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PROPOSAL TO THE ACADEMIC SENATE

TITLE: Proposal for New Bachelor of Science in Health Science Degree and Consolidation of Selected Majors within the Department of Health and Sport Science

SUBMITTED BY: School of Education and Health Sciences

DATE: Approved April 26, 2019

ACTION: Legislative Authority

Proposal for New Bachelor of Science in Health Science Degree and Consolidation of Selected Majors within the Department of Health and Sport Science

INTRODUCTION

Currently, the Department of Health and Sport Science (HSS) confers the Bachelors of Science in Education (BSE) degree to graduates of its 5 different degree programs: Exercise Physiology, Pre-Physical Therapy, Exercise Science, Dietetics, and Sport Management. This degree aligned with the department's location within the School of Education and and Allied Professions (SOEAP), however, following the addition of graduate programs in physical therapy and physician assistant, SOEAP became the School of Education and Health Sciences (SEHS). There is often confusion from prospective students, parents, current students, and alumni as to why the HSS degrees lead to a BSE. Therefore, HSS seeks to create a Bachelor of Science in Health Science (BSHS) degree to confer upon its graduates that is appropriately aligned with the current offerings of the department and name of the school.

Both the curriculum and the name of the degree programs in Pre-Physical Therapy, Dietetics, and Sports Management align well with post-graduate opportunities in both employment and post-graduate education (e.g. Doctoral of Physical Therapy programs), with changes to curriculum made in accordance with shifts in the industry or changes to graduate entrance requirements. However, there is often difficulty in appropriately describing and recruiting for the different HSS majors, particularly those of Exercise Physiology, Pre-Physical Therapy, and Exercise Science in relation to the entrance requirements to these degree programs, intended outcomes of students (e.g. post-graduate pathway), and specific curriculum of the programs. For example, more than 100 HSS students are presently seeking to enter graduate programs in both physician assistant and occupational therapy who have enrolled in HSS Exercise Physiology and Exercise Science degree programs, respectively, that largely came to HSS through word of mouth networking. Therefore, HSS seeks to create a new Health Science major, with multiple concentrations in order to provide clarity of its current departmental offerings, as well as recruit and graduate successful students prepared for health care careers. In addition, to better align degree and academic programs, we seek to include Dietetics as a second major within the Bachelor of Science in Health Science degree. The current Dietetics major would remain unchanged but lead to the BSHS rather than the BSE.

In the discussion and work of the creation of a new degree and majors, prompted by current issues with the Exercise Physiology, Pre-Physical Therapy, and Exercise Science programs, the HSS department considered its portfolio of offerings and how they are presented to internal and external audiences. Input from the HSS faculty regarding the 'traditional' Exercise Science major, indicates a need to enhance the curriculum for students primarily interested in entry-level employment in the broad field of Kinesiology. Specifically, the HSS faculty indicated a greater need for business and management related skills for career ready graduates as well as an emphasis towards current trends in community health. As a result, in addition to the current proposal, a parallel proposal is being submitted entitled "Proposal for New Bachelor of Science in Sport and Wellness Degree and Consolidation of Selected Majors within the Department of Health and Sport Science". Taken together, the two proposals represent a reorganization of the current offerings of the HSS department rather than de novo creation of degrees and/or majors.

1. Rationale for Program

We propose to establish a Bachelor of Science in Health Science (BSHS) degree in the School of Education and Health Science (SEHS) and Department of Health and Sport Science (HSS). Within this new degree, we propose:

- The creation of a major in Health Science, with multiple concentrations that correspond to our current offerings.
- The transfer of the current baccalaureate degree program in Dietetics to this degree to better align the major with the degree earned

The focus of the major in Health Science, with its multiple concentrations: Integrative Physiology, Exercise and Movement Sciences, and Occupational and Behavioral Studies will be to build upon the Common Academic Program to create graduates who can:

- Demonstrate an understanding of the scientific foundations of health-related disciplines;
- Demonstrate an appreciation and commitment to physical activity practice and sociocultural factors that influence this practice; and
- Develop professionally and identify relevant professional goals and necessary action steps.

Specifically, this program serves a significant disciplinary purpose by preparing students primarily for continued study in high demand rapidly growing graduate health professional schools¹. Given some students may not matriculate to graduate health programs, this program will also provide sufficient preparation for select entry-level career options in health related industries.

Currently, HSS confers a Bachelor of Science in Education degree in the following majors that relate to this new proposed major: Exercise Physiology, Pre-Physical Therapy, and Exercise Science. While these programs are popular¹, there is some misalignment of the post-graduate opportunities and nomenclature of the degree programs. In response to the rapid growth of students seeking entry into Occupational Therapy a “Pre-Occupational Therapy” attribute has been added to the Exercise Science major to serve this group of students. A potential solution would appear to be the creation of a “Pre-Occupational Therapy” major to provide alignment between major name and post-graduate interest. However, similar growth of student post-graduate outcomes may be anticipated in Athletic Training, and other potential areas including chiropractic, nursing, and programs in prosthetics and orthotics. In addition, prospective students and parents express concern that the specific alignment of our Pre-Physical Therapy major may have limited appeal in spite of the fact that coursework in this major satisfies prerequisites of numerous post-graduate health care programs including Athletic Training.

The present configuration of the three majors are fairly similar considering CAP courses and required major courses. These majors are differentiated from one another based upon approximately 20 credit hours of prerequisites that are specific to the three primary post-graduate destinations of physical therapy, physician assistant and occupational therapy. The proposed degree, major and concentrations aim to simplify, clarify, and align curriculum with student post-graduate outcomes. A single major with concentration areas is somewhat unique and will allow flexibility and personalization of the degree program, something that current prospective students seek². Students will have the flexibility to identify a concentration up to their 5th semester in the major. In addition, while the proposed major and concentrations immediately serve the three present primary post-graduate destinations, it would also provide the necessary prerequisites for potential emerging post-graduate destinations in the future. Finally, the proposed reorganization will move and change the

¹ 300+ students in 2017-2018.

² Hanover report recommendations and key findings, pg. 3, Appendix C

traditional Exercise Science major to the Sport and Wellness major with Health and Fitness and Community Health concentrations.

The program is well-aligned with the SEHS mission to educate “leaders in education and health care who transform society through faith, community building, service, wellness and scholarship.” and is built upon the guiding characteristics of Marianist Universities to educate for formation in faith, provide an excellent education, educate in the family spirit, educate for service, justice, and peace, and educate for adaptation and change.

2. Prospective Enrollment

The current³ and projected enrollments are as follows:

| Current Major | Total Enrollment | New Concentration | Projected Enrollment 19-20 AY (3 yr estimate⁴) |
|-------------------------------------|-------------------------|---------------------------------------|--|
| Exercise Physiology | 50 | Integrative Physiology | 70 (95) |
| Pre-Physical Therapy | 144 | Exercise and Movement Sciences | 155 (200) |
| Exercise Science | 118 | Occupational and Behavioral Studies | 95 (125) |
| Total Across 3 Current Majors (BSE) | 312 | Total for Health Science Major (BSHS) | 320 (420) |

The decrease in projected enrollment within Occupational and Behavioral Studies represents a subset of current Exercise Science students that would likely enroll in the Health and Fitness and Community Health concentrations of the Sport and Wellness major included in our parallel proposal to reorganize the HSS degrees and majors (the “traditional”, non-graduate school seeking students).

In addition to the transfer of current students into the new concentrations within the Health Science major, we anticipate some growth based on current market trends. “Pre-health bachelor’s programs together grew by an average annual 10.3% nationally from 2012 to 2016, which was substantially faster than the 1.7% growth for all bachelor’s degree programs and indicates strong student demand for pre-health in general”⁵. We believe that by explicitly focusing on health sciences and aligning the degree with the major that we can capture a greater portion of this market interest.

3. Efforts to Attract and Retain Students from Underrepresented Groups

Emphasis on recruiting underrepresented minority population groups is consistent with current UD efforts to increase student diversity. Enrollment Management works diligently to recruit students of diverse ethnic, socioeconomic and geographic backgrounds. Thus, SEHS and HSS will continue to work closely with all stakeholders to develop strategies to increase diversity within the BSHS degree and majors including the Flyer Promise and SEHS Scholarship programs. Currently, we have articulation agreements in place for pathways from the Sinclair Academy to our current majors in Dietetics, Exercise Physiology, Pre-Physical Therapy, and

³ As of August 1, 2018

⁴ Based up 17-18 AY transfers into department and departmental historical growth trends.

⁵ Hanover, pg 6

Exercise Science⁶. Upon approval of the new degree and majors, we will revise these pathways accordingly to provide another avenue to increase affordability of these programs.

4. Evidence of Need and Opportunities for Employment of Graduates

As primarily a pre-professional degree program, the opportunities for Health Science majors is best contextualized by looking at recent trends in health professional graduate programs. It is important to first point out that health professional programs do not have a preference or requirement for undergraduate degree but examine a student's academic record based on their completion of prerequisite courses rather than degree program⁷.

Currently, the most popular post-graduate destinations for our students are in the following areas, all of which have experienced significant growth in conferral of graduate degrees from 2012-2016⁸ and have strongly positive employment outlooks⁹.

| Health Profession | Degree Conferral Growth Rate | Employment Change |
|----------------------|----------------------------------|-------------------|
| Physical Therapy | 4.5% | 28.0% |
| Physician Assistant | 8.4% | 37.3% |
| Occupational Therapy | Masters: 5.4% Doctoral: 18.1% | 23.8% |

Other areas of modest interest of students including graduate programs in medicine, public health, and physiology are also growing¹⁰. While the degree is predominantly pre-professional, we also seek to prepare students for entry-level employment in health-related fields. In these areas, employment trends are above the average for all occupations (7.4%) as well.

| Entry-Level Opportunity | Employment Change | Entry-Level Opportunity | Employment Change |
|-------------------------------------|-------------------|-------------------------|-------------------|
| Healthcare support workers | 11.7% | Fitness Trainers | 10.1% |
| Medical and health service managers | 20.5% | Life scientists | 9.2% |
| Community health workers | 18.1% | Health educators | 14.5% |
| Exercise physiologists | 13.1% | Physical therapist aide | 29.4% |

5. Identification and Discussion of Similar Programs at the University and Peer Institutions

At the University of Dayton, several other degree programs prepare students for health professions, as is typical at peer institutions¹¹. Specifically, the most similar programs at UD are the Bachelor of Science, Biology

⁶ <https://www.udayton.edu/academy/majors.php>

⁷ Hanover, pg 3 and Appendix E -common undergraduate degree names leading to select graduate destinations.

⁸ Hanover, pgs. 21-22

⁹ Projected 2016-2026 Bureau of Labor Statistics employment change, <https://data.bls.gov/projections/occupationProj>

¹⁰ Hanover, pgs. 21-22

¹¹ Hanover, pg. 3 and Peer Benchmarking (Appendix D).

major, the Bachelor of Science, Pre-Medicine/Pre-Dental majors, and the Bachelor of Science, Psychology major. These programs are similar in the natural science basis that are often the core prerequisites of health professional programs. The unique aspects of the Health Science major, as compared to these programs, are the HSS courses included in the core curriculum (Appendix B; e.g. Medical Terminology, Nutrition, Anatomy, Physiology). As the proposed degree and program is a reorganization of existing programs, rather than new program creation, it is not anticipated to greatly affect these existing UD programs. We anticipate that some students who in the past might have entered one of these programs (e.g. Pre-Medicine) and transferred to HSS after 1-3 semesters may actually apply directly to the Health Science major as it is more clearly aligned with their interest. Capturing these students earlier in their academic career will allow for increased efficiency, community building, and a lower administrative burden on both departments. Letters of support from these department chairs/program directors are included in Appendix G.

As the Hanover market research report indicates, there is much diversity across the nation in health science education, organization of programs in this field, and nomenclature of particular degrees. Some peer institutions identify specific professional tracks at the baccalaureate level whereas others group graduate outcomes into single majors, and still others do a combination of the two approaches. Departmental peer comparison data (Appendix D) found similar diversity of organization and nomenclature. It is somewhat rare (8 of the 58 examined programs) to offer a major and concentration structure. Given that students seek flexibility and choice in their degree programs, even after they have arrived at an institution, we believe that this approach will allow us to meet the needs and desires of prospective students and serve current students. We also believe that this approach will be somewhat unique and may be able to be marketed as a distinctive characteristic of our offerings. Importantly, this structure will allow for an enhanced agility to respond quickly and appropriately to the changing market landscapes of both prospective students and graduate school requirements. Further, given our parallel proposal for the Bachelor of Science in Sport and Wellness, with a major in Sport and Wellness and multiple concentrations, this major+concentration arrangement will provide clarity for the programmatic offerings of the HSS department as a whole. There is precedent at UD for this structure, as the Department of Communications offers a Bachelor of Arts in Communication with four concentrations (public relations, communication management, media production, and journalism). In discussions with this department, they feel the major+concentration arrangement serves them well (Appendix G).

6. Description of Proposed Curriculum

The proposed curriculum is based on the following structure:

Common Academic Program + Core Major Courses + Concentration Courses

Specific required courses and 4 year degree plans are included as Appendix B. These curriculums seek to fulfill the degree and concentration-level Learning Outcomes that are included as Appendix A. As this is predominantly a pre-professional program, careful consideration has been given to prerequisite requirements of related graduate programs and appropriate mapping onto relevant concentrations (Appendix F).

7. Availability and Adequacy of Resources

As this proposal seeks to reorganize existing programs, there are no immediate needs for additional faculty. However, given this reorganization creates a degree program and major with ~300 students at present (with the likely increase in enrollment due to a more clear recruitment strategy), the increasing work required to coordinate curriculum and advising for BSHS students seeking entrance into graduate healthcare programs, and the need for this degree program to be appropriately represented to internal and external audiences, there is the need for a faculty member to serve as Director of the Health Science Undergraduate Program, with an

additional 1 month (10 month total) appointment. In addition, given the projected growth over the next 3 years, faculty resources will be examined at year end of AY 19-20 for consideration of an additional faculty line to be hired in AY 20-21 and start in Fall 2021.

a. Administrative Arrangement

The degree and related majors are housed within the HSS department. The Dietetics program which would grant the BSHS is an accredited program that is administered by a program director. The proposed major of Health Science and its concentrations would be administered by a newly created Program Director designation. This person would serve as the main point of contact for the Health Science major and coordinating faculty involvement. All curricular proposals and changes are approved by a Departmental Curriculum Committee and when appropriate, through the SEHS Undergraduate Academic Affairs standing committee of the SEHS Congress.

It is projected that the new degree and major would be available for students starting with the 2019-2020 catalog year. Given the application for Fall 2019 enrollment has already gone live, the HSS department would work with the newly hired SEHS Recruitment and Retention Coordinator to communicate with admitted students the option to enroll in the new majors and concentrations. Similarly, current students would be given the option to change their current major, if appropriate and earn the BSHS. The present proposal does not eliminate HSS courses presently taught, allowing students to remain in their present majors should they choose to do so. Working with the agreement of the department chair, academic advisers may make substitutions for current students if necessary. A table and timeline of implementation is included in Appendix H. Changes to the UD application would occur in May 2019 after notification to Higher Learning Commission and therefore students entering in the class of 2020 would apply to the new degree/majors.

8. Projected Additional Investment and Evidence of Institutional Commitment

As this proposal seeks to reorganize existing programs, there are minimal immediate needs for additional investment at the departmental, unit, or institutional level other than the aforementioned support for a Program Director. Given the reorganization proposed, investment in rebranding and new marketing materials will be needed and this has been factored into the departmental budget.

The Dean's office within SEHS is committed to ensuring the continued success of these programs and considering additional resource requests as they may arise in the future. (Appendix G)

APPENDICES

- A Program Learning Outcomes
- B Curriculum and 4 Year Plans for Each Concentration
- C Hanover Market Research Report
- D Additional Peer Benchmarking
- E Degrees Leading to Graduate Programs
- F Professional School Prerequisites and Curricular Alignment
- G Consultation and Support Letters
- H Implementation Timeline
- I Documentation of Approvals (HSS, SEHS UAAC, SEHS Congress)

| | | | |
|----------------------------------|--|-------------------------------------|---|
| Degree | Bachelor of Science in Health Science (BSHS) | | |
| Major | Health Science | | |
| Program Learning Outcomes | <p>The Common Academic Program student learning outcomes of scholarship, faith traditions, diversity, community, practical wisdom, critical evaluation of our times, and vocation are foundational for all degrees at the University of Dayton. Specific BSHS learning outcomes are aligned with undergraduate learning outcomes of national organizations such as AKA¹.</p> <p>Upon completion of the BSHS, graduates of our program will be able to:</p> <ul style="list-style-type: none"> ● Demonstrate an understanding of the scientific foundations of health-related disciplines. <ul style="list-style-type: none"> ○ Demonstrate an understanding of human anatomy, physiology, and applied physiology and its implications on health and disease (note AKA core 1 and 2) ○ Demonstrate critical thinking and problem solving skills. ○ Engage in lifelong learning by consuming and utilizing scientific knowledge. ● Demonstrate an appreciation and commitment to physical activity practice and sociocultural factors that influence this practice (note AKA core 3 and 4) <ul style="list-style-type: none"> ○ Describe the role of physical activity in the maintenance of high quality of life ○ Identify key health biomarkers and perform basic health and fitness assessments. ○ Apply knowledge of psychology and other social sciences to physical activity behaviors. ● Develop professionally and identify relevant professional goals and necessary action steps. <ul style="list-style-type: none"> ○ Demonstrate professionalism regarding ethical issues. ○ Communicate effectively by multiple modalities with diverse populations. ○ Identify appropriate graduate and professional programs and their admissions requirements (HP, EMS, BOS) and/or obtain relevant certifications that provide experiential learning opportunities and enhanced employment opportunities or advancement. <p>¹ AKA; American Kinesiology Society</p> | | |
| Concentrations | Integrative Physiology (IP) | Exercise and Movement Science (EMS) | Occupational and Behavioral Studies (OBS) |
| Future Destinations | Pre-Med, Pre-PA, Pre-MS/PhD | Pre-PT, Pre-AT, Pre-MPO, Pre-Chiro | Pre-OT, Pre-Nursing |

| | | | |
|-----------------------------|--|--|--|
| Learning Outcomes | <ul style="list-style-type: none"> ·Demonstrate advanced knowledge of physical, chemical and biological sciences, including subdisciplines. ·Identify core concepts in physiology and describe how they relate to human health and disease. ·Demonstrate extensive knowledge of human anatomy, physiology, and applied physiology. ·Understand and utilize research design and techniques with specific attention to implications on human health and disease. | <ul style="list-style-type: none"> ·Demonstrate advanced knowledge of physical and biological sciences ·Demonstrate comprehensive knowledge of human anatomy, physiology, and applied physiology. ·Understand and utilize techniques related to movement sciences such as kinesiology and biomechanics. ·Apply collective knowledge to human populations with a variety of physical abilities. | <ul style="list-style-type: none"> ·Demonstrate comprehensive knowledge in biological sciences ·Apply understanding of applied human studies in exercise physiology, nutrition, kinesiology, and health and wellness to daily life. ·Demonstrate comprehensive knowledge in behavioral and social sciences including special needs populations. |
| Curricular Value Add | | | Psych Minor |



| Common Academic Program – BSHS (HP, EMS, OBS) | | |
|--|--------------------|---|
| FIRST YEAR HUMANITIES COMMONS | | |
| West and World | HST 103 | 3 |
| Intro to Rel and Theol Studies | REL 103 | 3 |
| Intro to Philosophy | PHL 103 | 3 |
| FIRST YEAR WRITING SEMINAR | | |
| Writing Seminar I | ENG 100 | 3 |
| SECOND YEAR WRITING SEMINAR | | |
| Writing Seminar II | ENG 200 | 3 |
| ORAL COMMUNICATION | | |
| Principles of Oral Communication | CMM 100 | 3 |
| SOCIAL SCIENCE | | |
| Social Science Integrated | SSC 200 | 3 |
| ARTS | | |
| Student Choice | XXX XXX | 3 |
| MATHEMATICS | | |
| Statistics | In major block | |
| NATURAL SCIENCES | | |
| Natural Science I- Biology | In major block | |
| Natural Science II- Chemistry | In major block | |
| Natural Science Lab – Biology Lab | In major block | |
| CROSSING BOUNDARIES | | |
| Faith Tradition | | |
| Student Choice | XXX XXX | 3 |
| Practical Ethical Action | | |
| Medical Ethics or Christian Ethics in Healthcare | PHL 315 or REL 367 | 3 |
| Inquiry | | |
| (Fulfilled by MTH 207) | | |
| Integrative | | |
| (Fulfilled by HSS 295) | | |
| ADVANCED STUDIES | | |
| Philosophy/Religious Studies I | | |
| (Fulfilled by PHL 315 or REL 367) | | |
| Philosophy/Religious Studies II | | |
| Student Choice | XXX XXX | 3 |
| Historical Studies | | |
| Student Choice | XXX XXX | 3 |
| DIVERSITY AND SOCIAL JUSTICE | | |
| Student Choice | XXX XXX | 3 |
| MAJOR CAPSTONE | | |
| Research in Sport and Health Science | In major block | |
| 36-39 CREDITS | | |

| Major in Health Science, BSHS (IP, EMS, OBS) | | |
|---|---|--------|
| HEALTH AND SPORT SCIENCE CORE | | |
| Introduction to the University | HSS 101 | 1 |
| Introduction to Health Professions | HSS 114 | 2 |
| Medical Terminology | HSS 201 | 2 |
| Nutrition and Health | HSS 295 | 3 |
| Human Anatomy and Laboratory | HSS 305 + L | 4 |
| Human Physiology and Laboratory | HSS 307 + L | 4 |
| Physiology of Exercise and Laboratory | HSS 408 + L | 4 |
| Research in Sport and Health Science | HSS 428 | 3 |
| MATHEMATICS AND NATURAL SCIENCES | | |
| Introduction to Statistics | MTH 207 | 3 |
| Concepts of Biology I and Lab | BIO 151 + L | 4 |
| Concepts of Biology II and Lab | BIO 152 + L | 4 |
| General Chemistry I and Lab | CHM 123 + L | 4 |
| General Chemistry II and Lab | CHM 124 + L | 4 |
| PSYCHOLOGY | | |
| Intro to Psychology | PSY 101 | 3 |
| Lifespan Psychology | PSY 251 or PSY 351 AND PSY 353* | 3 or 6 |
| Upper-Level Psychology | PSY 363†, 366, 368, 422, 431, OR 435 | 3 |
| PROFESSIONAL SKILLS | | |
| Writing for Health Professions or Health Literacy and Social Justice (DSJ) | ENG 373 or ENG 366 | 3 |
| Professional Seminar | HSS 465 | 1 |
| Work/Shadow Experience or Research/Thesis/Dissection/Independent Study | EXP 103 HSS 455, 498 | 0-1 |
| 56-59 CREDITS | | |
| + CONCENTRATION REQUIREMENTS | | |
| Minimum of 124 Total Credits | | |

*Students interested in a psychology minor should take the 2 semester sequence

†Abnormal Psychology is preferred for Exercise and Movement Science and Occupational and Behavioral Studies

| Concentration in Integrative Physiology | | |
|---|----------------|-------------------|
| HEALTH AND SPORT SCIENCE | | |
| Clinical Assessment and Electrocardiography | HSS 345 | 3 |
| Advanced Physiology (Special Topics or Methods) | HSS 488 or 497 | 3 |
| MATHEMATICS AND NATURAL SCIENCES | | |
| Introductory Calculus I | MTH 148 | 3 |
| General Physics I and Lab | PHY 201 + L | 4 |
| General Physics II and Lab | PHY 202 + L | 4 |
| General Genetics | BIO 312 | 3 |
| Organic Chemistry I and Lab | CHM 313 + L | 4 |
| Organic Chemistry II and Lab | CHM 314 + L | 4 |
| Biochemistry | CHM 420 | 3 |
| General Microbiology | BIO 411 | 3 |
| Additional Laboratory (BIO or CHM) | BIO/CHM XXX L | 1 |
| | | 35 CREDITS |

| Concentration in Exercise and Movement Science | | |
|--|---|-------------------|
| HEALTH AND SPORT SCIENCE | | |
| Adapted Physical Education | HSS 220 | 3 |
| Strength and Conditioning or Personal Training or Intro to Athletic Training | HSS 320 or HSS 321 or HSS 335 | 3 |
| Leadership or Org Behavior or Sport and Bodies or Safety and Law | HSS 330 or HSS 356 or HSS 360 or HSS 448 | 3 |
| Kinesiology and Lab | HSS 409 + L | 4 |
| Exercise for Special Populations | HSS 422 | 3 |
| MATHEMATICS AND NATURAL SCIENCES | | |
| Introduction to Calculus | MTH 148 | 3 |
| General Physics I and Lab | PHY 201 + L | 4 |
| General Physics II and Lab | PHY 202 + L | 4 |
| ADVISOR APPROVED ELECTIVES | | 6 |
| | | 33 CREDITS |

| Concentration in Occupational and Behavioral Studies | | |
|--|---------------------------|-------------------|
| HEALTH AND SPORT SCIENCE | | |
| Adapted Physical Education | HSS 220 | 3 |
| Kinesiology and Lab | HSS 409 + L | 4 |
| NATURAL SCIENCES | | |
| PSYCHOLOGY (also fulfills minor requirements) | | |
| Minor Required Psychology | PSY 321, 322, 323, or 422 | 3 |
| Upper-Level Psychology (PSY 363/366/368/422/435) | PSY 3/4XX | 3 |
| OTHER SOCIAL SCIENCES | | |
| Upper-Level Sociology or Anthropology (SOC 321/330/339/354/360/380/384 or ANT 320/336) | SOC/ANT 3/4XX | 3 |
| Upper-Level Social Work or Communications (SWK 305/307/330/331/380 or CMM 372/411) | SWK/CMM 3/4XX | 3 |
| ADVISOR APPROVED ELECTIVES | | 9 |
| <i>Social Science course are suggestions and if necessary alternatives can be approved by advisor.</i> | | 28 CREDITS |

4 YEAR PLAN COLOR KEY

| | |
|----------------------------|------------------------|
| CAP-BSHS | CONC1- Int Phys |
| MAJOR- BSHS Health Science | CONC2- Ex & Mov Sci |
| 2 CONCS | CONC3 – Occ & Beh Stud |

BSHS IN HEALTH SCIENCE: INTEGRATIVE PHYSIOLOGY

| FIRST YEAR | | | |
|------------------------------------|-------|------------------|-------|
| FALL | HOURS | SPRING | HOURS |
| HSS 101 | 1 | BIO 152 AND 152L | 4 |
| HSS 114 | 2 | CHM 123 AND 123L | 4 |
| BIO 151 AND 151L | 4 | ENG 100 | 3 |
| Principles of Scientific Reasoning | 3 | MTH 207 | 3 |
| CMM 100 | 3 | REL 103 | 3 |
| PHL 103 | 3 | | |
| | 17 | | 17 |

| SECOND YEAR | | | |
|------------------|-------|------------------|-------|
| FALL | HOURS | SPRING | HOURS |
| HSS 201 | 2 | CHM 313 AND 313L | 4 |
| HSS 295 | 3 | ENG 200 | 3 |
| CHM 124 AND 124L | 4 | HSS 305 AND 305L | 4 |
| HST 103 | 3 | PSY 251 | 3 |
| PSY 101 | 3 | SSC 200 | 3 |
| MTH 148 | 3 | | |
| | 18 | | 17 |

| THIRD YEAR | | | |
|---|-------|--------------------|-------|
| FALL | HOURS | SPRING | HOURS |
| BIO 312 | 3 | ENG 373 or 366 | 3 |
| HSS 307 AND HSS 307L | 4 | HSS 408 AND 408L | 4 |
| PHY 201 AND 201L** | 4 | CHM 420 | 3 |
| CHM 314 and 314L | 3 | BIO 411 | 3 |
| PHL 315 or REL 367 | 3 | PHY 202 AND 202L** | 4 |
| **Take senior year if pre-PA, not pre-MED | | HSS 465 | 1 |
| | 17 | | 18 |

| FOURTH YEAR | | | |
|--------------------------------|-------|-----------------|-------|
| FALL | HOURS | SPRING | HOURS |
| CAP ADV HST | 3 | CAP ARTS | 3 |
| CAP FAITH TRAD | 3 | CAP ADV REL/PHL | 3 |
| HSS 408 and 408L | 4 | | |
| HSS 428 | 3 | CAP D&SJ | 3 |
| PSY 363, 366, 368, 422, OR 435 | 3 | HSS 448 or 497 | 3 |
| Add'l BIO or CHM Lab | 1 | HSS 455/EXP 103 | 0-1 |
| HSS 345 | 3 | | |
| | 16 | | 12-13 |

| | | | |
|--|--|--|---------|
| | | | 129-130 |
|--|--|--|---------|

4 YEAR PLAN COLOR KEY

| | |
|----------------------------|------------------------|
| CAP-BSHS | CONC1- Int Phys |
| MAJOR- BSHS Health Science | CONC2- Ex & Mov Sci |
| 2 CONCS (1/2, 2/3, OR 2/4) | CONC3 – Occ & Beh Stud |

BSHS IN HEALTH SCIENCE: EXERCISE AND MOVEMENT SCIENCE

| FIRST YEAR | | | |
|------------------|-------|------------------|-------|
| FALL | HOURS | SPRING | HOURS |
| HSS 101 | 1 | BIO 152 AND 152L | 4 |
| HSS 114 | 2 | CHM 124 AND 124L | 4 |
| BIO 151 AND 151L | 4 | ENG 100 | 3 |
| CHM 123 AND 123L | 4 | MTH 148 | 3 |
| CMM 100 | 3 | REL 103 | 3 |
| PHL 103 | 3 | | |
| | 17 | | 17 |

| SECOND YEAR | | | |
|------------------|-------|--|-------|
| FALL | HOURS | SPRING | HOURS |
| HSS 201 | 2 | PHY 202 AND 202L | 4 |
| HSS 295 | 3 | ENG 200 | 3 |
| PHY 201 AND 201L | 4 | HSS 305 AND 305L | 4 |
| HST 103 | 3 | PSY 251 (Replace with PS351/353 for PSYCH minor) | 3 |
| PSY 101 | 3 | SSC 200 | 3 |
| | 15 | | 17 |

| THIRD YEAR | | | |
|---------------------------|-------|-----------------------------|-------|
| FALL | HOURS | SPRING | HOURS |
| HSS 220 | 3 | ENG 373 ² or 366 | 3 |
| HSS 307 AND HSS 307L | 4 | HSS 408 AND 408L | 4 |
| PHL 315 or REL 367 | 3 | MTH 207 | 3 |
| HSS 330/356/360/448 | 3 | HSS 320/321/335 | 3 |
| ADVISOR APPROVED ELECTIVE | 3 | HSS 465 | 1 |
| | 13 | | 14 |

| FOURTH YEAR | | | |
|---------------------------|-------|--|-------|
| FALL | HOURS | SPRING | HOURS |
| CAP ADV HST | 3 | CAP ARTS | 3 |
| CAP FAITH TRAD | 3 | CAP ADV REL/PHL (PHL 315 & REL 367) ² | 3 |
| HSS 428 | 3 | CAP D&SJ (PSY 363) | 3 |
| PSY 363 ¹ | 3 | HSS 422 | 3 |
| HSS 409 AND 409L | 4 | HSS 455/EXP 103 | 0-1 |
| ADVISOR APPROVED ELECTIVE | 3 | | |
| | 16 | | 12-13 |

| | | | |
|--|--|-------|-------------|
| | | TOTAL | 124- 125 |
|--|--|-------|-------------|

4 YEAR PLAN COLOR KEY

| | |
|----------------------------|------------------------|
| CAP-BSHS | CONC1- Int Phys |
| MAJOR- BSHS Health Science | CONC2- Ex & Mov Sci |
| CONC 1 and 2 | CONC3 – Occ & Beh Stud |

BSHS IN HEALTH SCIENCE: OCCUPATIONAL AND BEHAVIORAL STUDIES

| FIRST YEAR | | | |
|------------------|-------|------------------|-------|
| FALL | HOURS | SPRING | HOURS |
| HSS 101 | 1 | BIO 152 AND 152L | 4 |
| HSS 114 | 2 | CHM 124 AND 124L | 4 |
| BIO 151 AND 151L | 4 | ENG 100 | 3 |
| CHM 123 AND 123L | 4 | MTH 207 | 3 |
| CMM 100 | 3 | REL 103 | 3 |
| PHL 103 | 3 | | |
| | 17 | | 17 |

| SECOND YEAR | | | |
|---------------------------|-------|---------------------------------------|-------|
| FALL | HOURS | SPRING | HOURS |
| HSS 201 | 2 | HSS 220 | 3 |
| HSS 295 | 3 | ENG 200 | 3 |
| ADVISOR APPROVED ELECTIVE | 3 | HSS 305 AND 305L | 4 |
| HST 103 | 3 | PSY 363 ¹ /366/368/422/435 | 3 |
| PSY 101 ¹ | 3 | SSC 200 | 3 |
| | | | |
| | 14 | | 17 |

| THIRD YEAR | | | |
|--|-------|--|-------|
| FALL | HOURS | SPRING | HOURS |
| PSY (321/322/323/422) ¹ | 3 | ENG 373 ² or 366 | 3 |
| HSS 307 AND HSS 307L | 4 | HSS 408 AND 408L | 4 |
| PHL 315 ² or REL 367 ² | 3 | SOC/ANT | 3 |
| ADVISOR APPROVED ELECTIVE | 3 | PSY 353 ¹ | 3 |
| PSY 351 ¹ | 3 | HSS 465 | 1 |
| | | PSY (363/366 ² /368/422/435) ¹ | 3 |
| | 16 | | 14 |

| FOURTH YEAR | | | |
|---------------------------|-------|---|-------|
| FALL | HOURS | SPRING | HOURS |
| CAP ADV HST | 3 | CAP ARTS | 3 |
| CAP FAITH TRAD | 3 | CAP ADV REL/PHL (PHL 315 ² or REL 367 ²) | 3 |
| HSS 428 | 3 | CAP D&SJ (PSY 363 ¹) | 3 |
| ADVISOR APPROVED ELECTIVE | 3 | SWK/CMM ² | 3 |
| HSS 409 AND 409L | 4 | HSS 455/EXP 103 | 0-1 |
| | 16 | | 12-13 |

| | | | |
|---|--|--|-------------|
| | | TOTAL | 123- 124 |
| Electives | | PHY 201/201L, PSY 216, MTH 148, HSS 117, HSS 121, HSS 320/321, HSS 335, HSS 422, HSS 431 | |
| ¹ Psychology Minor | | PSY 101, 351, 353, 363, (321, 322, 323, 422), 366, 431 | 18 |
| ² Medical Humanities Minor (MHM) | | ENG 373, REL 367, PHL 315, PSY 366, +1 MHM course | 15 |

Benchmarking Analysis: Trends in Bachelor of Health Science Degrees

Prepared for University of Dayton

June 2018

In the following report, Hanover Research presents the results of a benchmarking analysis of Bachelor of Health Science degrees, specifically highlighting structures, targeting, and outcomes of such programs among 13 peer and competitor institutions.



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Benchmarking Analysis: Trends in Bachelor of Health Science Degrees

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Executive Summary

Benchmarking Analysis: Trends in Bachelor of Health Science Degrees

Recommendations

Based on an analysis of Trends in Bachelor of Health Science Degrees at 13 peer and competitor institutions, Hanover recommends:

- 1 University of Dayton should consider allowing students to finalize their degree concentrations mid-way through their course of study.** Nearly all benchmarked programs emphasize the flexibility of their degree curriculum, and several allow students to transfer between concentrations. This suggests that successful programs are able to target a wide range of students, some with only a general idea of their eventual course of study, and that marketing an adaptable degree with several postgraduate outcomes is essential.
- 2 University of Dayton should consider maintaining an explicit exercise physiology concentration, in addition to tracks in public health, healthcare administration, and community health.** Each of these fields experienced rapid growth in bachelor's conferrals from 2012 to 2016, indicating strong student interest. In addition, there has been robust graduate conferral growth for public health and healthcare administration programs, which suggests that concentrations in these areas may benefit from students using them as pathways to eventual graduate study.
- 3 University of Dayton should consider offering a pre-medical concentration.** Unlike a human physiology component of more general degree concentration, an explicit pre-medical track may be more effective at capturing some of the growing student demand for pre-medical programs at the bachelor's level. More potently, it would reduce the appeal of competitor programs – a great number of whom advertise such concentrations – to students considering a medical career but unwilling to enter a formal pre-medical bachelor's degree (such as University of Dayton's).

Key Findings

Most institutions provide related programs via individual majors rather than through concentrations within a single degree. Of the 58 peer and competitor institutions provided by University of Dayton, just eight offer a health science program with a comparable structure to the proposed degree. More commonly, related majors are grouped together in a college or department of health sciences, with pre-health capacities located in an advising program.

Programs are rarely structured to have an explicit degree concentration for every intended postgraduate outcome. Instead, concentrations run a spectrum of relative specificity, sometimes all pointing to an explicit student graduate track and sometimes each covering a range of graduate options.

Degree and concentration titles do not appear likely to strongly affect student outcomes. Of the eighteen institutional peer and competitor graduate programs benchmarked by Hanover, only one occupational therapy doctorate requires a specific major.

Institutions target prospective students by emphasizing the wide applicability of the degree program. Most benchmarked institutions stress the wide-ranging educational and employment applications of their program's core learning outcomes.

Fast Facts



8

Peer and Competitor institutions with a comparable degree program



17.0%

Average annual growth of bachelor's conferrals in exercise physiology, public health, healthcare administration, and community health, 2012-2016.



6.1%

Average annual growth of bachelor's conferrals in pre-medical programs 2012-2016.

Research Questions and Methodology

Benchmarking Analysis: Trends in Bachelor of Health Science Degrees

Methodology

To assist University of Dayton as it considers restructuring its Health and Sport Science Department, Hanover conducted a benchmarking study to determine trends in Bachelor of Health Science degrees. The analysis aims to provide insight into interrelated research questions about structures, targeting, and outcomes of such programs.

The following analysis is based on a review of information drawn from institutional websites, as well as publicly available data sources including IPEDS. Hanover selected the 13 institutions included in this analysis based on list of peers and competitors provided by University of Dayton, supplemented by several large public and private institutions with comparable degree structures.

Research Questions

- 1. How are other similar departments structuring related majors?
- 2. How do major titles affect student outcomes, particularly in light of graduate and medical school entrance requirements?
- 3. What majors and concentrations are most likely to attract new/incoming students?
- 4. How do institutions target prospective students given changes in naming conventions and existing student questionnaires?
- 5. What other trends and practices exist across institutions successfully positioning these degrees?

Competitor and Peer Program Student Outcomes

| Institution | Physical Therapy | Occupation Therapy | Physician Assistant | Dentistry | Medicine | Pharmacy | Public Health | Community Health | Exercise Science | Athletic Training | Health Admin. | Exercise Physiology | Podiatry |
|--------------------------------------|------------------|--------------------|---------------------|-----------|----------|----------|---------------|------------------|------------------|-------------------|---------------|---------------------|----------|
| University of Cincinnati-Main Campus | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| Oakland University | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | |
| University of Missouri | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | ✓ | | |
| Stockton University | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | | ✓ | | |
| Baylor University | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | ✓ | | | |
| Saint Louis University | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | |
| Drexel University | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | | | ✓ | |
| Purdue University – Main Campus | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | | | | | |
| Cleveland State University | ✓ | ✓ | ✓ | | | | | ✓ | | | | | |
| DePaul University | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | ✓ | | ✓ |
| University of Kentucky | ✓ | ✓ | ✓ | ✓ | | ✓ | | | | ✓ | | | |
| Marymount University | ✓ | ✓ | | | | | ✓ | | | ✓ | | ✓ | |
| Kent State University | ✓ | ✓ | | | | | | | ✓ | | | ✓ | ✓ |

Program Trends Analysis

Benchmarking Analysis: Trends in Bachelor of Health Science Degrees

Major Structure

Most institutions provide related programs via individual majors rather than through concentrations within a single degree. Of the 58 peer and competitor institutions provided by University of Dayton, just eight offer a health science program with a comparable structure to the proposed degree. More commonly, related majors are grouped together in a college or department of health sciences, with pre-health capacities located in an advising program.

Programs are rarely structured to have an explicit degree concentration for every intended postgraduate outcome. Instead, concentrations run a spectrum of relative specificity:

- ❑ **Specific:** All tracks indicate an explicit intended endpoint (3 programs)
- ❑ **Grouped:** Similar outcomes (e.g. medicine/physician assistant/pharmacy vs occupational therapy/physical therapy/chiropractic therapy) are grouped together (3 programs)
- ❑ **Mixed:** Some concentrations are broken-out to a high degree of specificity and others are grouped into general tracks (7 programs)

Specific (University of Kentucky)

Athletic Training
Audiology
Dentistry
Occupational Therapy
Optometry
Pharmacy
Physical Therapy
Physician Assistant

Mixed (Oakland University)

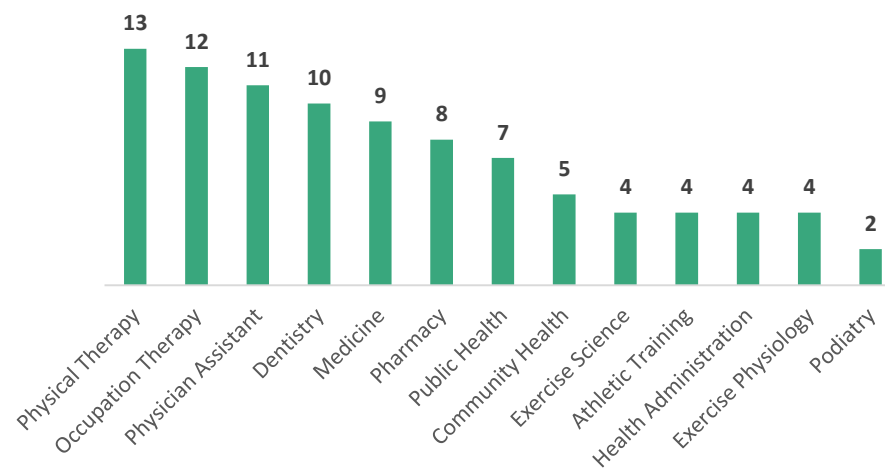
Integrative Holistic
Medicine
Nutrition and Health
Pre-Health Professional
(medical, dental, optometric,
veterinary, physician
assistant)
Pre-Pharmacy
Exercise Science
Pre-Physical Therapy

Grouped (University of Missouri)

Health and Wellness
(public health, accelerated
nursing, health education)
Leadership and Policy
(health administration,
informatics, policy or law)
Pre-Professional
(medicine, dentistry,
pharmacy, physician
assistant, optometry)
Rehabilitation Science
(occupational or physical
therapy, chiropractic)

Student Outcomes

Physical Therapy is the most common postgraduate field for which graduates are prepared, while few institutions advertise Podiatry tracks.



Major Titles

Degree titles do not appear likely to strongly affect student outcomes. Of the eighteen institutional peer and competitor graduate programs benchmarked by Hanover, just three (all OTD programs) require a specific major. In addition, there is little variation in major titles among benchmarked programs, with nearly all being a close variation of “Bachelor of Science in Health Sciences.”

Concentration titles are of are similarly limited importance to graduate programs. Benchmarked medical schools for example, are generally more concerned with students possessing adequate math and science abilities, computer literacy, and communication skills than with a student coming from an explicitly pre-medical degree track. This suggests that internal concerns and appealing to student demand should take precedence over student outcome concerns in determining concentration names.

*Concentrations are counted whenever they advertise leading to a particular field, regardless of whether the concentration is explicitly named after that field.

Degree Completions Analysis

Benchmarking Analysis: Trends in Bachelor of Health Science Degrees

National Degree Completions

Aggregate degree completions by year (2012-2016)

| | 2012 | 2013 | 2014 | 2015 | 2016 | Growth Rate |
|--|--------|--------|--------|--------|--------|-------------|
| Related Bachelor's Programs | | | | | | |
| Public Health, General | 1,397 | 2,144 | 3,103 | 3,912 | 5,024 | 37.7% |
| Exercise Physiology | 1,862 | 2,165 | 2,271 | 3,220 | 3,341 | 15.7% |
| Health/Health Care Administration/Management | 7,173 | 8,620 | 9,387 | 10,326 | 11,605 | 12.8% |
| Community Health and Preventive Medicine | 1,088 | 1,334 | 1,227 | 1,400 | 1,615 | 10.4% |
| Kinesiology and Exercise Science | 16,877 | 19,239 | 20,896 | 22,825 | 23,904 | 9.1% |
| Athletic Training/Trainer | 3,466 | 3,439 | 3,702 | 3,865 | 3,967 | 3.4% |
| Physician Assistant | 733 | 564 | 513 | 626 | 557 | -6.6% |
| Pre-Health Bachelor's Programs | | | | | | |
| Health/Medical Preparatory Programs, Other | 958 | 1,154 | 1,405 | 1,597 | 1,718 | 15.7% |
| PreVeterinary Studies | 238 | 291 | 305 | 326 | 345 | 9.7% |
| PreMedicine/PreMedical Studies | 909 | 1,035 | 998 | 1,063 | 1,153 | 6.1% |
| PrePhysical Therapy Studies | 189 | 211 | 215 | 185 | 215 | 3.3% |
| PreOccupational Therapy Studies | 87 | 147 | 138 | 84 | 89 | 0.6% |
| Selected Master's Programs | | | | | | |
| Health/Health Care Administration/Management | 6,701 | 7,497 | 7,883 | 8,440 | 9,317 | 8.6% |
| Public Health, General | 7,252 | 7,941 | 8,203 | 8,620 | 9,006 | 5.6% |

Source: IPEDS¹

Note: The following fields were eliminated for having fewer than 50 completions: PrePharmacy Studies, PreDentistry Studies, PreOptometry Studies, PreChiropractic Studies.

Analysis of Findings

Student demand for pre-health programs is strong, particularly for pre-medical, pre-veterinary, and pre-physical therapy degrees. Conferrals in pre-health bachelor's programs together grew by an average annual 10.3 percent nationally from 2012 to 2016, which was substantially faster than the 1.7 percent growth for all bachelor's degree programs and indicates strong student demand for pre-health in general. Pre-Veterinary Studies (9.7 percent), PreMedicine/PreMedical Studies (6.1 percent), and Pre-Physical Therapy Studies (3.3 percent) represent the fields with the largest share of growth. Notably, nearly half of national conferral volume among health preparatory programs, and the fastest-growing subcomponent (15.7 percent), was unspecified bachelor's programs. This suggests a large measure of student demand is unaccounted for by the three aforementioned programs.

Bachelor's degrees in public health, exercise physiology, healthcare administration, and community health have experienced the strongest student demand growth among related programs. These programs may be strong candidates for degree concentrations.

In addition, two of these fields (Public Health, General and Health/Health Care Administration/Management) have experienced strong graduate conferral growth at both the master's and doctoral levels – where each is among the fastest growing related fields (see slides 21-22). Given that much of the target audience for these programs is students intending to pursue graduate study, trends in graduate conferrals may reflect relevant changes in undergraduate student demand.

Program Positioning Analysis

Benchmarking Analysis: Trends in Bachelor of Health Science Degrees

Program Positioning

Most degree programs offer concentrations for students looking to immediately enter the workforce, as well as for those intent on graduate study. Nearly all benchmarked institutions advertised bachelor's-level career pathways for program graduates, and a majority have degree concentrations designated exclusively for direct-entry students. Indeed, just four institutions orient all their concentrations primarily toward graduate education, and these programs suggest possible career outcomes for students who eventually decline to pursue advanced study.

Few benchmarked programs are the exclusive pre-health avenue of their institution. Most institutions have Pre-Health Advising programs running parallel to bachelor of health sciences programs, including those with programs purporting to be pathways to graduate health education. Indeed some institutions (such as Drexel University) even have graduate assurance pathway programs operating out of non-health science undergraduate programs.

Nearly all benchmarked institutions highlight their curriculum's flexibility. Several point out that students can experience a range of health fields before deciding on a particular postgraduate outcome (whether educational or in the labor market), and others make note of students' ability to move between concentrations throughout their undergraduate course of study. Many also suggest that their program core provides a solid platform for both career entry and further study.

Target Student Market

Benchmarked programs are positioned to appeal to a wide number of students with an interest in a healthcare career but without necessarily a clear sense of the particular field they would like to study or whether they would like to pursue graduate education. Students in most benchmarked programs will be able directly enter the workforce if they so choose, or pursue graduate education in one of several fields. The availability of alternate pre-professional tracks elsewhere in the university means that students who are certain about their desired outcomes (especially in medicine) may choose to take narrower undergraduate program or even an accelerated degree.



Spotlight: University of Missouri



Bachelor of Health Science in Health Science

- The **University of Missouri** offers students four concentration options:
 - ❑ **Health and Wellness** prepares students for application to programs in public health, accelerated nursing, or health education and promotion **OR** to work in health and human services non-profit organizations and corporate health promotion and wellness programming (with experience)
 - ❑ **Leadership and Policy** prepares students for graduate studies in health administration, informatics, public health, policy or law **OR** to enter careers in health administration, informatics or sales
 - ❑ **Pre-Professional** prepares students to apply for graduate and professional programs in medicine, dentistry, pharmacy, physician assistant studies, optometry and related areas **OR** to work for clinical research companies, medical or pharmaceutical sales (with experience)
 - ❑ **Rehabilitation Science** prepares students for application to graduate programs in fields such as occupational therapy, physical therapy, chiropractic, applied behavior analysis, orthotics/prosthetics and similar degrees **OR** to work as applied behavior analysis implementers, coaches for alternative community training organizations (with experience)
- **Postgraduate Outcomes (2014-2015):**
 - **90 percent** of graduates plan to stay on at University of Missouri for graduate school
 - **24 percent** of graduates are employed
 - **68 percent** of graduates are in graduate/professional school
 - **Top-five postgraduate programs** are: Physical Therapy, Accelerated Nursing, Occupational Therapy, Health Care Administration, Physician Assistant
 - **Institution-wide Medical Acceptance** (national acceptance rate): Osteopathic (34%), Allopathic (39%), Dental (45%).
- **Targeting:** "...degree program is a flexible, non-clinical program designed to provided students a broad overview of health care, preparing them for graduate school in health care or non-clinical health careers."

Competitor Programs Benchmark

Benchmarking Analysis: Trends in Bachelor of Health Science Degrees

Health Science Degree Details at Competitor and Peer Institutions

Benchmarked programs are institutions from list of Institutional Peers and Competitors with similar degree structures to that proposed, supplemented by several large institutions with similar degree programs

| Institution | Degree Program | Concentrations | Student Outcomes | Target Student Market | Student Targeting/Marketing | Other Practices |
|----------------------------|---|--|--|--|--|--|
| Baylor University | Bachelor of Science in Education - Health Science Studies | <ol style="list-style-type: none"> 1) Pre-Physical Therapy 2) Pre-Medical/Dental 3) Pre- Athletic Training (5 year) 4) Secondary General Science Education 5) Health Professions | <ul style="list-style-type: none"> Helps students identify and meet entrance criteria health related programs while emphasizing health, fitness, and wellness. Health Professions leads to other allied health graduate programs (e.g., occupational therapy, pharmacy, physician assistant, etc.) | Students looking to pursue graduate study in health-related programs. | <p>“The program is the largest undergraduate program in the department and has a long history of producing outstanding students who successfully matriculate into professional schools.”</p> | <p>Students who do not qualify may still take advantage of College’s Pre-Health Advising and may transition to degree once they demonstrate ability to meet GPA and course readiness requirements.</p> <p>(within completion of 30 semester hours)</p> |
| Cleveland State University | Bachelor of Science in Health Sciences | <ol style="list-style-type: none"> 1) Associate Degree/Bachelor of Science Completion Program 2) General Interest 3) Health Promotion 4) Pre-Therapy 5) Pre-Physician Assistant Science | <ul style="list-style-type: none"> Prepare students to enter a graduate program in a specific healthcare field or to develop skills and knowledge that will prepare them to work in healthcare generally General Interest is those interested in health-related careers but uncertain about which health profession to pursue; Health Promotion is those who plans to enter the community health or health promotion field Pre-Therapy track completes the prerequisite courses needed to enter either the Master of Occupational Therapy Program or Doctor of Physical Therapy Program at Cleveland State University School-wide: 96% employed, 96% working in profession (2015-16) | Students looking to pursue graduate study in health-related programs or a health-related career. | <p>“The curriculum emphasizes the development of self-directed and engaged learning skills needed for independent and life-long learning. It also promotes the importance of culture and ethical considerations relevant to all aspects of healthcare practice.”</p> | <ul style="list-style-type: none"> Offers co-curricular certificates in Gerontology Studies, Culture, Communication and Health, and Bioethics as well as concentrations in Health and Wellness, Community Health, and Human Factors Health Sciences Upper-Division Honors/Scholars Programs (Clinical Track, Research Track, Cultural Competency Track) 2+2 articulation agreements with three community college Allied Health programs |

Competitor Programs Benchmark

Benchmarking Analysis: Trends in Bachelor of Health Science Degrees

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| Institution | Degree Program | Concentrations | Student Outcomes | Target Student Market | Student Targeting/Marketing | Other Practices |
|-------------------|--|--|--|--|--|--|
| DePaul University | Bachelor of Science in Health Sciences | <ul style="list-style-type: none"> 1) Bioscience <ul style="list-style-type: none"> General Track Lab Investigations Track Medical/Graduate Track Pre-Nursing Track 2) Bioscience - Accelerated Program <ul style="list-style-type: none"> Medicine Pathologists' Assistant Pharmacy Physical Therapy Physician Assistant Podiatry 3) Public Health Studies <ul style="list-style-type: none"> General Track Community Health Track Health Education Track Health Policy & Administration Track | <ul style="list-style-type: none"> Bioscience prepares students for career in dentistry, medicine, nursing, pharmacy or physical therapy Bioscience – Accelerated Program prepares students for entry to pre-professional program (3+4 in medicine, 3+4 in pharmacy, 3+2 in physician assistant studies, 3+2 in pathologists' assistant studies, 3+3 in physical therapy, or 3+4 in podiatric medicine) Public Health Studies prepares students for career in community health, health care administration, health communication and public health 93 percent of 2016 Health Sciences graduates were employed, continuing their education or not seeking employment after graduation. | Students looking to pursue graduate study in health-related programs or a health-related career. | Students are prepared “for the variety of the growing healthcare professions by combining biomedical instruction with an understanding of how societal factors impact health” | <ul style="list-style-type: none"> Five-year master’s offerings with a Health Communication, Public Health, or Nursing master's degree. |
| Drexel University | Bachelor of Science in Health Sciences | <ul style="list-style-type: none"> Exercise Science | <ul style="list-style-type: none"> General degree prepares students to pursue the following field post-graduation: Rehabilitation (Professions, Physical therapy, Occupational therapy, Speech and language pathology, Cardiac rehabilitation), Physician Assistant Studies, Medicine and Dentistry, Optometry, Audiology, Clinical Research, Public Health and Health Advocacy, Nursing, Exercise Physiology, Nutrition Sciences, Bioethics, Health Psychology) | Students looking to pursue graduate study in health-related programs or a health-related career. | <p>“opportunity to explore different facets of health-related professions before matriculating to specialized graduate programs or entering the workplace.”</p> <p>“Courses in health and clinical sciences, research methods, statistics, and healthcare ethics are combined with a core curriculum of mathematics, humanities, and social sciences.”</p> | <ul style="list-style-type: none"> Optional six-month co-operative education experience Automatic Drexel Doctor of Physical Therapy Program Admissions Interview (if eligible) Center for Interdisciplinary Clinical Simulation and Practice Accelerated degree options through Physician Assistant (3+2.25) and Physical Therapy (3+3) programs Sequential degree option (accelerated or standard BS) to Salus University MSOT program |

Competitor Programs Benchmark

Benchmarking Analysis: Trends in Bachelor of Health Science Degrees

Health Science Degree Details at Competitor and Peer Institutions

Benchmarked programs are institutions from list of Institutional Peers and Competitors with similar degree structures to that proposed, supplemented by several large institutions with similar degree programs

| Institution | Degree Program | Concentrations | Student Outcomes | Target Student Market | Student Targeting/Marketing | Other Practices |
|-----------------------|---|--|---|--|---|--|
| Kent State University | Bachelor of Science in Exercise Science | <ol style="list-style-type: none"> Exercise Physiology Exercise Specialist Pre-Physical/Occupational Therapy/Podiatric Medicine | <ul style="list-style-type: none"> Exercise Physiology prepares students for graduate school in exercise physiology or health care professions Exercise Specialist prepares students for work in the clinical setting, ranging from a career in wellness to cardiac rehabilitation Pre-Physical/Occupational Therapy/Podiatric Medicine prepares students for subsequent graduate school in these areas (Pre-podiatric medicine track is designed to be a combined with KSU College of Podiatric Medicine – no guaranteed acceptance) | Students looking to pursue graduate study in health-related programs or a health-related career. | “Students will acquire knowledge of human movement, requisite skills and competencies in their area of specialization” | -- |
| Marymount University | Bachelor of Science in Health Sciences | <ol style="list-style-type: none"> Pre-Physical Therapy Pre-Professional (Occupational Therapy, Athletic Training, Chiropractic Medicine) Public Health | <ul style="list-style-type: none"> Pre-Physical Therapy prepares students for doctoral programs in Physical Therapy Pre-professional prepares students to pursue master's degrees in occupational therapy (OT) or athletic training (AT), or the Doctorate in Chiropractic Medicine (DCM) Public Health prepares students for careers in or future study in public health 30 of graduates percent employed within first 3-months (74% related to field of study); 55% pursuing additional education | Students looking to pursue graduate study in health-related programs or a health-related career. | “program is a dynamic major that is interdisciplinary in nature and provides flexible options that allows students to prepare for many kinds of positions in the health and wellness fields.” | <ul style="list-style-type: none"> Graduates are prepared to apply for Exercise Physiologist or Personal Trainer certifications by the American College of Sports Medicine (ACSM) Physical Therapy Scholar's Program (guarantees admission to doctoral program to a select group of well-qualified incoming freshmen as well as a limited number of well-qualified transfer students) Eligible for Accelerated B.S. to M.S. program in Health Education and Promotion |

Source. Institutional Websites (see embedded hyperlinks) and Marymount University student outcomes data³

Competitor Programs Benchmark

Benchmarking Analysis: Trends in Bachelor of Health Science Degrees

Health Science Degree Details at Competitor and Peer Institutions

Benchmarked programs are institutions from list of Institutional Peers and Competitors with similar degree structures to that proposed, supplemented by several large institutions with similar degree programs

| Institution | Degree Program | Concentrations | Student Outcomes | Target Student Market | Student Targeting/Marketing | Other Practices |
|--------------------|--|--|--|--|--|--|
| Oakland University | Bachelor of Science in Health Sciences | <ol style="list-style-type: none"> 1) Exercise Science 2) Integrative Holistic Medicine 3) Nutrition and Health 4) Pre-Health Professional 5) Pre-Pharmacy 6) Pre-Physical Therapy | <ul style="list-style-type: none"> • Exercise Science prepares students for career in the fitness arenas as well as for graduate study in Exercise Science and other disciplines • Integrative Holistic Medicine prepares students for traditional and non-traditional career opportunities in community-based and medical organizations emphasizing patient-centered practices • Nutrition and Health prepares students for work in a variety of clinical and public health fields that emphasize the relationship between diet, nutrition, food access and health status • Pre-Health Professional fulfills traditional application requirements for medical, dental, optometric, veterinary, physician assistant and other professional schools • Pre-Pharmacy prepares students to meet the academic prerequisites necessary to be considered for admission to Doctor of Pharmacy (PharmD) programs throughout the state • Pre-Physical Therapy prepares students to meet the prerequisite application requirements for Doctor of Physical Therapy (DPT) programs throughout the state • 54 percent of School-wide graduates employed (76 percent directly or somewhat related to major); 40% pursuing continuing education | Students looking to pursue graduate study in health-related programs or a health-related career. | <p>“...multi-disciplinary, science-based curriculum that will prepare them for a broad range of careers”</p> <p>“...combines liberal arts, basic science, social science, and health science courses for students who desire a generalized health science academic credential”</p> | <ul style="list-style-type: none"> • Nutrition and Health minor |

Competitor Programs Benchmark

Benchmarking Analysis: Trends in Bachelor of Health Science Degrees

Health Science Degree Details at Competitor and Peer Institutions

Benchmarked programs are institutions from list of Institutional Peers and Competitors with similar degree structures to that proposed, supplemented by several large institutions with similar degree programs

| Institution | Degree Program | Concentrations | Student Outcomes | Target Student Market | Student Targeting/Marketing | Other Practices |
|---------------------------------|--|--|---|---|--|---|
| Purdue University – Main Campus | Bachelor of Science in Health Science Pre-Professional | <ol style="list-style-type: none"> 1) Pre-Chiropractic 2) Pre-Dentistry 3) Pre-Medicine 4) Pre-Occupational Therapy 5) Pre-Optometry 6) Pre-Physical Therapy 7) Pre-Physician's Assistant 8) Public Health Concentration | <ul style="list-style-type: none"> • Prepared to meet prerequisites of relevant graduate program and rigors of a professional program • 3+2 MBA program available for outstanding students | Students looking to pursue graduate study in health-related programs. | <p>“...designed to prepare students for entry into professional schools in a wide arena of health-related professions”</p> <p>“Building a solid foundation in the Sciences and Humanities prepares our undergraduates for the challenges of pursuing a career in the diverse and ever-changing healthcare industry.”</p> | <ul style="list-style-type: none"> • Students take similar coursework the first two years of enrollment, allowing the flexibility of switching from one HSPP program to another. • Course requirements for entry into professional school are incorporated into the plans of study, resulting in no extra coursework |
| Saint Louis University | Bachelor of Science in Health Sciences | <ol style="list-style-type: none"> 1) Pre-occupational therapy or pre-physical therapy track 2) Medical scholars, pre-medicine, physician assistant scholars or pre-physician assistant track (incl. dental and optometry) 3) Pharmacy Scholars or PharmD accelerated track | <ul style="list-style-type: none"> • Not guaranteed to meet all of the prerequisite requirements of all institutions (DPT, MAT, MOT, PA, Medical School, etc.) • Pharmacy Scholars & PharmD accelerated track lead to 3+4 program with St. Louis College of Pharmacy • The majority of students with a bachelor's degree in health sciences go on to medical school, graduate school or other post-baccalaureate studies. | Students looking to pursue graduate study in health-related programs. | <p>“...is a path for students interested in entering clinically related health fields such as medicine, nursing, physical therapy or occupational therapy. The program also provides a solid scientific and health-oriented curriculum for professional or graduate education.”</p> | -- |

Competitor Programs Benchmark

Benchmarking Analysis: Trends in Bachelor of Health Science Degrees

Health Science Degree Details at Competitor and Peer Institutions

Benchmarked programs are institutions from list of Institutional Peers and Competitors with similar degree structures to that proposed, supplemented by several large instructions with similar degree programs

| Institution | Degree Program | Concentrations | Student Outcomes | Target Student Market | Student Targeting/Marketing | Other Practices |
|--------------------------------------|--|--|--|---|---|---|
| Stockton University | Bachelor of Science in Health Science | <ol style="list-style-type: none"> 1) General Concentration 2) Pre-Communication Disorders (CD) 3) Pre-Physical Therapy (PT) 4) Pre-Occupational Therapy (OT) 5) Community Health Education 6) Health Administration | <ul style="list-style-type: none"> • Pre-Communication Disorders provides prerequisite course work for graduate study in communication disorders and sciences including speech-language pathology or audiology • Community Health Education prepares students to attain employment as health education specialists (eligible to take Certified Health Education Specialists exam) • Health Administration concentration prepares students for entry-level positions as health care administrators | Students looking to pursue graduate study in health-related programs or a health-related career | <p>“...prepares students for a range of career options, from entry level positions in the health services arena to admission into graduate or professional educational programs in disciplines such as medicine, dentistry, nursing, pharmacy, physician assistant, physical therapy, occupational therapy, and speech-language pathology.”</p> | <ul style="list-style-type: none"> • Includes Pre-Physician Assistant Area of Interest • Students can design program, within the structure of the major, which will help them prepare for a variety of positions in healthcare or for future Professional/Graduate education. • Curriculum based on the Core Competencies for Interprofessional Collaborative Practice (IPEC) • Pre-Accelerated/2nd degree Bachelor of Science in Nursing • B.S. Health Science/M.S. Physician Assistant |
| University of Cincinnati-Main Campus | Bachelor of Science in Health Sciences | <ol style="list-style-type: none"> 1) Exercise & Movement Science 2) Physiologic Science 3) Behavior & Occupation Studies 4) Behavior & Occupation Studies - Online Learning | <ul style="list-style-type: none"> • Exercise & Movement Science graduates are likely to likely to enroll in graduate programs in Physical Therapy, Occupational Therapy, exercise physiology, biomechanics & ergonomics, orthotics & prosthetics, nutrition, Athletic Training, or health administration • Physiologic Science graduates are likely to enroll in graduate programs in medicine (either MD or DO), Optometry, Physician Assisting, Chiropractic medicine, Dentistry, Physical Therapy, Occupational Therapy, Pharmacy, exercise physiology, biomechanics & ergonomics, nutrition, Athletic Training, or health administration. • Behavior & Occupation Studies graduates likely to enroll in graduate programs in Occupational Therapy, Public Health, Health Promotion, or Community Health Education • College-wide: 61.6% employed, 33.6% continuing education | Students looking to pursue graduate study in health-related programs | <p>“prepares you for graduate studies in the areas of Physical Therapy, Occupational Therapy, Medicine, Physician Assisting, Chiropractic medicine, Dentistry, nutrition, exercise science, and biomechanics & ergonomics as well as other health related masters’ and doctoral degree programs”</p> | <ul style="list-style-type: none"> • Program is completed in two levels: (1) All basic science disciplines, mathematics, English composition, and other areas of general education (2) Applied sciences of exercise, human movement and human anatomy and physiology • Nutrition Minor • Psychology Minor (with Behavior & Occupation Studies Concentration) • Junior Early Admission Pathway (JEAP) to Physical Therapy |

Source. Institutional Websites (see embedded hyperlinks) and University of Cincinnati student outcome data⁵

Competitor Programs Benchmark

Benchmarking Analysis: Trends in Bachelor of Health Science Degrees

Health Science Degree Details at Competitor and Peer Institutions

Benchmarked programs are institutions from list of Institutional Peers and Competitors with similar degree structures to that proposed, supplemented by several large institutions with similar degree programs

| Institution | Degree Program | Concentrations | Student Outcomes | Target Student Market | Student Targeting/Marketing | Other Practices |
|------------------------|--|---|--|---|---|--|
| University of Kentucky | Bachelor of Science in Human Health Sciences | <ol style="list-style-type: none"> 1) Athletic Training Track 2) Audiology Track 3) Dentistry Track 4) Occupational Therapy Track 5) Optometry Track 6) Pharmacy Track 7) Physical Therapy Track 8) Physician Assistant Track | <ul style="list-style-type: none"> • Gain a comprehensive knowledge of health care practices and a solid foundation in the basic sciences • A comprehensive knowledge of health care practices and a solid foundation in the basic sciences • 50%+ Dean's List students are admitted to health professions programs | Students looking to pursue graduate study in health-related programs or a health-related career | “not intended to replace traditional pathways to health care careers; instead, it is intended to offer a unique alternative for those who seek careers in health care and the health professions.” | <ul style="list-style-type: none"> • Minor in Health Advocacy |
| University of Missouri | Bachelor of Health Science in Health Science | <ol style="list-style-type: none"> 1) Health and Wellness 2) Leadership and Policy 3) Pre-Professional 4) Rehabilitation Science | <ul style="list-style-type: none"> • Health and Wellness prepares students for application to programs in public health, accelerated nursing, or health education and promotion • Leadership and Policy prepares students to enter careers in health administration, informatics, public health, policy or law • Pre-Professional prepares students to apply for graduate and professional programs in medicine, dentistry, pharmacy, physician assistant studies, optometry and related areas • Rehabilitation Science prepares students for application to graduate programs in fields such as occupational therapy, physical therapy, chiropractic, applied behavior analysis, orthotics/prosthetics and similar degrees • 90 percent of graduates plan to stay on at University of Missouri for graduate school • 24 percent employed; 68 percent in Graduate/Professional School • Top-five postgraduate programs are: Physical Therapy, Accelerated Nursing, Occupational Therapy, Health Care Administration, Physician Assistant • For Alumni Generally, graduate school national acceptance rate: Osteopathic (34%), Allopathic (39%), Dental (45%) | Students looking to pursue graduate study in health-related programs or a health-related career | “for students who wish to enter a non-clinical health career such as medical case management, corporate wellness, human services, medical sales, pharmaceutical manufacturing and distribution, and more. Graduates may also be qualified to enter either graduate or professional health science programs, such as physical therapy or public health.” | <p>MedOpp Advising Office (Pre-Health Advising) provides: One-on-One Advising, Introductory and Development Workshops, Application Year Programming (seminars, personal consultations and interactive workshops designed to prepare and assist students with the application process), Committee Letter, and Pre-Med Scholars Program (priority volunteer and job shadow placement, faculty/expert discussions).</p> |

Medical School Academic Admissions Requirements

Benchmarking Analysis: Trends in Bachelor of Health Science Degrees

Medical School Admissions Requirements

| Institution | General | Course Prerequisites | Preferences |
|---|---|---|---|
| Baylor College of Medicine | <ul style="list-style-type: none"> 90+ undergraduate semester hours (s.h.) or equivalent at a fully accredited college or university in the United States | <ul style="list-style-type: none"> Math (3-4s.h.) - quantitative math. Expository Writing (3-4s.h.) Humanities-Social/Behavioral Sciences (12s.h.) Organic Chemistry (2 semesters; 6-8s.h.) – lab not required Biochemistry (3-4s.h.) - lab is not required Advanced Biology (3-4s.h.) - lab is not required. | <ul style="list-style-type: none"> Biostatistics Highly recommended: genetics, cell/molecular biology |
| Creighton University School of Medicine | <ul style="list-style-type: none"> Bachelor's degree Completion of required courses at an accredited four-year institution in the United States or Canada. Foundation in: Commitment to “service of others” through non-medical volunteer activities; physician shadowing experiences; patient contact through clinical and/or medical experiences | <ul style="list-style-type: none"> Biochemistry Human/Animal/Mammalian Physiology at the advanced level* (such courses will focus on the function of all organ-systems within humans and/or other mammals) Statistics English (two courses) | <ul style="list-style-type: none"> Scientific research, though not required for admission, is also highly valued by the Committee. Advanced Level Courses Recent Courses |
| Drexel University College of Medicine | <ul style="list-style-type: none"> Baccalaureate degree at an accredited college or university Meaningful clinical experience Service orientation/community service | <ul style="list-style-type: none"> Biology – with an emphasis on the cellular and molecular aspects of living organisms (1 year) Chemistry – with an emphasis on an integrated sequence that leads to the mastery of biologically relevant general chemistry, organic chemistry, and biochemistry (2 years) Physics – with an emphasis on the principles of mechanisms, kinetics, thermodynamics, wave motion, electricity and magnetism (1 course) Laboratory experience – with a focus on hypothesis-driven exercises, problem solving, and basic laboratory principles (1 year) Statistics and probability – with emphasis on hypothesis testing, quantitative scientific reasoning analysis, and biostatistics. (Biostatistics, 1 course) English literature/communication/intensive writing experience Behavioral and social sciences | <ul style="list-style-type: none"> The premedical curriculum will be required to include significant academic rigor. The curriculum in undergraduate medical education necessitates that a student be able to successfully balance a course load that is heavily weighted in the sciences (One way to demonstrate this is to take multiple science and/or math courses at the same time) |

Source. Institutions websites

Note: Drexel University uses competency-based rather than course-based admissions requirements (see link).

Medical School Academic Admissions Requirements

Benchmarking Analysis: Trends in Bachelor of Health Science Degrees

Medical School Admissions Requirements

| Institution | General | Course Prerequisites | Preferences |
|---|--|--|--|
| Zucker College of Medicine (Hofstra University) | <ul style="list-style-type: none"> Bachelor's degree from an accredited U.S. or Canadian college or university A completed primary application (including MCAT) A Premedical Committee Letter | Strong recommendations: <ul style="list-style-type: none"> Biology - with lab (1 year) Chemistry, to the level of organic or biochemistry Mathematics (1 year) Physics (1 year) English literature or equivalent, including writing | <ul style="list-style-type: none"> Statistics Additional coursework in cell biology, embryology, ethics, genetics and molecular biology is helpful, but not required for admission |
| Stritch School of Medicine (Loyola University Chicago) | <ul style="list-style-type: none"> Bachelor's Degree (with at least one year of coursework in the US or Canada prior to applying) Applicants must complete at least 75% of their premedical courses at the university from which the degree would be granted. MCAT AMCAS Application | <ul style="list-style-type: none"> General chemistry – with lab (1 year) General biology – with lab (1 year) General physics – with lab (1 year) Organic chemistry – with lab (1 year) *Biochemistry can be substituted for part of the organic requirement **Online and pass/fail courses do not fulfill prerequisites | <ul style="list-style-type: none"> Strongly recommend that a student's undergraduate years include liberal arts and science courses, as a broad education will serve them well throughout their life. Also require that students possess basic computer skills, as much of their course work at the Stritch School of Medicine requires these basic skills. Community college courses are accepted as fulfilling premedical requirements, but the committee strongly recommends at least 12 hours of science coursework from a four-year university or graduate program |
| Medical College of Wisconsin (Marquette University) | <ul style="list-style-type: none"> 90 undergraduate credits, including prerequisites, at a regionally accredited college or university located in the United States or Canada New version of the MCAT CASPer exam AMCAS application | <ul style="list-style-type: none"> Advanced Biology - with lab (4s.h.) (Anatomy & Physiology, Microbiology, Neurobiology, etc.) Biochemistry (3-4s.h.) (provided the course required both general and organic chemistry as prerequisites) Physics (8s.h.) Math (4s.h.) English (3s.h.) Social Sciences - psychology or sociology (3s.h.) | <ul style="list-style-type: none"> Oral communication (speech, interpersonal communication, etc.) Statistics |

Source. Institutions websites

Note: Drexel University uses competency-based rather than course-based admissions requirements (see link).

Medical School Academic Admissions Requirements

Benchmarking Analysis: Trends in Bachelor of Health Science Degrees

Medical School Admissions Requirements

| Institution | General | Course Prerequisites | Preferences |
|---|---|--|--|
| Saint Louis University School of Medicine | <ul style="list-style-type: none"> 90 semester hours in undergraduate arts and science courses One academic year of science course work in an accredited North American college or university Applicants are expected to have pursued one area of knowledge or discipline in depth. The Committee on Admissions does not favor any specific major. Suitable major areas include the behavioral sciences and humanities, as well as the natural sciences. | <ul style="list-style-type: none"> General biology or zoology (8s.h.) – with lab Inorganic chemistry (8s.h.) – with lab Organic chemistry (8s.h.) – with lab Physics (8s.h.) – with lab English (6s.h.) Other humanities and behavioral sciences (12s.h.) *Online courses do not fulfill prerequisites | <ul style="list-style-type: none"> Virtually all accepted applicants complete a baccalaureate degree of at least 120 semester hours from an accredited college or university Study of biochemistry or cellular biology is highly recommended |
| Hackensack Meridian School of Medicine (Seton Hall University) | <ul style="list-style-type: none"> Baccalaureate degree from an accredited college or university AMCAS Application and SOM Secondary Application | <ul style="list-style-type: none"> Humanities, social, and behavior sciences (3 semesters) Biology - with laboratory (2 semesters) General Inorganic Chemistry - with laboratory (2 semesters) English Composition (1 semester) Literature (1 semester) Mathematics/Science-related (1 semester) (such as Statistics, Biostatistics, Epidemiology, Genetics, Calculus) Two semesters – with lab (Organic Chemistry, Biochemistry, Physics, Anatomy/Physiology, Zoology, Botany) | <ul style="list-style-type: none"> Ethics Spanish (2 semesters) Cell Biology Ecology Leadership Economics Political Science Engineering Computer Sciences |
| University of Cincinnati College of Medicine | <ul style="list-style-type: none"> United States citizen or permanent resident 90 semester hours at a U.S. accredited four-year degree-granting institution OR have a graduate degree from a U.S. college or university OR have completed at least 20 hours of science coursework at a U.S. college or university All majors are valued. Students are expected to engage in a rigorous academic program grounded in the basic principles of the sciences fundamental to medicine and the psycho/social nature of humans | <p>Knowledge usually obtained in one-year courses in:</p> <ul style="list-style-type: none"> Biology General Chemistry Organic chemistry Physics Mathematics. | <ul style="list-style-type: none"> Bachelor degree is encouraged but not required Highly competitive applicants have completed coursework in the social, cultural and behavioral sciences. Knowledge of the basic principles of statistics and computer literacy are strongly recommended. |

Source: Institutions websites

Note: Drexel University uses competency-based rather than course-based admissions requirements (see link).

Doctor of Physical Therapy Academic Admissions Requirements

Benchmarking Analysis: Trends in Bachelor of Health Science Degrees

Doctor of Physical Therapy Academic Admissions Requirements

| Institution | General | Course Prerequisites | Preferences |
|--------------------------------------|---|---|--|
| Baylor University | <ul style="list-style-type: none"> Baccalaureate degree from a regionally accredited institution prior 3.00/4.00 GPA on required prerequisite coursework Completion of the Graduate Record Examination (GRE) within the last five years (no minimum) Recommended: fifty hours of volunteer or work experience | <ul style="list-style-type: none"> Biology (6s.h.) - laboratory recommended Chemistry (8s.h.) - with laboratory General Physics (8s.h.) - with laboratory Human Anatomy and Physiology - with laboratory (8s.h.) Statistics (3s.h.) Any Psychology (3s.h.) Abnormal or Developmental Psychology (s.h.) English Composition or Writing (3s.h.) | |
| Bradley University | <ul style="list-style-type: none"> Baccalaureate degree with prerequisites completed with a "C" or higher Skills in computer literacy, communication (written and verbal), medical terminology, and teaching. Minimum 3.0 grade point average for all courses taken. GRE verbal minimum score of 150; quantitative minimum score of 150. TOEFL score of 600 or higher, and IELTS score of 7.0 or higher. | <ul style="list-style-type: none"> Chemistry for science majors - with lab (6-8s.h.) Physics for science majors - with laboratory (6-8s.h.) Biology/Zoology with content that includes an introduction to cell biology, biochemistry and genetics (6-8s.h.) Anatomy of vertebrate, mammalian, human or comparative anatomy – with lab (3-4s.h.) Physiology of vertebrate, mammalian or human physiology (A two-semester sequence of combined anatomy and physiology will meet the anatomy and physiology requirement) (3-4s.h.) Statistics (3s.h.) OR BS in Health Science from Health Science Bradley University | <ul style="list-style-type: none"> Kinesiology, biomechanics or additional courses in human anatomy Exercise physiology, pathophysiology, or additional courses in physiology Upper division psychology and sociology courses Medical Terminology 100 hours of exposure to physical therapy |
| Creighton University | <ul style="list-style-type: none"> 90 semester hours Prerequisite courses may be completed at any regionally accredited institution with a grade of C or better Proof of a minimum of 60 hours of observation supervised by a physical therapist *Students without a bachelor degree must identify their major emphasis of study and satisfactorily complete three upper-level courses (9s.h.) toward that major prior to matriculation. Strong academic performance is considered paramount; the degree of emphasis is secondary. | <ul style="list-style-type: none"> General Biology I & II - with labs (8s.h.) General Chemistry I & II - with labs (8s.h.) General Physics I & II - with labs (8s.h.) Human or Mammalian Physiology (3s.h.) English (including Composition) (6s.h.) Statistics (3s.h.) Electives (54s.h.) *The chemistry and physics courses must be a two-semester, eight-hour or equivalent course sequence. | |

Source: Institutions websites

Note: Drexel University uses competency-based rather than course-based admissions requirements (see link).

Doctor of Physical Therapy Academic Admissions Requirements

Benchmarking Analysis: Trends in Bachelor of Health Science Degrees

Doctor of Physical Therapy Academic Admissions Requirements

| Institution | General | Course Prerequisites | Preferences |
|--|--|---|--|
| Drexel University | <ul style="list-style-type: none"> Bachelor's Degree from an accredited institution in the United States or an equivalent international institution with mean cumulative GPA of 3.0 Grade of "C" or higher on all prerequisite courses 50 or more volunteer, shadowing or paid internship hours are required. Minimum GRE scores are a combined verbal and quantitative score of 300 and a 4.0 on the writing section. | <ul style="list-style-type: none"> Biology - with laboratory (1 year) Chemistry - with laboratory (1 year) Physics - with laboratory (1 year) Human/Mam Physiology – with lab (1 year of A&P will satisfy) Gross Anatomy – with lab (1 year of A&P will satisfy) General psychology (1 course) Introductory statistics (1 course) | <ul style="list-style-type: none"> Behavioral science-based course is preferred |
| Seton Hall University | <ul style="list-style-type: none"> Bachelor's degree with GPA of 3.2 on a 4-point scale Prerequisites completed with "C" or better PTCAS application 50 hours of clinical observation with a licensed physical therapist in the delivery of physical therapy services in a clinical environment. GRE scores with minimum of 150 on both the verbal and quantitative portions of the test and a 3.0 or greater on the analytical writing section (or graduate degree in another health profession or biological science) | <ul style="list-style-type: none"> Human Anatomy and Physiology - with lab (8s.h.) Chemistry - with lab (8s.h.) Physics - with lab (8s.h.) Psychology (3s.h.) Social and Behavioral Sciences (6s.h.) Statistics (3s.h.) English/Communications (6s.h.) | |
| University of Cincinnati-Main Campus | <ul style="list-style-type: none"> Undergraduate degree from a regionally accredited college or university GRE scores with suggested minimum scores of: 150 Quantitative, 150 Verbal, 4.0 Written 50 hours of Observation (minimum 25 inpatient, 25 elsewhere) | <ul style="list-style-type: none"> Anatomy and Physiology - with Lab (1 year) Biology - with Lab (1 year) Chemistry - with Lab (1 year) English Composition (1 year) Exercise Physiology (1 course) Medical Terminology (1 course) Psychology - Introductory (1 course) Abnormal, Developmental, or Lifespan Psychology (1 course) Statistics (1 course) | |

Source. Institutions websites

Note: Drexel University uses competency-based rather than course-based admissions requirements (see link).

Graduate Occupational Therapy Academic Admissions Requirements

Benchmarking Analysis: Trends in Bachelor of Health Science Degrees

Graduate Occupational Therapy Academic Admissions Requirements

| Institution | Program | General Requirements | Course Requirements |
|------------------------|--|--|--|
| Baylor University | Doctor of Post Professional Occupational Therapy | <ul style="list-style-type: none"> Successful completion of an entry-level, accredited occupational therapy program at the master's or baccalaureate degree level If the entry-level program is not at the master's level, the student must have completed a master's-level program in a related field (i.e., psychology). | -- |
| Creighton University | Entry-Level Doctor of Occupational Therapy | <ul style="list-style-type: none"> Baccalaureate degree (no minimum GPA) Prerequisite courses completed at regionally accredited institution with a grade of C or better Observation in an OT setting (no minimum; however the more hours a candidate has acquired, the more competitive of an applicant he/she will be) | -- |
| | Post Professional Doctor of Occupational Therapy | <ul style="list-style-type: none"> Bachelor's or entry-level master's degree* in occupational therapy at an ACOTE-accredited institution (or WFOT approved OT program for international applicants) | -- |
| Hofstra University | Master of Science in Occupational Therapy | <ul style="list-style-type: none"> Baccalaureate degree with minimum cumulative GPA of 3.0 Observation of occupational therapy related experience | -- |
| Saint Louis University | Master of Occupation Therapy | <ul style="list-style-type: none"> Prerequisites with a minimum 3.2 cumulative GPA | <ul style="list-style-type: none"> Biology with lab (4s.h.) Chemistry with lab (4s.h.) Basic anatomy (3s.h.) Physiology (3s.h.) Physics (3s.h.) Lifespan human development (3s.h.) Abnormal psychology (3s.h.) Research methods (3s.h.) Medical terminology |
| | Post Professional Doctor of Occupational Therapy | <ul style="list-style-type: none"> Bachelor's degree with 3.2 GPA Completed the National Board Certification in Occupational Therapy examination or an international equivalent One year (2,000 hours) of clinical experience as an occupational therapist or equivalent experience in another therapeutic field (Post-graduate therapy-related research will be considered as partial fulfillment of this requirement) | <ul style="list-style-type: none"> 4000 or 5000-level English composition course (3s.h.) OCTH 5011: Fundamentals of Occupational Science (3s.h.) OCTH 5010: Foundations of OT: Theories, Domains and Processes (3s.h.) |

Source: Institutions websites

National Master's Degree Conferrals

Benchmarking Analysis: Trends in Bachelor of Health Science Degrees

| Common Master's Degree Tracks | 2012 | 2013 | 2014 | 2015 | 2016 | Growth Rate | AAC** | STDEV(AAC) |
|---|-------|-------|-------|-------|-------|-------------|-------|------------|
| Applied Behavior Analysis | 207 | 229 | 294 | 498 | 802 | 40.3% | 148.8 | 112.1 |
| Clinical Nutrition/Nutritionist | 138 | 214 | 286 | 403 | 452 | 34.5% | 78.5 | 24.5 |
| Community Health and Preventive Medicine. | 123 | 178 | 189 | 191 | 207 | 13.9% | 21.0 | 20.3 |
| Exercise Physiology | 207 | 209 | 245 | 320 | 312 | 10.8% | 26.3 | 32.5 |
| Health/Health Care Administration/Management | 6,701 | 7,497 | 7,883 | 8,440 | 9,317 | 8.6% | 654.0 | 194.4 |
| Hospital and Health Care Facilities Administration/Management | 849 | 784 | 940 | 963 | 1,179 | 8.6% | 82.5 | 110.1 |
| Physician Assistant | 5,566 | 6,028 | 6,542 | 7,025 | 7,682 | 8.4% | 529.0 | 76.2 |
| Athletic Training/Trainer | 529 | 519 | 560 | 675 | 717 | 7.9% | 47.0 | 44.5 |
| Public Health, General | 7,252 | 7,941 | 8,203 | 8,620 | 9,006 | 5.6% | 438.5 | 155.8 |
| Kinesiology and Exercise Science | 1,982 | 2,181 | 2,182 | 2,192 | 2,455 | 5.5% | 118.3 | 115.0 |
| Occupational Therapy/Therapist | 5,009 | 5,366 | 5,515 | 5,824 | 6,191 | 5.4% | 295.5 | 87.4 |
| Dietetics/Dietitian | 400 | 465 | 528 | 476 | 472 | 4.2% | 18.0 | 49.0 |
| Gerontology | 384 | 444 | 468 | 457 | 441 | 3.5% | 14.3 | 30.6 |
| Audiology/Audiologist | 108 | 118 | 119 | 126 | 124 | 3.5% | 4.0 | 4.7 |
| Public Health Education and Promotion | 787 | 897 | 840 | 797 | 847 | 1.9% | 15.0 | 68.6 |
| Health Services Administration | 736 | 545 | 647 | 758 | 783 | 1.6% | 11.8 | 121.7 |
| Human Nutrition | 281 | 347 | 318 | 245 | 293 | 1.1% | 3.0 | 56.6 |
| Communication Sciences and Disorders, General | 1,844 | 1,869 | 1,898 | 1,928 | 1,870 | 0.4% | 6.5 | 37.3 |
| Community Health Services/Liaison/Counseling | 241 | 236 | 245 | 219 | 236 | -0.5% | -1.3 | 16.3 |
| Health Services/Allied Health/Health Sciences, General | 661 | 673 | 655 | 595 | 547 | -4.6% | -28.5 | 27.9 |
| Physical Therapy/Therapist | 430 | 244 | 194 | 150 | 96 | -31.3% | -83.5 | 59.3 |

National Doctoral Degree Conferrals

Benchmarking Analysis: Trends in Bachelor of Health Science Degrees

| Common Doctoral Degree Tracks | 2012 | 2013 | 2014 | 2015 | 2016 | Growth Rate | AAC** | STDEV(AAC) |
|--|--------|--------|--------|--------|--------|-------------|-------|------------|
| Applied Behavior Analysis | 31 | 30 | 48 | 59 | 83 | 27.9% | 13 | 9.3 |
| Occupational Therapy/Therapist | 234 | 278 | 302 | 351 | 455 | 18.1% | 55.2 | 29.7 |
| Exercise Physiology | 47 | 51 | 56 | 80 | 72 | 11.3% | 6.2 | 11.5 |
| Health Services/Allied Health/Health Sciences, General | 88 | 93 | 170 | 162 | 133 | 10.9% | 11 | 40.0 |
| Health/Health Care Administration/Management | 167 | 222 | 189 | 203 | 239 | 9.4% | 18 | 32.8 |
| Public Health, General | 342 | 349 | 363 | 409 | 489 | 9.4% | 36.7 | 29.0 |
| Public Health Education and Promotion | 60 | 62 | 79 | 71 | 85 | 9.1% | 6.25 | 10.0 |
| Physical Therapy/Therapist | 9,315 | 9,909 | 10,207 | 10,619 | 11,116 | 4.5% | 450.2 | 109.0 |
| Optometry | 1,404 | 1,554 | 1,552 | 1,549 | 1,652 | 4.2% | 62 | 66.6 |
| Dentistry | 5,149 | 5,370 | 5,467 | 5,867 | 6,005 | 3.9% | 214 | 116.3 |
| Pharmacy | 13,027 | 13,394 | 13,967 | 14,344 | 14,773 | 3.2% | 436.5 | 82.2 |
| Kinesiology and Exercise Science | 175 | 182 | 208 | 189 | 192 | 2.3% | 4.25 | 16.0 |
| Medicine | 17,146 | 17,886 | 17,879 | 18,551 | 18,680 | 2.2% | 383.5 | 326.9 |
| Veterinary Medicine | 2,618 | 2,610 | 2,687 | 2,815 | 2,859 | 2.2% | 60.25 | 49.5 |
| Audiology/Audiologist | 639 | 603 | 611 | 600 | 653 | 0.5% | 3.5 | 32.6 |
| Chiropractic | 2,496 | 2,219 | 2,420 | 2,544 | 2,418 | -0.8% | -19.5 | 191.6 |

*The following were eliminated for having fewer than 50 conferrals in 2016: Human Nutrition, Gerontology, and Communication Sciences and Disorders, General, Physician Assistant, Athletic Training/Trainer, Community Health and Preventive Medicine, Community Health Services/Liaison/Counseling, Health Policy Analysis, Health Services Administration, Clinical Nutrition/Nutritionist, Dietetics/Dietitian, and Hospital and Health Care Facilities Administration/Management.. **Average Annual Change

1. "IPEDS Data Center." National Center for Education Statistics. <https://nces.ed.gov/ipeds/datacenter/>
2. "Student Outcome Data." Cleveland State University. <https://www.csuohio.edu/sciences/health-sciences/student-outcome-data>
3. "Marymount University - Accountability." <https://www.marymount.edu/Home/Faculty-and-Staff/Office-of-Planning-Institutional-Effectiveness/Accountability>
4. "Outcomes - Career Services." page. Oakland University. <https://oakland.edu/careerservices/outcomes/index>
5. "Accountability - Office of Planning & Institutional Effectiveness." Marymount University. <https://www.marymount.edu/Home/Faculty-and-Staff/Office-of-Planning-Institutional-Effectiveness/Accountability>
6. "Post-Graduation Outcomes." University of Cincinnati. <http://www.uc.eduhttp://uc.edu/careereducation/about/outcomes>
7. "College of Health Sciences Undergraduate Bulletin (2018-2019)." University of Kentucky. http://www.uky.edu/registrar/sites/www.uky.edu.registrar/files/healthsciences_6.pdf

HR HANOVER
RESEARCH



| Institution | School/College | Department | Degree | Major | Concentration(s) | Notes |
|--------------------|--|--|----------------|---|--|---|
| Miami (Oxford) | College of Education, Health and Society | Kinesiology and Health | BS | Kinesiology | | Also have majors in Athletic Training, Nutrition, Public Health and Sport Leadership/Management |
| Ohio State | College of Education and Human Ecology | Human Sciences | BS Education | Exercise Science | | Suggest minor in Biology for some career aspirations |
| U of Cincinnati | College of Allied Health Sciences | Rehabilitation Sciences | BS | Health Sciences | -Exercise & Movement Science Concentration (Pre-Physical Therapy & Pre-Athletic Training) -Physiologic Science Concentration (Pre-Medicine & Pre-Pharmacy) -Behavior & Occupation Studies Concentration (HLSC-BO) (Pre-Occupational Therapy) | |
| Ohio University | College of Arts and Sciences | Biological Sciences | BS | Biological Sciences-PrePhysical Therapy | | Also for nursing, PA and chiropractic |
| | | Psychology | BA | Psychology Pre Physical Therapy | | Also for counseling, business, research |
| | College of Health Sciences and Professions | School of Applied Health Sciences and Wellness | BS | Exercise Physiology | | Clinical Ex Phys and medical school, physical therapy school, and physician assistant programs. |
| Xavier University | College of Professional Sciences | Sports Studies | BS | Exercise Science | | 3+2 with MS Athletic Training, Also major in Sport Management in dept. |
| | | Occupational Therapy | B Liberal Arts | Occupational Therapy | | |
| | College of Arts and Sciences | Biology | Minor | Pre-Physical Therapy | | |

| | | | | | | |
|----------------------|--|---|------------------------|--|---|--|
| IU – Bloomington | School of Public Health | Kinesiology | BS | Exercise Science | | Pre-professional and for clinical ex phys; dept also has Athletic Training |
| | | | BS in Public Health | Health Fitness Specialist | | Required Internship, prepares for certifications |
| | College of Arts and Sciences | | BS or BA | Human Biology | -Human Environment and Ecology -Human Growth and Development -Human Health and Disease -Human Origins and Survival -Human Reproduction & Sexuality | |
| Purdue University | College of Health and Human Sciences | Health and Kinesiology | BS | Kinesiology | | Used to also have: Applied Exercise and Health Movement and Sport Science Public Health and Athletic Training also in Department Careers and Pre-Professional |
| | | Not in a department | BS | Health Sciences | Pre-Professional: Chiropractic Dentistry Medicine Occupational Therapy Optometry Physical Therapy Physician Assistant Public Health | |
| | College of Science | Biological Science | BS BS | Health and Disease Neurobiology and Physiology | | |
| Marquette U | College of Health Sciences | Physical Therapy (Exercise Science Program) | BS | Exercise Physiology | | |

| | | | | | | |
|------------------|--|--|--|---|---|---|
| | | Biomedical Sciences | BS | Biomedical Sciences | | Offers Minor Offers Direct Admit, Early Admit to PT, PA, others |
| Villanova | Liberal Arts and Sciences | Pre Professional Program | | OT Affiliate Program PT Affiliate Program | | In Partnership with Thomas Jefferson University Suggests majors (biology, biochemistry, psychology, etc) |
| Butler | College of Pharmacy and Health Science | Health Sciences, Healthcare and Business | BSHS | Health Science | | Direct admit to PA program |
| | College of Education | Human Movement and Health Science | BSE? | Human Movement and Health Science | | Teacher Licensure, Allied Professions, Postgraduate Study preparation Offers Minor |
| Loyola (Chicago) | School of Nursing | Exercise Science | BS | Exercise Science | | Offers Minor |
| Saint Louis U | College of Health Sciences | | BS in Health Science | Health Science | “Curricular Options” 1-standard, pre-OT, pre-PT 2-med scholars, pre-med, PA scholars, pre-PA 3-pharm scholars, pre-Pharm | |
| | | | BS Exercise Science +MAT OR +DPT | Athletic Training (5 year) Physical Therapy (6 year) | | |
| | | | BS in Occupational Science | Occupational Science | | Guaranteed entry to MOT w/ met standards |

Peer Institutions for cross-applications; from Adam Rathge, Director of Enrollment Strategies

Top cross applications over last 10 years

Miami University – Oxford
Marquette University
Xavier University
Indiana University – Bloomington
Ohio State University

Top application overlaps for the previous cycle

Miami University – Oxford
Ohio State University
University of Cincinnati
Ohio University
Xavier University
Indiana University - Bloomington
Purdue University
Marquette University

Additional Competitive Matching

Villanova University
Butler University
Loyola University - Chicago
Saint Louis University

Major Names Related to Professional School Admission:

Physician Assistant

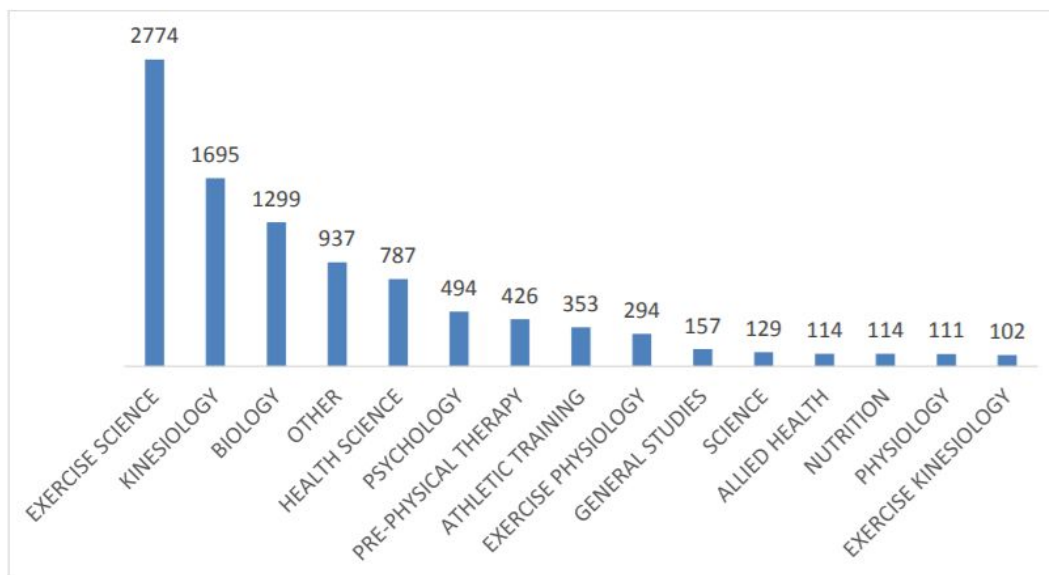
| 15-2016 | 16-2017 |
|---------------------|---------------------|
| Biology | Biology |
| Psychology | Health Science |
| Health Science | Psychology |
| Biological Sciences | Biological Sciences |
| Other/Not Listed | Exercise Science |
| Exercise Science | Other/Not Listed |
| Kinesiology | Biomedical Science |
| Biomedical Science | Kinesiology |
| Nutrition | Nutrition |
| Neuroscience | Biochemistry |

Accessed from CASPA Matriculant Report (through 2017 cycle). Note not all schools participate in CASPA.

<http://paeaonline.org/wp-content/uploads/2018/04/2014-2017-Matriculant-Comparison-Report.pptx>

Physical Therapy

Figure 17: Top 15 Majors for Accepted PTCAS Applicants



* Some applicants in PTCAS designated multiple majors or minors. Graph above includes information based on all majors designated. Major categories are not mutually exclusive. If an applicant enters the same major for multiple colleges or degrees, the major will be counted as many times as it is listed.

Obtained from PTCAS Data Applicant Report:

http://www.ptcas.org/uploadedFiles/PTCASorg/About_PTCAS/PTCASApplicantDataRpt.pdf

Occupational Therapy

OTCAS does not release a list of majors of applicants. Several resource website were accessed that mention the following as possible majors: exercise science/kinesiology, athletic training,, psychology, health science, biology, rehabilitation science, sociology, education, business. Similar to all other health professions, no specific major is required but prerequisites must be met.

Health Professions Prerequisite Analysis

| | Exercise & Movement Science Concentration (Pre-Physical Therapy & Pre-Athletic Training) | | | Integrative Physiology Concentration (Pre-Medicine/PA & Allied Health) | | | | | | | Behavior & Occupation Studies Concentration (Pre-Occupational Therapy & Accelerated Nursing) | | | Doctor of Chiropractic | |
|--|--|-------------------|-----|--|-------|-----|-----------|---------|-----|-----|--|----------------|----------------|------------------------|---|
| | Physical Therapy | Athletic Training | MPO | Physician Assistant | MD/DO | DDS | OPTOMETRY | PHARM D | DPM | DVM | Occupational Therapy | ACCELERATED RN | MSRN | | |
| English Composition 1 | X | S | | S | | X | X | X | X | X | X | X | X | X | |
| English Composition 2 | S | | | S | | X | X | X | X | X | S | | | | S |
| Medical Writing Course (ENG 363) | | | | | | | | | | | S | S | S | | |
| Oral Communication /Speech | S (6%) | | | | | | | S | | S | S | S | S | | |
| Anthropology (intro) | S (2%) | | | S | | | | S | | S | X ₁ | X ₁ | X ₁ | | S |
| Sociology (intro) | S (2%) | | | S | | | | S | S | S | X ₁ | X ₁ | X ₁ | | S |
| Social Science | S (2%) | | | S | | | | S | S | S | | S | S | | S |
| Medical/Health Care Ethics (PHL 315, REL 367) | S (2%) | S | | S | | | | | | | X | S | S | S | S |
| Computer Competency | | | | | | | | | | | | S | S | | |
| Economics | | | | | | | | S | | | | | | | |
| Psychology | | | | | | | | | | | | | | | |
| Intro Psych (PSY 101) | X | X | X | X | | | | | X | | X | X | X | | X |
| Life Span (PSY 251) | X | S | X | X | | | | | | | X | X | X | | |
| Child (PSY 351) | | | | | | | | | | | S | | | | |
| Adult (PSY 353) | | | | | | | | | | | S | | | | |
| Perception (PSY 323) | | | | | | | | | | | S | | | | |
| Social Psychology (PSY 341) | | | | | | | | | | | S | | | | |
| Health Psychology (PSY 366) | | | | | | | | | | | S | | | | |
| Abnormal (PSY 363) | X | S | X | S | | | | | | | X | | | | |
| BioPsychology (PSY 422) | | | | | | | | | | | S | | | | |
| Physiological Psychology (PSY 431) | | | | | | | | | | | S | | | | |
| Neuro Psychology | | | | | | | | | | | S | | | | |
| Psychotherapy (PSY 364) | | | | | | | | | | | S | | | | |
| Sport Psychology | | S | | | | | | | | | | | | | |
| HSS Courses | | | | | | | | | | | | | | | |
| Intro to Health Professions (HSS 114) | | S | | | | | | | | | | | | | |
| Fitness for Life/Personal Community Hlth (HSS 121/XXX) | | S | | | | | | | | | | | | | |
| Adapted PE (HSS 220) | | | | | | | | | | | | | | | |
| Principles of Fitness/Training/RX (HSS320/321) | | S | | | | | | | | | | | | | |
| Anatomy (HSS 305) | X | X | X | | | X | X | X | X | | X | X | X | | X |
| Anatomy Lab (HSS 305L) | X | X | X | | | X | X | X | X | | X | X | X | | X |
| Physiology (HSS 307) | X | X | X | | | S | S | X | X | | X | X | X | | X |
| Physiology Lab (HSS 307L) | X | X | X | | | S | S | X | X | | X | X | X | | X |
| Medical Terminology (HSS 201) | S (16%) | X | | | | | | | | | X | | | | |
| Kinesiology (HSS 409) | | X | | | | | | | | | X ₂ | | | | S |
| Kinesiology (HSS 409L) | | | | | | | | | | | X ₁ | | | | S |
| Biomechanics | | S | | | | | | | | | X ₂ | | | | S |
| Exercise Physiology (HSS 408) | S (15%) | X | | | | | | | | | | | | | S |
| Exercise Physiology Lab (HSS 408L) | | X | | | | | | | | | | | | | S |
| Fundamentals of Nutrition (HSS 295) | S (1%) | X | | S | | | | | | | | X | X | | S |
| Sports Nutrition | | S | | | | | | | | | | | | | |
| Research Design (HSS 428) | | S | | S | | | | | | | S | | | | |
| Math | | | | | | | | | | | | | | | |
| Algebra | | S | S | | | S | | | | S | | | | | |
| Pre-Calculus | | S | S | | | | | | | | | | | | |
| Calculus 1 (MTH 148) | | | | | | S | X | X | | | S | | | | |
| Calculus 2 (MTH 149) | | | | | | | | | | | S | | | | |
| Statistics (MTH 207) | X | X | X | X | | | X | X | S | S | X | X | X | | S |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---------|---|---|--|---|--|---|---|---|---|---|--|--|--|--|--|--|--|--|---|----------------|---|---|---|
| Exercise Physiology (HSS 408) | S (15%) | X | | | | | | | | | | | | | | | | | | | | S | | |
| Exercise Physiology Lab (HSS 408L) | | X | | | | | | | | | | | | | | | | | | | | S | | |
| Fundamentals of Nutrition (HSS 295) | S (1%) | X | | | S | | | | | | | | | | | | | | | | X | X | S | |
| Sports Nutrition | | S | | | | | | | | | | | | | | | | | | | | | | |
| Research Design (HSS 428) | | S | | | S | | | | | | | | | | | | | | | | | | | |
| APPENDIX F 2 | | | | | | | | | | | | | | | | | | | | | | | | |
| Math | | | | | | | | | | | | | | | | | | | | | | | | |
| Algebra | | S | S | | | | S | | | | | | | | | | | | | | | | S | |
| Pre-Calculus | | S | S | | | | | | | | | | | | | | | | | | | | | |
| Calculus 1 (MTH 148) | | | | | | | S | X | X | | | | | | | | | | | | S | | | |
| Calculus 2 (MTH 149) | | | | | | | | | | | | | | | | | | | | | | S | | |
| Statistics (MTH 207) | X | X | X | | X | | | X | X | S | S | | | | | | | | | X | X | X | S | |
| Other Science | | | | | | | | | | | | | | | | | | | | | | | | |
| Biology 1 (BIO 151) | X | S | X | | X | | X | X | X | X | X | | | | | | | | | | 1 | | X | X |
| Biology 1 Lab | X | S | X | | X | | X | X | X | X | X | | | | | | | | | | 1 | X | X | X |
| Biology 2 (BIO 152) | X | S | X | | X | | X | X | X | X | X | | | | | | | | | | 1 | X | X | X |
| Biology 2 Lab | X | S | X | | X | | X | X | X | X | X | | | | | | | | | | 1 | X | X | X |
| Genetics (BIO 312) | | | | | | | | | | | | | | | | | | | | | | | S | |
| Genetics Lab (BIO 312 L) | | | | | | | | | | | | | | | | | | | | | | | S | |
| Mammalian Biology | | | | | S | | | | | | | | | | | | | | | | | | | |
| Cellular Biology | | | | | X | | | | | | | | | | | | | | | | | | | |
| Immunology | | | | | S | | | | | | | | | | | | | | | | | | | |
| Microbiology (BIO 411) | | | | | X | | X | X | X | | | | | | | | | | | | | X | X | S |
| Chemistry 1 (CHM 123) | X | X | X | | X | | X | X | X | X | X | | | | | | | | | | 1 | X | X | X |
| Chemistry 1 Lab | X | X | X | | X | | X | X | X | X | X | | | | | | | | | | 1 | X | X | X |
| Chemistry 2 (124) | X | X | X | | X | | X | X | X | X | X | | | | | | | | | | 1 | X | X | X |
| Chemistry 2 Lab | X | X | X | | X | | X | X | X | X | X | | | | | | | | | | 1 | X | X | X |
| Organic 1 (CHM 313) | | | | | X | | X | X | X | X | X | | | | | | | | | | | S | S | S |
| Organic 1 Lab (CHM 313 L) | | | | | X | | X | X | X | X | X | | | | | | | | | | | S | S | S |
| Organic 2 (CHM 314) | | | | | X | | X | X | | | X | | | | | | | | | | | | | |
| Organic 2 Lab (CHM 314 L) | | | | | X | | X | X | | | X | | | | | | | | | | | | | |
| Biochemistry (CHEM 420) | | | | | X | | | X | S | | X | | | | | | | | | | | | | |
| Biochemistry L (CHEM 420) | | | | | X | | | X | S | | X | | | | | | | | | | | | | |
| Physics (PHY 201) | X | X | X | | S | | X | X | X | X | X | | | | | | | | | | X | | | S |
| Physics Lab (PHY 201L) | X | X | X | | | | X | X | X | X | X | | | | | | | | | | X | | | S |
| Physics (PHY 202) | X | S | X | | | | X | X | X | X | X | | | | | | | | | | | | | |
| Physics Lab (PHY 202L) | X | S | X | | | | X | X | X | X | X | | | | | | | | | | | | | |
| Comparative Anatomy BIO 3XX) | | | | | | | | | | | | | | | | | | | | | | | | |
| Pharmacology | | | | | | | | | | | | | | | | | | | | | S | | | S |
| Neuroanatomy | | | | | | | | | | | | | | | | | | | | | S ₁ | | | |
| Neuroscience | | S | | | | | | | | | | | | | | | | | | | S | | | |
| Pathology | | | | | | | | | | | | | | | | | | | | | S | | | |
| Specialty Courses | | | | | | | | | | | | | | | | | | | | | | | | |
| Intro to Athletic Training | | X | | | | | | | | | | | | | | | | | | | | | | |
| Ortho/Clinical AT Skills | | S | | | | | | | | | | | | | | | | | | | | | | |
| Emergency Care in AT | | S | | | | | | | | | | | | | | | | | | | | | | |
| Ortho Prophylactic/Bracing Tech | | S | | | | | | | | | | | | | | | | | | | | | | |
| Intro to PT | | | | | | | | | | | | | | | | | | | | | | | | |
| PT Seminar | | | | | | | | | | | | | | | | | | | | | | | | |
| 1; required as prerequisite for other(advanced) courses not specifically as a prerequisite for admission. P; preferred, S; some not all require this course, S1; some require and some allow Biopsychology (PSY 422), X1 ; generally either or X2; generally Kinesiology or Biomechanics or Physics | | | | | | | | | | | | | | | | | | | | | | | | |

Completed in June 2018

APPENDIX G - LETTERS OF SUPPORT AND CONSULTATION

[SEHS Dean's Letter of Support - Kevin Kelly](#)
[Social Science Subcouncil - Joe Valenzano](#)

Non-HSS Consultations

| | |
|---|-------------------------------------|
| Provost's Office - Carolyn Phelps | May 2018, July 2018 |
| Enrollment Management - Jason Reinoehl | May 11, 2018 - Call |
| SEHS Dean and Associate Dean | August 27, 2018 |
| Enrollment Management - Jason Reinoehl, Rob Durkle -continued support (referenced in KK letter) | October 9, 2018 |
| Danielle Poe, Associate Dean of CAS -recommended meeting with Social Science and Natural Science Subcouncils | January 2019 |
| Met with Social Science Subcouncil (JV letter) | February 20, 2019 |
| Consultation with Libraries/Dean Webb | March 4, 2019 |
| Scheduled to meet with Natural Science Subcouncil | March 22, 2019 |

HSS Consultation

April 3rd All HSS faculty brainstorming session
 Identified strengths, weaknesses, opportunities for growth, etc.


May 8th Program faculty (Crecelius, DeMarco, Gallo, Linderman, Ritterhoff) discussion and email to incoming (Beerse)
 Outline of summer work for combining majors and creating concentrations

May 15 – Aug 1 Crecelius and Linderman working on benchmarking, proposal, curriculum, etc.

July 25th Consultation with Dietetics (Dalton)

August 13th Consultation with Sport Management faculty (Daprano, Pu, Titlebaum)



To: Diana Cuy Castellanos, Chair SEHS Undergraduate Academic Affairs Committee
From:  Kevin R Kelly, Dean
Date: October 15, 2018
Re: Support for Department of Health and Sport Science (HSS) Undergraduate Degree Program Reorganization

I am writing in support of the HSS proposal to reorganize their undergraduate degree programs. This memo describes the steps taken by HSS and the Dean's Office to evaluate the proposal and the resulting reasons for my support of the degree reorganization proposal.

Evaluation Process

1. Professors Crecelius and Linderman forwarded an initial outline of the HSS degree reorganization plan on August 6, 2018.
2. Subsequent to my initial favorable review of this outline, Professors Crecelius and Linderman delivered full proposals for a new *Bachelor of Science in Health Science Degree and Consolidation of Selected Majors* and a new *Bachelor of Science in Sport and Wellness Degree*.
3. Professors Crecelius and Linderman and Department Chair Daprano met with Associate Dean Hartley and me on August 27, 2018 for a full discussion of the proposals.
4. Based on the proposals and August 27 discussion, I forwarded a formal feedback memo regarding the proposals to HSS on September 10, 2018. The HSS faculty and department chair provided responses to this feedback in a face-to-face meeting with Associate Dean Hartley and me on September 11, 2018. I then asked the HSS faculty to forward the proposed degree reorganization plan to Enrollment Management for further feedback and discussion.
5. The HSS/SEHS team met with Enrollment Management Vice President Jason Reinoehl and Rob Durkle, Associate Vice President and Dean of Admissions and Financial Aid, on October 9 to solicit their feedback regarding the reorganization proposal. VP Reinoehl provided positive feedback and encouraged HSS to proceed with the proposed reorganization.

In summary, the reorganization proposal has been thoroughly reviewed and evaluated within SEHS and by Enrollment Management. Professors Crecelius and Linderman have been responsive to feedback throughout the process.

SCHOOL OF EDUCATION AND HEALTH SCIENCES
Kevin R. Kelly, Ph.D.
Dean
1529 Brown Street Dayton, OH 45469-2969
Phone: (937) 229-3327 Fax: (937) 229-3199 Email: kkelly1@udayton.edu



Statement of Support

I enthusiastically support the proposed reorganization for four reasons.

1. The reorganized degree options provide a much better fit to the needs and interests of today's prospective HSS students. The proposed realignment provides much greater clarity regarding degree objectives and career/graduate program paths for prospective students.
2. The reorganization will provide more and better career options in the areas of fitness, wellness and community health.
3. The reorganized degree structures provide students with more flexibility, particularly during the first two years of their degree programs. HSS students will have more opportunities to change degree objectives without adding significant time and credit hours to completion of their revised degree objectives.
4. It is likely that the revised degrees will spur a growth in student enrollment, which will enable HSS to make a strong case for additional faculty resources.

The proposed degree reorganization will be of great benefit to current and future HSS students and to SEHS.

Cc: Anne Crecelius, Department of Health and Sport Science
Jon Linderman, Department of Health and Sport Science
Corinne Daprano, Chair, Department of Health and Sport Science
Linda Hartley, SEHS Associate Dean

SCHOOL OF EDUCATION AND HEALTH SCIENCES

Kevin R. Kelly, Ph.D.

Dean

1529 Brown Street Dayton, OH 45469-2969

Phone: (937) 229-3327 Fax: (937) 229-3199 Email: kkelly1@udayton.edu



University
of Dayton

Anne Crecelius <acrecelius1@udayton.edu>

Health and Sport Science- Reorganization of majors, degree

Carolyn Phelps <cphelps1@udayton.edu>

Wed, May 9, 2018 at 12:22 PM

To: Anne Crecelius <acrecelius1@udayton.edu>

Cc: Jon Linderman <jlinderman1@udayton.edu>, Corinne Daprano <cdaprano1@udayton.edu>

Anne,

Thanks for sharing. Corinne had given me a heads up about this, and I did some looking in the degree. I think you will want to pursue a Bachelor's of Science in Health Sciences rather than a Bachelor's of Science. This would keep clarity regarding the unit in which it is housed. At the time that Corinne and I spoke, I had mentioned the Bachelor's of Science, but then after looking at the other Bachelor's of Science outside of the College, they are specific with regard to the unit from which they come, i.e. Bachelor's of Science in Business Administration. It also gives you more control of the degree requirements; they can be specific to your degree.

I think this makes good sense. I look forward to seeing a draft.

Enjoy the day,

Carolyn

On Tue, May 8, 2018 at 11:42 AM, Anne Crecelius <acrecelius1@udayton.edu> wrote:

Carolyn,

Hope this finds you well. I am writing to let you know that this summer, Jon Linderman and I will be working on a proposal to consolidate the Exercise Physiology, Pre-Physical Therapy, and Exercise Science majors into one degree program with multiple concentrations as well as for a new degree (that is not the BSE currently awarded to these students). I've attached an overview of our planned work that includes rationale and a projected timeline.

I wanted to reach out to you in order to inform/consult with the Provost's office on this as required and suggested in the guidelines for actions pertaining to new program proposals. As we await the hiring of an associate dean for health sciences, we are getting started on the preliminary information gathering. Kevin is supportive of our work and efforts.

If you would like to meet and discuss, we are happy to, though I realize this is a busy time and unfortunately I will be leaving the country next Tuesday (5/13). If not, any thoughts via phone/email are also appreciated. Once we have a working draft of the proposal, we would likely request a meeting to begin to talk about appropriate steps forward, particularly with external approvals. We don't anticipate that this will need a financial analysis from the Office of the Provost as we are not really "adding" anything, but simply reorganizing to create a more efficient, more attractive, and perhaps even more appropriate arrangement of our current offerings.

I've copied Jon as well as Corinne on this.

Hope to see you Friday at the faculty meeting,

Anne

Anne R. Crecelius, Ph.D.

Assistant Professor

Department of Health and Sport Science

University of Dayton

Office: Fitz Hall 646H

Phone: (937) 229-4373

I am a Physiologist.

Please consider the environmental and economic impacts of printing this email

--

Carolyn Roecker Phelps, Ph.D.
Associate Provost for Faculty and
Administrative Affairs
University of Dayton
[300 College Park](#)
[Dayton, OH 45469-1634](#)

(937) 229-2245
cphelps1@udayton.edu

green dot: a single choice in one moment that makes this community safer. What's your **green dot**?



Anne Crecelius <acrecelius1@udayton.edu>

HSS Curriculum Changes

Joe Valenzano <jvalenzanoiii1@udayton.edu>

Mon, Mar 4, 2019 at 1:14 PM

To: Anne Crecelius <acrecelius1@udayton.edu>, Corinne Daprano <cdaprano1@udayton.edu>, Jon Linderman <jlinderman1@udayton.edu>

Dear Corinne, Jon, and Anne,

Thank you for the opportunity to discuss and consult on the curricular and programmatic changes you are making within HSS. We especially appreciated the opportunity to share with you potential areas of collaboration and curricular benefit for HSS students in the social sciences.

We, as the chairs on the social science sub council of the CCPD within the College of Arts and Sciences, representing the departments of Sociology, Anthropology and Social Work (SOC/ANT/SWK), Psychology (PSY), Political Science (POL), and Communication (CMM) fully support these adjustments. They will help clarify directions for students, better align HSS courses and curriculum and more clearly define degrees available.

These changes have the full support not only of the chairs, but the Social Science Sub-Council as a whole.

Joseph M. Valenzano, III (Communication)
Leslie Picca (Sociology, Anthropology and Social Work)
Grant Neeley (Political Science)
Lee Dixon (Psychology)

--

Joseph M. Valenzano III, Ph.D.
Associate Professor/Chair
Dept. of Communication
University of Dayton
[300 College Park Ave.](#)
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joe.valenzano@udayton.edu



Dr. Corinne Daprano
Chair, Department of Health & Sport Science
School of Education and Health Sciences
University of Dayton

March 5, 2019

Dear Dr. Daprano,

Thank you for consulting with the Libraries and allowing us to comment on the proposed reorganization of the Health and Sport Science majors. I am fully supportive of the proposal to create two degree programs and two majors. Since these programs already exist, we see no impact on library resources.

Sincerely,

Kathleen Webb
Dean of University of Dayton Libraries



Science Subcouncil Response to the HSS Realignment

Wiebke Diestelkamp <wdiestelkamp1@udayton.edu>

Tue, Apr 23, 2019 at 2:30 PM

To: Corinne Daprano <cdaprano1@udayton.edu>, Anne Crecelius <acrecelius1@udayton.edu>, Jon Linderman <jlinderman1@udayton.edu>

Cc: Daniel Goldman <dgoldman1@udayton.edu>, David Johnson <djohnson1@udayton.edu>, John Erdei <jerdei1@udayton.edu>, Karolyn Hansen <khansen1@udayton.edu>, Mehdi Zargham <mzargham1@udayton.edu>, Wiebke Diestelkamp <wdiestelkamp1@udayton.edu>, Kathleen Scheltens <kscheltens1@udayton.edu>

Dear Corinne, Anne and Jon,

I am writing on behalf of the Science Subcouncil, specifically, the chairs of Biology, Chemistry, Computer Science, Geology, and Mathematics, and the Director of the PreMed program.

We have reviewed the proposed changes to the HSS majors. You have already received a detailed response from the Biology Department and the Premed Program (attached); please consider that as part of our collective response. We appreciate your willingness to take their concerns into consideration and change the name of the Human Physiology concentration to Integrative Physiology.

With these adjustments in place, the Science Subcouncil, representing BIO, CHM, CPS, GEO, MTH and MED, supports your proposal for the realignment of the HSS majors.

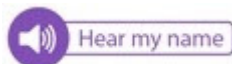
Best regards,

Wiebke Diestelkamp (Mathema
John Erdei (Physics)
Daniel Goldman (Geology)
David Johnson (Chemistry)
Karolyn Hansen (Biology)
Kathleen Scheltens (Premed)
Mehdi Zargham (Computer Science)

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HSSResponseMED_BIO1.pdf
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LETTER OF CONSULTATION WITH BIO (Karolyn Hansen) and MED (Kathy Scheltens)**Met with both and Assoc Dean Poe on Mon Apr 15 after having met with Natural Science Subcouncil (Mar 27)**

Thank you for giving us the opportunity to review the HSS Major re-organization proposal. In reviewing the various proposed concentrations, we recognize two areas of concern. The first issue relates specifically to the proposed “Human Physiology” concentration. Our concerns stem from the already somewhat confusing distinction between the offerings of the MED and BIO majors as compared to the present “Exercise Physiology” major.

A distinguishing feature of Exercise Physiology has been the applied nature of the major and its emphasis on exercise. This emphasis has been important when helping students choose a curriculum that suits their interests, and specifically when comparing the 2 natural science majors that prepare students for MED and PA school (MED and BIO) vs. the HSS major that prepares students for MED and PA school (EX Phys).

The proposed “Human Physiology” concentration basically includes the natural science coursework of the present MED and BIO majors. The attached chart shows the proposed “human physiology” concentration courses (non-highlighted), the HSS core courses in yellow and new proposed courses highlighted in blue. It is easy to see that beyond the HSS core, the bulk of the “human physiology” concentration are natural science courses. Having a third major that includes the same biomedical science focused curriculum as the BIO and MED majors seems duplicative. To make this third major now even more like the natural science majors vs. maintaining the applied exercise focus seems ill-advised. Indeed, the Hanover report finding #2 (HSS proposal page 19/54) recommends maintaining the UDayton Exercise Physiology major. Also, consider the Hanover Fast Fact: *17.0%. Average annual growth of bachelor's conferrals in exercise physiology, public health, healthcare administration, and community health, 2012-2016.*

We see the title of the proposed concentration as problematic. It would be very difficult to help students imagine the different curricula they might find in the BIO major vs. the Human Physiology major based on this title. As previously described, the biomedical science components of the proposed concentration practically mirror the MED and BIO major.

Presently, the BIO and MED majors are described as “more similar than different” with the distinction being that the BIO major is more holistically Biology, including environmental courses in addition to biomedical courses. It would be very difficult to describe the human physiology concentration as different from Premed or BIO major beyond the HSS core. Basically, the proposed human physiology concentration adds one more physiology course as compared to what students take in the BIO or MED major.

According to the proposal, “the unique aspects of the Health Science major, as compared to these programs (BIO and MED), are the HSS courses included in the core curriculum (Appendix B; e.g. Medical Terminology, Nutrition, Anatomy, Physiology)”. However, given that the MED and BIO majors do include BIO 475 (Human Anatomy) and BIO 403 (Physiology) and students can select BIO 404 (Physiology II), it is not clear how this proposed concentration has a unique emphasis on human physiology. Again, the issues of duplicity and potential confusion seem apparent. It is important to the integrity of all of the identified majors (MED, BIO, HSS proposed

concentration) that the titles of each reflect their distinction. Thus, a major that focuses on the applied aspect of this proposed concentration seems warranted, vs. a title that highlights its similarity to the natural science majors of the College of Arts and Sciences.

In examining the learning outcomes of the proposed major, these similarities between MED/BIO and Human Physiology also seem apparent:

HSS Program Learning Objectives:

- Demonstrate advanced knowledge of physical, chemical and biological sciences, including subdisciplines. In common with MED, BIO.
- Identify core concepts in physiology and describe how they relate to human health and disease. In common with MED, BIO.
- Demonstrate extensive knowledge of human anatomy, physiology, and applied physiology. Most content in common with MED, BIO.
- Understand and utilize research design and techniques with specific attention to implications on human health and disease. Most content in common with BIO.

The Second issue concerns resources. Current staffing for the Biology lecture and lab courses only permits a certain number of sections and strict class size limit for those BIO courses required for the HSS major. The pressure is intense in our lower and upper level lectures and labs. In fact, the MED major has had to restrict the number of incoming students based on availability of seats in the lower level science courses. We are already currently coordinating with HSS for an additional lecturer position in Biology to accommodate the proposed alignment of HSS 307L and BIO 403L. To accommodate the predicted growth of approximately 50 students in the proposed Exercise/Human Physiology concentration would require an additional lecture and/or 2 lab sections for each BIO course. This number represents 12.5% growth in required offerings compared to our current majors enrollment (~400 students). The intense pressure would also be on Chemistry, Physics, and Math for the predicted increased number of enrolled students in the HSS Exercise/Human Physiology concentration alone.

In conclusion, the Biology Dept. Chair and Director of Premedicine Programs are supportive of the re-alignment of the majors in HSS and of the 2 new identified majors. However, we do not support the title of the “Human Physiology” concentration due to our strong concern that it diminishes the uniqueness of the “exercise physiology” curriculum as compared to the MED and BIO majors and consider it essential that we maintain unique identities when marketing these curricula to students seeking an undergraduate major to prepare for graduate level health professional school.

We look forward to continued conversation with HSS faculty regarding the title of the concentration and resource related issues that may result from the re-alignment.

| Course Requirement | Hours | Human Physio | BIO Major | MED Major |
|--|-------|-------------------------|----------------------------------|---|
| Introduction to the University | 1 | HSS 101 | ASI 150 | ASI 150 |
| Intro to Health Professions | 2 | HSS 114 | | |
| Medical Terminology | 2 | HSS 201 | | |
| Nutrition and Health | 2 | HSS 295 | | |
| Physiology of Exercise and Laboratory | 4 | HSS 408 + L | | |
| Human Anatomy and Laboratory | 4 | HSS 305 + L | BIO 475 + L | BIO 475 +L (1 of 5 Upper Level SCI) |
| Human Physiology and Lab | 4 | HSS 307 + L | BIO 403 + L | BIO 403 + L (2 of 5 Upper Level SCI) |
| Research in Sport & Health Science | 3 | HSS 428 | | |
| Introduction to Statistics | 3 | MTH 207 | | MTH 207 |
| Concepts of BIO I + L | 4 | BIO 151 + L | BIO 151 + L | BIO 151 + L |
| Concepts of BIO II + L | 4 | BIO 152 + L | BIO 152 + L | BIO 152 + L |
| General Chem 1 + L | 4 | CHM 123 + L | CHM 123 + L | CHM 123 + L |
| General Chem 2 + L | 4 | CHM 124 + L | CHM 124 + L | CHM 124 + L |
| Intro Psych | 3 | PSY 101 | PSY 101 (Soc/Beh) | PSY 101 (Soc/Beh) |
| Lifespan Psych | | PSY 251 or PSY 351/353 | PSY 251 or PSY 351/353 (Soc/Beh) | 9 credits Soc/Behavioral Science |
| Upper Level Psy | 3 | Upper Level Psy | | 9 credits Soc/Beh |
| Writing for Health Professions or Health Literacy and Social Justice | 3 | ENG 373 or ENG 366 | | Upper Level ENG (Most common ENG 373 + 366) |
| Work/Shadow/Research, etc. | | EXP 103 HSS 455, 498 | | MED 210, MED 220, MED 339 |
| Clinical Assessment and Electrocardiography | 3 | HSS 345 | | |
| Advanced Physiology | 3 | HSS 488 or 497 | BIO 404 | BIO 404 (3 of 5 upper level SCI) |
| Intro Calculus | 3 | MTH 148 | MTH 148 | MTH 148 |
| General PHY 1 + L | 4 | PHY 201 + L | PHY 201 + L | PHY 201 + L |
| General PHY 2 + L | 4 | PHY 202 + L | PHY 202 + L | PHY 201 + L |
| General Genetics | 3 | BIO 312 | | BIO 312 (4 of 5 upper level SCI) |

| | | | | |
|-----------------------------|---|-------------|-------------|----------------------------------|
| Organic CHM 1 + L | 4 | CHM 313 + L | CHM 313 + L | CHM 313 + L |
| Organic CHM 2 + L | 4 | CHM 314 + L | CHM 314 + L | CHM 314 + L |
| Biochemistry | 3 | CHM 420 | CHM 420 | CHM 420 + L |
| General Microbiology | 3 | BIO 411 | BIO 411 | BIO 411 (5 of 5 upper level SCI) |
| Additional Lab (BIO or CHM) | 1 | | | |

Implementation Plan for HSS Reorganization

| | |
|-------------|--|
| Fall 2018 | Approval through HSS, SEHS |
| Spring 2019 | Approval through Senate, Provost, BOT |
| Spring 2019 | Notification to HLC, Development of new marketing materials |
| June 2019 | Change in UD and common application degree options |
| Fall 2019 | Implementation of new marketing materials |
| Fall 2019 | “Soft Launch” |
| | Option to Transition Current Students (including class enrolling in Fall 2019) |
| | Halt enrollment into previous degree programs (for internal transfers) |
| Fall 2020 | First cohort of entering students in new majors/concentrations |

Likely flow of students from current majors to new majors/concentrations

| Current Major | Primary New Major:Concentration | Alternative(s) New Major:Concentration |
|----------------------|--|---|
| Exercise Physiology | HS: Integrative Physiology | HS: Exercise and Movement Science |
| Pre-Physical Therapy | HS: Exercise and Movement Science | HS: Integrative Physiology HS: Occupational and Behavioral Studies |
| Exercise Science | HS: Occupational and Behavioral Studies | HS: Exercise and Movement Science SW: Health and Fitness SW: Community Health |
| Sport Management | SW:Sport Management | SW: Community Health SW: Health and Fitness |

APPENDIX I - DOCUMENTATION OF APPROVALS

Department of Health and Sport Science

Presented and Discussed on: Various meetings in 2017-2018, Brainstorming Session, Fall 2018

Voted on: Tuesday October 30, 2018

Vote Result: Unanimous Approval

Undergraduate Academic Affairs Committee (SEHS Congress Standing Committee)

Presented and Discussed on: November 19, 2018

Voted on: November 19, 2018

Vote Result: Unanimous Approval

SEHS Congress

Presented and Discussed on: November 30, 2018

Voted on: January 18, 2019

Vote Result: Unanimous Approval

UNDERGRADUATE PROGRAM REORGANIZATION – OVERVIEW OF PROPOSALS

CURRENT HSS

| | | | | | | |
|---------------|---------------------------------------|---|-------------------------|-----------------------------|----------------------------|------------------|
| Degree | Bachelor of Science in Nursing | Bachelor of Science in Education | | | | |
| Majors | Nursing | Sport Management | Exercise Science | Pre-Physical Therapy | Exercise Physiology | Dietetics |

PROPOSED HSS

| | | | | |
|---|---|--|---|-------------------------------------|
| Degree | Bachelor of Science in Nursing (BSN) | Bachelor of Science in Sport and Wellness (BSSW) | Bachelor of Science in Health Science (BSHS) | |
| Majors | Nursing | Sport and Wellness | Health Science | Dietetics |
| Concentrations | | <i>Health and Fitness</i> | <i>Integrative Physiology</i> | |
| | | <i>Community Wellness</i> | <i>Exercise and Movement Sciences</i> | |
| | | <i>Sport Management</i> | <i>Occupation and Behavior Studies</i> | |
| Post-Graduate Targets/Destinations | <i>Employment</i> | <i>Pre-Graduate (MPH, MBA, Law)</i> <i>Employment</i> | <i>Pre-Health Professional</i> <i>Pre-Graduate (Biomed, S&C)</i> | <i>Internship /Masters Programs</i> |

Key Proposal Points:

- Overall programmatic reorganization: degree, major, concentration.
 - Curriculum: CAP + Core Requirements + Concentration Requirements
- Bachelor of Science in Health Science
 - Health Science Major
 - Integrative Physiology concentration preserves the Exercise Physiology curriculum
 - Pre-Med, Pre-PA, Pre-Graduate (Phys, Biomed)
 - Exercise and Movement Science concentration preserves Pre-PT curriculum
 - Pre-PT, Pre-AT, Pre-MPO, Pre-Graduate (Ex Sci)
 - Occupational & Behavioral studies concentration is the pre-OT curriculum used/developed over the past 4-5 years (~45 students)
 - Also pre-nursing (accelerated)
 - Dietetics Major
 - A change in the degree granted (vs BSE) only
- Bachelor of Science in Sport and Wellness
 - Sport and Wellness Major
 - Sport Management concentration preserves the current major
 - Health and Fitness concentration targets non-graduate seeking Exercise Science to reflect a career ready plan of study w/changes to science and increase and earlier timing of both how-to and professional preparation courses
 - Community Health concentration added to serve as an area of growth (addressed in dept. brainstorming and Hanover report)