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## DOC 2019-07 Proposal for New Bachelor of Science in Sport and Wellness Degree and Consolidation of Selected Majors within the Department of Health and Sport Science

University of Dayton. School of Education and Health Sciences

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DOC 2019-07

PROPOSAL TO THE ACADEMIC SENATE

TITLE: Proposal for New Bachelor of Science in Sport and Wellness 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 Sport and Wellness 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). While there is historical precedent for sport management and fitness related disciplines to be located in a School of Education, 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 Sport and Wellness (BSSW) degree to confer upon its graduates that is appropriately aligned with the current offerings of the department.

A parallel proposal (Proposal for New Bachelor of Science in Health Science Degree and Consolidation of Selected Majors within the Department of Health and Sport Science) details that the primary driving factor for degree renaming and reorganization comes from the reorganization of the current Exercise Physiology, Pre-Physical Therapy, and Exercise Science majors. This parallel proposal identifies reorganization to best serve students seeking entry into postgraduate professional healthcare programs. In additional discussions the HSS faculty recognized several important factors leading to the present proposal aimed at best serving career-ready students that seek full-time employment immediately upon graduation. First, the faculty identified a need to improve career-ready opportunities for what we have termed "traditional" Exercise Science students (those not pursuing graduate study) who do not fit the proposed reorganization in our parallel proposal. Second, the HSS faculty recognized a need to address the growing interest by students and society on community health and wellness. Third, we recognition the excellence and expertise of existing faculty in preparing students for entry-level employment (e.g. Sport Management) and seek to leverage this for more students.

The proposed degree will involve the consolidation of the current Sport Management major with the "traditional" Exercise Science major that represents students interested in entry-level employment in the broad field of Kinesiology. In addition, the concentration of community health is proposed to address market trends that suggest this is a potential growth area and requires minimal additional resources (the addition of one course). 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 Sport and Wellness (BSSW) degree in the School of Education and Health Sciences (SEHS) and Department of Health and Sport Science (HSS). Within this new degree, we propose:

- The creation of a major in Sport and Wellness, with multiple concentrations (Health and Fitness, Community Health, and Sport Management) that correspond to our current offerings and opportunities for growth.

The focus of the major in Sport and Wellness, with its multiple concentrations: Health and Fitness, Community Health, and Sport Management will be to build upon the Common Academic Program to create graduates who can:

- Articulate the concepts of management and leadership as well the various skills, roles, and functions of leaders in health and sport,
- identify and analyze ethical, economic, legal, and socio-cultural issues, and formulate responses for use in planning, decision making and policy determinations in sport and wellness.
- develop professionally and identify relevant professional goals and necessary action steps.

Specifically, this program serves a significant disciplinary purpose by preparing students for entry-level career options in sport and wellness related industries. These fields are in high demand and there is expected growth<sup>1</sup>. In addition, courses in the major, concentrations, and electives provide relevant prerequisite courses for students interested in pursuing graduate education. Further, the major+concentration arrangement provides flexibility and agility to be able to respond to changing market trends.

Currently, students that are interested in entry-level employment in the health and fitness industry (e.g. personal trainer, fitness coach, etc) are typically enrolling in the current Exercise Science program. The curriculum of this major is heavily based in natural sciences requiring full-year sequences of biology, chemistry, and corresponding laboratories, as well as upper-level courses in anatomy and physiology. And yet, the requirements for certifications in this area are often not based upon scientific knowledge at this level. Rather, the knowledge required can be gained from survey-level courses. Replacing some of the natural and applied science courses with those that are more practical and/or professional skill focused (e.g. the core of current sport management offerings such as marketing, finance, etc), students will be better prepared to enter the job market. Thus, by creating a major with a Health and Fitness concentration that does not have the same scientific requirements as the pre-professional Health Science major, we anticipate attracting a broader base of students.

Historically, some graduates of our present Exercise Physiology, Pre-Physical Therapy, and Exercise Science majors have pursued careers in public health and community wellness. These students are arguably *very well prepared* in the natural sciences, however, they may be *under prepared* in social sciences, particularly political science and communication studies. Taken together with increased market drive, the Community Health concentration will be a “new” program that takes advantage of the reduction in natural sciences in the major to add curriculum in the concentration for both professional skills and social sciences. This package will appeal to both current and prospective students interested in health and wellness at the societal level.

Our current Sport Management major continues to be of growing interest to students as it represents the intersection of sport and business. Graduates of this program are successful in employment and graduate school placement. The curriculum of the present Sport Management major is conserved in its present form in the major courses as well as the Sport Management concentration. The proposed new major and concentrations seeks to extend the expertise and offerings of the Sport Management program and its faculty to additional students who could be of benefit.

A single major with concentration areas is somewhat unique, and will allow flexibility and personalization of the degree program, something that current prospective students seek<sup>2</sup>. 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

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<sup>1</sup> Hanover report pg. 3

<sup>2</sup> *ibid*

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 current<sup>3</sup> and projected enrollments are as follows:

Current Major	Total Enrollment	New Concentration	Projected Enrollment 19-20 AY (3 yr estimate <sup>4</sup> )
Exercise Science	118	Health and Fitness Community Health	80 15
Sport Management	121	Sport Management	130 (145)
Other (Exercise Physiology, Pre-Physical Therapy, Dietetics)	246	Health and Fitness Community Health	10 10
Total Across 5 Current Majors (BSE)	485	Total Health and Fitness Total Community Health  Total for Sport and Wellness Major (BSSW)	90 (120) 25 (60)  245 (325)

The majority of the current Sport Management students will stay in the Sport Management concentration within the Sport and Wellness Major. Some current Exercise Science majors will likely transition to the Health and Fitness and Community Health concentrations within the Sport and Wellness Major. We anticipate a few students from current Exercise Physiology, Pre-Physical Therapy, and Dietetics majors also transitioning to these 2 concentrations.

## 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 BSSW 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 Exercise Science and Sport Management<sup>5</sup>. 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

A number of entry-level opportunities exist for graduates of the proposed Sport and Wellness major and concentrations. In some cases, additional certifications increase the likelihood of employability and/or salary upon hire. Nearly all of these employment projections are above that of the overall average for all occupations (7.4%).

<sup>3</sup> As of August 1, 2018

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

<sup>5</sup> <https://www.udayton.edu/academy/majors.php>

<b>Entry-Level Opportunity</b>	<b>Employment Change</b>	<b>Entry-Level Opportunity</b>	<b>Employment Change</b>
Fitness Trainers	10.1%	Community Health Worker	18.1%
Coaches	12.9%	Medical and Health Services Managers	20.5%
Social and Community Services Manager	18.0%	Technical Writers	11.0%
Advertising and Promotions Manager	5.5%	Health Educator	14.5%
Human Resources Manager	9.1%	Marketing Managers	10.1%
Meeting, Convention and Event Planners	10.9%	Public Relations and Fundraising Managers	10.4%

In addition, possible post-graduate destinations for these students are in the following areas, all of which have experienced significant growth in conferral of graduate degrees from 2012-2016<sup>6</sup> and have strongly positive employment outlooks<sup>7</sup>.

<b>Graduate Programs</b>	<b>Degree Conferral Growth Rate</b>	<b>Employment Change</b>
Community Health	Masters: 13.9%	14.5% for health educators
Public Health	Masters: 5.6% Doctoral: 9.4%	20.1% for healthcare social workers
Health Management	Masters: 8.6% Doctoral: 9.4%	20.5% for medical and health services managers
Business (general)	66% from 2001-2016, largest field for master's level graduate degrees <sup>8</sup>	

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

At the University of Dayton, several other degree programs prepare students primarily for entry-level employment in wellness-related services and/or the business industry; however, none specifically target fitness and community health areas or the sport industry. Our own pre-professional health science programs (the proposed Health Science major) as well as the Pre-Medicine and Biology majors are somewhat similar to the Health and Fitness concentration, with much less focus on applied knowledge and practice and a greater focus on natural science academic learning. For the Community Health concentration, multiple majors within the social sciences (Social Work, Communications, Psychology, Sociology, and Political Science) are somewhat

<sup>6</sup> Hanover, pgs. 21-22

<sup>7</sup> Projected 2016-2026 Bureau of Labor Statistics employment change, <https://data.bls.gov/projections/occupationProj>

<sup>8</sup> [https://nces.ed.gov/programs/coe/indicator\\_ctb.asp](https://nces.ed.gov/programs/coe/indicator_ctb.asp)

similar but lack a focus on specific health-related knowledge and practice. For the Sport Management concentration, the undergraduate offerings of the School of Business Administration are somewhat similar to certain aspects of this concentration but lack a dedicated focus to the broad sport industry.

As the proposed degree and program is for the most part, a reorganization of existing programs, rather than new program creation, it is not anticipated to greatly affect the existing UD programs. Letters of support from these department chairs/program directors are included in Appendix D.

Given our parallel proposal for the Bachelor of Science in Health Science, with a major in Health Science 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 D).

## 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.

In general, the curriculum and learning outcomes of these concentrations are mapped upon requirements from credentialing/accrediting agencies, even though none of the programs will be formally accredited. Given the focus of the programs is preparation for employment, a broad-based curriculum with a focus on practical skills and earning industry experience highlights the major requirements. Concentration requirements add specific knowledge corresponding to the area of interest.

## 7. Availability and Adequacy of Resources

As this proposal seeks to reorganize existing programs, there are no immediate needs for additional faculty. However, we anticipate an increase in overall enrollment in BSSW, particularly in the Community Health concentration. While we can currently offer courses that lead to student learning outcomes, the program would benefit from an additional faculty member engaged in scholarship in this area and with disciplinary expertise to develop this concentration and related coursework rather than needing to utilize adjunct faculty for health promotion and epidemiology courses. For the next 1-2 years, it is anticipated that these courses can be developed by current faculty and taught by adjunct faculty with relevant qualifications and experience. Based upon examination of interest and enrollment in the the concentration, a future hire will be considered by the department and unit within the next 2 years.

In addition, given this reorganization creates a degree program and major with ~250 students at present (with the likely increase in enrollment due to a more clear recruitment strategy), the increasing work required to coordinate curriculum, advising, and internship placement and supervision for BSSW students 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.

#### a. Administrative Arrangement

The degree and related majors are housed within the HSS department. The proposed major of Sport and Wellness 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 Sport and Wellness major and coordinating faculty involvement. All curricular proposals and changes are approved by a Departmental Curriculum Review Committee and when appropriate, through the SEHS Undergraduate Academic Affairs, a 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 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 BSSW. 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 E. 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. 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 D)

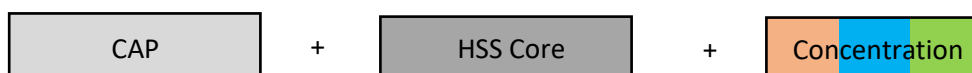
### APPENDICES

- A Learning Outcomes
- B Curriculum and 4 Year Plan
- C Hanover Report
- D Consultation and Support Letters
- E Implementation Timeline
- F Documentation of Approvals



<b>Degree</b>	Bachelor of Science in Sport and Wellness (BSSW)		
<b>Major</b>	Sport and Wellness		
<b>Program Learning Outcomes</b>	<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.</p> <p>Upon completion of the BSSW, graduates of our program will be able to:</p> <ul style="list-style-type: none"> <li>● Articulate the concepts of management and leadership as well as describe the various skills, roles, and functions of leaders in sport and wellness. <ul style="list-style-type: none"> <li>○ apply and evaluate principles of interpersonal communication, mass communications, public relations, and interaction with the public, particularly related to sport and wellness</li> <li>○ demonstrate how to locate, interpret, evaluate, and use professional literature to make informed practice decisions.</li> <li>○ illustrate the ability to reflect on and clarify their own values resulting in genuine respect for differences among people and ideas in individual, group, community, and global sport and wellness settings.</li> </ul> </li> <li>● Identify and analyze ethical, economic, legal, and socio-cultural issues, and formulate responses for use in planning, decision making and policy determinations in sport and wellness. <ul style="list-style-type: none"> <li>○ discuss moral issues related to sport and wellness in its intrinsic and extrinsic dimensions</li> <li>○ recognize why budget and finance is a critical component of all sport and wellness-related industries and evaluate economic principles related to health, sport and wellness fit in the national economy.</li> <li>○ explain the legal concepts within the sport and wellness workplaces and incorporate risk management strategies into decision-making</li> <li>○ describe how sport and wellness is a microcosm of society and is influenced by cultural traditions, social values, and psycho-social experiences.</li> </ul> </li> <li>● Develop professionally and identify relevant professional goals and necessary action steps. <ul style="list-style-type: none"> <li>○ successfully engage in experiential learning by transferring theory to practice.</li> <li>○ identify entry-level employment opportunities, obtain relevant certifications that provide experiential learning opportunities and enhanced employment opportunities or advancement, and/or appropriate graduate programs and their admissions requirements.</li> </ul> </li> </ul>		
<b>Concentrations</b>	Health and Fitness	Community Health	Sport Management

<b>Future Destinations</b>	Personal training, corporate wellness, coaching, studio/gym management,  Graduate Programs: public health, health promotion	Worksite and health promotion programs, schools, public health agencies, nonprofit health organizations, and voluntary health agencies  Graduate Programs: public health, health education, health policy	Collegiate and professional organizations, sport clubs, athletic federations, public and private recreation, event management, media.  Graduate Programs: law, business, management
<b>Learning Outcomes</b>	<ul style="list-style-type: none"> <li>● Apply understanding of applied human studies in anatomy, physiology, and nutrition to improvements in physical status</li> <li>● Evaluate health behaviors and risk factors.</li> <li>● Conduct fitness assessments and develop appropriate exercise prescriptions.</li> <li>● Motivate individuals to modify negative health habits and maintain positive lifestyle behaviors for health promotion.</li> <li>● Gain relevant certification (NCCA recognized)</li> <li>● Complete training in First Aid, Automated External Defibrillator (AED), HIPAA training, and appropriate OSHA blood-borne pathogens training</li> </ul>	<ul style="list-style-type: none"> <li>● Assess individual and community needs for health education and promotion</li> <li>● Understand the concept of health disparity/inequality and factors that might lead to differences in health outcomes across populations</li> <li>● Explain how different areas of health are interrelated (i.e., a holistic view of health).</li> <li>● Understand connections between health and the environment</li> <li>● Apply clinical and epidemiological evidence linking physical activity and exercise to mental and physical health and approaches to the delivery physical activity and health programs in clinical and community settings.</li> <li>● Communicate and advocate for health and health education.</li> </ul>	<ul style="list-style-type: none"> <li>● Practice marketing and selling within the sport industry.</li> <li>● Describe the role and influence of media in the sport industry.</li> <li>● Establish a diverse set of fundamental principles and skills, including skills in business, finance, operations, and marketing used for producing a sport-industry events from beginning to end.</li> <li>● Develop an understanding of the sports industry in relationship to the legal sector as well as the broader relationship between the industry and society.</li> </ul>



<b>Common Academic Program – BSSW (HF, CH, SM)</b>		
<b>FIRST YEAR HUMANITIES COMMONS</b>		
West and World	HST 103	3
Intro to Rel and Theol Studies	REL 103	3
Intro to Philosophy	PHL 103	3
<b>FIRST YEAR WRITING SEMINAR</b>		
Writing Seminar I	ENG 100	3
<b>SECOND YEAR WRITING SEMINAR</b>		
Writing Seminar II	ENG 200	3
<b>ORAL COMMUNICATION</b>		
Principles of Oral Communication	CMM 100	3
<b>SOCIAL SCIENCE</b>		
Social Science Integrated	SSC 200	3
<b>ARTS</b>		
Student Choice	XXX XXX	3
<b>MATHEMATICS</b>		
Statistics	In major block	
<b>NATURAL SCIENCES</b>		
Natural Science I	In major block	
Natural Science II	In major block	
Natural Science Lab	In major block	
<b>CROSSING BOUNDARIES</b>		
Faith Tradition		
Student Choice	XXX XXX	3
Practical Ethical Action		
Student Choice	XXX XXX	3
Inquiry		
(Fulfilled by MTH 207)		
Integrative		
(Fulfilled by XXX XXX)		
<b>ADVANCED STUDIES</b>		
Philosophy/Religious Studies I		
(Fulfilled by PEA)		
Philosophy/Religious Studies II		
Student Choice	XXX XXX	3
Historical Studies		
Student Choice	XXX XXX	3
<b>DIVERSITY AND SOCIAL JUSTICE</b>		
Student Choice	XXX XXX	3
<b>MAJOR CAPSTONE</b>		
Research in Sport and Health Science	In major block	
<b>36-39 CREDITS</b>		

<b>Major in Sport and Wellness, BSSW (HF, CH, SM)</b>		
<b>HEALTH AND SPORT SCIENCE CORE</b>		
Introduction to the University	HSS 101	1
Introduction to Sport and Wellness	HSS 111	3
Principles of Sport Management	HSS 250	3
Organizational Behavior or Leadership in Sport	HSS 356/330	3
Sport Marketing or Sales and Fundraising	HSS 357/358	3
Safety and Law in PE and Sports	HSS 448	3
Research in Sport and Health Science	HSS 428	3
<b>MATHEMATICS AND NATURAL SCIENCES</b>		
Introduction to Statistics	MTH 207	3
Natural Science I	(BIO 101, BIO 151, CHM 123, CHM 200, PHY 201, SCI 190, CPS 149)	3
Natural Science II	(BIO 101, BIO 151, CHM 123, CHM 200, PHY 201, SCI 190, CPS 149)	3
Natural Science Lab	(BIO 101L, BIO 151L, CHM 123L, CHM 200, PHY 201L, SCI 190L)	1
<b>BUSINESS COURSES</b>		
Intro to Accounting	ACC 200	3
Principles of Microeconomics	ECO 203	3
<b>EXPERIENTIAL LEARNING</b>		
Field Experience I or Practicum	HSS 285/HSS 255	3
Internship	HSS 485	3
		<b>41 CREDITS</b>
<b>+ CONCENTRATION REQUIREMENTS</b>		

<b>Concentration in Health and Fitness</b>		
<b>HEALTH AND SPORT SCIENCE</b>		
Fitness for Life	HSS 121	2
Medical Terminology	HSS 201	3
Fundamentals of Anatomy and Physiology	HSS 206	3
Nutrition and Health	HSS 295	3
Strength and Conditioning	HSS 320	3
Personal Training	HSS 321	3
Intro to Athletic Training	HSS 335	3
Tests and Measurement	HSS 405	3
Physical Activity Principles and Promotion*	HSS 4XX	3
Exercise for Special Populations	HSS 422	3
Nutrition for Exercise and Sport	HSS 431	3
<b>PROFESSIONAL COMPETENCIES</b>		
Intro to Psychology	HSS 101	3
Growth and Development	HSS 251	3
Health Psych/Interviewing and Counseling	HSS 366/431	3
Health Communication or Comm for Health Prof	CMM 411/372	3
Upper-Level English Course	ENG 3/4XX	3
		<b>47 CREDITS</b>

<b>Concentration in Community Health</b>		
<b>HEALTH AND SPORT SCIENCE</b>		
Personal and Community Health	HSS 117	3
Medical Terminology	HSS 201	3
Fundamentals of Anatomy and Physiology	HSS 206	3
Nutrition and Health	HSS 295	3
Community Nutrition	HSS 302	3
Sport and Bodies	HSS 360/SOC 360	3
Food Justice	HSS 384/SOC 384	3
Physical Activity Principles and Promotion*	HSS 4XX	3
Tests and Measurement	HSS 405	3
<b>PROFESSIONAL COMPETENCIES</b>		
Intro to Psychology	HSS 101	3
Community Psychology	PSY 368	3
Upper Level Communications	CMM 3/4XX	6
Upper Level Sociology/Anthropology/Social Work	SOC/ANT/SWK 3/4XX	6
Public Policy Analysis (or other POL)	POL 307	3
Upper Level Social Science	XXX 3/4XX	3
		<b>51 CREDITS</b>

\*new course

<b>Concentration in Sport Management</b>		
<b>HEALTH AND SPORT SCIENCE</b>		
Practicum in Health and Sport Science or Field Experience (whichever not taken in core)	HSS 255	3
Sport Facility Operations	HSS 253	3
Sport Ethics	HSS 331	3
Financing Sport Operations	HSS 349	3
Sports Media	HSS 353	3
Sport in Global Communities	HSS 354	3
Sport and Bodies	HSS 360/SOC 360	3
Organizational Behavior or Leadership in Sport (whichever not taken in core)	HSS 356/330	3
Sport Marketing or Sales and Fundraising (whichever not taken in core)	HSS 357/358	3
<b>BUSINESS MINOR</b>		
FIN 301/MGT 201/229/MIS 300/MKT 300/OPS 300	4 Courses	12
<b>PROFESSIONAL COMPETENCIES</b>		
Intro to Psychology or Intro to Sociology	PSY 101/SOC 101	3
Professional Competency Courses		12
		<b>54 CREDITS</b>

**BS IN SPORT AND WELLNESS: HEALTH AND FITNESS**

<b>FIRST YEAR</b>			
<b>FALL</b>	<b>HOURS</b>	<b>SPRING</b>	<b>HOURS</b>
HSS 101	1	PSY 101	3
HSS 111	3	MTH 207	3
CMM 100	3	ENG 100	3
HST 103	3	PHL 103	3
REL 103	3	Natural Science	3
Natural Science	3	Natural Science Lab	1
		HSS121	2
	16		18

<b>SECOND YEAR</b>			
<b>FALL</b>	<b>HOURS</b>	<b>SPRING</b>	<b>HOURS</b>
HSS 250	3	HSS 285	3
HSS 201	2	HSS 206	3
ECO 203	3	ACC 200	3
ENG 200	3	Arts elective	3
SSC 200	3	HSS 320	3
HSS 295	3	PSY 251	
	17		18

<b>THIRD YEAR</b>			
<b>FALL</b>	<b>HOURS</b>	<b>SPRING</b>	<b>HOURS</b>
HSS 321	3	CAP INT/DSJ	3
HSS 330/356	3	HSS 4XX PRINCIPLES.....	3
HSS 357/358	3	Practical Ethical Action & Advanced Philosophy	3
UPPER LEVEL ENGLISH	3	HSS 335	
CMM 372/411	3	HSS 405	
	15		15

<b>FOURTH YEAR</b>			
<b>FALL</b>	<b>HOURS</b>	<b>SPRING</b>	<b>HOURS</b>
CAP Advanced History	3	HSS 431	3
HSS 448	3	PSY 366/431	3
HSS 428	3	Faith Traditions & Advanced Religion	3
HSS422	3	HSS 485	3
	12		12
Total credit hours: 123-129			

**BS IN SPORT AND WELLNESS: COMMUNITY HEALTH**

<b>FIRST YEAR</b>			
<b>FALL</b>	<b>HOURS</b>	<b>SPRING</b>	<b>HOURS</b>
HSS 101	1	PSY 101	3
HSS 111	3	MTH 207	3
CMM 100	3	ENG 100	3
HST 103	3	PHL 103	3
REL 103	3	Natural Science	3
Natural Science	3	Natural Science Lab	1
	16		16

<b>SECOND YEAR</b>			
<b>FALL</b>	<b>HOURS</b>	<b>SPRING</b>	<b>HOURS</b>
HSS 250	3	HSS 285	3
HSS 201	2	HSS 206	3
HSS 117	3	HSS 302	3
ENG 200	3	Arts elective	3
SSC 200	3	HSS 360	3
HSS 295	3	HSS 384	3
	17		18

<b>THIRD YEAR</b>			
<b>FALL</b>	<b>HOURS</b>	<b>SPRING</b>	<b>HOURS</b>
HSS 360	3	CAP INT/DSJ	3
HSS 330/356	3	HSS 4XX PRINCIPLES.....	3
HSS 357/358	3	Practical Ethical Action & Advanced Philosophy	3
UPPER LEVEL ENGLISH	3	PSY 368	3
CMM 3-400 I	3	HSS 405	3
			3
	15		18

<b>FOURTH YEAR</b>			
<b>FALL</b>	<b>HOURS</b>	<b>SPRING</b>	<b>HOURS</b>
CAP Advanced History	3	SOC/ANT/SWK 3-400 II	3
HSS 448	3	CMM 3-400 II	3
HSS 428	3	Faith Traditions & Advanced Religion	3
SOC/ANT/SWK 3-400 I	3	HSS 485	3
POL 307	3		
	15		12
Total credit hours:			



**BS IN SPORT AND WELLNESS: SPORT MANAGEMENT**

<b>FIRST YEAR</b>			
<b>FALL</b>	<b>HOURS</b>	<b>SPRING</b>	<b>HOURS</b>
HSS 101	1	PSY/SOC 101	3
HSS 111	3	MTH 207	3
CMM 100	3	ENG 100	3,4
HST 103	3	PHL 103	3
REL 103	3	Natural Science	3
Natural Science	3	Natural Science Lab	1
	16		16-17

<b>SECOND YEAR</b>			
<b>FALL</b>	<b>HOURS</b>	<b>SPRING</b>	<b>HOURS</b>
HSS 250	3	HSS 285	3
HSS 255	3	HSS 330	3
ECO 203	3,4	HSS 353	3
ENG 200	3-4	ACC 200	3
SSC 200	3	Arts elective	3
		MGT 201	3
	15-17		18

<b>THIRD YEAR</b>			
<b>FALL</b>	<b>HOURS</b>	<b>SPRING</b>	<b>HOURS</b>
HSS 331	3	HSS 360	3
HSS 356	3	BUS minor elective	3
HSS 358	3	Practical Ethical Action & Advanced Philosophy	3
Professional Competency	3	Professional Competency	6
BUS minor elective	3		
	15		15

<b>FOURTH YEAR</b>			
<b>FALL</b>	<b>HOURS</b>	<b>SPRING</b>	<b>HOURS</b>
HSS 349	3	HSS 354	3
HSS 448	3	HSS 357	3
HSS 428	3	BUS minor elective	3
BUS minor elective	3	Faith Traditions & Advanced Religion	3
Advanced History	3	Professional Competency	3
	15		15
<b>SUMMER</b>			
HSS 485	3		
Total credit hours: 125-128			

# 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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# 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

- How are other similar departments structuring related majors?
- How do major titles affect student outcomes, particularly in light of graduate and medical school entrance requirements?
- What majors and concentrations are most likely to attract new/incoming students?
- How do institutions target prospective students given changes in naming conventions and existing student questionnaires?
- 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)

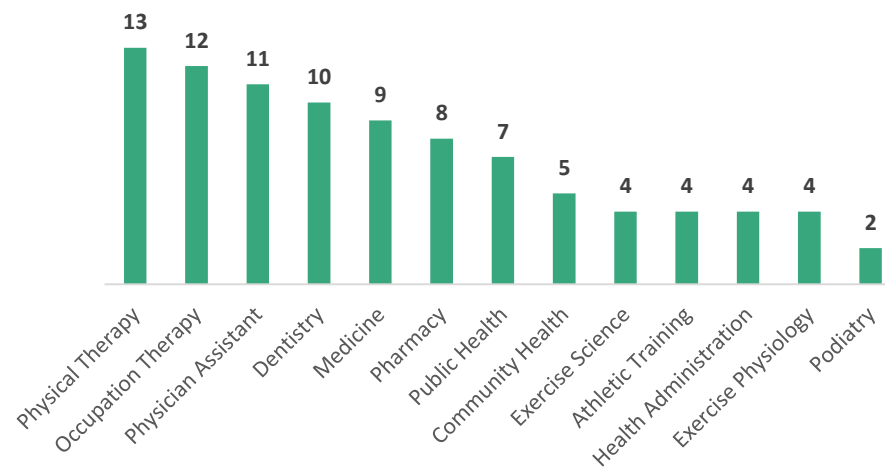
Integrative Holistic  
Medicine  
Nutrition and Health  
Pre-Health Professional  
(medical, dental, optometric,  
veterinary, physician  
assistant)  
Pre-Pharmacy  
Exercise Science  
Pre-Physical Therapy

### 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
<b>Related Bachelor's Programs</b>						
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%
<b>Pre-Health Bachelor's Programs</b>						
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%
<b>Selected Master's Programs</b>						
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: IPEDS<sup>1</sup>

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	<a href="#">Bachelor of Science in Education - Health Science Studies</a>	<ol style="list-style-type: none"> <li>1) Pre-Physical Therapy</li> <li>2) Pre-Medical/Dental</li> <li>3) Pre- Athletic Training (5 year)</li> <li>4) Secondary General Science Education</li> <li>5) Health Professions</li> </ol>	<ul style="list-style-type: none"> <li>Helps students identify and meet entrance criteria health related programs while emphasizing health, fitness, and wellness.</li> <li><b>Health Professions</b> leads to other allied health graduate programs (e.g., occupational therapy, pharmacy, physician assistant, etc.)</li> </ul>	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	<a href="#">Bachelor of Science in Health Sciences</a>	<ol style="list-style-type: none"> <li>1) Associate Degree/Bachelor of Science Completion Program</li> <li>2) General Interest</li> <li>3) Health Promotion</li> <li>4) Pre-Therapy</li> <li>5) Pre-Physician Assistant Science</li> </ol>	<ul style="list-style-type: none"> <li>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</li> <li><b>General Interest</b> is those interested in health-related careers but uncertain about which health profession to pursue;</li> <li><b>Health Promotion</b> is those who plans to enter the community health or health promotion field</li> <li><b>Pre-Therapy</b> 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</li> <li>School-wide: 96% employed, 96% working in profession (2015-16)</li> </ul>	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"> <li>Offers <b>co-curricular certificates</b> in Gerontology Studies, Culture, Communication and Health, and Bioethics as well as <b>concentrations</b> in Health and Wellness, Community Health, and Human Factors</li> <li>Health Sciences Upper-Division Honors/Scholars Programs (Clinical Track, Research Track, Cultural Competency Track)</li> <li>2+2 articulation agreements with three community college Allied Health programs</li> </ul>

# Competitor Programs Benchmark

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Institution	Degree Program	Concentrations	Student Outcomes	Target Student Market	Student Targeting/ Marketing	Other Practices
DePaul University	<a href="#">Bachelor of Science in Health Sciences</a>	<ul style="list-style-type: none"> <li><b>1) Bioscience</b> <ul style="list-style-type: none"> <li>General Track</li> <li>Lab Investigations Track</li> <li>Medical/Graduate Track</li> <li>Pre-Nursing Track</li> </ul> </li> <li><b>2) Bioscience - Accelerated Program</b> <ul style="list-style-type: none"> <li>Medicine</li> <li>Pathologists' Assistant</li> <li>Pharmacy</li> <li>Physical Therapy</li> <li>Physician Assistant</li> <li>Podiatry</li> </ul> </li> <li><b>3) Public Health Studies</b> <ul style="list-style-type: none"> <li>General Track</li> <li>Community Health Track</li> <li>Health Education Track</li> <li>Health Policy &amp; Administration Track</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li><b>Bioscience</b> prepares students for career in dentistry, medicine, nursing, pharmacy or physical therapy</li> <li><b>Bioscience – Accelerated Program</b> 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)</li> <li><b>Public Health Studies</b> prepares students for career in community health, health care administration, health communication and public health</li> <li>93 percent of 2016 Health Sciences graduates were employed, continuing their education or not seeking employment after graduation.</li> </ul>	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"> <li>Five-year master’s offerings with a Health Communication, Public Health, or Nursing master's degree.</li> </ul>
Drexel University	<a href="#">Bachelor of Science in Health Sciences</a>	<ul style="list-style-type: none"> <li>Exercise Science</li> </ul>	<ul style="list-style-type: none"> <li>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)</li> </ul>	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"> <li>Optional six-month co-operative education experience</li> <li>Automatic Drexel Doctor of Physical Therapy Program Admissions Interview (if eligible)</li> <li>Center for Interdisciplinary Clinical Simulation and Practice</li> <li>Accelerated degree options through Physician Assistant (3+2.25) and Physical Therapy (3+3) programs</li> <li>Sequential degree option (accelerated or standard BS) to Salus University MSOT program</li> </ul>

# 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	<a href="#">Bachelor of Science in Exercise Science</a>	<ol style="list-style-type: none"> <li>Exercise Physiology</li> <li>Exercise Specialist</li> <li>Pre-Physical/Occupational Therapy/Podiatric Medicine</li> </ol>	<ul style="list-style-type: none"> <li><b>Exercise Physiology</b> prepares students for graduate school in exercise physiology or health care professions</li> <li><b>Exercise Specialist</b> prepares students for work in the clinical setting, ranging from a career in wellness to cardiac rehabilitation</li> <li><b>Pre-Physical/Occupational Therapy/Podiatric Medicine</b> 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)</li> </ul>	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	<a href="#">Bachelor of Science in Health Sciences</a>	<ol style="list-style-type: none"> <li>Pre-Physical Therapy</li> <li>Pre-Professional (Occupational Therapy, Athletic Training, Chiropractic Medicine)</li> <li>Public Health</li> </ol>	<ul style="list-style-type: none"> <li><b>Pre-Physical Therapy</b> prepares students for doctoral programs in Physical Therapy</li> <li><b>Pre-professional</b> prepares students to pursue master's degrees in occupational therapy (OT) or athletic training (AT), or the Doctorate in Chiropractic Medicine (DCM)</li> <li><b>Public Health</b> prepares students for careers in or future study in public health</li> <li>30 of graduates percent employed within first 3-months (74% related to field of study); 55% pursuing additional education</li> </ul>	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"> <li>Graduates are prepared to apply for Exercise Physiologist or Personal Trainer certifications by the American College of Sports Medicine (ACSM)</li> <li>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)</li> <li>Eligible for Accelerated B.S. to M.S. program in Health Education and Promotion</li> </ul>

Source. Institutional Websites (see embedded hyperlinks) and Marymount University student outcomes data<sup>3</sup>

# 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	<a href="#">Bachelor of Science in Health Sciences</a>	<ol style="list-style-type: none"> <li>1) Exercise Science</li> <li>2) Integrative Holistic Medicine</li> <li>3) Nutrition and Health</li> <li>4) Pre-Health Professional</li> <li>5) Pre-Pharmacy</li> <li>6) Pre-Physical Therapy</li> </ol>	<ul style="list-style-type: none"> <li>• <b>Exercise Science</b> prepares students for career in the fitness arenas as well as for graduate study in Exercise Science and other disciplines</li> <li>• <b>Integrative Holistic Medicine</b> prepares students for traditional and non-traditional career opportunities in community-based and medical organizations emphasizing patient-centered practices</li> <li>• <b>Nutrition and Health</b> 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</li> <li>• <b>Pre-Health Professional</b> fulfills traditional application requirements for medical, dental, optometric, veterinary, physician assistant and other professional schools</li> <li>• <b>Pre-Pharmacy</b> prepares students to meet the academic prerequisites necessary to be considered for admission to Doctor of Pharmacy (PharmD) programs throughout the state</li> <li>• <b>Pre-Physical Therapy</b> prepares students to meet the prerequisite application requirements for Doctor of Physical Therapy (DPT) programs throughout the state</li> <li>• 54 percent of School-wide graduates employed (76 percent directly or somewhat related to major); 40% pursuing continuing education</li> </ul>	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"> <li>• Nutrition and Health minor</li> </ul>

# 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	<a href="#">Bachelor of Science in Health Science Pre-Professional</a>	<ol style="list-style-type: none"> <li>1) Pre-Chiropractic</li> <li>2) Pre-Dentistry</li> <li>3) Pre-Medicine</li> <li>4) Pre-Occupational Therapy</li> <li>5) Pre-Optometry</li> <li>6) Pre-Physical Therapy</li> <li>7) Pre-Physician's Assistant</li> <li>8) Public Health Concentration</li> </ol>	<ul style="list-style-type: none"> <li>• Prepared to meet prerequisites of relevant graduate program and rigors of a professional program</li> <li>• 3+2 MBA program available for outstanding students</li> </ul>	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"> <li>• Students take similar coursework the first two years of enrollment, allowing the <b>flexibility of switching from one HSPP program to another.</b></li> <li>• Course requirements for entry into professional school are incorporated into the plans of study, resulting in no extra coursework</li> </ul>
Saint Louis University	<a href="#">Bachelor of Science in Health Sciences</a>	<ol style="list-style-type: none"> <li>1) Pre-occupational therapy or pre-physical therapy track</li> <li>2) Medical scholars, pre-medicine, physician assistant scholars or pre-physician assistant track (incl. dental and optometry)</li> <li>3) Pharmacy Scholars or PharmD accelerated track</li> </ol>	<ul style="list-style-type: none"> <li>• Not guaranteed to meet all of the prerequisite requirements of all institutions (DPT, MAT, MOT, PA, Medical School, etc.)</li> <li>• <b>Pharmacy Scholars &amp; PharmD accelerated track</b> lead to 3+4 program with St. Louis College of Pharmacy</li> <li>• The <b>majority</b> of students with a bachelor's degree in health sciences <b>go on to medical school, graduate school or other post-baccalaureate studies.</b></li> </ul>	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	<a href="#">Bachelor of Science in Health Science</a>	<ol style="list-style-type: none"> <li>1) General Concentration</li> <li>2) Pre-Communication Disorders (CD)</li> <li>3) Pre-Physical Therapy (PT)</li> <li>4) Pre-Occupational Therapy (OT)</li> <li>5) Community Health Education</li> <li>6) Health Administration</li> </ol>	<ul style="list-style-type: none"> <li>• <b>Pre-Communication Disorders</b> provides prerequisite course work for graduate study in communication disorders and sciences including speech-language pathology or audiology</li> <li>• <b>Community Health Education</b> prepares students to attain employment as health education specialists (eligible to take Certified Health Education Specialists exam)</li> <li>• <b>Health Administration</b> concentration prepares students for entry-level positions as health care administrators</li> </ul>	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"> <li>• Includes Pre-Physician Assistant Area of Interest</li> <li>• 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.</li> <li>• Curriculum based on the Core Competencies for Interprofessional Collaborative Practice (IPEC)</li> <li>• Pre-Accelerated/2nd degree Bachelor of Science in Nursing</li> <li>• B.S. Health Science/M.S. Physician Assistant</li> </ul>
University of Cincinnati-Main Campus	<a href="#">Bachelor of Science in Health Sciences</a>	<ol style="list-style-type: none"> <li>1) Exercise &amp; Movement Science</li> <li>2) Physiologic Science</li> <li>3) Behavior &amp; Occupation Studies</li> <li>4) Behavior &amp; Occupation Studies - Online Learning</li> </ol>	<ul style="list-style-type: none"> <li>• <b>Exercise &amp; Movement Science</b> graduates are likely to likely to enroll in graduate programs in Physical Therapy, Occupational Therapy, exercise physiology, biomechanics &amp; ergonomics, orthotics &amp; prosthetics, nutrition, Athletic Training, or health administration</li> <li>• <b>Physiologic Science</b> 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 &amp; ergonomics, nutrition, Athletic Training, or health administration.</li> <li>• <b>Behavior &amp; Occupation Studies</b> graduates likely to enroll in graduate programs in Occupational Therapy, Public Health, Health Promotion, or Community Health Education</li> <li>• College-wide: 61.6% employed, 33.6% continuing education</li> </ul>	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 &amp; ergonomics as well as other health related masters’ and doctoral degree programs”</p>	<ul style="list-style-type: none"> <li>• 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</li> <li>• Nutrition Minor</li> <li>• Psychology Minor (with Behavior &amp; Occupation Studies Concentration)</li> <li>• Junior Early Admission Pathway (JEAP) to Physical Therapy</li> </ul>

Source. Institutional Websites (see embedded hyperlinks) and University of Cincinnati student outcome data<sup>5</sup>

# 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	<a href="#">Bachelor of Science in Human Health Sciences</a>	<ol style="list-style-type: none"> <li>1) Athletic Training Track</li> <li>2) Audiology Track</li> <li>3) Dentistry Track</li> <li>4) Occupational Therapy Track</li> <li>5) Optometry Track</li> <li>6) Pharmacy Track</li> <li>7) Physical Therapy Track</li> <li>8) Physician Assistant Track</li> </ol>	<ul style="list-style-type: none"> <li>• Gain a comprehensive knowledge of health care practices and a solid foundation in the basic sciences</li> <li>• A comprehensive knowledge of health care practices and a solid foundation in the basic sciences</li> <li>• 50%+ Dean's List students are admitted to health professions programs</li> </ul>	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"> <li>• Minor in Health Advocacy</li> </ul>
University of Missouri	<a href="#">Bachelor of Health Science in Health Science</a>	<ol style="list-style-type: none"> <li>1) Health and Wellness</li> <li>2) Leadership and Policy</li> <li>3) Pre-Professional</li> <li>4) Rehabilitation Science</li> </ol>	<ul style="list-style-type: none"> <li>• <b>Health and Wellness</b> prepares students for application to programs in public health, accelerated nursing, or health education and promotion</li> <li>• <b>Leadership and Policy</b> prepares students to enter careers in health administration, informatics, public health, policy or law</li> <li>• <b>Pre-Professional</b> prepares students to apply for graduate and professional programs in medicine, dentistry, pharmacy, physician assistant studies, optometry and related areas</li> <li>• <b>Rehabilitation Science</b> prepares students for application to graduate programs in fields such as occupational therapy, physical therapy, chiropractic, applied behavior analysis, orthotics/prosthetics and similar degrees</li> <li>• 90 percent of graduates plan to stay on at University of Missouri for graduate school</li> <li>• 24 percent employed; 68 percent in Graduate/Professional School</li> <li>• Top-five postgraduate programs are: Physical Therapy, Accelerated Nursing, Occupational Therapy, Health Care Administration, Physician Assistant</li> <li>• For Alumni Generally, graduate school national acceptance rate: Osteopathic (34%), Allopathic (39%), Dental (45%)</li> </ul>	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.”	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).

# Medical School Academic Admissions Requirements

## Benchmarking Analysis: Trends in Bachelor of Health Science Degrees

### Medical School Admissions Requirements

Institution	General	Course Prerequisites	Preferences
<a href="#">Baylor College of Medicine</a>	<ul style="list-style-type: none"> <li>90+ undergraduate semester hours (s.h.) or equivalent at a fully accredited college or university in the United States</li> </ul>	<ul style="list-style-type: none"> <li>Math (3-4s.h.) - quantitative math.</li> <li>Expository Writing (3-4s.h.)</li> <li>Humanities-Social/Behavioral Sciences (12s.h.)</li> <li>Organic Chemistry (2 semesters; 6-8s.h.) – lab not required</li> <li>Biochemistry (3-4s.h.) - lab is not required</li> <li>Advanced Biology (3-4s.h.) - lab is not required.</li> </ul>	<ul style="list-style-type: none"> <li>Biostatistics</li> <li>Highly recommended: genetics, cell/molecular biology</li> </ul>
<a href="#">Creighton University School of Medicine</a>	<ul style="list-style-type: none"> <li>Bachelor's degree</li> <li>Completion of required courses at an accredited four-year institution in the United States or Canada.</li> <li>Foundation in: Commitment to “service of others” through non-medical volunteer activities; physician shadowing experiences; patient contact through clinical and/or medical experiences</li> </ul>	<ul style="list-style-type: none"> <li>Biochemistry</li> <li>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)</li> <li>Statistics</li> <li>English (two courses)</li> </ul>	<ul style="list-style-type: none"> <li>Scientific research, though not required for admission, is also highly valued by the Committee.</li> <li>Advanced Level Courses</li> <li>Recent Courses</li> </ul>
<a href="#">Drexel University College of Medicine</a>	<ul style="list-style-type: none"> <li>Baccalaureate degree at an accredited college or university</li> <li>Meaningful clinical experience</li> <li>Service orientation/community service</li> </ul>	<ul style="list-style-type: none"> <li>Biology – with an emphasis on the cellular and molecular aspects of living organisms (1 year)</li> <li>Chemistry – with an emphasis on an integrated sequence that leads to the mastery of biologically relevant general chemistry, organic chemistry, and biochemistry (2 years)</li> <li>Physics – with an emphasis on the principles of mechanisms, kinetics, thermodynamics, wave motion, electricity and magnetism (1 course)</li> <li>Laboratory experience – with a focus on hypothesis-driven exercises, problem solving, and basic laboratory principles (1 year)</li> <li>Statistics and probability – with emphasis on hypothesis testing, quantitative scientific reasoning analysis, and biostatistics. (Biostatistics, 1 course)</li> <li>English literature/communication/intensive writing experience</li> <li>Behavioral and social sciences</li> </ul>	<ul style="list-style-type: none"> <li>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)</li> </ul>

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

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

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
<a href="#">Baylor University</a>	<ul style="list-style-type: none"> <li>Baccalaureate degree from a regionally accredited institution prior</li> <li>3.00/4.00 GPA on required prerequisite coursework</li> <li>Completion of the Graduate Record Examination (GRE) within the last five years (no minimum)</li> <li>Recommended: fifty hours of volunteer or work experience</li> </ul>	<ul style="list-style-type: none"> <li>Biology (6s.h.) - laboratory recommended</li> <li>Chemistry (8s.h.) - with laboratory</li> <li>General Physics (8s.h.) - with laboratory</li> <li>Human Anatomy and Physiology - with laboratory (8s.h.)</li> <li>Statistics (3s.h.)</li> <li>Any Psychology (3s.h.)</li> <li>Abnormal or Developmental Psychology (s.h.)</li> <li>English Composition or Writing (3s.h.)</li> </ul>	
<a href="#">Bradley University</a>	<ul style="list-style-type: none"> <li>Baccalaureate degree with prerequisites completed with a "C" or higher</li> <li>Skills in computer literacy, communication (written and verbal), medical terminology, and teaching.</li> <li>Minimum 3.0 grade point average for all courses taken.</li> <li>GRE verbal minimum score of 150; quantitative minimum score of 150.</li> <li>TOEFL score of 600 or higher, and IELTS score of 7.0 or higher.</li> </ul>	<ul style="list-style-type: none"> <li>Chemistry for science majors - with lab (6-8s.h.)</li> <li>Physics for science majors - with laboratory (6-8s.h.)</li> <li>Biology/Zoology with content that includes an introduction to cell biology, biochemistry and genetics (6-8s.h.)</li> <li>Anatomy of vertebrate, mammalian, human or comparative anatomy – with lab (3-4s.h.)</li> <li>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.)</li> <li>Statistics (3s.h.)</li> <li><b>OR</b> BS in Health Science from Health Science Bradley University</li> </ul>	<ul style="list-style-type: none"> <li>Kinesiology, biomechanics or additional courses in human anatomy</li> <li>Exercise physiology, pathophysiology, or additional courses in physiology</li> <li>Upper division psychology and sociology courses</li> <li>Medical Terminology</li> <li>100 hours of exposure to physical therapy</li> </ul>
<a href="#">Creighton University</a>	<ul style="list-style-type: none"> <li>90 semester hours</li> <li>Prerequisite courses may be completed at any regionally accredited institution with a grade of C or better</li> <li>Proof of a minimum of 60 hours of observation supervised by a physical therapist</li> <li>*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. <b>Strong academic performance is considered paramount; the degree of emphasis is secondary.</b></li> </ul>	<ul style="list-style-type: none"> <li>General Biology I &amp; II - with labs (8s.h.)</li> <li>General Chemistry I &amp; II - with labs (8s.h.)</li> <li>General Physics I &amp; II - with labs (8s.h.)</li> <li>Human or Mammalian Physiology (3s.h.)</li> <li>English (including Composition) (6s.h.)</li> <li>Statistics (3s.h.)</li> <li>Electives (54s.h.)</li> <li>*The chemistry and physics courses must be a two-semester, eight-hour or equivalent course sequence.</li> </ul>	

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

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	<a href="#">Doctor of Post Professional Occupational Therapy</a>	<ul style="list-style-type: none"> <li>Successful completion of an <b>entry-level, accredited occupational therapy program</b> at the master's or baccalaureate degree level</li> <li>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).</li> </ul>	--
Creighton University	<a href="#">Entry-Level Doctor of Occupational Therapy</a>	<ul style="list-style-type: none"> <li>Baccalaureate degree (no minimum GPA)</li> <li>Prerequisite courses completed at regionally accredited institution with a grade of C or better</li> <li>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)</li> </ul>	--
	<a href="#">Post Professional Doctor of Occupational Therapy</a>	<ul style="list-style-type: none"> <li>Bachelor's or entry-level master's degree* in occupational therapy at an ACOTE-accredited institution (or WFOT approved OT program for international applicants)</li> </ul>	--
Hofstra University	<a href="#">Master of Science in Occupational Therapy</a>	<ul style="list-style-type: none"> <li>Baccalaureate degree with minimum cumulative GPA of 3.0</li> <li>Observation of occupational therapy related experience</li> </ul>	--
Saint Louis University	<a href="#">Master of Occupation Therapy</a>	<ul style="list-style-type: none"> <li>Prerequisites with a minimum 3.2 cumulative GPA</li> </ul>	<ul style="list-style-type: none"> <li>Biology with lab (4s.h.)</li> <li>Chemistry with lab (4s.h.)</li> <li>Basic anatomy (3s.h.)</li> <li>Physiology (3s.h.)</li> <li>Physics (3s.h.)</li> <li>Lifespan human development (3s.h.)</li> <li>Abnormal psychology (3s.h.)</li> <li>Research methods (3s.h.)</li> <li>Medical terminology</li> </ul>
	<a href="#">Post Professional Doctor of Occupational Therapy</a>	<ul style="list-style-type: none"> <li>Bachelor's degree with 3.2 GPA</li> <li>Completed the National Board Certification in Occupational Therapy examination or an international equivalent</li> <li>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)</li> </ul>	<ul style="list-style-type: none"> <li>4000 or 5000-level English composition course (3s.h.)</li> <li>OCTH 5011: Fundamentals of Occupational Science (3s.h.)</li> <li>OCTH 5010: Foundations of OT: Theories, Domains and Processes (3s.h.)</li> </ul>

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](http://www.uky.edu/registrar/sites/www.uky.edu.registrar/files/healthsciences_6.pdf)



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## 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	<a href="#">May 2018, July 2018</a>
Enrollment Management - Jason Reinoehl	May 11, 2018 - <a href="#">Call</a>
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 3<sup>rd</sup> All HSS faculty brainstorming session  
Identified strengths, weaknesses, opportunities for growth, etc.

May 8<sup>th</sup> 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 25<sup>th</sup> Consultation with Dietetics (Dalton)

August 13<sup>th</sup> Consultation with Sport Management faculty (Daprano, Pu, Titlebaum)



To: Diana Cuy Castellanos, Chair SEHS Undergraduate Academic Affairs Committee  
From: <sup>KK</sup>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](mailto: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](mailto:kkelly1@udayton.edu)



**University  
of Dayton**

Anne Crecelius <acrecelius1@udayton.edu>

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## HSS Curriculum Changes

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**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.](#)  
[Dayton, OH 45469-1410](#)

P: (937)-229-2028  
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[jvalenzanoiii1@udayton.edu](mailto:jvalenzanoiii1@udayton.edu)  
[joe.valenzano@udayton.edu](mailto: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



University  
of Dayton

Anne Crecelius <acrecelius1@udayton.edu>

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## Science Subcouncil Response to the HSS Realignment

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**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.

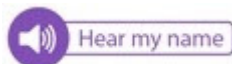
Best regards,

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

Wiebke S. Diestelkamp, Ph.D.  
Professor and Chair  
Department of Mathematics  
University of Dayton  
Dayton, OH 45469-2316

E-mail: [wiebke@udayton.edu](mailto:wiebke@udayton.edu)

Phone: (937) 229-2511



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105K

**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, and Academic Senate
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

<b>Current Major</b>	<b>Primary New Major:Concentration</b>	<b>Alternative(s) New Major:Concentration</b>
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 <b>SW: Health and Fitness</b> <b>SW: Community Health</b>
<b>Sport Management</b>	<b>SW:Sport Management</b>	<b>SW: Community Health</b> <b>SW: Health and Fitness</b>

## **APPENDIX F - 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**

<b>Degree</b>	<b>Bachelor of Science in Nursing</b>	<b>Bachelor of Science in Education</b>				
<b>Majors</b>	<b>Nursing</b>	<b>Sport Management</b>	<b>Exercise Science</b>	<b>Pre-Physical Therapy</b>	<b>Exercise Physiology</b>	<b>Dietetics</b>

**PROPOSED HSS**

<b>Degree</b>	<b>Bachelor of Science in Nursing (BSN)</b>	<b>Bachelor of Science in Sport and Wellness (BSSW)</b>	<b>Bachelor of Science in Health Science (BSHS)</b>	
<b>Majors</b>	<b>Nursing</b>	<b>Sport and Wellness</b>	<b>Health Science</b>	<b>Dietetics</b>
<b>Concentrations</b>		<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>	
<b>Post-Graduate Targets/Destinations</b>	<i>Employment</i>	<i>Pre-Graduate (MPH, MBA, Law)</i>  <i>Employment</i>	<i>Pre-Health Professional</i>  <i>Pre-Graduate (Biomed, S&amp;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)