flow fields; free convection.

ME539 Radiation Heat Transfer (3-0-3)(F/S). Radiation heat transfer due to emission and absorption between surfaces and within materials. Analytical and numerical solutions for steady and unsteady heat transfer due to radiation as a dominant process or in combination with convection and conduction. PREREQ: Graduate standing or PERM/INST.

ME550 Advanced Mechanics of Materials (3-0-3)(F/S). Extension of stress-strain concepts to three-dimensions, plate and shell analysis, failure theories, and fatigue. Analysis and visualization techniques include Finite Element Analysis and photoelasticity. PREREQ: CE350.

ME560 Computer Aided Design (3-0-3)(F/S). Computer programs used to develop 3-D CAD database for design, analysis, simulation, and manufacturing. Machinery design to meet functional, performance, reliability and manufacturing requirements. Design projects reinforce concepts and methodologies. For students desiring higher level CAD sills prior to taking ME480.

ME561 (ECE561) Control Systems (3-0-3)(S). Time and frequency domain analysis and design of feedback systems using classical and state space methods. Observability, controllability, pole placement, and observers. May be taken for ECE or ME credit, but not both.

ME564 (ECE564) Robotics and Automated Systems (3-0-3)(F/S). An introduction to robotics with emphasis on automated systems applications. Topics include: basis components of robotic systems; selection of coordinate frames; homogeneous transformations; solutions to kinematic equations; velocity and force/torque relations; manipulator dynamics; digital simulation of manipulator motion; motion planning; actuators of robots; sensors of robots; obstacle avoidance; and control design. Cross-listed with ECE564, may be taken once for credit.

ME566 Dynamic Modeling and Control of Engineering Systems (3-0-3)(F/S/SU). Multi-physics modeling of lumped parameter systems. Theoretical basis of system response including classical differential equations, state space

methods, Laplace and frequency domain approaches. Closed loop stability and overview of SISO control system specification and design. Emphasis on computer simulation and model verification. PREREQ: Graduate standing or PERM/INST.

ME570 Finite Element Methods (3-0-3)(F/S). Theoretical development of finite element methods, solution algorithm formulation, and problem solving in stress analysis, heat transfer, and fluid flow. PREREQ: ENGR 220, and CE350 or ME350, and PERM/INST.

ME571 Parallel Scientific Computing (3-0-3)(F/S). Introduction to parallel scientific and technical computing on supercomputers and modern graphics processing units. Finite difference methods to solve partial differential equations governing heat conduction and wave propagation. Scientific visualization of simulation data. Performance optimization of scientific codes. Course projects involve parallel computer programming of prototype problems. PREREQ: CS117, MATH333, or PERM/INST.

ME574 Advanced Vibrations (3-0-3)(F/S). Theory and applications of vibrating continuous and discrete multi degree of freedom systems, modal analysis, acquisition and synthesis of data. Experimental and analytical characterization of the vibration response of linear and nonlinear systems, including Transfer and Frequency Response Functions, MIMO and SIMO, and mathematical modeling. PREREQ: ME472 or PERM/INST.

ME576 Advanced Dynamics (3-0-3)(F/S). Analytical modeling to predict the performance of linked, multi-body mechanical systems undergoing large displacements and rotations. Theoretical considerations in preparing models for computer simulations and interpreting results. Application of a state of the art computer package in creating realistic simulations. PREREQ: ME380 or PERM/INST.

ME577 (BIOL577)(MSE577) Biomaterials (3-0-3)(F). Theory of biomaterials science. Medical and biological materials and their applications. Selection, properties, characterization, design and testing of materials used by or in living systems. May be taken for BIOL, ME, or MSE credit, but not from more than department. PREREQ: MSE101 or CHEM112.

ME578 Design and Analysis of Mechatronic Systems (3-0-3)(F/S). Design and analysis of engineering systems containing mechanical, electro-mechanical and embedded computer elements. The course provides an overview of basic electronics, digital logic, signal processing and electromechanical devices. Fundamentals of event-driven programming will also be covered. PREREQ: ENGR 240.

ME582 Optimal Design (3-0-3)(F/S). Analytical and computer methods used to provide optimal design of products or processes. Formulation, specification, figures of merit, controllable variables, constraints and relationships among design variables. Single and multi-variable optimization algorithms using linear and nonlinear programming methods to design problems in structures, machine components, and energy systems. PREREQ: MATH275, PHYS211, and PHYS211L.

ME585 Vehicle Design (3-0-3)(F/S). Subsystem design for wheeled vehicles including bicycles, motorcycles, cars, trucks and ATVs. Static and dynamic analyses of traction and reaction forces during acceleration, braking and cornering. Suspension response analysis. Subsystem design including suspension, chassis, steering, transmission, brakes, and tires. PREREQ: ENGR 220, MSE101, and CE350.

ME602 Mechanobiology (3-0-3)(F/S). Describes methods to quantify and predict ways that cells detect, modify, and respond to physical stimulus within the cellular environment. Covers topics in cell biology, statistics, and solid and fluid mechanics with a special emphasis on experimental and computational approaches to model cellular environments and whole cell mechanics. PREREQ: MATH333 or PERM/INST.

Micron School of Materials Science and Engineering

College of Engineering

Director: Amy Moll
Micron Center for Materials Research, Room 205
(208) 426-5600 (phone)
materials@boisestate.edu (email)
boisestate.edu/coen-materials (website)

Graduate Faculty: Estrada, Frary, Graugnard, Hughes, Hurley, Jankowski, Jeunghoon, Knowlton, Li, Moll, Müllner, Phillips, Simmonds, Ubic, Xiong

Interdisciplinary Participation

- Doctorate of Philosophy in Biomedical Engineering
- Doctor of Philosophy in Computing
- Doctor of Philosophy in Materials Science and Engineering
- Master of Engineering in Materials Science and Engineering
- Master of Science in Materials Science and Engineering
- Graduate Certificate in Computational Materials Science and Engineering
- Graduate Certificate in Foundations in Materials Science and Engineering
- Graduate Certificate in Nanomaterials Science and Engineering

General Information

Established in 2004, the Micron School of Materials Science and Engineering houses three distinct interdisciplinary graduate degrees: Doctor of Philosophy (PhD), Master of Science (MS) and Master of Engineering (MEngr) and three graduate certificate programs. With an interdisciplinary base of faculty from backgrounds including, but not limited to: Materials Science and Engineering, Mechanical and Biomedical Engineering, Electrical and Computer Engineering, Civil Engineering, Physics, Chemistry, and Biology, students enrolled in the graduate programs benefit from their diversity of background and the interdisciplinary nature of the field. Governance of the graduate and certificate programs is based upon participating faculty from constituent departments and overseen by the School.

Materials Science and Engineering is a highly interdisciplinary field that rests between basic science and engineering. Because of this, graduates develop collaborative skills that transcend disciplinary boundaries as well as technical skills and fundamental knowledge that make them highly attractive to the regional, national, and international workforce.

DOCTOR OF PHILOSOPHY IN MATERIALS SCIENCE AND ENGINEERING

Graduate Program Co-Coordinators: Hui (Claire) Xiong and Lan Li
Micron Center for Materials Research, Room 205
(208) 426-5600 (phone)
msegrad@boisestate.edu (email)
boisestate.edu/coen-materials/academic-programs/phd-program (website)

Participating Departments

- Biological Sciences
- Chemistry and Biochemistry
- Engineering
- Physics

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 15 (fall priority), May 15 (fall final), September 15 (spring priority), November 1 (spring final)
  - This program is competitive and traditionally receives applications from more candidates than we have space to enroll. Your application will be rigorously reviewed and admission is not guaranteed.
  - Decisions: Mid-March (fall), Late-October (spring)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
  - Applicants with a 2.75 GPA to 3.00 GPA may be considered for provisional admission.
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Personal Statement
  - A personal statement that outlines your educational, reasearch, and professional background. Include a description of your program interest and motivation. Describe your professional interests and career goals. Also discuss your unique attributes and expected contributions to the program.
- Submit Current Resume or Curriculum Vitae (CV)
- Submit Foundational Coursework for Graduate Study
  - Demonstrate completion of college-level chemistry or equivalent, calculus-based physics or equivalent, and college-level calculus or equivalent.
- Submit Background Check
  - Students must pass a Boise State Employee Background Check (criminal).
- Submit Letters of Recommendation
  - Three letters of recommendation from academic or professional references. These letters should address your preparation for graduate courses and research.
- Submit Graduate Assistantship Application
  - Deadlines: May 15 (fall), November 1 (spring)
  - Automatic consideration is given with your application to the program.

Degree Requirements

Doctor of Philosophy in Materials Science and Engineering

Graduate Major Requirements
25 Total Credits

Complete all of the following
Required Core Courses
Take the following:
MSE605 - Crystallography and Crystal Chemistry (4)
MSE608 - Solid State Thermodynamics (4)
MSE618 - Phase Transformations and Kinetics (4)
Technical Requirement:
Take at least 9 credits from the following:
Choose 9 credits from 500-level or 600-level courses in science and engineering fields chosen in consultation with the advisor and approved by the graduate coordinator.

Required Experiential Learning Courses. At least two credits must be filled by MSE651 or MSE650. Remaining credits can be fulfilled by one or more of the following:
Take at least 4 credits from the following:
GCOLL512 - Internship in College Teaching (3)
GCOLL513 - Practicum in College Teaching (4)
GCOLL514 - Field Experience in College Teaching (1)
MSE590 - Practicum/Internship (1 - 12)
MSE650 - Teaching Experience (3)
MSE651 - Graduate Teaching Assistant Experience (2)

Graduate Culminating Activity and Other Requirements
41 Total Credits

Complete all of the following
Take at least 9 credits from the following:
Additional courses as approved by the graduate coordinator.
Take the following:
MSE601 - Graduate Student Orientation (1)
Take at least 1 credits from the following:
MSE691 - Doctoral Comprehensive Examination (1 - 6)
Take at least 30 credits from the following:
MSE693 - Dissertation (1 - 12)

Grand Total Credits: 66

MASTER OF ENGINEERING IN MATERIALS SCIENCE AND ENGINEERING

Graduate Program Co-Coordinators: Hui (Claire) Xiong and Lan Li
Micron Center for Materials Research, Room 205
(208) 426-5600 (phone)
msegrad@boisestate.edu (email)
boisestate.edu/coen-materials/academic-programs/master-of-engineering
(website)

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 15 (fall priority), 1st week of the semester (fall final), September 15 (spring priority), 1st week of the semester (spring final)
  - This program is competitive and traditionally receives applications from more candidates than we have space to enroll. Your application will be rigorously reviewed and admission is not guaranteed.
  - Decisions: Mid-March (fall), Late-October (spring)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
  - Applicants with a GPA less than 3.00 may be considered for provisional admission.
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Personal Statement
  - A personal statement that outlines your educational and professional background. Include a description of your program interest and motivation. Describe your professional interests and career goals.
- Submit Current Resume or Curriculum Vitae (CV)
- Submit Foundational Coursework for Graduate Study
  - Demonstrate completion of college-level chemistry or equivalent, calculus-based physics or equivalent, and college-Level calculus or equivalent.
- Submit Letters of Recommendation
  - Three letters of recommendation from academic or professional references. These letters should address your preparation for graduate study.
- Submit Graduate Assistantship Application
  - Deadlines: May 15 (fall), November 1 (spring)
  - Automatic consideration is given with your application to the program.

Degree Requirements

All Required Core courses must be completed with a B or better.

Master of Engineering in Materials Science and Engineering

Graduate Major Requirements
21 Total Credits

Complete all of the following
Required Courses:
Take the following:
MSE605 - Crystallography and Crystal Chemistry (4)
MSE608 - Solid State Thermodynamics (4)
MSE618 - Phase Transformations and Kinetics (4)

Technical Requirement:
Take at least 9 credits from the following:
Choose 9 credits from 500-level or 600-level courses in science and engineering fields chosen in consultation with the advisor and approved by the graduate coordinator.

Graduate Culminating Activity and Other Requirements
9 Total Credits

Complete all of the following
Other Graduate Courses:
Take at least 6 credits from the following:
Additional courses as approved by the graduate coordinator.
Culminating Activity:
Take at least 3 credits from the following:
MSE599 - Master of Engineering Final Project (3)

Grand Total Credits: 30

MASTER OF SCIENCE IN MATERIALS SCIENCE AND ENGINEERING

Graduate Program Co-Coordinators: Hui (Claire) Xiong and Lan Li
Micron Center for Materials Research, Room 205
(208) 426-5600 (phone)
msegrad@boisestate.edu (email)
boisestate.edu/coen-materials/academic-programs/ms-program (website)

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: May 15 (fall), November 1 (spring)
  - This program is competitive and traditionally receives applications from more candidates than we have space to enroll. Your application will be rigorously reviewed and admission is not guaranteed.
  - Decisions: Mid-March (fall), Late-October (spring)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
  - Applicants with a 2.50 GPA to 3.00 GPA may be considered for provisional admission.
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Personal Statement
  - A personal statement that outlines your educational, research, and professional background. Include a description of your program interest and motivation. Describe your professional interests and career goals. Also discuss your unique attributes and expected contributions to the program.
- Submit Current Resume or Curriculum Vitae (CV)
- Submit Foundational Coursework for Graduate Study
  - Demonstrate completion of college-level chemistry or equivalent, and calculus-based physics or equivalent.
- Submit Background Check
- Students must pass a Boise State Employee Background Check (criminal).

- Submit Letters of Recommendation
  - Three letters of recommendation from academic or professional references. These letters should address your preparation for graduate courses and research.
- Submit Graduate Assistantship Application
  - Deadlines: May 15 (fall), November 1 (spring)
  - Automatic consideration is given with your application to the program.

Degree Requirements

Master of Science in
Materials Science and Engineering

Graduate Major Requirements
21 Total Credits

Complete all of the following
  Required Courses:
  Take the following:
    MSE605 - Crystallography and Crystal Chemistry (4)
    MSE608 - Solid State Thermodynamics (4)
    MSE618 - Phase Transformations and Kinetics (4)
  Technical Requirement:
  Take at least 9 credits from the following:
  Choose 9 credits from 500-level or 600-level courses in science and engineering fields chosen in consultation with the advisor and approved by the graduate coordinator.

Graduate Culminating Activity and Other Requirements
9 Total Credits

Complete all of the following
  Culminating Activity
  Take at least 9 credits from the following:
    CHEM593 - Thesis (1 - 12)
    MSE593 - Thesis (1 - 12)
    PHYS593 - Thesis (1 - 12)

Grand Total Credits: 30

Special Rule on Transfer Credit

The normal transfer credit policies of the Graduate College hold except that up to 15 transfer credits earned in combination at the University of Idaho and Idaho State University may be applied to either degree program (MS MSE or MEngr MSE) with the approval of the supervisory committee.

GRADUATE CERTIFICATE IN COMPUTATIONAL MATERIALS SCIENCE AND ENGINEERING

Graduate Program Co-Coordinators: Hui (Claire) Xiong and Lan Li
Micron Center for Materials Research, Room 205
(208) 426-5600 (phone)
msegrad@boisestate.edu (email)
boisestate.edu/coen-materials/academic-programs/certificate-programs (website)

General Information

This certificate program provides an interdisciplinary opportunity to develop and apply computational tools the field of materials science and engineering. Opportunities to develop in first-principles techniques, molecular simulation, supercomputing, big data analysis, and Scientific algorithm development will position certificate holders to contribute to modern materials design as computational scientists.

Program Admission Requirements

Complete all of the following
- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: August 1 (fall), December 15 (spring)

- Submit Baccalaureate Degree and 3.00 GPA, see page 19
  - Applicants with a GPA less than 3.00 may be considered for provisional admission.
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Personal Statement
  - A personal statement that outlines your educational and professional background. Include a description of your program interest and motivation. Describe your professional interests and career goals.
- Submit Current Resume or Curriculum Vitae (CV)
- Submit Foundational Coursework for Graduate Study
  - Demonstrate completion of an introduction to materials science and engineering course or have equivalent knowledge.

Certificate Requirements

Graduate Certificate in
Computational Materials Science and Engineering

Graduate Major Requirements
9 Total Credits

Complete all of the following
  Select 9 credits from the following options. 6 credits must be in MSE courses. Or other Boise State graduate courses related to computational materials science or modeling as approved by the graduate program coordinator.
  Take at least 9 credits from the following:
    MSE563 - Materials Modeling (3)
    MSE564 - Computational Materials Science (3)
    MSE570 - Physical Metallurgy (3)
    MSE571 - Physical Ceramics and Glasses (3)

Grand Total Credits: 9

Special Relationships with Other Programs

Credits earned in this certificate program may be counted toward the MEngr, MS, or PhD degree programs in Materials Science and Engineering.

GRADUATE CERTIFICATE IN FOUNDATIONS IN MATERIALS SCIENCE AND ENGINEERING

Graduate Program Co-Coordinators: Hui (Claire) Xiong and Lan Li
Micron Center for Materials Research, Room 205
(208) 426-5600 (phone)
msegrad@boisestate.edu (email)
boisestate.edu/coen-materials/academic-programs/certificate-programs (website)

General Information

The curriculum in this certificate is designed for individuals with a baccalaureate degree in materials science and engineering, chemical engineering, mechanical engineering, nuclear engineering, chemistry, physics or other related field. It is designed to provide the foundational knowledge of Materials Science and Engineering and is required knowledge for any advanced degree (M. Eng., MS or PhD) in Materials Science and Engineering. Each course is taught annually.

Program Admission Requirements

Complete all of the following
- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: August 1 (fall), December 15 (spring)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
  - Applicants with a GPA less than 3.00 may be considered for provisional admission.
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5

- Submit Personal Statement
  - A personal statement that outlines your educational and professional background. Include a description of your program interest and motivation. Describe your professional interests and career goals.
- Submit Current Resume or Curriculum Vitae (CV)
- Submit Foundational Coursework for Graduate Study
  - Demonstrate completion of an introduction to materials science and engineering course or have equivalent knowledge.

Certificate Requirements

Graduate Certificate in
Foundations in Materials Science and Engineering

Graduate Major Requirements
12 Total Credits

Take the following:
MSE605 - Crystallography and Crystal Chemistry (4)
MSE608 - Solid State Thermodynamics (4)
MSE618 - Phase Transformations and Kinetics (4)

Grand Total Credits: 12

Special Relationships with Other Programs

Credits earned in this certificate program may be counted toward the MEngr, MS, or PhD degree programs in Materials Science and Engineering.

GRADUATE CERTIFICATE IN NANOMATERIALS SCIENCE AND ENGINEERING

Graduate Program Co-Coordinators: Hui (Claire) Xiong and Lan Li
Micron Center for Materials Research, Room 205
(208) 426-5600 (phone)
msegrad@boisestate.edu (email)
boisestate.edu/coen-materials/academic-programs/certificate-programs (website)

General Information

This certificate provides current information of high relevance to those interested in the science and engineering of nano-dimensional materials. The certificate courses cover approaches to nanoscale fabrication, key material properties at the nanoscale, applications of nanoscale materials, as well as computational approaches to nanoscale materials science and engineering. The certificate program covers the breadth of nanoscale materials science and engineering, while each course provides depth within key topic areas.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: August 1 (fall), December 15 (spring)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
  - Applicants with a GPA less than 3.00 may be considered for provisional admission.
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Personal Statement
  - A personal statement that outlines your educational and professional background. Include a description of your program interest and motivation. Describe your professional interests and career goals.
- Submit Current Resume or Curriculum Vitae (CV)
- Submit Foundational Coursework for Graduate Study
  - Demonstrate completion of an introduction to materials science and engineering course or have equivalent knowledge.

Certificate Requirements

Graduate Certificate in
Nanomaterials Science and Engineering

Graduate Major Requirements
9 Total Credits

Complete all of the following
Take at least 3 of the following:
MSE545 - Nanoscale Processing (3)
MSE550 - Nanoscale Transport (3)
MSE563 - Materials Modeling (3)
Or other Boise State graduate courses related to nanotechnology as approved by the graduate program coordinator.

Grand Total Credits: 9

Special Relationships with Other Programs

Credits earned in this certificate program may be counted toward the MEngr, MS, or PhD degree programs in Materials Science and Engineering.

Course Offerings

MSE—Materials Science and Engineering

MSE510 Electrical, Optical, and Dielectric Materials (3-0-3)(F/S). Physical principles underlying the electrical, dielectric and optical properties of modern solids. Crystalline and energy band structure of materials, thermal properties and electrical conduction in semiconductors and metals, dielectric response and optical behavior of solids are covered.

MSE511 Semiconductor Materials (3-0-3)(F/S). Examination of the physical properties of semiconductors including electronic structure, free carrier statistics, optical properties, crystallography, and defects. Study of thermodynamic properties as related to lattice vibrations and diffusion.

MSE512 Mechanical Behavior of Materials I (3-0-3)(F/S). Study of deformation and fracture in engineering materials, including elastic and plastic deformations; dislocation theory; alloy hardening and creep deformation; fracture mechanisms; linear elastic fracture mechanics; toughening of metals, ceramics, and composites; environmentally assisted failure.

MSE513 Mechanical Behavior of Materials II (3-0-3)(F/S). Topics include fracture in different materials classes, time-dependent deformation behavior, mechanical behavior of polymers and other soft materials, deformation of natural materials and cellular solids, or mechanical behavior at the nanoscale.

MSE514 Magnetism and Magnetic Materials (3-0-3)(F/S). Introduction to the phenomenon of magnetism. Basic magnetic properties of solid matter. Unit systems in magnetism. Magnetic anisotropy, magnetic domains, magnetic hysteresis, permeability, coercivity, and magnetostriction. Examples of magnetic materials.

MSE519 Interfacial Kinetics and Transport Processes (3-0-3)(S)(Even years). Reaction kinetics and mass transport phenomena at materials interfaces important in materials processing and performance, including gas-solid, liquid-solid, and electrochemical processes. Emphasis on understanding fundamental mechanisms that control rates of reactions and mass transport. PREREQ: MSE608.

MSE521 Structural Characterization (3-0-3)(F/S)(Intermittently). The theory and practice of x-ray diffraction and analytical electron microscopy; the principles of modern diffractometers and electron-beam instruments, both scanning and transmission, including electron optics, imaging modes, the interaction of electrons and x-rays with matter, diffraction theory, contrast mechanisms, and basic techniques for determining chemical composition, crystal structure, orientation, and defects in crystals.

MSE522 Applications of Materials Characterization (1-3-2)(Offered as Justified). In-depth applied study of materials characterization techniques. Study of theory and specific application in materials science and engineering. Students are required to have an approved project. May be repeated for credit. PREREQ: PERM/INST.

MSE523 Introduction to X-Ray Diffraction (1-2-1)(F/S). A practical introduction to the apparatus and technique of x-ray diffraction for crystalline materials in the form of bulk materials, powders, or films. Students are required to have an approved project. PREREQ: PERM/INST.

MSE525 Surface Analysis (3-0-3)(F/S). Fundamentals and techniques associated with a range of surface analysis methods including LEED/RHEED, SPM, SIMS, XPS, Auger, RBS or NAA.

MSE527 Point Defects (3-0-3)(F/S). Point defects in materials, particularly focused on defect chemistry, notation, ionic/electronic disorder, mass/charge balance, and the influence of point defects on materials properties.

MSE528 Interfaces and Dislocation Behavior (3-0-3)(F/S). Structure of interfaces as groups of line defects including dislocations, disconnections, and disclinations; application of general concepts to special situations including epitaxial interfaces, twin boundaries and phase transformations.

MSE540 Advanced Processing (3-0-3)(F/S). Science and engineering of processes used in the manufacture of advanced ceramics, metals, polymers and composites.

MSE542 Ceramic Processing (3-0-3)(F/S). Science and engineering of fabricating ceramic materials primarily from powders. Fundamental principles of colloid chemistry, thermodynamics of curved surfaces, and sintering kinetics models, and processing techniques.

MSE545 Nanoscale Processing (3-0-3)(F/S). Fundamental and applied aspects of current approaches to fabrication of nanoscale (<100nm) features, materials, and devices including chemical, physical, and biological methodologies.

MSE550 Nanoscale Transport (3-0-3)(F/S). Fundamental and applied treatment of photons, electrons, and phonons as energy carriers from the nanoscale (< 100 nm) to the macroscale. Topics include energy transport in the forms of waves and particles, carrier scattering processes, transport in low-dimensional systems, and experimental methods of transport measurements. Particular attention will be given to 2-dimensional materials and devices. PREREQ: PHYS309 or PERM/INST.

MSE561 Microelectronic Packaging Materials (3-0-3)(F/S). Engineering analysis of electronic packaging materials and their effect on electrical design, assembly, reliability, and thermal management. Selection process for packaging materials, manufacturing and assembly, single and multi-chip packaging.

MSE562 Energy Materials (3-0-3)(F/S). Role of materials in sustainable energy including batteries and fuel cells, solar cells and solar fuels, thermoelectric, and wind energy with focus on fundamental principles and applications of functional energy materials. Includes discussion of energy and environmental issues and policies.

MSE563 Materials Modeling (3-0-3)(F/S). Theory and application of computational techniques for modeling materials across length scales (nanometers to centimeters) and time scales (femtoseconds to minutes). Emphasis on stochastic techniques including molecular dynamics, Monte Carlo, and kinetic Monte Carlo simulations.

MSE564 Computational Materials Science (3-0-3)(F/S). Theory and application of computational modeling and simulation to fundamentally understand structure-property-performance relationships in materials. Different length- and time-scale modeling techniques (e.g., first-principles quantum simulation, atomistic, mesoscale and continuum modeling), scientific programming, and visualization tools.

MSE565 Applications of Mathematica (1-0-1)(F/S). The basics of using Mathematica software to solve problems in materials science and engineering.

MSE570 Physical Metallurgy (3-0-3)(F/S). Structure-property relationships with a focus on the formation of microstructures of alloys and the resulting mechanical properties. Fundamentals of annealing, spinodal decomposition, nucleation, growth, and coarsening. Role of defects in the formation of microstructures.

MSE571 Physical Ceramics and Glasses (3-0-3)(F/S). Structure-property and processing-property relations in crystalline and amorphous ceramic materials at the atomistic and microscopic levels.

MSE573 Physical Properties of Polymers (3-0-3)(F/S). Physical properties of polymers with focus on their underlying physics and chemistry of chain structures, solution properties, glass transition, crystalline state, rubber elasticity, and viscoelasticity. Contemporary topics such as polymer composites and polymers for electronics, energy, and biomedical applications are also introduced.

MSE574 Soft Materials (3-0-3)(F/S). Connects the principles of bonding and structure in polymers with the properties of soft materials. Inherent in these relationships are property perturbations caused by processing, as well as chemical and physical changes to soft materials that are induced by the environment in which the material is used.

MSE577 (BIOL577)(ME577) Biomaterials (3-0-3)(F/S). Theory of biomaterials science. Medical and biological materials and their applications. Selection, properties, characterization, design and testing of materials used by or in living systems. May be taken for BIOL, ME or MSE credit, but only from one department. PREREQ: MSE101 or CHEM112.

MSE578 Scientific Communication in Materials Science and Engineering (1-0-1)(F/S). Communication of research findings. Organization and composition of scientific research papers. PREREQ: PERM/INST.

MSE588 Biocompatibility and Environmental Degradation (3-0-3)(F/S). Theory of environmental degradation of metals, ceramics, polymers and biomaterials. The scientific principles of materials degradation with emphasis on material interactions within a living organism.

MSE599 Master of Engineering Final Project (1-5-3)(F/S). Culminating activity for the Master of Engineering program. Through course, student will demonstrate master's level breadth of materials science and engineering knowledge, including carrying out a substantial project that demonstrates ability of a master's student to independently and successfully research, understand, and design a professional activity similar to what may be encountered in the workplace by drawing upon core materials science and engineering knowledge. (Pass/Fail.) PREREQ: ADM/PROG.

MSE601 Graduate Student Orientation (1-0-1)(F/S). Orientation to the graduate student experience, requirements for the doctoral degree, and research practices including ethics, safety, research methods, and intellectual property. (Pass/Fail.)

MSE602 Survey of Materials Science (3-0-3)(F/S). Application of the principles of chemistry and physics to the engineering properties of materials. Development of an in-depth understanding of the relationship between structure, properties, processing, and performance for all classes of materials.

MSE605 Crystallography and Crystal Chemistry (4-0-4)(F/S). Bonding, atomic arrangements and crystal structures of metals, ceramics, electronic materials and polymers; electronic structure of solids; physical properties of solids; defects in solids; relationship between processing, microstructure and properties of materials.

MSE608 Solid State Thermodynamics (4-0-4)(F/S). The laws of thermodynamics are applied to multicomponent, multiphase reacting systems, and other thermodynamic systems. These concepts are used to discuss and mathematically compute equilibrium phase diagrams. The energy effects due to the geometry of solid surfaces are discussed in regards to capillarity effects. Classical thermodynamics is related to atom-level distributions using statistical thermodynamics and the partition function. Electrochemical thermodynamics is discussed in the context of two-phase interfacial reactions.

MSE618 Phase Transformations and Kinetics (4-0-4)(F/S). Kinetics of phase transformations, nucleation, crystallization, decomposition, chemical reactions, and atomic and molecular diffusion. Surface and interface phenomenon, nanoparticle-matrix interactions, sintering, grain growth, recovery and recrystallization.

MSE650 Teaching Experience (3-0-3)(F/S). Under the guidance of a faculty member, Doctoral candidates develop and teach an undergraduate course in Materials Science and Engineering. PREREQ: PERM/INST.

MSE651 Graduate Teaching Assistant Experience (1-6-2)(F,S). Support faculty member through providing teaching assistance including but not limited to holding office hours, teaching sections, and overseeing projects. Content includes basic pedagogy and teaching skills. May be repeated for credit. (Pass/Fail.) PREREQ: PERM/INST.

Department of Music

College of Arts and Sciences | School of the Arts

Chair: Linda Kline
Morrison Center, Room C-100
(208) 426-3665 (phone)
(208) 426-1771 (fax)
boisestate.edu/music (website)

Graduate Faculty: Alexander, Becker, Brown, Buie, Ganong, Gray, Hansen, Hodges, Kline, Molumby, Moreau, Paradis, Parkinson, Porter, Purdy, Rushing-Raynes, Seppala, Tornello, Waterman

Graduate Degrees Offered

- Master of Music, Conducting (Choral)
- Master of Music, Music Education
- Master of Music, Performance

General Information

The Master of Music (MM) is a professional degree in music with emphasis in 1) music education, 2) performance, or 3) choral conducting. The emphasis in education is designed to meet the needs of music education specialists who work in the public school system, grades K-12, or who aspire to further graduate study and teaching in music education. Students engage in critical inquiry in music education through graduate courses related to research, pedagogy, history, and philosophy, as well as graduate courses in music theory and history. Declaring an area of emphasis of either elementary, choral, or secondary instrumental, students structure elective credits to reflect their area, and conclude their studies with a culminating activity related to their emphasis.

Performance majors seek to improve their performance and studio teaching skills, possibly in preparation for a performance career, further graduate study, private studio teaching, and/or collegiate applied teaching. Their coursework centers around applied study, music theory and history, and pedagogy and literature courses, and culminates in a graduate recital.

Conducting majors seek to improve their conducting and classroom teaching skills, possibly in preparation for a conducting career, further graduate study, classroom teaching, and/or collegiate teaching. Their coursework centers around applied study, music theory and history, and pedagogy and literature courses, and culminates in a graduate recital.

MASTER OF MUSIC, CONDUCTING (CHORAL)

Graduate Program Coordinator: Sarah Paradis
Morrison Center, Room C-215
(208) 426-1685 (phone)
sarahparadis@boisestate.edu (email)
boisestate.edu/music/graduate (website)

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: February 20 (fall priority), June 1 (fall final), October 1 (spring)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
  - Field of Study: Music
  - Applicants with a GPA less than 3.00 may be considered for provisional admission.
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
- Submit Current Resume or Curriculum Vitae (CV)

- A resume or curriculum vitae that includes your music performance experience.
- Submit Writing Sample
  - A writing sample of a short undergraduate research paper.
- Audition — All applicants are invited for an audition, in person, before the choral conducting faculty.
- Submit Letters of Recommendation
  - Three letters of recommendation from academic and/or professional references. Letters should address your preparation for graduate study.
- Submit Graduate Assistantship Application
  - Deadline: February 20 (fall)

Graduate Assistantships

The Department offers four full graduate assistantships, and the Blue Thunder Marching Band program offers three full graduate assistantships. A cooperative program for string students exists with the Boise Philharmonic Orchestra. Contact the graduate program coordinator for further information.

Degree Requirements

Master of Music, Conducting (Choral)

Graduate Major Requirements
33 Total Credits
   Complete all of the following
     Core Courses
      Take the following:
       MUS503 - Introduction to Music Research (3)
       MUS510 - Advanced Analytical Procedures I (3)
       MUS557 - Major Instrument Literature (3)
     Take at least 3 credits from the following:
      Music History Elective
      Take the following:
       MUS563 - Major Instrument Pedagogy I (3)
     Take at least 3 credits from the following:
      Additional Music History and/or Music Theory
     Take 2 credits from: -
     MUS-ENS505 - Meistersingers (1)
     Take 8 credits from: -
     MUS-PRV574 - Choral Conducting Private Lessons (4)
     Take 2 credits from: -
     MUS-PRV531 - Voice Private Lessons (1)
     2 semesters minimum: conducting private lessons must be taken each semester of residency.
     Take the following:
     MUS-APL547 - Graduate Conducting Recital (3)
Grand Total Credits: 33

MASTER OF MUSIC, MUSIC EDUCATION

Graduate Program Coordinator: Sarah Paradis
Morrison Center, Room C-215
(208) 426-1685 (phone)
sarahparadis@boisestate.edu (email)
boisestate.edu/music/graduate (website)

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: February 20 (fall priority), June 1 (fall final), October 1 (spring)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
  - Field of Study: Music Education
  - Applicants with a GPA less than 3.00 may be considered for provisional admission.
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5

- Submit Application Letter
- Submit Current Resume or Curriculum Vitae (CV)
  - A resume or curriculum vitae that includes your teaching experience.
- Submit Writing Sample
  - A writing sample of a short undergraduate research paper.
- Submit Letters of Recommendation
  - Three letters of recommendation from academic and/or professional references. Letters should address your preparation for graduate study.
- Submit Graduate Assistantship Application
  - Deadline: February 20 (fall)

Graduate Assistantships

The Department offers four full graduate assistantships, and the Blue Thunder Marching Band program offers three full graduate assistantships. A cooperative program for string students exists with the Boise Philharmonic Orchestra. Contact the graduate program coordinator for further information.

Degree Requirements

Master of Music, Music Education

Graduate Major Requirements
30 Total Credits

Complete all of the following
  Core Courses
    Take the following:
      MUS503 - Introduction to Music Research (3)
      MUS510 - Advanced Analytical Procedures I (3)
      MUS570 - New Developments in Music Education (3)
      MUS576 - History and Philosophy of Music Education (3)

  Music Education Emphasis Area and Electives
  (Courses selected with the approval of the student's Committee)
  Take at least 6 credits from the following:
    6 credits in the student's area of emphasis: elementary general music, choral music, or instrumental music. No more than four (4) workshop elective credits, of which one may be a music conference credit, may be applied towards the degree.

  Take at least 3 credits from the following:
  3 credits additional approved electives in music

  Other Music Courses
  (Courses selected with the approval of the student's Committee)
  Take at least 3 credits from the following:
    Music History

  Take at least 6 credits from the following:
    Additional credits selected from the following area(s) A. Additional music theory or history course(s) B. Music Ensemble(s) C. Private Music Lessons D. Conducting course(s)

  Comprehensive Examination A written comprehensive examination in music must be passed prior to completion of the student's culminating activity. This exam will be tailored to each student's graduate coursework. The comprehensive exam may be taken after the completion of 27 hours of required coursework to include 6 credits of the core courses and the 3 hours each in music history and music theory.

  Oral Examination If needed, an oral examination relating to the written comprehensive examination or to the culminating activity may be requested at the discretion of the candidate's Committee.

Graduate Culminating Activity and Other Requirements
3 - 6 Total Credits

  Complete 1 of the following
    Take at least 3 credits from the following:
      MUS591 - Project (1 - 3)
    Take at least 6 credits from the following:
      MUS593 - Thesis (1 - 9)

Grand Total Credits: 33 - 36

MASTER OF MUSIC, PERFORMANCE

Graduate Program Coordinator: Sarah Paradis
Morrison Center, Room C-215
(208) 426-1685 (phone)
sarahparadis@boisestate.edu (email)
boisestate.edu/music/graduate (website)

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: February 20 (fall priority), June 1 (fall final), October 1 (spring)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
  - Field of Study: Music
  - Applicants with a GPA less than 3.00 may be considered for provisional admission.
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
- Submit Current Resume or Curriculum Vitae (CV)
  - A resume or curriculum vitae that includes your music performance experience.
- Submit Writing Sample
  - A writing sample of a short undergraduate research paper.
- Audition — All applicants are invited for an audition, in person, before the performance faculty of his/her major performance area (i.e., keyboard, winds, strings, etc.).
- Submit Letters of Recommendation
  - Three letters of recommendation from academic and/or professional references. Letters should address your preparation for graduate study.
- Submit Graduate Assistantship Application
  - Deadline: February 20 (fall)

Graduate Assistantships

The Department offers four full graduate assistantships, and the Blue Thunder Marching Band program offers three full graduate assistantships. A cooperative program for string students exists with the Boise Philharmonic Orchestra. Contact the graduate program coordinator for further information.

Degree Requirements

Master of Music, Performance

Graduate Major Requirements
29 - 30 Total Credits

Complete all of the following
  Core Courses
    Take the following:
      MUS503 - Introduction to Music Research (3)
      MUS510 - Advanced Analytical Procedures I (3)
      MUS557 - Major Instrument Literature (3)

  Take at least 3 credits from the following:
  Music History Elective
    Complete 1 of the following
      In addition, complete one of the following areas below to graduate with a Master of Music, Performance.

  Complete all of the following
    Instrumental
      Take the following:
        MUS563 - Major Instrument Pedagogy I (3)
        MUS564 - Major Instrument Pedagogy II (3)
        or additional Music History and/or Music Theory

  Take at least 3 credits from the following:
    Additional graduate level music elective

  Take at least 8 credits from the following:
    MUS-PRV504 - Woodwind Instruments Private Lessons (4)

MUS-PRV514 - Brass Instruments Private Lessons (4)
MUS-PRV524 - Percussion Instrument Private Lessons (4)
MUS-PRV534 - Voice Private Lessons (4)
MUS-PRV544 - Keyboard Private Lessons (4)
MUS-PRV554 - Fretted Strings Private Lessons (4)
MUS-PRV564 - Bowed String Instrument Private Lessons (4)
2 semesters minimum: private lessons must be taken each
semester of residency
  Complete all of the following
    Voice
      Take the following:
        MUS465G - Diction for Singers I (2)
        MUS466G - Diction for Singers II (2)
    Take the following:
      MUS563 - Major Instrument Pedagogy I (3)
      MUS564 - Major Instrument Pedagogy II (3)
      or additional Music History and/or Music Theory
    Take at least 8 credits from the following:
      MUS-PRV504 - Woodwind Instruments Private Lessons (4)
      MUS-PRV514 - Brass Instruments Private Lessons (4)
      MUS-PRV524 - Percussion Instrument Private Lessons (4)
      MUS-PRV534 - Voice Private Lessons (4)
      MUS-PRV544 - Keyboard Private Lessons (4)
      MUS-PRV554 - Fretted Strings Private Lessons (4)
      MUS-PRV564 - Bowed String Instrument Private Lessons (4)

Graduate Culminating Activity and Other Requirements
3 Total Credits
  Take the following:
    MUS-APL546 - Graduate Solo Performance Recital (3)
Grand Total Credits: 32 - 33

Course Offerings

MUS—Music, General

MUS424G Counterpoint Since 1600 (3-0-3)(F). Study and writing in contrapuntal styles from Baroque period to present day. Invertible counterpoint, canon, fugue, invention, and analysis of procedures in representative works. Additional compositions and/or research for graduate credit. PREREQ: MUS220.

MUS465G Diction for Singers I (2-0-2)(F)(Odd years). A course designed for singers, devoted to the understanding of the International Phonetic Alphabet (IPA) system and the learning of the rules of pronunciation in Italian, Latin, and Spanish languages. Graduate students will additionally transcribe an entire song cycle or the songs of a proposed graduation recital. Required for all vocal performance majors and Master of Music vocal performance majors and strongly recommended for all voice emphasis majors. PREREQ: One year of MUS-PRV voice performance studies.

MUS466G Diction for Singers II (2-0-2)(S)(Even years). A continuation of MUS465G Diction for Singers I, with emphasis on German, French, and English languages. Graduate students will additionally transcribe an entire song cycle or the songs of a proposed graduation recital. Required for all vocal performance majors and Master of Music vocal performance majors and strongly recommended for all voice emphasis majors. PREREQ: MUS465G or PERM/INST.

MUS500 Graduate Seminar on Bach and Handel (3-0-3)(S). Examines the life, works, and genres associated with Johann Sebastian Bach and George Frideric Handel. Explores topics germane to their areas of expertise with regard to Bach and Handel. Also explores selected repertoire of these two seminal Baroque composers through in-class discussions and a significant final paper-presentation. PREREQ: Graduate Music Student or PERM/INST.

MUS501 History of Music in the United States (3-0-3)(F/S). Designed for either the non-specialist or specialist in music, this course will survey the role which music has played in the development of American culture. Vernacular and art music, as well as social and historical interrelationships with music will be examined and discussed. History elective. PREREQ: Graduate Music Student or PERM/INST.

MUS502 Survey of Jazz (3-0-3)(S). Explores interpretation of America's original musical art form through listening and through discussion of socio-cultural contexts of jazz. Survey covers stylistic influences of nineteenth century Africa and western Europe through current living exponents of jazz. In-depth book reviews and research papers on the subject are required. History elective. PREREQ: MUSI 100.

MUS503 Introduction to Music Research (3-0-3)(F/S). This course will provide an introduction to the basic research literature pertinent to the student's major area of emphasis; an interpretation of research findings; and the means to develop skills and techniques needed for the writing of an extended research paper, thesis and/or dissertation, articles for publication and book/performance reviews. PREREQ: Graduate Music Student or PERM/INST.

MUS504 Introduction to Ethnomusicology (3-0-3)(S)(Even years). Considers the role of music in society and culture, and examines several musical traditions beyond the scope of Western art music. History elective. PREREQ: Admission to Master of Music program or PERM/INST.

MUS510 Advanced Analytical Procedures I (3-0-3)(F/S). Overview of analytical approaches, methodologies, and theories of music of the common-practice period (18th through early 19th centuries) with emphasis on concepts/theories relating to harmony, tonality, and formal organization. PREREQ: Graduate Music Student or PERM/INST.

MUS511 Advanced Analytical Procedures II (3-0-3)(F/S). Develops and extends aspects of the theoretical systems and analytical paradigms covered in MUS510 through the close examination of individual works, composers, genres/styles, and/or systems of the late nineteenth through 21st centuries. PREREQ: MUS510 or PERM/INST.

MUS512 Electronic Music Applications (3-0-3)(F/S). A historical overview of electronic music and music technology. Hands-on experience with digital and analog synthesizers, effects processors, sampling, tape decks, computers and related software, and MIDI. Emphasis will be placed on the application of fundamental techniques of electronic music to creative composition. Theory elective. PREREQ: Graduate Music Student or PERM/INST.

MUS557 Major Instrument Literature (3-0-3)(F/S). Advanced survey of the major instrument literature. The student will prepare a research paper on several typical or important works in the repertoire. Repeatable for credit for different instruments. PREREQ: Graduate Music Student or PERM/INST.

MUS561 Advanced Instrumental Conducting (2-0-2)(F/S). Designed for secondary instrumental music teachers and advanced performers, this course provides opportunity to discover, analyze, and solve technical conducting problems in both wind band and orchestral music. May be repeated for credit.

MUS563 Major Instrument Pedagogy I (3-0-3)(F). An advanced and in-depth investigation of pedagogical techniques, materials and principles used in the private teaching studio. Readings in the philosophy of teaching will be included. Repeatable for credit for different instruments. PREREQ: Graduate Music Student or PERM/INST.

MUS564 Major Instrument Pedagogy II (3-0-3)(S). Development of lesson plans and supervised studio teaching in both private and group settings. Recommended preparation: MUS563. Repeatable for credit for different instruments. PREREQ: Graduate Music Student or PERM/INST.

MUS567 Choral Literature (3-0-3)(F/S). Survey course exploring choral works from all time periods. Though secular works will be discussed, special emphasis will be placed on tracing the development of the Mass, Motet, and Requiem throughout history. Strategies for teaching and performing these works will be discussed. Special projects include programming for elementary, secondary, and collegiate choirs. PREREQ: Graduate Music Student or PERM/INST.

MUS570 New Developments in Music Education (3-0-3)(F/S). Designed to acquaint the music specialist with recent ideas in music education, including major trends in curriculum, new methodology, music in integrated courses, and reports of major conferences and symposia. PREREQ: Graduate Music Student or PERM/INST.

MUS571 Advanced Practices and Principles in Teaching Music in the Elementary School (3-0-3)(F/S). Designed for the general classroom teacher or music specialist, the course deals with old and new approaches to teaching music in the classroom, teaching materials, current research on problem singers, creative musical activities, and the development of music reading skills. PREREQ: MUS374 or PERM/INST.

MUS572 General Music Methods and Materials (3-2-3)(F). A study of causes and solutions for problems occurring in the elementary music classroom, including methods, materials and teaching techniques. PREREQ: PERM/INST.

MUS576 History and Philosophy of Music Education (3-0-3)(F/S). Includes both an introduction to the history of music education in the United States, from colonial New England to the present; and alternate views about the philosophy of music, including aesthetic experience, aesthetic education, and the nature and meaning of music. PREREQ: Graduate Music Student or PERM/INST.

MUS585 Choral Methods and Materials (3-0-3)(F/S). A study of causes and solutions for problems occurring in the choral rehearsal. Areas to be covered include vocal methods and techniques, organization and repertoire planning.

MUS587 Advanced Methods and Techniques for the Instrumental Instructor (3-0-3)(F/S). A study of causes and solutions for problems occurring in the instrumental rehearsal. Areas to be covered include instrumental methods and techniques, organization and repertoire planning.

MUS-APL—Music Applied, Performance Classes, Recitals

MUS-APL529 Jazz Improvisation (1-0-1)(F/S). Private lessons in jazz improvisation. Intended primarily for instrumental majors, this performance-oriented course deals with the principles of jazz harmony and scaler theory. These principles will be applied to selected exercises and standard jazz literature. Students should possess above-average technical facility on their instrument and should have a working knowledge of music theory. Extra fee, non-waivable, per private lesson fee schedule, required. PREREQ: Graduate Standing and MUS103 or PERM/INST.

MUS-APL546 Graduate Solo Performance Recital (0-V-3)(F/S). A full recital to be presented as the culminating project for the Master of Music degree, Performance. After successful completion of the culminating project, the student's committee will administer a written examination consisting of three questions, one from each committee member. The questions will cover areas of the student's recital or culminating project and coursework taken toward the degree. After satisfactory completion of the written examination, the committee will meet with the student for an oral examination. (Pass/Fail.) PREREQ: PERM/INST.

MUS-APL547 Graduate Conducting Recital (0-V-3)(F/S). A full recital to be presented as the culminating project for the Master of Music degree, Conducting (Choral). After successful completion of the culminating project, the student's committee will administer a written examination consisting of three questions, one from each committee member. The questions will cover areas of the student's recital or culminating project and coursework taken during the degree. After satisfactory completion of the written examination, the committee will meet with the student for an oral examination. (Pass/Fail.) PREREQ: PERM/INST.

MUS-ENS—Music Ensemble

All MUS-ENS courses may be repeated for credit.

MUS-ENS321G Marching Band (0-V-1)(F). Designed to promote participation in and repertoire knowledge of literature for marching bands. The marching band performs at all home and at least one away football game and occasionally at other university or civic events. Open to all students with the approval of the director. Graduate music students will be expected to assume leadership roles or will be assigned extra duties within the band and/or its organization. May be repeated for credit.

MUS-ENS323G Pep Band (0-V-1)(S). Designed to promote participation in and repertoire knowledge for athletic and promotional bands. Regular public performances are required at Boise State athletic events and university and community functions. May be repeated for credit. PREREQ: MUS-ENS121/321-321G with an audition and/or PERM/INST.

MUS-ENS501 University Singers (0-3-1)(F,S). Open to all, a campus and community choir that focuses on improving vocal technique and musicianship skills. No audition. Major choral works from all periods, public performances. May be repeated for credit.

MUS-ENS505 Meistersingers (0-5-1)(F,S). Advanced 42-voice concert-touring chorus, highest standards, very active performing schedule. Membership by audition. May be repeated for credit. PREREQ: Audition and/or PERM/INST.

MUS-ENS511 Vocal Jazz Choir (0-3-1)(F,S). Designed to promote participation in and repertoire knowledge of literature for vocal jazz choirs. Public performances. May be repeated for credit. PREREQ: Audition and/or PERM/INST.

MUS-ENS512 Vox Angelis (0-3-1)(F,S). Specializing in choral literature for treble voices from all time periods, teaching vocal technique, musicianship, and sight-reading. Public performances. Membership by minimal audition. Public performances are given each semester. May be repeated for credit. PREREQ: Audition and/or PERM/INST.

MUS-ENS515 Opera Theater (0-5-1)(F,S,SU). Advanced study/experience in singing-acting technique and movement through performing in productions from the opera and/or musical theater repertoire. May be repeated for up to 4 credits maximum. PREREQ: PERM/INST.

MUS-ENS520 Symphonic Winds (0-5-1)(F,S). Rehearsal attendance and performance with the select concert band of the University. May be repeated for credit. PREREQ: Audition and/or PERM/INST.

MUS-ENS522 All Campus Band (0-3-1)(F,S). Rehearsal attendance and performances with the non-audition concert band. May be repeated for credit. PREREQ: Graduate standing in music.

MUS-ENS524 Treasure Valley Concert Band (0-3-1)(F,S). Rehearsal attendance and multiple performances with this full symphonic band comprising professionals and advanced adult musicians. May be repeated for credit. PREREQ: PERM/INST.

MUS-ENS526 Jazz Ensemble (0-4-1)(F,S). Rehearsal attendance and performance with the university big band jazz ensemble. May be repeated for credit. PREREQ: Audition and/or PERM/INST.

MUS-ENS527 Chamber Music (0-2-1)(F,S). Participation in a faculty coached, official departmental chamber ensemble, resulting in a minimum of one public performance per semester. May be repeated for credit. PREREQ: PERM/INST.

MUS-ENS540 Percussion Ensemble (0-3-1)(F,S). Rehearsal attendance and performance with the University percussion ensemble. May be repeated for credit. PREREQ: PERM/INST.

MUS-ENS550 Orchestra (0-5-1)(F,S). Rehearsal attendance and performance with the university orchestra. Graduate students are expected to assume leadership roles or will be assigned extra duties within the orchestra and/or its organization. Audition required for new students. May be repeated for credit. PREREQ: PERM/INST.

MUS-ENS570 Trombone Choir (0-1-1)(F,S). Study and performance of the literature, including original and transcribed works for multiple tenor and bass trombones. Public performances each semester. May be repeated for credit. PREREQ: PERM/INST.

MUS-ENS575 Tuba-Euphonium Ensemble (0-1-1)(F,S). Study and performance of music for tuba-euphonium ensemble. Literature consists of original and transcribed works for multiple euphoniums and tubas. Public performances are given each semester. May be repeated for credit. PREREQ: PERM/INST.

MUS-ENS585 Duo Piano Ensemble (0-2-1)(F,S). Survey of duo-piano literature, rehearsal and performance problems, resulting in public performance each semester. May be repeated for credit. PREREQ: PERM/INST.

MUS-PRV—Music Private Lessons Performance Studies

Students will be assigned on the basis of an audition. Performance, Technical Study, Musical Interpretation, Literature, and Teaching Technique will be stressed.

All 500-level MUS-PRV courses are repeatable. See undergraduate Private Lesson Performance Studies course numbering system for explanation of course numbers.

MUS-PRV501 (0-.5-1), 502 (0-.5-2), 504 (0-1-4). Woodwind instruments private lessons.

MUS-PRV511 (0-.5-1), 512 (0-.5-2), 514 (0-1-4). Brass instruments private lessons.

MUS-PRV521 (0-.5-1), 522 (0-.5-2), 524 (0-1-4). Percussion instruments private lessons.

MUS-PRV531 (0-.5-1), 532 (0-.5-2), 534 (0-1-4). Voice private lessons.

MUS-PRV541 (0-.5-1), 542 (0-.5-2), 544 (0-1-4). Keyboard instruments private lessons.

MUS-PRV551 (0-.5-1), 552 (0-.5-2), 554 (0-1-4). Fretted string instruments private lessons.

MUS-PRV561 (0-.5-1), 562 (0-.5-2), 564 (0-1-4). Bowed string instruments private lessons.

MUS-PRV574 Choral Conducting Private Lessons (0-1-4)(F/S). Choral conducting private lessons. May be repeated for credit.

School of Nursing

College of Health Sciences

Divisional Dean: Shelle Poole
Associate Divisional Dean and Chief Nurse Administrator: Amy Spurlock
Norco Building, Room 433
(208) 426-4143 (phone)
boisestate.edu/nursing (website)

Graduate Faculty: Ahten, Connor, Doyon, Gallegos, Hicks, Knight, Loos-Bartlett, Prengaman, Serratt, Stock, Walters

Graduate Degrees Offered

- Doctor of Nursing Practice in Leadership
- Master of Nursing, Adult-Gerontology Nurse Practitioner—Acute Care
- Master of Nursing, Adult-Gerontology Nurse Practitioner—Primary Care
- Graduate Certificate in Adult-Gerontology Nurse Practitioner—Acute Care
- Graduate Certificate in Adult-Gerontology Nurse Practitioner—Primary Care

General Information

The School offers a graduate nursing program with three degree options; two at the master's level and one at the doctoral level. In addition there are two options for graduate certificates. All programs are offered via distance education.

DOCTOR OF NURSING PRACTICE IN LEADERSHIP

Graduate Program Director: Teresa Serratt
Program Information: Zerik Kadrlik
Norco Building, Room 414D
(208) 426-3819 (phone)
(208) 426-2344 (fax)
nursingdnp@boisestate.edu (email)
boisestate.edu/nursing-dnp (website)

General Information

The School of Nursing offers a post-master's Doctor of Nursing Practice in Leadership (DNP) to prepare nurses with a practice focused doctorate. This post-masters DNP focuses on leadership with an emphasis on evidence-based practice enhancing development of interventions that impact health outcomes and complex healthcare systems. This curriculum provides nurses with existing graduate degrees the opportunity to develop doctoral level expertise in order to address pressing issues and challenges in today's complex health care arena by directing the care needs of multiple populations. This program is offered entirely via distance education.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: February 1 (fall priority), July 1 (fall final)
  - Pay a separate nursing program application fee of $20.00.
- Submit Baccalaureate and Master's Degree and 3.00 GPA, see page 19
  - Field of Study: Bachelor's degree in nursing and a master's degree in nursing or a related field. Applicants who possess a master's in a related field may be required to take additional graduate courses.
  - Program Restriction: This program is available to nurses practicing in all states in the US.
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 95, pBT (revised): 72, pBT (old): 587, IELTS - 6.5
- Submit Personal Statement
  - A personal statement will be evaluated for the quality of the content and writing style. It must not exceed 500 words, and must: Discuss how your career and the nursing profession could be enhanced through two (2) of the eight (8) Essentials of Doctor of Nursing Practice Education established by the American Association of Colleges of Nursing (AACN). Explain why you chose those two Essentials to discuss. Identify a significant population, organizational or system problem that requires a change. Explain why this change would achieve a more successful health outcome using evidence. This problem should be one that you could potentially use as the basis for your DNP Scholarly Project.
- Submit Current Resume or Curriculum Vitae (CV)
  - A resume or curriculum vitae that includes any applicable specialty certifications and information regarding your work experience as a registered nurse (RN).
- Submit Additional Materials
  - Provide proof of a valid and unencumbered nursing license.
- Interview — Final candidates will be invited for an interview. The interview will be virtual or over the telephone.
- Submit Letters of Recommendation
  - Three letters of recommendation from nursing faculty members, professional healthcare colleagues, or work supervisors who can evaluate your potential for success in a graduate program. Recommendations from family, friends, other students, or co-workers are not appropriate.

International students must comply with the following from the Commission of Graduates of Foreign Nursing Schools (CGFNS):

1. Credentials review
2. Qualifying examination of nursing knowledge
3. English proficiency exam

For more information, international students should contact the Idaho State Board of Nursing.

Residency Requirements

The DNP program is available to nurses practicing in all states in the US.

Degree Requirements

Students must have a grade of B or better in all DNP courses.

Doctor of Nursing Practice in Leadership

Graduate Major Requirements
40 Total Credits

Complete all of the following
Take the following:
NURS601 - Scholarly Project I (2)
NURS602 - Advanced Principles of Population Health Nursing (3)
NURS603 - Scholarly Project II (2)
NURS604 - Designing Models of Health Care Delivery (3)
NURS605 - Scholarly Project III (2)
NURS608 - Health Care Policy and Advocacy (3)
NURS609 - Health Care Policy and Advocacy Application (2)
NURS610 - Leadership for Organizations, Systems, and Populations (3)
NURS612 - Translation, Integration, and Dissemination of Evidence (3)
NURS614 - Outcomes Management Analysis (3)
NURS616 - Health Care Technology, Information Systems, and Quality (3)
NURS618 - Quality Improvement and Evaluation Methodology (3)
NURS620 - Scholarly Inquiry and Advanced Evidence-Based Practice (3)
NURS621 - Scholarly Project IV (2)
NURS622 - Financial Strategies for Nurse Leaders (3)
Take 0-3 credits of electives
Grand Total Credits: 40

MASTER OF NURSING, ADULT-GERONTOLOGY NURSE PRACTITIONER—ACUTE CARE OR PRIMARY CARE

Graduate Program Director: Jennifer Stock
Program Information: Zerik Kadrlik
Norco Building, Room 414D
(208) 426-3819 (phone)
(208) 426-2344 (fax)
gerontologygrad@boisestate.edu (email)
boisestate.edu/nursing-agnp (website)

General Information

The Adult-Gerontology Nurse Practitioner (AGNP) program prepares students for certification as an Adult-Gerontology Nurse Practitioner through certification agencies such as the American Nurses Credentialing Center (ANCC), the American Association of Nurse Practitioners (AANP) and/or the AACN, or the American Association for Critical-Care Nurses (AACN) and licensure as a nurse practitioner by the State Board of Nursing. The adult gerontology program has two separate tracks—acute care or primary care. The acute care track prepares graduates to test for the AGNP-acute care certification and the primary care track prepares graduates to test for the AGNP-primary care certification.

Students in both the acute and primary care tracks will specialize in care of adults with a focus on older adults. Students in the acute care track will focus on diagnosis and treatment of patients in the acute care setting and clinical experiences will occur in acute care settings. Students in the primary care track will focus on prevention, diagnosis, and treatment of patients in the ambulatory setting and clinical experience occur in primary care settings. This program is offered primarily via distance education with three on site experiences on the Boise State University campus. Clinical experiences are arranged in collaboration with the student, and ideally, students are placed in the communities where they reside. Note: This may not be available in all states.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadline: September 1 (spring)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
  - Field of Study: Nursing
  - Only available to RNs residing in Alaska, Arizona, California, Colorado, Georgia, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming.
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 95, pBT (revised): 72, pBT (old): 587, IELTS - 6.5
- Submit Personal Statement
  - A personal statement that introduces yourself. Your statement should outline your educational goals and your long-term professional goals for the admission committee. Limit your statement to no more than 500 words. This statement will be evaluated for the quality of both the content and writing style (i.e., grammar, punctuation, spelling, word use) and must: a) Clearly explain the advanced practice nursing role you seek to fulfill following graduation. b) Provide rationale for specializing in Primary Care. c) Demonstrate your understanding of the role of the advanced practice nurse practitioner in Adult-Gerontology. d) Explain why you have chosen the AGNP program at Boise State University.
- Submit Foundational Coursework for Graduate Study
  - A college level statistics course and a research course with grades 3.0 or above. Preferably in the last 5 years.

International students must comply with the following from the Commission of Graduates of Foreign Nursing Schools (CGFNS):

1. Credentials review
2. Qualifying examination of nursing knowledge
3. English proficiency

For more information, international students should contact the Idaho State Board of Nursing.

Residency Requirements

Some states may have additional licensure requirements including, but not limited to: fingerprinting, verification of citizenship, and/or verification of certification. It is the applicant's responsibility to seek guidance from their own to identify any supplemental materials or education that will be essential to fulfilling licensure prerequisites.

Degree Requirements

Master of Nursing, Adult-Gerontology Nurse Practitioner, Acute Care Option

Graduate Major Requirements
50 Total Credits

Complete all of the following
Nursing Core
Take the following:
NURS502 - Foundation of Knowledge and Theory for Advanced Nursing (3)
NURS508 - Advanced Research and Scholarly Inquiry for Nursing (3)
NURS522 - Concepts of Population Nursing in Health Systems (3)
Nurse Practitioner Core
Take the following:
NURS510 - Advanced Physiology and Pathophysiology (3)
NURS516 - Advanced Pharmacotherapeutics (3)
NURS518 - Health Assessment for the Advanced Practice Nurse (2)
NURS519 - Health Assessment for the Advanced Practice Nurse Clinical (1)
NURS520 - Professional Role for Advanced Practice Nurse (3)

NURS532 - Leadership for Advanced Nursing Practice (3)
NURS534 - Diagnosis and Management of Adult/Geriatric Health and Illness (3)
NURS535 - Diagnosis and Management of Adult/Geriatric Health and Illness Clinical (2)
NURS560 - Scholarly Synthesis (2)
Acute Care Option
Take the following:
NURS536 - Acute Care Management of Adult/Geriatric Health and Illness (4)
NURS537 - Acute Care Management of Adult/Geriatric Health and Illness I Clinical (2)
NURS538 - Acute Care Management of Adult/Geriatric Health and Illness II (4)
NURS539 - Acute Care Management of Adult/Geriatric Health and Illness II Clinical (2)
NURS541 - Acute Care Clinical Practicum (1 - 3)
NURS549 - Acute Care Procedures and Diagnostics for the Advanced Practice Nurse (2)
NURS557 - Acute Care Clinical Skills Synthesis (2)
Grand Total Credits: 50

Master of Nursing, Adult-Gerontology Nurse Practitioner, Primary Care Option

Graduate Major Requirements
50 Total Credits
Complete all of the following
Nursing Core
Take the following:
NURS502 - Foundation of Knowledge and Theory for Advanced Nursing (3)
NURS508 - Advanced Research and Scholarly Inquiry for Nursing (3)
NURS522 - Concepts of Population Nursing in Health Systems (3)
Nurse Practitioner Core
Take the following:
NURS510 - Advanced Physiology and Pathophysiology (3)
NURS516 - Advanced Pharmacotherapeutics (3)
NURS518 - Health Assessment for the Advanced Practice Nurse (2)
NURS519 - Health Assessment for the Advanced Practice Nurse Clinical (1)
NURS520 - Professional Role for the Advanced Practice Nurse (3)
NURS532 - Leadership for Advanced Nursing Practice (3)
NURS534 - Diagnosis and Management of Adult/Geriatric Health and Illness (3)
NURS535 - Diagnosis and Management of Adult/Geriatric Health and Illness Clinical (2)
NURS560 - Scholarly Synthesis (2)
Primary Care Option
Take the following:
NURS542 - Primary Care Management of Adult/Geriatric Health and Illness (4)
NURS543 - Primary Care Management of Adult/Geriatric Health and Illness I Clinical (2)
NURS544 - Primary Care Management of Adult/Geriatric Health and Illness II (4)
NURS545 - Primary Care Management of Adult/Geriatric Health and Illness II Clinical (2)
NURS547 - Primary Care Clinical Residency (3)
NURS551 - Primary Care Procedures and Diagnostics for the Advanced Practice Nurse (2)
NURS555 - Primary Care Clinical Skills Synthesis (2)
Grand Total Credits: 50

GRADUATE CERTIFICATE IN ADULT-GERONTOLOGY NURSE PRACTITIONER—ACUTE CARE OR PRIMARY CARE

Graduate Program Director: Nicole Loos-Bartlett
Program Information: Zerik Kadrlik
Norco Building, Room 414D
(208) 426-3819 (phone)
(208) 426-2344 (fax)
gerontologygrad@boisestate.edu (email)
boisestate.edu/nursing-agnp/certificates (website)

General Information

Nurse practitioners prepared with a master's degree or higher who want to change or expand their knowledge in specialty areas may apply for a Graduate certificate in Adult-Gerontology Acute or Primary care. Completion of the graduate certificate program will prepare students for certification as an adult gerontology nurse practitioner through certification agencies such as the American Nurses Credentialing Center (ANCC)(nursingworld.org/ancc), the American Association of Critical-Care Nurses (AACN)(aacn.org), or the American Association of Nurse Practitioners (AANP)(aanp.org). The acute care graduate certificate program prepares graduates to test for the AGNP-acute care certification and the primary care graduate certificate program prepares graduates to test for the AGNP-primary care certification. Note: Certification is available for graduates with a master's or doctorate degree in advanced practice nursing.

Students in both the acute and primary care tracks will specialize in care of adults with a focus on older adults. Students in the acute care track will focus on diagnosis and treatment of patients in the acute care setting and all clinical experiences will occur in acute care settings. Students in the primary care track will focus on prevention, diagnosis, and treatment of patients in the ambulatory setting and all clinical experience occur in primary care settings. This program is offered primarily via distance education with 2 short on-site experiences on the Boise State University campus. The remainder of clinical experiences will occur in the area where the student resides.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page
  - Deadlines: February 1 (summer priority), March 1 (summer final)
  - Pay a separate nursing program application fee of $20.00.
- Submit Baccalaureate and Master's Degree and 3.00 GPA, see page
  - Field of Study: Nurse Practitioner master's or doctoral.
  - Residency Restriction: The AGNP Program is available only to nurses currently residing in Alaska, Arizona, California, Colorado, Georgia, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Texas, Utah, Washington, and Wyoming.
  - Applicants with a GPA less than 3.00 may be considered for provisional admission.
- Submit English Proficiency*, see page
  - TOEFL - iBT: 95, pBT (revised): 72, pBT (old): 587, IELTS - 6.5
- Submit Personal Statement
  - A personal statement that introduces yourself. Your statement should outline your educational goals, and your long term professional goals for the admission committee. You will be evaluated for the quality of both the content and writing style (i.e., grammar, punctuation, spelling, word use) and must: a) Be no more than 500 words. b) Explain your motivation and interest in expanding your scope of practice to adult gerontology specifying a specialization in primary care. c) Explain why you have chosen the AGNP graduate certificate program at Boise State University.
- Submit Current Resume or Curriculum Vitae (CV)
  - A resume or curriculum vitae that includes any applicable specialty certifications and information regarding your nursing and nurse

practitioner experience. Include your active, unencumbered nursing licenses.

- Submit Additional Materials
  - Provide proof of a valid and unencumbered nurse practitioner license.
- Submit Foundational Coursework for Graduate Study
  - A statistics course and a nursing research course in a bachelor's program with a grade of C or better.
- Interview — Final candidates will be invited for an interview. Interviews will be conducted with highly-competitive candidates. The interview will be virtual or over the telephone.
- Submit Letters of Recommendation
  - Three letters of recommendation from nursing faculty members, professional healthcare colleagues, or work supervisors who can evaluate your potential for success in a graduate program. Recommendations from family, friends, other students or co-workers are not appropriate.

International students must comply with the following from the Commission of Graduates of Foreign Nursing Schools (CGFNS):

1. Credentials review
2. Qualifying examination of nursing knowledge
3. English proficiency

For more information, international students should contact the Idaho State Board of Nursing.

Residency Requirements

Some states may have additional licensure requirements including, but not limited to: fingerprinting, verification of citizenship, and/or verification of certification. It is the applicant's responsibility to seek guidance from their own state board of nursing to identify any supplemental materials or education that will be essential to fulfilling licensure prerequisites.

Certificate Requirements

Graduate Certificate in Adult-Gerontology Nurse Practitioner, Acute Care

Graduate Major Requirements
19 Total Credits

Take the following:
NURS536 - Acute Care Management of Adult/Geriatric Health and Illness (4)
NURS537 - Acute Care Management of Adult/Geriatric Health and Illness I Clinical (2)
NURS538 - Acute Care Management of Adult/Geriatric Health and Illness II (4)
NURS539 - Acute Care Management of Adult/Geriatric Health and Illness II Clinical (2)
NURS541 - Acute Care Clinical Practicum (1 - 3)
NURS549 - Acute Care Procedures and Diagnostics for the Advanced Practice Nurse (2)
NURS557 - Acute Care Clinical Skills Synthesis (2)

Grand Total Credits: 19

Graduate Certificate in Adult-Gerontology Nurse Practitioner, Primary Care

Graduate Major Requirements
19 Total Credits

Take the following:
NURS542 - Primary Care Management of Adult/Geriatric Health and Illness (4)
NURS543 - Primary Care Management of Adult/Geriatric Health and Illness I Clinical (2)
NURS544 - Primary Care Management of Adult/Geriatric Health and Illness II (4)
NURS545 - Primary Care Management of Adult/Geriatric Health and Illness II Clinical (2)

NURS547 - Primary Care Clinical Residency (3)
NURS551 - Primary Care Procedures and Diagnostics for the Advanced Practice Nurse (2)
NURS555 - Primary Care Clinical Skills Synthesis (2)

Grand Total Credits: 19

Each student will receive a gap analysis upon acceptance into the program. This analysis determines which prior coursework and supervised clinical hours may be applied toward the second certificate. Plans of study will be individualized to meet each student's learning needs and competency determination.

Course Offerings

NURS—Nursing

NURS502 Foundation of Knowledge and Theory for Advanced Nursing (3-0-3) (F/S). Critique, evaluate, and utilize conceptual and theoretical models in advanced nursing practice. Emphasis on linking theories with nursing. PREREQ: Admission to Graduate Program in Nursing or PERM/INST.

NURS504 Health Care Economics, Financing and Delivery (3-0-3)(F/S). Differentiates health care economics, financing and payment systems as context for fiscal management and budgeting; examines health care delivery from organizational and operational perspectives, all of which are applied in writing proposals. PREREQ: Admission to Graduate Program in Nursing or PERM/INST.

NURS508 Advanced Research and Scholarly Inquiry for Nursing (3-0-3) (F/S). Apply research methods for utilization in advanced nursing roles. PREREQ: NURS502 or PERM/INST.

NURS510 Advanced Physiology and Pathophysiology (3-0-3)(F/S/SU). Examines advanced physiologic and pathophysiologic principles, commonly encountered in advanced nursing practice, that affect health states in individuals across the lifespan. PREREQ: Admission to the Graduate Program in Nursing or PERM/INST.

NURS512 Advanced Nursing Leadership in Health Care (3-0-3)(F/S). Focuses on individual character and leadership development and emphasizes the knowledge and skills necessary to be an effective nurse leader in a variety of academic or health care settings. Builds on the AACN Essentials and the AONE competencies for Nurse Executives. PREREQ: Admission to Graduate Program in Nursing or Master of Health Science Program or PERM/INST.

NURS514 Organizational Leadership for Advanced Nursing Practice (3-0-3)(F/S). Focuses on the role of the nurse leader in advancing organizational change with an emphasis on theoretical application and data driven analysis to improve institutional effectiveness and efficiency. Builds on the AACN Essentials and the AONE competencies for Nurse Executives. PREREQ: NURS512 or PERM/INST.

NURS516 Advanced Pharmacotherapeutics (3-0-3)(F/S/SU). Examines advanced pharmacodynamics, pharmacokinetics, pharmacologic principles and clinical application of pharmaceutical agents used to treat acute and chronic conditions including therapeutic evaluation and considerations for diverse adult and geriatric patient populations. PREREQ: NURS510.

NURS518 Health Assessment for the Advanced Practice Nurse (2-0-2)(F/S/SU). Holistic assessment of all human systems using advanced assessment techniques, concepts, and approaches. Advanced assessment skills integrated with principles of differential diagnosis and clinical decision-making skill building. PREREQ: PERM/INST.

NURS519 Health Assessment for the Advanced Practice Nurse Clinical (0-3-1)(F/S/SU). Development and application of skills in advanced, Holistic-assessment of all human systems in clinical/laboratory settings. PREREQ: PERM/INST.

NURS520 Professional Role for the Advanced Practice Nurse (3-0-3)(F/S/SU). Appraises advanced practice nursing roles, scope of practice, legal and ethical principles of advanced practice and health care policy. PREREQ: PERM/INST.

NURS522 Concepts of Population Nursing in Health Systems (3-0-3)(SU). Examines the philosophy and framework for health promotion and disease

prevention, health care delivery, affecting policy, and advanced nursing roles with diverse populations. PREREQ: Admission to Graduate Program in Nursing or PERM/INST.

NURS524 Theory–Guided Assessment and Planning (2-0-2)(F/S). Integrates assessment and planning with theoretical frameworks for health promotion and disease prevention with a specific population. PREREQ: NURS502, NURS522. COREQ: NURS525 or PERM/INST.

NURS525 Theory–Guided Assessment and Planning Practicum (0-6-2)(F/S). Application of theory guided assessment and planning process with selected populations. PREREQ: NURS502, NURS522, PREREQ/COREQ: NURS524 or PERM/INST.

NURS526 Theory–Guided Implementation and Evaluation (2-0-2)(F/S). Integrates concepts of program development, implementation and evaluation based on theoretical and methodological applications for advanced nursing practice. PREREQ: NURS524. COREQ: NURS527 or PERM/INST.

NURS527 Theory–Guided Implementation and Evaluation Practicum (0-6-2) (F/S). Application of theory-guided and evidence-based program planning and outcome evaluation with selected populations. PREREQ: NURS525. PREREQ/COREQ: NURS526 or PERM/INST.

NURS528 Professional Roles for Advanced Nursing Practice (1-0-1)(F/S). Culminating seminar that integrates the functions and activities of advanced nursing practice into professional roles. PREREQ: Admission to Graduate Program in Nursing or PERM/INST.

NURS530 Promoting Learning in Nursing Education with Populations (2-0-2)(F/S). Explores and applies learning theories and instructional design principles to promote learning with a selected population. Evaluates strategies for assessing learning and effective teaching. PREREQ: Admission to Graduate Program in Nursing or PERM/INST.

NURS532 Leadership for Advanced Nursing Practice (3-0-3)(F/S/SU). Formulates leadership, management, and negotiation skills for advanced practice nurses to achieve improved health outcomes for individuals, communities, and systems. PREREQ: NURS502.

NURS534 Diagnosis and Management of Adult/Geriatric Health and Illness (3-0-3)(F/S/SU). Integrates broad principles of scientific and nursing principles of therapeutic decision-making to assess, diagnose, and manage common health issues across the adult lifespan with emphasis on needs and care of geriatric and diverse populations. PREREQ: NURS518, NURS519, and NURS520.

NURS535 Diagnosis and Management of Adult/Geriatric Health and Illness Clinical (0-8-2)(F/S/SU). Integrates theory with therapeutic decision-making for adult populations across the lifespan with common health conditions within acute or primary health care settings. COREQ: NURS534.

NURS536 Acute Care Management of Adult/Geriatric Health and Illness (4-0-4)(F/S/SU). Advances student's knowledge and therapeutic decision-making skills to assess, diagnose, and manage care for adult and geriatric populations with complex acute, critical, and chronic health conditions in the acute care setting using evidence-based, patient centered care management. PREREQ: NURS534 and NURS535, or admission to an AGNP Graduate Certificate Program, or PERM/INST.

NURS537 Acute Care Management of Adult/Geriatric Health and Illness I Clinical (0-8-2)(F/S/SU). Fosters development and application of expanded therapeutic and interventional skills to assess, diagnose, and manage care for adult and geriatric populations with complex acute, critical, and chronic health conditions in the acute care setting. COREQ: NURS536.

NURS538 Acute Care Management of Adult/Geriatric Health and Illness II (4-0-4)(F/S/SU). Synthesis of therapeutic skills to assess, diagnose, and manage care for adult and geriatric populations with complex acute, critical, and chronic health conditions in the acute care setting using evidence-based, patient-centered care management. PREREQ: NURS536 and NURS537.

NURS539 Acute Care Management of Adult/Geriatric Health and Illness II Clinical (0-8-2)(F/S/SU). Synthesis and application of advanced therapeutic and interventional skills to assess, diagnose, and manage care for adult and geriatric populations with complex, acute, critical, and chronic health conditions in the acute care setting. COREQ: NURS538.

NURS541 Acute Care Clinical Practicum (1-3 credits)(F/S/SU). Theoretical, clinical, and scientific principles are synthesized and implemented in acute care setting. Provides comprehensive adult-geriatric health and illness care, therapeutic interventions, and evaluation of patients with complex, acute, critical, and chronic illness problems. PREREQ: NURS538 and NURS539.

NURS542 Primary Care Management of Adult/Geriatric Health and Illness (4-0-4)(F/S/SU). Advances student's knowledge and therapeutic decision-making skills to assess, diagnose, and manage care for adult and geriatric populations in the primary care setting using evidence-based, patient centered care management of stable, chronic, and acute episodic illness. PREREQ: NURS534 and NURS535, or admission to an AGNP Graduate Certificate Program, or PERM/INST.

NURS543 Primary Care Management of Adult/Geriatric Health and Illness I Clinical (0-8-2)(F/S/SU). Fosters development and application of expanded therapeutic and interventional skills to assess, diagnose, and manage care for adult and geriatric populations with stable, chronic, and acute episodic illness, in the primary care setting. COREQ: NURS542.

NURS544 Primary Care Management of Adult/Geriatric Health and Illness II (4-0-4)(F/S/SU). Synthesis of therapeutic skills to assess, diagnose, and manage care for adult and geriatric populations in the primary care setting using evidence-based, patient-centered care management of stable, chronic, and acute episodic illness. PREREQ: NURS542 and NURS543.

NURS545 Primary Care Management of Adult/Geriatric Health and Illness II Clinical (0-8-2)(F/S/SU). Synthesis and application of advanced therapeutic and interventional skills to assess, diagnose, and manage care for adult and geriatric populations with stable, chronic, and acute episodic illness in the primary care setting. PREREQ: NURS542 and NURS543. COREQ: NURS544.

NURS547 Primary Care Clinical Residency (0-12-3)(F/S/SU). Theoretical, clinical, and scientific principles of adult-gerontology nurse practitioner practice are synthesized and implemented. Provides comprehensive adult-geriatric health and illness care, therapeutic interventions, and evaluation of patients in primary care settings. PREREQ: NURS544 and NURS545.

NURS549 Acute Care Procedures and Diagnostics for the Advanced Practice Nurse (0-8-2)(F/S/SU). Development and application of advanced acute care procedure and diagnostic skills in clinical/laboratory settings. PREREQ: NURS534 and NURS535, or admission to an AGNP Graduate Certificate Program, or PERM/INST.

NURS551 Primary Care Procedures and Diagnostics for the Advanced Practice Nurse (0-8-2)(F/S/SU). Development and application of advanced primary care procedure and diagnostic skills in clinical/laboratory settings. PREREQ: NURS534 and NURS535, or admission to an AGNP Graduate Certificate Program, or PERM/INST.

NURS555 Primary Care Clinical Skills Synthesis (0-8-2)(SU). On-campus clinical experience to assess the capacity of the primary care nurse practitioner student to provide holistic advanced nursing care to the adult-geriatric patient and submission of a final residency plan. PREREQ: NURS544 and NURS545.

NURS557 Acute Care Clinical Skills Synthesis (0-8-2)(SU). On-campus clinical experience to assess the capacity of the acute care nurse practitioner student to provide holistic advanced nursing care to the adult-geriatric patient and submission of a final residency plan. PREREQ: NURS538 and NURS539.

NURS560 Scholarly Synthesis (2-0-2)(F/S/SU). Synthesis of current knowledge focused in clinical area of study. COREQ: NURS541 or NURS547.

NURS562 Graduate Nursing Education (2-0-2)(F/S/SU). Explores graduate nursing education options for MS, DNP, and PhD degrees. Aids in

understanding roles available to graduates with advanced nursing degrees, e.g., AGNP, FNP, CNS, CRNA, Midwife, Educator-academic, Educator-practice, Leader, Researcher. PREREQ: PERM/INST.

NURS601 Scholarly Project I (0-8-2)(F/S/SU). Assessment and identification of nursing practice issue focused on a population of interest that lays the groundwork for development of the culminating scholarly project while investigating the DNP role. This course includes at least 16 hours of formalized discussion with faculty advisor per semester. (Pass/Fail.) PREREQ: NURS604.

NURS602 Advanced Principles of Population Health Nursing (3-0-3)(F/S/SU). Analyzes impact of social, cultural, ecological, and systems of care delivery factors on health care disparities across population groups. Evaluates the DNP role in disease prevention and health promotion for populations, utilizing a social, justice framework; explores the impact of globalization on health care and health care planning, and the need to design health care systems that are responsive to diverse cultural needs. PREREQ: Admission to DNP Program or PERM/INST.

NURS603 Scholarly Project II (0-8-2)(F/S/SU). Immersive practice experience with a population of interest that includes planning of the culminating scholarly project and examination of DNP role within a health care system. Includes at least 16 hours of formalized discussion with faculty advisor per semester. An oral proposal of the project must be approved by the supervisory committee to satisfactorily complete the course. (Pass/Fail.) PREREQ: NURS601.

NURS604 Designing Models of Health Care Delivery (3-0-3)(F/S/SU). Synthesizes evidence, theories, and scientific principles to create new individual, aggregate, and population health care delivery models and approaches. Comprehensive program planning knowledge and analytical skills will be used to evaluate and ameliorate the interactions between complex practice, organization/system, population, policy, economic, and political issues affecting diverse populations and practice settings. PREREQ: Admission to DNP Program or PERM/INST.

NURS605 Scholarly Project III (0-8-2)(F/S/SU). Immersive practice experience with a population of interest that includes implementation of scholarly project and role of the DNP. Includes at least 16 hours of formalized discussion with faculty advisor per semester. (Pass/Fail.) PREREQ: NURS603.

NURS608 Health Care Policy and Advocacy (3-0-3)(F/S/SU). Prepares students to analyze, influence, develop, and implement health related policies at all levels. Focused on principles and strategies to influence policymakers, lead stakeholder teams, and engage in advocacy efforts for health care consumer populations, providers, systems of care, and other stakeholders in policy and public forums.

NURS609 Health Care Policy and Advocacy Application (0-8-2)(F/S/SU). Provides the student the opportunity to experience leadership and professional development alongside an experienced local, regional or national health care policy leader. (Pass/Fail.) COREQ: NURS608.

NURS610 Leadership for Organizations, Systems, and Populations (3-0-3)(F/S/SU). Prepares the DNP student to assume an advanced leadership role in complex health care systems, to assess and transform practice environments, and enhance the quality of inter-professional health care delivery systems. Examines the impact of cultural, ethical, and economic factors on leading change in health care organizations. PREREQ: NURS614.

NURS612 Translation, Integration, and Dissemination of Evidence (3-0-3) (F/S/SU). Analyzes and evaluates concepts associated with evidence-based nursing practice models. Translating evidence-based practice includes: evidence-based practice recommendations, practice change, evaluating outcomes, and diffusing innovation. Uses translational science to apply evidence to practice. PREREQ: NURS614.

NURS614 Outcomes Management Analysis (3-0-3)(F/S/SU). Analysis and application of epidemiological, bio-statistical, environmental, and other data related to individual, aggregate, and population health. Emphasis on business and economic processes for analysis of cost effective health care outcomes. PREREQ: Graduate level statistics or equivalent and NURS602.

NURS616 Health Care Technology, Information Systems, and Quality (3-0-3)(F/S/SU). Prepares students to use evidence and advanced knowledge of technology to lead improvements in communication and the monitoring, collection, management, analysis, and dissemination of information that enhances health and health care safety and quality. Focused on design, selection, use, and evaluation of legal, ethical, just, and cost-effective information-management processes to evaluate health and practice outcomes in diverse, aggregate-focused, advanced practice settings. PREREQ: Admission to the DNP program.

NURS618 Quality Improvement and Evaluation Methodology (3-0-3)(F/S/SU). Appraises the study, understanding, and challenges of quality care measurement and improvement to assure high quality health care outcomes in practice, systems of care, organizations and communities, and populations. Uses evidence, research, and outcome information to improve nursing practice, care-delivery models, and health care systems. PREREQ: NURS602.

NURS620 Scholarly Inquiry and Advanced Evidence-Based Practice (3-0-3)(F/S/SU). Examines foundational and philosophical aspects of nursing science related to the role of the DNP. Uses applied research methods and design of health care research and evidence-based practice related to advanced clinical scholarship to examine relevance to nursing and health care practice. PREREQ: Admission to DNP Program or PERM/INST.

NURS621 Scholarly Project IV (0-8-2)(F/S/SU). Culminating immersive practice experience with a population of interest that includes evaluation of the scholarly project, written report of completed work and appraisal of the role of the DNP. An approval of supervisory committee at end of course. (Pass/Fail.) PREREQ: NURS605.

NURS622 Financial Strategies for Nurse Leaders (3-0-3)(F/S/SU). Examines advanced economic principles within the context of the U.S. healthcare system and utilizes advanced application of health care financial strategies for nurse leaders including key financial principles, cost benefit analysis, and budgeting. PREREQ: NURS614.

NURS623 Scholarly Experience (1-3 VARIABLE)(F/S/SU). Elective course with variable credits for those students who need additional hours to satisfy American Association of Colleges of Nursing (AACN) 1000 hour requirement for DNP education. May repeat course as needed. (Pass/Fail.) PREREQ: Admission to DNP program.

Department of Organizational Performance and Workplace Learning

College of Engineering

Chair: Seung Youn (Yonnie) Chyung
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boisestate.edu/opwl (website)

Graduate Faculty: Chyung, Giacumo, Marker, Martinez, da Silva, Stieha, Winiecki

Graduate Degrees Offered

- Master of Science in Organizational Performance and Workplace Learning
- Graduate Certificate in Workplace E-Learning Design and Development
- Graduate Certificate in Workplace Instructional Design
- Graduate Certificate in Workplace Performance Improvement

General Information

The Master of Science in Organizational Performance and Workplace Learning is designed to prepare individuals for careers in instructional design, performance improvement, learning and development, training management, workplace e-learning, human resources development, organizational development, and performance consulting. The program helps individuals acquire a broad range of knowledge and skills required to identify, analyze, and solve a variety of human and organizational performance problems in settings such as business and industry, the military, government agencies, and nonprofit organizations. In this program, students learn to how to think strategically and design interventions that will address various factors required to achieve desired results.

The Graduate Certificate in Workplace E-Learning Design and Development is designed for individuals who wish to advance their skills in developing and managing e-learning programs in the workplace. This program emphasizes the competencies required to design, develop, and manage workplace e-learning and performance support systems.

The Graduate Certificate in Workplace Instructional Design is for individuals who wish to expand their skills in designing and developing training programs that improve workplace performance. This program emphasizes the development of advanced instructional design skills required to create effective training programs for workplace settings.

The Graduate Certificate in Workplace Performance Improvement is designed for individuals who seek to develop skills in diagnosing and solving performance problems in the workplace. This program emphasizes the practical application of process models, tools, and techniques to workplace performance improvement situations.

Online Courses

All courses are conducted online via Canvas. Courses taught in this medium enable students to engage in 'threaded' discussions that promote a high level of interaction between instructor and students and among class members. The instructor and students also meet real-time through a video conferencing system to facilitate an effective learning process. Students, working individually or in team settings, produce high quality project and develop a portfolio website.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: July 1 (fall priority), August 1 (fall final), November 1 (spring priority), December 1 (spring final), March 1 (summer priority), April 1 (summer final)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
  - Applicants with a GPA less than 3.00 may be considered for provisional admission.
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Personal Statement
  - A personal statement that includes a heading with the following items: a) name, b) email address, c) telephone number, and d) the program(s) to which you are applying. The statement should be 500-1,000 words and single-spaced. Address your career goals and how the coursework for the program(s) will help you attain those goals. Explain the strategies you will use to be successful in online graduate study. Meet the evaluation criteria outlined on the OPWL website.
- Submit Current Resume or Curriculum Vitae (CV)

Graduate Assistantships and Research Assistantships

A limited number of full-time (20 hours per week) graduate assistantships and part-time (10 hours per week) research assistantships are available each academic year. All assistantships are remote positions. More information about graduate assistantships and research assistantships is available on the OPWL website.

Scholarships

The OPWL department offers scholarships to fully-admitted OPWL master's degree seeking students. Scholarship information is available on the OPWL website.

MASTER OF SCIENCE IN ORGANIZATIONAL PERFORMANCE AND WORKPLACE LEARNING

Graduate Program Coordinator: Yonnie Chyung
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boisestate.edu/opwl/programs-courses/ms-degree (website)

Degree Requirements

**Master of Science in
Organizational Performance and Workplace Learning**

Graduate Major Requirements
24 Total Credits

Complete all of the following
  Core Requirements
    Take the following:
      OPWL529 - Needs Assessment (4)
      OPWL530 - Evaluation (4)
      OPWL535 - Principles of Adult Learning (4)
      OPWL536 - Foundations of Organizational Performance and Workplace Learning (4)
      OPWL537 - Instructional Design (4)
      OPWL560 - Workplace Performance Improvement (4)

Graduate Culminating Activity and Other Requirements
12 Total Credits

Complete 1 of the following
  Portfolio Option
    Complete all of the following
    Take at least 3 credits of the following:
      OPWL506 - Survey Design and Data Analysis (1)
      OPWL507 - Interviews and Data Analysis (1)
      OPWL508 - Data Visualization (1)
      OPWL531 - Quantitative Research in Organizations (3)
    Take at least 8 credits from the following:
      Electives
    Take at least 1 credits from the following:
      OPWL592 - Portfolio (1 - 6)
  Thesis Option
    Complete all of the following
    Take the following:
      OPWL506 - Survey Design and Data Analysis (1)
      OPWL507 - Interviews and Data Analysis (1)
      OPWL508 - Data Visualization (1)
      OPWL531 - Quantitative Research in Organizations (3)
    Take at least 6 credits from the following:
      OPWL593 - Thesis (1 - 9)

Grand Total Credits: 36

GRADUATE CERTIFICATE IN WORKPLACE E-LEARNING DESIGN AND DEVELOPMENT

Graduate Program Coordinator: Yonnie Chyung
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boisestate.edu/opwl/programs-courses/certificate-elearning (website)

Certificate Requirements

**Graduate Certificate in
Workplace E-Learning Design and Development**

Graduate Major Requirements
16 Total Credits

Take the following:
  OPWL523 - E-Learning Authoring and Development (3)
  OPWL525 - E-Learning Content Design and Learning Management Systems (3)
  OPWL536 - Foundations of Organizational Performance and Workplace Learning (4)
  OPWL550 - Blended Learning for Performance Improvement (3)
  OPWL551 - Storyboarding and Scenario-Based E-Learning (3)

Grand Total Credits: 16

GRADUATE CERTIFICATE IN WORKPLACE INSTRUCTIONAL DESIGN

Graduate Program Coordinator: Yonnie Chyung
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boisestate.edu/opwl/programs-courses/certificate-instructional-design (website)

Certificate Requirements

**Graduate Certificate in
Workplace Instructional Design**

Graduate Major Requirements
18 Total Credits

Complete all of the following
  Take the following:
    OPWL535 - Principles of Adult Learning (4)
    OPWL536 - Foundations of Organizational Performance and Workplace Learning (4)
    OPWL537 - Instructional Design (4)
  Take at least 2 of the following:
    OPWL523 - E-Learning Authoring and Development (3)
    OPWL525 - E-Learning Content Design and Learning Management Systems (3)
    OPWL547 - Learning Experience Design (3)
    OPWL551 - Storyboarding and Scenario-Based E-Learning (3)

Grand Total Credits: 18

GRADUATE CERTIFICATE IN WORKPLACE PERFORMANCE IMPROVEMENT

Graduate Program Coordinator: Yonnie Chyung
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boisestate.edu/opwl/programs-courses/certificate-workplace-performance-improvement (website)

Certificate Requirements

Graduate Certificate in Workplace Performance Improvement

Graduate Major Requirements
18 Total Credits

Complete all of the following
Take at least 1 of the following:
OPWL529 - Needs Assessment (4)
OPWL530 - Evaluation (4)
Take the following:
OPWL536 - Foundations of Organizational Performance and Workplace Learning (4)
OPWL560 - Workplace Performance Improvement (4)
Take at least 6 credits from the following:
OPWL506 - Survey Design and Data Analysis (1)
OPWL507 - Interviews and Data Analysis (1)
OPWL508 - Data Visualization (1)
OPWL531 - Quantitative Research in Organizations (3)
OPWL570 - Organizational Culture and Leadership (2)
OPWL577 - Change Management (3)
OPWL578 - Performance Impact Beyond the Organization (3)

Grand Total Credits: 18

Course Offerings

OPWL—Organizational Performance and Workplace Learning

OPWL506 Survey Design and Data Analysis (1-0-1)(F/S). Survey questionnaires are often used to assist data-driven decisions during needs assessments, evaluations, and other learning and performance improvement interventions. Using a theory-to-practice approach and based on research-based evidence and expert knowledge, this course teaches how to design survey instruments with closed-ended questions and how to analyze quantitative data. (Pass/Fail.)

OPWL507 Interviews and Data Analysis (1-0-1)(S/SU). Interviews provide important data to professionals during needs assessment, evaluation, learning design, and change management. This course provides practical skills and tools necessary for planning and conducting individual and group interviews. It will also introduce evidence-based approaches to data analysis to facilitate data-driven decisions. (Pass/Fail.)

OPWL508 Data Visualization (1-0-1)(F/S/SU). Visual representation of data is increasingly important for data-driven decision making. Data visualization techniques allow professionals to represent information and derive meaning of the data. Students learn the value of visualization, specific techniques in information and scientific visualization, and ways to leverage visualization methods. (Pass/Fail.)

OPWL516 Foundations of Professional Development (1-0-1)(F/S). Provides a career coaching experience for emerging and second career professionals pursuing job opportunities in the OPWL workplace. Includes job targeting, course planning, opportunity pursuit, and reflection. Explores ways to continue working on professional development outside the classroom.

OPWL518 Contracting and Consulting (2-0-2)(F,S). Learn what is required for a successful contracting or consulting practice and explore steps they would need to take to be successful. Studies selected business requirements for self-employment, consultant-specific work products, and consulting scenarios.

Assignments include creating a sample proposal and defining a contracting/consulting business.

OPWL523 E-Learning Authoring and Development (3-0-3)(F,SU). Through hands-on practice, students demonstrate emerging foundational knowledge and skills required to use e-learning authoring tools and develop efficient, effective, and engaging, performance-based e-learning objects to support workplace learning. Students exit the course with a technical simulation, conceptual instruction and a quiz, and a linear scenario-based e-learning portfolio example.

OPWL525 E-Learning Content Design and Learning Management Systems (3-0-3)(S,SU). Students will learn foundational principles for implementing e-learning solutions and learning management/content management systems. Students will evaluate e-learning demo programs and study the use of reusable learning objects, sharable content objects, metadata and e-learning standards in the current e-learning practice. Students will develop sample multimedia learning objects and implement them on a learning management system. COREQ: OPWL536.

OPWL529 Needs Assessment (4-0-4)(F,S). Through analysis of case studies, guided practice, field work, and other methods, students learn to use tools, data, and systematic methods to identify and assess current or future performance problems and their causes, and help decision makers target critical problems with feasible solutions. Students will conduct an authentic project. PREREQ: OPWL536.

OPWL530 Evaluation (4-0-4)(F,S). Students learn how to conduct formative and summative evaluations of instructional or performance improvement programs implemented in organizations. Students explore principles, models, and frameworks for evaluation, and conduct a full-scale evaluation, working with real clients and stakeholders. PREREQ: OPWL536.

OPWL531 Quantitative Research in Organizations (3-0-3)(F,SU). Students learn how to design research and apply statistical analysis methods to conduct quantitative studies in organizational contexts. Students also review various empirical research reports in order to become educated consumers of research and contribute to improving organizational performance. PREREQ: OPWL536 or PERM/INST.

OPWL535 Principles of Adult Learning (4-0-4)(F,S). Students explore how contemporary adult learning theories and practices are applied to the field of workplace learning and performance improvement, particularly with respect to the instructional design process. They will investigate methods, strategies and technologies that are known to affect adult learners' learning outcomes. Students will apply adult learning principles to organizational situations in industry, government, military, and non-profit settings.

OPWL536 Foundations of Organizational Performance and Workplace Learning (4-0-4)(F,S,SU). Students study guiding principles of human performance improvement and apply relevant theories and models, from classic to contemporary, to real or realistic organizational situations in industry, government, military, and non-profit settings.

OPWL537 Instructional Design (4-0-4)(F,S). This course follows a systematic and systemic instructional design process and employs methods and strategies involved in designing effective instructional interventions for the workplace. Working with a real client, students complete a performance-oriented instructional design project in phases over the duration of the course. PREREQ: OPWL535 and OPWL536.

OPWL547 Learning Experience Design (3-0-3)(SU)(Even years). Students engage in the human-centered approach of learner experience design while also managing the risks of creating innovative solutions, tackling complex problems, and thinking creatively in situations with significant constraints. Students apply experience design tools and practices, including agile project management, design thinking, rapid prototyping, personas, and journey maps. PREREQ: OPWL535 and OPWL536.

OPWL550 Blended Learning for Performance Improvement (3-0-3)(F,SU). Students investigate various learning technologies that can contribute to the

building and sharing of individual and organizational knowledge. Based on analysis of learners' performance needs, students design blended approaches to improving workplace learning and performance by combining face-to-face learning and e-learning. COREQ: OPWL536.

OPWL551 Storyboarding and Scenario-Based E-Learning (3-0-3)(S,SU). Students create a high-level design document and storyboard for a branching scenario-based e-learning object. Students also learn how to select a design approach best suited for learners who would access the e-learning via mobile devices, desktops, laptops, or any combination of those devices. COREQ: OPWL536.

OPWL560 Workplace Performance Improvement (4-0-4)(F,S). Students examine the process models, non-instructional solutions, professional practice issues, and future trends of performance improvement which aim to improve performance in the workplace. In a hands-on project, students practice applying the performance improvement process to design effective performance solutions. PREREQ: OPWL536, and OPWL529 or OPWL530.

OPWL570 Organizational Culture and Leadership (2-0-2)(SU). Students exposed to the characteristics that constitute culture in organizations. In addition, students learn how to define, identify, and purposefully influence culture to support organizational mission, values and goals. This is done through an examination of current theories and concepts and applying them to real-world examples of organizational cultures identified by the students and their own experiences.

OPWL572 Project Management Fundamentals (1-0-1)(F/S). Students explore project management definitions, planning, managing, and reviewing parts of projects, as well as, examining practical knowledge of the pieces of a project plan including project scope, work breakdown structure, schedules, and resources. (Pass/Fail.)

OPWL577 Change Management (3-0-3)(S,SU)(Odd years). Students will learn basic principles related to the top-down and bottom-up change processes, and analytical and planning tools that can be used to facilitate change within an organization. Students will practice applying those principles and tools in real organizational situations.

OPWL578 Performance Impact Beyond the Organization (3-0-3)(SU) (Even years). Students will learn basic principles related to helping organizations plan, implement, and evaluate business practices that are environmentally, socially, and financially balanced. The course combines principles of design, systems thinking, change management, and evaluation. COREQ: OPWL536.

Selected Topics (1-0-1)(F/S/SU):

OPWL584 Selected Topics: Mentoring Programs in Organizational Performance and Workplace Learning (1-0-1)(On Demand). Incorporates using a human performance improvement process to determine mentoring program feasibility in an organization. Students experience the benefits and challenges of mentoring relationships. Students establish a mentor-mentee relationship. Students develop evidence-based program planning with a simulated or authentic client.

OPWL585 Selected Topics: Thinking in Systems (1-0-1)(F)(On Demand). Thinking in Systems. May be repeated for credit. (Pass/Fail.)

OPWL586 Selected Topics: Professional Ethics (1-0-1)(S). Professional Ethics. May be repeated for credit. (Pass/Fail.)

Department of Physics

College of Arts and Sciences

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Graduate Faculty: Ferguson, Fologea, Hanna, Jackson, Kim, Macomb, Mainali, Simmonds, Tenne, Wu

Interdisciplinary Programs

- Doctor of Philosophy in Biomolecular Sciences
- Doctor of Philosophy in Materials Science and Engineering
- Master of Engineering in Materials Science and Engineering
- Master of Science in Biomolecular Sciences
- Master of Science in Materials Science and Engineering

General Information

The Department of Physics is a primary participant in the offering of the master's and doctoral programs in materials science and engineering, and the doctoral program in biomolecular sciences. Please see the interdisciplinary program section of this catalog for further details.

Course Offerings

PHYS—Physics

PHYS504 Molecular and Cellular Biophysics (4-0-4)(F/S). An advanced introduction to biophysical methods and concepts, focused on developing an in-depth understanding of the functionality of biological systems at the molecular and cellular level. Topics include the biophysical properties of water and solutions, the characterization of biomolecular interactions, the biological relevance of the physical properties of biomolecules, the role of physical interactions in driving the self-assembly and conformational changes of biomolecules, membrane transport, molecular and cellular motility, and biophysical aspects of cell function. PREREQ: MATH170; PHYS112 or PHYS212; PHYS307, or BIOL320 and either CHEM350 or CHEM431.

PHYS512 Intermediate Quantum Mechanics (4-0-4)(On Demand). Fundamentals, including properties and solutions of the Schrodinger equation, operators, angular momentum, electron spin, identical particles, perturbations, and variational principle. Applications, such as tunneling, orbitals, magnetic resonance, and nanoscale effects. PREREQ: PERM/INST.

PHYS515 Solid State Physics (3-0-3)(S). Quantum physics applied to understanding the properties of materials, including semiconductors, metals, superconductors, and magnetic systems. PREREQ: Graduate standing, PHYS309.

PHYS520 Nanobiotechnology (3-0-3)(On Demand). An introduction to the biological and biomedical uses of nanotechnology, including the nature and applications of nanostructures to cell biology, imaging, biosensors, medical therapy (including anti-cancer therapies and drug delivery), and biotechnology. PREREQ: ADM/PROG.

PHYS523 Physical Methods of Materials Characterization (3-0-3)(F). Physical principles and practical methods used in determining the structural, electronic, optical, and magnetic properties of materials. Optical, electron, and scanning microscopies, diffraction, surface analysis, optical spectroscopy, electrical transport, and magnetometry. PREREQ: Graduate Standing, PHYS309.

PHYS524 Membrane Biophysics (3-0-3)(On Demand). Membranes are of fundamental importance for biological systems due to their roles in cellular compartmentalization, signal transduction, metabolism, and energy synthesis. Topics include structures and functions of membrane bilayers and membrane proteins, physics of membrane fusion, and mechanisms of cell signaling and energy transduction. PREREQ: ADM/PROG.

PHYS530 Optics (3-0-3)(On Demand). Geometrical and physical optics, including lenses, fiber optics, Fourier optics, polarization, interference, diffraction, lasers, and holography. PREREQ: ADM/PROG.

PHYS530L Optics Laboratory (0-3-1)(On Demand). Laboratory to be taken concurrently with PHYS330. Experiments in optics, including optical systems, thick lenses, interference, diffraction, Fourier optics, image processing, and holography. PREREQ: ADM/PROG.

PHYS532 Thermal Physics (4-0-4)(On Demand). Foundations and applications of thermodynamics and statistical mechanics, including temperature, entropy, heat capacity, chemical potential, and free energies. Applications to gases, paramagnets, chemical systems, electrons, photons, phonons, and superfluids. PREREQ: PERM/INST.

PHYS536 Soft Matter (3-0-3)(F)(On Demand). Introduction to the physical principles underlying the properties and behaviors of soft matter, including polymers, gels, colloids, and liquid crystals. Examples of soft matter include glues, paints, soaps, rubber, foams, gelatin, milk, and most materials of biological origin. (Recommended preparation: PHYS309.) PREREQ: PERM/INST.

PHYS537 Radiation Biophysics (3-0-3)(On Demand). Physical properties and biological effects of different kinds of radiation: action of radiation on various cellular constituents: target theory, genetic effects, repair of radiation damage, physics of radiology and radiotherapy, isotopic tracers. PREREQ: ADM/PROG.

PHYS545 Magnetism and Magnetic Materials (3-0-3)(On Demand). Physical principles of magnetism, properties of different types of magnetic materials, and their technological applications. Topics include magnetic moments, interactions and ordering; magnetism in metals and semiconductors; magnetic resonance, magnetoresistance, nanoscale magnetism; spintronics; magnetic recording technologies. PREREQ: ADM/PROG.

PHYS572 Electromagnetism (3-0-3)(S). Electromagnetic theory derived from Maxwell's equations. Applications to electromagnetic fields in materials, including dielectrics, magnetization, wave propagation through materials, stress tensors, and radiation. PREREQ: PHYS381 or ECE300.

PHYS598 Physics Seminar (1-0-1)(S). Individual reports on selected topics. The level of the reports must reflect the additional work expected beyond that required for the undergraduate seminar. PREREQ: PERM/INST.

Political Science Program

School of Public Service

Environmental Research Building, Room 3141
(208) 426-4591 (phone)
pols-ma@boisestate.edu (email)
boisestate.edu/sps-politicalscience/graduate (website)

Graduate Faculty: Allen, Bellinger, Burkhart, Vandusky-Allen, Wampler

MASTER OF ARTS IN POLITICAL SCIENCE

Graduate Program Coordinator: Nisha Bellinger
Environmental Research Building, Room 3141
(208) 426-4591 (phone)
nishabellinger@boisestate.edu (email)
boisestate.edu/sps-politicalscience/graduate (website)

General Information

The Master of Arts in Political Science requires completion of a minimum of 30 credits, including two core seminars, five to seven elective seminars, one advanced methodology course, as well as six hours of thesis work or two credit hours of comprehensive exams. When a student has completed nine credits of coursework, they will work with a faculty supervisor to either develop a topic for the student's proposed thesis or determine if comprehensive exams are the appropriate culminating activity for their degree. This meeting will typically take place in a student's second semester.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: February 1 (fall priority), August 1 (fall final), November 1 (spring priority), December 15 (spring final)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Personal Statement
  - A personal statement that includes a discussion of how your personal and professional goals are enhanced by the enrollment in the program.
- Submit Writing Sample
  - A writing sample that demonstrates your ability to sustain an argument and present evidence to support claims. Must be ten pages.
- Submit Letters of Recommendation
  - Three letters of recommendation from academic and/or professional references. Letters should address your potential for success in a graduate program, strengths and weaknesses, and the benefits you may receive from graduate study.
- Submit Graduate Assistantship Application
  - Deadline (if interested): February 1 (fall), November 1 (spring)

Degree Requirements

Master of Arts in Political Science

Graduate Major Requirements
28 - 24 Total Credits

Complete all of the following
  Take at least 1 of the following:
    POLS508 - Quantitative Research Methodology (3)
    SPS502 - Quantitative Methods for the Social Sciences (3)
    SPS503 - Qualitative Methods for the Social Sciences (3)
  Take at least 2 of the following:
    POLS505 - Comparative Politics (3)
    POLS506 - World Politics (3)
  Take between 19 and 15 credits from the following types of courses: Electives*
Comparative Politics/International Relations
  Take any of the following:
    POLS521 - Comparative Electoral Behavior (3)
    POLS522 - Comparative Political Parties (3)
    POLS523 - Non-Democratic Regimes (3)
    POLS524 - Politics of Inequality (3)
    POLS525 - Civil War and Terrorism (3)
    POLS526 - Democratization (3)
    POLS527 - Political Radicalization & Social Movements (3)
    POLS528 - Advanced International Political Economy (3)
    POLS529 - Coercion and Diplomacy (3)
    POLS530 - State Institutions and Civil Society (3)
    POLS531 - Contemporary Issues in World Politics (3)
Methodology
  Take any of the following:
    SPS501 - Social Science Research Design (3)
    SPS504 - Survey Research (3)
    SPS507 - Advanced Qualitative Methods and Analysis (3)
    SPS508 - Maximum Likelihood Estimation (3)
    SPS509 - Advanced Quantitative Methodology (3)
    SPS510 - Game Theory and Formal Modeling (3)

  Other Electives (maximum of six credits):
    Electives approved by the supervisory committee.

  *Students must complete the following courses before they can begin electives: POLS505, POLS506. Students may not take more than 3 credits from workshops.

Graduate Culminating Activity and Other Requirements
2 - 6 Total Credits

  Complete 1 of the following
    Take 6 credits from:
      POLS593 - Thesis (1 - 12)
    Take 2 credits from:
      POLS690 - Master's Comprehensive Examination (1 - 6)

Grand Total Credits: 30

Course Offerings

POLS—Political Science

POLS505 Comparative Politics (3-0-3)(F/S). This seminar focuses on the principal theoretical, methodological and analytical approaches developed in the subfield of comparative politics to explain variation in economic development, regime type, and state capacity. PREREQ: Graduate Standing or PERM/INST.

POLS506 World Politics (3-0-3)(F/S). Examination of theoretical and methodological approaches in understanding relations between state, sub-national, non-state, and international actors. PREREQ: Graduate Standing or PERM/INST.

POLS508 Quantitative Research Methodology (3-0-3)(F/S). This seminar provides instruction on bivariate and multivariate modeling of political behavior.

POLS521 Comparative Electoral Behavior (3-0-3)(F/S). Examination of factors that affect vote choice across countries in a comparative context. PREREQ: Graduate Standing or PERM/INST.

POLS522 Comparative Political Parties (3-0-3)(F/S). Examination of the theoretical and empirical foundations of party behavior in a comparative context. PREREQ: Graduate Standing or PERM/INST.

POLS523 Non-Democratic Regimes (3-0-3)(F/S). Analysis of the theoretical and empirical foundations of non-democratic rule in a comparative context. PREREQ: Graduate Standing or PERM/INST.

POLS524 Politics of Inequality (3-0-3)(F/S). Examination of global and regional trends in income inequality over time and the causes and consequences of inequality within developed and developing countries. PREREQ: Graduate Standing or PERM/INST.

POLS525 Civil War and Terrorism (3-0-3)(F/S). Analysis of the theoretical and empirical causes of non-state actors using force against states and civilians in both domestic and international spheres PREREQ: Graduate Standing or PERM/INST.

POLS526 Democratization (3-0-3)(F/S). This seminar explores current theory and empirical observations in the areas of democratic regime change and consolidation. PREREQ: Graduate Standing or PERM/INST.

POLS527 Political Radicalization and Social Movements (3-0-3)(F/S). Examines the radicalization process across time and space, with particular attention focused on non-state actors and political movements. PREREQ: Graduate Standing or PERM/INST.

POLS528 Advanced International Political Economy (3-0-3)(F/S). Examination of theoretical and methodological approaches to understanding the relationships between politics and economics in the international sphere. PREREQ: Graduate Standing or PERM/INST.

POLS529 Coercion and Diplomacy (3-0-3)(F/S). Analysis of the theoretical and empirical causes of states using or threatening to use force to achieve their goals in international affairs. PREREQ: Graduate Standing or PERM/INST.

POLS531 Contemporary Issues in World Politics (3-0-3)(F/S). Examination of theoretical and methodological approaches to understanding recent developments in international relations or comparative politics. May be repeated for credit. PREREQ: Graduate Standing or PERM/INST.

Population and Health Systems Management

College of Health Sciences | School of Allied Health Sciences

MASTER OF POPULATION AND HEALTH SYSTEMS MANAGEMENT

Graduate Program Director: Jenni Gudapati
Norco Building, Room 414A
(208) 426-3334 (phone)
phsminfo@boisestate.edu (email)
boisestate.edu/phsm/ (website)

General Information

This program is designed for those who work full time and want to enhance their knowledge and grow their career. This degree will offer future healthcare leaders the opportunity to earn the Master in Population and Health Systems Management degree along with four industry-recognized healthcare finance certificates offered through the Healthcare Financial Management Association (HFMA). The program is completed in five semesters through an online format that allows the students flexibility to study during the time convenient for them. Once per week evening Zoom lessons are conducted and recorded (attendance recommended).

A quality, practicality based, education program that builds transformation leaders who view healthcare through the lens of the patient journey. The program will deliver content that bridges the gaps between the clinical, operational, and financial fields and optimizes best health outcomes while overcoming constraints and mitigating risk to find real solutions to current and future community wellness needs. Creating a community of healthcare leaders to network with fellow students, alumni, faculty, and guest speakers. Engage students in multidisciplinary courses that teach current industry concepts, challenges, and topics that can be applied immediately at the workplace.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: August 1 (fall), December 1 (spring)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
  - An application letter that is no more than 1750 words. Provide a detailed listing of how you plan to use the knowledge gained from the program to benefit your current and/or future career goals.
- Submit Current Resume or Curriculum Vitae (CV)
  - Interview — All applicants will be invited for a interview.
- Submit Letters of Recommendation
  - Three letters of recommendation. At least two letters should be from professional references. Letters should address your potential for success in a graduate program, strengths and weaknesses, and the benefits you may receive from graduate study.

Degree Requirements

Master of Population and Health Systems Management

Graduate Major Requirements
27 Total Credits
Completed the following:
  PHSM501 - Actuarial Science and Epidemiology in Determining Patient Outcome I (3)
  PHSM503 - Actuarial Science and Epidemiology in Determining Patient Outcome II (3)
  PHSM510 - Management of Population-Focused Healthcare (3)
  PHSM517 - Principles of Health Care Business I (3)
  PHSM519 - Principles of Health Care Business II (3)
  PHSM520 - Healthcare Finance Mastery (3)
  PHSM530 - Health System Business (3)
  PHSM535 - Healthcare Business Analytics in Revenue (3)
  PHSM540 - Revenue Cycle Mastery in Healthcare (3)
Graduate Culminating Activity and Other Requirements
3 Total Credits
  Earned at least 3 credits from the following:
    PHSM591 - Project (1 - 12)
Grand Total Credits: 30

Course Offerings

PHSM—Population and Health Systems Management

PHSM501 Actuarial Science and Epidemiology in Determining Patient Outcome I (3-0-3)(F,S). Explores the relationship between epidemiology and actuarial science in the context of dynamic population health. Examines the basics of insurance with analysis dissecting to the patient level to create care plans which mitigate risk and promote best patient outcomes. PREREQ: Admitted to Masters of Population and Health Systems Management.

PHSM503 Actuarial Science and Epidemiology in Determining Patient Outcome II (3-0-3)(F,S). Principles of epidemiology and actuarial sciences are further explored. An overview of healthcare/insurance models and their limits, challenges of risk identification and management, the intersection with provider contracting, fee for value, risk arrangements is presented in the context of promoting individual best patient outcomes. PREREQ: Admitted to Masters of Population and Health Systems Management. COREQ: PHSM501.

PHSM510 Management of Population-Focused Healthcare (3-0-3) (F,S,SU). Introduction to the management of multiple aspects of population-focused healthcare. Topics include history of, risk stratification of, effects of an experimental model of, clinical models of, tools for measuring/improving, and the management of population-focused Healthcare in the future. PREREQ: Admitted to Masters of Population and Health Systems Management, PHSM501, PHSM503.

PHSM517 Principles of Health Care Business I (3-0-3)(F,S,SU). Overview of healthcare accounting and finance to strengthen competencies and address financial reports and statements unique to healthcare. Provides a practical overview of risk-sharing arrangements, managed care contracts and profitability ratios. Participants in this course will have the opportunity to earn the HFMA Certified Specialist Accounting and Finance. PREREQ: Admitted to Masters of Population and Health Systems Management, PHSM501, PHSM503.

PHSM519 Principles of Health Care Business II (3-0-3)(F,S,SU).
Explores the evolution of healthcare service delivery and payment. Highlights healthcare transformation, including the shift from volume to value, quality, patient satisfaction, competition on cost and the evolution of the payment system. Attention is given to the changing roles of managers in healthcare finance. Participants in this course will be utilizing the HFMA Business of Health Care®. PREREQ: Admitted to Masters of Population and Health Systems Management, PHSM517.

PHSM520 Healthcare Finance Mastery (3-0-3)(F,S,SU). A broad range of essential business and financial skills are explored. Provides an overview of modern healthcare business dynamics and theories of application. Participants in this course will have the opportunity to earn the HFMA Certified Healthcare Financial Professional credential. PREREQ: Admitted to Masters of Population and Health Systems Management, PHSM501, PHSM503.

PHSM530 Health System Business (3-0-3)(F,S,SU). Framework for analyzing data and tools to facilitate decision making in healthcare organizations. Participants in this course have the opportunity to earn the Healthcare Financial Management Association Certified Specialist Business Intelligence credential. PREREQ: Admitted to Masters of Population and Health Systems Management, PHSM501, PHSM503.

PHSM535 Healthcare Business Analytics in Revenue (3-0-3)(F,S,SU).
Discussion and application of business analytics. A systematic overview of how to inspect, clean, transform, and model data with the goals of highlighting useful information, suggest conclusions, and support decision-making within the Healthcare Revenue Cycle. PREREQ: Admitted to Masters of Population and Health Systems Management, PHSM501, PHSM503.

PHSM540 Revenue Cycle Mastery in Healthcare (3-0-3)(F,S,SU).
Examination of concepts related to the healthcare revenue cycle. An overview of the entire revenue cycle and its influence of the financial outcomes of the healthcare organization is provided. Participants in this course have the opportunity to earn the Healthcare Financial Management Association Certified Revenue Cycle credential as part of this course. PREREQ: Admitted to Masters of Population and Health Systems Management, PHSM501, PHSM503.

PHSM591 Project (1-12 credits)(S,SU). Execution of a substantial exercise that demonstrates the ability to successfully and independently carry out a professional activity similar to what is encountered in the professional workplace; archival of the results of the project is required according to standards approved by the Graduate College. May be repeated for credit. (Pass/Fail.) PREREQ: PREM/INST.

School of Public and Population Health

College of Health Sciences | School of Allied Health Sciences

Divisional Dean: Lillian Smith
Health Science Riverside, Room 106
(208) 426-3921 (phone)
boisestate.edu/spph/ (website)

Graduate Faculty: Baker, Curl, Ketelsen, Mann, Montrose, Myers, Rauscher, Reischl, Schafer, L. Smith, M. Smith, Spear, Toevs

Graduate Degrees Offered

- Master of Public Health
    - Health Management and Leadership Emphasis
    - Prevention and Intervention Programming Emphasis
    - Systems Analysis and Innovation Emphasis
- Graduate Certificate in Health Services Leadership, Data-Driven Decision-Making
- Graduate Certificate in Health Services Leadership, Health Management and Leadership

MASTER OF PUBLIC HEALTH

Graduate Program Director: Ellen Schafer
Health Sciences Riverside Building, Room 107
(208) 426-3334 (phone)
mphinfo@boisestate.edu (email)
boisestate.edu/spph/mph/ (website)

General Information

The mission of the Master of Public Health (MPH) program is to prepare recent undergraduate students and established professionals for leadership positions in public health, other public and private health promoting agencies, and health care institutions. Students in the MPH program can study in one of three concentration areas: 1) health management and leadership, 2) prevention and intervention programming, and 3) systems analysis and innovation. A brief description of each includes:

Prevention and Intervention Programming

Students will learn to use a problem-focused, multidisciplinary approach to designing prevention and intervention programs that address pressing public health problems. This emphasis area prepares students to design and coordinate interventions with integrated health education and promotion, policy, and regulatory components focused on multiple levels of influence. It emphasizes working with local communities to design and deliver programming meant to enhance the health and wellbeing of individuals, families, priority groups, and the community-at-large.

Systems Analysis and Innovation

Students will learn to use systems analysis tools to understand and enhance the social and cultural conditions, the institutional and organizational capacity, and the policy and regulatory frameworks necessary to promote community and population health. This emphasis area prepares students to ensure the efficiency and effectiveness of all systems necessary to create pathways to health that begin where people live, work, and play. It emphasizes addressing the broader contextual, structural, and environmental conditions that influence and affect health.

Health Management and Leadership

Students will learn the practical management and leadership skills necessary to effectively lead public health and other health promoting organizations. This emphasis area includes strategic planning, human resource management, budgeting and resource development, coalition building, and public-private

partnerships. It prepares students to lead government, nonprofit, and private health promoting organizations.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
    - Deadlines: January 15 (fall priority), May 15 (fall final)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
    - Applicants with a 2.75 GPA to 3.00 GPA may be considered for provisional admission.
- Submit English Proficiency*, see page 21
    - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
- Submit Current Resume or Curriculum Vitae (CV)
- Submit Writing Sample
    - Completion of a proctored writing exam. Contact mphinfo@boisestate.edu to schedule this exam. This requirement may be waived for students who have successfully completed another graduate program.
- Submit Letters of Recommendation
    - Two letter of recommendation from people you have worked closely with and that can comment on your ability to succeed in graduate school and/or the public health profession.

Degree Requirements

The Master of Public Health program expects students to earn grades of B or better in all graduate coursework. A course grade of less than a B may not be used to meet the MPH degree requirements.

Master of Public Health

Graduate Major Requirements
16 Total Credits

Complete all of the following
Foundational courses
Take the following:
MPH500 - Contemporary Foundations of Public Health (2)
MPH501 - Framing Public Health Problems (2)
MPH502 - Prevention & Intervention in Public Health Practice (3)
MPH503 - Public Health Management (2)
MPH504 - Applied Epidemiology (2)
MPH505 - Applied Public Health Research and Evaluation (2)
MPH506 - Applied Statistics in Public Health (2)
Take at least 1 credits from the following:
MPH590 - Practicum/Internship (1 - 12)

Area of Emphasis Select one from the following three emphases: Health Management and Leadership, Prevention and Intervention Programming, or Systems Analysis and Innovation. Each area of emphasis has specific requirements listed below.

Grand Total Credits: 16

Health Management and Leadership Emphasis

Graduate Culminating Activity and Other Requirements
26 Total Credits

Complete all of the following
Take the following:
MPH530 - Data-Informed Decision-Making (2)
MPH531 - Leadership and Strategic Planning in Health Promoting Organizations (2)
MPH532 - Managing Human Resources in Health Promoting Organizations (2)
MPH533 - Managing Financial Resources in Health Promoting Organizations (2)
MPH534 - Managing Partnerships to Achieve Public Health Goals (2)
MPH535 - Evaluating Organizational Effectiveness (2)
Complete all of the following
Take at least 2 credits from the following:
MPH692 - Capstone Course (1 - 4)

Take at least 12 credits from the following:
Electives

Complete all of the following
Take between 5 and 7 credits from the following:
MPH593 - Thesis (1 - 12)

Take between 2 and 0 credits from the following:
MPH688 - Thesis Proposal (1 - 6)

Take at least 7 credits from the following:
Electives

Grand Total Credits: 26

Prevention and Intervention Programming Emphasis

Graduate Culminating Activity and Other Requirements
26 Total Credits

Complete all of the following
Take the following:
MPH510 - Enhancing Community Engagement & Advocacy (2)
MPH511 - Community and Population Assessment (2)
MPH512 - Advanced Prevention and Intervention Design (2)
MPH513 - Implementing & Managing Public Health Programs (2)
MPH514 - Evaluating Prevention and Intervention Programs (2)
MPH515 - Advanced Prevention and Intervention Planning (2)

Complete all of the following
Take at least 2 credits from the following:
MPH692 - Capstone Course (1 - 4)

Take at least 12 credits from the following:
Electives

Complete all of the following
Take between 5 and 7 credits from the following:
MPH593 - Thesis (1 - 12)

Take between 2 and 0 credits from the following:
MPH688 - Thesis Proposal (1 - 6)

Take at least 7 credits from the following:
Electives

Grand Total Credits: 26

Systems Analysis and Innovation Emphasis

Graduate Culminating Activity and Other Requirements
26 Total Credits

Complete all of the following
Take the following:
MPH520 - Advanced Systems Analysis and Problem-Solving (2)
MPH521 - Building and Sustaining Systems Capacity (2)
MPH522 - Organization, Communications, and Advocacy in Systems Change (2)
MPH523 - Evaluating Systems Change (2)
MPH524 - Contemporary Issues in Health Systems and Policy (2)
PUBADM501 - Public Policy Process (3)

Complete all of the following
Take at least 2 credits from the following:
MPH692 - Capstone Course (1 - 4)

Take at least 11 credits from the following:
Electives

Complete all of the following
Take between 7 and 5 credits from the following:
MPH593 - Thesis (1 - 12)

Take between 0 and 2 credits from the following:
MPH688 - Thesis Proposal (1 - 6)

Take at least 6 credits from the following:
Electives

Grand Total Credits: 26

GRADUATE CERTIFICATES IN HEALTH SERVICES LEADERSHIP

Graduate Program Director: Ellen Schafer
Health Sciences Riverside Building, Room 107
(208) 426-3334 (phone)
mhsinfo@boisestate.edu (email)
boisestate.edu/spph/mph/certificates/ (website)

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 15 (fall priority), May 15 (fall final)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
  - Applicants with a 2.75 GPA to 3.00 GPA may be considered for provisional admission.
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
- Submit Current Resume or Curriculum Vitae (CV)
- Submit Writing Sample
  - Completion of a proctored writing exam. Contact mphinfo@boisestate.edu to schedule this exam. This requirement may be waived for students who have successfully completed another graduate program.
- Submit Letters of Recommendation
  - Two letter of recommendation from people you have worked closely with and that can comment on your ability to succeed in graduate school and/or the public health profession.

Certificate Requirements

Graduate Certificate in Health Services Leadership, Data-Driven Decision-Making

Graduate Major Requirements
12 Total Credits

Take the following:
MPH504 - Applied Epidemiology (2)
MPH506 - Applied Statistics in Public Health (2)
MPH530 - Data-Informed Decision-Making (2)
MPH540 - Advanced Statistics in Public Health (3)
MPH541 - Leading with Data (3)

Grand Total Credits: 12

Graduate Certificate in Health Services Leadership, Health Management and Leadership

Graduate Major Requirements
12 Total Credits

Take the following:
MPH530 - Data-Informed Decision-Making (2)
MPH531 - Leadership and Strategic Planning in Health Promoting Organizations (2)
MPH532 - Managing Human Resources in Health Promoting Organizations (2)
MPH533 - Managing Financial Resources in Health Promoting Organizations (2)
MPH534 - Managing Partnerships to Achieve Public Health Goals (2)
MPH535 - Evaluating Organizational Effectiveness (2)

Grand Total Credits: 12

Course Offerings

HLTH—Health Science

HLTH570 Epidemiology (3-0-3)(F,S,SU). Study of the distribution and determinants of disease within human populations. PREREQ: Upper-division standing and MATH254 or KINES301 or PSYC295 or SOC310 or PERM/INST.

MPH—Master of Public Health

MPH500 Contemporary Foundations of Public Health (2-0-2)(F). Examines the goals and mission of public health, from its historical roots in sanitation to current efforts to improve population health. The five core disciplines, biostatistics, environmental and occupational health, epidemiology, health policy and management, and health education and promotion are introduced, and the interdisciplinary nature of the field is emphasized.

MPH501 Framing Public Health Problems (2-0-2)(F). Introduces tools used to conduct critical examinations of public health problems. Includes theories of health behavior and systems thinking as applied to biological, environmental, psychological and social dynamics that affect the health and wellbeing of communities and populations. Emphasizes the role of using inclusive strategies to assess and understand these dynamics.

MPH502 Prevention and Intervention in Public Health Practice (3-0-3) (S). Emphasizes a problem-based approach to prevention and intervention that incorporates and coordinates strategies from multiple public health disciplines at multiple levels of influence. Includes conceptual and practical tools used when planning, designing, implementing, and evaluating prevention and intervention programs. Prioritizes the value of inclusive community engagement and leadership.

MPH503 Public Health Management (2-0-2)(S). Addresses the foundational principles of management and leadership within public health agencies and other health promoting organizations. Includes topics related to effectively managing the internal operations of organizations critical to successfully advancing the mission and goals of public health, as well as leading across organizations and within collaborative partnerships.

MPH504 Applied Epidemiology (2-0-2)(F). Examines the application of epidemiologic methods to public health problems. Identifies trends in national and global mortality and morbidity. Explains ecological, environmental, biologic, genetic, behavioral, psychological, and sociological factors affecting community and population health.

MPH505 Applied Public Health Research and Evaluation (2-0-2)(F). Introduces quantitative and qualitative research and evaluation methods as applied to public health. Emphasizes the practitioner as a responsible research consumer able to appropriately select and translate research into practice. Examines the role of practice-based evidence and the practitioner as an active contributor to research.

MPH506 Applied Statistics in Public Health (2-0-2)(S). An introduction to statistical techniques used in the treatment of public health data. Includes measures of central tendency and variability, correlation measures, probability, analysis of variance, and regression analysis.

MPH510 Enhancing Community Engagement and Advocacy (2-0-2)(F). Addresses the role of community engagement and advocacy as essential means of improving community and population health. Includes models of engaging and empowering communities through collective participation, community collaboration, and democratic decision-making. Emphasizes inclusivity and the capacity to engage diverse community members in identifying and pursuing common goals.

MPH511 Community and Population Assessment (2-0-2)(S). Prepares students to conduct health assessments that measure multiple dimensions of community and population health. Emphasizes a socio-ecological approach that accounts for the biological, environmental, social, and psychological determinants of health. Includes assessing community readiness, resources, and capacity to address public health problems. Builds skills necessary for quantitative and qualitative data collection and analysis and the effective dissemination of findings.

MPH512 Advanced Prevention and Intervention Design (2-0-2)(S). Prepares students to use multidisciplinary theoretical perspectives, strategies, and tools to understand public health problems and design interventions that address these problems at the intrapersonal, interpersonal, organizational, and community levels. Culminating activities include developing comprehensive prevention and intervention plans.

MPH513 Implementing and Managing Public Health Programs (2-0-2) (S). Provides conceptual and practical tools used for implementing and managing health promotion programs. Critical elements include learning to implement theoretically sound intervention programs with high levels of program fidelity; effectively engaging and managing human, financial, and community resources; and identifying and responding to commonly occurring implementation-related opportunities and challenges.

MPH514 Evaluating Prevention and Intervention Programs (2-0-2)(S). Prepares students to design comprehensive evaluations of public health prevention and intervention programs. Includes measuring changes in outcomes related to community and population health and wellbeing, community readiness and capacity to address public health problems, and the efficient and effective use of fiscal and human resources. Emphasizes community-engaged evaluation, dissemination of findings, and practitioner participation in public health research.

MPH515 Advanced Prevention and Intervention Planning (2-0-2)(F). Provides a final synthesis of the holistic process of planning, developing, implementing, and evaluating effective public health prevention and intervention programs. Emphasizes using a problem-focused approach to addressing public health problems and incorporating and coordinating multidisciplinary strategies and tools designed to target multiple levels of influence. Culminating activities include creating a multidisciplinary, multi-strategy, multilevel prevention or intervention program informed by theory, contemporary research, and community assessment data.

MPH520 Advanced Systems Analysis and Problem-Solving (2-0-2)(F). Prepares students to use advanced analytical tools to assess the role of multiple systems in contemporary public health problems. Uses theory, data, and interprofessional perspectives to identify how public health problems emerge, map phenomenon, and recommend analysis-informed and data-informed system-level solutions. Emphasizes historical and contemporary forces that influence the broader conditions in which people live and work.

MPH521 Building and Sustaining Systems Capacity (2-0-2)(F). Provides a theoretical and practical understanding of the roles effective, efficient, and equitable institutions play in creating pathways to health and wellbeing for everyone. Emphasizes the role of systems capacity and change in building and sustaining institutions that support public health. Addresses challenges related to institutional accountability. Includes assessing and comparing the capacity and health impact of existing institutions.

MPH522 Organization, Communications, and Advocacy in Systems Change (2-0-2)(S). Establishes the essential role of effective communications, organization, and advocacy in systems change. Prepares students to effectively engage community and interprofessional partners, build multi-level coalitions invested in systems change, select within and cross-systems communications and organizational strategies, and motivate and incentivize within and cross-systems collaboration to achieve community-supported public health goals. Emphasizes community investment, participation, and engagement in systems change.

MPH523 Evaluating Systems Change (2-0-2)(S). Prepares students to design comprehensive evaluations of systems change and the impact of systems change on public health. Also includes measuring changes in community support for systems change, perceptions of systems-level outcomes, and the effectiveness and efficiency of institutions that contribute to health and wellbeing. Emphasizes developmental evaluation methods, dissemination of findings, and practitioner participation in public health research.

MPH524 Contemporary Issues in Health Systems and Policy (2-0-2)(F). Examines current issues in health systems and policy. Includes a review of legislation and policy that influence the systems, structures, and resources associated with community and population health. Emphasizes the influence of policy on the broader social conditions associated with health and wellbeing, as well as the impact of health-specific policies on health-related costs, quality, and access to care.

MPH530 Data-Informed Decision-Making (2-0-2)(F). Prepares students to lead efforts to access, collect, analyze, communicate, and make decisions using data and data-informed decision-making. Incorporates quantitative and qualitative methods of primary and secondary data collection and analysis. Emphasizes data integrity, systematic consideration of multiple data sources, ethics in decision-making, and decision-making models, including models of shared and collaborative decision-making.

MPH531 Leadership and Strategic Planning in Health Promoting Organizations (2-0-2)(F). Introduces strategic planning in public health and other health promoting organizations. Emphasizes using epidemiological data, community assessments, and established organizational mission and capacity to identify opportunities to achieve public health goals and collaborate with other agencies and health promoting organizations. Includes discussion of strategic resource deployment, organizational behavior, and examinations of strategic opportunities presented by contemporary public health problems.

MPH532 Managing Human Resources in Health Promoting Organizations (2-0-2)(S). Examines human resource management in public health and other health promoting organizations. Includes hiring, staff development, team-building, strategic deployment of human capacity to achieve public health goals, managing shared personnel, and other personnel-related decision-making. Emphasizes the efficient and effective use of public and private human resources.

MPH533 Managing Financial Resources in Health Promoting Organizations (2-0-2)(S). Prepares students to budget and administer financial resources in public health and other health promoting organizations. Includes diverse methods of generating organizational revenue, shared budgeting and resource development across units and organizations, and critical tracking, analysis, and controls when authorizing financial expenditures. Emphasizes the efficient and effective use of public and private financial resources.

MPH534 Managing Partnerships to Achieve Public Health Goals (2-0-2) (F). Prepares students to achieve public health goals through the collaborative efforts of a coalition of public health agencies, other health promoting agencies, and a range of community stakeholders. Emphasizes skills required to build, organize, and manage diverse and inclusive partnerships and coalitions designed to achieve public health goals.

MPH535 Evaluating Organizational Effectiveness (2-0-2)(F). Prepares students to design evaluations of organizational effectiveness in and across public health agencies and other health promoting organizations. Includes measuring changes in public health and wellbeing, organizational capacity to address public health problems, and the efficient and effective use of resources to achieve public health goals. Emphasizes capacity building, developmental evaluation, and practitioner participation in public health research.

MPH540 Advanced Statistics in Public Health (3-0-3)(F). A survey of advanced statistical techniques emerging in contemporary public health data analysis. Techniques to be introduced include advanced regression analysis, multi-level modeling, structural equation modeling, longitudinal data analysis, geographical information systems, social network analysis and other emerging statistical techniques.

MPH541 Leading with Data (3-0-3)(S). Prepares students to identify data that can be used to use to answer practical questions, effectively present findings, and use facilitation skills to help groups make data-driven decisions and develop data-informed action plans.

MPH550 Maternal and Child Health (2-0-2)(F). Provides an overview of maternal and child health, issues, and trends. Prepares students to assess the health and wellbeing of expectant and new mothers, infants, and children. Examines key priority areas of maternal and child health as identified by the Centers for Disease Control and health promotion programs and policies specific to the needs of this population.

MPH551 Adolescent and Emerging Adult Health (2-0-2)(F). Provides an overview of health promotion during adolescence and emerging adulthood (approximately ages 11-23). Prepares students to assess the health and wellbeing of adolescents and emerging adults. Examines key priority areas of health and adolescent risk as identified by the Centers for Disease Control and health promotion programs and policies specific to the needs of this population.

MPH552 Optimal Aging in Adulthood (2-0-2)(S). Provides an overview of adult health promotion and optimal aging through adulthood. Prepares students to assess the health and wellbeing of adults and older adults. Examines key priority areas of adult and older adult health as identified by the Centers for Disease Control and health promotion programs and policies specific to the needs of this population.

MPH554 Health Promoting Schools (2-0-2)(S). Examines the school contexts in which young people grow and develop. Presents policy and program-based strategies for enhancing the health and wellbeing of young people in school and after-school settings. Prepares students to use public health strategies to ensure social and policy environments support the creation of healthy school contexts and the integration of evidence-informed strategies into the practice setting.

MPH555 Health Promoting Families and Communities (2-0-2)(F). Examines the contexts in which families live and play. Presents strategies for enhancing the health and wellbeing of all members of the family in both family and community settings. Prepares students to use public health strategies to ensure social and policy environments support the creation of healthy family and community contexts and the integration of evidence-informed strategies into the practice setting.

MPH556 Health Promoting Work (2-0-2)(F). Examines the contexts in which adolescents and adults work. Presents strategies for enhancing the health and wellbeing of workers in a range of work settings. Prepares students to use public health strategies to ensure that social and policy environments support the creation of healthy work contexts and the integration of evidence-informed strategies into the practice setting.

MPH560 Introduction to Environmental Health and Social Justice (2-0-2) (F). Introduces the fields of environmental and occupational health and pressing social justice issues affecting environmental and worker health. Describes how environmental problems can result in human health effects that are unevenly distributed throughout society. Present concepts related to worker justice, including worker health disparities, race and gender discrimination in the workplace, work stress, and other current topics in worker health and justice.

MPH561 Exposure Science for Public Health (2-0-2)(F). Presents underlying concepts, practices and principles that allow for the assessment of human exposures to hazardous agents as well as the relationship between exposure science and epidemiology. Prepares students to conduct and evaluate exposure assessments in occupational, residential, and ambient environments to help improve public health. Will include examples of the relationship between social justice and human health exposures.

MPH562 Environmental and Occupational Epidemiology (2-0-2)(S). Covers the methodology used to assess the relationship between occupational and environmental exposures and human health outcomes. Includes common study designs, methods for evaluating exposure-response relationships, and discussion of occupational and environmental factors as they influence human health. Will include examples of the relationship between social justice and the study of human disease.

MPH563 Principles of Toxicology (2-0-2)(S). Focuses on the chemical properties and biological processes responsible for the molecular, cellular and pathophysiological responses resulting from human exposure to toxic agents in environmental and occupational settings. Prepares students to identify characteristics that affect susceptibility and understand the primary mechanisms of toxicity.

MPH564 Genes, Epigenetics, and the Environment (2-0-2)(F). Investigates the long-debated "nature" versus "nurture" dichotomy, which can alternately be viewed as "genetics" versus "environment", neglects to recognize the interaction between genes and environmental exposures. Prepares students to evaluate the role of DNA sequence, factors such as age, diet, occupational exposures, and environmental factors, and the interplay between them (the "epigenome") in disease causation. Will include examples of the relationship between social justice and epigenetics.

MPH565 Policy and Advocacy in Environmental and Occupational Health (2-0-2)(F). Presents the legal and regulatory frameworks that affect environmental and occupational health. Introduces the major federal policies affecting environmental and occupational health, the policy making process, the responsibilities of key regulatory agencies, and current challenges to effective policy making and enforcement. Will include examples of the relationship between social justice, public policy, and environmental and occupational health.

MPH570 Public Health Disaster Preparedness Planning: Risk Management (3-0-3)(F)(Even years). Risk assessment or risk management methods in public health disaster preparedness planning will be presented in context of natural and human-caused disasters. The environmental, economic, and social consequences for communities will be studied. PREREQ: Graduate standing or PERM/INST.

MPH571 (SOCWRK571) Fundamentals of Healthy Aging (3-0-3) (F,S,SU). Overview of gerontology presented by examining major issues related to aging. Content includes theories of aging; the impact of an aging population; and future implications at local, national, and international levels. Cross-listed with SOCWRK 571, may be taken once for credit.

MPH572 (KINES572) Grant Writing (3-0-3)(SU). Examination of the process of securing resources from external entities. Students will learn and apply a variety of techniques employed in proposal development and grant authorship. May be taken for KINES or MPH credit, but not both.

Public Policy and Administration Programs

School of Public Service

Environmental Research Building, Room 5146F
(208) 426-1476 (phone)
(208) 426-4370 (fax)
boisestate.edu/sps-publicpolicy (website)

Graduate Faculty: Ashley, Birdsall, Dimand, Fowler, Fredericksen, Hubbard, Lindquist, Park, Schneider, Witt

Graduate Degrees Offered

- Doctor of Philosophy in Public Policy and Administration
- Master of Public Administration
- Graduate Certificate in Applied Public Administration
- Graduate Certificate in Conflict Management
- Graduate Certificate in Environmental Governance
- Graduate Certificate in Nonprofit Administration
- Graduate Certificate in Policy Research
- Graduate Certificate in State, Local, and Regional Governance

DOCTOR OF PHILOSOPHY IN PUBLIC POLICY AND ADMINISTRATION

Doctoral Program Coordinator: Amanda Ashley
Environmental Research Building, Room 5422
(208) 426-3280 (phone)
amandaashley@boisestate.edu (email)
boisestate.edu/sps-phd (website)

General Information

Boise State University offers a Doctor of Philosophy in Public Policy and Administration through the Public Policy and Administration (PPA) program. The degree requires the completion of a prescribed course of study in PPA, satisfactory performance on the comprehensive examination and the dissertation proposal, and independent completion of original research that results in a publicly defended dissertation that contributes significantly to knowledge in Public Policy and Administration.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadline: January 15 (fall)
  - This program is competitive and traditionally receives applications from more candidates than we have space to enroll. Your application will be rigorously reviewed and admission is not guaranteed.
  - Decision: Mid-February
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
  - An application letter that includes your background, experience, or aptitude. Your professional or career goals, objectives, aspirations, and area(s) of interest in the program. Explain how the program will help you to achieve these goals or be successful. Include the names of Boise State University faculty members/mentors that you are most interested in conducting research or collaborating with.
- Submit Current Resume or Curriculum Vitae (CV)
- Submit Graduate Record Examination (GRE) Scores
  - A GRE combined score of 300 in the verbal reasoning and quantitative reasoning sections. If you have a masters degree from an accredited institution, the program may waive the GRE requirement.
- Submit Writing Sample
  - A writing sample that clearly illustrates your ability to do research at an advanced level, is clearly written with minimal errors, and exhibits your ability to analyze and synthesize complex information in a compelling way.
- Submit Letters of Recommendation
  - Three letters of recommendation from academic and/or professional references. Letters should speak about you and your accomplishments in fairly specific and illustrative ways. Recommenders should address your ability to conduct advanced-level, sustained, significant research projects.
- Submit Graduate Assistantship Application
  - Deadline: March 1

Graduate Teaching and Research Fellowships

Graduate fellowships including tuition and fee waivers are funded from three sources: appropriated state funds, endowments, and research grants and contracts. Applicants to the PhD program in Public Policy and Administration who submit all documents required by the admission procedure by January 15 of any given year will be considered for a state appropriated or endowed graduate fellowship to start the following fall semester; notification of successful applicants will be during February and March. Information on graduate fellowships funded by research grants and contracts is available from the coordinator of the doctoral program in PPA.

Degree Requirements

Doctor of Philosophy in Public Policy and Administration

Graduate Major Requirements
27 Total Credits
  Complete all of the following
    Public Policy and Administration Core
      Take the following:
        PUBADM601 - Philosophy of Social Inquiry (3)
        PUBADM602 - Theories of Public Administration (3)
        PUBADM603 - Theories of Public Policy (3)
        PUBADM609 - Advanced Research Design (3)
      Take at least 1 of the following:
        PUBADM607 - Advanced Public Administration Studies (3)
        PUBADM608 - Advanced Public Policy Studies (3)
      Methods Sequence
        Take the following:
          SPS501 - Social Science Research Design (3)
          SPS502 - Quantitative Methods for the Social Sciences (3)
          SPS503 - Qualitative Methods for the Social Sciences (3)
      Take at least 1 of the following:
        SPS504 - Survey Research (3)
        SPS505 - Public Policy Analysis (3)
        SPS506 - Program Evaluation (3)
        SPS507 - Advanced Qualitative Methods and Analysis (3)
        SPS508 - Maximum Likelihood Estimation (3)
        SPS509 - Advanced Quantitative Methodology (3)
        SPS510 - Game Theory and Formal Modeling (3)
Graduate Culminating Activity and Other Requirements
40 Total Credits
  Complete all of the following
    Take at least 18 credits from the following:
      Electives (with supervisory committee approval)
    Take at least 2 credits from the following:
      PUBADM691 - Doctoral Comprehensive Examination (1 - 6)
    Take at least 2 credits from the following:
      PUBADM689 - Dissertation Proposal (1 - 6)
    Take at least 18 credits from the following:
      PUBADM693 - Dissertation (1 - 12)

Grand Total Credits: 67

Alternative Residency

PhD students are required to fulfill a one-year, full-time residency. Students wishing to fulfill their residency requirement via an *Alternative Residency Plan* (ARP) must complete the program ARP form and submit with the *Application for Advancement to Candidacy* (AAC) form following the successful defense of their dissertation proposal.

It is recommended that the alternative residency plans should meet the following four goals: Disciplinary depth and breadth, Scholarly immersion, Professional socialization, and Professional practice. Students should plan to attend or participate in a minimum of three (3) of these events or opportunities per semester of enrollment.

MASTER OF PUBLIC ADMINISTRATION

Graduate Program Director: Monica Hubbard
Environmental Research Building, Room 5147
(208) 426-5527 (phone)
monicahubbard@boisestate.edu (email)
boisestate.edu/sps-publicpolicy/mpa (website)

General Information

The Public Policy and Administration (PPA) program offers the master's degree in public administration (MPA), an important academic nucleus of the university's designated area of emphasis in public affairs. As the urban university in Idaho located in the capital city, Boise State has the mandate to provide educational opportunities related to public affairs. The program offers this degree to help fulfill that mandate.

The MPA is designed to prepare pre-service students and in-service professionals for positions of leadership in public service. Administrators and other staff members in all levels of government, non-profit organizations and private sector governmental affairs departments take advantage of the general administrative and policy analysis curriculum offered in the MPA. The curriculum provides the theoretical and practical dimensions of public management necessary to assist students seeking public service careers.

Based upon its lead role in public policy, the Master of Public Administration plays an important role in the administration and delivery of courses in the Master of Health Science, Health Policy emphasis.

Public Administration Applied Research and Service

In keeping with the university's role and mission in public affairs, our faculty are involved in a number of important training and applied research activities that have major statewide impact including the annual Mountain West Municipal Clerks and Treasurers Institute.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 15 (fall priority), April 1 (fall final), August 15 (spring priority), October 1 (spring final)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
  - Applicants with a GPA less than 3.00 may be considered for provisional admission.
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
  - An application letter that includes your background, experience, or aptitude. Your professional or career goals, objectives, aspirations, and area(s) of interest in the program. Explain how the program will help you to achieve these goals or be successful. Minimum of 500 words.
- Submit Current Resume or Curriculum Vitae (CV)

- Submit Graduate Record Examination (GRE) Scores
  - A minimum score of 300 combined, verbal and quantitative. The GRE can be waived if you that have an aggregate undergraduate GPA of 3.20 or better.
- Submit Letters of Recommendation
  - Three letters of recommendation from academic and/or professional references. Letters should evaluating your educational and career objectives.
- Submit Graduate Assistantship Application
  - Deadline: March 1

Degree Requirements

Master of Public Administration

Graduate Major Requirements
36 Total Credits

  Complete all of the following
    Core Requirements
      Take the following:
        PUBADM500 - Administration in the Public Sector (3)
        PUBADM501 - Public Policy Process (3)
        PUBADM502 - Organization Behavior and Management (3)
        PUBADM504 - Public Budgeting & Financial Administration (3)
        PUBADM505 - Personnel Administration for Public Service (3)
    Methods Sequence
      Take the following:
        SPS501 - Social Science Research Design (3)

      Take at least 1 of the following:
        SPS502 - Quantitative Methods for the Social Sciences (3)
        SPS503 - Qualitative Methods for the Social Sciences (3)
        SPS503 - Qualitative Methods for the Social Sciences (3)
        SPS505 - Public Policy Analysis (3)
        SPS506 - Program Evaluation (3)
    Electives
      Take at least 12 credits from the following:
        Select 12 credit hours of coursework from the noncore MPA courses listed in this catalog. Students may also work with an advisor to identify relevant graduate coursework in other programs at Boise State University.
      Take between 0 and 3 credits from the following:
        PUBADM590 - Public Service Internship (1 - 12)
  Graduate Culminating Activity and Other Requirements
  3 Total Credits

    Take at least 3 credits from the following:
      PUBADM692 - Capstone Course (1 - 4)

Grand Total Credits: 39

Public Service Internship

All students are required to complete a three credit internship for a total of 39 credits unless all or part of these credits are waived. Students who have at least one year of substantive administrative, management or professional experience in or with the public or nonprofit sector may petition the graduate director to waive the internship requirement. This petition must be submitted AFTER a student has been admitted to the MPA program and should include a letter detailing the basis for the petition along with a recent copy of the student's résumé. Instructions to petition for internship waiver or to obtain an internship are available on the program website.

GRADUATE CERTIFICATE IN APPLIED PUBLIC ADMINISTRATION

Graduate Program Coordinator: Monica Hubbard
Environmental Research Building, Room 5147
(208) 426-2527 (phone)
monicahubbard@boisestate.edu (email)
boisestate.edu/sps-publicpolicy/graduate-certificates/certificate-in-applied-public-administration (website)

General Information

The Boise State University Graduate Certificate in Applied Public Administration assists working professional and students with an applied, skills-based approach to hone their management and leadership skills and policy development expertise in the unique environment facing public service organizations across public, private, and non-profit sectors.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 15 (fall priority), April 1 (fall final), August 15 (spring priority), October 1 (spring final), January 15 (summer priority), April 1 (summer final)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
  - Applicants with a GPA less than 3.00 may be considered for provisional admission.
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
  - An application letter that includes background, experience, or aptitude. Describe your professional or career goals, objectives, aspirations, and area(s) of interest in the program. How will the program help you to achieve these goals or be successful. Should be a minimum of 500 words.
- Submit Current Resume or Curriculum Vitae (CV)
  - A resume that includes professional work and/or volunteer experience.

Certificate Requirements

Graduate Certificate in Applied Public Administration

Graduate Major Requirements
9 Total Credits

Take the following:
PUBADM561 - How to Plan a Career in Public Service (1)
PUBADM562 - How Public Policy is Made (1)
PUBADM563 - How the Legislative Process Works (1)
PUBADM564 - How to Engage Citizens (1)
PUBADM565 - How to Manage Public Finances (1)
PUBADM566 - How to Navigate Ethical Challenges (1)
PUBADM567 - How to Deal With People (1)
PUBADM568 - How to Negotiate Risks (1)
PUBADM569 - How to Make Policy Choices (1)

Grand Total Credits: 9

GRADUATE CERTIFICATE IN CONFLICT MANAGEMENT

Graduate Program Director: Ashley Orme
Environmental Research Building, Room 1143
(208) 426-2513 (phone)
(208) 426-4370 (fax)
ashleyorme@boisestate.edu (email)

General Information

The Graduate Certificate in Conflict Management assists working professionals and students to understand and respond to interpersonal and group conflict. The certificate program focuses on understanding the causes and productive responses to interpersonal conflict, including third-party facilitation and mediation, as well as upon the understanding of conflict in larger groups and the skills of facilitating high conflict meetings.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 15 (fall priority), April 1 (fall final), August 15 (spring priority), October 1 (spring final), January 15 (summer priority), April 1 (summer final)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
  - Applicants with a GPA less than 3.00 may be considered for provisional admission.
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Personal Statement
  - A personal statement that addresses your career goals and reasons for pursuing a graduate certificate in conflict management.

Certificate Requirements

Graduate Certificate in Conflict Management

Graduate Major Requirements
12 Total Credits

Take the following:
CONFLICT510 - Conflict Management (3)
CONFLICT513 - Mediation and Negotiation (3)
CONFLICT514 - Conflict Coaching and Facilitation (3)
CONFLICT515 - Culture and Conflict (3)

Grand Total Credits: 12

GRADUATE CERTIFICATE IN ENVIRONMENTAL GOVERNANCE

Program Director: Monica Hubbard
Environmental Research Building, Room 5147
(208) 426-5527 (phone)
monicahubbard@boisestate.edu (email)
boisestate.edu/sps-publicpolicy/graduate-certificates/environmental-governance (website)

General Information

The Boise State University Graduate Certificate in Environmental Governance assists working professionals and students with additional training and coursework to further develop their expertise and skills within the context of the unique challenges that emerge for public, private, and non-profit sectors in governing the environment.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 15 (fall priority), April 1 (fall final), August 15 (spring priority), October 1 (spring final), January 15 (summer priority), April 1 (summer final)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
  - An application letter that includes background, experience, or aptitude. Describe your professional or career goals, objectives, aspirations, and area(s) of interest in the program. How will the program help you to achieve these goals or be successful.
- Submit Current Resume or Curriculum Vitae (CV)
  - A resume that includes professional work and/or volunteer experience.

Certificate Requirements

Graduate Certificate in Environmental Governance
Graduate Major Requirements
12 Total Credits

Complete all of the following
  Take the following:
    PUBADM540 - Contemporary Issues in Natural Resource and Environmental Policy and Administration (3)
  Electives:
    Take at least 9 credits from the following:
    PUBADM541 - Environmental and Regulatory Policy and Administration (3)
    PUBADM542 - Science, Democracy and the Environment (3)
    PUBADM543 - Public Land and Resource Policy and Administration (3)
    PUBADM545 - U.S. Energy Policy (3)
    PUBADM546 - Climate Change Policy and Administration (3)
    PUBADM547 - Water Resources Policy and Management (3)
    PUBADM548 - Natural Resource & Environmental Administration (3)
    PUBADM549 - Environmental Assessment & Data Analysis (3)
    PUBADM551 - Environmental Management Techniques (3)
    PUBADM552 - Environmental Communication and Decision-Making (3)
    PUBADM554 - 21st Century Opportunities and Challenges in Energy (3)

Grand Total Credits: 12

GRADUATE CERTIFICATE IN NONPROFIT ADMINISTRATION

Program Director: Monica Hubbard
Environmental Research Building, Room 5147
(208) 426-5527 (phone)
nonprofit-administration@boisestate.edu (email)
boisestate.edu/sps-publicpolicy/graduate-certificates/nonprofit-administration-certificate (website)

General Information

The Boise State University Graduate Certificate in Nonprofit Administration assists working professionals and students with an interdisciplinary basis to hone their management and leadership skills and policy development expertise in the particular legal environment facing not-for-profit organizations as they collaborate with private enterprise and local, state and federal governments to serve the public interest.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 15 (fall priority), April 1 (fall final), August 15 (spring priority), October 1 (spring final), January 15 (summer priority), April 1 (summer final)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
  - An application letter that includes background, experience, or aptitude. Describe your professional or career goals, objectives, aspirations, and area(s) of interest in the program. How will the program help you to achieve these goals or be successful.
- Submit Current Resume or Curriculum Vitae (CV)
  - A resume that includes professional work and/or volunteer experience.

Certificate Requirements

Graduate Certificate in Nonprofit Administration
Graduate Major Requirements
15 Total Credits

Complete all of the following
  Take the following:
    PUBADM514 - Introduction to Nonprofit Management and Collaboration (3)
    PUBADM517 - Resource Management in Nonprofit Organizations (3)

  Elective Courses: Students must select nine credits from the electives listed below. Electives not included in this list must be pre-approved by the Certificate Coordinator before a student can apply them toward their degree progress.

  Take at least 6 credits from the following:
    CONFLICT512 - Mediation (3)
    PUBADM500 - Administration in the Public Sector (3)
    PUBADM511 - Decision-Making in Public and Nonprofit Management (3)
    PUBADM513 - Economics of Public Policy (3)
    PUBADM515 - Policy Implementation and Practice (3)
    PUBADM516 - City-County Governance and Administration (3)
    PUBADM518 - Introduction to Contract Management (3)
    PUBADM532 - Grant Writing (3)
    PUBADM550 - The Executive & the Administrative Process (3)
    PUBADM560 - State and Local Government Policy and Administration (3)
    PUBADM570 - Public Management Skills and Techniques (3)
    PUBADM571 - Ethics in the Public Sector (3)

  Internship/Service Learning: A 3-credit internship or 3 credits of coursework with associated service-learning designation are

required of students without substantive management experience in the Nonprofit sector. Students who have such experience may petition to have the internship/service learning requirement waived. Contact the coordinator of this certificate for guidelines.
PUBADM590 Internship
Take at least 3 credits from the following:
    PUBADM590 - Public Service Internship (1 - 12)

Grand Total Credits: 15

GRADUATE CERTIFICATE IN POLICY RESEARCH

Program Director: Monica Hubbard
Environmental Research Building, Room 5147
(208) 426-5527 (phone)
monicahubbard@boisestate.edu (email)
boisestate.edu/sps-publicpolicy/graduate-certificates/policy-research (website)

General Information

The Boise State University Graduate Certificate in Policy Research assists working professionals and students with additional training and coursework to further develop their expertise and skills for research within the context of public policy formulation, analysis, and evaluation.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
    - Deadlines: January 15 (fall priority), April 1 (fall final), August 15 (spring priority), October 1 (spring final), January 15 (summer priority), April 1 (summer final)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
    - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
    - An application letter that includes background, experience, or aptitude.
- Submit Current Resume or Curriculum Vitae (CV)
    - A resume that includes professional work and/or volunteer experience.

Certificate Requirements

Graduate Certificate in Policy Research

Graduate Major Requirements
12 Total Credits
    Complete all of the following
        Take the following:
            SPS501 - Social Science Research Design (3)
        Take at least 9 credits from the following:
            SPS502 - Quantitative Methods for the Social Sciences (3)
            SPS503 - Qualitative Methods for the Social Sciences (3)
            SPS504 - Survey Research (3)
            SPS505 - Public Policy Analysis (3)
            SPS506 - Program Evaluation (3)

Grand Total Credits: 12

GRADUATE CERTIFICATE IN STATE, LOCAL, AND REGIONAL GOVERNANCE

Program Director: Monica Hubbard
Environmental Research Building, Room 5147
(208) 426-5527 (phone)
monicahubbard@boisestate.edu (email)
boisestate.edu/sps-publicpolicy/graduate-certificates/state-local-and-regional-governance (website)

General Information

The Boise State University Graduate Certificate in State, Local, and Regional Governance assists working professionals and students with additional training and coursework to further develop their expertise and skills within the context of the unique governance challenges that emerge for public, private, and non-profit sectors at state-, local-, and regional-levels.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
    - Deadlines: January 15 (fall priority), April 1 (fall final), August 15 (spring priority), October 1 (spring final), January 15 (summer priority), April 1 (summer final)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
    - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Application Letter
    - An application letter that includes background, experience, or aptitude. Describe your professional or career goals, objectives, aspirations, and area(s) of interest in the program. How will the program help you to achieve these goals or be successful.
- Submit Current Resume or Curriculum Vitae (CV)
    - A resume that includes professional work and/or volunteer experience.

Certificate Requirements

Graduate Certificate in State, Local, and Regional Governance

Graduate Major Requirements
12 Total Credits
Complete all of the following
    Take the following:
        PUBADM560 - State and Local Government Policy and Administration (3)
    Take at least 9 credits from the following:
        PUBADM511 - Decision-Making in Public and Nonprofit Management (3)
        PUBADM512 - Information Technology and Public Policy (3)
        PUBADM513 - Economics of Public Policy (3)
        PUBADM515 - Policy Implementation and Practice (3)
        PUBADM516 - City-County Governance and Administration (3)
        PUBADM518 - Introduction to Contract Management (3)
        PUBADM530 - Administrative Law and Regulation (3)
        PUBADM571 - Ethics in the Public Sector (3)

Grand Total Credits: 12

Course Offerings

CONFLICT—Conflict Management

CONFLICT510 Conflict Management (3-0-3)(F). Students explore techniques and strategies for how to better manage the interpersonal conflicts they will experience in life. Conflict management theory and techniques will be applied in interpersonal, intergroup, organizational, and community settings through experiential learning that will focus on skills such as self-awareness, active listening, reflection, reframing, and building strong relationships.

CONFLICT511 Negotiation (2-0-2)(F/S). Negotiation is the theory and practice of communicating with others to achieve a goal. Explores both competitive and cooperative approaches to negotiation and emphasizes skill development with a focus on negotiation planning and numerous negotiation roleplays.

CONFLICT512 Mediation (3-0-3)(F/S). Students learn the theoretical foundations of negotiation and mediation, types of mediation, mediation models, mediation case work skills, and interpersonal communication skills for facilitating communication. Students will learn how to work as a third party neutral to facilitate mediation sessions between individuals in conflict. Students will engage in intensive skills development as they work with coaches and mediate several simulated and/or actual practice cases.

CONFLICT513 Mediation and Negotiation (3-0-3)(F). Students learn the theoretical foundations of negotiation and mediation. Including both competitive and cooperative approaches to negotiation and types of mediation, mediation models, mediation case work skills, and interpersonal communication skills for facilitating communication. Students will learn how to work as a third party neutral to facilitate mediation sessions between individuals in conflict. Students will engage in intensive skills development with a focus on negotiation planning and mediation practice.

CONFLICT514 Conflict Coaching and Facilitation (3-0-3)(S). Introduces students to two main conflict management techniques, conflict coaching and facilitation. For coaching: the steps of conflict coaching are presented, along with the appropriate questioning and communication skills needed to facilitate and one on one conversation. For facilitation: an overview of group dynamics, facilitator challenges, and strategies for successful facilitation. Students develop strong facilitation skills to keep conversations productive, on track, and leading to strong outcomes as a key to effective leadership. Both skill sets focus on future solutions and participant goals.

CONFLICT515 Culture and Conflict (3-0-3)(S). Focuses on the importance of culture in everyday lives, and the ways in which culture interrelates with and effects conflict and communication processes. Learning to communicate across cultures is imperative to our ability to function in a diverse workplace, city, and world. Using discussions, this course is designed to increase sensitivity to other cultures.

CONFLICT516 Group Facilitation (2-0-2)(S/SU). An overview of group dynamics, facilitator challenges, and strategies for successful facilitation. Students develop strong facilitation skills to keep conversations productive, on track, and leading to strong outcomes as a key to effective leadership. Learn to manage opposing opinions, different communication styles, difficult people, and difficult topics in order to help a group produce the best possible outcomes. COREQ: CONFLICT510, CONFLICT511, and CONFLICT512.

CONFLICT517 Conflict Coaching (2-0-2)(F/SU). Introduces participants to a one-on-one method of helping others effectively increase their conflict resolution competencies. The steps of conflict coaching is presented, along with the appropriate questioning and communication skills needed to facilitate. Focuses on future solutions and goals that the coaches creates with the communicative guidance of the coach. This method can benefit anyone facing conflict – whether the conflict is personal, professional, or academic. COREQ: CONFLICT510, CONFLICT511, or CONFLICT512.

CONFLICT565 Conflict Management in Environment, Natural Resource, and Energy Policy (3-0-3)(F/S/SU). Public and private interests in environmental, natural resource, and/or energy policy often clash. Examines processes to manage larger scale issues, the roles of government and private entities in these conflicts, and case studies of regional interest.

CONFLICT575 Conflict Analysis (3-0-3)(F/S/SU). Procedures are examined and analysis methods will be applied to regional policy or environmental conflict issues.

CONFLICT579 Connected Experiences in Conflict (1-0-1)(F/S). Offers students an opportunity to engage in reflection in relation to conflict management theory that stood out to them during their experience in the conflict management program. Students research these areas and be

encouraged to connect conflict management theory to their majors and future careers. COREQ: CONFLICT516 or CONFLICT517.

PUBADM—Public Administration

PUBADM500 Administration in the Public Sector (3-0-3)(F,S). Designed to introduce students to the broad field of public administration at the graduate level. The course surveys a number of important issues in contemporary public administration, including an emphasis on political, legal, economic and social institutions and processes.

PUBADM501 Public Policy Process (3-0-3)(F/S). Process of policymaking both within an agency and within the total governmental process, emphasizing policy and program planning, policy implementation and the value system of administrators.

PUBADM502 Organization Behavior and Management (3-0-3)(F/S). Considers the theories and practices of organization behavior and management in public and nonprofit organizations.

PUBADM503 Research Methods in Public Administration (3-0-3)(F/S). An introduction to quantitative and qualitative data analysis with an emphasis on using descriptive and inferential statistics as tools in both public policy analysis and public program analysis. The use of quantitative analysis to support management decision making is examined. Computers will be used in the analysis of quantitative data.

PUBADM504 Public Budgeting and Financial Administration (3-0-3)(F/S). Determination of fiscal policy, budgeting processes, and governmental forms of budgeting. Consideration of fiscal policy and processes in various program areas. Emphasis on the interface between technical and political processes. COREQ: PUBADM500 or PERM/PROG DIR.

PUBADM505 Personnel Administration for Public Service (3-0-3)(F/S). Examines the personnel/human resource management role as it has evolved in the public service sectors. Multiple responsibilities of personnel managers in the public and nonprofit sectors will be examined, and the link between public policy and personnel management is explored. COREQ: PUBADM500 or PERM/PROG DIR.

PUBADM506 Qualitative Analysis and Methodology (3-0-3)(F/S). Interviews, observation, focus group methods examined in relation to planning and public administration. Other topics include communication skills in terms of writing, presentation, interpersonal dialogue, and group process. PREREQ: PUBADM533 or PERM/INST.

PUBADM507 Intermediate Quantitative Analysis and Methodology (3-0-3)(F/S). Elementary distribution theory, statistical inference, and an introduction to multiple regression. Emphasis on practical applications. PREREQ: PUBADM533 or PERM/INST.

PUBADM508 Advanced Survey Research (3-0-3)(F/S). Addresses the theoretical and practical nexus between public policy and public opinion and the role that surveys play in that relationship. Students engage directly in advanced survey research through design, implementation, sampling, data collection, follow-up, analysis, and ethical considerations. PREREQ: PUBADM533 or PERM/INST.

PUBADM509 Public Policy Analysis (3-0-3)(F/S). Introduces policy analysis, policy tools, and factors shaping the utilization of policy analysis. A significant portion of the course is spent in learning and applying analytical techniques. PREREQ: PUBADM501 or PERM/INST.

PUBADM510 Program Evaluation (3-0-3)(F/S). Explores issues related to evaluation research and design with particular attention to design and critique of process, outcome, and impact evaluations and the utility of evaluation in performance monitoring. PREREQ: PUBADM533 or PERM/INST.

PUBADM511 Decision-Making in Public and Nonprofit Management (3-0-3)(F/S). Designed to introduce decision theory and optimization techniques and tools in public and nonprofit organizations to provide basic techniques related to planning, monitoring, managing, and measuring program performance.

PUBADM512 Information Technology and Public Policy (3-0-3)(F/S) (Alternate years). Examines implications of information technology for policymaking and policy analysis as well as the management of knowledge and information in and between organizations.

PUBADM513 Economics of Public Policy (3-0-3)(F/S)(Alternate years). Contributions of economic analysis to the justification, design, and implementation of economic policy, especially as it relates to the market economy and the benefits and costs associated with government intervention.

PUBADM514 Introduction to Nonprofit Management and Collaboration (3-0-3)(F/S)(Alternate years). The course examines the implementation of public policy through nongovernmental organizations. Students will gain a general understanding of the history of philanthropy in selected nations and will explore the various social, economic, and political assumptions that found contemporary cross-sector delivery systems.

PUBADM515 Policy Implementation and Practice (3-0-3)(F/S)(Alternate years). Examines mechanisms, assumptions, and measurement issues surrounding various forms of public policy implementation including the use of direct service delivery by public organizations, collaborative systems and the use of for-profit and nonprofit organizations.

PUBADM516 City-County Governance and Administration (3-0-3)(F/S). Introduction to different urban and rural political systems, governance and administration including variations in electoral structures, governing bodies, and an analysis of political parties, interest groups and emerging policy issues.

PUBADM517 Resource Management in Nonprofit Organizations (3-0-3) (F/S/SU). Explores the unique political and legal environment facing nonprofits and best practices in effectively and efficiently managing human and financial resources.

PUBADM518 Introduction to Contract Management (3-0-3)(F/S/SU). Explores issues, trends, ethics, and best practices in contract management from the pre-award phase through post-award.

PUBADM530 Administrative Law and Regulation (3-0-3)(F/S). Sources of power and duties of administrative agencies, rules and regulations made by agencies through investigation and hearings, judicial decisions and precedents relating to administrative activities.

PUBADM532 Grant Writing (3-0-3)(F/S). Students will explore the skills and techniques associated with successful grant writing and will prepare a grant proposal.

PUBADM533 Research Design and Measurement (3-0-1)(F/S). Introduction to the role of data in public management including ethical concerns of conducting research, the research design process and measurement. Course meets for 5 weeks.

PUBADM534 Descriptive Statistics (3-0-1)(F/S). Introduction to descriptive statistics including central tendency, measures of dispersion, normal distribution, contingency tables, data collection and sampling using SPSS. Course meets for 5 weeks. COREQ: PUBADM533 or PERM/INST.

PUBADM535 Inferential Statistics (3-0-1)(F/S). Explores inferential statistics with attention to hypothesis testing, cross-tabs with Chi-Square, independent samples t-test, ANOVA, association/correlation and simple regression using SPSS. Course meets for 5 weeks. COREQ: PUBADM533 or PERM/INST.

PUBADM536 Introduction to Survey Research Methods (3-0-1)(F/S). Introduction to several methods of conducting surveys to explore the strengths and limitations of this mode of data collection including developing instruments and assessing results. Course meets for 5 weeks. COREQ: PUBADM533 or PERM/INST.

PUBADM537 Advanced Statistical Techniques (3-0-1)(F/S). Explores more advanced techniques including multiple regression, logistic regression, dummy variables, multicollinearity, regression assumptions and time series modeling. Course meets for 5 weeks. COREQ: PUBADM533 or PERM/INST.

PUBADM540 Contemporary Issues in Natural Resource and Environmental Policy and Administration (3-0-3)(F/S). Examines current and topical issues and controversies in natural resource and environmental policy from the perspective of public policy and public administration.

PUBADM541 Environmental and Regulatory Policy and Administration (3-0-3)(F/S). Examines aspects of environmental regulatory politics and policy. Topics examined include the politics of regulation, pollution and energy policy, and intergovernmental environmental management.

PUBADM542 Science, Democracy, and the Environment (3-0-3)(F/S). Examines the role of science and scientists in the formation of U.S. environmental policy making. Special attention is given to the tension between elite and democratic forms of decision making.

PUBADM543 Public Land and Resource Policy and Administration (3-0-3)(F/S). Examines the major issues, actors, and policies affecting the public lands and resources of the United States. Special attention is paid to the processes, institutions, and organizations that influence how public land policy and resource policy is made.

PUBADM544 Energy Policy in the Western U.S. (3-0-3)(F/S). Examines energy resources, uses, reserves, and the perspectives of citizens impacted by resource extraction and use in the U.S. West. Emphasis is placed on current resource extraction developments in the oil, gas, coal, oil shale, tar sands, nuclear, and renewable industries.

PUBADM545 U.S. Energy Policy (3-0-3)(F/S). Explores the key issues in the development of major energy policy choices in the U.S. with attention paid to issues with international ramification.

PUBADM546 Climate Change Policy and Administration (3-0-3)(F/S). Considers multiple aspects of climate change, global warming, and related issues such as mitigation, adaptation, resilience, and vulnerability in relation to public policy and administration. Considering climate change is defined through science, politics, competing perspectives, alternate and available solutions will frame the course.

PUBADM547 Water Resources Policy and Management (3-0-3)(F/S). Considers water resource policy, management, and politics in the U.S. with attention to the clean Water Act, the Endangered Species Act, water allocation, public trust doctrines, and current water resource issues.

PUBADM548 Natural Resource and Environmental Governance (3-0-3) (F/S). Examines the various governance approaches used in diverse and complicated environmental and natural resource problems. It will examine these approaches as they are applied in the areas of water, land use, energy, and other natural resource areas.

PUBADM549 Environmental Assessment and Data Analysis (3-0-3)(F/S). Examines the various techniques for data collection, analysis, evaluation, and reporting in order to inform environmental decision-making by governmental, private sector, and nongovernmental policy actors.

PUBADM550 The Executive and the Administrative Process (3-0-3)(F/S). This course covers the powers and responsibilities of elected and appointed executives in the public sector. Concepts examined in the class include leadership and management, executive roles, management theories and styles, relationships with the separate branches of government and other actors in the political environment. The unique position of the executive between politics and administration and the relevant activities in policy formation through implementation form the basis of discussion.

PUBADM551 Environmental Management Techniques (3-0-3)(F/S). Examines past, existing, and best practices for environmental management. Using a case study approach from the perspective of public administration and management, this class explores what management tools are used, and their level of success.

PUBADM552 Environmental Communication and Decision-Making (3-0-3)(F/S). Examines processes by which policy actors communicate information about the environment, natural resources, and how they affect decision-making and behavior at both individual and institutional-levels.

PUBADM554 21St Century Opportunities and Challenges in Energy (3-0-3)(F/S). Exposes students to a range of domestic and international complexities and tradeoffs in energy systems with an emphasis on choice. Change in energy policy and technology will be covered in the context of practices, critical infrastructure, and markets.

PUBADM555 Security Regulation and Policy for Nuclear, Radiation and Cyber-Related Risk (3-0-3)(As justified). This regulation and policy course examines nuclear-radiation security, including cyber-nuclear risk, with an emphasis on the civilian sector. Topics will include: historical developments and relationships across nuclear security, safety and safeguards; national and international legal frameworks; organizations; transport and import/export; cooperation; culture and management.

PUBADM560 State and Local Government Policy and Administration (3-0-3)(F,S). This course examines state and local government administration in a political and organizational context and the attendant interunit, intersector, and interjurisdictional cooperation and conflict in policy administration. Attention is paid to management in a federal system with a focus on nation-state-local relations.

PUBADM561 How to Plan a Career in Public Service (1-0-1)(F/S/SU). Examines key skills for public servants that are marketable to employers, and career paths that include employment in public, private, and non-profit organizations.

PUBADM562 How Public Policy Is Made (1-0-1)(F/S/SU). Examines the public policy process including stages, types, and the roles public servants play.

PUBADM563 How the Legislative Process Works (1-0-1)(F/S/SU). Examines the process by which decisions are in made in legislative bodies, including parliamentary process and budgetary allocations.

PUBADM564 How to Engage Citizens (1-0-1)(F/S/SU). Examines importance of citizen participation in policy processes, including the role of social capital.

PUBADM565 How to Manage Public Finances (1-0-1)(F/S/SU). Examines key issues in public financial management, including basic government accounting and regulations governing public spending.

PUBADM566 How to Navigate Ethical Challenges (1-0-1)(F/S/SU). Provides an introduction to ethical challenges faced by public servants, including legal responsibilities.

PUBADM567 How to Deal with People (1-0-1)(F/S/SU). Explores issues related to leadership, mentoring and training employees, and working with others.

PUBADM568 How to Negotiate Risks (1-0-1)(F/S/SU). Examines the way in which organizations make an assessment of, control, and transfer risk.

PUBADM569 How to Make Policy Choices (1-0-1)(F/S/SU). Introduction to techniques used to assess the potential impacts of policy choices.

PUBADM570 Public Management Skills and Techniques (3-0-3)(F/S). This course addresses such knowledge and skills for managers and leaders in public organizations as: personal assessment; leading and managing others; aspects of self and others which underlie behavior; managing stress and time; decision making; public participation; working with elected and appointed public officials; working with the media; solving problems; communicating supportively and assertively; appropriately using power and influence; understanding motivational processes; managing conflicts; empowering and delegating; and building teams.

PUBADM571 Ethics in the Public Sector (3-0-3)(F/S). Examination of ethical dilemmas facing civil servants and elected officials utilizing case studies, current ethics statutes, and approaches in the public administration literature to the subject.

Selected Topics (1-3 Variable). To be offered as staff availability permits:

> **PUBADM580 Administrative Theory and Practice**
>
> **PUBADM581 Natural Resource and Environmental Policy**

> **PUBADM582 Public Policy and Policy Analysis**
>
> **PUBADM583 Public Management Skills and Techniques**
>
> **PUBADM584 State and Local Government Policy and Administration**
>
> **PUBADM585 Intergovernmental Relations**
>
> **PUBADM586 Community and Regional Planning**
>
> **PUBADM587 Comparative Public Administration and Planning Systems**

PUBADM597 Special Topics Special Topics (1-3 credits). Offered occasionally and reflect emerging topics in public administration.

PUBADM601 Philosophy of Social Inquiry (3-0-3)(F/S). Explores epistemological and normative issues involved in social science and public policy research. PREREQ: Admission to the PhD in Public Policy and Administration program or PERM/INST.

PUBADM602 Theories of Public Administration (3-0-3)(F/S). Examines political, social, economic, and administrative theories that have shaped democratic government and its institutions and processes. Topics include prominent writings in both political and public administration theory. PREREQ: Admission to the PhD in Public Policy and Administration program.

PUBADM603 Theories of Public Policy (3-0-3)(F/S). Examines the study of public policy and its administration using the development and refinement of technical oral and written communication skills and the preparation of research critiques. PREREQ: Admission to the PhD in Public Policy and Administration program.

PUBADM604 Advanced Techniques in Policy Research (3-0-3)(F/S). Direct application of quantitative and qualitative analysis to contemporary and emerging local, regional, state, national, comparative policy questions. Students are expected to work on selected policy research projects with identified public, private or nonprofit organizations. PREREQ: Admission to the PhD in Public Policy and Administration program and PUBADM503 and 9 credits from PUBADM506, PUBADM507, PUBADM508, PUBADM509, PUBADM510, GEOG560; or PERM/INST.

PUBADM605 Seminar in Environmental Policy and Administration (3-0-3)(F/S). Examines the major issues, policy choices, and actors in current environmental and natural resource policy. Attention is centered upon, but not limited to, U.S. policies and issues. PREREQ: Admission to the PhD in Public Policy and Administration program or PERM/INST.

PUBADM606 Seminar in State and Local Government Policy and Administration (3-0-3)(F/S). Examines current issues in state and local governance, with some particular attention paid to Western U.S. and state of Idaho issues and policies. PREREQ: Admission to the PhD in Public Policy and Administration program or PERM/INST.

PUBADM607 Advanced Public Administration Studies (3-0-3)(F/S). Explores advanced practical applications of political, social, economic, and administrative theories related to local, regional, state, national, comparative policy questions. PREREQ: Admission to the PhD in Public Policy and Administration program and PUBADM601 and PUBADM602; or PERM/INST.

PUBADM608 Advanced Public Policy Studies (3-0-3)(F/S). Explores advanced application of policy theory to local, regional, state, national, comparative policy questions. PREREQ: Admission to the PhD in Public Policy and Administration program and PUBADM601 and PUBADM603; or PERM/INST.

PUBADM609 Advanced Research Design (3-0-3)(F/S). Applies social science research design to advanced study of contemporary research questions in public policy and administration including advanced instruction in the development and presentation of research reports. PREREQ: Admission to the PhD in Public Policy and Administration program, completion of 12 credits in the methodology sequence, and completion of 3 credits from PUBADM607 or PUBADM608; or PERM/INST.

Department of Respiratory Care

College of Health Sciences | School of Allied Health Sciences

Chair: Megan Koster
Health Sciences Riverside, Room 207
(208) 426-3319 (phone)
(208) 426-4093 (fax)
respcare@boisestate.edu (email)
boisestate.edu/respiratorycare (website)

Graduate Faculty: Coyle, Koster

Graduate Degree Offered

- Master of Science in Respiratory Care

MASTER OF SCIENCE IN RESPIRATORY CARE

Graduate Program Director: Megan Koster
Health Science Riverside, Room 207C
(208) 426-3383 (phone)
msrconline@boisestate.edu (email)
boisestate.edu/respiratorycare/msrc (website)

General Information

This online program is designed for Registered Respiratory Therapists (RRT) who hold a valid credential and baccalaureate degree to pursue a Master of Science in Respiratory Care (MSRC) degree. Program curriculum, focused in educational leadership, is designed to support the professional advancement of RRTs who wish to advance the scope of Respiratory Care practice through the pursuit of administration and educational positions, either in academia or the healthcare setting, or those who wish to serve as leaders in the clinical setting by becoming content experts or consultants prepared with an advanced understanding of cardiopulmonary physiology and disease management.

This program admits students to an annual cohort and courses are to be taken sequentially, culminating in a research-based capstone course. Students will be required to enroll in two seven-week courses per semester; however, each course will be taken independently. This 36-credit program, offered solely online, is a unique opportunity for baccalaureate-prepared Respiratory Therapists interested in advancing their careers to do so by examining an integrated curriculum that not only emphasizes educational, health, management theory as it applies to clinical practice, but also challenges the student to engage with colleagues from across the nation in a variety of healthcare settings to explore those theories in varying contexts. Students will gain a graduate-level understanding of cardiopulmonary physiology and disease management and will be prepared to and encouraged by the MSRC faculty to pursue presentation or publication of their research topics. Additionally, graduates will be prepared with the advanced clinical knowledge necessary to pursue several of the advanced credentialing exams offered by the National Board for Respiratory Care (NBRC). This program has been designed with Respiratory Therapists working throughout the healthcare system in mind and students accepted to this program can expect to complete the course sequence in two years.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: June 1 (fall)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Personal Statement
  - A personal statement that includes your professional background, goals for the program, and research interests.
- Submit Current Resume or Curriculum Vitae (CV)
- Submit Additional Materials
  - Provide proof of a valid RRT credential and valid state license.
- Submit Letters of Recommendation
  - Two letters of recommendation from academic or professional references. These letters should address your preparation for graduate study, potential for success in a graduate program, strengths and weaknesses, and the benefits the you may receive from graduate study.

Degree Requirements

Master of Science in Respiratory Care

Graduate Major Requirements
30 Total Credits

Take the following:
RESPCARE500 - Educational Leadership (3)
RESPCARE505 - Evidence Based Medicine (3)
RESPCARE510 - Advanced Cardiopulmonary Physiology (3)
RESPCARE516 - Advanced Pulmonary Disease Management (3)
RESPCARE521 - Applied Research Methods (3)
RESPCARE525 - Educational Methodology (3)
RESPCARE530 - Advanced Cardiovascular Disease Management (3)
RESPCARE535 - Managing Organizational Change (3)
RESPCARE540 - Healthcare Management (3)
RESPCARE545 - Ethics of the Profession (3)

Graduate Culminating Activity and Other Requirements
6 Total Credits

Take the following:
RESPCARE570 - Capstone (6)

Grand Total Credits: 36

Course Offerings

RESPCARE—Respiratory Care

RESPCARE500 Educational Leadership (3-0-3)(F). Introduction of theoretical frameworks of leadership theory. Focuses on integration of concepts through thorough analysis of site-specific leadership. Students examine, diagnose, recommend, and reassess leadership strategies. Includes application project for site-study of student's choosing. PREREQ: Admission to the MSRC program.

RESPCARE505 Evidence Based Medicine (3-0-3)(F). Focuses on the student as a critical user of medical literature. Focus is on the ability to frame a clinical question, search the medical literature, weigh evidence based on study design and quality of research, interpretation of basic statistics used in clinical research, and interpretation of clinical summaries in the form of meta-analysis, systematic review, and clinical practice guidelines. COREQ: RESPCARE500.

RESPCARE510 Advanced Cardiopulmonary Physiology (3-0-3)(S). Provides in-depth examination of advanced physiology of the cardiovascular and pulmonary systems. Topics include study of cell biology, respiratory physiology, cardiac and circulatory function with relevant clinical application of concepts in cell biology, regulation and function of the cardiovascular system, gas exchange and transport, breathing regulation, and respiratory insufficiency. PREREQ: RESPCARE500 and RESPCARE505.

RESPCARE516 Advanced Pulmonary Disease Management (3-0-3) (S). Explores pulmonary disease management and presents the pathophysiology, diagnosis, and management of common respiratory diseases that Respiratory Therapists encounter in clinical practice. Includes the development of care plans and student-lead online discussions related to specific disease entities of their choosing. PREREQ: Admitted to Respiratory Care MS.

RESPCARE521 Applied Research Methods (3-0-3)(SU). Introduces types of research methods used in both healthcare and educational research. Emphasis is on the principles, methods, and statistical techniques used in modern health and educational environments. Focus is on development of a critical research question(s), review of literature, and proposed methodology for a capstone project of the student's choosing. PREREQ: Admitted to Respiratory Care MS.

RESPCARE525 Educational Methodology (3-0-3)(SU). Focuses on educational theory in academic, clinical, patient-centered, community-based, or preventative settings. Focus is on understanding of instructional design, development, and assessment components, as well as identification and development of objectives based in learning and/or health promotion theory. PREREQ: Admitted to Respiratory Care MS.

RESPCARE530 Advanced Cardiovascular Disease Management (3-0-3)(F). Explores cardiovascular disease management and presents the pathophysiology, diagnosis, and management of common cardiovascular diseases that Respiratory Therapists will encounter in clinical practice. Builds on the development of care plans and student-lead related discussion forums on topics related to specific disease entities of their choosing. PREREQ: Admitted to Respiratory Care MS.

RESPCARE535 Managing Organizational Change (3-0-3)(F). Focuses on leadership in an organizational setting. Examines leadership perspectives on the function and dynamics of organizational goal setting. Students are exposed to common organizational dilemmas and challenged to recommend a plan of action to minimize disruption. PREREQ: Admitted to Respiratory Care MS.

RESPCARE540 Healthcare Management (3-0-3)(S). Focuses the various responsibilities of managing a Respiratory Care department. Topics include a general overview and comparison of health delivery systems, opportunities for quality improvement, staffing and reimbursement structures, financial planning, and innovative leadership to address organizational goals. PREREQ: Admitted to Respiratory Care MS.

RESPCARE545 Ethics of the Profession (3-0-3)(S). Examines the facets of moral and ethical development from a macro-level leadership perspective. Students work closely with classmates. Provides framework to examine, articulate, and discuss the application of ethical frameworks to specific cases of both organizational and health care-specific ethical dilemmas. PREREQ: Admitted to Respiratory Care MS.

RESPCARE570 Capstone (6-0-6)(SU). Focus is on finalizing capstone projects alongside an advisory team to meet the final program requirements. Capstone project topics may focus on quality improvement, educational modules, advanced practice protocols, management, community service, or primary clinical research. PREREQ: RESPCARE515.

School of Social Work

College of Health Sciences

Interim Director: Joelle Powers
Education Building, Room 716
(208) 426-1568 (phone)
(208) 426-4291 (fax)
boisestate.edu/socialwork (website)

Graduate Faculty: Alam, Allen, Beauchemin, Chonody, Esp, Hutson, Kenaley, Liley, Magen, Obenshain, O'Reilly, Powers, Williams, Witt

Graduate Degrees Offered

- Master of Social Work
- Master of Social Work—Advanced Standing

MASTER OF SOCIAL WORK

Online Graduate Program Coordinator: Jennifer Obenshain
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On Campus Graduate Program Coordinator: Jill Chonody
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General Information

The Master of Social Work (MSW) is accredited by the Council on Social Work Education (reaffirmed in 2019). The program is designed to prepare students for advanced social work practice with individuals and families. Students learn clinical, organizational, policy, and administrative skills necessary for promoting social justice and equality, and enhancing the quality of life for all people. The program provides a broad and in-depth knowledge base in order to prepare students for advanced social work practice in a wide array of settings.

The School does not approve academic credit for prior work or life experience. Applicants are required to submit to criminal background clearances at their own expense during the admission process. Information obtained from the background clearances deemed to be detrimental to social work practice will impact your entrance into the program. More information on the background clearances can be found in the School of Social Work's policies. Both the Master of Social Work and the Master of Social Work—Advanced Standing degrees can be earned on the Boise campus program or the fully online program. The Master of Social Work—Advanced Standing can also be earned at Boise State's regional site in Coeur d'Alene.

The Master of Social Work Program has one specialization: Advanced social work practice with individuals and families within households, groups, organizations, and communities. Students in the two year program must complete a total of 61 credits including 18 credits in Field Work. Students in the Advanced Standing program complete 37 credits with 12 credits in Field Work.

Students may receive certification to practice school social work in the State of Idaho by completing SOCWRK562 School Social Work, SOCWRK575 and SOCWRK576 in an approved K-12 educational setting under the supervision of a professional social worker, and all other requirements for the Master of Social Work degree. Students may be eligible to receive certification in school social work in other states depending on specific state licensing criteria.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Online Deadlines: April 15 (fall), August 15 (spring), January 15 (summer)
  - In-Person Deadlines: December 1 (fall priority), March 1 (fall final)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
  - Applicants with a GPA less than 3.00 may be considered for provisional admission.
- Submit English Proficiency*, see page 21
  - TOEFL—iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS—6.5
- Submit Personal Statement
  - A personal statement is required. Your essay will address how your experiences, perspective, and distinguishable qualities can positively contribute to the Master of Social Work program and the field of social work. Your essay should reflect your best professional writing, and be no more than seven (7) double-spaced pages with 1-inch margins on all sides. For full details, visit d25vtythmttl3o.cloudfront.net/uploads/sites/74/2021/07/MSW-Personal-Essay-Instructions.pdf.
- Submit Current Resume or Curriculum Vitae (CV)
  - A resume or curriculum vitae that Includes any paid or unpaid social work experience shown in chronological order with the most recent activity listed first.
- Interview—Final candidates are invited for an interview.
- Submit Background Check
  - Complete a CastleBranch BJ53 Criminal Background Check (for an additional fee)
- Submit Additional Materials
  - Complete a notarized copy of the Licensing, Certification and Professional Program History Disclosure form d25vtythmttl3o.cloudfront.net/uploads/sites/74/2021/03/MSW.NotarizedForms.fillable.pdf
- Submit Letters of Recommendation
  - Three letters of recommendation from academic faculty member(s) and supervisor(s). At least one letter must be from a previous instructor and one from a supervisor. Recommendations from relatives, friends or colleagues will not be accepted. If it has been more than six (6) years since you last worked with the instructor, you can replace this recommendation with a letter from a second supervisor. If you do not have professional work experience, you can replace the letter from a supervisor with a recommendation from a second instructor.
- Submit Graduate Assistantship Application
  - Deadline: May 1

Degree Requirements

Master of Social Work

Graduate Major Requirements
61 Total Credits

Complete all of the following
Foundation:
Take the following:
SOCWRK503 - Foundation Social Work Practice I: Individuals (3)
SOCWRK504 - Foundation Social Work Practice II: Families and Groups (3)
SOCWRK505 - Foundation of Social Welfare Policy (3)
SOCWRK512 - HBSE I Human Development through the Life Cycle (3)
SOCWRK514 - Ethnicity, Gender, and Class (2)
SOCWRK515 - Foundation Social Work Practice III: Organizations and Communities (3)
SOCWRK521 - HBSE II Social Dimensions of Human Behavior (3)
SOCWRK530 - Foundation of Research I (2)
SOCWRK531 - Foundation of Research II (2)
SOCWRK570 - Foundation Field Work I (2)
SOCWRK572 - Foundation Field Work II (2)
SOCWRK573 - Foundation Practicum Seminar I (1)
SOCWRK574 - Foundation Practicum Seminar II (1)
Advanced:
Take the following:
SOCWRK506 - Program Leadership and Management (3)
SOCWRK525 - Advanced Social Work Interventions II: Individuals and Families (3)
SOCWRK526 - The Evaluation and Treatment of Mental Disorders (3)
SOCWRK532 - Advanced Research: Program and Practice Evaluation (3)
SOCWRK550 - Advanced Interventions I: Comparative Theories (3)
SOCWRK575 - Advanced Social Work Practicum I (5)
SOCWRK576 - Advanced Social Work Practicum II (5)
SOCWRK577 - Advanced Practicum Seminar I (1)
SOCWRK578 - Advanced Practicum Seminar II (1)
Two Electives:
Take at least 4 credits from the following:
Specialization Electives (2 credits each) Selected Topics (Elective options will vary from year to year, and may include these or other pertinent topics.) Child Welfare, Health Issues, School Social Work, Social Work with the Elderly, Substance Abuse, Trauma Informed Practice
Curriculum Guidelines established by the Council of Social Work Education are available in the School of Social Work office.
Grand Total Credits: 61

Degree Requirements

Master of Social Work—Advanced Standing

Graduate Major Requirements
37 Total Credits

Complete all of the following
Summer Session:
Take the following:
SOCWRK513 - Advanced Issues in Human Diversity (3)
SOCWRK529 - Research and Statistics for Social Work (3)
Advanced Year:
Take the following:
SOCWRK506 - Program Leadership and Management (3)
SOCWRK525 - Advanced Social Work Interventions II: Individuals and Families (3)
SOCWRK526 - The Evaluation and Treatment of Mental Disorders (3)
SOCWRK532 - Advanced Research: Program and Practice Evaluation (3)
SOCWRK550 - Advanced Interventions I: Comparative Theories (3)
SOCWRK575 - Advanced Social Work Practicum I (5)
SOCWRK576 - Advanced Social Work Practicum II (5)

SOCWRK577 - Advanced Practicum Seminar I (1)
SOCWRK578 - Advanced Practicum Seminar II (1)
Two Electives:
Take at least 4 credits from the following:
Specialization Electives (2 credits each) Selected Topics (Elective options will vary from year to year, and may include these or other pertinent topics.) Child Welfare, Health Issues, School Social Work, Social Work with the Elderly, Substance Abuse, Trauma Informed Practice
Curriculum Guidelines established by the Council of Social Work Education are available in the School of Social Work office.
Grand Total Credits: 37

Course Offerings

REFUGEE—Refugee Services

REFUGEE507 (SOCWRK507) Introduction to Refugee Program Supervision and Management (3-0-3)(S). Supervision and management knowledge and skills for agencies serving refugee clients. Financing, grant writing, budget management as well as supervision, staff retention strategies, managing vicarious trauma, workload management and outcomes monitoring. May be taken for credit in REFUGEE or SOCWRK but not both. COREQ: REFUGEE517 or SOCWRK517; and REFUGEE518 or SOCWRK518.

REFUGEE508 (SOCWRK508) Advanced Refugee Macro Practice (3-0-3)(F). Covers the current policy and issues related to refugee resettlement, follows any legislation related to refugees that is in process at the federal and state levels, and teaches strategies for effective community change and advocacy. May be taken for credit in REFUGEE or SOCWRK but not both. COREQ: REFUGEE517 or SOCWRK517; and REFUGEE518 or SOCWRK518.

REFUGEE509 (SOCWRK509) Management of Clinical Services for Refugees (3-0-3)(S). Teaches non-clinical administrators, managers and supervisors about clinical services in health and mental health programs serving refugee clients. Examines best practice and cross-cultural health and mental health programs. Prepares supervisors and managers for informed decision-making, problem-solving, policy development and advocacy. May be taken for credit in REFUGEE or SOCWRK but not both. PREREQ: REFUGEE507 or SOCWRK507; and REFUGEE517 or SOCWRK517; and REFUGEE518 or SOCWRK518.

REFUGEE510 (SOCWRK510) Refugee Services Capstone (3-0-3)(S). Prepares students to develop a professional portfolio and service project with refugees. May be taken for credit in REFUGEE or SOCWRK but not both. COREQ: REFUGEE507 or REFUGEE508 or REFUGEE519 or equivalent; and REFUGEE517 or SOCWRK517; and REFUGEE518 or SOCWRK518.

REFUGEE517 (SOCWRK517) Principles of Refugee Resettlement (3-0-3) (F/S). Explores the resettlement process in the United States. Provides knowledge and skills needed to assist in the resettlement experience of refugees. Examination of personal values and beliefs and their impacts on practice are integral. May be taken for credit in REFUGEE or SOCWRK but not both. PREREQ: Admission to MSW program or PERM/INST.

REFUGEE518 (SOCWRK518) Working Across Cultures with Refugees (3-0-3)(F/S). Provides a framework and skills practice for effective and competent cross-cultural practice with refugees in the human services. May be taken for credit in REFUGEE or SOCWRK but not both. PREREQ: Admission to MSW program or PERM/INST.

REFUGEE519 (SOCWRK519) Case Management with Refugees (3-0-3) (S). Case management knowledge and skills as applied in refugee serving agencies such as refugee resettlement, health settings and mental health agencies. May be taken for credit in REFUGEE or SOCWRK but not both. PREREQ: Admission to MSW program or PERM/INST.

SOCWRK—Social Work

SOCWRK503 Foundation Social Work Practice I: Individuals (3-0-3) (F,S,SU). This is the first practice course within the foundation year of the

MSW program. Practice I introduces students to values, knowledge, skills and competencies for generalist practice with individuals. Students practice key skills that include engagement, interviewing, assessment, contracting, intervention, recording, and the use of consultation and supervision in the context of social work values and ethics and affirming working relationships. PREREQ: Admission to MSW Program.

SOCWRK504 Foundation Social Work Practice II: Families and Groups (3-0-3)(F,S,SU). This is the second generalist practice course within the three-course practice sequence in the foundation year. This course builds on the foundational skills gained through successful completion of Practice I. Practice II introduces competencies required for social work practice with diverse families and small groups. PREREQ: SOCWRK503.

SOCWRK505 Foundation of Social Welfare Policy (3-0-3)(F,S,SU). Critically examines contemporary welfare policies, in a value-analytic framework, and in the context of the United States and international political economies. Emphasis is placed on values of equity, adequacy, and universality of access to basic social and economic security. Policy practice skills include identification and evaluation of policy problems, including their empirical and value dimensions, and skills in policy advocacy with legislators and with the general public. Major importance is placed on policies and programs that impact populations-at-risk. PREREQ: Admission to MSW Program.

SOCWRK506 Program Leadership and Management (3-0-3)(F,S,SU). This advanced course is designed to prepare students with the knowledge and skills for management and leadership in social service programs. PREREQ: SOCWRK572, SOCWRK574. COREQ: SOCWRK513, SOCWRK529.

SOCWRK507 (REFUGEE507) Introduction to Refugee Program Supervision and Management (3-0-3)(S). Supervision and management knowledge and skills for agencies serving refugee clients. Financing, grant writing, budget management as well as supervision, staff retention strategies, managing vicarious trauma, workload management and outcomes monitoring. May be taken for credit in REFUGEE or SOCWRK but not both. COREQ: REFUGEE517 or SOCWRK517; and REFUGEE518 or SOCWRK518.

SOCWRK508 (REFUGEE508) Advanced Refugee Macro Practice (3-0-3) (F). Covers the current policy and issues related to refugee resettlement, follows any legislation related to refugees that is in process at the federal and state levels, and teaches strategies for effective community change and advocacy. May be taken for credit in REFUGEE or SOCWRK but not both. COREQ: REFUGEE517 or SOCWRK517; and REFUGEE518 or SOCWRK518.

SOCWRK509 (REFUGEE509) Management of Clinical Services for Refugees (3-0-3)(S). Teaches non-clinical administrators, managers and supervisors about clinical services in health and mental health programs serving refugee clients. Examines best practice and cross-cultural health and mental health programs. Prepares supervisors and managers for informed decision-making, problem-solving, policy development and advocacy. May be taken for credit in REFUGEE or SOCWRK but not both. PREREQ: REFUGEE507 or SOCWRK507; and REFUGEE517 or SOCWRK517; and REFUGEE518 or SOCWRK518.

SOCWRK510 (REFUGEE510) Refugee Services Capstone (3-0-3)(S). Prepares students to develop a professional portfolio and service project with refugees. May be taken for credit in REFUGEE or SOCWRK but not both. COREQ: REFUGEE507 or REFUGEE508 or REFUGEE519 or equivalent; and REFUGEE517 or SOCWRK517; and REFUGEE518 or SOCWRK518.

SOCWRK512 HBSE I Human Development Through the Life Cycle (3-0-3) (F, S, SU). Provides knowledge of empirically based theories that focus on the interactions between and among individuals, groups, societies and economic systems. Students learn and apply life span theories and knowledge. Examines social systems in which people live and their influence in maintaining or achieving health and well-being. Explores the consequences of difference on a person's life experiences. PREREQ: Admission to MSW Program.

SOCWRK513 Advanced Issues in Human Diversity (3-0-3)(F,S,SU). Provides learning opportunities to increase knowledge to effectively work with persons from diverse backgrounds. A highly experiential course requiring overt and candid investigation of personal identity development and its impact on social work practice with persons from diverse backgrounds. PREREQ: Admission to Advanced Standing MSW Program.

SOCWRK514 Ethnicity, Gender, and Class (2-0-2)(F,S,SU). This experiential course in a small group format is designed to provide a positive environment for students' exploration of their attitudes toward human diversity. Students will increase their knowledge and awareness of the experiences of people of oppressed groups, in relation to historical prejudice and discrimination. Students will gain insight in sociohistorical and familial roots of their own biases and increase their ability to sensitively work with individuals and groups, who are subjected to oppression, based on race, ethnicity, gender, sexual orientation, class, and other stigmatizing characteristics. PREREQ: Admission to MSW Program.

SOCWRK515 Foundation Social Work Practice III: Organizations and Communities (3-0-3)(F,S,SU). This is the third generalist practice course within the foundation year of the MSW program. Practice III introduces students to theories and skills required for social work practice in organizational and community settings. Using organizations and communities as settings for social work practice and targets of change, and based on social work values and ethics, students learn strategies and skills for assessment and intervention. Conceptual models of macro change are examined including social planning, community organizing, social action, and community/organizational development and change. PREREQ: SOCWRK503. COREQ: SOCWRK504, SOCWRK521.

SOCWRK517 (REFUGEE517) Principles of Refugee Resettlement (3-0-3) (F/S). Explores the resettlement process in the United States. Provides knowledge and skills needed to assist in the resettlement experience of refugees. Examination of personal values and beliefs and their impacts on practice are integral. May be taken for credit in REFUGEE or SOCWRK but not both. PREREQ: Admission to MSW program or PERM/INST.

SOCWRK518 (REFUGEE518) Working Across Cultures with Refugees (3-0-3)(F/S). Provides a framework and skills practice for effective and competent cross-cultural practice with refugees in the human services. May be taken for credit in REFUGEE or SOCWRK but not both. PREREQ: Admission to MSW program or PERM/INST.

SOCWRK519 (REFUGEE519) Case Management with Refugees (3-0-3) (S). Case management knowledge and skills as applied in refugee serving agencies such as refugee resettlement, health settings and mental health agencies. May be taken for credit in REFUGEE or SOCWRK but not both. PREREQ: Admission to MSW program or PERM/INST.

SOCWRK521 HBSE II Social Dimensions of Human Behavior (3-0-3) (F,S,SU). Utilizes a variety of theoretical perspectives to examine the impact of social systems and institutions on human behavior. Draws on traditional and alternative/conflict theoretical perspectives and the role of systemic oppression and discrimination to examine how experiences differ across factors such as race/ethnicity, immigration status, gender, gender identity/expression, sexual orientation, ability, social and economic status, political ideology, and religiosity/spirituality. Examines strategies designed to eliminate oppressive structural barriers and ensure human rights are protected. PREREQ: SOCWRK512.

SOCWRK522 Bereaved Children (3-0-3)(F,S,SU). An intensive service-learning hybrid course built on the premise that individual citizens have both the opportunity and responsibility to be involved in addressing community problems. Using a human development theoretical framework, students create and implement age appropriate individual, group and community-focused grief activities to support a bereavement camp curriculum. Requirements include attending four class sessions, camp orientation, and committee meetings throughout the summer, and a one day camp session. PREREQ: PERM/INST.

SOCWRK525 Advanced Social Work Interventions II: Individuals and Families (3-0-3)(F,S,SU). This is the second practice course in the concentration year of the MSW program. Builds and expands upon knowledge gained through successful completion of all prior courses. Designed to provide students the opportunity to enhance practice skills necessary to provide effective assessment and intervention techniques regarding the more general issues and disorders, which are frequently seen by social workers, such as child maltreatment, substance abuse, and mental health. PREREQ: SOCWRK550. COREQ: SOCWRK576.

SOCWRK526 The Evaluation and Treatment of Mental Disorders (3-0-3) (F, S, SU). Prepares students to conduct systematic and strengths-based biopsychosocial assessments across the lifespan, formulate differential diagnostic impressions in accordance with the current Diagnostic and Statistical Manual of Mental Disorders (DSM), and recommend effective and appropriate theoretically guided interventions. PREREQ: SOCWRK572 and SOCWRK574; or SOCWRK513 and SOCWRK529.

SOCWRK529 Research and Statistics for Social Work (3-0-3)(F,S,SU). This is an advanced standing bridge course that enhances student skills and knowledge in foundation research concepts and procedures. Focuses on methods of data processing, analysis, and implications of quantitative and qualitative data to advance social work practice, knowledge, and theory. Use and interpret various statistical procedures for analyzing quantitative and qualitative data. Apply analytic techniques using computer software applications. PREREQ: Admission to Advanced Standing MSW Program.

SOCWRK530 Foundations of Research I (2-0-2)(F,S,SU). This is the first of a two-course sequence on foundations of research and analysis. It is designed to provide students with the knowledge base and skills for using scientific method to advance social work practice, knowledge, and theory. The course covers quantitative and qualitative methods. Content includes conceptualization, operationalization, design, sampling, measurement, data collection, use of results, and ethical considerations including how research affects diverse populations. PREREQ: Admission to MSW Program.

SOCWRK531 Foundations of Research II (2-0-2)(F, S, SU). This is the second course in a two-course sequence on foundations of research and analysis. Tis course focuses on methods of analysis, and implications of quantitative and qualitative data to advance social work practice, knowledge, and theory. Students learn to use and interpret various statistical procedures for analyzing quantitative data, including univariate, bivariate, and multivariate analysis, and analysis for qualitative data. Students apply analytic techniques using computer software applications. PREREQ: SOCWRK530.

SOCWRK532 Advanced Research: Program and Practice Evaluation (3-0-3) (F,S,SU). This course builds on basic understanding of quantitative and qualitative research methods and analysis. Students gain knowledge and skills to use appropriate research methods for empirically based knowledge building and to enhance program and practice effectiveness. Content includes single system and group design and formative and summative approaches to practice and program evaluation. PREREQ: SOCWRK531 or COREQ: SOCWRK529.

SOCWRK540 Actively Aging: A Multidisciplinary Perspective on Aging Determinants (2-0-2)(S,SU). Increased depth of knowledge about what factors impact the aging process, including socioeconomic status, social support systems, and the environment, are covered. Engagement in practice with older adults from an inclusive perspective that considers sociocultural perspectives on age and aging as well as the impact of generational effects. Evidence-based theories, assessments, and interventions for practice are also addressed. May be repeated once for credit. PREREQ: Admission to MSW Program

SOCWRK550 Advanced Interventions I: Comparative Theories (3-0-3) (F,S,SU). This is the first practice course in the concentration year of the MSW Program, which focuses on individuals and families. This course builds upon the generalist foundation and advances student knowledge of theoretical frameworks used in social work practice to bring about change with individuals and families. Students will examine practice implications of different theoretical frameworks with particular attention to the efficacy of those theoretical and practice models

with oppressed and at-risk populations. In addition, empirically based interventions, critical aspects of the therapeutic relationship, which promote growth and bring about change, and the application of social work values and evaluation of practice are areas of focus. COREQ: SOCWRK575 and SOCWRK577.

SOCWRK561 Core Concepts in Trauma-Informed Child Welfare Practice (2-0-2)(F,S,SU). Introduces students to the core concepts (general theory and foundational knowledge), informing evidence-based assessment and treatment for traumatized children and adolescents who are in the child welfare system. Highlights the roles of development, culture, and empirical evidence in trauma-specific assessment, referral and treatments, the level of functioning of primary care-giving environments and the capacity of the community and child welfare system to facilitate restorative processes. PREREQ: Admission to MSW program.

SOCWRK562 School Social Work (2-0-2)(F,S,SU). To develop an in-depth understanding of school social work skills and knowledge. Emphasis on school social work from a point of view that incorporates knowledge and values from a broad range of social work theoretical approaches. PREREQ: Admission to MSW Program.

SOCWRK563 Substance Use and Other Addictive Disorders (2-0-2) (F,S,SU). Provides an overview of chemical dependency and process addictions including: public policy, theories of prevention and addiction, screening and assessment, evidence-based treatment, the physiology and psychology of addiction, and the effects of drugs on the individual, family, and society. PREREQ: Admission to MSW Program.

SOCWRK564 Aging (2-0-2)(F,S,SU). Includes policy issues and services that should be available to all aged, and special services that are essential for the frail, impaired, or isolated elderly. Available programs are explored, including local organizations and related social services. Emphasis on strengths-based social work practice. PREREQ: SOCWRK550.

SOCWRK565 Social Work in Healthcare (2-0-2)(F,S,SU). Building on core knowledge common to all fields of practice, this course examines advanced practice skills and interventions relevant to health care settings in work with individual clients, families, groups, and interdisciplinary teams. Social work practice is explored in the context of the psychosocial consequences of illness and current health care delivery. PREREQ: Admission to MSW Program.

SOCWRK566 Foundation and Application of Trauma-Informed Practice (2-0-2)(F,S,SU). Examines acute, chronic and complex trauma informed by current evidence-based assessment and intervention methods for individuals, families, groups and communities impacted by traumatic stress. Emphasis is on the history of trauma; development, anatomy and physiology of the human brain; impact of traumatic stress, exposure to traumatic events, culture; trauma-specific assessment and recovery. PREREQ: Admission to MSW Program.

SOCWRK567 Child Welfare Practice (2-0-2)(F,S,SU). Examines the child welfare system within the context of its historical development, current policy, and professional competencies required for social work practice. Focuses on child welfare services, roles of advanced social work professionals, and how to apply a clinical lens in work with children, youth, and families. PREREQ: SOCWRK521, or SOCWRK513 and SOCWRK529.

SOCWRK570 Foundation Field Work I (0-15-2)(F,S,SU). Opportunity for students to apply what they have learned in the classroom to an area of practice within the field of social work, which includes working within a generalist framework across micro, mezzo and macro areas of practice. In addition, students doing field work will be able to demonstrate competence that is informed by knowledge, values, skills and cognitive and affective processes that include the student's critical thinking, affective reactions, and exercise of judgment in regard to unique practice situations. (Pass/Fail.) PREREQ: Admission to the MSW program. COREQ SOCWRK503 and SOCWRK512. COREQ: SOCWRK573.

SOCWRK571 (MPH571) Fundamentals of Healthy Aging (3-0-3) (F,S,SU). Overview of gerontology presented by examining major issues related

to aging. Content includes theories of aging; the impact of an aging population; and future implications at local, national, and international levels. Cross-listed with MPH571, may be taken once for credit

SOCWRK572 Foundation Field Work II (0-15-2)(F,S,SU). Continuation of SOCWRK570. (Pass/Fail.) PREREQ: SOCWRK570 and SOCWRK573. COREQ: SOCWRK504. COREQ: SOCWRK574.

SOCWRK573 Foundation Practicum Seminar I (1-0-1)(F,S,SU). Provides a forum for students to integrate, synthesize, and apply classroom content with the practical world of the field/practice setting. Fostering a generalist practice perspective, provides a supportive group setting to develop professional identity, self-awareness, self-care, empathy, and critical inquiry and awareness. Students will explore the use of social work values and ethics, examine best practices, and consider diverse experiences, along with processing and evaluation of personal behaviors within the context of field. PREREQ: Admission to the MSW Program. COREQ: SOCWRK570.

SOCWRK574 Foundation Practicum Seminar II (1-0-1)(F,S,SU). Continuation of SOCWRK573. COREQ: SOCWRK572.

SOCWRK575 Advanced Social Work Practicum I (0-20-5)(F,S,SU). Provides students with a supervised social work practiced experience in a social service agency under the direct supervision of a licensed social worker. Includes experiential learning in direct practice with individuals and families. (Pass/Fail.) PREREQ: SOCWRK572 and SOCWRK574; or SOCWRK513 and SOCWRK529. COREQ: SOCWRK577 and SOCWRK550.

SOCWRK576 Advanced Social Work Practicum II (0-20-5) (F,S,SU). Continuation of SOCWRK575. (Pass/Fail.) PREREQ: SOCWRK575 and SOCWRK577. COREQ: SOCWRK578.

SOCWRK577 Advanced Practicum Seminar I (1-0-1)(F,S,SU). Integrative seminar that facilitates development of advanced direct social work practice knowledge, skills and values with individuals and families. PREREQ: SOCWRK572 and SOCWRK574; or SOCWRK513 and SOCWRK529. COREQ: SOCWRK575.

SOCWRK578 Advanced Practicum Seminar II (1-0-1)(F,S,SU). Continuation of SOCWRK577. COREQ: SOCWRK576.

Selected Topics (1-4 Variable). To be offered as staff availability permits:

SOCWRK580 Social Work with Diverse Populations

SOCWRK581 Social Work with Families

SOCWRK582 Social Work with the Elderly

SOCWRK583 Social Work with Special Needs Populations

SOCWRK584 Social Work with Children and Youth

SOCWRK585 Social Work Practice with Organizations and Communities

SOCWRK586 Social Work with Groups

SOCWRK587 Social Work Supervision

Department of Theatre, Film, and Creative Writing

College of Arts and Sciences

Chair: Richard Klautsch
Morrison Center, Room C-100
(208) 426-3957 (phone)
theatrearts@boisestate.edu (email)
boisestate.edu/tfcw (website)

Graduate Faculty: Corless-Smith, Lowry, Moneyhun, Nicholson, Schwilling, Udall, Webster, Wieland

Graduate Degree Offered

- Master of Fine Arts in Creative Writing

MASTER OF FINE ARTS IN CREATIVE WRITING

Graduate Program Director: Mitch Wieland
Campus School, Suite 130
(208) 426-7093 (phone)
mfacwp@boisestate.edu (email)

General Information

The program offers maximum flexibility for writers seeking a place to focus on their craft. Students pursuing the degree specialize in either fiction or poetry and work closely with the creative writing faculty in workshop and conference settings.

The MFA in Creative Writing from Boise State University represents a student's mastery of one of the genres of creative writing, as well as a thorough grounding in traditional and contemporary letters. Students work with a faculty of accomplished writers and produce a manuscript of publishable quality during their course of study. While the MFA is the preferred degree for teachers of creative writing, the program at Boise State University also prepares students with courses offered in professional editing and publishing (practicum classes with *The Idaho Review*), form and theory, as well as with invaluable teaching experience in the creative writing classroom.

The Idaho Review, published by the MFA program, offers a chance for students to work on a national literary journal, either as graduate assistants or through course credit or internship.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadline: January 15 (fall)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit Unofficial Transcripts
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5
- Submit Personal Statement
- Submit Current Resume or Curriculum Vitae (CV)
  - A resume or curriculum vitae that includes education, publications, work and teaching experience, plus awards and honors.
  - A 500-word essay explaining your goals in pursuing graduate study in creative writing.
- Submit Writing Sample
  - A manuscript consisting of either 20-30 pages of fiction (double spaced) or 15-20 pages of poems. Limit your writing sample to items from your chosen genre.
- Interview — Final candidates are invited for an interview.
- Submit Letters of Recommendation
  - Three letters of recommendation from academic and/or professional references. The letters should address your suitability for success in a

graduate program, your engagement with and knowledge of your chosen field of study, and your potential ability as a classroom teacher.
- Submit Graduate Assistantship Application
  - Deadline: January 15 (fall)
  - Automatic consideration is given with your application to the program.

Graduate Assistantship

The MFA in Creative Writing program offers a number of Graduate Teaching Assistantships. These assistantships include waivers of tuition and fees, resident or non-resident, and a stipend of $11,450. Complete applications are due January 15. More information is available from the Director of Creative Writing.

Degree Requirements

Master of Fine Arts in Creative Writing

Graduate Major Requirements
18 Total Credits

Complete all of the following
Workshops: Students are admitted into the program in one genre of concentration. Four workshops must be taken in this declared genre.
Take at least 12 credits from the following:
CW522 - Poetry Writing Workshop (3)
CW523 - Fiction Writing Workshop (3)
CW524 - Creative Nonfiction Writing Workshop (3)
Required Courses: Students must take at least one Form and Theory course in their concentration. The class may be repeated twice and counted as an elective.
Take at least 6 credits from the following:
CW505 - Teaching Seminar (3)
CW532 - Form and Theory of Poetry (3)
CW533 - Form and Theory of Fiction (3)
CW534 - Form and Theory of Creative Nonfiction (3)

Graduate Culminating Activity and Other Requirements
30 Total Credits

Complete all of the following
Electives: Students may choose graduate-level courses from any department with approval of the Director of the Master of Fine Arts in Creative Writing program. Recommended are the Departments of English, and Theatre, Film, and Creative Writing. Cross-genre courses in creative writing allowed with the approval of the Director.
Take at least 24 credits from the following:
CW507 - Small Press Production (3)
CW508 - Literary Journal Editing and Publishing (3)
CW509 - Book Arts (3)
CW527 - Small Press Editorial Seminar (3)
Take at least 6 credits from the following:
CW593 - Thesis (1 - 12)

Grand Total Credits: 48

Course Offerings

CW—Creative Writing

ENGL406G Advanced Poetry Writing (3-0-3)(F/S). Intensive work in writing and critiquing poetry. Students seeking graduate credit will produce a greater quantity and higher quality of original work, will have a separate and more extensive reading list, and will be expected to participate more fully in class activities. May be repeated for up to six credit hours.

ENGL407G Advanced Fiction Writing (3-0-3)(F/S). Intensive work in writing and critiquing fiction. Students seeking graduate credit will produce a greater quantity and higher quality of original work, will have a separate and more extensive reading list, and will be expected to participate more fully in class activities. May be repeated for up to six credit hours.

CW505 Teaching Seminar (3-0-3)(F). Theory and practice of teaching college-level introductory creative writing classes for Teaching Assistants in the Creative Writing Program. Readings, preparation of class materials, and practice conducting class. PREREQ: PERM/INST.

CW507 Small Press Production (3-0-3)(S). A practicum course that studies the manuscript selection and preparation, design, editing, distribution, and promotion practices of small presses with the intention of preparing students to write, design, and submit manuscripts for publication. Students acquire hands-on experience with Ahsahta Press. PREREQ: ADM/PROG or PERM/INST.

CW508 Literary Journal Editing and Publishing (3-0-3)(F/S). A course that studies literary magazines and journals with the intention of preparing students to submit their own work for publication, as well as develop hands-on editorial skills and experience by assisting with The Idaho Review. May be repeated twice for credit. PREREQ: ADM/PROG or PERM/INST

CW509 (ENGL509) Book Arts (3-0-3)(S). A historical survey of various aspects of bookmaking, including papermaking, typography, printing, binding, and desktop publishing, as well as book distribution/ marketing, and production of artist's and eccentric bookworks. Course culminates in production of a classroom edition of each student's original writings or art works in an appropriate format devised by the student. PREREQ: Admission to program or PERM/INST.

CW522 Poetry Writing Workshop (3-0-3)(F/S). An advanced workshop in poetry. Students will write poems, submit their work for the critique of the workshop and contribute to the discussion of others' writing. Readings may be assigned to address particular issues of craft and genre. Repeatable for credit; course must be taken a minimum of four times if this is the degree candidate's genre. PREREQ: ADM/PROG or PERM/INST.

CW523 Fiction Writing Workshop (3-0-3)(F/S). An advanced workshop in fiction. Students will write fiction, submit their work for the critique of the workshop and contribute to the discussion of others' writing. Readings may be assigned to address particular issues of craft and genre. Repeatable for credit; course must be taken a minimum of four times if this is the degree candidate's genre. PREREQ: ADM/PROG or PERM/INST.

CW524 Creative Nonfiction Writing Workshop (3-0-3)(F/S). An advanced workshop in creative nonfiction. Students will write creative nonfiction, submit their work for the critique of the workshop and contribute to the discussion of others' writing. Readings may be assigned to address particular issues of craft and genre. Repeatable for credit; course must be taken a minimum of four times if this is the degree candidate's genre. PREREQ: ADM/PROG or PERM/INST.

CW527 Small Press Editorial Seminar (3-0-3)(F/S). A practicum course with an emphasis on the editorial processes of a small literary press, this course is for students who have completed CW507. Students will read, select, copyedit, and proofread manuscripts in consultation with the editor of Ahsahta Press. They will also look at the larger question of creating a "list" for the publisher, taking into account how books may complement each other and how they might be best marketed. May be repeated twice for credit. PREREQ: CW507 or PERM/INST.

CW532 Form and Theory of Poetry (3-0-3)(F/S). An intensive study of aspects of craft in poetry. Course will expose students to particular methods, approaches, and techniques in poetry and their aesthetic effects. May be repeated for up to 18 credits maximum. PREREQ: Admitted to Creative Writing MFA.

CW533 Form and Theory of Fiction (3-0-3)(F/S). An intensive study of aspects of craft in fiction. Course will expose students to particular methods, approaches, and techniques in fiction and their aesthetic effects. May be repeated for up to 18 credits maximum. PREREQ: ADM/PROG or PERM/INST.

CW534 Form and Theory of Creative Nonfiction (3-0-3)(F/S). An intensive study of aspects of craft in creative nonfiction. Course will expose students to particular methods, approaches, and techniques in creative nonfiction and their aesthetic effects. May be taken twice for credit. PREREQ: ADM/PROG or PERM/INST.

Department of World Languages

College of Arts and Sciences

Chair: Jason Herbeck
Library, Room 140-B
(208) 426-3956 (phone)
dianacarrillo@boisestate.edu (email)
boisestate.edu/worldlang (website)

Graduate Certificate Offered

- Graduate Certificate in Computer Assisted Language Learning

GRADUATE CERTIFICATE IN COMPUTER ASSISTED LANGUAGE LEARNING

Graduate Program Director: Kelly Arispe
Library, Room 146
(208) 426-1071 (phone)
kellyarispe@boisestate.edu (email)
boisestate.edu/worldlang/CALL (website)

General Information

The graduate certificate in Computer Assisted Language Learning (CALL) is designed to support instructors of world languages who are seeking to enhance their expertise in second language teaching methodology and the use of innovative educational technologies. With all classes delivered online and course offerings during the spring, summer, and fall semesters, the CALL certificate accommodates the flexible scheduling needs of working professionals. The program consists of two classes in the Department of World Languages and two classes in the Department of Educational Technology for a total of 12 credits. Students wishing to pursue a Master's or Doctoral Degree in Educational Technology can simultaneously pursue the CALL certificate and count EDTECH classes toward both programs.

Program Admission Requirements

Complete all of the following

- Submit Graduate Admission Application and Admission Materials, see page 19
  - Deadlines: January 15 (fall priority), August 1 (fall final), September 15 (spring priority), December 1 (spring final), April 1 (summer)
- Submit Baccalaureate Degree and 3.00 GPA, see page 19
- Submit English Proficiency*, see page 21
  - TOEFL - iBT: 80, pBT (revised): 60, pBT (old): 550, IELTS - 6.5

- Submit Application Letter
  - An application letter that explains why you are interested in this program and how your educational and/or teaching background/employment impacts your decision to apply.
- Submit Current Resume or Curriculum Vitae (CV)
  - In a resume or curriculum vitae make sure to highlight your language teaching experiences.
- Interview — Final candidates will be invited for an interview.

Certificate Requirements

Graduate Certificate in Computer Assisted Language Learning

Graduate Major Requirements
12 Total Credits
  Complete all of the following
    Take the following:
      EDTECH501 - Introduction to Educational Technology (3)
      WORLD510 - Foundations of Second Language Development (3)
      WORLD520 - Foundations of Technology-Enhanced Language Learning (3)
    Take at least 1 of the following:
      EDTECH502 - Creating Educational Websites (3)
      EDTECH503 - Instructional Design (3)
      EDTECH504 - Theoretical Foundations of Educational Technology (3)
      EDTECH505 - Evaluation for Educational Technologists (3)
      EDTECH534 - Mobile App Design for Teaching and Learning (3)
      EDTECH541 - Integrating Technology into the Classroom Curriculum (3)

Grand Total Credits: 12

Course Offerings

WORLD—World Language

WORLD510 Foundations of Second Language Development (3-0-3)(SU). Overview of theoretical principles of second language (L2) development by examining the cognitive, social, and linguistic factors and features that impact the process. Analysis and evaluation of theoretical principles for L2 development in a proficiency-based framework. PREREQ: WORLD410 or PERM/INST.

WORLD520 Foundations of Technology-Enhanced Language Learning (3-0-3)(SU). Study of the integration and implementation of technology-enhanced language learning in a communicative, proficiency-based context. Draws on the foundations of foreign language teaching and learning to evaluate instructional technologies that impact second language development in a classroom setting. Recommended: WORLD510.

Additional Graduate Courses

Course Offerings

Note: The 500-level courses listed below are not offered on a regular basis. Students interested in these courses should consult with an advisor in the department before completing their application.

COID—College of Innovation and Design

COID500 Harvard Business School Online At Boise State I and II (9-0-9) (F/S/SU). Course that includes participation in Harvard Business School's online Credential of Readiness course (HBS CORe). Includes a regular, instructor-led class to accompany each week's online lesson. Develops familiarity and foundational skills in areas ranging from data analytics, economics, and accounting. Consists of three concurrent tracks titled Business Analytics, Financial Accounting, and Economics for Managers with online lessons developed by Harvard Business School faculty using real life case examples. Successful completion will receive a Credential of Readiness from HBS in addition to Boise State course credit. (Pass/Fail.) COID500 cannot be taken for credit after COID501 or COID502. PREREQ: Graduate standing, and PERM/INST.

COID501 Harvard Business School Online At Boise State I (5-0-5)(F). Course that includes participation in Harvard Business School's online Credential of Readiness course (HBS CORe). Includes a regular, instructor-led class to accompany each week's online lesson. Develops familiarity and foundational skills in areas ranging from basic and intermediate data analytics, economics, and accounting. Consists of three concurrent tracks titled Business Analytics, Financial Accounting, and Economics for Managers with online lessons developed by Harvard Business School faculty using real life case examples (Pass/ Fail.) COID501 cannot be taken for credit after COID500. PREREQ Graduate standing, and PERM/INST.

COID502 Harvard Business School Online At Boise State II (4-0-4)(S). Course that includes participation in Harvard Business School's online Credential of Readiness course (HBS CORe). Includes a regular, instructor-led class to accompany each week's online lesson. Develops familiarity and foundational skills in areas ranging from advanced applications of data analytics, economics, and accounting. Consists of three concurrent tracks titled Business Analytics, Financial Accounting, and Economics for Managers with online lessons developed by Harvard Business School faculty using real life case examples. Successful completion of COID501 and COID502 will receive the Credential of Readiness from HBS in addition to Boise State course credit. (Pass/Fail.) COID502 cannot be taken for credit after COID500. PREREQ: COID501 and PERM/INST.

CMGT—Construction Management

CMGT517 Project Scheduling (2-2-3)(F/S). The use of Gantt charts, S-curves, Critical Path Method (CPM) using both Arrow Diagraming and Precedence Diagraming Methods (ADM and PDM), computerized scheduling, P.E.R.T. charts, resource leveling and time cost trade offs used as planning, scheduling, and management techniques. PREREQ: CMGT367 or PERM/INST.

CMGT570 Land Development (3-0-3)(F/S). An overview of the land development process, including planning, design, construction, and sale of various types of real estate. Key concepts in successful development, feasibility studies, site selection and improvement, government policy and regulation, project planning and master planning, design of public infrastructure, and construction of site improvements.

COMM—Communication

COMM501 Research Methods (3-0-3)(F). Provides an overview of foundational methodological approaches to research in the field of communication and media studies. Introduces students to issues of epistemology, scholarly inquiry, and criticism as aligned with common approaches to the study of communication.

COMM505 Theory and Philosophy of Communication (3-0-3)(S). Provides an overview of leading theoretical traditions in communication studies and the philosophy of communication. Emphasizes meta-theoretical issues and understanding communication theory and theorizing as a lens for understanding everyday communication practices.

COMM506 Interpersonal Communication (3-0-3)(F/S). Explores contemporary theory and research related to the practice of interpersonal communication. Addresses contemporary issues with relational development, maintenance, and decline as well as varied types of relationships and relational contexts.

COMM507 Organizational Communication (3-0-3)(F/S). Explores contemporary theory and research associated with the practice of organizational communication. Emphasizes communication as constitutive of organization and communication as essential in creating, maintaining, and changing organizational structures, cultures, identities, and power relations.

COMM508 Media Theory and Criticism (3-0-3)(F/S). Examines a broad range of theoretical perspectives on media institutions, practices, and effects. Emphasis is given to the implications of media theory and research for citizens, members of civic or professional organizations who work with media, as well as media practitioners.

COMM509 Media Law and Ethics (3-0-3)(F/S). Examines varied legal and ethical issues facing media practitioners and the public as consumers of media. Topics include First and Fourth Amendment, the right to privacy, censorship, libel and slander, copyright, and media and national security considerations.

COMM510 Communication, Community, and Politics (3-0-3)(F/S). Explores the connections between theory and practice in communication studies, community organizing, and politics. Examines the exercise of power, conflicts between autonomy and control, and intersections between political and social life.

COMM511 Critical Theories (3-0-3)(F/S). Provides an overview of critical perspectives of media, society, and organizations by exploring the work of the Frankfurt School, postmodern perspectives, as well as feminist and other critical theories in the field of communication.

COMM512 Culture and Communication (3-0-3)(F/S). Examines current issues and theoretical perspectives in the study of communication within particular cultural contexts. Topics include the history of the terms "culture" and "communication," and the evolution of theoretical perspectives on both terms.

COMM520 Collaboration and Conflict (3-0-3)(F/S). Explores contemporary communication theory and research on collaboration and conflict. Attends to issues of conflict, conflict suppression, decision making, participatory practices, and workplace democracy.

COMM521 Discourse and Identity (3-0-3)(F/S). Examines discourse as a way to explore the intersections of communication and identity. Addresses the ways communicative practices create knowledge of the self with attention to issues of gender, race, ethnicity, disciplinary power, bio-politics, consent, and control.

COMM522 Communication Pedagogy and Training (3-0-3)(F/S). Explores teaching and learning scholarship focusing on communication pedagogy and the practice of teaching communication. Helps prepare students to teach in academic and other organizational settings.

COMM530 Media, Politics, and Power (3-0-3)(F/S). Explores the role of media in politics, governance and citizenship, with emphasis on the American media system. Focuses on the institutional relationships that control and influence media coverage of politics, campaigns, elections and policymaking,

and examines the impact of digital technology and the Internet on participatory democracy.

COMM531 Media and Institutions (3-0-3)(F/S). Explores the influences of social forces and institutions on media organizations. Topics include the ways advertising, public relations, social media, and legal, regulatory, and political systems influence media economics, content, and competition.

COMM532 Media Aesthetics and Culture (3-0-3)(F/S). Explores the philosophical and cultural implications of media theory through the lens of aesthetics. With attention to the historical progression of theory addressing the moving image, this course focuses on the mutually dependent relationship between form and content in understanding, analyzing, and interpreting visual media texts.

COMM540 Communication, Gender, and Difference (3-0-3)(F/S). Explores the intersections of communication and gender. Attends to difference and diversity as communicative accomplishments and examines issues of identity, language, power, and hegemony.

COMM541 Rhetoric and Civic Life (3-0-3)(F/S). Examines the intersections of rhetorical theory and practice with civic life. Addresses issues of civic engagement, public sphere(s), rhetorical performance, citizenship, and the construction of (im)possibility.

ENGL—English

ENGL401G Advanced Nonfiction Writing (3-0-3)(F/S). Advanced practice in nonfiction genres, and study of how writers read and learn from other writers. Experimentation with subjects, voice, organization, and style. Students may take the course twice, for a total of 6 credits. Students seeking graduate credit will produce a greater quantity and high quality of original work, will have a separate and more extensive reading list, and will be expected to participate more fully in class activities. PREREQ: ENGL201.

ENGL500 Research Methods in Literary Studies (3-0-3)(F/S). An introduction to research techniques and resources in advanced literary study. The course includes the use of bound and electronic reference sources, methods of bibliography and textual criticism, the significance of biographical, archival, and historical evidence in literary study, and standard conventions of scholarly documentation. PREREQ: ADM/PROG or PERM/INST.

ENGL501 Teaching Writers in Secondary School Communities (3-0-3) (F,S,SU). Students synthesize and apply theory and research related to the teaching of writers, with a focus on helping writers navigate writing processes, rhetorical situations, and writing environments. In order to design inclusive writing communities, students identify and build on writers' strengths and resources.

ENGL502 Teaching Creative Nonfiction, Poetry, and Fiction Writing (3-0-3) (F/S). Theories and practices for teaching secondary school students, college students, and others how to write in genres such as creative nonfiction, poetry, and fiction. Emphasis is on teaching in classroom and workshop settings. PREREQ: ADM/PROG or PERM/INST.

ENGL503 Writing Center Pedagogy and Administration (3-0-3)(F). Emphasis on composition theory, writing pedagogy, and writing program administration as they pertain to tutoring and writing center work. A writing-center based empirical research project is required. Includes tutoring and administrative duties in the Boise State Writing Center. PREREQ: PERM/INST.

ENGL505 Linguistics (3-0-3)(F/S)(Alternate years). Modern linguistic theories and their application to literature and teaching English. An examination of how various grammatical models represent the complexities of language sound, sequence, and structure. Application of theory to language at work. Alternate years. PREREQ: ADM/PROG or PERM/INST.

ENGL509 (CW509) Book Arts (3-0-3)(S). A historical survey of various aspects of bookmaking, including papermaking, typography, printing, binding, and desktop publishing, as well as book distribution/marketing, and production of artist's and eccentric bookworks. Course culminates in production of a classroom edition of each

student's original writings or art works in an appropriate format devised by the student. PREREQ: Admission to program or PERM/INST.

ENGL510 Seminar in Major American Or English Writer (3-0-3)(F/S). A consideration of minor and major artistic creations of an author with attention to major influences on the writer and his/her influences on others. Aspects of investigation to include the life of the author and its relation to his/her work, the society and culture of the times, his/her place and stature in the genres in which he/she worked, his/her use or disregard of tradition, as well as an investigation of contemporary criticism and critical evaluation since the writer's time. Repeatable for credit. PREREQ: ADM/PROG or PERM/INST.

ENGL511 Rhetorical Theory for Workplace Writers (3-0-3)(F)(Even years). An introduction to rhetorical theories and concepts relevant to workplace settings, such as rhetorical genre theory, applied linguistics, ethics, and the rhetoric of science. Interdisciplinary approaches include cultural studies, STEM communication, linguistics, psychology and sociology. PREREQ: ADM/PROG or PERM/INST.

ENGL512 Technical Rhetoric and Applications (3-0-3)(S)(Odd years). An advanced study of technical communication for those students who are or expect to become professional technical communicators. Topics of study include modern theories of rhetoric, focusing on semantics, syntax, readability, pragmatics, and hypertext. Students will write reports, proposals, manuals, and online documents related to their own backgrounds and fields of interest. PREREQ: ADM/PROG or PERM/INST.

ENGL513 Technical Editing (3-0-3)(F). An advanced course in the editing of technical documents. Major projects are related to each student's field of interest. Topics of study include the theory and ethics of editing, content editing, copy editing, developmental editing, production editing, and online editing. PREREQ: ADM/PROG or PERM/INST.

ENGL515 Visual Rhetoric and Information Design (3-0-3)(S). A study and application of the rhetorical elements of design, including color, line, form, images, and type. Students will be introduced to desktop publishing, graphics, and Web-authoring software. Students will apply principles of visual rhetoric in creating print and online technical documents. PREREQ: ADM/PROG or PERM/INST.

ENGL516 Topics in Content Development and Delivery (3-0-3)(F)(Even years). Study and application of the principles and techniques involved in taking both print and on-screen documents from conception to production. Topics will vary but can include desktop publishing, software documentation, managing content distribution, creating and updating specific web content such as static copy, blogs, podcasts, or videos, search engine optimization, working with prepress and printing companies, and selecting appropriate delivery systems. This course may be taken twice for credit. PREREQ: ADM/PROG or PERM/INST.

ENGL519 Leadership of Writing Teams (3-0-3)(S)(Odd years). Analysis and application of the principles of management and organizational behavior as they apply to teams of writers. In a case-study environment focused on contexts for the production of writing such as publication teams and community groups, students study ways of creating and maintaining inclusive, ethical, and effective groups. Designed to enhance the leadership skills of writers, students learn the techniques and practices of managing writing groups within organizational settings, while studying relevant principles of motivational theory, organizational communication, and human behavior. PREREQ: ADM/PROG or PERM/INST.

ENGL520 Genre (3-0-3)(F/S). A study of a well defined literary category, such as novel, short story, epic, or tragedy. Examination of representative texts in order to discover the evolution of a specific literary genre while at the same time establishing its typical features. Repeatable for credit. PREREQ: ADM/PROG or PERM/INST.

ENGL521 On-Screen Accessibility and Universal Design (3-0-3)(S)(Even years). Study and application of the principles involved in designing, creating, and managing accessible information on the screen. Analysis and application of how to promote inclusivity in online contexts through design and pedagogical choices. Practice applying universal design and accessibility principles to make online content usable and accessible for all users. PREREQ: ADM/PROG or PERM/INST.

ENGL525 Literary Translation Workshop (3-0-3)(F/S). Students read works of theory and practice in literary translation, translate short works of literature, submit their work for workshop critique, and contribute to the discussion of others' writing. Languages and genres translated vary with instructor. Repeatable for credit. PREREQ: ADM/PROG or PERM/INST.

ENGL530 Studies in a Literary Period (3-0-3)(F/S). A study of a selected chronological period of American or British literature with focus on major authors, genres, or topics. Repeatable for credit. PREREQ: ADM/PROG or PERM/INST.

ENGL535 User Experience (3-0-3)(F)(Odd years). User experience focuses on understanding—and designing experiences tailored to—human behavior. In this course learn to create successful visual and emotional user experiences while exploring links between usability and desirability, humanity and technology. PREREQ: ADM/PROG or PERM/INST.

ENGL536 Proposal Development (3-0-3)(F)(Odd years). Study of principles of effective proposal development and grant writing for businesses and nonprofits. Topics include identifying funding sources, developing grant applications, creating proposals in response to requests/call for proposals, writing collaboratively within an organization, and giving convincing and audience-appropriate presentations. PREREQ: ADM/PROG or PERM/INST.

ENGL537 Writing for Social Media and Online Communities (3-0-3)(S)(Even years). Apply interactive Internet-based technologies to easily collaborate, share, link and generate content. Analyzing user-created content and online communities, students will learn techniques and best practices for using the social web to enhance workplace communication using tools such as blogs, micro-blogs, wikis, social networking sites, tag clouds, and syndication. PREREQ: ADM/PROG or PERM/INST.

ENGL540 Issues in Writing, Teaching, and Learning (3-0-3)(S). Investigates the theories, practices, and conditions that influence the development of writing ability and other literacies. May focus on issues in learning theory, an examination of composing practices, or social contexts that influence student growth. Topics might include transfer and inquiry-based learning, practices like revision or teaching with technology, or writing in social contexts like community-based organizations. PREREQ: ADM/PROG or PERM/INST.

ENGL545 Contemporary Issues in Rhetoric and Composition (3-0-3)(S). Theoretical exploration of current topics in rhetoric and composition as well as contexts for writing instruction and research. Introduces students to emerging issues in the discipline like multimodal composing, contemporary rhetorical theory, cultural studies, and new technologies. May also examine contemporary contexts for literacy instruction and practices as well as theories of composing in the workplace and community. PREREQ: ADM/ PROG or PERM/INST.

ENGL550 Literature and Culture (3-0-3)(F/S). The interaction between a body of literature and the social, economic, and political forces that characterize the culture in which it originates. The influence of culture on literary form and content. Repeatable for credit. PREREQ: ADM/PROG or PERM/INST.

ENGL554 Methods for Research in Writing and Rhetoric (3-0-3)(F/S). An introduction to research methods appropriate for conducting research in various writing contexts. Explores a range of empirical and rhetorical strategies for research, including developing research questions, choosing appropriate research methods, and addressing ethical issues in conducting research with human subjects. PREREQ: ADM/PROG or PERM/INST.

ENGL555 Writing in Rhetoric and Composition Studies (3-0-3)(F). Provides an overview of writing expectations and publication opportunities in the field of rhetoric and composition as well as identifying opportunities for the study and practice of rhetoric and writing beyond the field (e.g., community organizations, political discourse, interdisciplinary conversations). Helps students consider options for the culminating activity of the program. PREREQ: Admitted to the MA in English, Rhetoric and Composition program or PERM/INST.

ENGL561 Composition Theory and Practice (3-0-3)(F)(even years). A study of writing as both subject and activity. Examines theories and their application in multiple contexts with attention to the ethical dimensions of writing, including cultural awareness. PREREQ: ADM/PROG or PERM/INST.

ENGL562 Theories of Rhetoric (3-0-3)(F)(odd years). Main currents in historical and contemporary rhetorical theory. Attention is given to the Western tradition as well global rhetorics. Themes may include the importance of rhetoric in the public forum, the role of rhetoric in education, and the ethical obligations of the rhetor. PREREQ: ADM/PROG or PERM/INST.

ENGL566 Discourse and Dialogue in Secondary School Communities (3-0-3)(F,S,SU). Students synthesize and apply theory and research related to the ways speaking and listening serve as resources for thinking and learning in secondary classroom communities with a focus on facilitating whole-class and small group conversations and creating democratic learning environments in which learners become active participants in shaping the direction of classroom discourse.

ENGL567 Teaching Language Learners in Secondary School Communities (3-0-3)(F,S,SU). Students synthesize and apply theory and research related to the teaching of language in secondary schools, including inquiring into diverse forms of language use, teaching multilingual learners, and teaching grammar in the context of writing.

ENGL576 Inquiry into English Language Arts Learning Communities (3-0-3) (F,S,SU). Students practice taking on an inquiry stance that takes a systematic look into learners' experiences in their classrooms, including a focus on analyzing artifacts of learning (student products, self-assessment), observations of learning, and the words and ideas of learners (surveys, interviews, focus groups).

ENGL577 Inquiring into Classroom Practices and Curricula (1-0-1)(F). Students develop and practice teacher inquiry stances and strategies. Students apply their inquiries by revising and re-imagining their instructional practices. This is the first-course in a year-long sequence. PREREQ: PERM/INST.

ENGL578 Participating in Teacher Inquiry Communities (2-0-2)(S). Students practice and publicly share their inquiries into their classroom practices and curricula within and beyond the course community. This is the second-course in a year-long sequence. PREREQ: ENGL577 or PERM/INST.

ENGL579 Boise State Writing Project Invitational Institute (6-0-6)(SU). Students engage in the National Writing Project's six social practices of writing and reading for personal and professional purposes; going public with practice through a teaching demonstration; learning/engaging with the profession; collaborating with/responding to one another as writers, readers, teachers, and learners; leading by becoming thinking partners with colleagues; and advocating for inclusive and equitable conditions for teachers and learners. PREREQ: Must apply and be invited to participate.

ENGL580 Leading and Changing Secondary School Communities Through the English Language Arts (3-0-3)(F,S,SU). Students synthesize critical and sociocultural theories of learning and learning communities related to the teaching of English language arts, and they apply that synthesis to create a plan/ project that strengthens one of their communities through the English language arts.

ENGL581 Teaching Readers of Literary Texts in Secondary School Communities (3-0-3)(F,S,SU). Students synthesize and apply theory and research related to the teaching of readers of literary texts in secondary schools, with a focus on helping young people become creative and critical readers within participatory and inclusive reading communities.

ENGL582 Selected Topics in Teaching English Language Arts (3-0-3)(F,S,SU). Students study current theories and topics in teaching the English Language Arts. A specific focus will be announced each time the course is offered. PREREQ: PERM/INST.

ENGL585 Selected Topics in Linguistics (3-0-3)(F/S). An investigation of a particular topic in linguistics, drawn generally from psycholinguistics, sociolinguistics, semantics, pragmatics, discourse, syntax, or morphology. Coursework will include lecture, discussion, and a paper or project, depending on the nature of the topic. Repeatable once for credit. PREREQ: LING 305 and admission to program, or PERM/INST.

ENGL588 Survey of Critical Theory (3-0-3)(F/S). A survey of major contemporary theories of literary criticism and their effects on literary studies. PREREQ: ADM/PROG or PERM/INST.

ENGR—Engineering Science

ENGR500 Research Methods (1-0-1)(F/S). Topics include defining a thesis or other research project, library and Internet searching techniques, completing a literature review, preparing a research or project plan, research methods, preparing the thesis proposal, preparing the final thesis or research project document, and preparing a successful oral presentation.

ENGR520 Managing Change in a Knowledge-Based Economy (3-0-3)(F/S). Exploration of effectively managing innovation processes, from idea to launch, as applied to entrepreneurship in all backgrounds and disciplines including engineering, business, health care, information technology, and the arts.

ENGR525 The Business of Technology (3-0-3)(F). Gives Engineering and Science graduates a deeper understanding of essential business concepts, a broadened business vocabulary, and greater confidence in communicating with hiring managers and business leaders.

ENGR560 Manufacturing Process Control and Improvement (3-0-3)(S). Application of statistics in manufacturing to characterize variation, control processes and to improve quality using statistical process control approaches and design of experiments methodologies. Topics covered include control charts, process capability, gage reproducibility and reliability, analysis of variance, acceptance sampling, factorial designs, response surfaces and regression analysis. PREREQ: MATH360 or MATH361.

ENGR575 Microgravity Leadership (1-0-1)(F/S). Advising undergraduate NASA Microgravity University research teams. May be repeated for credit. PREREQ: PERM/INST.

GCOLL—Graduate College

GCOLL501 Bridge to the Doctorate Seminar (0-2-1)(F/S)(Intermittently). Graduate Seminar for Bridge to the Doctorate (BD) Fellows. Introduces and provides practice in graduate student success strategies for the first critical two years of graduate school. Weekly topics may include, inclusive mentoring, graduate student success strategies, competitive national fellowship applications, responsible conduct of research, and professional development strategies. May be repeated for credit. Must be a Bridge to Doctorate Fellow. (Pass/Fail.)

GCOLL505 Responsible Conduct of Research (1-0-1)(F,S). Basic concepts, principles and practices governing research compliance and Responsible Conduct of Research (RCR) in each of four disciplinary areas (one area chosen by each student): biomedical sciences, social and behavioral sciences, physical sciences and engineering, humanities. Each area includes an overview of research conduct and misconduct, data acquisition and management, responsible authorship, peer review, mentoring, conflicts of interest, collaborative research, human subjects, and animal research. Online materials produced by the Collaborative Institutional Training Initiative (CITI). Lectures will cover the online materials and related case studies, and other areas of research compliance including patents, intellectual properties, non-disclosure agreements, and sponsored projects. (Pass/Fail.) PREREQ: Graduate standing.

GCOLL511 Teaching in Higher Education (3-0-3)(S). A study of the nature of learning. Students explore all aspects of course design, including structuring and facilitation of classroom learning, assessment methods, how to increase student engagement, and the use of technology in enhancing learning. Overview of academic careers. PREREQ: Admission to GC in College Teaching or PERM/INST.

GCOLL512 Internship in College Teaching (1-2-3)(F/S/SU). Provides qualified graduate students with an opportunity to develop as university teachers by co-teaching a college course. Includes planning lessons/lectures and assessment of student learning during the co-teaching experience. Workload must be in accordance with university guidelines for internships. In the semester when students enroll, students are required to have a teaching assignment which has been approved by the program coordinator, instructor of record for the course, and the chair of the department offering the course. PREREQ: GCOLL511 and PERM/INST.

GCOLL513 Practicum in College Teaching (1-3-4)(F/S/SU). Provides qualified graduate students with an opportunity to develop as university teachers. Includes planning the lessons/lectures and assessment of student learning during the mentored teaching experience; students enrolled in the practicum have full responsibility for a course. In the semester when students enroll, they are required to have a teaching assignment which has been approved by the program coordinator and chair of the department offering the course. Offered through collaboration between Boise State University and collaborating institutions. Open to all qualified graduate students, but primarily intended for doctoral students. PREREQ: GCOLL511 and PERM/INST.

GCOLL514 Field Experience in College Teaching (1-1-1)(F/S/SU). Provides qualified graduate students with an opportunity to develop as university teachers by teaching in a college course. Includes planning and facilitating class sessions, as well assessment of student learning during those class periods. In the semester when students enroll, students are required to have arranged with an instructor who is willing to let them plan and facilitate two weeks of instruction; the arrangement must be approved by the program coordinator. PREREQ: GCOLL511 and PERM/INST.

GCOLL516 Exploration of Pedagogy (1-1-1)(F/S). Provides graduate students an opportunity to learn more about pedagogy, best teaching practices, how technology is incorporated in the classroom, and other strategies for engaging and working with students with diverse backgrounds through workshops and other programs offered by the Center for Teaching and Learning. With instructor's approval, students may pursue other pedagogical areas of interest. May be repeated for credit.

GCOLL517 College Teaching Portfolio (1-2-2)(F/S). Development of a professional teaching portfolio and teaching philosophy statement. Reflection on teaching experiences and professional development experiences. Exploration of careers in higher education. Prior to enrollment, students must have completed the Graduate TA Orientation. PREREQ: GCOLL512 or GCOLL513 or GCOLL514, and PERM/INST.

GENDER—Gender Studies

GENDER580 SELECTED TOPICS IN GENDER STUDIES (3-0-3)(F/S). Graduate-level studies of a particular topic relating to the field of gender studies.

HES—Human-Environment Systems

HES500 Foundations in Human-Environment Systems Science (3-0-3)(F). Explores transdisciplinary and collaborative approaches in human-environment systems (HES) science to help solve complex environmental problems facing human society, such as global climate change and natural resource management. Provides students with a foundational understanding of the theories, methods, and applications of HES science.

HES505 Introduction to Spatial Data Management, Analysis, and Visualization in R (3-0-3)(F). Introduction to the core components of manipulating spatial data within the R statistical environment including managing vector and raster data, projections, extraction of data values, interpolation, and plotting. Learn to prototype and benchmark different workflows to aid in applying the appropriate tools to their research questions.

HES550 (GEOS550) Race and Racism in Earth and Environmental Science (1-0-1)(F). This seminar provides a critical examination of race and racism in the Earth and Environmental Sciences (EES). Readings and discussion will explore the complex relationship between EES-related disciplines and racial injustice, structural issues that give rise to the racial makeup of practitioners in the EES, and evidence-based practices that serve to enhance access and participation in the EES. This seminar targets students in EES fields who are interested in a deeper understanding of how race and racism have played a role in shaping their field and how it can be made more accessible and inclusive. Cross-listed with GEOS550, may be taken once for credit.

HES598 Human-Environment Systems Seminar (1-0-1)(F). Introduces students to current applied topics in human-environment systems science. Students engage in professional development activities for future careers. May include oral presentations, academic writing, networking, and developing an Internet presence. May be repeated for credit.

HES600 SES (Social-Ecological Systems) Research Methods (3-0-3)(F). Trains students to design interdisciplinary research. Introduces methods employed in human-environment systems science. Includes spatial analysis, social science approaches, and agent-based modeling.

HES610 Spatial Analysis in Environmental Research (3-0-3)(S). Introduction to the history, theory, quantitative methods, and practical applications of the discipline of landscape ecology. Focuses on the interplay between spatial pattern and process, where it comes from, why it matters, and how it changes through time.

HES620 Agent Based Modeling of Human-Environment Systems (3-0-3)(S). Students use agent-based models to understand and predict dynamics of human-environment systems. Focuses on agent-based approaches as powerful tools in ecological economics, land use science, political science, natural resource management, and sustainability sciences.

ISLE—Intensive Semester Learning Experience

ISLE550 Intensive Semester Learning Experience (6-9 credits)(F/S/SU). Dedicates a semester of coursework to a discrete project. Individually-designed immersive learning experiences encourage creative responses to tangible challenges through the development of creative/research projects. With modeling and mentoring, students work collaboratively and cross-disciplinarily, develop projects from start to finish, present their results, and build relationships with community partners. PREREQ: PERM/INST.

ITM—Information Technology Management

ITM530 Predictive Analytics (3-0-3)(F). Fundamentals of predictive analytics will be examined. Topics will include problem definition, data preparation, and the use of analytic techniques to solve business problems. Modeling techniques will focus on predictive analytics utilizing both data and text. PREREQ: BUSSTAT207 or MATH254 or MATH360 or MATH361, or equivalent undergraduate statistics class.

ITM555 Information Security (3-0-3)(F,S). In-depth exploration of security issues and challenges in organizations. Topics include the need for security, policy development and implementation, risk assessment, security threats and vulnerabilities, security controls and tools. Exercises explore defense against security threats, secure application development, and network design issues. PREREQ: ITM305 or CS-HU153; Admitted to MS in Cybersecurity.

ITM556 Information Security Management (3-0-3)(F). Students will evaluate governance and standards frameworks, write security policy documents, develop strategies, perform threat modeling on projects, and develop training and awareness programs. PREREQ: ITM555 or CYBER500; Admitted to MS in Cybersecurity.

ITM557 Security Analytics (3-0-3)(S). Students will evaluate and deploy SIEM software, perform data analytics on security data, investigate security incidents, simulate security incidents, and evaluate security metrics. PREREQ: ITM556.

ITM560 Cloud Computing (3-0-3)(S). An introduction to the essentials of cloud computing. Hands-on exercises provide a foundation in infrastructure, platform, and software as a service concepts including storage, computing, networking, identity and access management, content delivery and management. PREREQ: PERM/INST.

PSYC—Psychology

PSYC331G The Psychology of Health (3-0-3)(F/S). Principles that have emerged from the experimental analysis of behavior will be examined. The principles include, but are not limited to, operant and classical conditioning. The course will deal with applications of these principles to the understanding and change of phobias, obesity, smoking, alcoholism, aberrant sexual behavior, and similar problems. PREREQ: PSYC 101.

PSYC405G Advanced Statistical Methods (3-0-3)(S). Advanced topics in univariate statistics (for example, repeated measures designs) and multivariate techniques such as discriminant analysis, factor analysis, and principal component analysis. PREREQ: PSYC321 or equivalent or PERM/INST.

PSYC421G Psychological Measurement (3-0-3)(F). Theory and nature of psychological measurement together with a survey of types of psychological tests currently used. PREREQ: PSYC321.

PSYC438G Community Psychology (3-0-3)(F,S). Focuses on human and social problems in a systemic context. Primary prevention and community empowerment strategies employed are emphasized for individual, community, and social benefit. A course in research methods or statistics is recommended but not required. PREREQ: PSYC 101.

PSYC512 Lifespan Human Development (3-0-3)(F). Examines both typical and atypical development across the lifespan using an ecological systems perspective. Topics include the mutual influences and contexts of biology, personality, cognitions, social relationships and culture on a variety of age-related issues. PREREQ: Admission to Family Studies Program or PERM/INST.

PSYC514 Diversity in Family Systems (2-0-2)(S/SU). Explores attitudes toward human diversity and includes the acquisition of skills necessary to work sensitively with individuals and groups who are subjected to prejudice and discrimination based on race, ethnicity, gender, sexual orientation, socioeconomic status. Topics include experiences of people of oppressed groups and sociohistorical roots of biases. PREREQ: Admission to Family Studies Program or PERM/INST.

SOC—Sociology

SOC500 Advanced Social Statistics (3-0-3)(S). The methods of nonparametric statistics in the analysis of sociological data are examined in depth with application to research. PREREQ: SOC101 and SOC310 or equivalents as determined by consultation with department chair.

SOC501 the Sociology of Education (3-0-3)(F/S). A sociological analysis of the American school system, its problems and the social forces that shape the schools in contemporary society.

SOC502 Qualitative Social Research Methods (3-0-3)(F). An intensive course in interpretive social science, covering the practice of fieldwork ethnography, the use of computers in qualitative research, techniques of qualitative data analysis, and the writing of qualitative research reports. PREREQ: Graduate standing.

SOC510 Conflict and Change in Socio-Cultural Systems (3-0-3)(F/S). Intensive examination of social and cultural change as related to technological evolution, value changes and the resultant conflict in society.

SOC512 Social Demography (3-0-3)(F/S). Techniques and methods for analyzing population growth, trends, and movement as reflected in actuarial data, birth-death rate; mobility, fertility and fecundity as these affect the societal patterns, especially planning for human service programs.

SOC535 Drugs in Societal Context (3-0-3)(F/S). This class applies the sociological perspective on social problems to drug use. It examines how different social groups use drugs, attempt to control and prohibit the use of drugs, and the societal effects of using and controlling the use of drugs.

SOC571 Feminist Sociological Theory (3-0-3)(F/S). An examination of the major types of feminist theory in Sociology or theory directly useful to sociologists in search of understanding and explaining gender relations. The student will encounter new perspectives in Sociology that arise from the exchange of new ideas, new data, exciting possibilities for social change, and the emergence of new theoretical models to understand gender relations. PREREQ: Graduate standing.

SOC572 Sociology of Aging (3-0-3) (F/S). The study of aging and age cohorts as they relate to and interact with social structures and processes with an emphasis on the later stages of aging. Topics include ageism within social institutions, the effects of age cohorts on work, education and medicine, and the boomer age cohort.

SOC595 Reading and Conference (1-2 credits). Directed reading on selected materials in human services administration and discussion of these materials as arranged and approved through major advisor.

SPS—School of Public Service

SPS501 Social Science Research Design (3-0-3)(F/S). Introduction to the logic of research design in the social sciences. Basic methods of quantitative and qualitative research and their application to different disciplines. The relationship among theory, research, and social policy. The development and interpretation of research reports.

SPS502 Quantitative Methods for the Social Sciences (3-0-3)(F/S). Univariate and introductory multivariate techniques through computerized statistical packages in the social and behavioral sciences and entailing statistical problem solving using various data-sources. PREREQ: SPS501 or PERM/INST.

SPS503 Qualitative Methods for the Social Sciences (3-0-3)(F/S). Interviews, observation, focus group methods examined in relation to research endeavors in criminal justice, political science and public policy and administration. Other topics include communication skills in terms of writing, presentation, interpersonal dialogue, and group process. PREREQ: SPS501 or PERM/INST.

SPS504 Survey Research (3-0-3)(F/S). Students engage directly in advanced survey research through design, implementation, sampling, data collection, follow-up, analysis, and ethical considerations. PREREQ: SPS501 and SPS502, or PERM/INST.

SPS505 Public Policy Analysis (3-0-3)(F/S). Introduces policy analysis, policy tools, and factors shaping the utilization of policy analysis. A significant portion of the course is spent in learning and applying analytical techniques. PREREQ: PUBADM501 and SPS501, or PERM/INST.

SPS506 Program Evaluation (3-0-3)(F/S). Explores issues related to evaluation research and design with particular attention to design and critique of process, outcome, and impact evaluations and the utility of evaluation in performance monitoring. PREREQ: SPS501 or PERM/INST.

SPS507 Advanced Qualitative Methods and Analysis (3-0-3)(F/S). Students develop advanced skills in qualitative inquiry and the application of methods, such as advanced interviewing skills, Delphi methods, and qualitative content analysis. Students also apply qualitative analysis software such as nVivo. Other topics include communication skills in terms of writing, presentation, interpersonal dialogue, and group process. PREREQ: SPS501 and SPS503, or PERM/INST.

SPS508 Maximum Likelihood Estimation (3-0-3)(F/S). Examine and implement techniques necessary to estimate limited dependent variables using maximum likelihood estimation. Topics include binary, count, ordinal, nominal, and duration dependent variables and the appropriate models and robustness tests for them. PREREQ: POLS508 or PUBADM503, or PERM/INST.

SPS509 Advanced Quantitative Methodology (3-0-3)(F/S). Examines and implements advanced techniques in quantitative methodology as it applies to the social sciences. PREREQ: POLS508 or PUBADM503, or PERM/INST.

SPS510 Game Theory and Formal Modeling (3-0-3)(F/S). Examines and implements formal modeling and game theoretic techniques in modeling decision-making across various actors. PREREQ: Graduate Standing or PERM/INST.

STEM-ED—STEM Education

STEM-ED510 STEM Teaching Methods (3-0-3)(F,S). Methods used to plan, enact, assess, and reflect upon sequences of lessons for teaching and learning in inclusive secondary STEM classrooms. Requires current background check and fieldwork. Recommended admission to the professional year and completion of STEM-ED 310. PREREQ: PERM/INST.

VIP—Vertically Integrated Projects

VIP500 Vertically Integrated Projects (1-2 credits)(F,S,SU). Develops important professional and technical skills through work on team-based, research projects. Graduate students serve as project managers and are responsible for modeling the behavior, technical expertise, and leadership of a professional researcher and project leader. Roles include teaching, leading, and developing members of large multidisciplinary design/discovery teams. Course topic is based on the VIP project, and design challenges considered are those necessary for the success of the VIP project. Topics may be repeated up to 6 semesters. Either graded or pass/fail. PREREQ: PERM/INST.

VIP600 Vertically Integrated Projects (1-2 credits)(F,S). Reinforces professional and technical skills developed at the 200-500 level through work on team-based, research projects. Doctoral students serve as research leaders (which may include research on dissertation topic) and are responsible for modeling the behavior, technical expertise, and leadership of a professional researcher and project leader while mentoring students of all levels in support of the team's success. Roles include comprehensive project management, objective setting/clarification, role definition and assignment, teaching, leading, mentoring team members, and working with the professor to evaluate team member performance. Course topic is based on the VIP project and design challenges considered are those necessary for the success of the VIP project. Course and topic may be repeated up to 6 semesters for credit. PREREQ: PERM/INST.

Administration, Faculty, and Emeriti

Boise State University Administration

President
Marlene Tromp

Provost and Vice President for Academic Affairs
John Buckwalter

Vice President for Finance and Administration
Mark J. Heil

Interim Vice President for Student Affairs and Enrollment Management
Ed Whipple

Vice President for University Advancement
Matthew Ewing

Vice President and Chief Financial Officer
Mark Heil

Vice President for Campus Operations and Chief Operating Officer
Randi McDermott

Dean of Honors College
Andrew Finstuen

Interim Dean of University Libraries
Michelle Armstrong

College of Arts and Sciences
Interim Dean, Leslie Durham

College of Business and Economics
Dean, Mark Bannister

College of Education
Interim Dean, Jennifer Snow

College of Engineering
Dean, JoAnn S. Lighty

College of Health Science
Dean, Tim Dunnagan

College of Innovation and Design
Dean, Gordon Jones

School of Public Service
Interim Dean, Andrew Giacomazzi

Graduate College
Interim Dean, Scott Lowe

Division of Extended Studies
Dean, Mark Wheeler

Boise State University Graduate Faculty

Full-Time Official Faculty as of April 1, 2022

Note: The date listed is the year of first graduate appointment.

*May chair graduate committees.

A

Ackler, Harold 2013
Clinical Assistant Professor, Materials Science and Engineering; PhD, Massachusetts Institute of Technology

Ahmed, Saleh* 2020
Assistant Professor, School of Public Service; PhD, University of Arizona

Ahmed-Zaid, Said* 1996
Associate Professor, Electrical and Computer Engineering; PhD, University of Illinois at Urbana–Champaign

Ahten, Sara M.* 2012
Associate Professor, Nursing; DNP, Rush University

Albig, Allan* 2012
Associate Professor, Biological Sciences; PhD, Washington State University

Alderden, Jenny* 2022
Associate Professor, Nursing; PhD, University of Utah

Alexander, Eric S. 2017
Assistant Professor, Music; DMA, Boston University

Allen, Kyle D. 2020
Assistant Professor, Finance; PhD, Texas Tech University

Allen, Michael* 2014
Associate Professor, Political Science; PhD, Binghamton University

Allen, Robin* 1997
Associate Professor, Social Work; PhD, University of Illinois at Urbana–Champaign

Anderson, Cheryl P.* 2017
Assistant Professor, Anthropology; PhD, University of Nevada, Las Vegas

Andersen, Timothy* 2001
Graduate Program Coordinator and Professor, Computer Science; PhD, Brigham Young University

Anderson, Jeffrey M.* 2005
Associate Professor, Respiratory Care; MA, Boise State University

AnnieMargaret, Jill* 2006
Professor, Art, Design, and Visual Studies; MFA, California State University, Long Beach

Araujo, Kathleen* 2022
Associate Professor and Director, Energy Policy Institute, School of Public Service; PhD, Massachusetts Institute of Technology

Arellano, Amy* 2018
Associate Professor, Communication and Media; PhD, University of Nebraska – Lincoln

Arispe, Kelly 2017
Professor, World Languages; PhD, University of California, Davis

Ashley, Amanda 2011
Graduate Program Coordinator and Associate Professor, School of Public Service; PhD, University of Pennsylvania

Ashley, Seth* 2012
Associate Professor, Communication and Media; PhD, University of Missouri

Atkins Elliott, Leslie* 2020
Interim Chair and Professor, Curriculum, Instruction, and Foundational Studies; PhD, University of Maryland

Atlakson, Philip* 1985
Professor, Theatre, Film, and Creative Writing; MA, State University of New York, Binghamton

Ausman, Kevin D* 2015
Assistant Professor, Chemistry and Biochemistry; PhD, Rice University

B

Babinkostova, Liljana* 2007
Graduate Program Coordinator and Professor, Mathematics; PhD, University of St. Cyril and Methodius, Macedonia

Baek, Young Kyun* 2011
Professor, Educational Technology; PhD, Georgia State University

Baker, Edward (Ed)* 2002
Professor, Public and Population Health; PhD, Temple University

Barney Smith, Elisa* 1999
Professor, Electrical and Computer Engineering; PhD, Rensselaer Polytechnic Institute

Basu Thakur, Gautam* 2012
Associate Professor, English; PhD, University of Illinois at Urbana–Champaign

Baxter, Ryan J. 2015
Associate Professor, Accountancy; PhD, Case Western Reserve University

Beard, Richard S.* 2017
Assistant Research Professor, Biological Sciences; PhD, Idaho State University

Beauchemin, James 2017
Assistant Professor, Social Work; PhD, Ohio State University

Becerra, Roland* 2021
Assistant Professor, Art, Design, and Visual Studies; MFA, Yale University

Becker, Rachel N. 2020
Assistant Professor, Music; PhD, University of Cambridge

Bellinger, Nisha* 2018
Graduate Program Coordinator and Professor, School of Public Service; PhD, University of Missouri

Belthoff, James* 1993
Professor, Biological Sciences; PhD, Clemson University

Benner, Shawn* 2004
Associate Dean, College of Innovation and Design and Professor, Geosciences; PhD, University of Waterloo

Bergstrom, Anna* 2021
Assistant Professor, Geosciences; PhD, University of Colorado, Boulder

Beymer, Lisa* 2017
Clinical Assistant Professor, Early and Special Education; EdD, Boise State University

Bieter, John Jr.* 2004
Professor, History; PhD, Boston College

Birdsall, Christopher C.* 2016
Assistant Professor, School of Public Service; PhD, American University

Bittleston, Leonora S.* 2019
Assistant Professor, Biological Sciences; PhD, Harvard University

Black, Geoffrey A.* 2014
Professor, Economics; PhD, University of Washington

Blakeslee, Laurie* 2001
Associate Professor, Art, Design, and Visual Studies; MFA, University of Arizona

Boggs, Kyle G.* 2019
Assistant Professor, English; PhD, University of Arizona

Boodraj, Maheshwar 2021
Assistant Professor, Information Technology and Supply Chain Management; PhD, Georgia State University

Boothe, Diane 2015
Professor, Literacy, Language, and Culture; DPA, University of Southern California

Bostaph, Lisa* 2004
Professor, Criminal Justice; PhD, University of Cincinnati

Boucher, Teresa* 1997
Professor, World Languages; PhD, Princeton University

Brady, Lisa Marie* 2004
Chair and Professor, History; PhD, University of Kansas

Brand, Brittany D.* 2013
Associate Professor, Geosciences; PhD, Arizona State University

Brandt, Jodi* 2016
Assistant Professor, Geosciences; PhD, University of Wisconsin

Brill, Stephen H.* 1998
Associate Professor, Mathematics; PhD, University of Vermont

Brown, Eric 2008
Associate Professor, Chemistry and Biochemistry; PhD, Oregon State University

Brown, Marcellus* 1989
Associate Professor, Music; MM, University of Michigan at Ann Arbor

Brown, Tyler N.* 2015
Graduate Program Coordinator and Associate Professor, Kinesiology; PhD, University of Michigan at Ann Arbor

Browning, Jim* 2007
ciate Professor, Electrical and Computer Engineering; PhD, University of Wisconsin, Madison

Buerki, Sven* 2017
Assistant Professor, Biological Sciences; PhD, University of Neuchatel

Buffenbarger, James* 1991
Associate Professor, Computer Science; PhD, University of California, Davis

Buie, Zachary C.* 2019
Assistant Professor, Music; DMA, University of Utah

Bullock, Douglas* 1995
Associate Dean, College of Arts and Sciences, and Professor, Mathematics; PhD, University of Iowa

Burkhart, Ross* 2004
Professor, Political Science; PhD, University of Iowa

C

Calhoun, Donna* 2012
Associate Professor, Mathematics; PhD, University of Washington

Callahan, Michael P.* 2015
Associate Professor, Chemistry and Biochemistry; PhD, University of California, Santa Barbara

Calvert, Hannah 2018
Assistant Research Professor, College of Education; PhD, University of Texas at Austin

Campbell, Ann* 2004
Professor, English; PhD, Emory University

Campbell, Cynthia G.* 2013
Associate Chair and Associate Professor, Psychological Science; PhD, Pennsylvania State University

Campbell, Kris A.* 2005
Professor, Electrical and Computer Engineering; PhD, University of California, Davis

Cannon, Ryan* 2014
Associate Professor, Communication and Media; MFA, University of Texas at Austin

Cantley, Kurtis D.* 2013
Graduate Program Coordinator and Associate Professor, Electrical and Computer Engineering; PhD, University of Texas, Dallas

Carney, Michele* 2012
Associate Professor, Curriculum, Instruction, and Foundational Studies; PhD, University of Idaho

Carter, Deborah* 2009
Interim Associate Dean, College of Education, Professor, Early and Special Education; PhD, University of Oregon

Carter, Hannah 2019
Assistant Professor, Literacy, Language, and Culture; PhD, University of Nevada, Reno

Casper, Mary Frances* 2007
Associate Professor, Communication and Media; PhD, North Dakota State University

Castaneda, Nivea 2019
Lecturer, Communication and Media; PhD, University of Denver

Castellano, Isaac M.* 2015
Clinical Assistant Professor, School of Public Service; PhD, University of Kentucky

Cattau, Megan E.* 2019
Assistant Professor, College of Innovation and Design and Endorsement for Biological Sciences; PhD, Columbia University

Caughlin, T. Trevor* 2017
Assistant Professor, Biological Sciences; PhD, University of Florida

Cavey, Laurie* 2010
Professor, Mathematics; PhD, North Carolina State University

Champion, Joe* 2014
Associate Professor, Mathematics; PhD, University of Northern Colorado

Charlier, Henry A.* 2000
Associate Professor, Chemistry and Biochemistry; PhD, Medical College of Wisconsin

Chen, Hao* 2010
Associate Professor, Electrical and Computer Engineering; PhD, Syracuse University

Chen, Ke (Kelly)* 2015
Assistant Professor, Economics; PhD, Dalhousie University

Chenoweth, Timothy* 2004
Associate Professor, Information Technology and Supply Chain Management; PhD, Washington State University

Chiasson, John N.* 2006
Associate Professor, Electrical and Computer Engineering; PhD, University of Minnesota

Ching, Yu-Hui* 2011
Chair and Associate Professor, Educational Technology; PhD, Pennsylvania State University

Chinnathambi, Karthik* 2012
Senior Research Engineer, Materials Science and Engineering; PhD, Indian Institute of Science

Chittoori, Bhaskar* 2013
Graduate Program Coordinator and Associate Professor, Civil Engineering; PhD, University of Texas, Arlington

Cho, Daehwan* 2010
Associate Professor, Communication and Media; MFA, Southern Illinois University Carbondale

Chonody, Jill M. 2018
Graduate Program Coordinator and Associate Professor, Social Work; PhD, Florida State University

Christensen, Preston M. 2021
Clinical Professor, Construction Management; JD, University of Utah

Chyung, Seung Youn (Yonnie)* 1997
Chair, Graduate Program Coordinator, and Professor, Organizational Performance and Workplace Learning; EdD, Texas Tech University

Clare, Ralph* 2012
Associate Professor, English; PhD, Stony Brook University

Clemens, John D.* 2019
Assistant Professor, Mathematics; PhD, University of California, Berkeley

Cline, Richard (Casey) 2018
Chair and Associate Professor, Construction Management; PhD, University of Idaho

Colson, Adam C.* 2017
Assistant Professor, Chemistry and Biochemistry; PhD, Rice University

Conger, Scott A.* 2013
Associate Professor, Kinesiology; PhD, University of Tennessee

Connor, Kelley* 2015
Associate Professor, Nursing; PhD, University of Kansas

Corless-Smith, Martin* 2000
Graduate Program Coordinator and Professor, Theatre, Film, and Creative Writing; PhD, University of Utah

Cornell, Kenneth A.* 2006
Associate Professor, Chemistry and Biochemistry; PhD, Oregon Health and Sciences University

Corral, Karen 2008
Chair and Associate Professor, Information Technology and Supply Chain Management; PhD, University of Arizona

Coskey, Samuel* 2013
Associate Professor, Mathematics; PhD, Rutgers University

Courtheyn, Christopher* 2020
Assistant Professor, School of Public Service; PhD, University of North Carolina

Cowan, Mark* 2005
Professor, Accountancy; JD, University of Connecticut

Crowley, Stephen J. 2015
Associate Professor, Philosophy; PhD, Indiana University

Cruz, Jennyffer* 2020
Assistant Professor, Biological Sciences; PhD, University of Queensland

Cundiff, Nicole 2020
Clinical Assistant Professor, College of Business and Economics; PhD, Southern Illinois University

Curl, Cynthia L. 2016
Assistant Professor, Public and Population Health; PhD, University of Washington

Cutchin, Steven M.* 2014
Associate Professor, Computer Science; PhD, Purdue University

Cutler, Joshua 2020
Assistant Professor, Accountancy; PhD, University of Oregon

D

Da Silva, Rafael Leonardo* 2022
Clinical Assistant Professor, Organizational Performance and Workplace Learning; PhD, University of Georgia

Dagher, Gaby* 2016
Assistant Professor, Computer Science; PhD, Concordia University

Dalrymple, Sarah E. 2017
Clinical Assistant Professor, Biological Sciences; PhD, University of California, Davis

Davis, Kirsten A. 2018
Associate Professor, Construction Management; PhD, Virginia Polytechnic Institute and State University

de Graaff, Marie-Anne* 2010
Graduate Program Coordinator and Professor, Biological Sciences; PhD, Wageningen University

DeYoung, Edwin J. 2019
Graduate Program Coordinator and Lecturer, Geosciences; MS, Montana State University

Demps, Kathryn* 2012
Associate Professor, Anthropology; PhD, University of
California, Davis

Deng, Qizhen 2019
Assistant Professor, Literacy, Language, and Culture;
PhD, University of Nebraska-Lincoln

Deng, Zhangxian* 2018
Assistant Professor, Mechanical and Biomedical
Engineering; PhD, Ohio State University

Devereux Herbeck, Mariah E.* 2012
Professor, World Languages; PhD, University of
Wisconsin-Madison

Dimand, Ana-Maria* 2020
Assistant Professor, School of Public Service; PhD,
Florida International University

Dinkar, Niharika* 2006
Associate Professor, Art, Design, and Visual Studies;
PhD, State University of New York at Stony Brook

Dismuke, Sherry* 2013
Clinical Associate Professor, Curriculum, Instruction,
and Foundational Studies; EdD, Boise State University

Dit, Bogdan* 2016
Clinical Assistant Professor, Computer Science; PhD,
College of William and Mary

Douglas, Whitney* 2013
Associate Professor, English; PhD, University of
Nebraska–Lincoln

Doumas, Diana M.* 2003
Professor, Counselor Education; PhD, University of
Southern California

Doyon, Katherine* 2022
Assistant Professor, Nursing; PhD, University of Utah

Dumais, Joseph J. 2015
Associate Research Professor, Chemistry and
Biochemistry; PhD, University of Washington

Dunne, Timothy C. 2016
Assistant Professor, College of Business and Economics;
PhD, University of Missouri

Durham, Leslie 2006
Interim Dean, College of Arts and Sciences, and
Professor, Theatre, Film, and Creative Writing; PhD,
University of Kansas

E

Earley, Caroline* 2010
Professor, Art, Design, and Visual Studies; MFA,
University of Wisconsin–Milwaukee

Egginton, Jared F. 2020
Associate Professor, Finance; PhD, University of
Mississippi

Eichmeyer, Jennifer N.* 2018
Program Director and Clinical Assistant Professor,
School of Allied Health; MS, University of Texas,
Houston

Eisty, Nasir U.* 2022
Assistant Professor, Civil Engineering; PhD, University
of Alabama

Ekstrand, Michael D.* 2016
Assistant Professor, Computer Science; PhD, University
of Minnesota

Elder, Thomas 2001
Associate Professor, Art, Design, and Visual Studies;
MFA, Iowa State University

Enderlin, Ellyn M.* 2020
Assistant Professor, Geosciences; PhD, Ohio State
University

Enright, Esther A.* 2016
Assistant Professor, Curriculum, Instruction, and
Foundational Studies; PhD, University of Michigan

Erpelding, Chad* 2010
Professor, Art, Design, and Visual Studies; MFA,
Southern Illinois University Carbondale

Esp, Susan 2010
Associate Professor, School of Social Work; PhD,
University of Idaho

Estrada, David* 2013
Associate Professor, Materials Science and Engineering
and Electrical and Computer Engineering; PhD,
University of Illinois at Urbana–Champaign

Estrem, Heidi* 2008
Professor, English; PhD, University of Nevada, Reno

F

Fails, Jerry Alan* 2016
Graduate Program Coordinator and Associate Professor,
Computer Science; PhD, University of Maryland

Farid, Arvin* 2008
Associate Professor, Civil Engineering; PhD,
Northeastern University, Boston

Ferguson, Matthew L 2013
Assistant Professor, Physics; PhD, University of
Maryland

Feris, Kevin* 2005
Chair and Professor, Biological Sciences; PhD,
University of Montana

Filzen, Josh 2015
Associate Professor, Accountancy; PhD, University of
Oregon

Finstuen, Andrew* 2011
Interim Vice Provost for Undergraduate Studies,
Director of Honors College and Professor, History;
PhD, Boston College

Fitzpatrick, Clare K. 2016
Assistant Professor, Mechanical and Biomedical
Engineering; PhD, University College Dublin

Flores, Alejandro N.* 2009
Associate Professor, Geosciences; PhD, Massachusetts
Institute of Technology

Fologea, Daniel* 2012
Assistant Professor, Physics; PhD, University of
Bucharest

Forbey, Jennifer* 2008
Professor, Biological Sciences; PhD, University of Utah

Ford, Jeremy W.* 2017
Assistant Professor, Early and Special Education; PhD,
University of Iowa

Ford, Philip 2015
Clinical Associate Professor, Kinesiology; PhD,
University of Southern Mississippi

Fowler, Nicholas (Luke)* 2016
Graduate Program Coordinator and Associate Professor,
Public Policy and Administration; PhD, Mississippi
State University

Fox, Francis* 1999
Professor, Art, Design, and Visual Studies; MFA,
University of Wyoming

Fragkias, Michail* 2014
Graduate Program Coordinator and Associate Professor,
Economics; PhD, Clark University

Frary, Megan* 2005
Graduate Program Coordinator and Associate Professor,
Materials Science and Engineering; PhD, Massachusetts
Institute of Technology

Fredericksen, Elizabeth* 1999
Professor, Public Policy and Administration; PhD,
Washington State University

Fredricksen, James E.* 2008
Graduate Program Coordinator and Associate Professor,
English; PhD, Michigan State University

Friesen, Norm* 2013
Professor, Educational Technology; PhD, University of
Alberta

Fry, Phillip C.* 1987
Professor, Information Technology and Supply Chain
Management; PhD, Louisiana State University

Fry, Sara* 2008
Professor, Curriculum, Instruction, and Foundational
Studies; PhD, University of Wyoming

Fry, Vanessa Crossgrove* 2022
Assistant Research Professor and Interim Director,
Idaho Policy Institute, School of Public Service; PhD,
Boise State University

Fuller, Christie M.* 2020
Associate Professor, Information Technology and
Supply Chain Management; PhD, Oklahoma State
University

G

Gabbard, David* 2013
Professor, Curriculum, Instruction, and Foundational
Studies; EdD, University of Cincinnati

Gallegos, Cara M.* 2013
Associate Professor, Nursing; PhD, University New
Mexico

Gallo, Laura L.* 2016
Graduate Program Coordinator and Assistant Professor,
Counselor Education; PhD, University of Iowa

Gandarias Beldarrain, Ziortza 2019
Assistant Professor, World Languages; PhD, University
of Nevada, Reno

Gao, Yong* 2008
Professor, Kinesiology; PhD, University of Illinois at
Urbana–Champaign

Gardner, Stewart* 2015
Assistant Clinical Professor, School of Public Service;
PhD, Michigan State University

Garza, Maria Alicia* 1997
Professor, World Languages; PhD, University of
Arizona

Gattiker, Thomas* 2005
Professor, Information Technology and Supply Chain
Management; PhD, University of Georgia

Genuchi, Matthew C. 2013
Associate Professor, Psychological Science; PhD,
University of Denver

Giacomazzi, Andrew* 1998
Interim Dean, School of Public Service and Professor,
Criminal Justice; PhD, Washington State University

Giacumo, Lisa A.* 2016
Assistant Professor, Organizational Performance and
Workplace Learning; PhD, Arizona State University

Gill, Jill K.* 2000
Professor, History; PhD, University of Pennsylvania,
Philadelphia

Gillespie, Lane* 2013
Associate Professor, Criminal Justice; PhD, University
of South Florida

Glenn, Nancy 2008
Professor, Geosciences; PhD, University of Nevada,
Reno

Goo, Juna* 2022
Assistant Professor, Mathematics; PhD, Michigan State
University Graduate Faculty

Gooden, Eric S. 2015
Assistant Professor, Accountancy; PhD, Florida State
University

Graugnard, Elton* 2010
Assistant Research Professor, Materials Science and
Engineering; PhD, Purdue University

Gray, Lori F.* 2017
Associate Professor, Music; DMA, Arizona State
University

Gregory, Bayard O.* 2004
Instructor, Public Policy and Administration; PhD,
University of Idaho

Grusiecki, Tomasz* 2018
Assistant Professor, Art, Design, and Visual Studies;
PhD, 2017, McGill University

Guarino, Joseph C.* 2000
Professor, Mechanical and Biomedical Engineering;
PhD, University of Idaho

Guo, Daibao* 2019
Assistant Professor, Literacy, Language, and Culture;
PhD, Texas A&M

H

Hagenah, Sara* 2015
Assistant Professor, Curriculum, Instruction, and
Foundational Studies; PhD, University of Washington

Hamby, Anne 2021
Assistant Professor, College of Business and Economics;
PhD, Virginia Polytechnic Institute and State
University

Hamilton, Robert W.* 2000
Associate Professor, Civil Engineering; PhD, University
of Maine

Hammons, Dave* 2018
Graduate Program Coordinator and Associate Professor, Kinesiology; EdD, Boise State University

Hampikian, Gregory* 2004
Professor, Biological Sciences; PhD, University of Connecticut

Hampshire, Patricia* 2011
Chair, Graduate Program Coordinator, and Associate Professor, Early and Special Education; PhD, Indiana University

Hanna, Charles B.* 1996
Chair and Professor, Physics; PhD, Stanford University

Hansen, Mark R.* 2007
Professor, Music; DMA, University of North Texas, Denton

Hansen, Marla* 1991
Professor, Theatre, Film, and Creative Writing; MFA, University of Utah

Hansen, Matthew C.* 2005
Professor, English; PhD, University of Nebraska

Hansen, Zeynep Kobabiyik* 2008
Vice Provost of Academic Planning and Professor, Economics; PhD, University of Arizona

Harlander, Jens* 2007
Associate Professor, Mathematics; PhD, University of Oregon

Hartt, S. Allen* 2020
Assistant Professor, Accountancy; PhD, Bentley University

Harvey, Keith* 2000
Associate Dean, College of Business and Economics and Professor, Finance; PhD, University of Tennessee, Knoxville

Harvey, Samantha C.* 2011
Professor, English; PhD, Cambridge University

Hausegger, Lori* 2015
Associate Professor, Political Science; PhD, Ohio State University

Hayden, Eric J.* 2013
Associate Professor, Biological Sciences; PhD, Portland State University

Heath, Julie* 2007
Professor, Biological Sciences; PhD, University of Florida

Henderson, Eric K.* 2020
Clinical Assistant Professor, Computer Science; PhD, Cambridge University

Henderson, Heike* 1997
Associate Chair and Professor, World Languages; PhD, University of California, Davis

Herbeck, Jason R.* 2012
Chair and Professor, World Languages; PhD, University of Wisconsin–Madison

Hicks, Manda* 2013
Associate Professor, Communication and Media; PhD, Bowling Green State University

Hillard, Thomas* 2008
Associate Professor, English; PhD, University of Arizona

Hillis, Vicken* 2017
Graduate Program Coordinator and Assistant Professor, College of Innovation and Design; PhD; University of California, Davis

Hindrichs, Cheryl* 2008
Professor, English; PhD, Ohio State University

Hodges, Brian* 2008
Associate Professor, Music; DMA, University of North Carolina at Greensboro

Hollar, Courtney 2021
Lecturer, Mechanical and Biomedical Engineering; PhD, University of Idaho

Holmes, M. Randall* 1991
Professor, Mathematics; PhD, State University of New York at Binghamton

Honts, Charles R.* 1995
Professor, Psychological Science; PhD, University of Utah

Hopping, Kelly A. 2018
Assistant Professor, College of Innovation and Design; PhD, Colorado State University

Hou, Yantian* 2016
Assistant Professor, Computer Science; PhD, Utah State University

House, Kendall V.* 2007
Clinical Assistant Professor, Anthropology; PhD, University of California, Davis

Hsu, Yu-Chang* 2011
Graduate Program Coordinator and Associate Professor, Educational Technology; PhD, Pennsylvania State University

Hu, Jingxian* 2018
Assistant Professor, Economics; PhD, University of Kansas

Huang, Qiping (Jimmy) 2020
Assistant Professor, Finance; PhD, University of Kentucky

Hubbard, Monica* 2014
Graduate Program Coordinator and Associate Professor, Public Policy and Administration; PhD, Oregon State University

Hudyma, Nicholas* 2019
Chair and Professor, Civil Engineering; PhD, University of Nevada, Las Vegas

Hughes, William L.* 2008
Director, Micron School of Materials and Professor, Materials Science and Engineering; PhD, Georgia Institute of Technology

Humphrey, Michael John* 2007
Associate Professor, Early and Special Education; EdD, University of Northern Colorado

Hung, Jui-long (Andy)* 2008
Professor, Educational Technology; EdD, Texas Tech University

Hunt, Charles R. 2019
Assistant Professor, School of Public Service; PhD, University of Maryland

Huntley, Katherine V.* 2011
Associate Professor, History; PhD, University of Leicester

Huntsman, Sherena* 2019
Assistant Professor, English; PhD, University of Utah

Hurley, Michael* 2010
Associate Research Professor, Materials Science and Engineering; PhD, University of Virginia

Husting, Virginia* 1999
Professor, Sociology; PhD, University of Illinois at Urbana–Champaign

Hutchinson, Les* 2019
Assistant Professor, English; PhD, Michigan State University

Hutson, Royce 2012
Associate Professor, Social Work; PhD, University of Wisconsin–Madison

Hyatt, Troy* 2011
Chair and Associate Professor, Accountancy; PhD, University of Arizona

I

Isbell, Matthew G.* 2016
Graduate Program Coordinator and Associate Professor, Communication and Media; PhD, University of Texas at Arlington

Islam, Samia* 2015
Graduate Program Coordinator and Professor, Economics; PhD, West Virginia University

J

Jackson, Brian* 2020
Assistant Professor, Physics; PhD, University of Arizona

Jaques, Brian J.* 2016
Assistant Professor, Materials Science and Engineering; PhD, Boise State University

Jain, Amit* 1996
Chair, Graduate Program Coordinator and Associate Professor, Computer Science; PhD, University of Central Florida

Jankowski, Eric* 2015
Associate Professor, Materials Science and Engineering; PhD, University of Michigan

Jebe, Ruth 2016
Assistant Professor, College of Business and Economics; JD, University of Minnesota

Johnson, Benjamin C.* 2018
Assistant Professor, Electrical and Computer Engineering; PhD, Cornell University

Johnson, Evelyn* 2008
Professor, Early and Special Education; EdD, University of Washington

Johnson, Jeffrey B.* 2012
Graduate Program Coordinator and Associate Professor, Geosciences; PhD, University of Washington

Johnson, Tyler G.* 2008
Professor, Kinesiology; PhD, Arizona State University

Jones, Niusha 2021
Assistant Professor, College of Business and Economics; PhD, University of North Texas

Jorcyk, Cheryl* 1998
Professor, Biological Sciences; PhD, Johns Hopkins University

Jorgensen, J. Cody* 2015
Assistant Professor, Criminal Justice; PhD, University of Texas at Dallas

Josephsen, Jayne 2019
Associate Professor, Nursing; EdD, Boise State University

K

Kaiser, Kendra E.* 2019
Research Professor, Geosciences; PhD, Duke University

Kaiser, Uwe* 2001
Chair and Associate Professor, Mathematics; PhD, University of Siegen

Kandadai, Nirmala* 2019
Assistant Professor, Electrical and Computer Engineering; PhD, University of Texas at Austin

Kang, HyunMee* 2017
Assistant Professor, Communication and Media; PhD, Louisiana State University

Kane, Adrian T.* 2012
Professor, World Languages; PhD, University of California–Riverside

Kang, HyunMee* 2017
Assistant Professor, Communication and Media; PhD, Louisiana State University

Kang, In Gu* 2020
Assistant Professor, Organizational Performance and Workplace Learning; PhD, Indiana University

Kaupins, Gundars 2008
Professor, Management; PhD, University of Iowa

Keck, Casey* 2012
Associate Department Chair and Associate Professor, English; PhD, Northern Arizona University

Kempf, Timothy R.* 2015
Clinical Assistant Professor; Kinesiology; PhD, Purdue University

Kenaley, Bonnie L. Davis 2009
Associate Professor, Social Work; PhD, University of Albany, State University of New York

Kennington, Casey* 2016
Assistant Professor, Computer Science; PhD, Universitat Bielefeld

Ketelsen, Kirk L.* 2018
Clinical Assistant Professor, Public and Population Health; PhD, University of Northern Colorado

Kettler, Jaclyn J.* 2015
Assistant Professor, Political Science; PhD, Rice University

Keys, Kathleen* 2004
Interim Director, School of Art, and Professor, Art, Design, and Visual Studies; PhD, The Ohio State University

Khanal, Mandar* 2000
Associate Professor, Civil Engineering; PhD, University of California, Irvine

Kim, Byung-Il* 2006
Professor, Physics; PhD, Seoul National University

King, Laura* 2012
Associate Professor, Criminal Justice; PhD, Indiana University Pennsylvania

King, Matthew D.* 2016
Assistant Professor, Chemistry and Biochemistry; PhD,
Syracuse University

King, William R.* 2019
Professor, School of Public Service; PhD, University of
Cincinnati

Kinzel, Margaret T.* 2000
Chair and Associate Professor, Mathematics; PhD,
Pennsylvania State University

Klautsch, Richard* 1992
Department Head and Professor, Theatre, Film, and
Creative Writing; PhD, Wayne State University

Klein, Joanne* 2001
Associate Chair and Professor, History; PhD, Rice
University

Kline, Linda* 2000
Department Head and Professor, Music; DA,
University of Memphis

Knowlton, William B.* 2000
Professor, Electrical and Computer Engineering,
Materials Science and Engineering; PhD, University of
California, Berkeley

Knox, Brian D. 2020
Assistant Professor, Accountancy; PhD, University of
Pittsburgh

Ko, Kyungduk 2004
Associate Professor, Mathematics; PhD, Texas A&M
University

Koetsier, Peter* 1995
Interim Chair and Professor, Biological Sciences; PhD,
Idaho State University

Kohn, Matthew J.* 2007
Professor, Geosciences; PhD, Rensselaer Polytechnic
Institute

Kopera, Michal A.* 2018
Assistant Professor, Mathematics; PhD, University of
Warwick

Koster, Megan S.* 2017
Graduate Program Coordinator and Clinical Associate
Professor, Respiratory Care, EdD; University of New
England

Kroes, James R. 2017
Professor, Information Technology and Supply Chain
Management; PhD, Georgia Institute of Technology

Krohn, Raymond J.* 2012
Assistant Professor, History; PhD, Purdue University

Kuang, Wan* 2005
Associate Professor, Electrical and Computer
Engineering; PhD, University of Southern California

L

Landrum, R. Eric* 1992
Chair and Professor, Psychological Science; PhD,
Southern Illinois University Carbondale

Lane, Julie* 2010
Associate Professor, Communication and Media; PhD,
University of Wisconsin–Madison

Lee, Jacqueline* 2018
Assistant Professor, Criminal Justice; PhD, University of
Maryland

Lee, Jaechoul* 2003
Professor, Mathematics; PhD, University of Georgia

Lee, Jeunghoon* 2008
Associate Professor, Chemistry and Biochemistry,
Materials Science and Engineering; PhD, University of
Connecticut

Lee, Lily 2014
Graduate Program Coordinator and Associate Professor,
Art, Design, and Visual Studies; MFA, University of
Oregon

LeMaster, Clifford* 1990
Professor, Chemistry and Biochemistry; PhD,
University of California, Davis

Lete, Nerea* 2012
Professor, World Languages; MFA, University of Iowa

Li, Lan* (Samantha) 2012
Graduate Program Coordinator and Associate Professor,
Materials Science and Engineering; PhD, University of
Cambridge

Li, Yongjia (Eddy) 2020
Assistant Professor, Finance; PhD, University of
Arkansas,

Liberty, Lee M.* 1994
Research Professor, Geosciences; MS, University of
Wyoming

Lighty, JoAnn Slama* 2017
Dean, College of Engineering and Professor,
Mechanical and Biomedical Engineering; PhD,
University of Utah

Liley, Denice Goodrich* 1997
Associate Professor, Social Work; PhD, University of
Utah

Lindquist, Eric* 2012
Associate Professor, School of Public Service; PhD,
Texas A&M University

Lindquist, Paul* 2010
Senior Lab Engineer, Materials Science and
Engineering; PhD, University of Illinois

Lingwall, Jeff 2019
Assistant Professor, College of Business and Economics;
JD, Yale Law School

Llewellyn, Sarah E. 2021
Clinical Assistant Professor, Biological Sciences; PhD,
Washington State University

Long, Min* 2016
Assistant Professor, Computer Science; PhD, Cornell
University

Loo, Sin Ming* 2004
Professor, Electrical and Computer Engineering; PhD,
University of Alabama in Huntsville

Loos-Bartlett, Nicole 2017
Graduate Program Coordinator and Clinical Assistant
Professor, Nursing; DNP, Brandman University

Lowe, Scott E.* 2006
Interim Dean, Graduate College and Professor,
Economics; PhD, University of California, Santa
Barbara

Lowenthal, Patrick R.* 2013
Graduate Program Coordinator and Associate Professor,
Educational Technology; PhD, University of Colorado,
Denver

Lu, Yang* 2013
Associate Professor, Civil Engineering; PhD, Virginia
Tech

Lubamersky, Lynn* 2001
Associate Professor, History; PhD, Indiana University

Lucas, Shelley* 2001
Graduate Program Coordinator and Associate Professor,
Kinesiology; PhD, University of Iowa

Ludwig, Genevieve E 2018
Clinical Assistant Professor, Kinesiology; EdD, Walden
University

Lujan, Trevor* 2011
Graduate Program Coordinator and Associate Professor,
Mechanical and Biomedical Engineering; PhD,
University of Utah

Lunstrum, Libby* 2020
Associate Professor, School of Public Service; PhD,
University of Minnesota

Lyons, Jeffrey* 2016
Associate Professor, Political Science; PhD, University
of Colorado at Boulder

M

MacDonald, Jason B 2000
Associate Professor, Marketing; PhD, University of
Texas–Pan American

Macomb, Daryl* 2011
Associate Professor, Physics; PhD, Iowa State University

Madsen-Brooks, Leslie J.* 2010
Associate Professor, History; PhD, University of
California–Davis

Maher, Liam P. 2018
Assistant Professor, Management; PhD, Florida State
Univesity

Mainali, Laxman* 2020
Assistant Professor, Physics; PhD, State University of
New York, Albany

Mallette, Jennifer C.* 2015
Graduate Program Coordinator and Assistant Professor,
English; PhD, University of Arkansas

Mamivand, Mahmood* 2017
Assistant Professor, Mechanical and Biomedical
Engineering; PhD, Mississippi State University

Mann, Michael J.* 2018
Graduate Program Coordinator and Associate
Professor,Public and Population Health; PhD,
University of Florida

Mannen, Erin M.* 2020
Assistant Professor, Mechanical and Biomedical
Engineering; PhD, University of Kansas

Marin, Traci* 2021
Associate Professor, Respiratory Care; PhD, University
of California, Riverside

Marker, Anthony Wayne* 2005
Chair, Graduate Program Coordinator, and Professor,
Organizational Performance and Workplace Learning;
PhD, Indiana University, Bloomington

Marr, John (Jack) 2015
Clinical Associate Professor, College of Business and
Economics; MA, University of Chicago

Marshall, Hans-Peter* 2009
Associate Professor, Geosciences; PhD, University of
Colorado at Boulder

Martin, Eric M.* 2016
Assistant Professor, Kinesiology; PhD, Michigan State
University

Martinez, Michal* 2011
Assistant Professor, English; PhD, University of
Southern California

Martinez, Seth-Aaron* 2021
Clinical Assistant Professor, Organizational
Performance and Workplace Learning; PhD, Indiana
University

Masarik, April S. 2017
Assistant Professor, Communication and Media; PhD,
University of California, Davis

Mattingly, E. Shaunn 2014
Associate Professor, Management; PhD, University of
Louisville

McBayer, Garrett A. 2020
Assistant Professor, Finance; PhD, University of
Arkansas,

McCall, Darci 2022
Clinical Associate Professor, Nursing; PhD, University
of Northern Colorado

McChesney, John W.* 1995
Associate Professor, Kinesiology; PhD, University of
Oregon

McClain, Lisa* 2001
Professor, History; PhD, University of Texas

McClellan, Erin D.* 2012
Associate Professor, Communication and Media; PhD,
University of Colorado at Boulder

McDonald, Theodore W.* 2001
Professor, Psychological Science; PhD, University of
Wisconsin–Milwaukee

McDougal, Owen* 2008
Chair and Professor, Chemistry and Biochemistry;
PhD, University of Utah

McIntosh, John 2008
Associate Professor, Management; PhD, University of
Illinois at Urbana Champaign

McNamara, James P.* 1997
Chair, Graduate Program Coordinator, and Professor,
Geosciences; PhD, Syracuse University

McNatt, D. Brian 2010
Associate Professor, Management; PhD, University of
Iowa

Mead, Jodi L.* 2000
Graduate Program Coordinator and Professor,
Mathematics; PhD, Arizona State University

Meftahi, Ida* 2020
Assistant Professor, History; PhD, University of
Toronto

Mehrpouyan, Hoda* 2016
Assistant Professor, Computer Science; PhD, Oregon State University

Mercado, Julie M. 2020
Assistant Professor, Accountancy; PhD, University of Alabama

Meridith, Emily Knouf 2021
Clinical Assistant Professor, Biological Sciences; PhD, University of Washington

Midgett, Aida* 2010
Chair and Professor, Counselor Education; PhD, Northern Arizona University

Mikesell, Dylan* 2015
Graduate Program Coordinator and Associate Professor, Geosciences; PhD, Boise State University

Miller, Nicholas* 1993
Chair and Professor, History; PhD, Indiana University

Miller, Raissa* 2014
Graduate Program Coordinator and Assistant Professor, Counselor Education; PhD, University of North Texas

Miller, Sondra M. 2006
Associate Professor, Civil Engineering; PhD, University of Iowa

Mitchell, Kristen A.* 2007
Associate Professor, Biological Sciences; PhD, Washington State University

Mitkova, Maria I.* 2007
Professor, Electrical and Computer Engineering; PhD, University of Chemical Technology and Metallurgy, Sofia, Bulgaria

Mo, Ya* 2020
Assistant Professor, Curriculum, Instruction, and Foundational Studies; PhD, Michigan State University

Moll, Amy J.* 2000
Director and Professor, Materials Science and Engineering; PhD, University of California, Berkeley

Molumby, Nicole* 2005
Graduate Program Coordinator and Professor, Music; DMA, Ohio State University

Moneyhun, Clyde* 2011
Professor, English; PhD, University of Arizona

Montgomery, Cynthia 2021
Clinical Associate Professor, Nursing; PhD, Walden University

Montrose, Luke* 2021
Assistant Professor, Public Health and Population Science; PhD, University of Montana

Moore, Rick Clifton* 1994
Professor, Communication and Media; PhD, University of Oregon

Moorcroft, Scott J. 2017
Graduate Program Coordinator and Clinical Assistant Professor, Kinesiology; MA, Boise State University

Morales, Serena 2018
Graduate Program Coordinator and Clinical Assistant Professor, Curriculum, Instruction, and Foundational Studies; PhD, University of Texas at Austin

Moreau, Leslie M.* 2007
Associate Professor, Music; DMA, Arizona State University

Moroney, Jillian L. 2019
Assistant Professor, School of Public Service; PhD, University of Idaho

Moro, Regina R.* 2016
Graduate Program Coordinator and Assistant Professor, Counselor Education; PhD, University of North Carolina at Charlotte

Morrison, Brad E.* 2013
Associate Professor, Biological Sciences; PhD, University of Texas at Dallas

Mulhern, Margaret* 2014
Clinical Associate Professor, Literacy, Language, and Culture; PhD, University of Illinois at Chicago

Müllner, Peter* 2004
Distinguished Professor, Materials Science and Engineering; PhD, Swiss Federal Institute of Technology

Munger, James C.* 1988
Special Assistant to the Provost; PhD, University of Arizona

Munger, Roger* 2001
Director of Technical Communication and Professor, English; PhD, Rensselaer Polytechnic Institute

Myers, Douglas J.* 2019
Associate Professor, Public and Population Health; ScD, University of Massachusetts, Lowell

N

Nagarajan, Rajesh* 2011
Associate Professor, Chemistry and Biochemistry; PhD, Wesleyan University

Nelson, Gena* 2018
Graduate Program Coordinator and Assistant Professor, Early and Special Education; PhD, University of Minnesota

Neupert, Kent* 2004
Professor, Management; PhD, University of Western Ontario

Nicholas, Karen R. 2019
Assistant Professor, Management; PhD, West Virginia University

Nichols, Shaun S.* 2019
Professor, History; PhD, Harvard University

Niu, Qifei* 2019
Assistant Professor, Geosciences; PhD, The Hong Kong University of Science and Technology

Norman, Beret Liv* 2012
Associate Professor, World Languages; PhD, University of Massachusetts–Amherst

Northrup, Clyde J.* 1998
Associate Dean, College of Arts and Sciences, Graduate Program Coordinator and Professor, Geosciences; PhD, Massachusetts Institute of Technology

Norton, Todd* 2016
Professor, Communication and Media; PhD, University of Utah

Novak, Stephen* 1993
Professor, Biological Sciences; PhD, Washington State University

O

Obenshain, Jennifer 2018
Graduate Program Coordinator an Clinical Assistant Professor, Social Work; DSW, University of Tennessee

Ochoa-Repáraz, Javier* 2022
Assistant Professor, Biological Sciences; PhD, University of Navarra

O'Mallon, Marilyn 2016
Associate Director and Associate Professor, Nursing; PhD, Hampton University

Olschanowsky, Catherine* 2016
Assistant Professor, Computer Science; PhD, University of California, San Diego

Olsen-Smith, Steven* 2000
Professor, English; PhD, University of Delaware

Ordal, Leslie* 2019
Clinical Assistant Professor, Genetic Counseling Program; MS, University of Toronto

Ordona, Ron Billano 2019
Clinical Faculty, Nursing; DNP, Boise State University

O'Reilly, Nicole L. 2018
Assistant Professor, Social Work; PhD, University of Maryland, Baltimore

Orr, Martin* 1998
Professor, Sociology; PhD, University of Oregon

Otanicar, Todd P.* 2019
Chair and Associate Professor, Mechanical and Biomedical Engineering; PhD, Arizona State University

Oxford, Julia Thom* 2000
Director, INBRE/Biomolecular Research and Distinguished Professor, Biological Sciences; PhD, Washington State University, Pullman

P

Pakala, V. Krishna C. 2019
Clinical Associate Professor, Mechanical and Biomedical Engineering

Paradis, Sarah R. 2014
Graduate Program Coordinator and Associate Professor, Music; DM, Indiana University

Park, Sanghee* 2015
Assistant Professor, Public Policy and Administration; PhD, Seoul National University

Parkinson, Del R.* 1985
Professor, Music; DM, Indiana University

Parton, Lee* 2018
Assistant Professor, Economics; PhD, North Carolina State University

Paterson, Sharon 2008
Professor, Sociology; PhD, Virginia Polytechnic Institute and State University

Paudel, Jayash.* 1997
Assistant Professor, Economics; PhD, University of Massachusetts, Amherst

Paulsen, Krista E.* 2020
Associate Professor, School of Public Service; PhD, University of California, Santa Barbara

Payne, Michelle M.* 1997
Assistant Provost for Leadership and Faculty Affairs and Professor, English; PhD, University of New Hampshire

Peariso, Craig* 2009
Associate Professor, Art, Design, and Visual Studies; PhD, State University of New York at Stony Brook

Penry, Tara* 2000
Professor, English; PhD, Fordham University

Pentland, Steven J.* 2020
Assistant Professor, Information Technology and Supply Chain Management; PhD, University of Arizona

Pera, Maria Soledad* 2015
Assistant Professor, Computer Science; PhD, Brigham Young University

Peralta, Claudia* 2011
Professor, Literacy, Language, and Culture; PhD, University of Colorado at Boulder

Perkins, Ross* 2008
Graduate Program Coordinator and Associate Professor, Educational Technology; PhD, Virginia Polytechnic Institute and State University

Perrenoud, Anthony* 2021
Associate Professor, Construction Management; PhD, Arizona State University

Petranek, Laura Jones* 2005
Associate Professor, Kinesiology; PhD, University of South Carolina, Columbia

Phillips, Scott T* 2017
Professor, Materials Science and Engineering; PhD, University of California, Berkeley

Pierce, Jennifer* 2005
Associate Professor, Geosciences; PhD, University of New Mexico

Plumlee, Donald* 2008
Chair and Associate Professor, Mechanical and Biomedical Engineering; PhD, University of Idaho

Pool, Juli Lull* 2007
Associate Professor, Early and Special Education; PhD, University of Oregon

Poole, Shelle 2019
Divisional Dean and Clinical Associate Professor, Management; PhD, University of Idaho

Porter, C. Michael* 2011
Associate Professor, Music; DMA, University of Iowa

Powers, Joelle 2012
Associate Dean, College of Health Sciences and Professor, Social Work; PhD, University of North Carolina at Chapel Hill

Prengaman, Molly 2014
Associate Professor, Nursing; MS, Idaho State University

Pritchard, Mary E.* 2004
Professor, Psychological Science; PhD, University of Denver

Purdy, Craig A.* 1987
Assistant Professor, Music; MM, New England Conservatory

R

Rafla, Nader* 1996
Chair and Professor, Electrical and Computer Engineering; PhD, Case Western Reserve University

Ramirez, Dora Alicia 2008
Professor, Sociology; PhD, University of Nebraska, Lincoln

Reeder, Heidi M.* 2000
Graduate Program Coordinator and Professor, School of Public Service; PhD, Arizona State University

Refinetti, Roberto* 2014
Professor, Psychological Science; PhD, University of California, Santa Barbara

Reinhardt, Bob H. 2017
Assistant Professor, History; PhD, University of California, Davis

Reischl, Uwe* 2002
Professor, Public and Population Health; PhD, University of California, Berkeley

Reynard, Linda 2021
Assistant Research Professor, Geosciences; Dphil, University of Oxford

Rice, Kerry Lynn* 2006
Professor, Educational Technology; EdD, Boise State University

Roark, Anthony P.* 2005
Professor, Philosophy; PhD, University of Washington

Robertson, Ian C.* 2000
Professor, Biological Sciences; PhD, Simon Fraser University, Burnaby, B.C., Canada

Robinson, Erick* 2021
Assistant Professor, Anthropology; PhD, University of Sheffield

Roche, Kevin R.* 2020
Assistant Professor, Civil Engineering; PhD, Northwestern University

Rodriguez, Arturo* 2007
Professor, Literacy, Language, and Culture; PhD, New Mexico State University

Rohn, Troy* 2000
Professor, Biological Sciences; PhD, University of Washington

Rossetto, Kelly* 2016
Associate Professor, Communication and Media; PhD, University of Texas at Austin

Rush, Daniel E. 2019
Assistant Professor, Information Technology and Supply Chain Management; PhD, University of Michigan

Rushing-Raynes, Laura* 1998
Associate Professor, Music; DMA, University of Arizona

Ruskovich, Emily* 2017
Assistant Professor, Theatre, Film, and Creative Writing; MFA, University of Iowa

Russell, Dale D.* 1995
Professor, Chemistry and Biochemistry; PhD, University of Arizona, Tucson

S

Sadegh, Mojtaba* 2017
Assistant Professor, Civil Engineering; PhD, University of California, Irvine

Sadler, Jonathan* 2007
Professor, Art, Design, and Visual Studies; MFA, The School of the Museum of Fine Arts, Boston and Tufts University, Summerville

Sarin, Shikhar* 2002
Professor, Marketing; PhD, University of Texas at Austin

Scarritt, Arthur* 2008
Chair and Professor, Sociology; PhD, University of Wisconsin-Madison

Schafer, Ellen J. 2018
Graduate Program Coordinator and Assistant Professor, Public and Population Health; PhD, University of Iowa

Scheepers, Marion* 1988
Distinguished Professor, Mathematics; PhD, University of Kansas

Schimpf, Martin E.* 1990
Professor, Chemistry and Biochemistry; PhD, University of Utah

Schmitz, Mark* 2004
Professor, Geosciences; PhD, Massachusetts Institute of Technology

Schneider, Jen* 2014
Interim Associate Dean, School of Public Service, and Associate Professor, Public Policy and Administration; PhD, Claremont Graduate University

Schooley-Pettis, Diane* 1989
Associate Dean, College of Business and Economics and Professor, Finance; PhD, University of Colorado at Boulder

Scott, Dan* 2006
Interim Chair and Professor, Art, Design and Studies; MFA, New York Academy of Art

Sego, Trina* 2002
Professor, Marketing; PhD, University of Texas at Austin

Serpe, Marcelo* 1998
Professor, Biological Sciences; PhD, University of California, Davis

Serra, Edoardo* 2015
Assistant Professor, Computer Science; PhD, University of Calabria

Serratt, Teresa D.* 2015
Graduate Program Coordinator and Associate Professor, Nursing; PhD, University of California, San Francisco

Shadle, Susan* 1997
Executive Director, Center for Teaching and Learning and Professor, Chemistry and Biochemistry; PhD, Stanford University

Shelton, Brett E.* 2013
Professor, Educational Technology; PhD, University of Washington

Shepherd, Dawn* 2012
Assistant Professor, English; PhD, North Carolina State University

Sherman, Elena A.* 2012
Assistant Professor, Computer Science; PhD, University of Nebraska, Lincoln

Shimon, Jane* 2001
Chair and Professor, Kinesiology; EdD, University of Northern Colorado

Shuck, Gail* 2001
Professor, English; PhD, University of Arizona

Siebert, Carl F.* 2015
Graduate Program Coordinator and Associate Professor, Curriculum, Instruction, and Foundational Studies; PhD, Florida State University

Simler-Williamson, Allison B.* 2019
Assistant Professor, Biological Sciences; PhD, University of California, Davis

Simmonds, Paul J.* 2014
Assistant Professor, Physics; PhD, University of Cambridge

Simmonds, Sara E. 2021
Assistant Research Professor, Biological Sciences; PhD, University of California, Los Angeles

Simonson, Shawn R.* 2008
Professor, Kinesiology; EdD, University of Northern Colorado

Smith, James F.* 1992
Graduate Program Coordinator and Professor, Biological Sciences; PhD, University of Wisconsin, Madison

Smith, Jennifer A.* 2001
Graduate Program Coordinator and Associate Professor, Electrical and Computer Engineering; PhD, University of Idaho; PhD, State University of New York, Albany.

Smith, Kirk* 1993
Chair, Professor, Marketing; PhD, University of Houston

Smith, Lillian Upton* 2016
Department Head, Professor, Public and Population Health; DrPH, University of South Carolina

Smith, Megan* 2018
Assistant Professor, Public and Population Health; PhD, West Virginia University

Smulovitz, Anika* 2003
Professor, Art, Design, and Visual Studies; MFA, University of Wisconsin, Madison

Snelson, Chareen Lee* 2006
Associate Chair, Graduate Program Coordinator and Associate Professor, Educational Technology; EdD, Boise State University

Snodgrass, Astri J.* 2018
Assistant Professor, Art, Design, and Visual Studies; MFA, University of Alabama

Snopkowski, Kristin* 2014
Graduate Program Coordinator and Associate Professor, Anthropology; PhD, University of New Mexico

Snow, Jennifer L.* 2003
Interim Dean and Professor, Curriculum, Instruction, and Foundational Studies; PhD, Pennsylvania State University, University Park

Som Castellano, Rebecca L.* 2013
Associate Professor, Sociology; PhD, Ohio State University

Son, Eun Hye* 2009
Chair and Associate Professor, Literacy, Language, and Culture; PhD, Ohio State University, Columbus

Songer, Anthony D. 2018
Professor, Construction Management; PhD, University of California, Berkeley

Spencer, Anne C. 2019
Lecturer, Genetic Counseling Program; MS, University of California, Berkeley

Spezzano, Francesca* 2015
Assistant Professor, Computer Science; PhD, University of Calabria

Spurlock, Amy L.* 2021
Professor, Nursing; PhD, University of Kentucky

Stallings, Matthew A. 2020
Assistant Professor, Accountancy; PhD, University of Nebraska

Stieha, Vicki* 2015
Clinical Assistant Professor, Organizational Performance and Workplace Learning; PhD, University of Cincinnati

Stock, Jennifer* 2018
ClinicalAssociate Professor, Nursing; DNP, University of Utah

Stone, Brian W. 2019
Assistant Professor, Psychology; PhD, University of Georgia

Subbaraman, Harish* 2016
Assistant Professor, Electrical and Computer Engineering; PhD, University of Texas at Austin

T

Teitler, Zachariah* 2011
Associate Professor, Mathematics; PhD, University of Michigan

Tenne, Dmitri* 2006
Professor, Physics; PhD, Russian Academy of Sciences

Terpend, Regis 2006
Associate Professor, Information Technology and Supply Chain Management; PhD, Arizona State University

Test, Edward M.* 2008
Professor, English; PhD, University of California, Santa Barbara

Thiede, Keith W.* 2006
Associate Dean, College of Education, Graduate Program Coordinator, and Professor, Curriculum, Instruction, and Foundational Studies; PhD, University of Washington

Thornes, Timothy* 2013
Associate Professor, English; PhD, University of Oregon

Tinker, Juliette* 2004
Professor, Biological Sciences; PhD, University of Iowa

Toevs, Sarah E.* 2000
Director, Center for the Study of Aging and Professor, Public and Population Health; PhD, University of Utah

Tornello, Joseph F. 2011
Associate Professor, Music; DMA, University of Kentucky

Totorica, Tatia 2018
Clinical Assistant Professor, College of Education; EdD, Boise State University

Trespalacios, Jesús* 2013
Associate Professor, Educational Technology; PhD, Virginia Polytechnic Institute and State University

Turner, LeeAnn* 1996
Associate Chair and Professor, Art, Design, and Visual Studies; PhD, University of Pennsylvania

Turner, Lindsey R.* 2014
Research Professor, College of Education; PhD, University of Illinois at Chicago

Twitchell, Douglas P.* 2020
Associate Professor, Information Technology and Supply Chain Management; PhD, University of Arizona

U

Ubic, Rick* 2007
Professor, Materials Science and Engineering; PhD, The University of Sheffield

Udall, Brady* 2008
Associate Professor, English; MFA, University of Iowa

Ulappa, Amy C.* 2017
Clinical Assistant Professor, Biological Sciences; PhD, Washington State University

Uribe-Flórez, Lida J.* 2016
Chair and Associate Professor, Educational Technology; PhD, Virginia Tech

Uzer, Gunes 2016
Assistant Professor, Mechanical and Biomedical Engineering; PhD, Stony Brook University

V

VanDusky-Allen, Julie* 2013
Assistant Professor, School of Public Service; PhD, Binghamton University

Vecchione, Amy 2019
Associate Professor, Albertsons Library; MLIS, University of Washington

Veltman, Maximilian 2013
Associate Professor, Nursing; MS, University of Texas at Austin

Viera, Carolina 2021
Assistant Professor, World Languages; PhD, University of California, Davis

Viskupic, Karen* 2017
Assistant Professor, Geosciences; PhD, Massachusetts Institute of Technology

Volsche, Shelly L.* 2019
Clinical Assistant Professor, Anthropology and Biological Sciences; PhD, University of Nevada, Las Vegas

W

Wakild, Emily* 2012
Professor, History; PhD, University of Arizona

Walker, David M.* 2012
Graduate Program Coordinator and Associate Professor, History; PhD, George Washington University

Walker, Kate* 2011
Associate Professor, Art, Design, and Visual Studies;

MFA, University of Arizona

Walters, Renee 2017
Clinical Associate Professor, Nursing; PhD, University of Kansas

Wampler, Brian* 2015
Professor, Political Science; PhD, University of Texas at Austin

Wang, Sasha* 2011
Associate Professor, Mathematics; PhD, Michigan State University

Wanless, V. Dorsey* 2015
Associate Professor, Geosciences; PhD, University of Florida

Warner, Don* 2002
Professor, Chemistry and Biochemistry; PhD, University of Michigan

Warner, Lisa 2015
Graduate Program Coordinator and Assistant Professor, Chemistry and Biochemistry; PhD, University of Colorado, Boulder

Warrington, Amber* 2017
Assistant Professor, English; PhD, University of Texas at Austin

Waterman, William E.* 2019
Assistant Professor, Music; DMA, Michigan State University

Weaver, Jennifer 2012
Associate Professor, Psychological Science; PhD, University of California, Irvine

Webster, Kerri* 2013
Visiting Assistant Professor, Theatre, Film, and Creative Writing; MFA, Indiana University

Welch, Thad B.* 2008
Professor, Electrical and Computer Engineering; PhD, University of Colorado, Colorado Springs

Wells, Jessica 2018
Assistant Professor, Criminal Justice; PhD, Sam Houston State University

Westover, Jeffrey W.* 2008
Professor, English; PhD, Boston College

White, Merlin M.* 2006
Professor, Biological Sciences; PhD, University of Kansas

Wieland, Mitchell* 1996
Professor, English; MFA, University of Alabama

Wiley, Brian 2014
Associate Professor, Art, Design, and Media Culture; MFA, Minneapolis College of Art and Design

Wilhelm, Jeffrey D. 2003
Professor, English; PhD, University of Wisconsin, Oshkosh

Wilkins, David E.* 2000
Associate Professor, Geosciences; PhD, University of Utah

Williams, Heather* 2015
Chair, Graduate Program Coordinator, and Associate Professor, Curriculum, Instruction and Foundational Studies; PhD, University of Idaho

Williams, Nathaniel J. 2018
Assistant Professor, Social Work; PhD, University of Tennessee, Knoxville

Williamson, Matthew A.* 2019
Assistant Professor, College of Innovation and Design and Endorsement for Biological Sciences; PhD, University of California, Davis

Wingett, Denise G.* 2003
Graduate Program Coordinator and Professor, Biological Sciences; PhD, Washington State University

Winiecki, Donald J.* 1996
Professor, Organizational Performance and Workplace Learning; PhD, Central Queensland University; EdD, Texas Tech University

Witt, Heather* 2018
Assistant Professor, Communication and Media; PhD, Widener University

Witt, Stephanie L.* 1989
Professor, Political Science; Public Policy and Administration; PhD, Washington State University

Wood, Rulon* 2016
Associate Professor, Communication and Media; PhD, University of Utah

Woods, Shelton* 1994
Interim Associate Dean, Honors and Professor, History; PhD, University of California, Los Angeles

Wright, Grady* 2007
Graduate Program Coordinator and Professor, Mathematics; PhD, University of Colorado at Boulder

Wu, Hao-Yi (Heidi)* 2020
Assistant Professor, Physics; PhD, Stanford University

X

Xiao, Jidong* 2016
Assistant Professor, Computer Science; PhD, College of William and Mary

Xiong, Hui (Claire)* 2012
Graduate Program Coordinator and Associate Professor, Materials Science and Engineering; PhD, University of Pittsburgh

Y

Yang, Dazhi* 2011
Associate Professor, Educational Technology; PhD, Purdue University

Yeh, Jyh-haw* 2000
Graduate Program Coordinator and Associate Professor, Computer Science; PhD, University of Florida

Yenor, Scott* 2015
Professor, Political Science; PhD, Loyola University

Yurke, Bernard* 2008
Distinguished Research Professor, Materials Science and Engineering; PhD, Cornell University

Z

Zenkert, A.J.* 2013
Clinical Assistant Professor, Curriculum, Instruction, and Foundational Studies; EdD, Boise State University

Ziker, John P.* 2003
Chair and Professor, Anthropology; PhD, University of California, Santa Barbara

Zhang, Shuqi* 2020
Assistant Professor, Kinesiology; PhD, Louisiana State University

Zhao, Yunchuan (Lucy)* 2019
Assistant Professor, Nursing; PhD, University of Kansas

Zubik-Kowal, Barbara* 2002
Professor, Mathematics; PhD, Adam Mickiewicz University

Emeriti Graduate Faculty

Emeritus faculty who were members of the Graduate Faculty prior to
retirement who have been awarded emeritus status by the Graduate Dean.

Note: The date listed is the year of first graduate appointment.

*May chair graduate committees.

Armstrong, James O., Lit, Lang, & Culture 1992
Barr, Robert, PhD, Education* 1994
Barrash, Warren, PhD, Geosciences 1995
Bahruth, Roberto E., PhD, C & I Found Studies 2018
Begic, Sandina, PhD, Community & Env Hlth 2018
Bodie, Nancy (Dusty), PhD, Management 2008
Brudenell, Ingrid, PhD, Nursing* 1991
Chase, Margaret E., PhD, Lit, Lang & Culture 2007
Cox, Marvin, PhD, Communication* 1977
Elison-Bowers, Patt, PhD, Psychology 1986

English, Thomas J., PhD, Accountancy 1987
Feldman, Alex, PhD, Mathematics 1988
Grassley, Jane, PhD, Nursing 2019
Hanlon, Heather, EdD, Art 2014
Lathen, William C., PhD, Accountancy 1984
Lindsey, Melinda, PhD, Special Education* 1987
Luke, Robert A., PhD, Physics 1971
Martin, Susan D., Lit, Lang, & Culture 2004
Martz, Kim, PhD, Nursing 2019
McLuskie, Ed, PhD, Communication 1981

Miller, Margaret, PhD, Counselor Education 1994
Petlichkoff, Linda, PhD, Kinesiology 1987
Plew, Mark, PhD, Anthropology* 1984
Renner, Celia J., PhD, Accountancy 2008
Steiner, Stanley, PhD, Lit, Lang, & Culture 1992
Stepich, Donald, PhD, OPWL* 1998
Tysseling, Lee Ann, Lit, Lang, & Culture 1992
Weatherby, James, PhD, Pub Pol & Admin* 1989
Wood, Spencer, PhD, Geosciences 2007

Adjunct Graduate Faculty

Part-Time Faculty, Faculty from Other Universities, and Personnel from Affiliated Agencies.

Note: The date listed is the year of first graduate appointment.

*May chair graduate committees.

A

Aagesen, Larry, PhD, Materials Science and Engineering 2017
Allen, Peter B., PhD, Materials Science and Engineering 2015

Anderson, Jacob, PhD, Geosciences 2020
Andrews, Benjamin J., PhD, Geosciences 2018
Apel, Ted, PhD, Art, Design, and Visual Studies 2008

Ariznabarreta, Larraitz, PhD, World Languages 2016
Asle Zaeem, Mohsen, PhD, Materials Science and Engineering 2020

B

Bailey, Elizabeth, PhD, Organizational Performance and Workplace Learning 2020
Bairaktarova, Diana, PhD, Mechanical and Biomedical Engineering 2021
Baker, Fredrick W., III, PhD, Educational Technology 2016
Bakhtian, Noël, PhD, School of Public Service 2021
Bandfield, Joshua L., PhD, Geosciences* 2016
Barbour, Michael K., PhD, Educational Technology 2011
Bartau Rojas, Isabel, DPed, Educational Technology 2020
Beals, Catherine D., EdD, Curriculum, Instruction, and Foundational Studies 2016
Begic, Sandina, PhD, Public and Population Health 2018
Bellot, Sidonie, PhD, Biological Sciences 2021
Benscoter, George Jr., PhD, Organizational Performance & Workplace Learning ... 2016
Bernstein, Alison, PhD, Public and Population Health 2022
Berry, Lisa, EdD, Educational Technology 2019
Bixby, Michael B., JD, College of Business and Economics 2017
Black, Jennifer B, PhD, English 2019
Bockholt, Blaine, PhD, Geosciences 2022
Bolter, Nicole D., PhD, Kinesiology* 2015
Bolz, Devin, PhD, Biological Sciences 2015
Bornstein, Allan J., PhD, Biological Sciences 2018
Bose, Devshikha, PhD, Mechanical and Biomedical Engineering 2021
Bosler, Peter A., PhD, Mathematics 2021
Bourland, William, MD, Biological Sciences 2010
Braig, Bridgette, PhD, Marketing 2019
Brancalion, Pedro H. S., PhD, Biological Sciences 2020
Brown, Karen, PhD, Art, Design, and Visual Studies* 2004
Budwig, Ralph S., PhD, Materials Science & Mechanical Biomedical Engineering . 2012
Bullen, Margaret L., PhD, World Languages 2018
Bubak-Azevedo, Katie, EdD, Educational Technology 2019
Bui, Hieu T., PhD, Materials Science and Engineering 2020
Burbank, Malcolm, PhD, Civil Engineering 2017
Burnham, Morey, PhD, Biological Sciences 2020
Busby, Posy E., PhD, Biological Sciences 2021
Butt, Darryl, PhD, Materials Science and Engineering* 2005

C

Callahan, Janet, PhD, Materials, Science, and Engineering 2004
Callmander, Martin, PhD, Biological Sciences 2021
Campbell, Mary L., EdS, Counselor Education 2010
Carlisle, Jay D., PhD, Biological Sciences 2006
Carroll, Peter N., PhD, History 2020
Carroll, Rosemary, PhD, Geosciences 2021
Castro, Adrian E., PhD, Geosciences 2020
Charlton, Patrick, PhD, Curriculum, Instruction, and Foundational Studies 2017
Chavoshi Kapadia, Negar, PhD, Public and Population Health 2017
Chen, Yue, PhD, Materials Science and Engineering 2017
Clark, John L., PhD, Biological Sciences 2010
Clark, Patrick E., PhD, Biological Sciences 2019
Coats, Erik R., PhD, Biological Sciences 2015
Cole, James I., PhD, Materials Science and Engineering 2016
Coll, Kenneth M., PhD, Counselor Education 2015
Conlon Khan, Lori, EdD, Music* 2015
Cox, Tom R., PhD, College of Education 2019
Coyle, Joseph P., MD, Respiratory Care 2017
Crawford, Angela R., EdD, Mathematics 2020
Crowley, James, PhD, Geosciences 2011
Cullen, Nicole, MFA, English 2015
Curtin, Michael J., PhD, Kinesiology 2022

D

Dadabay, Carolyn Y., PhD, Biological Sciences 2021
Darnell, Matthew, PhD, Kinesiology 2015

Davis, Paul H., PhD, Materials Science and Engineering* 2015
Deeb, Elias J., PhD, Geosciences 2022
Delana, Patrick E., PhD, College of Business and Economics 2011
Delparte, Donna M., PhD, Biological Sciences 2020
Dhopatkar, Nishad, PhD, Materials Science and Engineering 2020
Diaz Aldana, Luis A., PhD, Materials Science and Engineering 2022
Diioia, Marina, PhD, Biological Sciences 2019
Donohue, Jack, PhD, Electrical and Computer Engineering 2015
Douglas, Diane L., PhD, Anthropology 2021
Dow, Christine F., PhD, Geosciences 2021
Drew, Mark L., DVM, Biological Sciences 2008
Dufek, Eric J., PhD, Materials Science and Engineering 2019
Dunand, David C., PhD, Materials Science and Engineering 2010
Dunn, Bruce S., PhD, Materials Science and Engineering 2017

E

Egger, Anne E., PhD, Geosciences 2022
Elam, Jeffrey W., PhD, Micron School of Materials Science and Engineering 2018
Ellis, Paul R., PhD, Mathematics 2021
Ellsworth, Ethan, PhD, Biological Sciences 2016

F

Fakhri, Michael, SJD, School of Public Service 2018
Falk, Leslie, DNP, Nursing 2017
Fauvelle, Mikael, PhD, Anthropology 2019
Fawns, Tracy Y., DNP, Nursing 2019
Fishler, Hillary K., PhD, Materials Science and Engineering 2022
Fleming, Austin, PhD, Electrical and Computer Engineering and Materials Science and
    Engineering 2020
Fleming, Leah R., MD, Genetic Counseling Program 2020
Forest, Felix, PhD, Biological Sciences 2019
Ford, Adam T., PhD, Biological Sciences 2021
Francis, Clinton D., PhD, Biological Sciences 2018
Fuller, Mark R., PhD, Biological Science 2015

G

Galla, Stephanie, PhD, Biological Sciences* 2022
Ganong, Derek, DMA, Music 2017
Garcia-Cervera, Carlos J., PhD, Materials Science and Engineering 2016
Gardner, Donna, DrPH, Respiratory Care 2021
Georgiades, Savvas D., PhD, Social Work 2016
Germino, Matthew, PhD, Biological Sciences* 2009
Gilton, Terry L., PhD, Chemistry and Biochemistry* 2017
Giordano, Guido, PhD, Geosciences 2020
Glorfield, Cyndia K., PhD, Social Work 2018
Godwin, Lizandra, PhD, Materials Science and Engineering 2016
Goirizelaia, Iñaki, PhD, World Languages 2016
Gould, Russell T., PhD, Anthropology 2016
Graff, Robert, PhD, Anthropology 2015
Gray, Elizabeth Ambrose, DNP, Nursing 2021
Gray, Sarah M., PhD, Biological Sciences 2021
Greber, Brian, PhD, COBE, Graduate Students 2010
Green, Analeah , PhD, Social Work 2019
Gregg, Suzanne, EdD, Literature, Language, and Culture 2016
Grimm, Nathan L., MD, Mechanical and Biomedical Engineering 2021

H

Haggerty, Roy, Phd, Biological Sciences 2017
Hahn, Andre M., PhD, Accountancy 2020
Hamilton, Dale, PhD, Computer Science 2022
Han, Bangshuai, PhD, Geosciences 2016
Hand, Cynthia, PhD, Theatre, Film, and Creative Writing 2019
Hanson, Paul J. PhD, Geosciences* 2017
Harm, J. Eian, EdD, Curriculum, Instruction, and Foundational Studies 2014
Harrison, C. Keith, EdD, Communication and Media 2017
Havens, Scott, PhD, Geosciences 2017
Heckman, Emily M., PhD, Materials Science and Engineering 2017
Heimstra, Christopher A., PhD, Geosciences 2020
Henderson, Jonathan, PhD, Mechanical and Biomedical Engineering 2015
Hermann, Rebecca, PhD, Biomolecular Sciences 2015
Herzog, Nicole M, PhD, Anthropology* 2017
House, Kendall V., PhD, Anthropology* 2007
Hu, Hongqiang, PhD, Materials Science and Engineering 2021
Hues, Steven M., PhD, Materials Science and Engineering 2016

Hulet, April, PhD, Biological Sciences 2020
Hunter, Chrissy, DNP, Nursing 2017
Hupka, Lukasz J., PhD, Materials Science and Engineering 2021
Hurley, David H., PhD, Materials Science and Engineering 2019
Hussein, Fady, PhD, Electrical and Computer Engineering 2020
Hyppolite, Melody, L., PhD, Social Work 2018

I

Iacovella, Christopher R., PhD, Materials Science and Engineering 2022
Ivey, Christina L., PhD, Communication 2016

J

Jaschke, Andres, PhD, Materials Science and Engineering 2019
Jastrow, Julie D., PhD, Biological Sciences 2018
Johnson, Ann, PhD, Philosophy 2018
Johnson, Evan C, PhD, Public and Population Health 2021
Johnson, Heidi M., DNP, Nursing 2022

K

Kaiser, Kendra E., PhD, Geosciences PhD 2019
Kammer, Jacob W., MD, Biological Sciences 2021
Kane, Joshua J., PhD, Materials Science and Engineering 2018
Kassem, Emad A., PhyD, Civil Engineering 2018
Katzner, Todd E., PhD, Biological Sciences* 2015
Kawahara, Akito Y., PhD, Biological Sciences 2018
Kay, Richard F. PhD, Geosciences* 2017
Keeley, Ernest R., PhD, Biological Sciences 2021
Kennedy, Brendan J., PhD, Materials Science and Engineering 2018
Kerman, Mitchell, C., PhD, Mechanical and Biomedical Engineering 2018
Khalil, Andre, PhD, Geosciences 2020
Kilkenny, Francis F, PhD, Biological Sciences 2018
Kim, Youngchan, PhD, Materials Science and Engineering 2020
Knight, Rachel, DNP, Nursing 2020
Koehne, Jessica E., PhD, Micron School of Materials Science and Engineering 2017
Konecky, Brian D., PhD, Counselor Education 2019
Korzh, Anton, PhD, Computer Science 2017
Kosh, Joshua C., PhD, Geosciences 2022
Krohn, Raymond J., PhD, History* 2012
Kurtz, Timothy R., JD, College of Business and Economics 2015
Kustra, Robert W., PhD, School of Public Service* 2018

L

Lachiondo, David, PhD, History 2020
Lawyer, Tracye J., MD, PhD, Biomedical Engineering Program 2021
Lee, Eungje, PhD, Materials Science and Engineering 2016
Lewis, Kirk J., MD, Kinesiology 2013
Li, Bin, PhD, Materials Science and Engineering 2021
Liddle, J. Alexander, DPhil, Materials Science and Engineering 2017
Lindell, Michael, PhD, Geosciences 2020
Lodis, Craig S., PhD, Counselor Education 2021
Long, Sean P., PhD, Geosciences 2015
Lowry, Mary, MFA, Theatre, Film, and Creative Writing 2021
Lui, Rongsong M., PhD, Biological Sciences 2020
Lui, Yuzi, PhD, Materials Science and Engineering 2021
Lung, Mark, PhD, Anthropology 2018
Lytle, Marion L., PhD, Geosciences 2018

M

Macklin, Tialitha, PhD, English 2019
Maher-Hasse, Karmin, DNP, Nursing 2021
Manga, Michael, PhD, Geosciences 2018
Mansfield, Donald H., DA, Biological Sciences 2016
Manske, Sarah L., PhD, Materials Science and Engineering 2020
Marin-Spiotta, Erika, PhD, Biological Sciences 2018
Marks, Danny, PhD, Geosciences 2018
Marlon, Jennifer R., PhD, Geosciences 2021
Marlowe, Justin, PhD, Public Policy and Administration 2017
Martinsen, Rob A., PhD, Curriculum, Instruction, and Foundational Studies 2017
Masarik, Matthew T., PhD, Geosciences 2017
Mass, Olga A., PhD, Materials Science and Engineering 2021
Matis, Selina, PhD, Social Work 2019
Maxwell, Toby, PhD, Biological Sciences 2021
McCabe, Jennifer D., PhD, Biological Sciences 2021
McIlroy, Susan, PhD, Biological Sciences 2016
McLaughlin, Thomas Chalmers, PhD, Social Work 2019
Medintz, Igor L., PhD, Materials Science and Engineering 2016
Mehta, Rutvik Jatin, PhD, Materials Science and Engineering 2017
Melinger, Joseph S., PhD, Materials Science and Engineering 2019
Mercaldo, David, EdD, Literature, Language, and Culture 2015
Metzger, Kathryn E., PhD, Materials Science and Engineering 2019

Middlekauff, Monique L, PhD, Kinesiology 2021
Miller, Stephen R., JD, School of Public Service 2016
Monadjem, Ara, PhD, Biological Sciences 2021
Morawski, Bozena M., PhD, Public and Population Health* 2019
Moreno, Roxanna M., DNP, Nursing 2022

N

Nash, Caroline S., PhD, Geosciences 2020
Nelson, Andrew T., PhD, Materials Science and Engineering 2021
Newby, Deborah T., PhD, Biological Sciences 2015
Nickel, Christine, PhD, Educational Technology 2015
Nilsson, Kurt J., MD, Biomolecular Sciences Program 2018

O

Oleyar, Dave, PhD, Biological Sciences 2021
Oliphant, Catherine M., PharmD, Public and Population Health 2019
Olson, Mary R., PhD, College of Business and Economics 2015
Olsoy, Peter J., PhD, Biological Sciences 2022
Osguthorpe, Richard D., PhD, College of Education 2005

P

Panaou, Petros, PhD, Literacy, Language, and Culture 2016
Parga, Clemente, PhD, Materials Science and Engineering 2019
Patricelli, Gail L., PhD, Biological Sciences 2016
Patton, Samantha P., PharmD, Counselor Education 2019
Pauli, Benjamin P., PhD, Biological Sciences 2015
Pensack, Ryan D., PhD, Materials Science and Engineering 2019
Pilon Dos Santos, Glauco, PhD, Materials Science and Engineering 2022
Poland, Michael, PhD, Geosciences 2021
Pond, Robert C., PhD, Materials Science and Engineering 2019
Potyondy, David, PhD, Civil Engineering 2018
Poulos, Michael J., PhD, Geosciences 2022
Price, Candice, PhD, Mathematics 2021
Pryor, James R., DNP, Nursing 2017

R

Ramisetti, Srinivasa Babu, PhD, Materials Science and Engineering 2016
Ratsch, Christian, PhD, Materials Science and Engineering 2019
Rausch, Joseph, PhD, Biological Sciences 2010
Ratsch, Christian, PhD, Materials Science and Engineering 2019
Rawdan, Michael, PhD, COBE, Graduate Studies 2019
Reilly, Blaine C., PhD, Counselor Education 2019
Requena Mullor, Juan Miguel, PhD, Biological Sciences 2019
Reynolds, Carla E., PhD, Materials Science and Engineering 2017
Rezaie, Beth (Behnaz), PhD, Mechanical and Biomedical Engineering 2017
Ribas, Rafael P., PhD, Economics 2022
Richardson, Bryce A., PhD, Biological Sciences 2019
Rider, Brian C., PhD, Kinesiology 2018
Rittenour, Tammy, PhD, Geosciences 2017
Roark, Scott, PhD, College of Business and Economics 2017
Robertson, Misty, DNP, Nursing 2021
Roche, Olivier, PhD, Geosciences 2016
Rodgers, Daryl M., MS, College of Education 2017
Romero, Jared J., PhD, Biological Sciences 2020
Roopsind, Anand, PhD, Biological Sciences 2019
Rosentreter, Roger, PhD, Biological Sciences 2005
Rothemund, Paul, PhD, Materials Science and Engineering 2015
Ruegg, Kristen C., PhD, Biological Sciences* 2015
Ruggiero, Michael T., PhD, Materials Science and Engineering 2022
Rullkoetter, Paul J., PhD, Materials Science and Engineering 2019
Rumsey, Shannon, DNP, Nursing 2022
Russo, G. Michael, PhD, Counselor Education 2022

S

Sample, Charlene, Dsci, Electrical and Computer Engineering 2020
Sarocchi, Damiano, PhD, Geosciences 2017
Saxena, Vishal, Electrical and Computer Engineering* 2009
Scheibner, Michael, Dr ret nat, Materials Science and Engineering 2019
Schniedewind, Elizabeth F., School of Public Service, EdD 2020
Schroeder, Barbara, EdD, Educational Technology 2010
Schwartz, Darin M., PhD, Geosciences 2022
Scofield, Rebecca, PhD, History 2022
Sellars Frith, Patricia, DNP, Nursing 2019
Semmelroth, Carrie, EdD, Curriculum, Instruction, and Foundational Studies 2013
Seo, Jinwon, PhD, Biological Sciences 2018
Sforza, Rene, PhD, Biological Sciences 2006
Shankar, Varum, PhD, Mathematics 2019
Shaw, Mark Q., PhD, Electrical and Computer Engineering 2017
Shellie, Krista C., PhD, Biological Sciences 2011
Shinneman, Douglas J., PhD, Geosciences 2010

Shilo, Doron, PhD, Materials Science and Engineering 2019
Shuman, Jaquelyn Kremper, PhD, Geosciences 2019
Siddicky, Safeer Farrukh, PhD, Mechanical and Biomedical Engineering 2021
Silak, Cathy, JD, Public Policy 2006
Sills, Scott, PhD, Materials Science and Engineering 2015
Skifton, Richard, PhD, Materials Science and Engineering 2020
Smith, Chad A., PhD, School of Public Service 2017
Snyder, Dawn M., PhD, Organizational Performance and Workplace Learning 2021
Stahulak, Brian, DNP, Nursing 2019
Storch, Amy, PhD, Social Work 2017
Straka, Ladislav, DSc, Materials Science and Engineering 2018
Stubban, John P., PhD, Computer Science* 2019
Sussmann, Theodore R., PhD, Civil Engineering 2019

T

Tank, David C., PhD, Biological Sciences 2008
Tengelsen, Leslie Ann, DVM, Public and Population Health 2019
Thachuk, Chris, PhD, Materials Science and Engineering 2020
Thomsen, Bastian, PhD, Biological Sciences* 2020
Touchton, Michael, PhD, Political Science* 2013
Turner, Daniel B., PhD, Materials Science and Engineering 2021

U

Ustin, Susan L., PhD, Geosciences 2017

V

Valayil Varghese, Tony, PhD, Materials Science and Engineering 2022
Van Mullem, Heather ID, PhD, JD, Kinesiology 2022
van Wijnen, Andre J., PhD, Materials Science and Engineering 2020
VanderStouwe, Chris, PhD, English 2022
Vona, Alessandro, PhD, Geosciences 2020
Vucetich, John A., PhD, Biological Science 2015

W

Walker, Andrew E., PhD, Educational Technology 2020
Walker, Anne A., PhD, Economics 2017
Wall, Corey J., PhD, Geosciences 2019
Wang, Yongqiang, PhD, Materials Science and Engineering 2021
Warren, Jeffrey M., PhD, Geosciences 2022
Weeks, Emma N.I., PhD, Biological Sciences 2017
Weeks, J. Troy, PhD, Biological Sciences 2017
Wei, Hsian-Chuen Sharon, PhD, World Languages 2012
Wenner, Julianne A., PhD, Curriculum, Instruction and Foundational Studies 2015
Wharry, Janelle P., PhD, Materials Science and Engineering* 2013
Wilkins, Brittany T., PhD, Social Work 2019
Williams, Joy, MFA, English 2017
Wilson, Gail, PhD, Biological Sciences 2018
Windes, William E., PhD, Materials Science and Engineering 2018
Wingett, Wes, PhD, Counselor Education 2020
Winslow, Robin D., EdD, Curriculum, Instruction, and Foundational Studies 2020
Wong-Ng, Winnie, PhD, Materials Science and Engineering 2015
Wood, Joshua A., PhD, Materials Science and Engineering 2018
Wright, Richard N., PhD, Materials Science and Engineering 2009
Wu, Yaqiao, PhD, Materials Science and Engineering* 2012

Y

Yager, Elowyn, PhD, Geosciences 2016
Yaffa, Leslie, EdD, Social Work 2016
Yensen, A. Eric, PhD, Anthropology 2021
Ysursa, John M., PhD, History 2017
Yu, Pei-Lin*, PhD, Anthropology* 2014
Yuan, Jinchao, PhD, Mechanical and Biomedical Engineering 2016

Z

Zadegan, Reza M., PhD, Computer Science and Materials Science and Engineering 2017

Affiliate Graduate Faculty

Participants in multi-university programs.

Bass, Rick, BS, Theatre, Film, and Creative Writing 2021
Bazzett, Rachael, MSW, Social Work 2020
Blackham, Paul B., MEM, Civil Engineering 2021
Booth, Jason M., MPAc, Accountancy 2021
Brookhouse, Elizabeth A., MS, Kinesiology 2020
Brown, Laura, MSW, Social Work 2016
Burns, Brandi, MAHR, History 2016
Butler, Bryan C., MBA, College of Business and Economics 2019
Cain, Jaimie, MSW, Social Work 2019
Calbeto, Jaime, MS, College of Business and Economics 2019
Cameron, Dana, MS, Accountancy 2020
Chavez, Fulcanelli (Fuli), MS, Electrical and Computer Engineering 2021
Constantinidis, Loretta H., MSW, Social Work 2016
Crow Cruz, Christina, MSW, Social Work 2019
Curry, Tim, MS, Kinesiology 2021
Dardis-Kunz, Magen, MSW, Social Work 2016
Davis Julie, MSW, Social Work 2019
Doerr, Anthony, MFA, Theatre, Film, and Creative Writing 2021
Dunn, Sandra E., MS, Electrical and Computer Engineering 2021
Erbes, Robert, BS, Computing Program 2019
Ertter, Barbara, PhD, Biological Sciences 2019
Gibard, Clementine, PhD, Biological Sciences 2019
Gilliam, Nikeshia Jackson, EdD, College of Business and Economics 2019
Gravel-Fletcher, Emily, MHS, Public and Population Health 2022
Gutting, Elizabeth, MFA, Theatre, Film, and Creative Writing 2019
Haan, Lutana H., MHS, Public and Population Health 2019
Hageman, Sally A., MSW, Social Work 2018
Halford, F. Kirk, MA, Anthropology 2021
Hambleton Julie M., MA, Counselor Education 2019
Hanrahan, Stacey, MSN, Nursing 2021
Hein, HannaLore, MAHR, History 2021
Hendershot, Jerry, MA, Art, Design, and Visual Studies 2021
Hobson, Elizabeth Dale, MA, History 2021
Hodge, Karen, MSN, School of Nursing 2012
Hopkins, Heidi M., MA, Kinesiology 2020
Hubbard, Kayla, BS, Computer Science 2019
Hunt, J. Brad, MA, Education 2008
Hurley, Kathleen, MS, Accountancy 2019
Ikeda, Kurt, MA, History 2022
Ilett, Frank, MBA, College of Business and Economics 2018
Johnson, Jeffrey D., MBA, College of Business and Economics 2019

Kapil, Bhanu, MA, Theatre, Film, and Creative Writing 2020
Kostka, Kevin, BA, Public and Population Health 2019
Krutz, Jonathan, MBA, College of Business and Economics 2014
Kunzman, Matthew, MS, Electrical and Computer Engineering 2021
Lamb, Trisha Stevens, MBA, College of Business and Economics 2016
Lang, Nicole, MSW, Social Work 2020
Lara, G. Patrick, MS, Kinesiology 2002
Lasich, Nicole, MPH, Public and Population Health 2020
Lee, Anna Salisbury, MA, English 2020
Lee, Tracie M., MBA, College of Business and Economics 2021
Maitri, Jessica, MSW, Social Work 2020
Marquez, Ryan, MS, Accountancy 2020
Mattingly, Brian, MS, Electrical and Computer Engineering 2021
Mattravers, Jenny, MA, Curriculum, Instruction, and Foundational Studies 2022
Mawhirter, Sarah, PhD, College of Arts and Sciences 2014
Metzler, Alissa, MEd, Literacy, Language, and Culture 2020
Morehouse, Holly, PhD, Public and Population Health 2020
Morgan, Drew, MS, Civil Engineering 2022
Morse, Jane E., MSW, Social Work 2016
Mulnik, Joe, BS, Computer Science 2021
Nelson, Cindy, MA, Counselor Education 2020
Nelson, Kelsey, MEd, Public and Population Health 2022
Olsen, Seth, MS, Civil Engineering 2022
O'Morrow, Brian A., MBA, College of Business and Economics 2017
Orme, Ashley, MA, Public Policy and Administration 2015
Panter, Shane K., MS, Computer Science 2015
Peterson, Erik D., MS, Electrical and Computer Engineering 2021
Price, Tessa, MA, Counselor Education 2019
Quisano, Araceili A., MSW, Social Work 2019
Reese, Stephen, BS, Computer Science 2019
Reynolds, Alyssa, MSW, Social Work 2021
Rieger, Craig G., PhD, Computer Science 2021
Rogers, Laurisa, MSW, Social Work 2019
Rosales, Alejandro, MS, Civil Engineering 2022
Rowell, Danny, MS, Electrical and Computer Engineering 2021
Russell, Mia, MAHR, History 2021
Schilling, Natalie, MSW, Social Work 2019
Shannon, Kyle, BS, Biological Sciences 2019
Sherman, Dave, MS, Civil Engineering 2021
Slagel, Michael C.L., MS, Social Work 2016
Stacey, Mark, MS, Electrical and Computer Engineering 2021

Stephens, Janet A., PhD, College of Business and Economics 2019
Stone, Amanda D., MSW, Social Work 2019
St. John, Nick, MBA, College of Business and Economics 2016
Thompson, Brian N., MS, College of Innovation and Design 2021
Thompson, Victoria E., MSW, Social Work 2020
Tiddens, Christine, MSW, Social Work 2016
Tomblin, David C., PhD, School of Public Service 2019
Tresh, Keith, MS, Electrical and Computer Engineering 2021
Trotter, Gia M., MSW, Social Work 2018
Trull, Rhiannon G., MA, Counselor Education 2021
Unruh, Troy, MS, Materials Science and Engineering 2022
Uriarte, Ramey, MA, Curriculum, Instruction, and Foundational Studies 2022

Urquidi, Rhonda, MA, Curriculum, Instruction, and Foundational Studies 2021
Valdepena Delgado, Andres, MEngr, Electrical and Computer Engineering 2019
Wagner, Adrian R., MS, Materials Science and Engineering 2018
Wallace Bernier, Melissa M., MSW, Social Work 2019
Wallen, Kenneth E., PhD, Biological Sciences 2021
Watson, Anna C., MSW, Social Work 2020
Whitmer, Tyler D., MS, Kinesiology 2020
Wolff, Rebecca, MFA, Theatre, Film, and Creative Writing 2020
Yundt, Lindsey A., MA, Mathematics 2020
Zhai, Huachun, PhD, Civil Engineering 2022

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