

# 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

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

COURSE	TITLE	S.H.
<b>FIRST YEAR REQUIREMENT -STUDENT SUCCESS</b>		
YSU 1500 or SS 1500 or HONR 1500	Success Seminar Strong Start Success Seminar Intro to Honors	1-2
<b>General Education Requirements</b>		
ENGL 1550 or ENGL 1549	Writing 1 Writing 1 with Support	3-4
ENGL 1551	Writing 2	3
CMST 1545	Communication Foundations	3
STAT 2625 or STAT 2601 or STAT 2625C	Statistical Literacy and Critical Reasoning Introductory Statistics Statistical Literacy and Critical Reasoning with Co- Requisite Support	3-6
<b>Natural Science Requirements</b>		
BIOL 1551 & 1551L	Anatomy and Physiology 1 and Anatomy and Physiology 1 Laboratory	4
BIOL 1552 & 1552L	Anatomy and Physiology 2 and Anatomy and Physiology 2 Laboratory	4
<b>Social Science Requirements</b>		
PSYC 1560	General Psychology	3
Social Science Elective (1 Course)		3
<b>Social &amp; Personal Awareness Requirements</b>		
FNUT 1551	Normal Nutrition	3
PHLT 1568	Healthy Lifestyles	3
<b>Arts &amp; Humanities Requirement</b>		
Arts and Humanities Elective (1 Courses)		3

Arts and Humanities Elective (1 Courses)		3
<b>Major Requirements</b>		
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
<b>Additional Courses Needed</b>		
PHYS 1506	Physics for Health Care	3
MATH 1513 or MATH 1510	Algebra and Transcendental Function College Algebra	4-5
CHEM 1515 & 1515L	General Chemistry 1 and General Chemistry 1 Laboratory	4
PHLT 5804	Multicultural Health (Offered Spring only) <sup>Counts toward graduate credit</sup>	3
MPH 6901	Public Health Concepts (Offered Fall/Summer only) <sup>Counts toward graduate credit</sup>	3
MPH 6904	Biostatistics in Public Health (Offered Fall/Summer only) <sup>Counts toward graduate credit</sup>	3
Elective courses		10
<b>Total Semester Hours</b>		<b>120-126</b>
<b>Year 1</b>		
<b>Fall</b>		
YSU 1500 or HONR 1500 or SS 1500	Success Seminar or Intro to Honors or Strong Start Success Seminar	1-2
ENGL 1550 or ENGL 1549	Writing 1 or Writing 1 with Support	3-4
BIOL 1551 & 1551L	Anatomy and Physiology 1 and Anatomy and Physiology 1 Laboratory	4
MATH 1513 or MATH 1510	Algebra and Transcendental Function or College Algebra	4-5
KSS 1595	Introduction to Kinesiology and Sport Science	2
<b>Semester Hours</b>		<b>14-17</b>
<b>Spring</b>		
ENGL 1551	Writing 2	3
BIOL 1552 & 1552L	Anatomy and Physiology 2 and Anatomy and Physiology 2 Laboratory	4
KSS 1559	Aerobic Conditioning Activities	1
KSS 3710 & 3710L	Physiology of Exercise and Physiology of Exercise Laboratory	5
<b>Semester Hours</b>		<b>13</b>
<b>Year 2</b>		
<b>Fall</b>		
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
Arts and Humanities Elective		3

**Semester Hours** 14

##### Spring

KSS 4875	Exercise Counseling and Behavioral Strategies	4
KSS 4880	Internship	8
Elective course		3
PHLT 5804	Multicultural Health	3

**Semester Hours** 18

**Total Semester Hours** 120-126

## 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
- 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.