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## Curriculum Subcommittee Agenda October 5, 2023

Utah State University

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UtahState  
University

CURRICULUM SUBCOMMITTEE  
Chad Simon, Chair

October 5, 2023  
2:00 – 3:00 p.m.  
Old Main-Champ Hall  
[Zoom](#) (Statewide)

## AGENDA

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### *Approval of Minutes – September 7, 2023*

#### **Program Proposals**

Request from the Department of Applied Sciences, Technology and Education in the College of Agriculture and Applied Sciences to [offer a Career and Technical Education Teaching Academy Institutional Certificate of Proficiency](#).

Request from the Department of Technology, Design and Technical Education in the College of Agriculture and Applied Sciences to [offer an Engineering Technology AAS](#).

Request from the Department of Technology, Design and Technical Education in the College of Agriculture and Applied Sciences to [offer an Engineering Technology BAS](#).

Request from the Department of Theatre Arts in the Caine College of the Arts to [change the name of the Theatre Arts Design and Technology Film Production Option BFA to Theatre Arts: Theatre Design & Technology BFA](#).

Request from the Department of Communicative Disorders and Deaf Education in the Emma Eccles Jones College of Education and Human Services to [discontinue the Speech Language Pathology and Audiology-BS](#).

Request from the Department of Communicative Disorders and Deaf Education in the Emma Eccles Jones College of Education and Human Services to [discontinue the Speech Language Pathology and Audiology – Online Second BS](#).

Request from the Department of Communication Studies and Philosophy in the College of Humanities and Social Sciences to [discontinue the Speech Communication Teaching Minor](#).

Request from the Departments of Communication Studies and Philosophy, Journalism and Communication and Political Science in the College of Humanities and Social Sciences to [offer a Political Communication Certificate of Proficiency](#).

Request from the Department of Sociology and Anthropology in the College of Humanities and Social Sciences to [move the Community and Natural Resources Institute from the Department of Sociology and Anthropology to the College of Humanities and Social Sciences](#).

Request from the Department of Sociology and Anthropology in the College of Humanities and Social Sciences to [offer an Environmental Justice Institutional Certificate of Proficiency](#).

Request from the Department of Sociology and Anthropology in the College of Humanities and Social Sciences to offer a [Social Dimensions of Climate Change Institutional Certificate of Proficiency](#).

Request from the Department of Sociology and Anthropology in the College of Humanities and Social Sciences to offer a [Social Dimensions of Climate Change and Environmental Justice Minor](#).

Request from the Department of Geosciences in the College of Science to [change the name from Earth Science Composite Teaching-BA, BS to Earth Science Teaching-BA, BS](#).

Request from the Department of Management in the Jon M. Huntsman School of Business to [offer a Healthcare Management Minor](#).

Request from the Department of Environment and Society in the S.J. & Jessie E. Quinney College of Natural Resources to [offer a Climate Change Solutions Certificate of Proficiency](#).

Request from the Department of Environment and Society in the S.J. & Jessie E. Quinney College of Natural Resources to [offer an Environmental Science and Sustainability Bachelor of Science](#).

**Semester Course Approval Reviews:**

<https://usu.curriculog.com/>

**College of Agriculture and Applied Sciences**

ADVS –  
APEC –  
ASTE – 14  
AVTE – 1  
LAEP –  
NDFS – 2  
PSC – 2  
TDTE - 52

**Caine College of the Arts**

ART – 10  
MUSC –  
THEA - 1

**Jon M. Huntsman School of Business**

ACCT –  
DAIS – 8  
BECN – 12  
MHR – 1  
MSLE – 1

**Emma Eccles Jones College of Education and Human Services**

COMD – 2  
HDFS – 5  
ITLS – 5  
KHS – 21  
NURS – 1  
PSY – 3  
SPERC –  
TEAL - 7

**College of Engineering**

BENG –  
CEE –  
ECE – 2  
EED –  
MAE – 7

**College of Humanities and Social Sciences**

CAI - 11  
CSPH – 6  
ENGL – 6  
HIST – 5  
JCOM – 6  
POLS – 6  
SWRK –  
SOCA – 3  
WGLC – 60

**S.J. & Jessie E. Quinney College of Natural Resources**

ENVS – 13  
WATS –  
WILD –

**College of Science**

BIOL – 2  
CHEM –  
CS –  
GEOL –  
MATH –  
PHYS – 1

**College of Veterinary Medicine**

VCLS –

**Other**

USU - 1

**Other Business**

CIP Code Change Request – Mateja Savoie-Roskos

Change the CIP code for the Landscape Architecture-BLA, Landscape Architecture-MLA (advanced professional degree)-MLA, and Accelerated Master of Landscape Architecture-BLA, MLA to 40601 Landscape Architecture. Also change the Landscape Architecture Minor.

[Update Language in Curriculum Handbook](#) – Toni Gibbons

**Adjourn: 3:00 pm**



September 7, 2023  
2:00 – 3:00 p.m.  
Old Main-Champ Hall

## MINUTES

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Present: Richard Walker, Caine College of the Arts  
Mateja Savoie-Roskos, College of Agriculture and Applied Sciences  
Chad Simon, *Chair*, Jon M. Huntsman School of Business  
Nate Trauntvein, Emma Eccles Jones College of Education and Human Services  
Thomas Fronk, College of Engineering  
Jared Colton, College of Humanities and Social Sciences  
Peter Howe, S.J. & Jessie E. Quinney College of Natural Resources  
Brynja Kohler, College of Science  
Heloisa Rutigliano, College of Veterinary Medicine  
Erin Davis, University Libraries  
Paul Barr, *Chair*, EPC, Provost's Office  
Richard Cutler, Graduate Council  
Toni Gibbons, Registrar's Office  
Michele Hillard, Secretary  
Paul Barr, *Chair* EPC

Absent: Sunshine Brosi, USU Eastern  
Mark Chynoweth, Statewide Campuses  
Sarah Pope, Graduate Senator  
Aly Cinq-Mars, USUSA Executive VP

Visitors:

### **Approval of Minutes – April 6, 2023**

*Motion to approve minutes made by Nate Trauntvein. Seconded by Richard Walker. Minutes approved as distributed.*

### **Program Proposals**

Request from the Department of Nutrition, Dietetics and Food Sciences in the College of Agriculture and Applied Sciences to [offer a Chocolate Science Certificate of Proficiency](#).

*Motion to approve the R401 made by Mateja Savoie-Roskos. Seconded by Richard Cutler. Proposal approved.*

Request from the Department of Nutrition, Dietetics and Food Sciences in the College of Agriculture and Applied Sciences to [establish the Student Nutrition Access Center](#).

*Motion to approve the R401 made by Mateja Savoie-Roskos. Seconded by Richard Cutler. Proposal approved.*

Request from the Department of Technology, Design and Technical Education in the College of Agriculture and Applied Sciences to [restructure the Accounting Practices Certificate of Completion](#).

*Motion to approve the R401 made by Mateja Savoie-Roskos. Seconded by Richard Cutler. Proposal approved.*

Request from the Department of Technology, Design and Technical Education in the College of Agriculture and Applied Sciences to [offer an Engineering Technology AAS](#).

*Motion to hold the R401 made by Mateja Savoie Roskos. Seconded by Nate Trauntvein. Proposal held until Engineering has had time to review.*

Request from the Department of Technology, Design and Technical Education in the College of Agriculture and Applied Sciences to [offer an Engineering Bachelor of Applied Science](#).

*Motion to hold the R401 made by Mateja Savoie Roskos. Seconded by Nate Trauntvein. Proposal held until Engineering has had time to review.*

Request from the Department of Geosciences in the College of Science to [change the name of the Geology-Geo Workforce Emphasis \(BA | BS\) to Geology-Professional Emphasis \(BA | BS\)](#).

*Motion to approve the R401 made by Brynja Kohler Seconded by Richard Cutler. Proposal approved.*

Request from the Department of Watershed Sciences in the S.J. & Jessie E. Quinney College of Natural Resources to [offer a Marine Science Minor](#).

*Motion to approve the R401 made by Peter Howe. Seconded by Nate Trauntvein. Proposal approved.*

Request from the Department of Watershed Sciences in the S.J. & Jessie E. Quinney College of Natural Resources to [discontinue the Watershed Ecology Specialization in the Master of Science](#).

*Motion to approve the R401 made by Peter Howe. Seconded by Nate Trauntvein. Proposal approved.*

Request from the Department of Watershed Sciences in the S.J. & Jessie E. Quinney College of Natural Resources to [discontinue the Watershed Ecology Specialization in the PhD program](#).

*Motion to approve the R401 made by Peter Howe. Seconded by Nate Trauntvein. Proposal approved.*

Request from the Department of Watershed Sciences in the S.J. & Jessie E. Quinney College of Natural Resources to [discontinue the Watershed Hydrology Specialization in the Master of Science](#).

*Motion to approve the R401 made by Peter Howe. Seconded by Nate Trauntvein. Proposal approved.*

Request from the Department of Watershed Sciences in the S.J. & Jessie E. Quinney College of Natural Resources to [discontinue the Watershed Hydrology Specialization in the PhD program](#).

*Motion to approve the R401 made by Peter Howe. Seconded by Nate Trauntvein. Proposal approved.*

Request from the Department of Watershed Sciences in the S.J. & Jessie E. Quinney College of Natural Resources to [discontinue the Watershed Management Specialization in the Master of Science](#).

*Motion to approve the R401 made by Peter Howe. Seconded by Nate Trauntvein. Proposal approved.*

Request from the Department of Watershed Sciences in the S.J. & Jessie E. Quinney College of Natural Resources to [discontinue the Watershed Management Specialization in the PhD Program](#).

*Motion to approve the R401 made by Peter Howe. Seconded by Nate Trauntvein. Proposal approved.*

Request from the Department of Instruction, Patrol Services and Digital Initiatives in the University Libraries to [change the department name from Instruction Collections and Patron Services and Library Public Services](#).

*Motion to approve the R401 made by Erin Davis. Seconded by Richard Cutler. Proposal approved.*

Request from the Department of Special Collections Digital & Cataloging in the University Libraries to [change the department name from Special Collections Digital & Cataloging to Library Collections and Discovery](#).

*Motion to approve the R401 made by Erin Davis. Seconded by Richard Cutler. Proposal approved.*

Request from Empowering Teaching Excellence in the Office of the Provost and Chief Academic Officer to [establish the Center for Empowering Teaching Excellence](#).

*Motion to approve the R401 made by Paul Barr. Seconded by Nate Trauntvein. Proposal approved.*

**Semester Course Approval Reviews:**

<https://usu.curriculog.com/>

**College of Agriculture and Applied Sciences**

*Motion to approve the business of the College of Agriculture and Applied Sciences pending the removal of the courses requested made by Mateja Savoie-Roskos. Seconded by Nate Trauntvein. Business approved minus the courses listed below. Motion to approve remaining business made by Nate Trauntvein.*

*Seconded by Mateja Savoie Roskos.*

- ADVS – *(Removed ASTE 5600, 5610, 5620, 6600, 6610, 6620 from agenda. Awaiting dual/cross*
- APEC – 2 *listed courses to catch up with them.)*
- ASTE – 11
- AVTE – *(HOLD TECS 2830, TEHE 1150, TEIT 1810, 1820, 1830, 1840 and 1850. TEPT 1620) Motion to hold made*
- LAEP – 1 *by Mateja Savoie-Roskos. Seconded by Richard Walker.*
- PSC – *(HOLD TEIT 1290 & 2950) Motion to hold made by Mateja Savoie-Roskos. Seconded by Richard Walker*
- NDFS – 3
- PSC – *(HOLD TEPL 1310, 1320, 1410 and 1420) Motion to hold made by Mateja Savoie-Roskos. Seconded by*
- TDTE - 50 *Richard Walker*

**Caine College of the Arts**

- ART –
- MUSC –
- THEA -

**Jon M. Huntsman School of Business**

*Motion to approve the business of the Jon M. Huntsman School of Business made by Richard Walker.*

*Seconded by Richard Cutler. Business approved.*

- ACCT –
- DAIS – 8
- BECN –
- MHR –
- MSLE – 6

**Emma Eccles Jones College of Education and Human Services**

- COMD –
- HDFS –
- ITLS –
- KHS –
- NURS –
- PSY –
- SPERC–
- TEAL -

**College of Engineering**

- BENG –
- CEE –
- ECE –
- EED –
- MAE –

### **College of Humanities and Social Sciences**

CSPH –  
ENGL –  
HIST –  
JCOM –  
POLS –  
SWRK –  
SOCA –  
WGLC –

### **S.J. & Jessie E. Quinney College of Natural Resources**

*Motion to approve the business of the S.J. & Jessie E. Quinney College of Natural Resources made by Peter Howe. Seconded by Mateja Savoie-Roskos. Business approved.*

ENVS – 3  
WATS – 7  
WILD – 1

### **College of Science**

*Motion to approve the business of the College of Science minus the course listed below made by Brynja Kohler. Seconded by Richard Cutler. Business approved minus the course listed below.*

BIOL – 1  
CHEM –  
CS – 1  
GEOS – 5  
MATH – 2  
PHYS – 1     *(Removed PHYS 5250. Awaiting dual/cross to catch up in Curriculum)*

### **College of Veterinary Medicine**

VCLS –

### **Other Business**

New Baccalaureate Programs Template – Toni Gibbons

Reviewing catalog program page templates and will be updating and making changes and streamlining the information so that it will be easier for parents and students to understand and maneuver through. Registrar's Office proposes removing the template and adding a link that goes to the degree map itself. It would free up space on the page to see what the course requirements are. Also, tables are not accessible and that needs to be corrected. Will put a link to more information at the top of the page. Then would come the minimum basic requirements. This will help with speeding up the publication of the catalog. Held a focus group with lead advisors. This would become effective in the 2024-2025 catalog.

Cross/Dual Listed Information for the EPC Handbook – Toni Gibbons

Add language regarding consistency of titles and description for dual/cross listed courses. Propose adding something to the handbook that these courses must have the same title and description.

**Adjourn: 2:55 pm**



# CAAS - Applied Sciences, Technology and Education - Career and Technical Education Teaching Academy - Institutional Certificate of Proficiency

## 4.1.a R401 ABBREVIATED PROGRAM PROPOSAL

### R401-Abbreviated Program Proposal

## HELPS AND HINTS FOR COMPLETING R401 PROPOSALS

[Writing Guidelines/Suggestions](#)

[USHE R401 Policy](#)

[Process and Flowchart](#)

## COLLEGE AND DEPARTMENT INFORMATION

Click on the college(s) and department(s) that are included on this request

COLLEGE (include all cross listed colleges)\*

DEPARTMENT (include all cross listed departments)\*

Current Title (if applicable)\* Career and Technical Education Teaching Academy Institutional Certificate of Proficiency

Proposed Title\* Career and Technical Education Teaching Academy - Institutional Certificate of Proficiency

## CIP Code

Enter the Correct CIP Code by Using the Following Link: [Classification Instruction Programs](#)

CIP Code (6-digits)\* 13.1399

Minimum Number of Credits (if applicable)\* 15

Maximum Number of Credits (if applicable)\* 15

Type of Degree: (BA, BS, etc.)\* Institutional Certificate of Proficiency

### REQUEST

## TYPE OF CHANGE BEING REQUESTED

Click the change(s) that best reflect your proposal.

- New Academic Program:**
- Certificates of Completion
  - Certificates of Proficiency
  - CTE - Certificate of Completion
  - CTE - Certificate of Proficiency
  - Institutional Certificate of Proficiency
  - K-12 Endorsement Program
  - Minor
  - New Emphasis for Existing Program
  - Out of Service Area Delivery Program (attach signed MOU)
  - Other

- Post-Baccalaureate Certificate
- Post-Masters Certificate

- Existing Academic Program Changes:**
- Name Change of Existing Program
  - Program Restructure (with or without Consolidation)
  - Program Transfer to a New Academic Department or Unit
  - Program Suspension (on hold-not listed in catalog)
  - Program Discontinuation (permanent program removal)
  - Reinstatement of Previously Suspended Program
  - Out-of-Service Area Delivery Program (attach signed MOU)

- Administrative Unit Changes:**
- Name Change of Existing Unit
  - Administrative Unit (Transfer)
  - Administrative Unit (Restructure-with or without Consolidation)
  - Administrative Unit (Suspension-on hold)
  - Administrative Unit (Discontinuation-permanent unit removal)
  - Reinstatement of Previously Suspended Administrative Unit
  - Reinstatement of Previously Discontinued Administrative Unit

**Other: (explain change)**

### ADDITIONAL APPROVALS (if applicable)

**Graduate Council Approval\***  Yes  
 No

**Teacher Licensure Program Approval (STEP)\***  Yes  
 No

### SECTION I: THE REQUEST

**R401 Purpose\*** The purpose of this proposal is two-fold: 1) add new proposed courses to the Career and Technical Education (CTE) Teaching Academy Institutional Certificate of Proficiency; and 2) reduce the number of credits of the CTE Teaching Academy Institutional Certificate of Proficiency from 18 credits (6 courses x 3 credits each) to 15 credits (5 courses x 3 credits each).

### SECTION II: PROGRAM PROPOSAL

**Proposed Action & Rationale\***

We are proposing to: 1) add new proposed courses to the CTE Teaching Academy Institutional Certificate of Proficiency; and 2) reduce the number of credits of the CTE Teaching Academy Institutional Certificate of Proficiency from 18 credits (6 courses x 3 credits each) to 15 credits (5 courses x 3 credits each).

Current classes in this program are:

TEE 3200 - Methods of Teaching and Learning: Levels 1-3 (3 credits)

TEE 4400 - Methods of Teaching and Learning: Levels 4-6 (3 credits)

TEE 5220 - Program and Course Development (3 credits)

TEE 4210 - Evaluation and Assessment (3 credits)

TEE 5920 - Digital Tools for Learning (3 credits)

TEE 5910 - Classroom and Laboratory Management (3 credits)

New proposal will consist of the following new courses (3 credits each):

- ASTE 5150 - Methods of Teaching CTE
- ASTE 5151 - Program and Course Development
- ASTE 5152 - Evaluation and Assessment
- ASTE 5153 - Digital Tools for learning
- ASTE 5154 - Classroom and Laboratory Management

A non-credit continuing education option for these will exist (90 hours each):

- CEAS 5150 - Methods of Teaching CTE
- CEAS 5151 - Program and Course Development
- CEAS 5152 - Evaluation and Assessment
- CEAS 5153 - Digital Tools for learning
- CEAS 5154 - Classroom and Laboratory Management

The rationale behind these changes is 1) two methods courses were not needed and so the previous two would be condensed into one; 2) to better meet the varying needs of technical college and secondary education teachers who need pedagogical training, offering Continuing Education Units (CEU) along with Academic Credits; 3) Aligning CEU and Academic credits with the same name and numbers for consistency is important; 4) With this certificate serving both technical college faculty and secondary education teachers, moving this CTE Teaching Academy Institutional Certificate of Proficiency to the Applied Sciences, Technology and Education (ASTE) department is a better fit.

**Labor Market Demand (if applicable)**

There is a shortage of qualified CTE teachers nationwide and in Utah. An increase in secondary level teachers coming from industry seeking alternative routes to licensure has given rise to the need for accessible and affordable curriculum options. These options make it possible for these teachers to obtain endorsement more easily and therefore remain in the the teaching profession for longer.

**Consistency with Institutional Mission & Institutional Impact\***

This proposal is consistent with the university's mission of serving the public through learning, discovery, and engagement. Two audiences (public) across Utah will primarily be served by this proposal. Many Career and Technical Education teachers in Utah come from industry and enter the classroom, both secondary and post-secondary, without any pedagogical training. For secondary school teachers, there is little option to receive pedagogical training online with options for CEU or academic credits, which ultimately impacts their ability to receive necessary endorsements on their license to be able to teach. This proposal will greatly impact the availability of coursework to both secondary and post-secondary teachers in CTE.

**Finances\***

The modification will reduce the credit hours and FTE of faculty. These courses are being restructured and redesigned for higher quality online delivery with lower input from faculty each semester.

**SECTION III: CURRICULUM (if applicable)**

**Program Curriculum Narrative**

See other Curricolog submissions for each course listed in this proposal.

**Attach** (if applicable) completed [Program Curriculum](#) and [Degree Map](#) to this request by clicking on the Files  icon located on the right-hand side of the screen.

## **SUBMIT AND APPROVE THE PROPOSAL**

**Click on the SAVE ALL CHANGES button below.**

**Scroll to the top left and click on the LAUNCH  icon to launch your proposal.**

**Utah System of Higher Education  
New Academic Program Proposal  
Cover/Signature Page - Full Template**

**Institution Submitting Request:** Utah State University  
**Proposed Program Title:** Engineering Technology  
**Are There New Emphases:** Yes  No   
**Names of New Emphases (Separated by Commas):**  
**Sponsoring School, College, or Division:** College of Agriculture and Applied Sciences  
**Sponsoring Academic Department(s) or Unit(s):** Technology, Design and Technical Education  
**Classification of Instructional Program Code<sup>1</sup>:** 6 - Digit CIP: 15.0000  
**Min/Max Credit Hours Required of Full Program:** 63 / 63  
**Proposed Beginning Term<sup>2</sup>:** Spring 2024  
**Institutional Board of Trustees' Approval Date:**

**Program Type (mark all that apply with an x):**

<input checked="" type="checkbox"/> (AAS)	Associate of Applied Science Degree
<input type="checkbox"/> (AA)	Associate of Arts Degree
<input type="checkbox"/> (AS)	Associate of Science Degree
<input type="checkbox"/>	Specialized Associate Degree (specify award type <sup>3</sup> : )
<input type="checkbox"/>	Other (specify award type <sup>3</sup> : )
<input type="checkbox"/> (BA)	Bachelor of Arts Degree
<input type="checkbox"/> (BS)	Bachelor of Science Degree
<input type="checkbox"/> (BAS)	Bachelor of Applied Science Degree
<input type="checkbox"/>	Specialized Bachelor Degree (specify award type <sup>3</sup> : )
<input type="checkbox"/>	Other (specify award type <sup>3</sup> : )
<input type="checkbox"/> (MA)	Master of Arts Degree
<input type="checkbox"/> (MS)	Master of Science Degree
<input type="checkbox"/>	Specialized Bachelor Degree (specify award type <sup>3</sup> : )
<input type="checkbox"/>	Other (specify award type <sup>3</sup> : )
<input type="checkbox"/>	Doctoral Degree (specify award type <sup>3</sup> : )
<input type="checkbox"/>	K-12 School Personnel Program
<input type="checkbox"/>	Out of Service Area Delivery Program <input type="checkbox"/> Attached MOU
<input type="checkbox"/>	Out of Mission Program
<input type="checkbox"/>	NEW Professional School

<sup>1</sup> For CIP code classifications, please see <http://nces.ed.gov/ipeds/cipcode/Default.aspx?y=55>.  
<sup>2</sup> "Proposed Beginning Term" refers to first term after Regent approval that students may declare this program.  
<sup>3</sup> Please indicate award such as APE, BFA, MBA, MEd, EdD, JD

**Changes to Existing Programs or Administrative Units Required (mark all that apply with an x, if any):**

<input type="checkbox"/>	Program Restructure with or without Consolidation
<input type="checkbox"/>	Emphases transfer from another program or academic unit
<input type="checkbox"/>	Name Change of Existing Program or Academic Unit
<input type="checkbox"/>	Program transfer to a different academic unit
<input type="checkbox"/>	Suspension or discontinuation of a unit or program
<input type="checkbox"/>	Reinstatement of a previously suspended/discontinued program or administrative unit
<input type="checkbox"/>	Other

**Chief Academic Officer (or Designee) Signature:**

I, the Chief Academic Officer or Designee, certify that all required institutional approvals have been obtained prior to submitting this request to the Office of the Commissioner.

Please type your first and last name

Date:

I understand that checking this box constitutes my legal signature.

# Utah System of Higher Education Program Description - Full Template

## Section I: The Request

Utah State University's (DEPARTMENT NAME) requests approval to offer the following degree(s):

To be effective on:

This program was approved by the institutional Board of Trustees on:

## Section II: Program Proposal

### Program Description

The Department of Technology, Design, and Technical Education (TDTE) at Utah State University (USU) is developing an Engineering Technology Associates of Applied Science degree to begin Spring 2024, if approved. This degree is a standalone degree, and it is also designed to "stack" onto existing 900-hour certificates from Utah's Technical Colleges. The degree will focus on educating students on applied engineering principles by using math, science, and practical experiences to solve real-world problems. The degree will have a core of math, science, engineering, laboratory work, and digital design, with several electives allowing the students to focus on robotics, additive manufacturing, advanced manufacturing, electronics, quality and reliability, and CAD systems. The program will be offered both face-to-face on the Logan Main Campus and online for non-traditional and distance learners. The program will seek accreditation through the Accreditation Board for Engineering and Technology (ABET).

### Consistency with Institutional Mission

Utah State University (USU) is a land grant university, which means it has a specific mission and goals outlined by the Morrill Act of 1862. Additionally, USU serves as a regional community college and technical college for the southeast region. The desire for a workforce development strategy that is both innovative and emphasizes stackable pathways into higher learning opportunities for students is the central mission of USU. As a result, it is the intention of USU to offer an engineering technology program that is centered around the diverse needs of the state.

As a leader in education and workforce development, USU aims to provide accessible and relevant education to meet the needs through a program that accommodates the learners' barriers to success. An engineering technology program through USU contributes to this goal by offering a curriculum that aligns with the needs of the local and regional industries, preparing students for high-demand careers in engineering and technology fields that local industry partners support. By offering a practical and applied education, the program can equip graduates with the skills and knowledge required to address real-world challenges and contribute to the economic development in Utah and beyond.

Utah State University is committed to continual research and innovation as land grant universities are expected to engage in research and innovation to advance knowledge and promote economic growth. An engineering technology program can actively contribute to research by conducting applied research projects in collaboration with industries and government agencies.

Additionally, a vital aspect of the Land Grant Mission is outreach and extension, which seeks to engage with communities and provide these services. An engineering technology program can fulfill this role by actively collaborating with local industries, organizations, and communities. This collaboration can involve offering technical assistance, training programs, and consulting services to address engineering and technology-related challenges businesses and communities face. By sharing expertise and resources, the program can enhance the competitiveness of local industries, promote economic development, and improve the quality of life for Utah residents.

A vital aspect of this program proposal is the desire to increase access for adult learners as they transition from one stage of their career to the next. Land grant universities strive to create an inclusive and diverse learning environment that reflects the state's demographics and promotes equal opportunities for all. This engineering technology program can contribute to this goal by actively recruiting and supporting students from diverse backgrounds, including underrepresented groups, and by accommodating learning in contextual space through industry collaboration.

## Section III: Needs Assessment

### Program Rationale

The proposed engineering technology program request was birthed from necessity as regional workforce partners voiced concern for unmet workforce needs. As a result, curricular development processes were initiated in partnership with industry and accrediting bodies to help meet the industry's needs while maintaining program fidelity.

Engineering technology is dynamic and constantly evolving, driven by technological advancements and ever-changing industry demands. To create a relevant program, it is essential to actively involve industry representatives, employers, and professionals in the program development process. By seeking their input, the emerging trends, technological advancements, and skill requirements can be identified that shape the industry's needs. This industry-driven approach will ensure program alignment with the current and future demands of the engineering technology field, thus increasing the employability of graduates.

Developing a successful engineering technology program requires strong collaboration and partnerships with industry stakeholders. By actively engaging employers, professional organizations, and industry experts, valuable partnerships will be established that facilitate internships, co-op opportunities, and real-world projects for students. These collaborations will enhance students' practical skills and knowledge and provide them with networking opportunities and potential employment prospects. Moreover, industry partners can contribute to curriculum development, ensuring it reflects the latest industry practices and technologies relevant for their future career advancements.

The curriculum of the engineering technology program will be designed based on input from industry partners to ensure its alignment with industry needs and demands. The program will offer a balanced mix of theoretical knowledge and hands-on practical experience, emphasizing the application of engineering principles and advanced technologies in real-world settings. Courses will cover various relevant topics such as engineering design, manufacturing processes, quality assurance, project management, and emerging technologies specific to the industry. Additionally, the program will incorporate industry-standard software, tools, and equipment to familiarize students with the available resources used in the field.

To deliver a high-quality education that meets industry standards, faculty members will possess a combination of academic qualifications and industry experience. This blend of expertise will ensure that students receive instruction that combines theoretical knowledge with practical insights. Faculty members will engage in ongoing professional development activities, including industry conferences, workshops, and collaborations with industry partners. By staying connected with industry trends and best practices, faculty will be better equipped to deliver relevant and up-to-date instruction to students.

A robust system of continuous evaluation and improvement will be implemented to ensure the ongoing relevance and quality of the program. Feedback from industry partners, alumni, and employers will be actively sought and incorporated into program reviews and updates. This iterative process will help identify areas for improvement, emerging industry needs, and opportunities for curriculum enhancement. The program will also regularly conduct graduate surveys and track the employment outcomes of graduates to assess the program's effectiveness in meeting industry demands.

### Labor Market Demand

Nationally, the Bureau of Labor Statistics (BLS) projects that employment in engineering occupations will grow by 4% between 2019 and 2029, adding over 139,000 new jobs to the economy. The BLS also reports that engineering occupations offer a median annual wage of \$81,440, significantly higher than the median annual wage for all occupations of \$41,950.

Furthermore, as technological advances continue to shape various industries, the demand for professionals with practical, hands-on experience in engineering is expected to increase. The proposed Associate of Applied Science in Engineering Technology program will provide students with the practical skills and knowledge needed to succeed in these rapidly evolving industries and prepare them for the job market upon graduation.

There is considerable demand for engineering professionals as the projected growth rate is high for the coming years. Locally and nationally, the expectation for positive growth in engineering and engineering-related areas shows economically solid promise for the coming years. According to data from the Utah Department of Workforce Services, occupations related to engineering are expected to see a 27% increase in employment in Utah between 2020 and 2030. This growth is higher than the projected average employment growth of 8.6% across all occupations in the state.

In addition, Utah's median wage for engineering occupations is significantly higher than the state's overall median wage. As of May 2020, Utah's median hourly wage for architecture and engineering occupations was \$41.83, compared to the state's overall median hourly wage of \$20.46. Moreover, salaries for more specific occupations within the Engineering sector, oriented toward Engineering Technology, report



median wages on 6-digit CIP codes in a range from \$44.31 per hour to \$30.62. This data suggests that engineering occupations are in high demand and offer increased earning potential for graduates.

The proposed Associate of Applied Sciences in Engineering Technology program will provide students with the skills and knowledge needed to succeed in this dynamic field, contribute to the growth of Utah manufacturing industries across the state, and supply a demand for highly skilled engineering professionals.

## **Student Demand**

The Engineering Technology Program is expected to generate significant student demand, particularly from two key groups: students from technical colleges and individuals seeking to re-enter education from industry. Technical college graduates who have completed associated certificate work may seek opportunities to further their education and advance their careers. The proposed Engineering Technology program provides an ideal pathway for these students to continue their educational journey in a high-wage, high-demand field. The program addresses the demand for a seamless transition from technical college toward a four-year degree program by offering a curriculum that leverages their technical knowledge and skills.

These students are attracted to the program because it allows them to deepen their understanding of engineering principles, gain specialized knowledge in their chosen field, and broaden their career prospects, making them eligible for future promotion. The program's emphasis on industry collaboration ensures that the education provided is efficient and aligned with industry demands, making graduates highly employable. This aspect appeals to technical college graduates seeking a competitive edge in the job market and the opportunity for upward career mobility.

Additionally, there is a growing trend of individuals with industry experience seeking to re-enter education to enhance their skills, explore new career opportunities, or pursue a career change. The proposed Engineering Technology Program, with its emphasis on industry input and demand, offers a unique opportunity for these individuals to update their knowledge and acquire formal qualifications in the engineering technology field. With their practical industry experience, these students bring valuable insights and perspectives to the program. Their presence enriches classroom discussions, enhances collaborative learning, and contributes to a dynamic educational environment. Their industry connections and experiences also provide valuable networking opportunities and potential job placements after graduation.

The program's flexibility in scheduling, including part-time and evening classes, caters to the needs of individuals who may be juggling work, family responsibilities, or other commitments. This flexibility, combined with the program's industry relevance and hands-on approach, appeals to individuals re-entering education and seeking a program that directly aligns with their professional goals and aspirations.

## **Similar Programs**

This program does not exist in USU's service region. Currently, the association that offers national accreditation, the Accreditation Board for Engineering and Technology (ABET), accredits Engineering Technology AAS programs at Weber State University, Utah Valley University, Salt Lake Community College, and Southern Utah University in the state. Of the current programs, very few have a "stacking" component to allow technical college students to articulate their certificates for credits toward graduation in Engineering Technology. The program is also to be offered face-to-face and fully online to meet the needs of industry in the Bear River Region and Wasatch Front.

## **Collaboration with and Impact on Other USHE Institutions**

The proposed Engineering Technology Program recognizes the importance of creating seamless educational pathways for students transitioning from technical colleges. The program is committed to establishing solid collaborations with area technical colleges for stackable credentials to facilitate this transition and ensure students can build upon their prior technical education. The first step in collaborating with technical colleges is to align the curriculum of the Engineering Technology Program with the courses offered at these institutions. By reviewing the course offerings and competencies of technical college programs, areas of overlap can be identified and clear pathways established for credit transfer and advanced standing in the Engineering Technology Program. This alignment will minimize redundancy in coursework and enable students to seamlessly transition into the program without any loss of credit.

To formalize the collaboration and facilitate credit transfer, the Engineering Technology Program will work closely with technical colleges to develop articulation agreements. These agreements will outline the specific courses, competencies, and credits to be recognized for transfer into the program. They will provide clear guidelines for technical college graduates on how their prior coursework can be applied towards meeting the requirements of the Engineering Technology Program. Articulation agreements will create a transparent and efficient process for credit evaluation and transfer, ensuring a smooth transition for students.

Collaboration with technical colleges goes beyond credit transfer. The Engineering Technology Program will establish advising and support services to assist students from technical colleges in transitioning to the program. Academic advisors will be available to guide students through the admission process, provide information on course equivalencies, and help them navigate the curriculum. These advisors will also be knowledgeable about scholarships, financial aid, and other resources available to support students during their educational journey.

One of the critical benefits of collaborating with technical colleges is the opportunity to offer stackable credentials. The Engineering Technology Program will work closely with technical colleges to identify specific technical certificate or associate degree programs that align with the program's focus areas. Students can earn interim credentials along their educational pathway by recognizing and awarding stackable credentials. These credentials provide valuable industry-recognized certifications and enhance the employability of students who may choose to enter the workforce before completing their applied associate degree.

## **External Review and Accreditation**

An advisory board with industry leaders in Northern Utah from Northrop Grumman, Lockheed Martin, Autoliv, TCR Composites, and ATK have reviewed the degree plan proposal and support this program. Additional advisory members will be added as the need arises. Nationally, the Accreditation Board for Engineering and Technology (ABET) offers accreditation for programs similar to this proposal. This program has been designed to meet their standards and once the program is in place, accreditation will be applied for with the first graduating class as defined by ABET, with the initial projected review after three years. According to the ABET website, the average cost of the initial accreditation visit fee is \$20,000.

## **Section IV: Program Details**

### **Graduation Standards and Number of Credits**

The Engineering Technology AAS aligns with the standards and number of credits of other programs granting the Associate of Applied Science degree at USU. Upon graduation, a student will have earned a minimum of 63 credits.

### **Admission Requirements**

Requirements for admission into the Associate of Applied Science in Engineering Technology degree program are consistent with the general University undergraduate admission requirements.

**Curriculum and Degree Map**

See Appendix A & B

## **Section V: Institution, Faculty, and Staff Support**

### **Institutional Readiness**

This degree program proposal is a result of many requests from industry partners currently working with the Technology Systems program. This program will share many technical skill courses with the technology systems program while also providing specific Engineering Technology coursework and training. It is anticipated an additional 11 courses will be needed to be able to provide the specific set of knowledge and skills graduates would need to enter the industry. With 11 new courses, the program will require two additional faculty members along with an educational specialist to be able to offer the additional courses required. Funding for faculty overload, adjunct instructors, or graduate students to help with courses in both TESI and this Engineering Technology degree program that will likely have capacity issues. The program is designed to have a path to the degree through the USU Online System, with additional options for students at many regional campuses.

### **Faculty**

The courses draw on the strengths and expertise of the faculty in the Department of Technology, Design, and Technical Education, along with collaboration from the faculty at USU Eastern and Bridgerland Technical College that provides technical content training for students within the AAS degree. Additional courses offered in programs outside the department, (e.g., the Schools of Math and Science)) will be applied to this degree with minimal student impact. Through restructuring and reallocation of teaching assignments, the faculty can accommodate the student demand of the proposed program while requiring only two additional faculty members. The positions for the faculty members are being funded through growth funds in the college and being supported by the university to develop this program for our industry partners. Additional faculty will be considered as the enrollment in the program grows or industry partners sponsors such additions.

### **Staff**

With little restructuring, current staff resources are sufficient for the needs of this new program, but funding will be provided at the university level to fund a program coordinator to help with the projected growth of the program. As the program grows or industry partners sponsor such additions, additional staff will be considered.

### **Student Advisement**

The Department of Technology, Design, and Technical Education (TDTE) has designated advisors throughout the regional campus system and within the College of Agriculture and Applied Sciences. The advisors for this program will be the same individuals who also advise students in the early stages of the Engineering Technology program. Funding is being allocated at the University level to fund a program advisor after the first year to help with the projected growth. If needed, student peer mentors will assist the advisors with the increased number of students and additional advising capacity will be added as student numbers warrant within TDTE.

### **Library and Information Resources**

No additional library resources will be needed to support this program. Key journals and readings are already available through USU's library system to support the AAS in Engineering Technology.

### **Projected Enrollment and Finance**

See Appendix D

## **Section VI: Program Evaluation**

### **Program Assessment**

The Department of Technology, Design, and Technical Education will conduct on-going assessment of the degree program and make improvements or adjustments as needed. The objectives selected for this program include skills and knowledge identified by industry leaders and those required by ABET for accreditation. This program has four primary objectives. After completion of this degree program, students will be able to:

1. Graduates will demonstrate a commitment to professional and ethical responsibilities, diversity, inclusion awareness and lifelong professional development.

2. Graduates will be recognized as having mastered both theory and application of the body of knowledge in the engineering technology field.
3. Graduates will demonstrate the ability to effectively, creatively, and methodically solve broadly-defined engineering problems through experimentation, analysis, synthesis, and evaluation of data through the use of the engineering design process.
4. Graduates will be recognized as being personally effective as individuals, team members and team leaders through oral, written, and visual communication.
5. Graduates will acquire training and develop skills necessary for a career or an advanced degree program.

Instructors will use student course evaluations as a formative step in evaluating the program. The program faculty will have the opportunity to interact and work with other faculty from across campus to seek feedback. The department will also conduct exit interviews/surveys of graduating students and use portfolios and senior projects to evaluate the technical, written, verbal, and communication skills of the students. The program will survey alumni at approximately five-year intervals to provide an opportunity for student reflection on the program outcomes and overall value. Industry partners will offer internships and provide feedback about the program through an advisory committee.

The program will also be assessed by ABET and the feedback will be integrated into the program to maintain accreditation. ABET requires certain standards to be met and will help keep the evaluation and assessment at the forefront of the faculty's decision-making.

## **Student Standards of Performance**

The student performance standards have been identified and developed through partnership with industry through an advisory committee and through ABET. The standards will be evaluated and adapted as industry partners provide feedback and as student outcomes that are reported to ABET will be assessed and shared with faculty.

### Core AAS Standards of Performance

The ABET student outcomes for use in accreditation of the AAS program that will be used for assessing are as follows:

For associate degree programs, these student outcomes must include, but are not limited to, the following elements:

- (1) an ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve well-defined engineering problems appropriate to the discipline;
- (2) an ability to design solutions for well-defined technical problems and assist with the engineering design of systems, components, or processes appropriate to the discipline;
- (3) an ability to apply written, oral, and graphical communication in well-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature;
- (4) an ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results; and
- (5) an ability to function effectively as a member of a technical team.

### Additional ABET Standards

1. Include a technical core preparing students for the increasingly complex technical specialties later in the curriculum;
2. Develop student competency in the discipline;
3. Include design considerations appropriate to the discipline and degree level such as: industry and engineering standards and codes; public safety and health; and local and global impact of engineering solutions on individuals, organizations and society; and
4. Combine technical, professional, and general education components to prepare students for a career, further study, and lifelong professional development.
5. The curriculum must include topics related to professional and ethical responsibilities, diversity and inclusion awareness, quality, and continuous improvement.
6. The physical or natural science content of the curriculum must be appropriate to the discipline and must include laboratory experiences.

Industry partnerships will be used to evaluate and provide feedback of students' learning and performance in an industrial setting. Completion of a senior design project will be evaluated using a common rubric to assess the student standards of performance. Artifacts demonstrating student performance will be included in a portfolio and collected throughout the courses in the program.

**Appendix A: Program Curriculum**

Course Number	NEW Course	Course Title	Credit Hours
General Education Courses (list specific courses recommended for this program on Degree Map)			
<b>General Education Credit Hour Sub-Total</b>			17
<b>Required Courses</b>			
ETEC 1000	Yes	Introduction to Engineering Technology	1
TESY 1200		Computer-Aided Drafting and Design	3
ETEC 2300	Yes	Introduction to Electronics	4
ETEC 1010	Yes	Engineering Technology Principles	3
TESY 1030		Materials Processing and Systems	3
ETEC 2020	Yes	Introduction to Automation	3
TEE 2850		Statics and Strengths of Materials	3
ETEC 2010	Yes	Introduction to Quality	3
ETEC 2200	Yes	Technical Communication for Engineering Technology	3
TESY 2250		Occupational Experience in General Technology	3
<b>Required Course Credit Hour Sub-Total</b>			29
<b>Elective Courses</b>			
TEE 1010		Graphic Communication Technologies	3
TEE 1040		Construction and Estimating	3
TEE 1640		Introduction to Welding	3
TEE 2030		Wood-Based Manufacturing Systems	3
TEE 2200		Aquaponic Systems	3
TEE 2220		Civil Engineering and Architecture	3
TESY 2270	Yes	Intermediate CAD	3
<b>Elective Credit Hour Sub-Total</b>			17
<b>Core Curriculum Credit Hour Sub-Total</b>			

**Add An Emphasis:**

Can students complete this degree without emphases?  Yes  No

Course Number	NEW Course	Course Title	Credit Hours
Name of Emphasis:			
<b>Emphasis Credit Hour Sub-Total</b>			
<b>Total Number of Credits to Complete Program</b>			

**Program Curriculum Narrative**

This Engineering Technology degree program requires students to take 16 to 17 credits in general education which can be seen in the degree map below. This program is designed to be stackable with a certificate from a technical college. Proposals for a new course for this degree program that will carry a CL2 general education designation are being submitted concurrently with this proposal. The core requirements for the program contain 29 credits leaving 17 credits of technical electives totaling 63 credits required. Technical electives can include courses articulated with the Utah Technical College System and USU Eastern.



## Degree Map

<b>First Year Fall</b>	<b>Cr. Hr.</b>	<b>First Year Spring</b>	<b>Cr. Hr.</b>
ENGL 1010 Intro to Writing (CL1)	3	APEC 1600 Nat Resources/Econ (BAI)	3
MATH 1050 College Algebra (QL)	4	MATH 1060 Trigonometry (QL)	2
ETEC 1000 Introduction to Engineering Technology	1	ETEC 1010 Engineering Technology Principles	3
TESY 1200 Computer-Aided Drafting and Design	3	TESY 1030 Materials and Proc.	3
ETEC 1300 Introduction to Electronics	4	Any BCA, BHU, BLS, or BSS	3
		Technical Elective	3
<b>Total</b>	15	<b>Total</b>	17
<b>Second Year Fall</b>	<b>Cr. Hr.</b>	<b>Second Year Spring</b>	<b>Cr. Hr.</b>
ETEC 2020 Intro to Automation	3	ETEC 2200 Technical Communication for Engineering Technology	3
MATH 1210 Calculus I (QL)	4	TESY 2250 Occupational Experience in General Technology	3
TEE 2850 Statics and Strengths of Materials	3	PHYS 1800 Physics of Tech (BPS)	4
ETEC 2010 Intro to Quality	3	CHEM 1210 Principles of CHEM	4
Technical Elective	3	CHEM 1215 Chem Lab	1
<b>Total</b>	16	<b>Total</b>	15

## Appendix C: Current and New Faculty / Staff Information

### Part I. Department Faculty / Staff

Identify # of department faculty / staff (headcount) for the year preceding implementation of proposed program.

	# Tenured	# Tenure -Track	# Non -Tenure Track
Faculty: Full Time with Doctorate			2
Faculty: Part Time with Doctorate			
Faculty: Full Time with Masters			1
Faculty: Part Time with Masters			1
Faculty: Full Time with Baccalaureate			
Faculty: Part Time with Baccalaureate			2
Teaching / Graduate Assistants	////	////	
Staff: Full Time			
Staff: Part Time			3

### Part II. Proposed Program Faculty Profiles

List current faculty within the institution -- with academic qualifications -- to be used in support of the proposed program(s).

	First Name	Last Name	Tenure (T) / Tenure Track (TT) / Other	Degree	Institution where Credential was Earned	Est. % of time faculty member will dedicate to proposed program.	If "Other," describe
Full Time Faculty							
	Trevor	Robinson	Other	Phd - TEE	Utah State University	100	
	Andrew	Deceuster	Other	Phd - ENGR	Utah State University	100	
	Steve	Williams	Other	MS - TEE	Utah State University	100	
							Add Another Full Time
Part Time Faculty							
	Corey	Ortiz	Other	Phd - TEE	Utah State University	75	
	Larry	Gardner	Other	Phd - Physics	Utah State University	50	
	Alex	Thompson	Other	BS - TESY	Utah State University	50	
							Add Another Part Time

### Part III: New Faculty / Staff Projections for Proposed Program

Indicate the number of faculty / staff to be hired in the first three years of the program, if applicable. Include additional cost for these faculty / staff members in Appendix D.

	# Tenured	# Tenure -Track	# Non -Tenure Track	Academic or Industry Credentials Needed	Est. % of time to be dedicated to proposed program.
Faculty: Full Time with Doctorate			1	Three or more years of industry experience working with manufacturing, quality assurance, and/or engineer products.	100
Faculty: Part Time with Doctorate					
Faculty: Full Time with Masters			1	Five or more years of industry experience working with manufacturing, quality assurance, and/or engineer products.	100
Faculty: Part Time with Masters					
Faculty: Full Time with Baccalaureate					
Faculty: Part Time with Baccalaureate					
Teaching / Graduate Assistants					
Staff: Full Time			2	Skills as an academic advisor and an education specialist	100
Staff: Part Time	////	////			

## Appendix D: Projected Program Participation and Finance

**Part I.**

*Project the number of students who will be attracted to the proposed program as well as increased expenses, if any. Include new faculty & staff as described in Appendix C.*

Three Year Projection: Program Participation and Department Budget						
	Year Preceding Implementation	New Program				
		Year 1	Year 2	Year 3	Year 4	Year 5
<b>Student Data</b>						
# of Majors in Department	600	640	680	720	760	800
# of Majors in Proposed Program(s)		20	40	50	50	50
# of Graduates from Department	120	120	140	150	160	170
# Graduates in New Program(s)		10	15	20	20	20
<b>Department Financial Data</b>						
<i>Project additional expenses associated with offering new program(s). Account for New Faculty as stated in Appendix C, "Faculty Projections."</i>	Department Budget					
	Year Preceding Implementation (Base Budget)	Year 1	Year 2	Year 3		
		Addition to Base Budget for New Program(s)	Addition to Base Budget for New Program(s)	Addition to Base Budget for New Program(s)		
<b>EXPENSES – nature of additional costs required for proposed program(s)</b>						
<i>List salary benefits for additional faculty/staff each year the positions will be filled. For example, if hiring faculty in year 2, include expense in years 2 and 3. List one-time operating expenses only in the year expended.</i>						
Personnel (Faculty & Staff Salary & Benefits)	\$568,052.00	\$130,000.00	\$260,000.00	\$411,000.00		
Operating Expenses (equipment, travel, resources)	\$25,000.00	\$5,000.00	\$10,000.00	\$15,000.00		
Other:	\$87,600.00	\$65,000.00	\$65,000.00	\$0.00		
<b>TOTAL PROGRAM EXPENSES</b>		\$200,000.00	\$335,000.00	\$426,000.00		
<b>TOTAL EXPENSES</b>	\$680,652	\$880,652	\$1,015,652	\$1,106,652		
<b>FUNDING – source of funding to cover additional costs generated by proposed program(s)</b>						
<i>Describe internal reallocation using Narrative 1 on the following page. Describe new sources of funding using Narrative 2.</i>						
Internal Reallocation	\$87,600.00	\$70,000.00	\$75,000.00	\$15,000.00		
Appropriation						
Special Legislative Appropriation						
Grants and Contracts				\$86,000.		
Special Fees						
Tuition				\$65,000.00		
Differential Tuition (requires Regents approval)						
<b>PROPOSED PROGRAM FUNDING</b>		\$70,000.00	\$75,000.00	\$160,000.00		
<b>TOTAL DEPARTMENT FUNDING</b>	\$680,652	\$750,652	\$755,652	\$846,652		
<b>Difference</b>						
Funding - Expense	\$0	\$130,000.00	\$260,000.00	\$260,000.00		

**Part II: Expense explanation**

**Expense Narrative**

Please note that the budget is the same for the R401 proposal for the AAS in Engineering Technology. The two programs will share budget and faculty. The department is well positioned with six faculty members with background and experience in engineering technology. However, those six faculty members are committed to the General Technology AAS and Technology Systems BS with overlap in the Outdoor Product Design and Development BS and some technical certificate programs. Two additional faculty members, for which funding is not currently available, will be required to effectively deliver the BAS and AAS degree programs in Engineering Technology. Additionally, a professional academic advisor will be required and an educational specialist who will work with industry to make sure curriculum is aligned with industry needs, develop internship and career placement opportunities for students, and market the program. The laboratories are currently well-equipped to support the new program, although some additional equipment may be required to support the additional enrollments.

**Part III: Describe funding sources**

**Revenue Narrative 1**

One-time funding of \$87,000.00 was provided from USU Central Administration for the current fiscal year, prior to program implementation, to develop the program, overall curriculum, and individual new courses. USU Central Administration has also committed funding for a professional academic advisor for the first two years of the program, after which it is expected that growth funding from tuition will be used for the academic advisor position moving forward. The operating budget will be reallocated within the department as managing this new program will be very similar to operating the department's current programs.

**Revenue Narrative 2**

Ongoing funding for one new full-time faculty position will be required beginning in the first year of program implementation. Ongoing funding for a second full-time faculty position will be required in the second year of program implementation. It is estimated that each position will require a minimum of \$90,000 in salary plus benefits for a total cost of \$260,000 for the two faculty positions. External funding will be used to support the educational specialist position that will be added in year three of the program and grant funding will be sought to purchase any additional required equipment for the program.

**Utah System of Higher Education  
New Academic Program Proposal  
Cover/Signature Page - Full Template**

**Institution Submitting Request:** Utah State University  
**Proposed Program Title:** Engineering Technology  
**Are There New Emphases:** Yes  No   
**Names of New Emphases (Separated by Commas):**  
**Sponsoring School, College, or Division:** College of Agriculture and Applied Sciences  
**Sponsoring Academic Department(s) or Unit(s):** Technology, Design and Technical Education  
**Classification of Instructional Program Code<sup>1</sup>:** 6 - Digit CIP: 15.0000  
**Min/Max Credit Hours Required of Full Program:** 120 / 120  
**Proposed Beginning Term<sup>2</sup>:** Spring 2024  
**Institutional Board of Trustees' Approval Date:**

**Program Type (mark all that apply with an x):**

<input type="checkbox"/> (AAS)	Associate of Applied Science Degree
<input type="checkbox"/> (AA)	Associate of Arts Degree
<input type="checkbox"/> (AS)	Associate of Science Degree
<input type="checkbox"/>	Specialized Associate Degree (specify award type <sup>3</sup> : )
<input type="checkbox"/>	Other (specify award type <sup>3</sup> : )
<input type="checkbox"/> (BA)	Bachelor of Arts Degree
<input type="checkbox"/> (BS)	Bachelor of Science Degree
<input checked="" type="checkbox"/> (BAS)	Bachelor of Applied Science Degree
<input type="checkbox"/>	Specialized Bachelor Degree (specify award type <sup>3</sup> : )
<input type="checkbox"/>	Other (specify award type <sup>3</sup> : )
<input type="checkbox"/> (MA)	Master of Arts Degree
<input type="checkbox"/> (MS)	Master of Science Degree
<input type="checkbox"/>	Specialized Bachelor Degree (specify award type <sup>3</sup> : )
<input type="checkbox"/>	Other (specify award type <sup>3</sup> : )
<input type="checkbox"/>	Doctoral Degree (specify award type <sup>3</sup> : )
<input type="checkbox"/>	K-12 School Personnel Program
<input type="checkbox"/>	Out of Service Area Delivery Program <input type="checkbox"/> Attached MOU
<input type="checkbox"/>	Out of Mission Program
<input type="checkbox"/>	NEW Professional School

<sup>1</sup> For CIP code classifications, please see <http://nces.ed.gov/ipeds/cipcode/Default.aspx?y=55>.  
<sup>2</sup> "Proposed Beginning Term" refers to first term after Regent approval that students may declare this program.  
<sup>3</sup> Please indicate award such as APE, BFA, MBA, MEd, EdD, JD

**Changes to Existing Programs or Administrative Units Required (mark all that apply with an x, if any):**

<input type="checkbox"/>	Program Restructure with or without Consolidation
<input type="checkbox"/>	Emphases transfer from another program or academic unit
<input type="checkbox"/>	Name Change of Existing Program or Academic Unit
<input type="checkbox"/>	Program transfer to a different academic unit
<input type="checkbox"/>	Suspension or discontinuation of a unit or program
<input type="checkbox"/>	Reinstatement of a previously suspended/discontinued program or administrative unit
<input type="checkbox"/>	Other

**Chief Academic Officer (or Designee) Signature:**

I, the Chief Academic Officer or Designee, certify that all required institutional approvals have been obtained prior to submitting this request to the Office of the Commissioner.

Please type your first and last name

Date:

I understand that checking this box constitutes my legal signature.

# Utah System of Higher Education Program Description - Full Template

## Section I: The Request

Utah State University's Technology, Design and Technical Education requests approval to offer the following degree(s): Engineering Technology

To be effective on: Spring 2024

This program was approved by the institutional Board of Trustees on:

## Section II: Program Proposal

### Program Description

The Department of Technology, Design, and Technical Education (TDTE) at Utah State University (USU) is developing an Engineering Technology Bachelor of Applied Science degree to begin in the Spring of 2024. This degree is a standalone degree, and it is also designed to "stack" onto existing AAS degrees and 900-hour certificates from Utah's Technical Colleges. The degree will focus on educating students on applied engineering principles by using math, science, and practical experiences to solve real-world problems. The degree will have a core of math, science, engineering, laboratory work, and digital design, with several electives allowing the students to focus on robotics, additive manufacturing, advanced manufacturing, electronics, quality and reliability, or CAD systems. The program will be offered face-to-face on the Logan Main Campus and online for non-traditional and distance learners. The program will seek accreditation through the Accreditation Board for Engineering and Technology (ABET).

### Consistency with Institutional Mission

Utah State University (USU) is a land grant university, which means it has a specific mission and goals outlined by the Morrill Act of 1862. Additionally, USU serves as a regional community college and technical college for the southeast region. The desire for a workforce development strategy that is both innovative and emphasizes stackable pathways into higher learning opportunities for students is the central mission of USU. As a result, it is the intention of USU to offer an engineering technology program that is centered around the diverse needs of the state.

As a leader in education and workforce development, USU aims to provide accessible and relevant education to meet the needs through a program that accommodates the learners' barriers to success. An engineering technology program through USU contributes to this goal by offering a curriculum that aligns with the needs of the local and regional industries, preparing students for high-demand careers in engineering and technology fields that our local industry partners support. By offering a practical and applied education, the program can equip graduates with the skills and knowledge required to address real-world challenges and contribute to the economic development in Utah and beyond.

Utah State University is committed to continual research and innovation as land grant universities are expected to engage in research and innovation to advance knowledge and promote economic growth. An engineering technology program can actively contribute to research by conducting applied research projects in collaboration with industries and government agencies.

Additionally, a vital aspect of the Land Grant Mission is outreach and extension, which seeks to engage with communities and provide these services. An engineering technology program can fulfill this role by actively collaborating with local industries, organizations, and communities. This collaboration can involve offering technical assistance, training programs, and consulting services to address engineering and technology-related challenges businesses and communities face. By sharing expertise and resources, the program can enhance the competitiveness of local industries, promote economic development, and improve the quality of life for Utah residents.

A vital aspect of this program proposal is the desire to increase access for adult learners as they transition from one stage of their career to the next. Land grant universities strive to create an inclusive and diverse learning environment that reflects the state's demographics and promotes equal opportunities for all. This engineering technology program can contribute to this goal by actively recruiting and supporting students from diverse backgrounds, including underrepresented groups, and by accommodating learning in contextual space through industry collaboration.

## Section III: Needs Assessment

### Program Rationale

The proposed engineering technology program request was initiated from necessity as regional workforce partners voiced concern for unmet workforce needs. As a result, curricular development processes were initiated in partnership with industry and accrediting bodies to help meet the industry's needs while maintaining program fidelity.

Engineering technology is dynamic and constantly evolving, driven by technological advancements and ever-changing industry demands. To create a relevant program, it is essential to actively involve industry representatives, employers, and professionals in the program development process. By seeking their input, emerging trends, technological advancements, and skill requirements can be identified that shape the industry's needs. This industry-driven approach will ensure program alignment with the current and future demands of the engineering technology field, thus increasing the employability of graduates.

Developing a successful engineering technology program requires strong collaboration and partnerships with industry stakeholders. By actively engaging employers, professional organizations, and industry experts, valuable partnerships can be developed that facilitate internships, co-op opportunities, and real-world projects for students. These collaborations will enhance students' practical skills and knowledge and provide them with networking opportunities and potential employment prospects. Moreover, industry partners can contribute to curriculum development, ensuring it reflects the latest industry practices and technologies relevant for their future career advancements.

The curriculum of the engineering technology program will be designed based on input from industry partners to ensure its alignment with industry needs and demands. The program will offer a balanced mix of theoretical knowledge and hands-on practical experience, emphasizing the application of engineering principles and advanced technologies in real-world settings. Courses will cover various relevant topics such as engineering design, manufacturing processes, quality assurance, project management, and emerging technologies specific to the industry. Additionally, the program will incorporate industry-standard software, tools, and equipment to familiarize students with the available resources used in the field.

To deliver a high-quality education that meets industry standards, faculty members will possess a combination of academic qualifications and industry experience. This blend of expertise will ensure that students receive instruction that combines theoretical knowledge with practical insights. Faculty members will engage in ongoing professional development activities, including industry conferences, workshops, and collaborations with industry partners. By staying connected with industry trends and best practices, faculty will be better equipped to deliver relevant and up-to-date instruction to students.

A robust system of continuous evaluation and improvement will be implemented to ensure the ongoing relevance and quality of the program. Feedback from industry partners, alumni, and employers will be actively sought and incorporated into program reviews and updates. This iterative process will help identify areas for improvement, emerging industry needs, and opportunities for curriculum enhancement. The program will also regularly conduct graduate surveys and track the employment outcomes of graduates to assess the program's effectiveness in meeting industry demands.

### Labor Market Demand

Nationally, the Bureau of Labor Statistics (BLS) projects that employment in engineering occupations will grow by 4% between 2019 and 2029, adding over 139,000 new jobs to the economy. The BLS also reports that engineering occupations offer a median annual wage of \$81,440, significantly higher than the median annual wage for all occupations of \$41,950.

Furthermore, as technological advances continue to shape various industries, the demand for professionals with practical, hands-on experience in engineering is expected to increase. The proposed Bachelor of Applied Science in Engineering Technology program will provide students with the practical skills and knowledge needed to succeed in these rapidly evolving industries and prepare them for the job market upon graduation.

There is considerable demand for engineering professionals as the projected growth rate is high for the coming years. Locally and nationally, the expectation for positive growth in engineering and engineering-related areas shows economically solid promise for the coming years. According to data from the Utah Department of Workforce Services, occupations related to engineering are expected to see a 27% increase in employment in Utah between 2020 and 2030. This growth is higher than the projected average employment growth of 8.6% across all occupations in the state.

In addition, Utah's median wage for engineering occupations is significantly higher than the state's overall median wage. As of May 2020, Utah's median hourly wage for architecture and engineering occupations was \$41.83, compared to the state's overall median hourly wage of \$20.46. Moreover, salaries for more specific occupations within the engineering sector, oriented toward Engineering Technology, report median wages on 6-digit CIP codes in a range from \$44.31 per hour to \$30.62. This data suggests that engineering occupations are in high



demand and offer increased earning potential for graduates.

The proposed Bachelor of Applied Science in Engineering Technology program will provide students with the skills and knowledge needed to succeed in this dynamic field, contribute to the growth of Utah manufacturing industries across the state, and supply a demand for highly skilled engineering professionals.

## **Student Demand**

The Engineering Technology Program is expected to generate significant student demand, particularly from two key groups: students from technical colleges and individuals seeking to re-enter education from industry. Technical college graduates who have completed associated certificate work may seek opportunities to further their education and advance their careers. The proposed Engineering Technology program provides an ideal pathway for these students to continue their educational journey in a high-wage, high-demand field. The program addresses the demand for a seamless transition from technical college toward a four-year degree program by offering a curriculum that leverages their technical knowledge and skills.

These students are attracted to the program because it allows them to deepen their understanding of engineering principles, gain specialized knowledge in their chosen field, and broaden their career prospects, making them eligible for future promotion. The program's emphasis on industry collaboration ensures that the education provided is efficient and aligned with industry demands, making graduates highly employable. This aspect appeals to technical college graduates seeking a competitive edge in the job market and the opportunity for upward career mobility.

Additionally, there is a growing trend of individuals with industry experience seeking to re-enter education to enhance their skills, explore new career opportunities, or pursue a career change. The proposed Engineering Technology Program, with its emphasis on industry input and demand, offers a unique opportunity for these individuals to update their knowledge and acquire formal qualifications in the engineering technology field. With their practical industry experience, these students bring valuable insights and perspectives to the program. Their presence enriches classroom discussions, enhances collaborative learning, and contributes to a dynamic educational environment. Their industry connections and experiences also provide valuable networking opportunities and potential job placements after graduation.

The program's flexibility in scheduling, including part-time and evening classes, caters to the needs of individuals who may be juggling work, family responsibilities, or other commitments. This flexibility, combined with the program's industry relevance and hands-on approach, appeals to individuals re-entering education and seeking a program that directly aligns with their professional goals and aspirations.

## **Similar Programs**

This program does not exist in USU's service region. Currently, the association that offers national accreditation, the Accreditation Board for Engineering and Technology (ABET), accredits Engineering Technology programs at Weber State University, Utah Valley University, and Southern Utah University in the state. Of the current program, none have a "stacking" component to allow technical college students to articulate their certificates for credits toward graduation in Engineering Technology. The program is also to be offered face-to-face and fully online to meet industry needs in the Bear River Region and Wasatch Front.

## **Collaboration with and Impact on Other USHE Institutions**

The proposed Engineering Technology Program recognizes the importance of creating seamless educational pathways for students transitioning from technical colleges. The program is committed to establishing solid collaborations with area technical colleges for stackable credentials to facilitate this transition and ensure students can build upon their prior technical education. The first step in collaborating with technical colleges is to align the curriculum of the Engineering Technology Program with the courses offered at these institutions. By reviewing the course offerings and competencies of technical college programs, areas of overlap can be identified and clear pathways established for credit transfer and advanced standing in the Engineering Technology Program. This alignment will minimize redundancy in coursework and enable students to seamlessly transition into the program without any loss of credit.

To formalize the collaboration and facilitate credit transfer, the Engineering Technology Program will work closely with technical colleges to develop articulation agreements. These agreements will outline the specific courses, competencies, and credits to be recognized for transfer into the program. They will provide clear guidelines for technical college graduates on how their prior coursework can be applied towards meeting the requirements of the Engineering Technology Program. Articulation agreements will create a transparent and efficient process for credit evaluation and transfer, ensuring a smooth transition for students.

Collaboration with technical colleges goes beyond credit transfer. The Engineering Technology Program will establish advising and support services to assist students from technical colleges in transitioning to the program. Academic advisors will be available to guide students through the admission process, provide information on course equivalencies, and help them navigate the curriculum. These advisors will also be knowledgeable about scholarships, financial aid, and other resources available to support students during their educational journey.

One of the critical benefits of collaborating with technical colleges is the opportunity to offer stackable credentials. The Engineering Technology Program will work closely with technical colleges to identify specific technical certificate or associate degree programs that align with the program's focus areas. Students can earn interim credentials along their educational pathway by recognizing and awarding stackable credentials. These credentials provide valuable industry-recognized certifications and enhance the employability of students who may choose to enter the workforce before completing their bachelor's degree.

## **External Review and Accreditation**

An advisory board with industry leaders in Northern Utah from Northrop Grumman, Lockheed Martin, Autoliv, TCR Composites, and ATK have reviewed the degree plan proposal and support this program. Additional advisory members will be added as the need arises. Nationally, the Accreditation Board for Engineering and Technology (ABET) offers accreditation for programs similar to this proposal. This program has been designed to meet their standards and once the program is in place, accreditation will be applied for with the first graduating class as defined by ABET, with the initial projected review after three years. According to the ABET website, the average cost of the initial accreditation visit fee is \$20,000.

## **Section IV: Program Details**

### **Graduation Standards and Number of Credits**

The proposed program aligns with the standards and number of credits of other programs granting the bachelor of science degree at USU. Upon graduation, a student will have earned a minimum of 120 credits including general education, University Studies, and major courses.

### **Admission Requirements**

The admission requirements will be consistent with the existing USU undergraduate admission requirements.

**Curriculum and Degree Map**  
See Appendix A

## **Section V: Institution, Faculty, and Staff Support**

### **Institutional Readiness**

This degree program proposal is a result of many requests from industry partners currently working with the Technology Systems program. This program will share many technical skill courses with the technology systems program while also providing specific Engineering Technology coursework and training. It is anticipated that an additional 11 courses will need to be developed to be able to provide the specific set of knowledge and skills graduates would need to enter the industry. With 11 new courses, the program will require two additional faculty members along with an educational specialist to be able to offer the additional courses required. Funding for faculty overload, adjunct instructors, or graduate students to help with courses in both Technology Systems and this Engineering Technology degree program will likely have capacity issues. The program is designed to have a path to the degree through the USU Online System, with additional options for students at many regional campuses.

### **Faculty**

The courses draw on the strengths and expertise of the faculty in the Department of Technology, Design, and Technical Education, along with collaboration from the faculty at USU Eastern and Bridgerland Technical College that provides technical content training for students within the AAS degree. Additional courses offered in programs outside the department, will be applied to this degree with minimal student impact. Through restructuring and reallocation of teaching assignments, the faculty can accommodate the student demand of the proposed program while requiring only two additional faculty members. The positions for the faculty members are being funded through growth funds in the college and are supported by the university to develop this program for our industry partners. Additional faculty will be considered as the enrollment in the program grows or industry partners sponsors such additions.

### **Staff**

With little restructuring, current staff resources are sufficient for the needs of this new program, but funding will be provided at the university level to fund an Educational Specialist to help with the projected growth of the program. As the program grows or industry partners sponsor such additions, additional staff will be considered.

### **Student Advisement**

The Department of Technology, Design, and Technical Education (TDTE) has designated advisors throughout the regional campus system and within the College of Agriculture and Applied Sciences. The advisors for this program will be the same individuals who also advise students in the early stages of the Engineering Technology program. Funding is being allocated at the University level to fund a program advisor after the first year to help with the projected growth. If needed, student peer mentors will assist the advisors with the increased number of students and additional advising capacity will be added as student numbers warrant within TDTE.

### **Library and Information Resources**

Additional resources will not be needed. USU's current undergraduate resources include all software needed for this degree program.

### **Projected Enrollment and Finance**

See Appendix D

## **Section VI: Program Evaluation**

### **Program Assessment**

The Department of Technology, Design, and Technical Education will conduct on-going assessment of the degree program and make improvements or adjustments as needed. The objectives selected for this program include skills and knowledge identified by industry leaders and those required by ABET for accreditation. This program has four primary objectives. After completion of this degree program, students will be able to:

1. Graduates will demonstrate a commitment to professional and ethical responsibilities, diversity, inclusion awareness and lifelong professional development.
2. Graduates will be recognized as having mastered both theory and application of the body of knowledge in the engineering technology field.
3. Graduates will demonstrate the ability to effectively, creatively, and methodically solve broadly-defined engineering problems through experimentation, analysis, synthesis, and evaluation of data through the use of the engineering design process.
4. Graduates will be recognized as being personally effective as individuals, team members and team leaders through oral, written, and visual communication.
5. Graduates will acquire training and develop skills necessary for a career or an advanced degree program.

Instructors will use student course evaluations as a formative step in evaluating the program. The program faculty will have the opportunity to interact and work with other faculty from across campus to seek feedback. The department will also conduct exit interviews/surveys of graduating students and use portfolios and senior projects to evaluate the technical, written, verbal, and communication skills of the students. The program will survey alumni at approximately five-year intervals to provide an opportunity for student reflection on the program outcomes and overall value. Industry partners will offer internships and provide feedback about the program through an advisory committee.

The program will also be assessed by ABET and the feedback will be integrated into the program to maintain accreditation. ABET requires certain standards to be met and will help keep the evaluation and assessment at the forefront of the faculty's decision-making.

## **Student Standards of Performance**

The student performance standards have been identified and developed through partnership with industry through an advisory committee and through ABET. The standards will be evaluated and adapted as industry partners provide feedback and as student outcomes that are reported to ABET will be assessed and shared with faculty.

### Core Standards of Performance

The ABET student outcomes for use in accreditation that will be used for assessing the program are as follows:

- (1) an ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly-defined engineering problems appropriate to the discipline;
- (2) an ability to design systems, components, or processes meeting specified needs for broadly-defined engineering problems appropriate to the discipline;
- (3) an ability to apply written, oral, and graphical communication in broadly-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature;
- (4) an ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results to improve processes; and
- (5) an ability to function effectively as a member as well as a leader on technical teams.

### Additional ABET Standards

1. Include a technical core preparing students for the increasingly complex technical specialties later in the curriculum;
2. Develop student competency in the discipline;
3. Include design considerations appropriate to the discipline and degree level such as: industry and engineering standards and codes; public safety and health; and local and global impact of engineering solutions on individuals, organizations and society; and
4. Combine technical, professional, and general education components to prepare students for a career, further study, and lifelong professional development.
5. The curriculum must include topics related to professional and ethical responsibilities, diversity and inclusion awareness, quality, and continuous improvement.
6. The physical or natural science content of the curriculum must be appropriate to the discipline and must include laboratory experiences.
7. Baccalaureate degree curricula must provide a capstone or integrating experience that develops student competencies in applying both technical and non-technical skills in solving problems.

Industry partnerships will be used to evaluate and provide feedback of students' learning and performance in an industrial setting. Completion of a senior design project will be evaluated using a common rubric to assess the student standards of performance. Artifacts demonstrating student performance will be included in a portfolio and collected throughout the courses in the program.

## Appendix A: Program Curriculum

Course Number	NEW Course	Course Title	Credit Hours
General Education Courses (list specific courses recommended for this program on Degree Map)			
<b>General Education Credit Hour Sub-Total</b>			29
<b>Required Courses</b>			
ETEC 1000	Yes	Introduction to Engineering Technology	1
TESY 1200		Computer-Aided-Drafting and Design	3
ETEC 2300	Yes	Introduction to Electronics	4
ETEC 1010	Yes	Eng Technology Principles	3
TESY 1030		Materials Processing and Systems	3
ETEC 2020	Yes	Introduction to Automation	3
TEE 2850		Statics and Strengths of Materials	3
ETEC 2010	Yes	Introduction to Quality	3
ETEC 2200	Yes	Technical Communication for Engineering Technology	3
TESY 2250		Occupational Experience in General Technology	3
ETEC 3200	Yes	Professional Communication in Engineering Technology	3
ETEC 3010	Yes	Material Science	3
ETEC 3020	Yes	Energy and Power Systems	3
ETEC 4900	Yes	Capstone/Sr. Project I	3
TESY 3000		Hazard Recognition and Control	3
ETEC 4910	Yes	Capstone/Sr. Project II	3
<b>Required Course Credit Hour Sub-Total</b>			47
<b>Elective Courses</b>			
TEE 1010		Graphic Communication Technologies	3
TEE 1040		Construction and Estimating	3
TEE 1640		Introduction to Welding	3
TEE 2030		Wood-Based Manufacturing Systems	3
TEE 2200		Aquaponic Systems	3
TEE 2220		Civil Engineering and Architecture	3
TESY 2270	Yes	Intermediate CAD	3
TESY 3040		Design for Additive Manufacturing	3
TESY 3200		Additive Manufacturing I	3
TESY 3210		Additive Manufacturing II	3
TESY 3270		Advanced Computer-Aided Drafting	3
TESY 4300		Intellectual Property for Product Developers	3
TESY 4330		Product Innovation Processes, Tools, and Strategies	3
TESY 3030		Computer-integrated Manufacturing Systems	3
TESY 4230		Advanced Materials and Processing Systems	3
TESY 4500		Quality Management Systems	3
TESY 4510		Quality Root Cause Analysis Methods and Applications	3
TESY 4520		Statistical Quality Control w/SPC	3
TESY 4530		Principles of Lean Manufacturing	3
TESY 4540		Quality Management Systems II	3
TESY 4410		Industrial Automation and Networking	3
TESY 4420		Industrial Robotics	3
TESY 4430		Advanced Programmable Logic Controllers	3
TESY 4440		Machine Vision and Inspection	3
TESY 4450		Human Machine Interface	3
<b>Elective Credit Hour Sub-Total</b>			36
<b>Core Curriculum Credit Hour Sub-Total</b>			

**Add An Emphasis:**

Can students complete this degree without emphases?  Yes  No

Course Number	NEW Course	Course Title	Credit Hours
Name of Emphasis:			
<b>Emphasis Credit Hour Sub-Total</b>			
<b>Total Number of Credits to Complete Program</b>			

**Program Curriculum Narrative**

This Engineering Technology degree program requires students to take 29 general education credits which can be seen in the four-year plan. This program is designed to be stackable with a certificate from a technical college and the AAS in Engineering Technology program. Proposals for new courses for this degree program that will carry CL2, CI, and QI general education designations are being submitted concurrently with this proposal. The core requirements for the program contain 47 credits leaving 36 credits of technical electives. Technical electives can include certificates articulated in from the Utah Technical College System and USU Eastern. Additionally, institutional certificates providing more depth can be obtained. Related insitutional certificates currently active in the USU system include Quality and Reliability, Advanced Manufacturing, and Additive Manufacturing with more being planned. Additional technical electives may be added and approved when they make logical sense for a career pathway.



## Degree Map

<b>First Year Fall</b>	<b>Cr. Hr.</b>	<b>First Year Spring</b>	<b>Cr. Hr.</b>
ENGL 1010 Intro to Writing (CL1)	3	APEC 1600 Nat Resources/Econ (BAI)	3
MATH 1050 College Algebra (QL)	4	MATH 1060 Trigonometry	2
ETEC 1000 Introduction to Engineering Technology	1	ETEC 1010 Engineering Technology Principles	3
TESY 1200 Computer-Aided Drafting and Design	3	TESY 1030 Materials and Processing Systems	3
ETEC 1300 Introduction to Electronics	4	Any Breadth Creative Arts (BCA)	3
		Communication Literacy 2 (CL2)	3
<b>Total</b>	<b>15</b>	<b>Total</b>	<b>17</b>
<b>Second Year Fall</b>	<b>Cr. Hr.</b>	<b>Second Year Spring</b>	<b>Cr. Hr.</b>
ETEC 2020 Introduction to Automation	3	ETEC 2200 Technical Communication for Engineering Technology	3
MATH 1210 Calculus I	4	TESY 2250 Occupational Experience in General Technology	3
TEE 2850 Statics and Strengths of Materials	3	PHYS 1800 Physics of Tech (BPS)	4
ETEC 2010 Intro to Quality	3	CHEM 1210 Principles of CHEM	4
Any Breadth Social Science (BSS)	3	CHEM 1215 Chem Lab	1
<b>Total</b>	<b>16</b>	<b>Total</b>	<b>15</b>
<b>Third Year Fall</b>	<b>Cr. Hr.</b>	<b>Third Year Spring</b>	<b>Cr. Hr.</b>
Upper Div Technical Elective	3	ETEC 3020 Energy Systems	3
Upper Div Technical Elective	3	ETEC 3010 Material Science	3
Any Breadth Humanities (BHU)	3	Upper Div Technical Elective	3
Technical Elective	3	Any Breadth Life Science (BLS)	3
ETEC 3200 Technical Communication	3	Elective	3
<b>Total</b>	<b>15</b>	<b>Total</b>	<b>15</b>
<b>Fourth Year Fall</b>	<b>Cr. Hr.</b>	<b>Fourth Year Spring</b>	<b>Cr. Hr.</b>
ETEC 4900 Capstone/Sr. Project I	3	Technical Elective	4
Upper Div Technical Elective	3	Upper Div Technical Elective	3
Upper Div Technical Elective	3	TESY 3000 Hazard recog/control	3
Elective	5	ETEC 4910 Capstone/Sr. Project II	3
<b>Total</b>	<b>14</b>	<b>Total</b>	<b>13</b>

## Appendix C: Current and New Faculty / Staff Information

### Part I. Department Faculty / Staff

Identify # of department faculty / staff (headcount) for the year preceding implementation of proposed program.

	# Tenured	# Tenure -Track	# Non -Tenure Track
Faculty: Full Time with Doctorate			2
Faculty: Part Time with Doctorate			
Faculty: Full Time with Masters			1
Faculty: Part Time with Masters			1
Faculty: Full Time with Baccalaureate			
Faculty: Part Time with Baccalaureate			2
Teaching / Graduate Assistants	////	////	
Staff: Full Time			
Staff: Part Time			3

### Part II. Proposed Program Faculty Profiles

List current faculty within the institution -- with academic qualifications -- to be used in support of the proposed program(s).

	First Name	Last Name	Tenure (T) / Tenure Track (TT) / Other	Degree	Institution where Credential was Earned	Est. % of time faculty member will dedicate to proposed program.	If "Other," describe
Full Time Faculty							
	Trevor	Robinson	Other	Phd - TEE	Utah State University	100	
	Andrew	Deceuster	Other	Phd - ENGR	Utah State University	100	
	Steve	Williams	Other	MS - TEE	Utah State University	100	
							Add Another Full Time
Part Time Faculty							
	Corey	Ortiz	Other	Phd - TEE	Utah State University	75	
	Larry	Gardner	Other	Phd - Physics	Utah State University	50	
	Alex	Thompson	Other	BS - TESY	Utah State University	50	
							Add Another Part Time

### Part III: New Faculty / Staff Projections for Proposed Program

Indicate the number of faculty / staff to be hired in the first three years of the program, if applicable. Include additional cost for these faculty / staff members in Appendix D.

	# Tenured	# Tenure -Track	# Non -Tenure Track	Academic or Industry Credentials Needed	Est. % of time to be dedicated to proposed program.
Faculty: Full Time with Doctorate			1	Three or more years of industry experience working with manufacturing, quality assurance, and/or engineer products.	100
Faculty: Part Time with Doctorate					
Faculty: Full Time with Masters			1	Five or more years of industry experience working with manufacturing, quality assurance, and/or engineer products.	100
Faculty: Part Time with Masters					
Faculty: Full Time with Baccalaureate					
Faculty: Part Time with Baccalaureate					
Teaching / Graduate Assistants					
Staff: Full Time			2	Skills as an academic advisor and an education specialist	100
Staff: Part Time	////	////			

## Appendix D: Projected Program Participation and Finance

### Part I.

*Project the number of students who will be attracted to the proposed program as well as increased expenses, if any. Include new faculty & staff as described in Appendix C.*

Three Year Projection: Program Participation and Department Budget						
	Year Preceding Implementation	New Program				
		Year 1	Year 2	Year 3	Year 4	Year 5
<b>Student Data</b>						
# of Majors in Department	600	640	680	720	760	800
# of Majors in Proposed Program(s)		40	80	120	160	200
# of Graduates from Department	120	120	140	150	160	170
# Graduates in New Program(s)		0	20	30	40	50
<b>Department Financial Data</b>						
	Department Budget					
	Year Preceding Implementation (Base Budget)	Year 1	Year 2	Year 3		
		Addition to Base Budget for New Program(s)	Addition to Base Budget for New Program(s)	Addition to Base Budget for New Program(s)		
<i>Project additional expenses associated with offering new program(s). Account for New Faculty as stated in Appendix C, "Faculty Projections."</i>						
<b>EXPENSES – nature of additional costs required for proposed program(s)</b>						
<i>List salary benefits for additional faculty/staff each year the positions will be filled. For example, if hiring faculty in year 2, include expense in years 2 and 3. List one-time operating expenses only in the year expended.</i>						
Personnel (Faculty & Staff Salary & Benefits)	\$568,052.00	\$130,000.00	\$260,000.00	\$411,000.00		
Operating Expenses (equipment, travel, resources)	\$25,000.00	\$5,000.00	\$10,000.00	\$15,000.00		
Other: One time internal allocation to initiate program develop courses (USU Budget Hearing Process)	\$87,600.00	\$65,000.00	\$65,000.00	\$0.00		
<b>TOTAL PROGRAM EXPENSES</b>		\$200,000.00	\$335,000.00	\$426,000.00		
<b>TOTAL EXPENSES</b>	\$680,652	\$880,652	\$1,015,652	\$1,106,652		
<b>FUNDING – source of funding to cover additional costs generated by proposed program(s)</b>						
<i>Describe internal reallocation using Narrative 1 on the following page. Describe new sources of funding using Narrative 2.</i>						
Internal Reallocation	\$87,600.00	\$70,000.00	\$75,000.00	\$15,000.00		
Appropriation						
Special Legislative Appropriation						
Grants and Contracts				\$86,000.00		
Special Fees						
Tuition				\$65,000.00		
Differential Tuition (requires Regents approval)						
<b>PROPOSED PROGRAM FUNDING</b>		\$70,000.00	\$75,000.00	\$160,000.00		
<b>TOTAL DEPARTMENT FUNDING</b>	\$680,652	\$750,652	\$755,652	\$846,652		
<b>Difference</b>						
Funding - Expense	\$0	\$130,000.00	\$260,000.00	\$260,000.00		

**Part II: Expense explanation**

**Expense Narrative**

Please note that the budget is the same for the R401 proposal for the AAS in Engineering Technology. The two programs will share budget and faculty. The department is well positioned with six faculty members with background and experience in engineering technology. However, those six faculty members are committed to the General Technology AAS and Technology Systems BS with an overlap in the Outdoor Product Design and Development BS and some technical certificate programs. Two additional faculty members, for which funding is not currently available, will be required to effectively deliver the BAS and AAS degree programs in Engineering Technology. Additionally, a professional academic advisor will be required, and an educational specialist who will work with industry to make sure the curriculum is aligned with industry needs, develop internship and career placement opportunities for students, and market the program. The laboratories are currently well-equipped to support the new program, although some additional equipment may be required to support the additional enrollments.

**Part III: Describe funding sources**

**Revenue Narrative 1**

One-time funding of \$87,000.00 was provided from USU Central Administration for the current fiscal year, prior to program implementation, to develop the program, overall curriculum, and individual new courses. USU Central Administration has also committed funding for a professional academic advisor for the first two years of the program, after which it is expected that growth funding from tuition will be used for the academic advisor position moving forward. The operating budget will be reallocated within the department as managing this new program will be very similar to operating the department's current programs.

**Revenue Narrative 2**

Ongoing funding for one new full-time faculty position will be required beginning in the first year of program implementation. Ongoing funding for a second full-time faculty position will be required in the second year of program implementation. It is estimated that each position will require a minimum of \$90,000 in salary plus benefits for a total cost of \$260,000 for the two faculty positions. External funding will be used to support the educational specialist position that will be added in year three of the program and grant funding will be sought to purchase any additional required equipment for the program.

# CCA - Theatre Arts - Theatre Arts: Theatre Design & Technology - BFA

## 4.1.a R401 ABBREVIATED PROGRAM PROPOSAL

### R401-Abbreviated Program Proposal

## HELPS AND HINTS FOR COMPLETING R401 PROPOSALS

[Writing Guidelines/Suggestions](#)

[USHE R401 Policy](#)

[Process and Flowchart](#)

## COLLEGE AND DEPARTMENT INFORMATION

Click on the college(s) and department(s) that are included on this request

COLLEGE (include all cross listed colleges)\*

DEPARTMENT (include all cross listed departments)\*

Current Title (if applicable)\* Theatre Arts Theatre Design and Technology Film Production Option BFA

Proposed Title\* Theatre Arts: Theatre Design & Technology - BFA

## CIP Code

Enter the Correct CIP Code by Using the Following Link: [Classification Instruction Programs](#)

CIP Code (6-digits)\* 50.0502

Minimum Number of Credits (if applicable)\* 120

Maximum Number of Credits (if applicable)\* 160

Type of Degree: (BA, BS, etc.)\*

### REQUEST

## TYPE OF CHANGE BEING REQUESTED

Click the change(s) that best reflect your proposal.

- New Academic Program:**
- Certificates of Completion
  - Certificates of Proficiency
  - CTE - Certificate of Completion
  - CTE - Certificate of Proficiency
  - Institutional Certificate of Proficiency
  - K-12 Endorsement Program
  - Minor
  - New Emphasis for Existing Program
  - Out of Service Area Delivery Program (attach signed MOU)
  - Post-Baccalaureate Certificate
  - ...

Post-Masters Certificate

- Existing Academic Program Changes:**
- Name Change of Existing Program
  - Program Restructure (with or without Consolidation)
  - Program Transfer to a New Academic Department or Unit
  - Program Suspension (on hold-not listed in catalog)
  - Program Discontinuation (permanent program removal)
  - Reinstatement of Previously Suspended Program
  - Out-of-Service Area Delivery Program (attach signed MOU)

- Administrative Unit Changes:**
- Name Change of Existing Unit
  - Administrative Unit (Transfer)
  - Administrative Unit (Restructure-with or without Consolidation)
  - Administrative Unit (Suspension-on hold)
  - Administrative Unit (Discontinuation-permanent unit removal)
  - Reinstatement of Previously Suspended Administrative Unit
  - Reinstatement of Previously Discontinued Administrative Unit

**Other: (explain change)**

### ADDITIONAL APPROVALS (if applicable)

**Graduate Council Approval\***  Yes  
 No

**Teacher Licensure Program Approval (STEP)\***  Yes  
 No

### SECTION I: THE REQUEST

**R401 Purpose\*** The official title of this BFA Emphasis should be simply: Theatre Arts: Theatre Design & Technology - BFA  
  
The concentration of "Film Production Option" was erroneously added onto the title at some point and we are seeking to remove that concentration from the title.

### SECTION II: PROGRAM PROPOSAL

**Proposed Action & Rationale\*** "Film Production" is just one of several concentrations under the Theatre Design & Technology BFA, it should not be listed as the BFA emphasis itself.

**Labor Market Demand (if applicable)** Not applicable to current change request.

**Consistency with Institutional Mission & Institutional Impact\*** Not applicable to current change request.

**Finances\*** Not applicable to current change request.

### SECTION III: CURRICULUM (if applicable)

**Program Curriculum Narrative** Not applicable to current change request.

**Attach** (if applicable) completed [Program Curriculum](#) and [Degree Map](#) to this request by clicking on the Files  icon located on the right-hand side of the screen.

## SUBMIT AND APPROVE THE PROPOSAL

Click on the **SAVE ALL CHANGES** button below.

Scroll to the top left and click on the **LAUNCH**  icon to launch your proposal.

# CEHS - Communicative Disorders and Deaf Education - Speech Language Pathology and Audiology - BS

## 4.1.a R401 ABBREVIATED PROGRAM PROPOSAL

### R401-Abbreviated Program Proposal

## HELPS AND HINTS FOR COMPLETING R401 PROPOSALS

[Writing Guidelines/Suggestions](#)

[USHE R401 Policy](#)

[Process and Flowchart](#)

## COLLEGE AND DEPARTMENT INFORMATION

Click on the college(s) and department(s) that are included on this request

COLLEGE (include all cross listed colleges)\*

DEPARTMENT (include all cross listed departments)\*

Current Title (if applicable)\* Speech Language Pathology and Audiology - BS

Proposed Title\* Speech Language Pathology and Audiology - BS

## CIP Code

Enter the Correct CIP Code by Using the Following Link: [Classification Instruction Programs](#)

CIP Code (6-digits)\* 51.0203

Minimum Number of Credits (if applicable)\* 0

Maximum Number of Credits (if applicable)\* 0

Type of Degree: (BA, BS, etc.)\* BS, BA

### REQUEST

## TYPE OF CHANGE BEING REQUESTED

Click the change(s) that best reflect your proposal.

- New Academic Program:**
- Certificates of Completion
  - Certificates of Proficiency
  - CTE - Certificate of Completion
  - CTE - Certificate of Proficiency
  - Institutional Certificate of Proficiency
  - K-12 Endorsement Program
  - Minor
  - New Emphasis for Existing Program
  - Out of Service Area Delivery Program (attach signed MOU)
  - Post-Baccalaureate Certificate
  - ...

Post-Masters Certificate

- Existing Academic Program Changes:**
- Name Change of Existing Program
  - Program Restructure (with or without Consolidation)
  - Program Transfer to a New Academic Department or Unit
  - Program Suspension (on hold-not listed in catalog)
  - Program Discontinuation (permanent program removal)
  - Reinstatement of Previously Suspended Program
  - Out-of-Service Area Delivery Program (attach signed MOU)

- Administrative Unit Changes:**
- Name Change of Existing Unit
  - Administrative Unit (Transfer)
  - Administrative Unit (Restructure-with or without Consolidation)
  - Administrative Unit (Suspension-on hold)
  - Administrative Unit (Discontinuation-permanent unit removal)
  - Reinstatement of Previously Suspended Administrative Unit
  - Reinstatement of Previously Discontinued Administrative Unit

**Other: (explain change)** Program not offered in the department

### ADDITIONAL APPROVALS (if applicable)

**Graduate Council Approval\***  Yes  
 No

**Teacher Licensure Program Approval (STEP)\***  Yes  
 No

### SECTION I: THE REQUEST

**R401 Purpose\*** Program not offered in the department.

### SECTION II: PROGRAM PROPOSAL

**Proposed Action & Rationale\*** Program not offered in the department.

**Labor Market Demand (if applicable)** N/A

**Consistency with Institutional Mission & Institutional Impact\*** N/A

**Finances\*** N/A

### SECTION III: CURRICULUM (if applicable)

**Program Curriculum Narrative** N/A

**Attach** (if applicable) completed [Program Curriculum](#) and [Degree Map](#) to this request by clicking on the Files  icon located on the right-hand side of the screen.

## SUBMIT AND APPROVE THE PROPOSAL

Click on the **SAVE ALL CHANGES** button below.

Scroll to the top left and click on the **LAUNCH**  icon to launch your proposal.



# CEHS - Communicative Disorders and Deaf Education - Speech Language Pathology and Audiology - Online Second BS

## 4.1.a R401 ABBREVIATED PROGRAM PROPOSAL

### R401-Abbreviated Program Proposal

## HELPS AND HINTS FOR COMPLETING R401 PROPOSALS

[Writing Guidelines/Suggestions](#)

[USHE R401 Policy](#)

[Process and Flowchart](#)

## COLLEGE AND DEPARTMENT INFORMATION

Click on the college(s) and department(s) that are included on this request

COLLEGE (include all cross listed colleges)\*

DEPARTMENT (include all cross listed departments)\*

Current Title (if applicable)\* Speech Language Pathology and Audiology - Online Second BS

Proposed Title\* Speech Language Pathology and Audiology - Online Second BS

## CIP Code

Enter the Correct CIP Code by Using the Following Link: [Classification Instruction Programs](#)

CIP Code (6-digits)\* 51.0203

Minimum Number of Credits (if applicable)\* 0

Maximum Number of Credits (if applicable)\* 0

Type of Degree: (BA, BS, etc.)\* BA, BS

### REQUEST

## TYPE OF CHANGE BEING REQUESTED

Click the change(s) that best reflect your proposal.

- New Academic Program:**
- Certificates of Completion
  - Certificates of Proficiency
  - CTE - Certificate of Completion
  - CTE - Certificate of Proficiency
  - Institutional Certificate of Proficiency
  - K-12 Endorsement Program
  - Minor
  - New Emphasis for Existing Program
  - Out of Service Area Delivery Program (attach signed MOU)
  - Other

- Post-Baccalaureate Certificate
- Post-Masters Certificate

- Existing Academic Program Changes:**
- Name Change of Existing Program
  - Program Restructure (with or without Consolidation)
  - Program Transfer to a New Academic Department or Unit
  - Program Suspension (on hold-not listed in catalog)
  - Program Discontinuation (permanent program removal)
  - Reinstatement of Previously Suspended Program
  - Out-of-Service Area Delivery Program (attach signed MOU)

- Administrative Unit Changes:**
- Name Change of Existing Unit
  - Administrative Unit (Transfer)
  - Administrative Unit (Restructure-with or without Consolidation)
  - Administrative Unit (Suspension-on hold)
  - Administrative Unit (Discontinuation-permanent unit removal)
  - Reinstatement of Previously Suspended Administrative Unit
  - Reinstatement of Previously Discontinued Administrative Unit

**Other: (explain change)** Department does not offer this program anymore- Last registered student was in two thousand sixteen

### ADDITIONAL APPROVALS (if applicable)

**Graduate Council Approval\***  Yes  
 No

**Teacher Licensure Program Approval (STEP)\***  Yes  
 No

### SECTION I: THE REQUEST

**R401 Purpose\*** Department does not offer this program anymore. Last registered student was in 2016.

### SECTION II: PROGRAM PROPOSAL

**Proposed Action & Rationale\*** Department does not offer this program anymore. Last registered student was in 2016.

**Labor Market Demand (if applicable)** N/A

**Consistency with Institutional Mission & Institutional Impact\*** N/A

**Finances\*** N/A

### SECTION III: CURRICULUM (if applicable)

**Program Curriculum Narrative**

**Attach** (if applicable) completed [Program Curriculum](#) and [Degree Map](#) to this request by clicking on the Files  icon located on the right-hand side of the screen.

## SUBMIT AND APPROVE THE PROPOSAL

Click on the **SAVE ALL CHANGES** button below.

Scroll to the top left and click on the **LAUNCH**  icon to launch your proposal.

# CHASS - Communication Studies and Philosophy - Speech Communication Teaching Minor

## 4.1.a R401 ABBREVIATED PROGRAM PROPOSAL

### R401-Abbreviated Program Proposal

## HELPS AND HINTS FOR COMPLETING R401 PROPOSALS

[Writing Guidelines/Suggestions](#)

[USHE R401 Policy](#)

[Process and Flowchart](#)

## COLLEGE AND DEPARTMENT INFORMATION

Click on the college(s) and department(s) that are included on this request

COLLEGE (include all cross listed colleges)\*

DEPARTMENT (include all cross listed departments)\*

Current Title (if applicable)\* Speech Communication Teaching Minor

Proposed Title\* Speech Communication Teaching Minor

## CIP Code

Enter the Correct CIP Code by Using the Following Link: [Classification Instruction Programs](#)

CIP Code (6-digits)\* 09.0101

Minimum Number of Credits (if applicable)\* 28

Maximum Number of Credits (if applicable)\* 29

Type of Degree: (BA, BS, etc.)\* Minor

### REQUEST

## TYPE OF CHANGE BEING REQUESTED

Click the change(s) that best reflect your proposal.

- New Academic Program:**
- Certificates of Completion
  - Certificates of Proficiency
  - CTE - Certificate of Completion
  - CTE - Certificate of Proficiency
  - Institutional Certificate of Proficiency
  - K-12 Endorsement Program
  - Minor
  - New Emphasis for Existing Program
  - Out of Service Area Delivery Program (attach signed MOU)
  - Post-Baccalaureate Certificate
  - ...

Post-Masters Certificate

**Existing Academic Program Changes:**

- Name Change of Existing Program
- Program Restructure (with or without Consolidation)
- Program Transfer to a New Academic Department or Unit
- Program Suspension (on hold-not listed in catalog)
- Program Discontinuation (permanent program removal)
- Reinstatement of Previously Suspended Program
- Out-of-Service Area Delivery Program (attach signed MOU)

**Administrative Unit Changes:**

- Name Change of Existing Unit
- Administrative Unit (Transfer)
- Administrative Unit (Restructure-with or without Consolidation)
- Administrative Unit (Suspension-on hold)
- Administrative Unit (Discontinuation-permanent unit removal)
- Reinstatement of Previously Suspended Administrative Unit
- Reinstatement of Previously Discontinued Administrative Unit

**Other: (explain change)**

**ADDITIONAL APPROVALS (if applicable)**

**Graduate Council Approval\***  Yes  
 No

**Teacher Licensure Program Approval (STEP)\***  Yes  
 No

**SECTION I: THE REQUEST**

**R401 Purpose\*** To request the discontinuation of the Speech Communication Teaching minor.

**SECTION II: PROGRAM PROPOSAL**

**Proposed Action & Rationale\*** The Department of Communication Studies and Philosophy is discontinuing the Speech Communication Teaching Minor. The faculty member who created and ran this program retired 15 years ago. The department finished out the last few students over the next few years, and we have not offered it since. The minor, and its accompanying required courses, haven't been offered in over a decade. There are so few teaching opportunities in this area that it is not a viable path for students.

**Labor Market Demand (if applicable)** N/A

**Consistency with Institutional Mission & Institutional Impact\*** With no students in the minor in over a decade, there will be no impact on USU or its mission.

**Finances\*** There are no finances tied to this minor.

**SECTION III: CURRICULUM (if applicable)**

**Program Curriculum Narrative**

**Attach** (if applicable) completed [Program Curriculum](#) and [Degree Map](#) to this request by clicking on the Files  icon located on the right-hand side of the screen.

**SUBMIT AND APPROVE THE PROPOSAL**

**Click on the SAVE ALL CHANGES button below.**

**Scroll to the top left and click on the LAUNCH  icon to launch your proposal.**

# CHASS - Communication Studies and Philosophy Journalism and Communication Political Science - Political Communication - Certificate of Proficiency

## 4.1.a R401 ABBREVIATED PROGRAM PROPOSAL

### R401-Abbreviated Program Proposal

## HELPS AND HINTS FOR COMPLETING R401 PROPOSALS

[Writing Guidelines/Suggestions](#)

[USHE R401 Policy](#)

[Process and Flowchart](#)

## COLLEGE AND DEPARTMENT INFORMATION

Click on the college(s) and department(s) that are included on this request

COLLEGE (include all cross listed colleges)\*

DEPARTMENT (include all cross listed departments)\*

Current Title (if applicable)\* Political Communication - Certificate of Proficiency

Proposed Title\* Political Communication - Certificate of Proficiency

## CIP Code

Enter the Correct CIP Code by Using the Following Link: [Classification Instruction Programs](#)

CIP Code (6-digits)\* 09,999

Minimum Number of Credits (if applicable)\* 18

Maximum Number of Credits (if applicable)\* 39

Type of Degree: (BA, BS, etc.)\* CP

### REQUEST

## TYPE OF CHANGE BEING REQUESTED

Click the change(s) that best reflect your proposal.

- New Academic Program:**
- Certificates of Completion
  - Certificates of Proficiency
  - CTE - Certificate of Completion
  - CTE - Certificate of Proficiency
  - Institutional Certificate of Proficiency
  - K-12 Endorsement Program
  - Minor
  - New Emphasis for Existing Program
  - Out of Service Area Delivery Program (attach signed MOU)
  - Other

- Post-Baccalaureate Certificate
- Post-Masters Certificate

- Existing Academic Program Changes:**
- Name Change of Existing Program
  - Program Restructure (with or without Consolidation)
  - Program Transfer to a New Academic Department or Unit
  - Program Suspension (on hold-not listed in catalog)
  - Program Discontinuation (permanent program removal)
  - Reinstatement of Previously Suspended Program
  - Out-of-Service Area Delivery Program (attach signed MOU)

- Administrative Unit Changes:**
- Name Change of Existing Unit
  - Administrative Unit (Transfer)
  - Administrative Unit (Restructure-with or without Consolidation)
  - Administrative Unit (Suspension-on hold)
  - Administrative Unit (Discontinuation-permanent unit removal)
  - Reinstatement of Previously Suspended Administrative Unit
  - Reinstatement of Previously Discontinued Administrative Unit

**Other: (explain change)**

### ADDITIONAL APPROVALS (if applicable)

**Graduate Council Approval\***  Yes  
 No

**Teacher Licensure Program Approval (STEP)\***  Yes  
 No

### SECTION I: THE REQUEST

**R401 Purpose\*** We are requesting permission to create a Certificate of Proficiency in Political Communication. The proposal uses existing courses and faculty across departments and develops a certificate that will enhance job prospects for students in Journalism & Communication, Political Science, and Communication Studies.

### SECTION II: PROGRAM PROPOSAL

**Proposed Action & Rationale\*** Success in any field is difficult if one lacks effective communication skills. Success is particularly evasive in politics and public policy in the absence of good communication. Indeed, an entire academic sub-discipline, Political Communication, sits at the nexus of Political Science and Communication. Institutions that offer coursework in this growing field typically do so either from within a Political Science Department or a Communication Department. We propose to create a certificate of proficiency to help students take advantage of expertise in this area from across several departments where political communication skills are taught. This allows students cross-disciplinary training that will improve their skill set and employment prospects.

**Labor Market Demand (if applicable)\*** The field of Political Communication has employment merit in its own right. As of this writing (Nov. 8, 2022) a search on job site Indeed.com for "Political Communication" returns 59,158 jobs. They vary in specifics, from government affairs at Coca Cola to a communication specialist at the Environmental Defense Fund to a position at CNN in criminal justice reporting. For students interested in pursuing careers in politics, adding communication/public relations skills improves their marketability because they receive extra training in forming compelling messages and the dissemination of those messages through traditional communication methods (like print and broadcast media) and newer methods (like social media, podcasts, and other electronic media). For students interested in pursuing communication careers (like journalism and public relations) it improves their marketability by providing a strong knowledge base in politics and public policy—key subjects on which journalists and other communication professionals are often asked to address.

**Consistency with Institutional Mission & Institutional Impact\*** The mission of Utah State University is to be student-centered in terms of academics but also to then serve "the public through learning, discovery, and engagement." We have a commitment to make sure our students learn what they need to learn so that they can then move out into the world. Communicating with others and building the skills necessary for civic engagement is at the center of what we do in higher education. And this certificate will facilitate the university's mission to put students first so that they can then engage with the world around them.

**Finances\*** This certificate of proficiency will be created using existing courses across three departments. No new financial resources are needed.

### SECTION III: CURRICULUM (if applicable)

## Program Curriculum Narrative

This certificate of proficiency will be housed and administered in the College of Humanities and Social Sciences and the Departments of Journalism and Communication, Political Science, and Communication Studies. It will incorporate classes from the Journalism & Communication Department, the Political Science Department, and the Communications Studies & Philosophy Department.

From these three areas, students will be required to complete 18 credits, including nine credits from a list of core classes, with one core class from each area: Journalism & Communication (JCOM), Political Science (POLS), and Communication Studies (CMST). The core is meant to ensure that students are participating in all three areas brought together in the certificate. The core classes will begin to give students some common terminology as well as shared experiences that they can then take into the second half of their certificate.

Students will then take an additional nine credits from elective courses in the three areas. Students are strongly encouraged to complete a three-credit internship as part of those nine elective credits (a maximum of three credits of internship may be counted toward the certificate). Whether the additional nine credits include an internship or not, the credits must come from at least two of the three areas. Again, we want to ensure that students are benefiting from the expertise and skills that all three areas offer. Students must earn a C or better in courses used toward the certificate. See the attached program curriculum for a list of core and elective classes.

Each of the three areas offers specific and complementary skills. Because they are working across and between fields, students are encouraged to excavate connections between the areas in which they are studying for this certificate. Below, we lay out the skills developed in each area, but the strength of the certificate is in how skills become multiplied exponentially when acquired at points of intersection.

- From the POLS courses, students will learn basic factual information that underlies the functioning of political systems in the United States and/or abroad. Moreover, students learn principles for formulating political strategy and policy.
- The JCOM courses lay a theoretical foundation for understanding mass communication. Beyond studying theory, though, these classes offer hands-on learning of practical skills for developing stories and conveying complex information in accessible ways. JCOM courses in this certificate emphasize multimedia communication for dissemination of information across a wide range of platforms.
- CMST courses teach students both the theory and practice of interpersonal communication. These courses help students understand the basics of interpersonal relations and communication, approaches to argument formation, tactics for persuasion, and communication across diverse cultures and contexts.

Again, the idea behind this structure is to ensure that students work in the places of overlap, to see, most broadly, how to most effectively articulate messages about politics and public policy to varied constituencies. Because they have worked at the crossroads of fields, they are then also able to articulate and translate to potential employers the benefit of training across all three areas. Each of these three areas in the college are very popular with students. Undergraduates see the value of each area but all too often have to make a choice in following one path and not the others. This certificate gives them the opportunity to combine the content knowledge of their major with skills from other departments that enrich their education and improve their marketability.

### **POLS Core courses:**

#### **POLS 1100: United States Government & Politics (BAI)**

U.S. Constitution, political parties and elections, interest groups, Congress, president, bureaucracy, courts, and civil rights and liberties. This course meets the Americanization requirement.

#### **POLS 2100: Introduction to International Relations (BSS)**

This course introduces students to the analysis of the interaction of nation-states and non-governmental actors in a variety of issue areas, such as politics, economics, security, human rights, and the environment.

#### **POLS 2200: Comparative Politics (BSS)**

Comparisons of differences in political culture, institutions, and processes, including authoritarian and democratic systems, violence and corruption, political development, and public policy.

### **JCOM Core courses:**

#### **JCOM 1500—Introduction to Mass Communication (BSS)**

History, philosophy, structures, and functions of the mass media (newspapers, magazines, TV and radio, advertising, and public relations) and their intersection with other social institutions. Media economics and the impacts of new technologies on media institutions and society.

#### **JCOM 2300—Introduction to Public Relations**

This course surveys the theories and practice of public relations in a variety of business, corporate, governmental, and nonprofit organizational settings. It also includes elements of promoting organizational messages and communicating with various publics.

### **CMST Core courses:**

#### **CMST 1020—Public Speaking (BHU)**

Speaking in formal public communication situations. Development of skills in speech preparation, audience adaptation, and delivery. Two lectures and one one-hour lab per week.

#### **CMST 1330—Intro to Global Communication (BSS)**

This course introduces students to the complexities and trends associated with global communication. Attention will be paid to cross-national perspectives on communication, as well as the impact transnational organizations and cross-cultural attitudes have on public discourse.

#### **CMST 2110-Interpersonal Communication**

Examination of theories, methods, and competencies relevant to studying, establishing, and maintaining interpersonal relationships in family, intercultural, professional, and other contexts. Classroom experiences with topics such as perception, language, nonverbal behavior, conflict

resolution, and listening.

**CMST 2270—Argumentation and Debate**

Techniques of analysis, investigation, evidence, reasoning, brief making, refutation, and construction and delivery of the argumentative speech and academic debate.

**POLS Elective courses:**

**POLS 3110—Parties & Elections (DSS)**

Political parties, campaigns, and elections.

**POLS 3120—Law & Politics (DSS)**

Examines history, processes, and theories underlying American law and politics. Makes selective comparison of the American legal system with other legal systems.

**POLS 3130—United States Legislative Politics (DSS)**

Legislative process.

**POLS 3140—The Presidency (DSS)**

Examines the origins, purposes, and scope of the executive power in the American constitutional system.

**POLS 3320—The Foundations of American Constitutionalism**

Introduces students to debate over constitutions, constitutionalism, and constitution-making which occurred during the period (roughly) from the Revolution to the election of 1800.

**POLS 3400—United States Foreign Policy (DSS)**

Formulation, execution, and impact of United States foreign policy.

**POLS 3700—Terrorism and Counterterrorism**

Explores dynamics, causes, characteristics, and consequences of those acts labeled “terrorist.” Also explores counter measures to such acts.

**POLS 4220—Ethnic Conflict and Cooperation (CI/DSS)**

Examines origins of ethnic groups and the causes of ethnic conflicts, as well as different strategies for preventing or resolving such conflict. Explores conditions facilitating interethnic cooperation, the more common form of ethnic group interaction.

**POLS 4410—Global Negotiations**

This course is designed to increase negotiation skills in an international or global setting. The course focuses on developing cultural intelligence, strategic communication, and problem-solving across varied issues, areas, and contexts..

**POLS 5910, 5920, 5930, 5940, 5950, or 5960—Political Science Internship Classes**

**JCOM Elective Courses:**

**JCOM 2010—Media Literacy (BSS)**

This course includes exploration of the cultural forces that shape media messaging through instruction in digital investigation techniques; training in fact-checking; discussions of bias, influence, and complexity; and the study of media-cultivated conversations about race, class, gender, sexuality, and ability.

**JCOM 2030—Multimedia Boot Camp**

This required core JCOM major course covers the basics of digital multimedia skills.

**JCOM 2400—Introduction to Social Media**

This course addresses the history of social media platforms, the theoretical foundations for persuasion, message creation, and community building, and the ethical responsibilities of public communication. Students learn to analyze audiences across platforms and decide on the strongest messaging.

**JCOM 3100—Reporting Public Affairs (CI)**

Emphasizes development of advanced reporting, newsgathering, interviewing, and writing skills.

**JCOM 4020—Mass Media and Society (DSS)**

Study of theories and practice of the impact of mass media in conjunction with other social institutions: political, social, cultural, ideological, economic, and religious.

**JCOM 4030—Mass Media Law (DSS)**

The course examines media rights of free expression and both the history and applicability of First Amendment protections. The course discusses the structure and functioning of the U.S. court system, defamation, trademark, copyright, access to information, and other related topics.

**JCOM 4410—Gender and the Mass Media**

This course examines the nature of gender-based images in a variety of mass media, from advertising to magazines, television, and film. It examines



the analysis of gender stereotypes and portrayals in news and entertainment media, along with resulting social impacts.

**JCOM 4510—Communication Internship**

Supervised, real-world training and practice in communication work places, including news and business environments.

**JCOM 5420—The Mass Media and Politics**

This course covers the examination of the role of the mass media in the political process, including both campaigns and governance. It also includes the examination of political advertising, news coverage, polling, opinion formation strategies, and politicians' use of new media technologies.

**JCOM 5400—Social Media Analytics and Client Management**

This course prepares students to run professional social media accounts through an immersion in cross-platform storytelling. Students learn social-media tools and use skills in research, videography, graphic design, and writing to create messages for social media platforms.

**CMST Elective courses:**

**CMST 2120—Small Group Communication (HR)**

Introduction to communication in group processes such as decision-making, leadership, power, conflict, deviance and the development of group structures, functions, norms and roles.

**CMST 3270—Culture and Public Discourse**

This course will examine the influence that culture plays in the creation of public discourse within the United States and around the world. We will also examine the impacts that this discourse can have on our own cultural worldview.

**CMST 3280—Organizations and Social Change**

This course explores the ways in which organizations effect social change. It focuses specifically on nonprofit organizations, social entrepreneurship, and corporate social responsibility. Students analyze how different organizations address a variety of social issues in local, national, and international contexts.

**CMST 3400—Persuasion (CI)**

Survey of theory and research investigating the process of social influence. Topics include: compliance-gaining strategies, enactment and detection of deception, verbal and nonverbal influence, attitude change, conformity, communicator characteristics, credibility, emotional appeals, and ethics.

**CMST 3330—Intercultural Communication (DSS)**

Study of how communication shapes culture and how culture, in turn, affects communication. Development of active intercultural communication in professional and personal contexts.

**CMST 3730—Culture and Global Intervention**

This course studies the influence of public messages about global poverty and inequality that impact global development interventions. It also instructs students on the culture-centered approach as a method of working with and for communities.

**CMST 4200—Language, Thought, and Action (CI/DSS)**

Examines the influence of language on perception, interpretation, and evaluation in a wide variety of communication contexts, from organizational communication to mass media to interpersonal relations.

**CMST 4270—Communication, Culture, and Power**

This course examines the intersections of power, communication, knowledge, and identity. The course will highlight the indispensable role that communication plays, not only in the production of powerful hegemonic structures, but also in resisting them.

**CMST 2250, 4250—CMST Internship Courses**

**Attach** (if applicable) completed [Program Curriculum](#) and [Degree Map](#) to this request by clicking on the Files  icon located on the right-hand side of the screen.

## **SUBMIT AND APPROVE THE PROPOSAL**

**Click on the SAVE ALL CHANGES button below.**

**Scroll to the top left and click on the LAUNCH  icon to launch your proposal.**

# CHASS - Sociology and Anthropology - Community and Natural Resources Institute

## 4.1.a R401 ABBREVIATED PROGRAM PROPOSAL

### R401-Abbreviated Program Proposal

## HELPS AND HINTS FOR COMPLETING R401 PROPOSALS

[Writing Guidelines/Suggestions](#)

[USHE R401 Policy](#)

[Process and Flowchart](#)

## COLLEGE AND DEPARTMENT INFORMATION

Click on the college(s) and department(s) that are included on this request

COLLEGE (include all cross listed colleges)\*

DEPARTMENT (include all cross listed departments)\*

Current Title (if applicable)\* Community and Natural Resources Institute

Proposed Title\* Community and Natural Resources Institute

## CIP Code

Enter the Correct CIP Code by Using the Following Link: [Classification Instruction Programs](#)

CIP Code (6-digits)\* 00.0000

Minimum Number of Credits (if applicable)\* 0

Maximum Number of Credits (if applicable)\* 0

Type of Degree: (BA, BS, etc.)\* NA

### REQUEST

## TYPE OF CHANGE BEING REQUESTED

Click the change(s) that best reflect your proposal.

- New Academic Program:**
- Certificates of Completion
  - Certificates of Proficiency
  - CTE - Certificate of Completion
  - CTE - Certificate of Proficiency
  - Institutional Certificate of Proficiency
  - K-12 Endorsement Program
  - Minor
  - New Emphasis for Existing Program
  - Out of Service Area Delivery Program (attach signed MOU)
  - Post-Baccalaureate Certificate
  - ...

Post-Masters Certificate

**Existing Academic Program Changes:**

- Name Change of Existing Program
- Program Restructure (with or without Consolidation)
- Program Transfer to a New Academic Department or Unit
- Program Suspension (on hold-not listed in catalog)
- Program Discontinuation (permanent program removal)
- Reinstatement of Previously Suspended Program
- Out-of-Service Area Delivery Program (attach signed MOU)

**Administrative Unit Changes:**

- Name Change of Existing Unit
- Administrative Unit (Transfer)
- Administrative Unit (Restructure-with or without Consolidation)
- Administrative Unit (Suspension-on hold)
- Administrative Unit (Discontinuation-permanent unit removal)
- Reinstatement of Previously Suspended Administrative Unit
- Reinstatement of Previously Discontinued Administrative Unit

**Other: (explain change)**

**ADDITIONAL APPROVALS (if applicable)**

**Graduate Council Approval\***  Yes  
 No

**Teacher Licensure Program Approval (STEP)\***  Yes  
 No

**SECTION I: THE REQUEST**

**R401 Purpose\***

The Community and Natural Resources Institute (CANRI) is committed to interdisciplinary research and community engagement centered on natural resource issues and environmental problems in the Intermountain West and beyond. CANRI brings together faculty and students from the social sciences, humanities, and sciences to foster meaningful dialogue, cultivate collaborations, and share data to affect social-environmental change. In order to increase cross-campus and community visibility and expand collaborations across the College of Humanities and Social Sciences (CHaSS), while maintaining those we have built across campus, we propose to move CANRI from being housed in Sociology and Anthropology to CHaSS.

**SECTION II: PROGRAM PROPOSAL**

**Proposed Action & Rationale\***

By moving CANRI from the department to the college level, we hope to increase engagement with faculty and students in CHaSS, while maintaining existing relationships across campus. We believe that elevating the profile of CANRI will also help foster collaborations with other relevant centers and institutes across campus as well as outside of the university.

**Labor Market Demand (if applicable)**

NA

**Consistency with Institutional Mission & Institutional Impact\***

The move of CANRI to CHaSS will help increase our engagement and research and outreach impact across CHaSS, the campus, and the broader community and region.

**Finances\***

CANRI has an existing funding index with modest funds accumulated by the 2nd director that are used sparingly. We also have an agreement with CHaSS for ongoing support for the director in the form of a course release, faculty assistance in the form of a course release and summer salary for the next year, CHaSS administrative support, CHaSS support for research and outreach events in FY24, and some grant proposal support. We hope that by elevating CANRI we can also seek additional more sustained funding from various sources.

**SECTION III: CURRICULUM (if applicable)**

**Program Curriculum Narrative**

NA

**Attach** (if applicable) completed [Program Curriculum](#) and [Degree Map](#) to this request by clicking on the Files  icon located on the right-hand side of the screen.

## **SUBMIT AND APPROVE THE PROPOSAL**

**Click on the SAVE ALL CHANGES button below.**

**Scroll to the top left and click on the LAUNCH  icon to launch your proposal.**

# CHASS - Sociology and Anthropology - Environmental Justice - Institutional Certificate of Proficiency

## 4.1.a R401 ABBREVIATED PROGRAM PROPOSAL

### R401-Abbreviated Program Proposal

## HELPS AND HINTS FOR COMPLETING R401 PROPOSALS

[Writing Guidelines/Suggestions](#)

[USHE R401 Policy](#)

[Process and Flowchart](#)

## COLLEGE AND DEPARTMENT INFORMATION

Click on the college(s) and department(s) that are included on this request

COLLEGE (include all cross listed colleges)\*

DEPARTMENT (include all cross listed departments)\*

Current Title (if applicable)\* Not applicable

Proposed Title\* Environmental Justice - Institutional Certificate of Proficiency

## CIP Code

Enter the Correct CIP Code by Using the Following Link: [Classification Instruction Programs](#)

CIP Code (6-digits)\* 45.0101

Minimum Number of Credits (if applicable)\* 9

Maximum Number of Credits (if applicable)\* 15

Type of Degree: (BA, BS, etc.)\* Institutional Certificate of Proficiency

### REQUEST

## TYPE OF CHANGE BEING REQUESTED

Click the change(s) that best reflect your proposal.

- New Academic Program:
- Certificates of Completion
  - Certificates of Proficiency
  - CTE - Certificate of Completion
  - CTE - Certificate of Proficiency
  - Institutional Certificate of Proficiency
  - K-12 Endorsement Program
  - Minor
  - New Emphasis for Existing Program
  - Out of Service Area Delivery Program (attach signed MOU)
  - Post-Baccalaureate Certificate
  - ...

Post-Masters Certificate

**Existing Academic Program Changes:**

- Name Change of Existing Program
- Program Restructure (with or without Consolidation)
- Program Transfer to a New Academic Department or Unit
- Program Suspension (on hold-not listed in catalog)
- Program Discontinuation (permanent program removal)
- Reinstatement of Previously Suspended Program
- Out-of-Service Area Delivery Program (attach signed MOU)

**Administrative Unit Changes:**

- Name Change of Existing Unit
- Administrative Unit (Transfer)
- Administrative Unit (Restructure-with or without Consolidation)
- Administrative Unit (Suspension-on hold)
- Administrative Unit (Discontinuation-permanent unit removal)
- Reinstatement of Previously Suspended Administrative Unit
- Reinstatement of Previously Discontinued Administrative Unit

**Other: (explain change)**

**ADDITIONAL APPROVALS (if applicable)**

**Graduate Council Approval\***  Yes  
 No

**Teacher Licensure Program Approval (STEP)\***  Yes  
 No

**SECTION I: THE REQUEST**

**R401 Purpose\***

The Department of Sociology & Anthropology at Utah State University (USU) is requesting approval for a 9-credit micro certificate in Environmental Justice. The Institutional Certificate of Proficiency will be available to sociology undergraduate majors and minors (approximately 1,200 students), undergraduate students in the College of Humanities and Social Sciences, and undergraduate students across USU (approximately 25,000 students). The required 9-credits will consist of one required course and two electives that students will be able to select from a list of options. This micro certificate consists entirely of existing courses in Sociology, with the option to take one elective from already existing courses outside Sociology. Courses will be offered in varying formats in line with USU course delivery methods (e.g. in-person, connect, hybrid, online, and virtual) to accommodate the needs of Logan main campus students, students at Statewide Campuses, and online/Distance Education students. Overlaps with other departments whose courses count toward this micro certificate have been discussed with other departments and the appropriate department heads have approved all included courses.

**SECTION II: PROGRAM PROPOSAL**

**Proposed Action & Rationale\***

Brief Description of the Unit Requesting the Action:

The Sociology Program within the Department of Sociology and Anthropology at USU grants undergraduate degrees (BA, BS, and minor), Master's Degrees, and Doctoral Degrees. In addition, many of our courses meet USU's general education requirements for undergraduate students across the university, and many students from the undergraduate to graduate level in other programs and departments take our courses as electives. The Sociology Program also offers a fully online undergraduate major.

Proposed Action:

We are requesting approval for a 9-credit Institutional Certificate of Proficiency in Environmental Justice housed in the Sociology Program within the Department of Sociology and Anthropology at USU.

Rationale:

There is an increasing need to address environmental issues in the state of Utah and beyond, and there is a growing awareness of the need to take approaches that considers multiple stakeholders and issues of equity and justice. Environmental justice approaches prioritize fair and equitable outcomes and meaningful involvement and participation in environmental decision-making. Many students attending and graduating from USU are interested in contributing in these areas. Students who complete this certificate will be knowledgeable about and prepared to support environmental justice efforts in their communities and across governance scales. Furthermore, they will possess the skills to work in environmental justice related fields, including government, nonprofit, and corporate positions. This certificate will allow students to highlight this training on their transcripts and resumes.

The Sociology Program developed and began offering (in spring semester 2023) the course SOC 3310: Environmental Justice. The development of this course was supported by a 2021-2022 Intersections Faculty Teaching Fellowship from the Center for Intersectional Gender Studies and Research at USU. The course has enrolled well and been well received by students; it is currently being offered every semester. This course revealed a desire amongst students at USU to gain a better understanding of Environmental Justice, including varying aspects of inequality and ways to create social change to address environmental issues equitably. The Sociology Program at USU has a historically strong and internationally well-regarded specialization in Environment and Community, and we have at least five faculty members with Environmental Justice as one of their main areas of expertise. In addition, within the program and department a majority of faculty focus on at least one of the overlapping issues of equity, justice, and the environment.

Upon successful completion of this certificate, students will be able to:

1. Describe what environmental justice is, its origins, types of environmental justice, and why it is important.
2. Understand how different types of societal inequalities intersect with environmental issues to create disproportionate environmental injustices.
3. Apply an environmental justice perspective to a variety of issues from the local to the global.
4. Identify different factors that can lead to social change and different strategies that may achieve improved environmental justice outcomes.
5. Recognize how a justice-focused social science perspective improves understanding of environmental issues and helps to address them more equitably.

Institutional procedures included faculty and committee meetings to discuss and design the certificate, with input from multiple parties across the university. The micro certificate will be comprised mainly of courses we already offer in Sociology, with the option to take one elective course outside Sociology. Courses will be offered in varying formats in line with USU course delivery methods (e.g. in-person, connect, hybrid, online, and virtual) to accommodate the needs of Logan main campus students, students at Statewide Campuses, and online/Distance Education students.

Thus, this Environmental Justice micro certificate builds on, makes connections between, and coincides with the expertise of our faculty and the needs of our students and our state. In addition, USU was recently selected as an Anchor Partner in the Jobs for the Future (JFF) Quality Green Jobs Regional Challenge. USU's participation in JFF will be coordinated by Sustainability Program Manager, Caitlin McLennan, who has voiced support for this certificate given its role in preparing students for jobs in fields related to the environment, including those related to USU Statewide Campuses' work on renewable energy production.

In Utah, there is a need for students with training in environmental justice approaches. Federal and state agencies are increasingly incorporating environmental justice as a framework that guides their work. For example, the Utah Department of Environmental Quality's website specifies that the agency "is committed to environmental justice in Utah, both through the continuation of current efforts and improving on and identifying areas of our work where we can address the environmental conditions that disproportionately impact disadvantaged and underserved communities. We will accomplish this by partnering with impacted communities and engaging with policymakers to find collaborative, community-based solutions" (<https://deg.utah.gov/general/environmental-justice-in-utah>). In addition, the U.S. Environmental Protection Agency (EPA) recently launched an Environmental Justice study of Salt Lake City's west side, reported on by the Salt Lake Tribune (<https://www.sltrib.com/news/environment/2022/10/20/epa-is-launching-an/>). This micro certificate will benefit USU and USHE by enabling students from Utah, as well as out-of-state students pursuing higher education in Utah, to receive the training they need to contribute to environmental justice efforts.

The Environmental Justice micro certificate will have one required course: SOC 3310 Environmental Justice. To complete the micro certificate students will then need to take two additional courses, one in each of two areas, Axes of Inequality and Social Change. Many of the elective courses also fulfill general education requirements. The micro certificate is designed to be able to be completed quickly, by students in any major.

The Environmental Justice Institutional Certificate of Proficiency will help the department, college, and university better serve students interested in addressing complex social and environmental issues. Specifically, having a formalized micro certificate will increase awareness among students of the many course offerings in the social sciences and humanities that are relevant to the field, including courses on broader social inequalities where the relevance may not be immediately obvious from the catalog description. Increasing awareness will help students, particularly those in colleges other than USU's College of Humanities and Social Sciences, to select their electives and general education courses strategically. The micro certificate will also allow students who have taken these courses to easily demonstrate their social science training on their transcripts and resumes. Finally, this micro certificate will raise awareness among students who may be considering advanced degrees in this area, drawing attention to USU's Master's and PhD programs in Sociology and other fields related to environmental justice.

**Labor Market Demand (if applicable)**

Students who complete this certificate will be knowledgeable about and prepared to support environmental justice efforts in their communities and work in environmental justice related fields, including government, nonprofit, and corporate positions. According to the Utah DWS Occupation Information Data Viewer (<https://jobs.utah.gov/jsp/utalmis/#/>) training in environmental justice is useful for the following careers: Lawyer, Environmental Engineer and Environmental Engineering Technologist or Technician, Environmental Compliance Inspector, Environmental Scientist and Specialist including Health-related, Environmental Science and Protection Technician including Health-related, Environmental Science Teacher, Criminal Justice and Law Enforcement Teacher, Environmental Restoration Planner, and Environmental Economist. There are substantial numbers of job openings in Utah in these fields, according to the website (<https://jobs.utah.gov/jsp/utalmis/#/>). Having this credential in addition to their major field of study will make USU graduates more competitive for graduate/professional school and on the job market.

**Consistency with Institutional Mission & Institutional Impact\***

The mission of USU is to be a premier land grant university by fostering the principle that academics come first, by cultivating diversity of thought and culture, and by serving the public through learning, discovery, and engagement. This Environmental Justice Institutional Certificate of Proficiency highlights and makes connections between academic courses taught at USU, emphasizes diversity, and serves the public in ways related to community engagement on important environmental and social issues, thus it is directly in line with and supports USU's mission. As explained above, the proposed micro certificate will serve the needs of USU students, and therefore be directly aligned with USU's mission to empower our students to lead successful lives and contribute to their communities.

The proposed micro certificate primarily serves to recognize and formalize teaching and research that is already occurring at USU. The courses that make up the Environmental Justice micro certificate are already taught on a regular basis. The creation of this certificate provides benefits such as increasing class enrollment, improving student skills, offering opportunities for interdisciplinary experiences, and providing a way for students to highlight those skills on transcripts and resumes but costs little in terms of new class creation and faculty time.

While many units and programs in the USHE system and across USHE institutions including USU have offerings related to the environment, this proposed micro certificate is focused specifically on environmental justice and thus is unique and complementary to other offerings.

**Finances\***

The Environmental Justice Institutional Certificate of Proficiency is comprised of classes that are already offered at USU and requires no new facilities or staff. No budgetary impact is anticipated.

**SECTION III: CURRICULUM (if applicable)**

**Program Curriculum Narrative**

Environmental justice approaches focus on fair and equitable outcomes and meaningful involvement and participation in processes of environmental decision-making. Environmental justice is intersectional and interdisciplinary and relates to inequality based on class, gender, race, ethnicity, Indigeneity, sexuality, disability, etc., and spans local to global scales. This micro certificate in Environmental Justice will prepare students to understand and, if desired, support environmental justice efforts in their personal and professional lives. Students will learn about environmental justice theories, efforts, and case studies from the local to the global level and will gain a deeper understanding of the related processes of inequality. Students who complete this micro certificate will be knowledgeable about and prepared to support environmental justice efforts in their communities and work in environmental justice related fields, including government, nonprofit, and corporate positions.

The micro certificate requires the completion of 9 credits with a grade of C or better. Courses taken pass/fail will not count towards the micro certificate.

The micro certificate is available to students on the Logan campus, as well as through USU's Statewide Campuses and Distance Education program.

**Attach** (if applicable) completed [Program Curriculum](#) and [Degree Map](#) to this request by clicking on the Files  icon located on the right-hand side of the screen.

**SUBMIT AND APPROVE THE PROPOSAL**

**Click on the SAVE ALL CHANGES button below.**

**Scroll to the top left and click on the LAUNCH  icon to launch your proposal.**



# CHASS - Sociology and Anthropology - Social Dimensions of Climate Change - Institutional Certificate of Proficiency

## 4.1.a R401 ABBREVIATED PROGRAM PROPOSAL

### R401-Abbreviated Program Proposal

## HELPS AND HINTS FOR COMPLETING R401 PROPOSALS

[Writing Guidelines/Suggestions](#)

[USHE R401 Policy](#)

[Process and Flowchart](#)

## COLLEGE AND DEPARTMENT INFORMATION

Click on the college(s) and department(s) that are included on this request

COLLEGE (include all cross listed colleges)\*

DEPARTMENT (include all cross listed departments)\*

Current Title (if applicable)\* Not applicable

Proposed Title\* Social Dimensions of Climate Change - Institutional Certificate of Proficiency

## CIP Code

Enter the Correct CIP Code by Using the Following Link: [Classification Instruction Programs](#)

CIP Code (6-digits)\* 45.0101

Minimum Number of Credits (if applicable)\* 9

Maximum Number of Credits (if applicable)\* 15

Type of Degree: (BA, BS, etc.)\* Institutional Certificate of Proficiency

### REQUEST

## TYPE OF CHANGE BEING REQUESTED

Click the change(s) that best reflect your proposal.

- New Academic Program:**
- Certificates of Completion
  - Certificates of Proficiency
  - CTE - Certificate of Completion
  - CTE - Certificate of Proficiency
  - Institutional Certificate of Proficiency
  - K-12 Endorsement Program
  - Minor
  - New Emphasis for Existing Program
  - Out of Service Area Delivery Program (attach signed MOU)
  - Other

- Post-Baccalaureate Certificate
- Post-Masters Certificate

- Existing Academic Program Changes:**
- Name Change of Existing Program
  - Program Restructure (with or without Consolidation)
  - Program Transfer to a New Academic Department or Unit
  - Program Suspension (on hold-not listed in catalog)
  - Program Discontinuation (permanent program removal)
  - Reinstatement of Previously Suspended Program
  - Out-of-Service Area Delivery Program (attach signed MOU)

- Administrative Unit Changes:**
- Name Change of Existing Unit
  - Administrative Unit (Transfer)
  - Administrative Unit (Restructure-with or without Consolidation)
  - Administrative Unit (Suspension-on hold)
  - Administrative Unit (Discontinuation-permanent unit removal)
  - Reinstatement of Previously Suspended Administrative Unit
  - Reinstatement of Previously Discontinued Administrative Unit

**Other: (explain change)**

**ADDITIONAL APPROVALS (if applicable)**

**Graduate Council Approval\***  Yes  
 No

**Teacher Licensure Program Approval (STEP)\***  Yes  
 No

**SECTION I: THE REQUEST**

**R401 Purpose\*** The Department of Sociology & Anthropology at Utah State University (USU) is requesting approval for a 9-credit micro certificate, Social Dimensions of Climate Change - Institutional Certificate of Proficiency. The certificate will be available to sociology undergraduate majors and minors (approximately 1,200 students), undergraduate students in the College of Humanities and Social Sciences, and undergraduate students across USU (approximately 25,000 students). The required 9-credits will consist of one required course and two electives that students will be able to select from a list of options. This micro certificate consists entirely of existing courses in Sociology, the College of Humanities and Social Sciences, and USU course offerings more broadly. Courses will be offered in varying formats in line with USU course delivery methods (e.g. in-person, connect, hybrid, online, and virtual) to accommodate the needs of Logan main campus students, students at Statewide Campuses, and online/Distance Education students. Overlaps with other departments whose courses count toward this micro certificate have been discussed and the appropriate department heads have approved all included courses.

**SECTION II: PROGRAM PROPOSAL**

**Proposed Action & Rationale\***

Brief Description of the Unit Requesting the Action:

The Sociology Program within the Department of Sociology and Anthropology at USU grants undergraduate degrees (BA, BS, and minor), Master's Degrees, and Doctoral Degrees. In addition, many of our courses meet USU's general education requirements for undergraduate students across the university, and many students from the undergraduate to graduate level in other programs and departments take our courses as electives. The Sociology Program also offers a fully online undergraduate major.

Proposed Action:

We are requesting approval for a 9-credit micro credential (Institutional Certificate of Proficiency) in Social Dimensions of Climate Change housed in the Sociology Program within the Department of Sociology and Anthropology at USU.

Rationale:

All USU students, but especially those with more limited exposure to the intersection of people and the environment in their majors, increasingly need an understanding of both the social and natural dimensions of climate change to be equipped to effectively address this multi-faceted, multi-scalar socio-environmental issue as it relates to their careers and lives. Climate change refers to long term shifts in temperature and weather patterns. It has social drivers and social impacts that are characterized by inequality from the local to the global scale. This micro certificate in Social Dimensions of Climate Change will prepare students to understand and address in their personal and professional lives some of the myriad aspects of climate change, a challenge that many deem to be the greatest of our time. Students will primarily learn about social science theories and methods related to this issue, and they will be able to gain some background in natural science aspects of climate change as part of this certificate. Students who complete this certificate will gain foundational knowledge about climate change, preparing them to work to address climate change, regardless of their career path, in academic, government, nonprofit, and corporate settings. This certificate will allow students to highlight this training on their transcripts and resumes.

The Sociology Program developed and began offering (in fall semester 2023) the course SOC 3300: Sociology of Climate Change. The Sociology Program at USU has a historically strong and internationally well-regarded specialization in Environment and Community, and we have at least seven faculty members in the Sociology and Anthropology Department who specialize in studying climate change and related social issues.

Upon successful completion of this certificate, students will be able to:

1. Demonstrate an understanding of climate change from a sociological perspective, including understanding the social drivers and social consequences of climate change.
2. Explain how environmental issues are inherently social issues, and identify key conflicts and stakeholders.
3. Apply diverse disciplinary perspectives to understand socio-environmental issues including climate change from disciplines within the social sciences and/or humanities.
4. Articulate a basic understanding of climate change through a natural science lens, to complement interdisciplinary understandings from the social sciences and/or humanities.
5. Analyze and critically evaluate proposed ways to address climate change and the social motivations behind them.

Institutional procedures included faculty and committee meetings to discuss and design the certificate, with input from multiple parties across the university. The micro certificate will be comprised primarily of courses we already offer in Sociology and Anthropology, with the option to take natural science focused elective courses outside the department. Courses will be offered in varying formats in line with USU course delivery methods (e.g. in-person, connect, hybrid, online, and virtual) to accommodate the needs of Logan main campus students, students at Statewide Campuses, and online/Distance Education students.

The Social Dimensions of Climate Change Institutional Certificate of Proficiency builds on, makes connections between, and coincides with the expertise of our faculty and the needs of our students and our state. In addition, USU was recently selected as an Anchor Partner in the Jobs for the Future (JFF) Quality Green Jobs Regional Challenge. USU's participation will be coordinated by Sustainability Program Manager, Caitlin McLennan, who has voiced support for this certificate for its role in preparing students for jobs in fields related to the environment and climate change, including those related to USU Statewide Campuses' work on renewable energy production.

In Utah, there is a need for students, workers, and citizens with an understanding of climate change as a socio-environmental issue. This certificate will prepare our students to be engaged citizens knowledgeable in these areas, and it will prepare them to apply this knowledge in any career path they choose. According to the Utah Department of Public Safety's Utah Hazard Mitigation website, "It is likely that temperatures will increase through much of the twenty-first century, which will impact Utah's natural hazards including drought, flooding, extreme weather, wildfire, landslide, avalanche, and dam failure. Climate change will impact Utah's agricultural economy as increasingly hot temperatures impact the cattle's open grazing feed supply and stress livestock. Agriculture is 15% of Utah's economy and hotter summers and less reliable water will also affect what can be grown in arid Utah with an economic impact of \$21 billion annually" (<https://hazards.utah.gov/climate-change/>). In addition, the Utah Departments of Public Health, Disease Control and Prevention, and Bureau of Epidemiology put out a report titled, "Climate Change and Public Health in Utah," which provides a report on the influence of climate change and other environmental factors on health in Utah (<https://health.utah.gov/enviroepi/publications/Climate%20Change%20Booklet%20WEB%20compressed.pdf>). Through this proposed certificate, students will learn about and have opportunities to become involved in community-based solutions for mitigating and adapting to climate change. One route of pursuing these partnerships will be through the Community and Natural Resources Institute (CANRI) (<https://chass.usu.edu/sociology/canri/index>) which is housed in the College of Humanities and Social Sciences, and which is comprised of and led by faculty in both the social and natural sciences.

This micro certificate will benefit USU and USHE by enabling students from Utah, as well as out-of-state students pursuing higher education in Utah to receive the training they need to contribute to climate change mitigation and adaptation efforts in the state and beyond, in a variety of careers.

The Social Dimensions of Climate Change Institutional Certificate of Proficiency will have one required course: SOC 3300 Sociology of Climate Change. To complete the micro certificate students will then need to take two additional courses, one in each of two areas, A Deeper Dive into Socio-Environmental Issues and Climate Change through a Natural Sciences Lens. Many of the elective courses also fulfill general education requirements. The micro certificate is designed to be able to be completed quickly, by students in any major, especially those not already focused on environment-society relationships.

The Social Dimensions of Climate Change certificate will help the department, college, and university better serve students interested in addressing complex socio-environmental issues, regardless of what career path they pursue. Our objective is for the students who complete the certificate to be able to apply what they learn to diverse career contexts where more climate change awareness is needed. We need people who can bring up climate change related issues in educated ways when they are working as economists, entrepreneurs, and nurses for example. These micro certificates will also contribute to preparing them to participate more effectively as educated citizens in public debate about climate change. Specifically, having a formalized micro certificate will increase awareness among students of the many course offerings in the social sciences and that are relevant to the field, including courses on broader social inequalities where the relevance may not be immediately obvious from the catalog description. Increasing awareness will help students, particularly those in colleges other than USU's College of Humanities and Social Sciences, to select their electives and general education courses strategically. The micro certificate will also allow students who have taken these courses to easily demonstrate their social science training on their transcripts and resumes. Finally, this micro certificate will raise awareness among students who may be considering advanced degrees in this area, drawing attention to USU's Master's and PhD programs in Sociology and other fields related to climate change and other complex socio-environmental issues.

**Labor Market Demand (if applicable)**

Students who complete this certificate will be more knowledgeable about and better prepared to support efforts to address climate change in their communities and across governance-scales. They will gain the skills to work in climate change related fields, including government, nonprofit, and corporate positions. According to the Utah DWS Occupation Information Data Viewer (<https://jobs.utah.gov/jsp/utalmis/#/>) an example of a career for which training in social dimensions of climate change is useful would be a Climate Change Policy Analyst, and it can provide the foundation for opportunities in many other related areas. There are substantial numbers of job openings in Utah in these fields, according to the website (<https://jobs.utah.gov/jsp/utalmis/#/>). Having this credential in addition to their major field of study will make USU graduates more competitive for graduate/professional school and on the job market.

**Consistency with Institutional Mission & Institutional Impact\***

The mission of USU is to be a premier land grant university by fostering the principle that academics come first, by cultivating diversity of thought and culture, and by serving the public through learning, discovery, and engagement. The Social Dimensions of Climate Change Institutional Certificate of Proficiency highlights and makes connections between academic disciplines by building bridges across the social and natural sciences. It serves the public by providing necessary training in understanding climate change, both social and natural components, in order to better prepare the next generation to meet societal challenges. As explained above, the proposed micro certificate will serve the needs of USU students, and therefore be very much in line with USU's mission to empower our students to lead successful lives and contribute to their communities.

The proposed certificate primarily serves to recognize and formalize teaching and research that is already occurring at USU. The courses that make up the Social Dimensions of Climate Change Institutional Certificate of Proficiency are already taught on a regular basis. The creation of this micro certificate provides benefits such as increasing class enrollment, improving student skills, offering opportunities for interdisciplinary experiences, and providing a way for students to highlight those skills on transcripts and resumes but costs little in terms of new class creation and faculty time.

Several units and programs in the USHE system and across USHE institutions including USU have offerings related to the environment and climate change. For example, the University of Utah offers a certificate in climate change through the Geography Program and USU's Environment and Society department is proposing a new Climate Change Solutions certificate. We have been in contact with the creators of the USU certificate and we see our offerings as distinct but complementary. Our proposed micro certificate is more narrowly focused on social dimensions of climate change and climate change as a socio-environmental issue, with two of the three required courses in these areas, as well as an introductory understanding to the natural dimensions, and thus it is unique and complementary to other offerings. Our micro certificate in Social Dimensions of Climate Change is only 9 credits and could lead to further study and completion of additional complementary certificates moving forward.

**Finances\***

The Social Dimensions of Climate Change Institutional Certificate of Proficiency is comprised of classes that are already offered at USU and requires no new facilities or staff. No budgetary impact is anticipated.

**SECTION III: CURRICULUM (if applicable)**

**Program Curriculum Narrative**

To be equipped to effectively address the multi-faceted, multi-scalar issue of climate change, students, regardless of the career path they choose, need an understanding of both the social and natural dimensions of this socio-environmental issue. Climate change refers to long term shifts in temperature and weather patterns. It has social drivers and social impacts which are characterized by inequality from the local to the global scale. This Institutional Certificate of Proficiency in Social Dimensions of Climate Change will prepare students, including and especially those not focusing on environment and society relationships with their major area of study, to understand and address in their personal and professional lives some of the myriad aspects of climate change, a challenge many deem to be the greatest of our time. Students will learn about social science theories and methods related to studying this issue and gain some background knowledge on natural science components. Students who complete this certificate will be better prepared to work to address climate change moving forward and contribute insights about climate change to various fields, including in academic, government, nonprofit, and corporate settings.

The certificate requires the completion of 9 credits with a grade of C or better. Courses taken pass/fail will not count towards the micro certificate.

The certificate is available to students on the Logan campus, as well as through USU's Statewide Campuses and Distance Education program.

**Attach** (if applicable) completed [Program Curriculum](#) and [Degree Map](#) to this request by clicking on the Files  icon located on the right-hand side of the screen.

## **SUBMIT AND APPROVE THE PROPOSAL**

**Click on the SAVE ALL CHANGES button below.**

**Scroll to the top left and click on the LAUNCH  icon to launch your proposal.**

# CHASS - Sociology and Anthropology - Social Dimensions of Climate Change and Environmental Justice Minor

## 4.1.a R401 ABBREVIATED PROGRAM PROPOSAL

### R401-Abbreviated Program Proposal

## HELPS AND HINTS FOR COMPLETING R401 PROPOSALS

[Writing Guidelines/Suggestions](#)

[USHE R401 Policy](#)

[Process and Flowchart](#)

## COLLEGE AND DEPARTMENT INFORMATION

Click on the college(s) and department(s) that are included on this request

COLLEGE (include all cross listed colleges)\*

DEPARTMENT (include all cross listed departments)\*

Current Title (if applicable)\* Not applicable

Proposed Title\* Social Dimensions of Climate Change and Environmental Justice Minor

## CIP Code

Enter the Correct CIP Code by Using the Following Link: [Classification Instruction Programs](#)

CIP Code (6-digits)\* 45.0101

Minimum Number of Credits (if applicable)\* 15

Maximum Number of Credits (if applicable)\* 21

Type of Degree: (BA, BS, etc.)\* Minor

### REQUEST

## TYPE OF CHANGE BEING REQUESTED

Click the change(s) that best reflect your proposal.

- New Academic Program:**
- Certificates of Completion
  - Certificates of Proficiency
  - CTE - Certificate of Completion
  - CTE - Certificate of Proficiency
  - Institutional Certificate of Proficiency
  - K-12 Endorsement Program
  - Minor
  - New Emphasis for Existing Program
  - Out of Service Area Delivery Program (attach signed MOU)
  - Other

- Post-Baccalaureate Certificate
- Post-Masters Certificate

- Existing Academic Program Changes:**
- Name Change of Existing Program
  - Program Restructure (with or without Consolidation)
  - Program Transfer to a New Academic Department or Unit
  - Program Suspension (on hold-not listed in catalog)
  - Program Discontinuation (permanent program removal)
  - Reinstatement of Previously Suspended Program
  - Out-of-Service Area Delivery Program (attach signed MOU)

- Administrative Unit Changes:**
- Name Change of Existing Unit
  - Administrative Unit (Transfer)
  - Administrative Unit (Restructure-with or without Consolidation)
  - Administrative Unit (Suspension-on hold)
  - Administrative Unit (Discontinuation-permanent unit removal)
  - Reinstatement of Previously Suspended Administrative Unit
  - Reinstatement of Previously Discontinued Administrative Unit

**Other: (explain change)**

### ADDITIONAL APPROVALS (if applicable)

**Graduate Council Approval\***  Yes  
 No

**Teacher Licensure Program Approval (STEP)\***  Yes  
 No

### SECTION I: THE REQUEST

**R401 Purpose\*** The Department of Sociology & Anthropology at Utah State University (USU) is requesting approval for a 15-credit minor in Social Dimensions of Climate Change and Environmental Justice. The minor will be available to sociology undergraduate majors and minors (approximately 1,200 students), undergraduate students in the College of Humanities and Social Sciences, and undergraduate students across USU (approximately 25,000 students). The required 15-credits will consist of two required courses and three electives that students will be able to select from a list of options. This minor consists entirely of existing courses in Sociology, the College of Humanities and Social Sciences, and USU course offerings more broadly. Courses will be offered in varying formats in line with USU course delivery methods (e.g. in-person, connect, hybrid, online, and virtual) to accommodate the needs of Logan main campus students, students at Statewide Campuses, and online/Distance Education students. Overlaps with other departments whose courses count toward this minor have been discussed with other departments and the appropriate department heads have approved all included courses.

### SECTION II: PROGRAM PROPOSAL

## Proposed Action & Rationale\*

### Brief Description of the Unit Requesting the Action:

The Sociology Program within the Department of Sociology and Anthropology at USU grants undergraduate degrees (BA, BS, and minor), Master's Degrees, and Doctoral Degrees. In addition, many of our courses meet USU's general education requirements for undergraduate students across the university, and many students from the undergraduate to graduate level in other programs and departments take our courses as electives. The Sociology Program also offers a fully online undergraduate major.

### Proposed Action:

We are requesting approval for a 15-credit minor in Social Dimensions of Climate Change and Environmental Justice housed in the Sociology Program within the Department of Sociology and Anthropology at USU. This 15-credit minor builds on two 9-credit micro certificates also currently being proposed by the Sociology Program, one in Environmental Justice and one in Social Dimensions of Climate Change. These 9-credit certificates will be stackable into the 15-credit minor proposed here, allowing students to achieve varying levels of certification and build on their interests in ways they can highlight on their transcripts and resumes.

### Rationale:

Students need an understanding of both the social and natural dimensions of climate change to be equipped to effectively address this multi-faceted, multi-scalar socio-environmental issue. Climate change refers to long term shifts in temperature and weather patterns. It has social drivers and social impacts that are characterized by and exacerbate inequality from the local to the global scale. In addition, there is an increasing need to address environmental issues including climate change in the state of Utah and beyond, and there is an increasing awareness of the need to take an approach that considers multiple stakeholders and issues of equity and justice. Environmental justice approaches prioritize fair and equitable outcomes and meaningful involvement and participation in response to environmental issues.

Many students attending and graduating from USU are interested in contributing in these areas. This minor will allow students to gain training that will prepare them to contribute and allow them to highlight this training on their transcripts and resumes. Students who complete this stackable minor will be knowledgeable about and prepared to support environmental justice and efforts to address climate change in their communities and work in environment related fields, including government, nonprofit, and corporate positions. This minor will also be useful for students not necessarily pursuing majors or careers directly related to the environment, as it will allow them to apply this environment-related training and knowledge when applicable in a variety of settings.

The two required courses for this minor are SOC 3310: Environmental Justice and SOC 3300: Sociology of Climate Change. The Sociology Program at USU has a historically strong and internationally well-regarded specialization in Environment and Community, and we have at least seven faculty members who specialize in studying Social Dimensions of Climate Change and Environmental Justice. Further, our entire program focuses on and offers courses in the study of related social issues.

Upon successful completion of this minor, students will be able to:

1. Demonstrate an interdisciplinary understanding of the social and other drivers and consequences of climate change and environmental issues.
2. Apply diverse perspectives such as those from the social sciences, humanities, and natural sciences, to climate change and related socio-environmental issues.
3. Explain the importance of approaches to addressing climate change and environmental issues that incorporate environmental and climate justice.

Institutional procedures included faculty and committee meetings to discuss and design the stackable minor, with input from multiple parties across the university. The minor will be comprised of courses we already offer in Sociology, with the option to take elective courses outside Sociology. Courses will be offered in varying formats in line with USU course delivery methods (e.g. in-person, connect, hybrid, online, and virtual) to accommodate the needs of Logan main campus students, students at Statewide Campuses, and online/Distance Education students.

The Social Dimensions of Climate Change and Environmental Justice minor builds on, makes connections between, and coincides with the expertise of our faculty and the needs of our students and our state. In addition, USU was recently selected as an Anchor Partner in the Jobs for the Future (JFF) Quality Green Jobs Regional Challenge. USU's participation will be coordinated by Sustainability Program Manager, Caitlin McLennan, who has voiced support for this minor given its role in preparing students for jobs in fields related to the environment and climate change, including those related to USU Statewide Campuses work on renewable energy production.

In Utah, there is a need for students with an understanding of climate change as a socio-environmental issue. According to The Utah Department of Public Safety's Utah Hazard Mitigation website, "It is likely that temperatures will increase through much of the twenty-first century, which will impact Utah's natural hazards including drought, flooding, extreme weather, wildfire, landslide, avalanche, and dam failure. Climate change will impact Utah's agricultural economy as increasingly hot temperatures impact the cattle's open grazing feed supply and stress livestock. Agriculture is 15% of Utah's economy and hotter summers and less reliable water will also affect what can be grown in arid Utah with an economic impact of \$21 billion annually" (<https://hazards.utah.gov/climate-change/>). In addition, the Utah Departments of Public Health, Disease Control and Prevention, and Bureau of Epidemiology put out a report titled, "Climate Change and Public Health in Utah," which describes the influence of climate change and other environmental factors on health in Utah (<https://health.utah.gov/enviroepi/publications/Climate%20Change%20Booklet%20WEB%20compressed.pdf>). Students will learn about and have the opportunity to become involved in community-based solutions for mitigating and adapting to climate change. One route of pursuing these community partnerships will be through the Community and Natural Resources Institute (CANRI) (<https://chass.usu.edu/sociology/canri/index>) which is housed in the College of Humanities and Social Sciences and which is made up of and led by faculty in both the social and natural sciences.

There is also a need for students with training in environmental justice approaches. Federal and state agencies are increasingly incorporating environmental justice as a framework that guides their work. For example, according to their website, the Utah Department of Environmental Quality "is committed to environmental justice in Utah, both through the continuation of current efforts and improving on and identifying areas of our work where we can address the environmental conditions that disproportionately impact disadvantaged and underserved communities. We will accomplish this by partnering with impacted communities and engaging with policymakers to find collaborative, community-based solutions" (<https://deg.utah.gov/general/environmental-justice-in-utah>). In addition, the U.S. Environmental Protection Agency (EPA) recently launched an Environmental Justice study of Salt Lake City's west side, reported on by the Salt Lake Tribune (<https://www.sltrib.com/news/environment/2022/10/20/epa-is-launching-an/>). This minor will benefit USU and USHE by enabling students from Utah and out-of-state students pursuing higher education in Utah to receive the training they need to contribute to environmental justice and climate change



mitigation and adaptation efforts in the state and beyond.

The two required courses for this minor are SOC 3310: Environmental Justice and SOC 3300: Sociology of Climate Change, which are also the two required courses for the two micro certificates, Environmental Justice and Social Dimensions of Climate Change. To complete the minor students will then need to take three additional courses, choosing one course in three of the following five areas, Axes of Inequality, Social Change, A Deeper Dive into Social Science Perspectives on Socio-Environmental Issues, A Deeper Dive into Humanities Perspectives on Socio-Environmental Issues, and Climate Change through a Natural Sciences Lens. Many of the elective courses also fulfill general education requirements. The minor is designed to build upon the two micro certificates, allowing students to pursue their interests in these topics in more depth. This minor is available to and can be completed by students in any major.

The Social Dimensions of Climate Change and Environmental Justice minor will help the department, college, and university better serve students interested in addressing complex socio-environmental issues and employing approaches that incorporate considerations of equity. Specifically, having a formalized minor that builds on two micro certificates will increase awareness among students of the many course offerings in the social sciences and that are relevant to the field, including courses on broader social inequalities where the relevance may not be immediately obvious from the catalog description. Increasing awareness will help students, particularly those in colleges other than USU's College of Humanities and Social Sciences, to strategically select their electives and general education courses. The minor will also allow students who have taken these courses to easily demonstrate their social science training on their transcripts and resumes. Finally, this minor will raise awareness among students who may be considering advanced degrees in this area, drawing attention to USU's Master's and PhD programs in Sociology and other fields related to climate change, environmental justice, and other complex socio-environmental issues.

**Labor Market Demand (if applicable)**

Students who complete this minor will be knowledgeable about and prepared to support efforts to address climate change and take environmental justice approaches in their communities and across governance scales. They will possess the skills necessary to work in climate change and equity related fields, including government, nonprofit, and corporate positions. According to the Utah DWS Occupation Information Data Viewer, (<https://jobs.utah.gov/jsp/utalmis/#/>) training in social dimensions of climate change is useful for careers such as Climate Change Policy Analysts in addition to providing the foundation for many related careers. Additionally, according to the Utah DWS Occupation Information Data Viewer (<https://jobs.utah.gov/jsp/utalmis/#/>) training in environmental justice is useful for the following careers: Lawyer, Environmental Engineer and Environmental Engineering Technologist or Technician, Environmental Compliance Inspector, Environmental Scientist and Specialist including Health-related, Environmental Science and Protection Technician including Health-related, Environmental Science Teacher, Criminal Justice and Law Enforcement Teacher, Environmental Restoration Planner, and Environmental Economist. There are substantial numbers of job openings in Utah in these fields, according to the website (<https://jobs.utah.gov/jsp/utalmis/#/>). Whether they are pursuing majors and careers directly related to the environment or not, having this credential in addition to their major field of study will make USU graduates more competitive for graduate/professional school, as well as on the job market.

**Consistency with Institutional Mission & Institutional Impact\***

The mission of USU is to be a premier land grant university by fostering the principle that academics come first, by cultivating diversity of thought and culture, and by serving the public through learning, discovery, and engagement. The Social Dimensions of Climate Change and Environmental Justice minor highlights and makes connections between academic disciplines by building bridges across the social and natural sciences. It serves the public by providing necessary training in understanding climate change, both social and natural components, in order to better prepare the next generation to meet societal challenges. As explained above, the proposed minor will serve the needs of USU students, and therefore be very much in line with USU's mission to empower our students to lead successful lives and contribute to their communities.

The proposed minor primarily serves to recognize and formalize teaching and research that is already occurring at USU. The courses that make up the Social Dimensions of Climate Change and Environmental Justice minor are already taught on a regular basis. The creation of this minor provides benefits such as increasing class enrollment, improving student skills, offering opportunities for interdisciplinary experiences, and providing a way for students to highlight those skills on transcripts and resumes but costs little in terms of new class creation and faculty time.

Several units and programs in the USHE system and across USHE institutions including USU have offerings related to the environment and climate change. For example, the University of Utah offers a certificate in climate change through the Geography Program and USU's Environment and Society department is proposing a new Climate Change Solutions certificate. We have been in contact with the creators of the USU certificate and we see our offerings as distinct but complementary. Our proposed minor focuses on climate change as a socio-environmental issue and environmental justice approaches and thus is unique and complementary to other offerings.

**Finances\***

The Social Dimensions of Climate Change and Environmental Justice minor is comprised of classes that are already offered at USU and requires no new facilities or staff. No budgetary impact is anticipated.

**SECTION III: CURRICULUM (if applicable)**

**Program Curriculum Narrative**

To be equipped to effectively address the multi-faceted, multi-scalar issues of Social Dimensions of Climate Change and Environmental Justice, students need an understanding of both the social and natural dimensions of this socio-environmental issue. Climate change refers to long term shifts in temperature and weather patterns. It has social drivers and social impacts that are characterized by inequality from the local to the global scale. Environmental justice approaches focus on fair and equitable outcomes and meaningful involvement and participation in response to environmental issues. Environmental justice is intersectional and interdisciplinary and relates to inequality based on class, gender, race, ethnicity, Indigeneity, sexuality, disability, etc., and spans local to global scales. This minor in Social Dimensions of Climate Change and Environmental Justice will prepare students to understand and address in their personal and professional lives some of the myriad aspects of climate change, a challenge that many deem to be the greatest of our time. Students will learn about natural and social science theories and methods related to studying this issue. It will also prepare students to understand and, if desired, support environmental justice efforts in their personal and professional lives. Students will learn about environmental justice theories, efforts, and case studies from the local to the global level and will gain a deeper understanding of the related processes of inequality. Students who complete this minor will gain foundational knowledge about Social Dimensions of Climate Change and Environmental Justice, preparing them to work to address climate change and other environmental issues with an approach that considers equity, including in academic, government, nonprofit, and corporate settings.

The minor requires the completion of 15-credits with a grade of C or better. Courses taken pass/fail will not count towards the minor.

The minor is available to students on the Logan campus, as well as through USU's Statewide Campuses and Distance Education program.

**Attach** (if applicable) completed [Program Curriculum](#) and [Degree Map](#) to this request by clicking on the Files  icon located on the right-hand side of the screen.

## **SUBMIT AND APPROVE THE PROPOSAL**

**Click on the SAVE ALL CHANGES button below.**

**Scroll to the top left and click on the LAUNCH  icon to launch your proposal.**

# COS - Geosciences - Earth Science Teaching - BA BS

## 4.1.a R401 ABBREVIATED PROGRAM PROPOSAL

### R401-Abbreviated Program Proposal

## HELPS AND HINTS FOR COMPLETING R401 PROPOSALS

[Writing Guidelines/Suggestions](#)

[USHE R401 Policy](#)

[Process and Flowchart](#)

## COLLEGE AND DEPARTMENT INFORMATION

Click on the college(s) and department(s) that are included on this request

COLLEGE (include all cross listed colleges)\*

DEPARTMENT (include all cross listed departments)\*

Current Title (if applicable)\* Earth Science Composite Teaching - BA BS

Proposed Title\* Earth Science Teaching - BA BS

## CIP Code

Enter the Correct CIP Code by Using the Following Link: [Classification Instruction Programs](#)

CIP Code (6-digits)\* 13.1337

Minimum Number of Credits (if applicable)\* 120

Maximum Number of Credits (if applicable)\* 126

Type of Degree: (BA, BS, etc.)\* BA, BS

### REQUEST

## TYPE OF CHANGE BEING REQUESTED

Click the change(s) that best reflect your proposal.

- New Academic Program:**
- Certificates of Completion
  - Certificates of Proficiency
  - CTE - Certificate of Completion
  - CTE - Certificate of Proficiency
  - Institutional Certificate of Proficiency
  - K-12 Endorsement Program
  - Minor
  - New Emphasis for Existing Program
  - Out of Service Area Delivery Program (attach signed MOU)
  - Post-Baccalaureate Certificate
  - ...

Post-Masters Certificate

- Existing Academic Program Changes:**
- Name Change of Existing Program
  - Program Restructure (with or without Consolidation)
  - Program Transfer to a New Academic Department or Unit
  - Program Suspension (on hold-not listed in catalog)
  - Program Discontinuation (permanent program removal)
  - Reinstatement of Previously Suspended Program
  - Out-of-Service Area Delivery Program (attach signed MOU)

- Administrative Unit Changes:**
- Name Change of Existing Unit
  - Administrative Unit (Transfer)
  - Administrative Unit (Restructure-with or without Consolidation)
  - Administrative Unit (Suspension-on hold)
  - Administrative Unit (Discontinuation-permanent unit removal)
  - Reinstatement of Previously Suspended Administrative Unit
  - Reinstatement of Previously Discontinued Administrative Unit

**Other: (explain change)**

### ADDITIONAL APPROVALS (if applicable)

**Graduate Council Approval\***  Yes  
 No

**Teacher Licensure Program Approval (STEP)\***  Yes  
 No

### SECTION I: THE REQUEST

**R401 Purpose\*** The purpose of this request is to change the name of the Earth Science (Composite Teaching) - BA, BS degree program to Earth Science Teaching.

### SECTION II: PROGRAM PROPOSAL

**Proposed Action & Rationale\*** The current name of this degree program, Earth Science (Composite Teaching) - BA, BS, does not reflect changes made in required coursework during the last year in conformance with State of Utah mandates. Essentially, it no longer is a composite teaching degree. Consequently, it is requested that the name be changed simply to Earth Science Teaching to reflect the true nature of this degree accurately.

**Labor Market Demand (if applicable)** This proposal is requesting only to change the name of the Earth Science (Composite Teaching) - BA, BS degree program to Earth Science Teaching. Consequently, information on the Labor Market Demand does not seem applicable.

**Consistency with Institutional Mission & Institutional Impact\*** This proposal is requesting only to change the name of the Earth Science (Composite Teaching) - BA, BS degree program to Earth Science Teaching. Consequently, information on the Institutional Mission & Institutional Impact does not seem applicable.

**Finances\*** Changing the name of the Earth Science (Composite Teaching) - BA, BS degree program to Earth Science Teaching will have no financial impact whatsoever.

### SECTION III: CURRICULUM (if applicable)

**Program Curriculum Narrative** Not applicable.

**Attach** (if applicable) completed [Program Curriculum](#) and [Degree Map](#) to this request by clicking on the Files  icon located on the right-hand side of the screen.

## SUBMIT AND APPROVE THE PROPOSAL

Click on the **SAVE ALL CHANGES** button below.

Scroll to the top left and click on the **LAUNCH**  icon to launch your proposal.

## HSB - Management - Healthcare Management Minor

### 4.1.a R401 ABBREVIATED PROGRAM PROPOSAL

#### R401-Abbreviated Program Proposal

## HELPS AND HINTS FOR COMPLETING R401 PROPOSALS

[Writing Guidelines/Suggestions](#)

[USHE R401 Policy](#)

[Process and Flowchart](#)

## COLLEGE AND DEPARTMENT INFORMATION

Click on the college(s) and department(s) that are included on this request

COLLEGE (include all cross listed colleges)\*

DEPARTMENT (include all cross listed departments)\*

Current Title (if applicable)\* NA

Proposed Title\* Healthcare Management Minor

## CIP Code

Enter the Correct CIP Code by Using the Following Link: [Classification Instruction Programs](#)

CIP Code (6-digits)\* 51.0701

Minimum Number of Credits (if applicable)\* 12

Maximum Number of Credits (if applicable)\* 12

Type of Degree: (BA, BS, etc.)\* Minor

#### REQUEST

## TYPE OF CHANGE BEING REQUESTED

Click the change(s) that best reflect your proposal.

- New Academic Program:
- Certificates of Completion
  - Certificates of Proficiency
  - CTE - Certificate of Completion
  - CTE - Certificate of Proficiency
  - Institutional Certificate of Proficiency
  - K-12 Endorsement Program
  - Minor
  - New Emphasis for Existing Program
  - Out of Service Area Delivery Program (attach signed MOU)
  - Post-Baccalaureate Certificate
  - ...

Post-Masters Certificate

- Existing Academic Program Changes:**
- Name Change of Existing Program
  - Program Restructure (with or without Consolidation)
  - Program Transfer to a New Academic Department or Unit
  - Program Suspension (on hold-not listed in catalog)
  - Program Discontinuation (permanent program removal)
  - Reinstatement of Previously Suspended Program
  - Out-of-Service Area Delivery Program (attach signed MOU)

- Administrative Unit Changes:**
- Name Change of Existing Unit
  - Administrative Unit (Transfer)
  - Administrative Unit (Restructure-with or without Consolidation)
  - Administrative Unit (Suspension-on hold)
  - Administrative Unit (Discontinuation-permanent unit removal)
  - Reinstatement of Previously Suspended Administrative Unit
  - Reinstatement of Previously Discontinued Administrative Unit

**Other: (explain change)**

### ADDITIONAL APPROVALS (if applicable)

**Graduate Council Approval\***  Yes  
 No

**Teacher Licensure Program Approval (STEP)\***  Yes  
 No

### SECTION I: THE REQUEST

**R401 Purpose\*** Create a minor in Healthcare Management to prepare students for entry level jobs in the growing healthcare sector and admission to graduate programs in healthcare management.

### SECTION II: PROGRAM PROPOSAL

**Proposed Action & Rationale\*** The Huntsman School of Business (HSB) has, for several years, had a thriving Healthcare Management student organization resulting from student interest. Moreover, since 2014, at least 20 HSB students have gone on to leading graduate programs in healthcare management at institutions including the universities of Michigan, Minnesota, North Carolina, and Utah. The school also continues to place students in organizations in the healthcare field. Even absent academic programming, there is student interest in a field that has significant employment and professional growth potential.

The proposed minor will prepare students both within and outside the HSB with interest in this area, and provide students still exploring career opportunities with a path that currently only exists as an emphasis within the Management major that was created in AY 22-23. Collaboration with academic units outside the HSB now make it possible to offer a broader curriculum that can serve students from a variety of academic disciplines

**Labor Market Demand (if applicable)\*** Healthcare Management is a growing sector of the U.S. and Utah economies. According to the U.S. Bureau of Labor Statistics, between 2021 and 2031 there are anticipated to be

- over 56,000 openings for medical and health service managers annually
- an increase in employment of over 136,000, and
- projected employment growth of 28%, outpacing the 5% rate of overall job growth.

The Utah Department of Workforce Services rates the occupation outlook for Medical and Health Services Managers as five star, noting that the occupation 'is expected to experience faster than average employment growth with a high volume of annual job openings.'

**Consistency with Institutional Mission & Institutional Impact\*** The proposed program of study is consistent with both the HSB and USU's commitment to preparing students to effectively serve the state, nation, and world, and to be leaders in their chosen career paths.

**Finances\*** All of the courses are currently offered, either as part of the healthcare management emphasis in the Management degree, or as part of other programs across campus. It has been confirmed with all department heads in whose departments proposed courses reside, that capacity exists to absorb additional students. No new facilities, equipment etc. are needed.

### SECTION III: CURRICULUM (if applicable)

**Program Curriculum Narrative**

Minor in Healthcare Management

Required (6 credits)

MGT 4500 Principles of Healthcare Management (3 cr.)

MGT 4520 Healthcare Policy and Strategy (3 cr) - currently offered under MGT 4850: Special Topics in Management designation, proposal to create new course in process

Electives (6 credits)

ANTH 4130 Introduction to Medical Anthropology (3 cr.)

CMST 4700 Health Communication (3 cr.)

CMST 4750 Strategic Health Mesaging (3 cr.)

HEP 3800 Health Care Systems (3 cr.)

HEP 4000 Health Services Administration (3 cr.)

PHIL 3500 Healthcare Ethics (3 cr.)

MGT 4510 Innovation and Improvement in Healthcare Management (3 cr.)

PSY 3110 Health Psychology (3 cr.)

SOC 3330 Medical Sociology (3 cr.)

**Attach** (if applicable) completed [Program Curriculum](#) and [Degree Map](#) to this request by clicking on the Files  icon located on the right-hand side of the screen.

## **SUBMIT AND APPROVE THE PROPOSAL**

**Click on the SAVE ALL CHANGES button below.**

**Scroll to the top left and click on the LAUNCH  icon to launch your proposal.**

# QCNR - Environment and Society - Climate Change Solutions - Certificate of Proficiency

## 4.1.a R401 ABBREVIATED PROGRAM PROPOSAL

### R401-Abbreviated Program Proposal

## HELPS AND HINTS FOR COMPLETING R401 PROPOSALS

[Writing Guidelines/Suggestions](#)

[USHE R401 Policy](#)

[Process and Flowchart](#)

## COLLEGE AND DEPARTMENT INFORMATION

Click on the college(s) and department(s) that are included on this request

COLLEGE (include all cross listed colleges)\*

DEPARTMENT (include all cross listed departments)\*

Current Title (if applicable)\* Not Applicable

Proposed Title\* Climate Change Solutions - Certificate of Proficiency

## CIP Code

Enter the Correct CIP Code by Using the Following Link: [Classification Instruction Programs](#)

CIP Code (6-digits)\* 03.0103

Minimum Number of Credits (if applicable)\* 16

Maximum Number of Credits (if applicable)\* 18

Type of Degree: (BA, BS, etc.)\* Certificate of Proficiency

### REQUEST

## TYPE OF CHANGE BEING REQUESTED

Click the change(s) that best reflect your proposal.

- New Academic Program:**
- Certificates of Completion
  - Certificates of Proficiency
  - CTE - Certificate of Completion
  - CTE - Certificate of Proficiency
  - Institutional Certificate of Proficiency
  - K-12 Endorsement Program
  - Minor
  - New Emphasis for Existing Program
  - Out of Service Area Delivery Program (attach signed MOU)
  - Post-Baccalaureate Certificate
  - ...



Post-Masters Certificate

**Existing Academic Program Changes:**

- Name Change of Existing Program
- Program Restructure (with or without Consolidation)
- Program Transfer to a New Academic Department or Unit
- Program Suspension (on hold-not listed in catalog)
- Program Discontinuation (permanent program removal)
- Reinstatement of Previously Suspended Program
- Out-of-Service Area Delivery Program (attach signed MOU)

**Administrative Unit Changes:**

- Name Change of Existing Unit
- Administrative Unit (Transfer)
- Administrative Unit (Restructure-with or without Consolidation)
- Administrative Unit (Suspension-on hold)
- Administrative Unit (Discontinuation-permanent unit removal)
- Reinstatement of Previously Suspended Administrative Unit
- Reinstatement of Previously Discontinued Administrative Unit

**Other: (explain change)**

**ADDITIONAL APPROVALS (if applicable)**

**Graduate Council Approval\***  Yes  
 No

**Teacher Licensure Program Approval (STEP)\***  Yes  
 No

**SECTION I: THE REQUEST**

**R401 Purpose\*** This R401 is for the establishment of a new "Climate Change Solutions" Certificate of Proficiency to be offered by the Department of Environment and Society. The target audience for the proposed certificate is students enrolled at the Logan campus.

**SECTION II: PROGRAM PROPOSAL**

**Proposed Action & Rationale\***

The Department of Environment and Society (ENVS), in the S.J. and Jessie E. Quinney College of Natural Resources, is an interdisciplinary department with a majority of its nineteen (19) faculty identifying as environmental social scientists or as geographers. Other faculty within the department identify as interdisciplinary scientists who bridge the social and biophysical sciences and one faculty identifies as an ecologist. Fourteen faculty are based on the Logan Campus and five are based on either the Moab or Blanding Campus. The Department currently offers three BS degrees (Environmental Studies, Recreation Resource Management, and Geography), one Certificate of Proficiency in Applied Geographic Information Science, two graduate-level certificates, and MS and PhD degrees in Environment and Society, Geography, Recreation Resource Management, and Ecology.

ENVS is proposing the creation of a new certificate of proficiency that will prepare USU undergraduate students from across the university to contribute to addressing climate change. The certificate curriculum focuses on developing knowledge and skills for climate change mitigation, adaptation and resilience. It is designed to be easily completed alongside a variety of majors. Students pursuing this certificate will learn about climate change impacts, climate and environmental justice, communicating about climate change, strategies for mitigating greenhouse gas emissions, and adaptation and resilience responses and planning. Students also will learn about climate policy and the role of governments, businesses, civil society, and individuals in addressing climate change at local to global scales.

Despite widespread recognition that "solving" climate change is unlikely in the foreseeable future, the proposed certificate title "Climate Change Solutions" uses the term "solutions" because it is the term used by the Intergovernmental Panel on Climate Change (IPCC) to refer to "effective, feasible and just means of reducing climate risk, increasing resilience and pursuing other climate-related societal goals" (IPCC AR6 WGII report, chapter 1, p. 158, [https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC\\_AR6\\_WGII\\_Chapter01.pdf](https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_Chapter01.pdf)). This proposed new certificate is framed in this context and is designed to prepare students to engage in "wide-ranging actions that might be involved in a transition to resilience" (IPCC AR6 WGII report, chapter 1, p. 158, <https://www.ipcc.ch/assessment-report/ar6/>).

Coursework (described in greater detail in the Program Curriculum Narrative section below) will lead to the following learning outcomes for students, with completing students able to:

1. Describe current and anticipated impacts of climate change on human and human-environment systems.
2. Conceptualize the role of humans and human systems as drivers of biogeochemical changes in biophysical systems.
3. Formulate strategies for climate change mitigation and adaptation at a variety of scales (societal, community, individual business, etc.).
4. Apply systems thinking to solving the global challenges of climate change.
5. Apply analytics to a climate change adaptation and mitigation context.

In addition to coursework, students will have opportunities to participate in hands-on research and projects related to climate change mitigation and adaptation. This could involve fieldwork, data analysis, and modeling, as well as engagement with stakeholders and communities affected by climate change.

The proposed certificate was developed by the ENVS departmental faculty, led by a core working group. The proposed curriculum was shared with the department heads of all departments delivering any of the proposed included courses, to seek permission and solicit any concerns. Permission was gained to include all the listed courses. The proposal was also discussed with the College leadership team, including the Ecology Center Director. Related programs at USU are delivered by the Department of Plants, Soils, and Climate, whose head was one of those consulted, with a Climate Science BS, MS, and PhD, as well as a Climate Change and Energy minor and a BS in Soils and Sustainable Land Systems: Applied Climatology Option. These programs emphasize the natural science, whereas the proposed Certificate emphasizes the social and communications sciences; there is a strong complementarity in programming. USU also has a Climate Adaptation Science Specialization at the graduate level, delivered across multiple colleges and coordinated by the Ecology Center. The Department of Sociology and Anthropology has communicated with the ENVS Department that they are proposing a 9-credit undergraduate institutional certificate related to climate change.

The recent addition of several new ENVS courses enables the effective development and delivery of this proposed new certificate. Most importantly, the addition to the faculty of Dr. Brooke Osborne, a global climate change ecologist, allows the Department to develop a new integrative course on the Ecology of Global Climate Change, which will serve as one of the core courses for the Certificate. Other new skills-building courses in ENVS on Sustainability Metrics (ENVS 4200) and Building Community Environmental Resilience (ENVS 4030) and a new Sociology course on the Sociology of Climate Change (SOC 3300, currently pending approval) to be delivered regularly by the Department of Sociology and Anthropology further support the development of this Certificate.

The Certificate will be of benefit to USU and USHE through the enhanced service to USU students. The presence of a Climate Change Solutions Certificate of Proficiency may lead to recruitment of new students to USU; however, the primary expectation is that it will attract students already at USU who are interested in gaining a credential in addressing climate change as a skills-oriented addition to their major.

**Labor Market Demand (if applicable)**

Graduates of the certificate program will be well-equipped to pursue careers in various climate-change-related fields, including environmental policy, sustainability consulting, renewable energy development, and climate adaptation-related research and management, or they will be prepared to help lead climate change solutions from within a full range of other careers. They will be prepared to work in this context for the private for-profit sector, government agencies, NGOs, or international organizations. With this broad applicability of the certificate across many jobs and careers, it is difficult to map to specific occupation outlook data.

However, in 2021 the Environmental and Energy Study Institute (EESI) (founded in 1984 by a bipartisan group of members of Congress) published the "Adaptation Jobs Explainer: Understanding this Critical and Growing Workforce" (<https://www.eesi.org/articles/view/adaptation-jobs-explainer-understanding-this-critical-and-growing-workforce>) to examine growth of jobs in climate adaptation and resilience. EESI notes that "adaptation jobs range across many sectors and industries. There is demand for adaptation jobs across the United States, and adaptation employment is growing... There are no Bureau of Labor Statistics Standard Occupational Classification (SOC) codes designed for adaptation and resilience jobs." Additionally, "...adaptation and resilience work is spread out across multiple industries and sectors, and the skills to make companies, governments, and organizations more resilient to climate impacts can be incorporated into many different types of jobs." They note that responsibilities for climate action are being added to the responsibilities of many professions, and that "adaptation and resilience jobs can also fall anywhere along the adaptation categories of action: measure and learn, plan, fund and invest, develop and deploy technology, communicate and engage, build physical infrastructure, shift management practices and recurring behavior, and change policy and law." They cite the Climate Change Business Journal,

which "placed the value of the U.S. adaptation and resilience industry at \$2.4 billion in 2019."

**Consistency with Institutional Mission & Institutional Impact\***

This proposed Climate Change Solutions - Certificate of Proficiency supports the USU mission learning, discovery, and engagement. No faculty or staff structures will be impacted.

A few other USHE schools have similar or related programs in place. The University of Utah offers an 18-credit Climate Change Certificate through the Geography Department, with a greater emphasis on the natural science (physical geography) of climate change and lesser emphasis on applied skills for climate change solutions. Weber State University has a Climate Science Track within their Geography BS that has subfield options, including in climate policy and planning, climate communications, technical skills, and the climate system. Searches for UVU, SUU, Snow College, SLCC, and Utah Tech did not turn up comparable programs.

**Finances\***

No new costs or savings are anticipated with this proposed action. Courses included in the certificate are expected to be able to accommodate the expected modest increase in course registrations.

**SECTION III: CURRICULUM (if applicable)**

**Program Curriculum Narrative**

The proposed curriculum consists of a core set of 12 credits, in which there is some student choice among courses that provide theory and application directly related to climate change adaptation and mitigation. Students select two additional courses, one from a set of "affiliated knowledge and communication" electives (3 credits) and one from a set of "analytical skills electives" (1-3 credits). The variability in the total credits reflects an option for students to complete an internship or undergraduate research for as few as 1 credit or as many as 3 credits. Approved internship or undergraduate research would be related to climate change mitigation, adaptation, or resilience.

One new ENVS course, with a tentative course title "Ecology of Global Climate Change," is included in the curriculum. This course will be submitted for approval effective for Summer/Fall 2024. The existing course ENVS 2340, currently titled "Natural Resources and Society" may have a course title change to reflect the increased content focused on climate change.

**Attach** (if applicable) completed [Program Curriculum](#) and [Degree Map](#) to this request by clicking on the Files  icon located on the right-hand side of the screen.

## SUBMIT AND APPROVE THE PROPOSAL

Click on the **SAVE ALL CHANGES** button below.

Scroll to the top left and click on the **LAUNCH**  icon to launch your proposal.

**Utah System of Higher Education  
New Academic Program Proposal  
Cover/Signature Page - Full Template**

**Institution Submitting Request:** Utah State University

**Proposed Program Title:** Environmental Science & Sustainability

**Are There New Emphases:** Yes  No

**Names of New Emphases (Separated by Commas):**

**Sponsoring School, College, or Division:** S.J. & Jessie E. Quinney College of Natural Resources

**Sponsoring Academic Department(s) or Unit(s):** Department of Environment and Society

**Classification of Instructional Program Code<sup>1</sup>:** 03.0104

**Min/Max Credit Hours Required of Full Program:** 74 / 84

**Proposed Beginning Term<sup>2</sup>:** Fall 2024

**Institutional Board of Trustees' Approval Date:**

**Program Type (check all that apply):**

<input type="checkbox"/> (AAS)	Associate of Applied Science Degree
<input type="checkbox"/> (AA)	Associate of Arts Degree
<input type="checkbox"/> (AS)	Associate of Science Degree
<input type="checkbox"/>	Specialized Associate Degree (specify award type <sup>3</sup> : )
<input type="checkbox"/>	Other (specify award type <sup>3</sup> : )
<input type="checkbox"/> (BA)	Bachelor of Arts Degree
<input checked="" type="checkbox"/> (BS)	Bachelor of Science Degree
<input type="checkbox"/> (BAS)	Bachelor of Applied Science Degree
<input type="checkbox"/>	Specialized Bachelor Degree (specify award type <sup>3</sup> : )
<input type="checkbox"/>	Other (specify award type <sup>3</sup> : )
<input type="checkbox"/> (MA)	Master of Arts Degree
<input type="checkbox"/> (MS)	Master of Science Degree
<input type="checkbox"/>	Specialized Master Degree (specify award type <sup>3</sup> : )
<input type="checkbox"/>	Other (specify award type <sup>3</sup> : )
<input type="checkbox"/>	Doctoral Degree (specify award type <sup>3</sup> : )
<input type="checkbox"/>	K-12 School Personnel Program
<input type="checkbox"/>	Out of Service Area Delivery Program <input type="checkbox"/> Attached MOU
<input type="checkbox"/>	Out of Mission Program
<input type="checkbox"/>	NEW Professional School

<sup>1</sup> For CIP code classifications, please see <http://nces.ed.gov/ipeds/cipcode/Default.aspx?y=55>.

<sup>2</sup> "Proposed Beginning Term" refers to first term after Regent approval that students may declare this program.

<sup>3</sup> Please indicate award such as APE, BFA, MBA, MEd, EdD, JD

**Changes to Existing Programs or Administrative Units Required (check all that apply, if any):**

<input type="checkbox"/>	Program Restructure with or without Consolidation
<input type="checkbox"/>	Emphases transfer from another program or academic unit
<input type="checkbox"/>	Name Change of Existing Program or Academic Unit
<input type="checkbox"/>	Program transfer to a different academic unit
<input type="checkbox"/>	Suspension or discontinuation of a unit or program
<input type="checkbox"/>	Reinstatement of a previously suspended/discontinued program or administrative unit
<input type="checkbox"/>	Other

**Chief Academic Officer (or Designee) Signature:**

I, the Chief Academic Officer or Designee, certify that all required institutional approvals have been obtained prior to submitting this request to the Office of the Commissioner.

Please type your first and last name \_\_\_\_\_ Date:

I understand that checking this box constitutes my legal signature.

# Utah System of Higher Education Program Description - Full Template

## Section I: The Request

Utah State University requests approval to offer the following Baccalaureate degree(s): Environmental Science & Sustainability effective Fall 2024. This program was approved by the institutional Board of Trustees on .

## Section II: Program Proposal

### Program Description

*Present a complete, formal program description.*

The Department of Environment and Society (ENVS), in the S.J. and Jessie E. Quinney College of Natural Resources, is an interdisciplinary department with nineteen (19) faculty identifying as environmental social scientists, geographers, or ecologists. Fourteen faculty are based on the Logan Campus and five are based on either the Moab or Blanding Campus. The Department currently offers three BS degrees (Environmental Studies, Recreation Resource Management, and Geography), one Certificate of Proficiency in Applied Geographic Information Science, two graduate-level certificates, and MS and PhD degrees in Environment and Society, Geography, Recreation Resource Management, and Ecology.

This action is to propose establishment of a new BS in Environmental Science and Sustainability to be offered at the Logan campus. The Department will explore the feasibility of future delivery of the program to Statewide students, based on completion feasibility with course delivery modes, as a subsequent step in program development. The requirements for the new major will consist of a minimum of 74 credits and a maximum of 84 credits, with the difference based on course selection. This number of credits is similar to the number required for other science-based majors at USU, including in the College.

The curriculum is structured to provide foundational knowledge of biological, chemical, and physical principles, integrated with environmental social science on human behavior, decision-making, and policy in relation to human-environment interactions. Students will take a core set of courses delivered by the Department, consisting of an introduction to environmental science (a current BLS course delivered by the Department), an introduction to environmental social science (a current BSS course delivered by the Department), upper-division environmental policy and environmental data science courses, and an advanced integrative science course with an ecological orientation. Students will also take a professional orientation course taken by all students in the College and a relevant communications course. This set of core courses is complemented by foundational science courses offered mainly by other departments as well as by analytical skills courses in statistics and geospatial analysis. Directed electives within the major deepen knowledge and skills in two systems areas (in atmospheric, geospheric & hydrospheric systems, and in sustainability and human-environment systems) and in management and techniques for sustainability.

### Consistency with Institutional Mission

*Explain how the program is consistent with the institution's Regents-approved mission, roles, and goals (see mission and roles at [higheredutah.org/policies/policy312](http://higheredutah.org/policies/policy312)) or, for "out of mission" program requests, the rationale for the request.*

The program is consistent with USU mission and roles and meets mission in terms of excellence in programs and benefit to surrounding communities. The program will produce graduates with integrative STEM knowledge and skills to support sustained human, economic, and environmental health and community wellbeing in Utah. Additionally, the Environmental Science and Sustainability BS program qualifies as "high-yield" under USHE guidelines and meets the state's identified workforce needs. Students are prepared for environmental science jobs that cross a wide range of types.

## Section III: Needs Assessment

### Program Rationale

*Describe the institutional procedures used to arrive at a decision to offer the program. Briefly indicate why such a program should be initiated. State how the institution and the USHE benefit by offering the proposed program.*

The Environmental Science and Sustainability program was developed in response to student demand. As part of a strategic direction process in the department, the demand for an environmental degree option with strengthened emphasis in the biological, chemical and physical sciences was uncovered. A working group of the ENVS faculty first considered developing an Environmental Science emphasis area with the existing Environmental Studies BS and proposed course requirements based on review of Environmental Science programs across the country. In Departmental discussions, the full faculty determined that the initial proposed approach of an Emphasis would not be as effective as a new BS, as it could lead to student confusion or decreased appeal or ability to locate the program. Review of other institutions in Utah and across the country clarified that most institutions offer both types of programs (environmental studies/science) as separate but complementary in nature.

Once the decision was made to develop a sister BS program and not a new Emphasis within the existing Environmental Studies program, the departmental faculty participated in review, discussion, and revision of the initially proposed curriculum. This revised proposed curriculum was shared with the department heads of all departments delivering any of the proposed included courses, to seek permission and solicit any concerns. Plans for the new program were reviewed with College leadership and were included with a College submission of strategies for AggieAction2028 (the university-wide strategic planning effort).

Having an Environmental Science and Sustainability BS available for USU students benefits USU and the USHE by meeting currently unmet demand at USU (see below) and by providing a previously unavailable degree option to high school graduates in the Logan service area that they otherwise needed to leave the USU service-area to access.

### **Labor Market Demand**

*Provide local, state, and/or national labor market data that speak to the need for this program. Occupational demand, wage, and number of annual openings information may be found at sources such as Utah DWS Occupation Information Data Viewer ([jobs.utah.gov/jsp/wi/utalmis/gotoOccinfo.do](http://jobs.utah.gov/jsp/wi/utalmis/gotoOccinfo.do)) and the Occupation Outlook Handbook ([www.bls.gov/oco](http://www.bls.gov/oco)).*

The Utah Department of Workforce Services assigns a five star rating to the occupation outlook for "Natural Sciences Managers" which is an umbrella category that includes environmental scientists and specialists. The Bureau of Labor Statistics lists national mean annual pay for environmental scientists and specialists as \$83,820 in 2022, with a mean salary in Utah between \$74,440 and \$83,760. Nationally, job availability is projected to grow for 2022-2032 by 6%, faster than average for all occupations, with 4,900 new jobs across the country.

### **Student Demand**

*Provide evidence of student interest and demand that supports potential program enrollment. Use Appendix D to project five years' enrollments and graduates. Note: If the proposed program is an expansion of an existing program, present several years enrollment trends by headcount and/or by student credit hours that justify expansion.*

The Department anticipates that student demand for the BS in Environmental Science and Sustainability will be a mixture of (1) students currently enrolled in the Department's sister BS in Environmental Studies program who would prefer the option with more natural science, or other students already choosing to attend USU, and (2) new students interested in environmental science who would prefer to attend USU and will now do so with this new degree availability. The Department conducted focus groups as a part of a 2019-2020 strategic planning process, including with recent graduates from current ENVS undergraduate programs. Student demand for an environmental program option with enhanced natural science training was identified through this process and in consultation with the academic advisor assigned to the Department. This advisor has shared examples of current and potential USU students already expressing interest in enrolling in the proposed program.

### **Similar Programs**

*Are similar programs offered elsewhere in the USHE, the state, or Intermountain Region? If yes, identify the existing program(s) and cite justifications for why the Regents should approve another program of this type. How does the proposed program differ from or compliment similar program(s)?*

The proposed Environmental Science and Sustainability BS program shares characteristics with a number of programs at other USHE institutions, as does the Department's existing Environmental Studies BS. Many institutions already have both types of programs, environmental studies and environmental science. The University of Utah has recently launched a new Earth & Environmental Science BS as a complement to their longstanding BS/BA in Environmental and Sustainability Studies. Weber

State has an Environmental Science BS and has an Environment & Sustainability Track within their Geography BS. UVU has an Environmental Studies BS and an Environmental Science & Management BS. SUU has an Environmental Science BS and an Environmental Studies BA. Utah Tech has a BS in Earth, Energy, and Environmental Science, Environmental Science Emphasis. SLCC has a Certificate of Proficiency in Environmental Science and Sustainability. Searches of the Snow College catalog did not turn up a similar program. The identified SLCC program could prepare interested transfer students for the proposed program at USU.

USU participation in the first "Majors Meeting" convened by USHE in Spring 2023 for environmental science and environmental studies verified understanding that each similar program at the USHE institutions has its own emphasis and focal orientation. These programs can complement each other, as they allow Utah high school graduates to select a program that best meets their needs and interests. Some Environmental Science programs have minimal inclusion of the social and behavioral sciences along with the natural sciences coursework, and only a few have a focal emphasis on sustainability. The USU program also will be the only program delivered out of a College of Natural Resources, with available coursework options for students interested in combining environmental science and sustainability with natural resource management applications.

### **Collaboration with and Impact on Other USHE Institutions**

*Indicate if the program will be delivered outside of designated service area; provide justification. Service areas are defined in [higherutah.org/policies/policyr315/](https://higheredutah.org/policies/policyr315/). Assess the impact the new program will have on other USHE institutions. Describe any discussions with other institutions pertaining to this program. Include any collaborative efforts that may have been proposed.*

No adverse effects on other USHE institutions is anticipated. Environmental Science is a common BS degree program for higher education institutions to offer and each USHE institution program has its particular strengths. The new USHE-convened Majors Meeting for environmental studies/sciences, which met Spring 2023 for the first time, will facilitate communication and collaboration across the USHE institutions in this area. USU plans to develop and deliver the program proposed here were shared with representatives from the other institutions at the Spring 2023 Majors Meeting.

### **External Review and Accreditation**

*Indicate whether external consultants or, for a career and technical education program, program advisory committee were involved in the development of the proposed program. List the members of the external consultants or advisory committee and briefly describe their activities. If the program will seek special professional accreditation, project anticipated costs and a date for accreditation review.*

Not applicable.

## **Section IV: Program Details**

### **Graduation Standards and Number of Credits**

*Provide graduation standards. Provide justification if number of credit or clock hours exceeds credit limit for this program type described in R401-3.11, which can be found at [higherutah.org/policies/R401](https://higheredutah.org/policies/R401).*

Graduation standards will be as follows: All courses required for the major must be taken on an A-B-C-D-F basis. A grade of C- or better is required for all courses used to meet requirements for the major.

### **Admission Requirements**

*List admission requirements specific to the proposed program.*

In line with all other BS programs in the Quinney College of Natural Resources, this program will require that new freshmen admitted to USU be in Good Standing for admission to the program. Transfer students from other institutions or other programs at USU will need a minimum 2.5 GPA for admission.



## Curriculum and Degree Map

Use the tables in Appendix A to provide a list of courses and Appendix B to provide a program Degree Map, also referred to as a graduation plan.

## Section V: Institution, Faculty, and Staff Support

### Institutional Readiness

*How do existing administrative structures support the proposed program? Identify new organizational structures that may be needed to deliver the program. Will the proposed program impact the delivery of undergraduate and/or lower-division education? If yes, how?*

ENVS will deliver the proposed new program as a sister program to the existing BS in Environmental Studies. Many courses delivered by the department will serve both programs. Academic advising for students in the new program can be added to the responsibilities of the current academic advisor assigned to the department. No new administrative structures will be required.

When proposed course requirements were shared with other department heads at the University, some concern was articulated with respect to capacity in Biology and Chemistry labs. Should the proposed BS grow to have significant enrollments these capacities will need to be addressed.

### Faculty

*Describe faculty development activities that will support this program. Will existing faculty/instructors, including teaching/graduate assistants, be sufficient to instruct the program or will additional faculty be recruited? If needed, provide plans and resources to secure qualified faculty. Use Appendix C to provide detail on faculty profiles and new hires.*

Recent faculty hiring in the Department will support the delivery of the Environmental Science and Sustainability BS program. For example, the addition to the faculty of Dr. Brooke Osborne, a global climate change ecologist, is allowing the Department to develop a new integrative course on the Ecology of Global Climate Change, which will serve as one of the core courses for the program.

### Staff

*Describe the staff development activities that will support this program. Will existing staff such as administrative, secretarial/clerical, laboratory aides, advisors, be sufficient to support the program or will additional staff need to be hired? Provide plans and resources to secure qualified staff, as needed.*

No additional staff will be needed to support administration of the proposed new program. Current staff can incorporate program support into responsibilities for the current department undergraduate programs.

### Student Advisement

*Describe how students in the proposed program will be advised.*

Students will be advised by the academic advisor assigned to the Department. The advisor has been consulted and is looking forward to having this program as an option for USU students. In the Quinney College of Natural Resources, students are also assigned a faculty advisor. For this new program, the assigned advisor will be Dr. Brooke Osborne, a biogeochemist and ecologist who is an ENVS tenure-track assistant professor with a majority teaching role (50%).

### Library and Information Resources

*Describe library resources required to offer the proposed program if any. List new library resources to be acquired.*

No new library resources are required. This is a new integrative program across sciences already offered at USU and as such does not require acquisition in a new specialized area.

## Projected Enrollment and Finance

*Use Appendix D to provide projected enrollment and information on related operating expenses and funding sources.*

## Section VI: Program Evaluation

### Program Assessment

*Identify program goals. Describe the system of assessment to be used to evaluate and develop the program.*

The Department Faculty developed the curriculum based on specified learning outcome goals:

At the end of this program, students will be able to...

1. Articulate basic understanding of chemical, biological, and physical science principles.
2. Integrate basic disciplinary science understanding in the context of environmental change.
3. Conceptualize social-environmental systems.
4. Apply systems thinking to understanding and addressing complex environmental problems.
5. Effectively communicate and initiate sustainability behaviors and policies grounded in environmental science.
6. Apply analytical tools to an environmental science context

Program assessment will follow current departmental strategies for undergraduate program assessment, with course-embedded, assignment-based assessment of learning outcomes at the level of the individual student. This assessment plan identifies assignments in a key set of department-delivered courses. Outcome data is collected from instructors at the completion of each term and reviewed by the Department's Undergraduate Program Assessment Coordinator, who is a faculty member with this assigned service role. Assessment data are reviewed periodically with the full faculty at a departmental meeting to consider the need for program changes.

### Student Standards of Performance

*List the standards, competencies, and marketable skills students will have achieved at the time of graduation. How and why were these standards and competencies chosen? Include formative and summative assessment measures to be used to determine student learning outcomes.*

Standards, competencies, and marketable skills to be achieved by students mirror the program learning outcome goals above. Departmental faculty who spearheaded program development reviewed the curriculum of comparable programs across the U.S. The identified standards, competencies, and marketable skills for the proposed program reflect environmental science and sustainability programming in higher education across the country. There exists some variation in programs labeled environmental science, especially in terms of the relative weight of any included social and behavioral sciences. The intentional inclusion of sustainability-oriented competencies and skills, to prepare problem-solvers for state, national, and global sustainability challenges facing contemporary human society, necessitates the strong inclusion of coursework in the social and behavioral sciences.

## Appendix A: Program Curriculum

List all courses, including new courses, to be offered in the proposed program by prefix, number, title, and credit hours (or credit equivalences). Indicate new courses with an X in the appropriate columns. The total number of credit hours should reflect the number of credits required to be awarded the degree.

For variable credits, please enter the minimum value in the table for credit hours. To explain variable credit in detail as well as any additional information, use the narrative box at the end of this appendix.

		Course Number	NEW Course	Course Title	Credit Hours
General Education Courses (list specific courses if recommended for this program on Degree Map)					
<b>General Education Credit Hour Sub-Total</b>					
Required Courses					
+	-			See Attached Table for Required Courses	
Choose of the following courses:					
+	-				
+	-				
<input type="text" value="Add A Group of Courses"/>					
<b>Required Course Credit Hour Sub-Total</b>					53
Elective Courses					
+	-			See Attached Table for Electives	
Choose of the following courses:					
+	-				
+	-				
Choose of the following courses:					
+	-				
+	-				
Choose of the following courses:					
+	-				
+	-				
<input type="text" value="Add A Group of Courses"/>					
<b>Elective Credit Hour Sub-Total</b>					21
<b>Core Curriculum Credit Hour Sub-Total</b>					74

## Program Curriculum Narrative

Describe any variable credits. You may also include additional curriculum information.

Due to issues with the Program Curriculum table saving correctly, the Program Curriculum is instead attached in a separate document, with images of the table completed correctly.

General Education credits are not listed in the table. Many are covered in the program course requirements, given the integrative and interdisciplinary nature of the program. Those General Education credits not covered total an additional 15 and include the CL1, CL2, BAI, BHU, and BCA requirements. Specific courses are not recommended for these 15 credits. For the Chemistry block, students take one of two course series options (CHEM 1110, 1120, and 1125 OR CHEM 1210, 1215, 1220,

and 1225) for either 9 or 10 credits total. For the Physical Science Foundation block, students take the Physical Geography course and lab (GEOG 1000 and 1005) or the Physical Geology course and lab (GEO 1110 and 1115). Program electives are divided into three electives blocks: Sustainability & Human-Environment Systems Electives (students select 3 courses), Atmosphere, Geosphere & Hydrosphere Electives (students select 2 courses), and Environmental Management & Sustainability Techniques Electives (students select 2 courses). Variable credits (between a minimum of 74 total and a maximum of 84 total for the program requirements and electives) reflect the choices students have among courses which carry different numbers of credits.

## Degree Map

Degree maps pertain to undergraduate programs ONLY. Provide a degree map for proposed program. Degree Maps were approved by the State Board of Regents on July 17, 2014 as a degree completion measure. Degree maps or graduation plans are a suggested semester-by-semester class schedule that includes prefix, number, title, and semester hours. For more details see <http://higheredutah.org/pdf/agendas/201407/TAB%20A%202014-7-18.pdf> (Item #3).

Please cut-and-paste the degree map or manually enter the degree map in the table below.

Toggle Cut-and-Paste

Toggle Table

First Year Fall	Cr. Hr.	First Year Spring	Cr. Hr.
CL1	3	CL2	3
MATH 1050 (or MATH 1100) (QL)	4	ENVS 1350 (BLS)	3
CHEM 1210	4	ENVS 2000	1
CHEM 1215	1	CHEM 1220 (BPS)	4
BCA	3	CHEM 1225	1
		BAI course	3
Add Courses	Total	Total	Total
	15		15
Second Year Fall	Cr. Hr.	Second Year Spring	Cr. Hr.
ENVS 2340 (BSS)	3	STAT 2000 (or STAT 3000) (QI)	4
GEOG 1000 (BPS)	3	PSC 2010	3
GEOG 1005	1	BIOL 1620 (BLS)	3
BIOL 1610	3	BHU course	3
Electives	5	Elective	2
Add Courses	Total	Total	Total
	15		15
Third Year Fall	Cr. Hr.	Third Year Spring	Cr. Hr.
ENVS 3500 (QI)	3	ENVS 3010	3
WATS 2220	3	Atmosphere, Geosphere & Hydrosphere Elective	3
GEOG 2800	4	Sustainability & Human-Environment Systems Ele	3
Sustainability & Human-Environment Systems Ele	3	Environmental Management & Sustainability Tec	3
Elective	2	CI course if not otherwise taking two	3
Add Courses	Total	Total	Total
	15		15
Fourth Year Fall	Cr. Hr.	Fourth Year Spring	Cr. Hr.
Atmosphere, Geosphere & Hydrosphere Elective	3	ENVS 4xxx	3
Sustainability & Human-Environment Systems Ele	3	ENVS 4700 (CI)	3
Environmental Management & Sustainability Tec	3	DHA course if not otherwise taking	3
DSS course if not otherwise taking	3	Electives	6
Elective	3		
Add Courses	Total	Total	Total
	15		15



	First Name	Last Name	Tenure (T) / Tenure Track (TT) / Other	Degree	Institution where Credential was Earned	Est. % of time faculty member will dedicate to proposed program.	If "Other," describe
							<a href="#">Add Another Part Time</a>

**Part III: New Faculty / Staff Projections for Proposed Program**

*Indicate the number of faculty / staff to be hired in the first three years of the program, if applicable. Include additional cost for these faculty / staff members in Appendix D.*

	# Tenured	# Tenure -Track	# Non-Tenure Track	Academic or Industry Credentials Needed	Est. % of time to be dedicated to proposed program.
Faculty: Full Time with Doctorate					
Faculty: Part Time with Doctorate					
Faculty: Full Time with Masters					
Faculty: Part Time with Masters					
Faculty: Full Time with Baccalaureate					
Faculty: Part Time with Baccalaureate					
Teaching / Graduate Assistants					
Staff: Full Time					
Staff: Part Time					

## Appendix D: Projected Program Participation and Finance

### Part I.

Project the number of students who will be attracted to the proposed program as well as increased expenses, if any. Include new faculty & staff as described in Appendix C.

Three Year Projection: Program Participation and Department Budget						
	Year Preceding Implementation	New Program				
		Year 1	Year 2	Year 3	Year 4	Year 5
<b>Student Data</b>						
# of Majors in Department	155	160	170	185	200	215
# of Majors in Proposed Program(s)		10	20	35	50	65
# of Graduates from Department	49	51	52	54	54	59
# Graduates in New Program(s)		0	0	5	5	10
<b>Department Financial Data</b>						
	Department Budget					
	Year Preceding Implementation (Base Budget)	Year 1	Year 2	Year 3		
		Addition to Base Budget for New Program(s)	Addition to Base Budget for New Program(s)	Addition to Base Budget for New Program(s)		
<i>Project additional expenses associated with offering new program(s). Account for New Faculty as stated in Appendix C, "Faculty Projections."</i>						
<b>EXPENSES – nature of additional costs required for proposed program(s)</b>						
<i>List salary benefits for additional faculty/staff each year the positions will be filled. For example, if hiring faculty in year 2, include expense in years 2 and 3. List one-time operating expenses only in the year expended.</i>						
Personnel (Faculty & Staff Salary & Benefits)	\$0	\$0	\$0	\$0	\$0	
Operating Expenses (equipment, travel, resources)	\$0	\$0	\$0	\$0	\$0	
Other:	\$0	\$0	\$0	\$0	\$0	
<b>TOTAL PROGRAM EXPENSES</b>		\$0	\$0	\$0	\$0	
<b>TOTAL EXPENSES</b>	\$0	\$0	\$0	\$0	\$0	
<b>FUNDING – source of funding to cover additional costs generated by proposed program(s)</b>						
<i>Describe internal reallocation using Narrative 1 on the following page. Describe new sources of funding using Narrative 2.</i>						
Internal Reallocation						
Appropriation						
Special Legislative Appropriation						
Grants and Contracts						
Special Fees						
Tuition						
Differential Tuition (requires Regents approval)						
<b>PROPOSED PROGRAM FUNDING</b>		\$0	\$0	\$0	\$0	
<b>TOTAL DEPARTMENT FUNDING</b>	\$0	\$0	\$0	\$0	\$0	
<b>Difference</b>						
Funding - Expense	\$0	\$0	\$0	\$0	\$0	



**Part II: Expense explanation**

**Expense Narrative**

*Describe expenses associated with the proposed program.*

There are no additional expenses anticipated for the delivery of the proposed program, other than insignificant costs associated with additional marketing materials for a 4th departmental BS program. Existing departmental faculty and administrative lines can absorb the instruction and administrative program support required for the new program. The one new course required for program delivery is already planned within the existing teaching loads of current faculty.

**Part III: Describe funding sources**

**Revenue Narrative 1**

*Describe what internal reallocations, if applicable, are available and any impact to existing programs or services.*

No internal reallocations are required.

**Revenue Narrative 2**

*Describe new funding sources and plans to acquire the funds.*

No new funding sources are anticipated.

## Curriculum Handbook Updates

Below are the proposed edits from the Registrar's Office:

### *Current and Proposed Language:*

*Be aware of the difference between a Cross List and a Dual List. A Cross List course is one that is listed across departments (e.g., BIOL/SOIL 6200). A course may be Cross Listed with up to 5 other courses (Curriculum Subcommittee, 9 January 1997). Note that all cross list/dual listed courses have a single department as their administrative home and that all course approval forms must originate with this department.*

*A Dual List course is one that is listed across levels within a department (e.g., ELED 4600/6600). No course below the 4000 level should be dual listed with a graduate course, and no dual listing is permitted among 1000-5000 level courses (EPC, 9 January 1997).*

*Cross listed courses must have the same title, course description, and course prerequisites. Dual listed courses must have the same title and course description (with the exception of the addition of the statement requiring extra work for students receiving graduate credit).*

*While identical numbers for all four digits of cross listed courses and identical numbers for the last three digits of dual-listed courses are not ~~now~~ **currently** required, it is strongly recommended that the numbering be consistent across departments and levels. When proposing to cross list/dual list a course with a consistent number across departments, please check to ensure that the number chosen is available in the other departments. If a course is proposed for dual listing with an undergraduate and graduate course number, extra work must be required for students receiving graduate credit. The course approval form must include, as part of the course description, an explanation of these extra graduate assignments.*