

BACHELOR OF SCIENCE IN APPLIED SCIENCE IN EXERCISE SCIENCE 4+1 MPH TRACK

The Exercise Science 4 + 1 MPH track begins preparing students to work one-on-one with individuals performing health assessments, fitness testing, and writing exercise prescriptions for a variety of populations (BSA) and continues to prepare the student to improve the health of entire populations (MPH).

The undergraduate degree in Exercise Science prepares students for careers that include:

- medically based wellness programs
- corporate wellness programs
- strength and conditioning
- clinical rehabilitation programs such as cardiac/pulmonary rehabilitation
- public and private fitness clubs

The master's degree in Public Health prepares students for careers that include:

- health informatics specialist
- healthcare administrator
- epidemiologist
- public health project manager
- healthcare consultant

Program Director:

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The following are KSS courses required in the major for this degree:

COURSE	TITLE	S.H.
FIRST YEAR REQUIREMENT -STUDENT SUCCESS		
YSU 1500	Success Seminar	1-2
or YSU 1500S	Youngstown State University Success Seminar	
or HONR 1500	Intro to Honors	
General Education Requirements		
ENGL 1550	Writing 1	3-4
or ENGL 1549	Writing 1 with Support	
ENGL 1551	Writing 2	3
General Education Math		
MATH 1513	Algebra and Transcendental Function	4-6
or MATH 1510	College Algebra	
or MATH 1510C	College Algebra with Co-requisite Support	
Natural Science (Two courses; at least one must include a lab)		
BIOL 1551 & 1551L	Anatomy and Physiology 1 and Anatomy and Physiology 1 Laboratory	4
CHEM 1515 & 1515L	General Chemistry 1 and General Chemistry 1 Laboratory	4
Social and Behavioral Science (6 s.h.)		
PSYC 1560	General Psychology	3
Any Gen Ed Social and Behavioral Science Course		3
Arts and Humanities (6 s.h.)		
HIST 2650	CL History of American Democracy	3
Any Gen Ed Arts and Humanities Course		3

General Education Electives (9 s.h.)

FNUT 1551	Normal Nutrition	3
CMST 1545	Communication Foundations	3
PHLT 1568	Healthy Lifestyles	3

Major Requirements

KSS 1595	Introduction to Kinesiology and Sport Science	2
KSS 1559	Aerobic Conditioning Activities	1
KSS 1560	Resistance Training	2
KSS 15XX	Activity Elective	1
KSS 2605	Sports First Aid and Injury Prevention	3
KSS 2625	Pedagogical Aspects of Exercise Science	3
KSS 3700	Exercise Evaluation and Testing	4
KSS 3710 & 3710L	Physiology of Exercise and Physiology of Exercise Laboratory	5
KSS 3720	Kinesiology and Applied Anatomy	4
KSS 3730	Exercise Prescription	4
KSS 3760	Strength Training and Conditioning	3
KSS 4805	Administration of Exercise Programs	3
KSS 4810	Clinical Exercise Testing and Prescription	4
KSS 4875	Exercise Counseling and Behavioral Strategies	4
KSS 4880	Internship	8

Additional Courses Needed

STAT 2625	Statistical Literacy and Critical Reasoning	3-6
or STAT 2601	Introductory Statistics	
or STAT 2625C	Statistical Literacy and Critical Reasoning with Co-Requisite Support	
BIOL 1552 & 1552L	Anatomy and Physiology 2 and Anatomy and Physiology 2 Laboratory	4
PHYS 1506	Physics for Health Care	3
PHLT 5804	Multicultural Health (Offered Spring only)	3
	Counts toward graduate credit	
MPH 6901	Public Health Concepts (Offered Fall/Summer only)	3
	Counts toward graduate credit	
MPH 6904	Biostatistics in Public Health (Offered Fall/Summer only)	3
	Counts toward graduate credit	
Elective courses		10

Total Semester Hours 120-127

Year 1

Fall		S.H.
YSU 1500	Success Seminar	1-2
or YSU 1500S	or Youngstown State University Success Seminar	
or HONR 1500	or Intro to Honors	
ENGL 1550	Writing 1	3-4
or ENGL 1549	or Writing 1 with Support	
BIOL 1551 & 1551L	Anatomy and Physiology 1 and Anatomy and Physiology 1 Laboratory	4
MATH 1513	Algebra and Transcendental Function	4-6
or MATH 1510	or College Algebra	
or MATH 1510C	or College Algebra with Co-requisite Support	
KSS 1595	Introduction to Kinesiology and Sport Science	2

Semester Hours 14-18

Spring

ENGL 1551	Writing 2	3
BIOL 1552 & 1552L	Anatomy and Physiology 2 and Anatomy and Physiology 2 Laboratory	4
HIST 2650	CL History of American Democracy	3

KSS 1559	Aerobic Conditioning Activities	1
KSS 3710 & 3710L	Physiology of Exercise and Physiology of Exercise Laboratory	5
Semester Hours		16
Year 2		
Fall		
KSS 1560	Resistance Training	2
KSS 2625	Pedagogical Aspects of Exercise Science	3
CHEM 1515 & 1515L	General Chemistry 1 and General Chemistry 1 Laboratory	4
PSYC 1560	General Psychology	3
FNUT 1551	Normal Nutrition	3
Semester Hours		15
Spring		
KSS Activity Elective		1
PHLT 1568	Healthy Lifestyles	3
STAT 2625 or STAT 2601 or STAT 2625C	Statistical Literacy and Critical Reasoning or Introductory Statistics or Statistical Literacy and Critical Reasoning with Co-Requisite Support	3-6
PHYS 1506	Physics for Health Care	3
KSS 2605	Sports First Aid and Injury Prevention	3
Semester Hours		13-16
Year 3		
Fall		
CMST 1545	Communication Foundations	3
KSS 3700	Exercise Evaluation and Testing	4
KSS 3720	Kinesiology and Applied Anatomy	4
KSS 4805	Administration of Exercise Programs	3
Social Science Elective		3
Semester Hours		17
Spring		
KSS 3760	Strength Training and Conditioning	3
KSS 3730	Exercise Prescription	4
Arts & Humanities Elective		3
Elective Course		6
Semester Hours		16
Year 4		
Fall		
KSS 4810	Clinical Exercise Testing and Prescription	4
MPH 6901	Public Health Concepts	3
MPH 6904	Biostatistics in Public Health	3
Elective course		1
Elective Course		3
Semester Hours		14
Spring		
KSS 4875	Exercise Counseling and Behavioral Strategies	4
KSS 4880	Internship	8
PHLT 5804	Multicultural Health	3
Semester Hours		15
Total Semester Hours		120-127

- Students will demonstrate skills in risk factor and health risk identification and the ability to prescribe and implement exercise safely in healthy individuals, special populations (i.e. older adults) and individuals with controlled cardiovascular, pulmonary, and metabolic diseases and other clinical populations.
- Students will demonstrate competency in effectively educating, exercise counseling and using behavioral strategies in individuals regarding lifestyle modification.
- Students will demonstrate competency in the legal and professional tasks related to the field.
- Students will demonstrate knowledge of implementing management policies related to the field.

The student learning outcomes for the MPH are as follows:

Core Competencies

- Use basic techniques and statistical software to access, evaluate, and interpret health data.
- Apply analytic reasoning and methods.
- Interpret scientific and statistical results, including the strengths and limitations of scientific articles.
- Explain characteristics, strengths and limitations of epidemiological study design types.
- Apply behavioral health theories/models in developing community health promotion and intervention programs, and applications for research funding.
- Apply principles of strategic planning to public health, including continuous quality improvement, leadership, teamwork, systems thinking, and social marketing.
- Assess associations found between environmental hazards and health outcomes to influence environmental policies designed to protect populations.
- Apply principles of program planning, development, implementation, management, and evaluation in organizational and community initiatives.
- Use collaborative strategies in the design of policies, interventions, and programs.
- Communicate public health information to lay and professional audiences, using appropriate channels and technologies and with linguistic and cultural proficiency.
- Demonstrate ability to use credible evidence and rationale to guide well-reasoned decisions, proposals, and attitudes.
- Use individual, team and organizational learning opportunities for personal and professional development.

Generalist Competencies

- Prepare proposals for funding from external sources.
- Demonstrate the ability to design, implement and execute a research protocol.
- Consider the role of cultural and social factors in the planning and delivery of public health services and interventions.
- Demonstrate critical evaluation of ethical values, theories, and principles that guide public health inquiry and decision-making.
- Analyze the public health information infrastructure used to collect, process, maintain, and disseminate data in order to allow for decision-making at an administrative level.
- Apply theory and strategy-based communication principles adapted to different contexts.
- Explain how biological, chemical, and physical agents affect human health.

Learning Outcomes

The student learning outcomes for the BSA in exercise science are as follows:

- Students will demonstrate knowledge and skills in health, fitness and performance assessment