

Exercise Science and Exercise Physiology Handbook

Approved 2.7.2024

Table of Contents

THE EXERCISE SCIENCE and EXERCISE PHYSIOLOGY MAJOR	3
Mission.....	3
Program Faculty	5
UNDERGRADUATE DEGREE IN EXERCISE SCIENCE	5
Admissions.....	6
Graduation Requirements.....	6
Learning Objectives Of The Exercise Science Program.....	6
Progression Requirements	9
Graduation Requirements	9
Strength and Conditioning Concentration.....	10
Exercise Physiology Concentration	13
Exercise Specialist Concentration.....	17
Pre-Physical/Occupational Therapy/Podiatric Medicine Concentration.....	22
MASTER'S DEGREE IN EXERCISE PHYSIOLOGY	26
Description.....	26
Learning Objectives of the Exercise Physiology Master's Program.....	26
Admissions.....	26
Graduation Requirements.....	27
Plan of Study	28
DOCTORAL DEGREE IN EXERCISE PHYSIOLOGY	28
Description.....	28
Admissions.....	28
Learning Objectives for the Doctoral Degree in Exercise Physiology.....	28
Plan Of Study.....	29
Candidacy Examination.....	29
EXERCISE SCIENCE COURSE DESCRIPTIONS	30
What is Exercise Science.....	42
Exercise Science and Exercise Physiology Major Remediation Policy.....	44
Student Complaint Procedure to Accreditation agency (CASCE).....	45
Kent State University Grievance Policy.....	46
Graduate Student Leave of Absence Policy.....	46
Appendix A - Arranged Coursework Form.....	49
Appendix B - Arranged Coursework Form.....	50
Appendix C - Graduate Assistantship Application Form.....	53
Appendix D - Graduate Assistant Policy and Procedures.....	59

THE EXERCISE SCIENCE and EXERCISE PHYSIOLOGY MAJOR

MISSION

The Kent State Exercise Science and Exercise Physiology program provides students with an understanding of the physiological, biomechanical, and psychological effects of exercise on the human body. This unique and challenging program is designed to prepare students for a wide range of careers in the fast-growing fields of health, wellness, and fitness. The Exercise Science major at Kent State University provides students with a foundation of both theoretical and clinical knowledge while adhering to the Kent State mission to “teach its students not only how to make a living, but how to live.”

Specifically, Kent State University offers eight tracks within the major of Exercise Science and Exercise Physiology:

Category 1 – Bachelor of Science degree concentrations

- Strength & Conditioning Concentration
- Exercise Physiology Concentration
- Exercise Specialist Concentration
- Pre-Physical Therapy/Occupational Therapy/Podiatric Medicine Concentration

Category 2 –Master of Science in Exercise Physiology degree tracks

- Thesis
- Non-Thesis
- Athletic Training Track

Category 3 –Doctorate of Physiology degree

PROGRAM FACULTY

Ellen Glickman Ph.D. FACSM
Professor
School Director, Health Sciences

J. Derek Kingsley Ph.D. FACSM, CSCS*D, ACSM EP
Associate Professor
Program Coordinator

Adam Jajtner Ph.D. CSCS*D
Associate Professor

Angela Ridgel Ph.D. FACSM, ACSM EP
Professor

John McDaniel Ph.D.
Professor

Jacob Barkley Ph.D. ACSM EP
Professor

Meghan Magee Ph.D. CSCS, CISSN
Assistant Professor

UNDERGRADUATE DEGREE IN EXERCISE SCIENCE

Exercise Science and Exercise Physiology are designed to promote the development of a healthy physically active lifestyle and prepare its graduates for teaching exercise science and fitness professions.

ADMISSIONS

For students interested in pursuing a degree in Exercise Science at Kent State University applications for admission may be obtained by contacting the Office of Admission. Applications are also available online at www.kent.edu.

GRADUATION REQUIREMENTS

1. Completion of all courses in the Exercise Science or Exercise Physiology curriculum
2. A minimum cumulative grade point average of 2.25 (an equivalent of a C+ letter grade).
3. Successful completion of all required internship credits

LEARNING OBJECTIVES OF THE EXERCISE SCIENCE PROGRAM

Students will have the ability to:

- Learn about the physiology of human movement.
- Learn about the anatomy and physiology of exercise.
- Learn about the pathophysiology of chronic diseases and risk factors.
- Apply the knowledge, skills and abilities needed to assess, motivate and prescribe exercise for healthy individuals and those with chronic diseases.
- Knowledge of Physiology: Students will understand scientific and theoretical concepts of physiology critical to acting as an Exercise Scientist.
- Assessment Skill: Students will demonstrate practical skills including the ability to conduct a comprehensive fitness assessment.
- Foundational Knowledge of the Field: Students will take, and be able to pass, a National Certification (ACSM EP-C or the NSCA CSCS).

UNDERGRADUATE DEGREE IN EXERCISE SCIENCE

Code	Course List Title	Credit Hours
Major Requirements (courses count in major GPA)		
ATTR/EXSC 25057	HUMAN ANATOMY AND PHYSIOLOGY I (KBS) (KLAB) ¹	4
ATTR/EXSC 25058	HUMAN ANATOMY AND PHYSIOLOGY II (KBS) (KLAB) ¹	4
ATTR/EXSC 35054	BIOMECHANICS	3
EXSC 15003	CAREERS IN HEALTH AND MEDICAL SCIENCES	2
or ATTR 15003	CAREERS IN HEALTH AND MEDICAL SCIENCES	
or IHS 15003	CAREERS IN HEALTH AND MEDICAL SCIENCES	
EXSC 35080	PHYSIOLOGY OF EXERCISE	4
EXSC 35068	STATISTICS FOR EXERCISE SCIENTIST ²	3
EXSC 45065	EXERCISE TESTING ³	3
or EXSC 45070	ELECTROCARDIOGRAPHY FOR THE EXERCISE PHYSIOLOGIST	
EXSC 45081	ADVANCED PHYSIOLOGY OF EXERCISE ⁴	3
EXSC 45481	SEMINAR IN EXERCISE PHYSIOLOGY	1
GERO 14029	INTRODUCTION TO GERONTOLOGY (DIVD) (KSS)	3
NUTR 23511	SCIENCE OF HUMAN NUTRITION (KBS)	3
NURS 20950	HUMAN GROWTH AND DEVELOPMENT FOR HEALTH PROFESSIONALS	3
or PESP 25033	LIFESPAN MOTOR DEVELOPMENT	
PH 30015	UNITED STATES HEALTH CARE SYSTEM	3
or SPAD 35025	FACILITY MANAGEMENT	
SEPP 20026	PSYCHOLOGICAL FOUNDATIONS OF SPORT AND EXERCISE	3
Additional Requirements (courses do not count in major GPA)		
CHEM 10060	GENERAL CHEMISTRY I (KBS)	4
CHEM 10061	GENERAL CHEMISTRY II (KBS)	4
CHEM 10062	GENERAL CHEMISTRY I LABORATORY (KBS) (KLAB)	1
CHEM 10063	GENERAL CHEMISTRY II LABORATORY (KBS) (KLAB)	1
PSYC 11762	GENERAL PSYCHOLOGY (DIVD) (KSS)	3
UC 10001	FLASHES 101	1
Kent Core Composition		6
Kent Core Humanities and Fine Arts (minimum one course from each)		9
Concentrations		
Choose from the following:		49
Exercise Physiology		
Exercise Specialist		
Pre-Physical/Occupational Therapy/Podiatric Medicine		
Strength and Conditioning Concentration		

Minimum Total Credit Hours:

120

¹ Students who have successfully completed [BSCI 11010/BSCI 11020](#) or [BSCI 21010/BSCI 21020](#) may use those courses in place of [ATTR 25057/ATTR 25058](#) and [EXSC 25057/EXSC 25058](#).

² Students who have successfully completed [MATH 12022](#) or [PSYC 21621](#) may use those courses in place of [EXSC 35068](#).

³ [EXSC 45065](#) is strongly recommended for students in the Strength and Conditioning concentration. Students in the Exercise Specialist concentration are required to take both courses; one will fulfill major requirements and the other will fulfill concentration requirements.

⁴ A minimum C grade must be earned to fulfill writing-intensive requirement

UNDERGRADUATE DEGREE IN EXERCISE SCIENCE

DESCRIPTION

The **Strength and Conditioning** concentration is designed to assist those that wish to pursue a career in the field of strength and conditioning. This may include working with all levels of athletes in a strength and conditioning facility. This track will prepare students to enter the field of exercise science directly and be leaders in their profession. Students will take a substantial amount of hands-on exercise science classes and perform two internships.

CAREERS

Examples of specific careers immediately available upon graduation:

- Strength and conditioning coach
- Fitness directors and managers in the military
- Fitness instructors and supervisors at the state, regional, and national levels in sports and athletic programs
- Sports consultants in areas of psychology and training, biomechanics, efficiency and metabolism, and nutrition

Major Requirements – Strength & Conditioning

Course List

Code	Title	Credit Hours
ATTR 25036	RESPONDING TO EMERGENCIES	3
EXSC 35075	EXERCISE PROGRAMMING	3
EXSC 35040	PRACTICAL AND APPLIED CONCEPTS OF STRENGTH AND CONDITIONING	3
EXSC 45023	PROFESSIONAL CERTIFICATE PREPARATION ¹	2
EXSC 45040	ADVANCED STRENGTH AND CONDITIONING	3
EXSC 45492	INTERNSHIP IN PHYSICAL FITNESS AND CARDIAC REHABILITATION (ELR)	6
NUTR 23520	SPORTS	3
SEPP 40020	HIGH PERFORMANCE ATHLETES IN SPORT	3

Additional Requirements (courses do not count in major GPA)

MATH 11009	MODELING ALGEBRA (KMCR)	3-4
or MATH 11010	ALGEBRA FOR CALCULUS (KMCR)	

General Electives (total credit hours depends on earning 120 credit hours, including 39 upper-division credit hours) ³ 20

Minimum Total Credit Hours: 49

¹ The final exam is the National Strength and Conditioning Association's Certified Strength and Conditioning Specialist. This certification requires that you are in the last year of the program.

² State or Federal background checks may be required for practicum/internship experiences. This course can be taken for 1-8 credits and is repeatable up to 8 credits (45 contact hours per credit).

³ Students are strongly encouraged to meet with faculty advisor when selecting electives.

Total Credit Hours:

120

Progression Requirements

Progression Requirements:

Graduation Requirements

Graduation Requirements: (i.e., minimum grade in specific courses, passage of specific exam)

Graduation Requirements Summary

Minimum Major GPA	Minimum Overall GPA
2.250	2.000

Suggested Curriculum Sequence – Strength & Conditioning

Strength and Conditioning Concentration

This roadmap is a recommended semester-by-semester plan of study for this major. However, courses designated as critical (!) must be completed in the semester listed to ensure a timely graduation.

Plan of Study Grid

Semester One

EXSC 15003	CAREERS IN HEALTH AND MEDICAL SCIENCES	
or ATTR 15003	or CAREERS IN HEALTH AND MEDICAL SCIENCES	2
or IHS 15003	or CAREERS IN HEALTH AND MEDICAL SCIENCES	
MATH 11009	MODELING ALGEBRA (KMCR)	
or MATH 11010	or ALGEBRA FOR CALCULUS (KMCR)	3-4
UC 10001	FLASHES 101	1
Kent Core Requirement		3
Kent Core Requirement		3
Kent Core Requirement		3
Credit Hours		15

Semester Two

CHEM 10060	GENERAL CHEMISTRY I (KBS)	4
CHEM 10062	GENERAL CHEMISTRY I LABORATORY (KBS) (KLAB)	1
PSYC 11762	GENERAL PSYCHOLOGY (DIVD) (KSS)	3
Kent Core Requirement		3
Kent Core Requirement		3
Credit Hours		14

Semester Three

CHEM 10061	GENERAL CHEMISTRY II (KBS)	4
CHEM 10063	GENERAL CHEMISTRY II LABORATORY (KBS) (KLAB)	1
ATTR 25057	HUMAN ANATOMY AND PHYSIOLOGY I (KBS) (KLAB)	
or EXSC 25057	or HUMAN ANATOMY AND PHYSIOLOGY I (KBS) (KLAB)	4
SEPP 20026	PSYCHOLOGICAL FOUNDATIONS OF SPORT AND EXERCISE	3
NURS 20950	HUMAN GROWTH AND DEVELOPMENT FOR HEALTH PROFESSIONALS	3
or PESP 25033	or LIFESPAN MOTOR DEVELOPMENT	
Credit Hours		15

Semester Four

ATTR 25058	HUMAN ANATOMY AND PHYSIOLOGY II (KBS) (KLAB)	
or EXSC 25058	or HUMAN ANATOMY AND PHYSIOLOGY II (KBS) (KLAB)	4
EXSC 35068	STATISTICS FOR EXERCISE SCIENTIST	3
GERO 14029	INTRODUCTION TO GERONTOLOGY (DIVD) (KSS)	3
NUTR 23511	SCIENCE OF HUMAN NUTRITION (KBS)	3
General Elective		3
Credit Hours		16

Semester Five

ATTR 25036	RESPONDING TO EMERGENCIES	3
ATTR 35054	BIOMECHANICS	3
EXSC 35040	PRACTICAL AND APPLIED CONCEPTS OF STRENGTH AND CONDITIONING	3
EXSC 35080	PHYSIOLOGY OF EXERCISE	4
NUTR 23520	SPORTS NUTRITION	3
Credit Hours		16

Semester Six

EXSC 45065	EXERCISE TESTING	3
----------------------------	------------------	---

Suggested Curriculum Sequence – Strength & Conditioning

or EXSC 45070	or ELECTROCARDIOGRAPHY FOR THE EXERCISE PHYSIOLOGIST	
EXSC 45481	SEMINAR IN EXERCISE PHYSIOLOGY	1
SPAD 35025	FACILITY MANAGEMENT	3
or PH 30015	or UNITED STATES HEALTH CARE SYSTEM	9
General Elective		16
Credit Hours		
Semester Seven		
EXSC 45040	ADVANCED STRENGTH AND CONDITIONING	3
EXSC 45492	INTERNSHIP IN PHYSICAL FITNESS AND CARDIAC REHABILITATION (ELR)	3
SEPP 40020	HIGH PERFORMANCE ATHLETES IN SPORT	3
EXSC 35075	EXERCISE PROGRAMMING	3
EXSC 45081	ADVANCED PHYSIOLOGY OF EXERCISE	3
Credit Hours		15
Semester Eight		
EXSC 45023	PROFESSIONAL CERTIFICATE PREPARATION	2
EXSC 45492	INTERNSHIP IN PHYSICAL FITNESS AND CARDIAC REHABILITATION (ELR)	3
General Elective		8
Credit Hours		13
Minimum Total Credit Hours:		120

EXERCISE PHYSIOLOGY CONCENTRATION

DESCRIPTION

The **Exercise Physiology** concentration prepares students for graduate school in exercise physiology or health care professions.

CAREERS

Examples of specific careers immediately available upon graduation:

- Clinical Exercise Physiologists
- Researchers in companies that make physiological equipment for testing and evaluation
- Supervisors of specialized health, fitness, wellness, or lifestyle programs in correctional services, police, fire, and emergency response organizations
- Exercise technologists in cardiology suites
- Sports consultants in areas of psychology and training, biomechanics, efficiency and metabolism, and nutrition
- Electrophysiology technologists in hospital settings

Examples of careers requiring post-graduate education:

- Educators/Researchers at institutions of higher learning in Exercise Physiology, Exercise Psychology, Biomechanics, Physiology, Biomedical Science, Public Health
- Physical Therapists in hospitals, in-patient/out-patient/in-home rehabilitation settings
- Cardio-pulmonary rehabilitation specialists
- Strength coaches for college, university and professional sports programs
- Exercise and/or Sport Psychologists
- Dieticians
- Chiropractors
- Physician Assistants*
- Physicians*
- Veterinarians*
- Pharmacists*

*Additional coursework in organic chemistry, biochemistry, and/or microbiology may be required depending on the specific graduate program

Major Requirements

Exercise Physiology Concentration Requirements

Course List		
Code	Title	Credit Hours
Concentration Requirements (courses count in major GPA)		
ATTR 25036	RESPONDING TO EMERGENCIES	3
CHEM 20481	BASIC ORGANIC CHEMISTRY I	4
or CHEM 30481	ORGANIC CHEMISTRY I	
EXSC 35040	PRACTICAL AND APPLIED CONCEPTS OF STRENGTH AND CONDITIONING	3
EXSC 45022	EXERCISE LEADERSHIP ¹	2
or EXSC 45023	PROFESSIONAL CERTIFICATE PREPARATION	
EXSC 45096	INDIVIDUAL INVESTIGATION IN EXERCISE SCIENCE (ELR) ²	3
NUTR 33512	INTERMEDIATE NUTRITION SCIENCE	3
Additional Requirements (courses do not count in major GPA)		
MATH 11009	MODELING ALGEBRA (KMCR)	3-4
or MATH 11010	ALGEBRA FOR CALCULUS (KMCR)	
General Electives (total credit hours depends on earning 120 credit hours, including 39 upper-division credit hours) ³		28
Minimum Total Credit Hours:		49

¹ For *Exercise Leadership*, the final exam is the American College of Sports Medicine Certified Exercise Physiologist (ACSM-EP) certification. This certification requires that you be in your last semester of your senior year. For *Professional Certification Preparation*, the final exam is the National Strength and Conditioning Association's Certified Strength and Conditioning Specialist (CSCS). This certification requires that you are in the last year of the program.

² This course can be taken 1-6 credits. It is repeatable up to 6 credits (45 contact hours per credit).

³ Students are strongly encouraged to meet with faculty advisor when selecting electives.

Suggested Curriculum Sequence – Exercise Physiology Track

Exercise Physiology Concentration

This roadmap is a recommended semester-by-semester plan of study for this major. However, courses designated as critical (!) must be completed in the semester listed to ensure a timely graduation.

Plan of Study Grid

Semester One

EXSC 15003	CAREERS IN HEALTH AND MEDICAL SCIENCES	
or ATTR 15003	or CAREERS IN HEALTH AND MEDICAL SCIENCES	2
or IHS 15003	or CAREERS IN HEALTH AND MEDICAL SCIENCES	
MATH 11009	MODELING ALGEBRA (KMCR)	
or MATH 11010	or ALGEBRA FOR CALCULUS (KMCR)	3-4
UC 10001	FLASHES 101	1
Kent Core Requirement		3
Kent Core Requirement		3
Kent Core Requirement		3
Credit Hours		15

Semester Two

CHEM 10060	GENERAL CHEMISTRY I (KBS)	4
CHEM 10062	GENERAL CHEMISTRY I LABORATORY (KBS) (KLAB)	1
PSYC 11762	GENERAL PSYCHOLOGY (DIVD) (KSS)	3
Kent Core Requirement		3
General Elective		3
Credit Hours		14

Semester Three

ATTR 25057	HUMAN ANATOMY AND PHYSIOLOGY I (KBS) (KLAB)	4
or EXSC 25057	or HUMAN ANATOMY AND PHYSIOLOGY I (KBS) (KLAB)	
EXSC 45481	SEMINAR IN EXERCISE PHYSIOLOGY	1
CHEM 10061	GENERAL CHEMISTRY II (KBS)	4
CHEM 10063	GENERAL CHEMISTRY II LABORATORY (KBS) (KLAB)	1
NUTR 23511	SCIENCE OF HUMAN NUTRITION (KBS)	3
NURS 20950	HUMAN GROWTH AND DEVELOPMENT FOR HEALTH PROFESSIONALS	3
or PESP 25033	or LIFESPAN MOTOR DEVELOPMENT	
Credit Hours		16

Semester Four

ATTR 25058	HUMAN ANATOMY AND PHYSIOLOGY II (KBS) (KLAB)	4
or EXSC 25058	or HUMAN ANATOMY AND PHYSIOLOGY II (KBS) (KLAB)	
EXSC 35068	STATISTICS FOR EXERCISE SCIENTIST	3
GERO 14029	INTRODUCTION TO GERONTOLOGY (DIVD) (KSS)	3
SEPP 20026	PSYCHOLOGICAL FOUNDATIONS OF SPORT AND EXERCISE	3
Kent Core Requirement		3
Credit Hours		16

Semester Five

ATTR 25036	RESPONDING TO EMERGENCIES	3
ATTR 35054	BIOMECHANICS	3
or EXSC 35054	or BIOMECHANICS	
EXSC 35040	PRACTICAL AND APPLIED CONCEPTS OF STRENGTH AND CONDITIONING	3
CHEM 20481	BASIC ORGANIC CHEMISTRY I	4
or CHEM 30481	or ORGANIC CHEMISTRY I	

Suggested Curriculum Sequence – Exercise Physiology Track

General Elective		3
Credit Hours		16
Semester Six		
EXSC 35080	PHYSIOLOGY OF EXERCISE	4
EXSC 45065	EXERCISE TESTING	3
or EXSC 45070	or ELECTROCARDIOGRAPHY FOR THE EXERCISE PHYSIOLOGIST	3
General Electives		9
Credit Hours		16
Semester Seven		
NUTR 33512	INTERMEDIATE NUTRITION SCIENCE	3
SPAD 35025	FACILITY MANAGEMENT	3
or PH 30015	or UNITED STATES HEALTH CARE SYSTEM	3
EXSC 45081	ADVANCED PHYSIOLOGY OF EXERCISE	3
General Electives		6
Credit Hours		15
Semester Eight		
EXSC 45022	EXERCISE LEADERSHIP	2
or EXSC 45023	or PROFESSIONAL CERTIFICATE PREPARATION	3
EXSC 45096	INDIVIDUAL INVESTIGATION IN EXERCISE SCIENCE (ELR)	7
General Electives		12
Credit Hours		12
Minimum Total Credit Hours:		120

EXERCISE SPECIALIST CONCENTRATION

DESCRIPTION

The **Exercise Specialist** concentration enables students to prepare for work in the clinical setting, ranging from a career in wellness to cardiac rehabilitation.

CAREERS

A student graduating from this exercise science program with a concentration in Exercise Specialist works in areas such as personal training, health promotion, fitness development, fitness management, corporate wellness, commercial wellness, online training, running fitness facilities, or work with athletic teams and programs.

Examples of specific careers immediately available upon graduation:

- Small business owners and entrepreneurs in the exercise science industry
- Sports and wellness program instructors and directors
- Researchers in companies that make physiological equipment for testing and evaluation
- Managers and exercise leaders in corporate wellness programs
- Instructors in health and fitness clubs
- Supervisors of specialized health, fitness, wellness, or lifestyle programs in correctional services, police, fire, and emergency response organizations
- Fitness instructors in YMCAs, spas and resort centers
- Fitness directors and managers in the military
- Fitness instructors and supervisors at the state, regional, and national levels in sports and athletic programs
- Sports consultants in areas of psychology and training, biomechanics, efficiency and metabolism, and nutrition

MAJOR COURSE REQUIREMENTS – Exercise Specialist

Exercise Specialist Concentration Requirements

Course List		
Code	Title	Credit Hours
Concentration Requirements (courses count in major GPA)		
ATTR 25036	RESPONDING TO EMERGENCIES	3
ATTR 45040	PATHOLOGY AND PHARMACOLOGY FOR ALLIED HEALTH CARE PROVIDERS	3
EXSC 35040	PRACTICAL AND APPLIED CONCEPTS OF STRENGTH AND CONDITIONING	3
EXSC 35075	EXERCISE PROGRAMMING	3
EXSC 40612	EXERCISE LEADERSHIP FOR THE OLDER ADULT	3
EXSC 45022	EXERCISE LEADERSHIP ¹	2
or EXSC 45023	PROFESSIONAL CERTIFICATE PREPARATION	
EXSC 45040	ADVANCED STRENGTH AND CONDITIONING	3
EXSC 45065	EXERCISE TESTING ²	3
or EXSC 45070	ELECTROCARDIOGRAPHY FOR THE EXERCISE PHYSIOLOGIST	
EXSC 45492	INTERNSHIP IN PHYSICAL FITNESS AND CARDIAC REHABILITATION (ELR) ³	3
Additional Requirements (courses do not count in major GPA)		
MATH 11009	MODELING ALGEBRA (KMCR)	3-4
or MATH 11010	ALGEBRA FOR CALCULUS (KMCR)	
General Electives (total credit hours depends on earning 120 credit hours, including 39 upper-division credit hours) ⁴		20
Minimum Total Credit Hours:		49

¹ For *Exercise Leadership*, the final exam is the American College of Sports Medicine Certified Exercise Physiologist (ACSM-EP) certification. This certification requires that you be in your last semester of your senior year. For *Professional Certification Preparation*, the final exam is the National Strength and Conditioning Association's Certified Strength and Conditioning Specialist (CSCS). This certification requires that you are in the last year of the program.

² [EXSC 45065](#) and [EXSC 45070](#) are both required for students in the Exercise Specialist concentration; one fulfills major requirements and the other fulfills concentration requirements.

³ State or Federal background checks may be required for practicum/internship experiences. This course can be taken for 1-8 credits and is repeatable up to 8 credits (45 contact hours per credit).

⁴ Students are strongly encouraged to meet with faculty advisor when selecting electives.

Suggested Curriculum Sequence – Exercise Specialist Concentration

Exercise Specialist Concentration

This roadmap is a recommended semester-by-semester plan of study for this major. However, courses designated as critical (!) must be completed in the semester listed to ensure a timely graduation.

Plan of Study Grid

Semester One

EXSC 15003	CAREERS IN HEALTH AND MEDICAL SCIENCES	
or ATTR 15003	or CAREERS IN HEALTH AND MEDICAL SCIENCES	2
or IHS 15003	or CAREERS IN HEALTH AND MEDICAL SCIENCES	
MATH 11009	MODELING ALGEBRA (KMCR)	
or MATH 11010	or ALGEBRA FOR CALCULUS (KMCR)	3-4
UC 10001	FLASHES 101	1
Kent Core Requirement		3
Kent Core Requirement		3
Kent Core Requirement		3
	Credit Hours	15

Semester Two

CHEM 10060	GENERAL CHEMISTRY I (KBS)	4
CHEM 10062	GENERAL CHEMISTRY I LABORATORY (KBS) (KLAB)	1
PSYC 11762	GENERAL PSYCHOLOGY (DIVD) (KSS)	3
Kent Core Requirement		3
Kent Core Requirement		3
	Credit Hours	14

Semester Three

CHEM 10061	GENERAL CHEMISTRY II (KBS)	4
CHEM 10063	GENERAL CHEMISTRY II LABORATORY (KBS) (KLAB)	1
ATTR 25057	HUMAN ANATOMY AND PHYSIOLOGY I (KBS) (KLAB)	
or EXSC 25057	or HUMAN ANATOMY AND PHYSIOLOGY I (KBS) (KLAB)	4
NURS 20950	HUMAN GROWTH AND DEVELOPMENT FOR HEALTH PROFESSIONALS	
or PESP 25033	or LIFESPAN MOTOR DEVELOPMENT	3
SEPP 20026	PSYCHOLOGICAL FOUNDATIONS OF SPORT AND EXERCISE	3
	Credit Hours	15

Semester Four

ATTR 25058	HUMAN ANATOMY AND PHYSIOLOGY II (KBS) (KLAB)	
or EXSC 25058	or HUMAN ANATOMY AND PHYSIOLOGY II (KBS) (KLAB)	4
EXSC 35068	STATISTICS FOR EXERCISE SCIENTIST	3
GERO 14029	INTRODUCTION TO GERONTOLOGY (DIVD) (KSS)	3
NUTR 23511	SCIENCE OF HUMAN NUTRITION (KBS)	3
General Elective		3
	Credit Hours	16

Semester Five

ATTR 25036	RESPONDING TO EMERGENCIES	3
ATTR 35054	BIOMECHANICS	
or EXSC 35054	or BIOMECHANICS	3
EXSC 35040	PRACTICAL AND APPLIED CONCEPTS OF STRENGTH AND CONDITIONING	3
General Electives		6
	Credit Hours	15

Semester Six

EXSC 45070	ELECTROCARDIOGRAPHY FOR THE EXERCISE PHYSIOLOGIST	3
----------------------------	---	---

Suggested Curriculum Sequence – Exercise Specialist Concentration

EXSC 45481	SEMINAR IN EXERCISE PHYSIOLOGY	1
EXSC 35080	PHYSIOLOGY OF EXERCISE	4
EXSC 45065	EXERCISE TESTING	3
PH 30015	UNITED STATES HEALTH CARE SYSTEM	3
or SPAD 35025	or FACILITY MANAGEMENT	
	Credit Hours	14
Semester Seven		
EXSC 35075	EXERCISE PROGRAMMING	3
ATTR 45040	PATHOLOGY AND PHARMACOLOGY FOR ALLIED HEALTH CARE PROVIDERS	3
or EXSC 34000	or EXERCISE SCIENCE FOR ESPORTS	
EXSC 45081	ADVANCED PHYSIOLOGY OF EXERCISE	3
General Electives		7
	Credit Hours	16
Semester Eight		
EXSC 45022	EXERCISE LEADERSHIP	2
or EXSC 45023	or PROFESSIONAL CERTIFICATE PREPARATION	
EXSC 45492	INTERNSHIP IN PHYSICAL FITNESS AND CARDIAC REHABILITATION (ELR)	3
EXSC 40612	EXERCISE LEADERSHIP FOR THE OLDER ADULT	3
EXSC 45040	ADVANCED STRENGTH AND CONDITIONING	3
General Electives		4
	Credit Hours	15
	Minimum Total Credit Hours:	120

PRE-PHYSICAL THERAPY, OCCUPATIONAL THERAPY, and PODIATRIC MEDICINE CONCENTRATION

DESCRIPTION

The **Pre-Physical/Occupational Therapy/Podiatric Medicine** concentration prepares students for subsequent graduate school in these areas. The pre-podiatric medicine track is designed to be a combined program with Kent State University's College of Podiatric Medicine. Successful completion of this program, however does not guarantee acceptance into the Doctor of Podiatric Medicine degree. Please see the [Podiatric Medicine doctoral program](#) in the catalog for more information about the application process and acceptance criteria.

CAREERS

Physical and Occupational therapists help people of all ages to fully engage in their daily lives, from their work and recreation to activities of daily living like getting dressed, cooking, eating and driving.

If you choose this field, there are many kinds of practice available for you to specialize in. You may decide to work with premature babies at a pediatric hospital or children with cerebral palsy or Down syndrome. Many practitioners choose to help children thrive in the “occupations” of childhood, which include learning, playing and growing.

Therapists also work in schools with students who have learning disabilities or behavioral problems. Or you may be interested in working with older people in their homes or nursing homes, helping them to recover from strokes or deal with Alzheimer’s disease. Some practitioners choose to help accident victims to regain needed skills or offer assistance to people with mental illness.

There are new specialties too, like training workers to use the correct ergonomics, helping people with low vision maintain their independence, making buildings and homes more accessible, evaluating and training older drivers and promoting health and wellness.

Kent State University offers a Doctorate of Podiatric Medicine. This particular program is three years of post baccalaureate work. It is located in Independence OH.

MAJOR COURSE REQUIREMENTS – Pre-Physical Therapy, Occupational Therapy, and Podiatric Medicine Concentration

Pre-Physical/Occupational Therapy/Podiatric Medicine Concentration Requirements Course List

Code	Title	Credit Hours
Concentration Requirements (courses count in major GPA)		
BSCI 10110	BIOLOGICAL DIVERSITY (ELR) (KBS) (KLAB)	4
BSCI 10120	BIOLOGICAL FOUNDATIONS (ELR) (KBS) (KLAB)	4
EXSC 45492	INTERNSHIP IN PHYSICAL FITNESS AND CARDIAC REHABILITATION (ELR) ²	3
or EXSC 43098	RESEARCH IN EXERCISE SCIENCE (ELR)	
HED 14020	MEDICAL TERMINOLOGY	3
NUTR 33512	INTERMEDIATE NUTRITION SCIENCE	3
PHY 13001	GENERAL COLLEGE PHYSICS I (KBS)	4
PHY 13002	GENERAL COLLEGE PHYSICS II (KBS)	4
PHY 13021	GENERAL COLLEGE PHYSICS LABORATORY I (KBS) (KLAB)	1
PHY 13022	GENERAL COLLEGE PHYSICS LABORATORY II (KBS) (KLAB)	1
PSYC 40111	PSYCHOPATHOLOGY	3
Chemistry Elective, choose from the following (depending on career goals):		4-8
CHEM 20481	BASIC ORGANIC CHEMISTRY I	
CHEM 30481	ORGANIC CHEMISTRY I	
& CHEM 30482	and ORGANIC CHEMISTRY II	
& CHEM 30475	and ORGANIC CHEMISTRY LABORATORY I (ELR)	
& CHEM 30476	and ORGANIC CHEMISTRY LABORATORY II ³	
Additional Requirements (courses do not count in major GPA)		
MATH 11010	ALGEBRA FOR CALCULUS (KMCR)	3
MATH 11022	TRIGONOMETRY (KMCR)	3
General Electives (total credit hours depends on earning 120 credit hours, including 39 upper-division credit hours) ⁴		9
Minimum Total Credit Hours:		49

¹ This course can be taken for 1-3 credits and is repeatable up to 12 credits (45 contact hours per credit).

² State or Federal background checks may be required for practicum/internship experiences. This course can be taken for 1-8 credits and is repeatable up to 8 credits (45 contact hours per credit).

³ Organic Chemistry series recommended for those students planning to apply to the Doctor of Podiatric Medicine degree.

⁴ Students are strongly encouraged to meet with faculty advisor when selecting electives. Maximum 9 credit hours from the Doctor of Podiatric Medicine degree can be used to fulfill general electives for students admitted to the combined bachelor's/doctoral degree program.

- Admission into physical therapy or occupational therapy graduate programs is competitive by GPA.

Suggested Curriculum Sequence –Pre-Physical Therapy, Occupational Therapy, and Podiatric Medicine

Pre-Physical/Occupational Therapy/Podiatric Medicine Concentration

This roadmap is a recommended semester-by-semester plan of study for this major. However, courses designated as critical (!) must be completed in the semester listed to ensure a timely graduation.

Plan of Study Grid

Semester One

		Credits
BSCI 10120	BIOLOGICAL FOUNDATIONS (ELR) (KBS) (KLAB)	4
CHEM 10060	GENERAL CHEMISTRY I (KBS)	4
CHEM 10062	GENERAL CHEMISTRY I LABORATORY (KBS) (KLAB)	1
EXSC 15003	CAREERS IN HEALTH AND MEDICAL SCIENCES	2
or ATTR 15003	or CAREERS IN HEALTH AND MEDICAL SCIENCES	
or IHS 15003	or CAREERS IN HEALTH AND MEDICAL SCIENCES	
MATH 11010	ALGEBRA FOR CALCULUS (KMCR)	3
UC 10001	FLASHES 101	1
	Credit Hours	15

Semester Two

BSCI 10110	BIOLOGICAL DIVERSITY (ELR) (KBS) (KLAB)	4
CHEM 10061	GENERAL CHEMISTRY II (KBS)	4
CHEM 10063	GENERAL CHEMISTRY II LABORATORY (KBS) (KLAB)	1
MATH 11022	TRIGONOMETRY (KMCR)	3
SEPP 20026	PSYCHOLOGICAL FOUNDATIONS OF SPORT AND EXERCISE	3
	Credit Hours	15

Semester Three

ATTR 25057	HUMAN ANATOMY AND PHYSIOLOGY I (KBS) (KLAB)	4
or EXSC 25057	or HUMAN ANATOMY AND PHYSIOLOGY I (KBS) (KLAB)	
HED 14020	MEDICAL TERMINOLOGY	3
PSYC 11762	GENERAL PSYCHOLOGY (DIVD) (KSS)	3
Chemistry Elective		4
	Credit Hours	14

Semester Four

ATTR 25058	HUMAN ANATOMY AND PHYSIOLOGY II (KBS) (KLAB)	4
or EXSC 25058	or HUMAN ANATOMY AND PHYSIOLOGY II (KBS) (KLAB)	
GERO 14029	INTRODUCTION TO GERONTOLOGY (DIVD) (KSS)	3
General Electives (may be used to fulfill Organic Chemistry series)		6
Kent Core Requirement		3
	Credit Hours	16

Semester Five

ATTR 35054	BIOMECHANICS	3
or EXSC 35054	or BIOMECHANICS	
EXSC 35068	STATISTICS FOR EXERCISE SCIENTIST	3
EXSC 45481	SEMINAR IN EXERCISE PHYSIOLOGY	1
NUTR 23511	SCIENCE OF HUMAN NUTRITION (KBS)	3
PHY 13001	GENERAL COLLEGE PHYSICS I (KBS)	4
PHY 13021	GENERAL COLLEGE PHYSICS LABORATORY I (KBS) (KLAB)	1
	Credit Hours	15

Semester Six

NUTR 33512	INTERMEDIATE NUTRITION SCIENCE	3
EXSC 35080	PHYSIOLOGY OF EXERCISE	4
PHY 13002	GENERAL COLLEGE PHYSICS II (KBS)	4

Suggested Curriculum Sequence –Pre-Physical Therapy, Occupational Therapy, and Podiatric Medicine

<u>PHY 13022</u>	GENERAL COLLEGE PHYSICS LABORATORY II (KBS) (KLAB)	1
Kent Core Requirement		6
Credit Hours		18

Semester Seven

<u>NURS 20950</u>	HUMAN GROWTH AND DEVELOPMENT FOR HEALTH PROFESSIONALS	3
or <u>PESP 25033</u>	or LIFESPAN MOTOR DEVELOPMENT	
<u>SPAD 35025</u>	FACILITY MANAGEMENT	3
or <u>PH 30015</u>	or UNITED STATES HEALTH CARE SYSTEM	
<u>PSYC 40111</u>	PSYCHOPATHOLOGY	3
<u>EXSC 45081</u>	ADVANCED PHYSIOLOGY OF EXERCISE	3
Kent Core Requirement		3
Credit Hours		15

Semester Eight

<u>EXSC 45492</u>	INTERNSHIP IN PHYSICAL FITNESS AND CARDIAC REHABILITATION (ELR)	3
or <u>EXSC 43098</u>	or RESEARCH IN EXERCISE SCIENCE (ELR)	
<u>EXSC 45065</u>	EXERCISE TESTING	3
or <u>EXSC 45070</u>	or ELECTROCARDIOGRAPHY FOR THE EXERCISE PHYSIOLOGIST	
General Electives		6
Credit Hours		12
Minimum Total Credit Hours:		120

MASTER'S OF SCIENCE IN EXERCISE PHYSIOLOGY

DESCRIPTION

The Master of Science degree in Exercise Physiology prepares graduates for a wide variety of career options, including exercise prescription and research, as well as future doctoral study. Representative faculty research includes the areas of body composition, metabolism/nutritional requirements, environment, clinical exercise physiology and the physiology of aging as it is influenced by physical activity and fitness. The EHHS graduate handbook can be found [here](#). All forms can be found on the [EHHS website](#).

Athletic training faculty also support the degree path with their areas of expertise in clinical and educational research in the field of athletic training.

The Exercise Physiology major includes the following optional concentration:

- The **Athletic Training** concentration is designed to serve the needs of post-certification (or certification-pending) students who wish to further their knowledge and skills in the athletic training profession while pursuing a master's degree. Students have the opportunity to pursue advanced clinical and academic training while obtaining knowledge and skills relative to effective clinical instruction and supervision. Advanced research skills are also a critical component to this advanced track program. Opportunities to perform research independently and/or in conjunction with program faculty are widely available.

ADMISSIONS

Admission Requirements: If program does not have additional admission criteria above and beyond the minimum to be admitted to a Kent State associate or bachelor's degree, write "standard admission criteria for the degree." If program has additional admission criteria (e.g., audition, 3.0 high school GPA, 2.75 overall GPA for transfer students), list those requirements.

- Bachelor's degree in exercise science, or equivalent preparation, from an accredited college or university
- Minimum 2.750 undergraduate GPA on a 4.000-point scale
- Official transcript(s)
- Goal statement
- Two letters of recommendation
- English language proficiency - all international students must provide proof of English language proficiency (unless they meet specific exceptions) by earning one of the following:
 - Minimum 550 TOEFL PBT score
 - Minimum 79 TOEFL IBT score
 - Minimum 77 MELAB score
 - Minimum 6.5 IELTS score
 - Minimum 58 PTE score
 - Minimum 110 Duolingo English score

Degree applicants are expected to have substantial preparation in the sciences, usually including coursework in biology, chemistry, physics, mathematics, anatomy, kinesiology and exercise physiology.

LEARNING OBJECTIVES FOR THE M.S. PROGRAM

Graduates of this program will be able to:

1. Pass one of the exams from the American College of Sports Medicine (ACSM) or National Strength and Conditioning Association (NSCA):
 1. Certified Exercise Physiologist (C-EP) or
 2. Certified Strength and Conditioning Specialist (CSCS).
2. Demonstrate understanding of the physiology of human movement across the lifespan.
3. Demonstrate detailed knowledge of the anatomy and physiology of the human and health and disease.
4. Demonstrate knowledge of the pathophysiology of disease, risk factors and special exercise populations, according to the American College of Sports Medicine.

Graduates of the Athletic Training optional concentration will be able to:

1. Apply the principles of the research process in athletic training by engaging with faculty and clinical staff in graduate research initiatives.
2. Engage health care professionals and apply the knowledge gained, through their education in both the classroom and clinical settings.
3. Engage in program improvement as part of a continuous quality improvement initiative by evaluating the effectiveness of the program through multiple evaluation resources.

Program Requirements:

Code	Course List Title	Credit Hours
Major Requirements		
ATTR 53018	ETHICAL LEADERSHIP FOR HEALTH CARE	3
EXPH 63050	RESEARCH PROCESS IN ATHLETIC TRAINING AND EXERCISE PHYSIOLOGY	3
EXPH 63091	RESEARCH SEMINAR	1
Additional Requirements or Concentration		
Choose from the following:		27
Additional Requirements for Students Not Declaring a Concentration		
Athletic Training Concentration		
Minimum Total Credit Hours:		34

Additional Requirements for Students Not Declaring a Concentration

Code	Course List Title	Credit Hours
Major Requirements		
EXPH 63051	QUANTITATIVE AND RESEARCH METHODS IN ATHLETIC TRAINING AND EXERCISE PHYSIOLOGY	3
EXPH 65081	ENERGY METABOLISM AND BODY COMPOSITION	3
or EXPH 65083	EXERCISE ENERGY METABOLISM	
EXPH 65082	CARDIO-RESPIRATORY FUNCTION	3
or EXPH 65084	CARDIOVASCULAR-RESPIRATORY DYNAMICS DURING EXERCISE	
Major Electives, choose from the following:		12
BMS 68610	HUMAN GROSS ANATOMY I	
BMS 68611	HUMAN GROSS ANATOMY II	
BSCI 50020	BIOLOGY OF AGING	
BSCI 50431	NEUROENDOCRINOLOGY	
EXPH 50612	EXERCISE LEADERSHIP FOR THE OLDER ADULT	
EXPH 55065	EXERCISE TESTING	
EXPH 55070	ELECTROCARDIOGRAPHY FOR THE EXERCISE PHYSIOLOGIST	
EXPH 55081	ADVANCED PHYSIOLOGY OF EXERCISE	
EXPH 60610	PHYSIOLOGY OF AGING: IMPLICATIONS FOR HUMAN BEHAVIOR	
EXPH 63098	RESEARCH	
EXPH 65080	PHYSIOLOGICAL BASIS OF EXERCISE AND SPORT	
EXPH 65086	NEUROBIOLOGY OF MOVEMENT AND EXERCISE	
NUTR 63518	ADVANCED SPORTS NUTRITION	
Additional electives chosen in consultation with advisor		
Culminating Requirement		
Choose from the following:		6
EXPH 63098	RESEARCH	
& EXPH 65192	and INTERNSHIP IN EXERCISE PHYSIOLOGY	
EXPH 63199	THESIS I	
EXPH 65192	INTERNSHIP IN EXERCISE PHYSIOLOGY	
Minimum Total Credit Hours:		27

Athletic Training Concentration Requirements

Course List

Code	Title	Credit Hours
Concentration Requirements		
ATTR 62010	CONTEMPORARY ISSUES AND EXAM PREP IN ATHLETIC TRAINING	3
ATTR 62012	EDUCATION AND SUPERVISION PROCESSES IN ATHLETIC TRAINING	3
ATTR 62014	ADVANCED CLINICAL PROCEDURES IN ATHLETIC TRAINING AND SPORTS MEDICINE	3
ATTR 62016	CLINICAL INQUIRY IN ATHLETIC TRAINING	3
Concentration Electives, choose from the following: ¹		9-12
BMS 60450	MEDICAL PHYSIOLOGY II	
BMS 68610	HUMAN GROSS ANATOMY I	
BMS 68611	HUMAN GROSS ANATOMY II	
BSCI 50020	BIOLOGY OF AGING	
BSCI 50142	BIOENERGETICS	
BSCI 50431	NEUROENDOCRINOLOGY	
BSCI 50432	ENDOCRINOLOGY	
BSCI 50433	MAMMALIAN PHYSIOLOGY I	
BSCI 50434	MAMMALIAN PHYSIOLOGY II	
CHEM 50261	BIOCHEMISTRY: BIOMOLECULE STRUCTURE AND FUNCTION	
EXPH 50612	EXERCISE LEADERSHIP FOR THE OLDER ADULT	
EXPH 55065	EXERCISE TESTING	
EXPH 55070	ELECTROCARDIOGRAPHY FOR THE EXERCISE PHYSIOLOGIST	
EXPH 55081	ADVANCED PHYSIOLOGY OF EXERCISE	
EXPH 60610	PHYSIOLOGY OF AGING: IMPLICATIONS FOR HUMAN BEHAVIOR	
EXPH 63051	QUANTITATIVE AND RESEARCH METHODS IN ATHLETIC TRAINING AND EXERCISE PHYSIOLOGY	
EXPH 63098	RESEARCH	
EXPH 65075	MUSCLE FUNCTION AND EXERCISE	
EXPH 65076	ENVIRONMENTAL STRESS AND EXERCISE	
EXPH 65080	PHYSIOLOGICAL BASIS OF EXERCISE AND SPORT	
EXPH 65081	ENERGY METABOLISM AND BODY COMPOSITION	
EXPH 65082	CARDIO-RESPIRATORY FUNCTION	
EXPH 65083	EXERCISE ENERGY METABOLISM	
EXPH 65084	CARDIOVASCULAR-RESPIRATORY DYNAMICS DURING EXERCISE	
EXPH 65086	NEUROBIOLOGY OF MOVEMENT AND EXERCISE	
NUTR 53513	MICRONUTRIENT NUTRITIONAL BIOCHEMISTRY	
NUTR 63518	ADVANCED SPORTS NUTRITION	
Additional electives chosen in consultation with advisor		
Culminating Requirement		
Choose from the following:		3-6
ATTR 63098	RESEARCH ¹	
ATTR 63199	THESIS I	
Minimum Total Credit Hours:		27

¹ Students who select [ATTR 63098](#) must take additional coursework to meet the minimum credit hours required for the degree.

PLAN OF STUDY

It is the responsibility of each graduate student to make an appointment with the assigned faculty adviser and prepare a plan of study to be filed with the Office of Graduate Student Services, 418 White Hall, by the end of the second enrolled semester. The plan of study form is available in the program area department. The completed form is a comprehensive plan for the student's program. If the plan of study must be revised after submitting to the Office of Graduate Student Services, the adviser must initial the change(s) on the plan of study or submit a memo to the Office of Graduate Student Services indicating the change(s). The form to submit your plan of study can be found [here](#).

DOCTORAL DEGREE IN EXERCISE PHYSIOLOGY

DESCRIPTION

The Ph.D. degree in Exercise Physiology prepares students for a wide variety of career options, including exercise prescription and research. The program develops the competencies needed for those who intend to teach exercise physiology, pursue research or apply exercise physiology in practice. The EHHS graduate handbook can be found [here](#). All forms can be found on the [EHHS website](#).

ADMISSIONS

Admission Requirements: If program does not have additional admission criteria above and beyond the minimum to be admitted to a Kent State associate or bachelor's degree, write "standard admission criteria for the degree." If program has additional admission criteria (e.g., audition, 3.0 high school GPA, 2.75 overall GPA for transfer students), list those requirements.

- Master's degree from an accredited college or university
- Previous degree in exercise science or equivalent preparation
- Minimum 2.750 graduate GPA on a 4.000 point scale (minimum 3.500 GPA is recommended)
- Official transcript(s)
- Curriculum vita or résumé
- Goal statement
- Two letters of recommendation
- Interview
- English language proficiency - all international students must provide proof of English language proficiency (unless they meet specific exceptions) by earning one of the following:
 - Minimum 550 TOEFL PBT score (paper-based version)
 - Minimum 79 TOEFL IBT score (Internet-based version)
 - Minimum 77 MELAB score
 - Minimum 6.5 IELTS score
 - Minimum 58 PTE score
 - Minimum 110 Duolingo English Test score
- It is expected that the student has made contact with a faculty member prior to applying for the doctoral degree.

LEARNING OBJECTIVES FOR THE Ph.D. PROGRAM

Graduates of this program will be able to:

1. Present their research data regionally and nationally at conferences.
2. Publish their research data in peer reviewed publications.
3. Teach classes associated with exercise physiology.
4. Work in the field and implement community-based exercise programing.

Program Requirements:

Course List

Code	Title	Credit Hours
Major Requirements		
EXPH 73050	RESEARCH PROCESSES IN ATHLETIC TRAINING AND EXERCISE PHYSIOLOGY	3
EXPH 73051	QUANTITATIVE AND RESEARCH METHODS IN ATHLETIC TRAINING AND EXERCISE PHYSIOLOGY	3
EXPH 73091	RESEARCH SEMINAR ¹	2
Exercise Physiology Electives, choose from the following:		9
EXPH 75075	MUSCLE FUNCTION AND EXERCISE	
EXPH 75076	ENVIRONMENTAL STRESS AND EXERCISE	
EXPH 75081	ENERGY METABOLISM AND BODY COMPOSITION	
or EXPH 75083	EXERCISE ENERGY METABOLISM	
EXPH 75082	CARDIO-RESPIRATORY FUNCTION	
or EXPH 75084	CARDIOVASCULAR-RESPIRATORY DYNAMICS DURING EXERCISE	
Physiology Electives, choose from the following:		6
EXPH 70610	PHYSIOLOGY OF AGING: IMPLICATIONS FOR HUMAN BEHAVIOR	
EXPH 75080	PHYSIOLOGICAL BASIS OF EXERCISE AND SPORT	
EXPH 75086	NEUROBIOLOGY OF EXERCISE AND MOVEMENT	
Additional electives as approved by faculty advisor		
Culminating Requirements		
EXPH 83098	RESEARCH	12
EXPH 83199	DISSERTATION I ²	30
Minimum Total Credit Hours:		65

¹ Students must enroll in [EXPH 73091](#) for two semesters.

² Upon admission to candidacy, each doctoral candidate must register for [EXPH 83199](#). It is expected that a doctoral candidate will continuously register for Dissertation I for a total of 30 credit hours, and thereafter [EXPH 83299](#), each semester until all requirements for the degree have been met. The dissertation must show that the student has the competency to conduct research in a discriminating and original manner. The quality of the dissertation must be such that one or more articles acceptable for publication in a professional journal may be expected to be derived from it.

PLAN OF STUDY

It is the responsibility of each graduate student to make an appointment with the assigned faculty adviser and prepare a plan of study to be filed with the Office of Graduate Student Services, 418 White Hall, by the end of the fourth enrolled semester. The plan of study form is available in the program area. The completed form is a comprehensive plan for the student's program. If the plan of study must be revised after submitting to the Office of Graduate Student Services, the adviser must initial the change(s) on the plan of study or submit a memo to the Office of Graduate Student Services indicating the change(s). The form needed to submit your plan of study can be found [here](#).

CANDIDACY EXAMINATION

Students will be required to pass an oral and written candidacy examination after coursework is completed before beginning their dissertation. Prior to taking the candidacy examination, the student must demonstrate his or her ability to conduct independent research related to the field of exercise physiology. This may be in the form of a completed thesis, an independent study project or an article published in an acceptable research journal. The acceptability of such evidence is to be determined by faculty advising students in exercise physiology.

Doctoral Comprehensive Examinations: All doctoral students will take comprehensive examinations and must be registered during the semester of comprehensive exams. If a student is not otherwise registered for coursework, they must register for a one credit hour research experience in the program area during the comprehensive exam semester. This will be supervised by the program coordinator. By filling out the Permission to Take Doctoral

Comps During Final Semester of Coursework form, found within the Comprehensive Exam Packet, and with approval of the comprehensive examination committee and the program coordinator, doctoral students may elect to sit for comprehensive exams as early as the final semester of their coursework or to wait until the completion of their required course work. Some program areas will require all coursework to be completed before sitting for comprehensive exams. Doctoral students will not be registered for Dissertation I until they have successfully completed written and oral exams and satisfied any “IPs” or “INs” received in their final semester of coursework. Formats Program areas define the process for their examination process as one of the following nine formats. The doctoral advisor/committee makes the final determination about which format is followed:

Exercise Physiology: Five questions taken over two and a half days totaling 20 hours of writing time.

In addition, to assess the ability to communicate knowledge verbally, students will complete an oral examination. The intent in both written and oral exams is to evaluate the student’s comprehensive knowledge of the field of study. The committee will submit their evaluations within a timely manner, usually within four weeks of the student’s writing. Satisfactory completion of both exams is required to enter candidacy. Scheduling of exams will be determined by the program area. Procedure Students apply for comprehensive exam by completing the Application for Doctoral Comprehensive Examination, found in the [Comprehensive Exam Packet](#). Each program area will provide documentation for which of the comprehensive exam options they will be using. Formats will be reviewed occasionally by the Associate Dean in order to check for consistency among and within programs.

Students will need to complete the form, [Application for Comprehensive Exam](#), prior to taking comprehensive exams.

Once the comprehensive exams are completed, students will need to complete the form for the [Written portion](#), and for the [Oral portion](#).

GRADUATE ASSISTANTSHIPS

Graduate assistantships may be available for doctoral graduate students. The form can be found in Appendix C. The Policy and Procedures for Graduate Assistantships can be found in Appendix D.

EXERCISE SCIENCE COURSE DESCRIPTIONS

***These courses will require an arranged coursework form (Appendix A and Appendix B).**

EXSC 15003 CAREERS IN HEALTH AND MEDICAL SCIENCES 2 Credit Hours

An overview of the profession of Healthcare and Medical Professional associated including employment opportunities, academic preparation, and clinical preparation. This course will address the qualities and skills required for a comprehensive list of professional opportunities in the healthcare and medical fields with an emphasis on professionalism, cultural competencies, ethics and self care. Students will be required to work with faculty and health care and medical professionals to outline a personalized program to assist in their professional development.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 2 lecture

Grade Mode: Standard Letter

EXSC 23093 VARIABLE TITLE WORKSHOP IN EXERCISE SCIENCE 1-3 Credit Hours

(Repeatable for credit) Workshop to develop mastery and application of knowledge and skills that address issues in exercise science; topics vary. Satisfactory/unsatisfactory (S/U) graded.

Prerequisite: None.

Schedule Type: Workshop

Contact Hours: 1-3 other

Grade Mode: Satisfactory/Unsatisfactory

EXSC 25057 HUMAN ANATOMY AND PHYSIOLOGY I (KBS) (KLAB) 4 Credit Hours

(Cross-listed with [ATTR 25057](#)) Comprehensive examination of anatomy and physiology related to the organization of the body and basic cell and tissue types. Specific structure and function of the muscular, skeletal, integumentary, and nervous systems are addressed.

Prerequisite: None.

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 3 lecture, 2 lab

Grade Mode: Standard Letter

Attributes: Kent Core Basic Sciences, Kent Core Basic Sciences Lab

EXSC 25058 HUMAN ANATOMY AND PHYSIOLOGY II (KBS) (KLAB) 4 Credit Hours

(Cross-listed with [ATTR 25058](#)) Comprehensive examination of anatomy and physiology related to the human body under rest and exercise conditions. Specific structure and function of the metabolic, endocrine, lymphatic, digestive, urinary and reproductive systems are addressed. Advanced coverage of neurological, cardiovascular and respiratory systems are also addressed.

Prerequisite: [ATTR 25057](#) or [EXSC 25057](#) or [BSCI 11010](#) or [BSCI 21010](#).

Schedule Type: Laboratory, Lecture, Combined Lecture and Lab

Contact Hours: 3 lecture, 2 lab

Grade Mode: Standard Letter

Attributes: Kent Core Basic Sciences, Kent Core Basic Sciences Lab

EXSC 34000 EXERCISE SCIENCE FOR ESPORTS 3 Credit Hours

This course examines topics within the field of exercise science and relates them to esports performance. Topics will include physical activity, sedentary behavior, mental and physical health and exercise physiology. By relating these topics to esports, students will gain an understanding of what may enhance and also diminish esports performance.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

**EXSC 35040 PRACTICAL AND APPLIED CONCEPTS OF STRENGTH AND CONDITIONING
3 Credit Hours**

This course will discuss the practical and applied concepts related to strength and conditioning. Specifically, the course will focus on how to improve muscle strength, power, speed, agility, endurance, stamina, stability, and muscle hypertrophy. Emphasis will be placed on the ability to create and administer safe and effective periodized training programs while ensuring safe and effective techniques fundamental to improvements in athletic performance.

Prerequisite: [ATTR 25057](#) or [EXSC 25057](#) or [BSCI 11010](#) or [BSCI 21010](#);
and [ATTR 25058](#) or [EXSC 25058](#) or [BSCI 11020](#) or [BSCI 21020](#).

Co-requisites: EXSC 35080 and ATTR/EXSC 35054

Schedule Type: Combined Lecture and Laboratory

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXSC 35054 BIOMECHANICS 3 Credit Hours

(Cross-listed with [ATTR 35054](#)) Anatomical and mechanical bases of human movement. Emphasis is placed on tools and techniques for motion analysis, mechanical concepts, forces and performance analysis. Lecture and laboratory.

Prerequisite: [ATTR 25057](#) or [EXSC 25057](#) or [BSCI 11010](#) or [BSCI 21010](#).

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXSC 35068 STATISTICS FOR THE EXERCISE SCIENTIST 3 Credit Hours

Measurement and statistics applied to physical education and exercise/sport sciences; laboratory experiences in statistics test construction and administration and evaluation.

Prerequisite: None.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXSC 35075 EXERCISE PROGRAMMING 3 Credit Hours

Problems and issues in developing exercise programs in institutional and commercial settings.

Prerequisite: [ATTR 25057](#) or [EXSC 25057](#) or [BSCI 11010](#) or [BSCI 21010](#);
and [ATTR 25058](#) or [EXSC 25058](#) or [BSCI 11020](#) or [BSCI 21020](#).

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXSC35080 PHYSIOLOGY OF EXERCISE (WIC) 4 Credit Hours

Response of the human to acute and chronic exercise with emphasis on the underlying physiological mechanisms.

Prerequisite: [ATTR 25057](#) or [EXSC 25057](#) or [BSCI 11010](#) or [BSCI 21010](#);
and [ATTR 25058](#) or [EXSC 25058](#) or [BSCI 11020](#) or [BSCI 21020](#).

Schedule Type: Combined Lecture and Lab

Contact Hours: 3 lecture, 2 lab

Grade Mode: Standard Letter

Attributes: Writing Intensive

EXSC 40612 EXERCISE LEADERSHIP FOR THE OLDER ADULT 3 Credit Hours

(Cross-listed with [EXPH 50612](#)) Designed to provide students with a knowledge base in exercise leadership in the older adult population, including special populations. Students participate in the leading, supervision and evaluation of participants within the exercise program. They also assist in the collection of functional fitness data.

Prerequisite: None.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXSC 41000 EXERCISE IMPLEMENTATION: AN EXERCISE INTERVENTION PROGRAM 1-3 Credit Hours

(Repeatable for credit) Students will participate in leading, supervising and developing plans for individuals who want to reduce cardiovascular risk factors through structured exercise.

Prerequisite: [EXSC 45080](#).

Schedule Type: Laboratory

Contact Hours: 3-9 other

Grade Mode: Standard Letter

EXSC 43093 VARIABLE TITLED WORKSHOP IN EXERCISE SCIENCE AND EXERCISE PHYSIOLOGY 1-3 Credit Hours

(Repeatable for credit) (Cross-listed with [EXPH 53093](#)) Workshop in exercise science, topics vary.

Prerequisite: None.

Schedule Type: Workshop

Contact Hours: 1-3 lecture

Grade Mode: Satisfactory/Unsatisfactory

***EXSC 43098 RESEARCH IN EXERCISE SCIENCE (ELR) 1-3 Credit Hours**

(Repeatable for a maximum of 12 credit hours) Research project completed under the supervision of a faculty member. Written approval of supervising faculty member and School Director required prior to registration.

Prerequisite: Special approval.

Schedule Type: Research

Contact Hours: 3-9 other

Grade Mode: Satisfactory/Unsatisfactory-IP

Attributes: Experiential Learning Requirement

EXSC 45022 EXERCISE LEADERSHIP 2 Credit Hours

Designed to provide the students with the knowledge base in exercise leadership. Topic areas and competencies using a variety of techniques in leading and demonstrating safe and effective methods of applying the fundamental principles of exercise science. The exercise leader will demonstrate all forms of group exercise, flexibility and balance training. The final exam is the American College of Sports Medicine Certified Exercise Physiologist certification (ACSM-EP). To take this certification requires that you be in the last semester of your senior year.

Prerequisite: [EXSC 25057](#) or [ATTR 25057](#) or [BSCI 11010](#) or [BSCI 21010](#);
and [EXSC 25058](#) or [ATTR 25058](#) or [BSCI 11020](#) or [BSCI 21020](#); and senior standing.

Pre/corequisite: [EXSC 45080](#).

Schedule Type: Lecture

Contact Hours: 2 lecture

Grade Mode: Standard Letter

EXSC 45023 PROFESSIONAL CERTIFICATE PREPARATION 2 Credit Hours

This course is designed to prepare students to take the the National Strength and Conditioning Association Certified Strength and Conditioning Specialist (NSCA CSCS). Material covered will include basic exercise science, training adaptations, and methods of resistance-exercise training.

Prerequisite: [EXSC 25057](#) or [ATTR 25057](#) or [BSCI 11010](#) or [BSCI 21010](#);
and [EXSC 25058](#) or [ATTR 25058](#) or [BSCI 11020](#) or [BSCI 21020](#); and senior standing.

Pre/corequisite: [ATTR 35040](#) and [EXSC 45080](#).

Schedule Type: Lecture

Contact Hours: 2 lecture

Grade Mode: Standard Letter

EXSC 45040 ADVANCED STRENGTH AND CONDITIONING 3 Credit Hours

(Cross-listed with [EXPH 55040](#)) Advanced principles in strength and conditioning. Learn and understand the energy systems, anatomy, physiology and proper lifting technique of strength, speed, agility and conditioning exercises for practical application with athletes.

Prerequisite: [EXSC 25057](#) or [ATTR 25057](#) or [BSCI 11010](#) or [BSCI 21010](#);
and [EXSC 25058](#) or [ATTR 25058](#) or [BSCI 11020](#) or [BSCI 21020](#).

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EXSC 45065 EXERCISE TESTING 3 Credit Hours

(Cross-listed with [EXPH 55065](#)) Lecture and laboratory experiences dealing with the administration and interpretation of exercise tests.

Prerequisite: [ATTR 25057](#) or [EXSC 25057](#) or [BSCI 11010](#) or [BSCI 21010](#);
and [ATTR 25058](#) or [EXSC 25058](#) or [BSCI 11020](#) or [BSCI 21020](#).

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

Attributes: CTAG Exercise Science

EXSC 45070 ELECTROCARDIOGRAPHY FOR THE EXERCISE PHYSIOLOGIST 3 Credit Hours

(Cross-listed with [EXPH 55070](#)) Designed to provide students with the knowledge base in electrocardiography. Students work on interpreting the 12-lead electrocardiogram with clinical case studies to enhance the knowledge base of the exercise specialist.

Prerequisite: [ATTR 25057](#) or [EXSC 25057](#) or [BSCI 11010](#) or [BSCI 21010](#); and [ATTR 25058](#) or [EXSC 25058](#) or [BSCI 11020](#) or [BSCI 21020](#).

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EXSC 45081 ADVANCED PHYSIOLOGY OF EXERCISE 3 Credit Hours

(Cross-listed with [EXPH 55080](#)) Response of the human to acute and chronic exercise with emphasis on the underlying physiological mechanisms.

Prerequisite: [ATTR 25057](#) or [EXSC 25057](#) or [BSCI 11010](#) or [BSCI 21010](#); and [ATTR 25058](#) or [EXSC 25058](#) or [BSCI 11020](#) or [BSCI 21020](#) and EXSC 35080.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

***EXSC 45096 INDIVIDUAL INVESTIGATION IN EXERCISE SCIENCE (ELR) 1-3 Credit Hours**

(Repeatable for a maximum of 6 credit hours) Independent study completed under the supervision of a faculty member. Written approval of supervising faculty member and school director required prior to registration.

Prerequisite: Special approval.

Schedule Type: Individual Investigation

Contact Hours: 3-9 other

Grade Mode: Standard Letter

Attributes: Experiential Learning Requirement

EXSC 45480 INTERNSHIP SEMINAR IN EXERCISE SCIENCE 1 Credit Hour

Overview of the internship possibilities that are available for the exercise science major. The American College of Sports Medicine (ACSM) certification workshops and the scope of the practice for the exercise specialist is discussed in detail.

Prerequisite: Special approval.

Schedule Type: Lecture

Contact Hours: 1 lecture

Grade Mode: Standard Letter

EXSC 45481 SEMINAR IN EXERCISE PHYSIOLOGY 1 Credit Hour

Provides an overview of the research possibilities and the internship possibilities that are available for the exercise science major. The Institutional Review Board, research methodology and the risks and benefits of research in the area of exercise science are discussed in detail. Also covers The American College of Sports Medicine (ACSM) certification workshops and the scope of the practice for the exercise specialist.

Prerequisite: Special approval.

Schedule Type: Lecture

Contact Hours: 1 lecture

Grade Mode: Standard Letter

EXSC 45492 INTERNSHIP IN PHYSICAL FITNESS AND CARDIAC REHABILITATION (ELR) 1-9 Credit Hours

(Repeatable for a maximum of 9 credit hours) Supervised experience providing practical experience in administration and operation of programs in physical fitness, health enhancement and or cardiac rehabilitation. 45 clock hours per credit hour.

Prerequisite: Special approval.

Schedule Type: Practical Experience

Contact Hours: 3-27 other

Grade Mode: Satisfactory/Unsatisfactory-IP

Attributes: Experiential Learning Requirement

EXSC 46095 SPECIAL TOPICS IN EXERCISE SCIENCE 1-3 Credit Hours

(Repeatable for credit) Selected topics in exercise science dependent upon interest.

Prerequisite: None.

Schedule Type: Lecture

Contact Hours: 1-3 lecture

Grade Mode: Standard Letter

EXERCISE PHYSIOLOGY COURSE DESCRIPTIONS

EXPH 50612 EXERCISE LEADERSHIP FOR THE OLDER ADULT 3 Credit Hours

(Cross-listed with [EXSC 40612](#)) Designed to provide the students with a knowledge base in exercise leadership in the senior population and includes special populations. Students participate in the leading supervision and evaluation of the participant within the exercise program. They also assist in the collection of functional fitness data.

Prerequisite: Graduate standing.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 51000 EXERCISE IMPLEMENTATION: AN EXERCISE INTERVENTION PROGRAM 1-3 Credit Hours

(Repeatable for credit) Students will participate in leading, supervising and developing plans for individuals who want to reduce cardiovascular risk factors through structured exercise.

Prerequisite: [EXPH 55080](#); and graduate standing.

Schedule Type: Laboratory

Contact Hours: 3-9 lab

Grade Mode: Standard Letter

EXPH 53093 VARIABLE TITLE WORKSHOP IN EXERCISE SCIENCE AND EXERCISE PHYSIOLOGY 1-3 Credit Hours

(Repeatable for credit) (Cross-listed with [EXSC 43093](#)) Workshop in exercise science or physiology, topics vary.

Prerequisite: Graduate standing.

Schedule Type: Workshop

Contact Hours: 1-3 other

Grade Mode: Satisfactory/Unsatisfactory

EXPH 55040 ADVANCED STRENGTH AND CONDITIONING 3 Credit Hours

(Slashed with [EXSC 45040](#)) Advanced principles in strength and conditioning. Learn and understand the energy systems, anatomy, physiology and proper lifting technique of strength, speed, agility and conditioning exercises for practical application with athletes.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EXPH 55065 EXERCISE TESTING 3 Credit Hours

(Cross-listed with [EXSC 45065](#)) Lecture and laboratory experiences dealing with the administration and interpretation of exercise tests.

Prerequisite: Graduate standing.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 55070 ELECTROCARDIOGRAPHY FOR THE EXERCISE PHYSIOLOGIST 3 Credit Hours

(Cross-listed with [EXSC 45070](#)) Designed to provide students with the knowledge base in electrocardiography. Students work on interpreting the 12-lead electrocardiogram with clinical case studies to enhance the knowledge base of the exercise specialist.

Prerequisite: Graduate standing; and special approval.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EXPH 55080 PHYSIOLOGY OF EXERCISE 3 Credit Hours

(Cross-listed with [EXSC 45080](#)) Physiological bases of muscular activity with special attention to general effects of exercise on body function. Laboratory included.

Prerequisite: Graduate standing.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 60610 PHYSIOLOGY OF AGING: IMPLICATIONS FOR HUMAN BEHAVIOR 3 Credit Hours

(Cross-listed with [EXPH 70610](#)) Examine physiological changes which accompany advancing age. Special attention is paid to the effect of these changes on sensory motor and cognitive behavior.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EXPH 63050 RESEARCH PROCESS IN ATHLETIC TRAINING AND EXERCISE PHYSIOLOGY 3 Credit Hours

(Cross-listed with [EXPH 73050](#)) The research process and statistical concepts applied to athletic training and exercise physiology.

Prerequisite: Graduate standing.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 63051 QUANTITATIVE AND RESEARCH METHODS IN ATHLETIC TRAINING AND EXERCISE PHYSIOLOGY 3 Credit Hours

(Slashed with [EXPH 73051](#)) Research design and statistical methods applied to exercise, physiology and athletic training.

Prerequisite: [EXPH 63050](#); and graduate standing.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 63091 RESEARCH SEMINAR 1 Credit Hour

(Repeatable for credit) (Slashed with [EXPH 73091](#)) Presentation and discussion of research by faculty and students. A total of 2 credits may be applied toward degree requirements.

Prerequisite: Graduate standing.

Schedule Type: Seminar

Contact Hours: 1 other

Grade Mode: Satisfactory/Unsatisfactory

***EXPH 63096 INDIVIDUAL INVESTIGATION IN EXERCISE PHYSIOLOGY 1-3 Credit Hours**

(Repeatable for a maximum of 6 credit hours) (Slashed with [EXPH 73096](#)) Independent study completed under the supervision of a faculty member. Written approval of supervising faculty member and School Director required prior to registration.

Prerequisite: Graduate standing; and special approval.

Schedule Type: Individual Investigation

Contact Hours: 3-9 other

Grade Mode: Standard Letter-IP

***EXPH 63098 RESEARCH 1-15 Credit Hours**

(Repeatable for credit) Research carried out by the student under the supervision of a faculty member.

Prerequisite: Graduate standing.

Schedule Type: Research

Contact Hours: 1-15 other

Grade Mode: Standard Letter-IP

EXPH 63193 VARIABLE TITLE WORKSHOP IN EXERCISE PHYSIOLOGY 1-3 Credit Hours

(Repeatable for credit) Workshop in exercise physiology; topics vary. Maximum 4 hours applied to the degree.

Prerequisite: Graduate standing.

Schedule Type: Workshop

Contact Hours: 1-3 other

Grade Mode: Satisfactory/Unsatisfactory

EXPH 63195 SPECIAL TOPICS IN EXERCISE PHYSIOLOGY 1-3 Credit Hours

(Repeatable for credit) (Slashed with [EXPH 73195](#)) Selected and varied topics of relevance in exercise physiology.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 1-3 lecture

Grade Mode: Standard Letter

***EXPH 63199 THESIS I 2-6 Credit Hours**

(Repeatable for credit) Thesis students must register for a total of 6 hours, 2 to 6 hours in a semester distributed over several semesters if desired.

Prerequisite: Graduate standing.

Schedule Type: Masters Thesis

Contact Hours: 3 other

Grade Mode: Satisfactory/Unsatisfactory-IP

***EXPH 63299 THESIS II 2 Credit Hours**

Thesis students must continue registration each semester until all degree requirements are met.

Prerequisite: [EXPH 63199](#); and graduate standing.

Schedule Type: Masters Thesis

Contact Hours: 2 other

Grade Mode: Satisfactory/Unsatisfactory-IP

EXPH 65075 MUSCLE FUNCTION AND EXERCISE 3 Credit Hours

(Slashed with [EXPH 75075](#)) Characteristics of skeletal muscle related to contraction during exercise, strength, elasticity, fatigue, and training. Electromyograph analysis of muscle function emphasized.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EXPH 65076 ENVIRONMENTAL STRESS AND EXERCISE 3 Credit Hours

(Slashed with [EXPH 75076](#)) Effects of heat, cold, pressure, pollution and psychological stress upon physiological responses to exercise. Lecture and laboratory.

Prerequisite: Graduate standing.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 65080 PHYSIOLOGICAL BASIS OF EXERCISE AND SPORT 3 Credit Hours

(Slashed with [EXPH 75080](#)) Application of physiological concepts to human performance. Includes role of testing, training strength and endurance, nutritional considerations, environmental influences and, adapted exercise programs.

Prerequisite: Graduate standing.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 65081 ENERGY METABOLISM AND BODY COMPOSITION 3 Credit Hours

(Slashed with [EXPH 75081](#)) Measurement of metabolic response to exercise. Topics include ergometry spirometry energy expenditure body composition and performance correlates of strength power and endurance.

Prerequisite: Graduate standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EXPH 65084 CARDIOVASCULAR-RESPIRATORY DYNAMICS DURING EXERCISE 3 Credit Hours

(Slashed with [EXPH 75084](#)) Responses of the cardiovascular and respiratory systems to exercise. Use of noninvasive methods to measure cardio-respiratory function emphasized. Lecture and laboratory.

Prerequisite: Graduate standing.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 65086 NEUROBIOLOGY OF MOVEMENT AND EXERCISE 3 Credit Hours

(Slashed with [EXPH 75086](#)) Provide students with knowledge to understand the role of the muscular and nervous systems in human movement and exercise. Motor disorders and rehabilitation techniques will also be discussed. Lecture and laboratory.

Prerequisite: Graduate standing.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 65192 INTERNSHIP IN EXERCISE PHYSIOLOGY 1-9 Credit Hours

(Repeatable for a maximum of 9 credit hours) Field experience in exercise physiology programs and testing in Kent State University adult fitness program or cooperating agencies.

Prerequisite: Graduate standing; and special approval.

Schedule Type: Practical Experience

Contact Hours: 3-27 other

Grade Mode: Satisfactory/Unsatisfactory-IP

EXPH 70610 PHYSIOLOGY OF AGING:IMPLICATIONS FOR HUMAN BEHAVIOR 3 Credit Hours

(Slashed with [EXPH 60610](#)) Examine physiological changes which accompany advancing age. Special attention is paid to the effect of these changes on sensory motor and cognitive behavior.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

***EXPH 73050 RESEARCH PROCESSES IN ATHLETIC TRAINING AND EXERCISE PHYSIOLOGY 3 Credit Hours**

(Slashed with [EXPH 63050](#)) The research process and statistical concepts applied to athletic training and exercise physiology.

Prerequisite: Doctoral standing.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 73051 QUANTITATIVE AND RESEARCH METHODS IN ATHLETIC TRAINING AND EXERCISE PHYSIOLOGY 3 Credit Hours

(Slashed with [EXPH 63051](#)) Research design and statistical methods applied to exercise physiology and athletic training.

Prerequisite: [EXPH 73050](#); and doctoral standing.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 73091 RESEARCH SEMINAR 1 Credit Hour

(Repeatable for credit) Presentation and discussion of research by faculty and students. A total of 2 credits may be applied toward degree requirements.

Prerequisite: Doctoral standing.

Schedule Type: Seminar

Contact Hours: 1 other

Grade Mode: Satisfactory/Unsatisfactory

EXPH 73195 SPECIAL TOPICS IN EXERCISE PHYSIOLOGY 1-3 Credit Hours

(Repeatable for a maximum of 6 credit hours) (Slashed with [EXPH 63195](#)) Selected and varied topics of relevance in exercise physiology.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 1-3 lecture

Grade Mode: Standard Letter

EXPH 75075 MUSCLE FUNCTION AND EXERCISE 3 Credit Hours

(Slashed with [EXPH 65075](#)) Characteristics of skeletal muscle related to contraction during exercise, strength, elasticity, fatigue and training. Electromyograph analysis of muscle function emphasized.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EXPH 75076 ENVIRONMENTAL STRESS AND EXERCISE 3 Credit Hours

(Slashed with [EXPH 65076](#)) Effects of heat, cold, pressure, pollution and psychological stress upon physiological responses to exercise. Lecture and laboratory.

Prerequisite: Doctoral standing.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 75080 PHYSIOLOGICAL BASIS OF EXERCISE AND SPORT 3 Credit Hours

(Slashed with [EXPH 65080](#)) Application of physiological concepts to human performance. Includes role of testing, training, strength and endurance, nutritional considerations, environmental influences, and adapted exercise programs.

Prerequisite: Doctoral standing.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 75081 ENERGY METABOLISM AND BODY COMPOSITION 3 Credit Hours

(Slashed with [EXPH 65081](#)) Measurement of metabolic response to exercise. Topics include ergometry, spirometry, energy expenditure, body composition and performance correlates of strength, power and endurance.

Prerequisite: Doctoral standing.

Schedule Type: Lecture

Contact Hours: 3 lecture

Grade Mode: Standard Letter

EXPH 75084 CARDIOVASCULAR-RESPIRATORY DYNAMICS DURING EXERCISE 3 Credit Hours

(Slashed with [EXPH 65084](#)) Responses of the cardiovascular and respiratory systems to exercise. Use of noninvasive methods to measure cardio-respiratory function emphasized. Lecture and laboratory.

Prerequisite: Doctoral standing.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

EXPH 75086 NEUROBIOLOGY OF EXERCISE AND MOVEMENT 3 Credit Hours

(Slashed with [EXPH 65086](#)) Provides students with knowledge to understand the role of the muscular and nervous systems in human movement and exercise. Motor disorders and rehabilitation techniques will also be discussed. Lecture and laboratory.

Prerequisite: Graduate standing.

Schedule Type: Combined Lecture and Lab

Contact Hours: 2 lecture, 2 lab

Grade Mode: Standard Letter

***EXPH 83098 RESEARCH 1-15 Credit Hours**

(Repeatable for credit) Research for doctoral students.

Prerequisite: Doctoral standing; and special approval.

Schedule Type: Research

Contact Hours: 1-15 other

Grade Mode: Standard Letter-IP

***EXPH 83199 DISSERTATION I 15 Credit Hours**

(Repeatable for credit) Doctoral dissertation, for which registration in at least two semesters is required, first of which will be semester in which dissertation work is begun and continuing until the completion of 30 hours.

Prerequisite: Doctoral standing; and special approval.

Schedule Type: Dissertation

Contact Hours: 15 other

Grade Mode: Satisfactory/Unsatisfactory-IP

***EXPH 83299 DISSERTATION II 15 Credit Hours**

(Repeatable for credit) Continuing registration required of doctoral students who have completed the initial 30 hours of dissertation and continuing until all degree requirements are met.

Prerequisite: [EXPH 83199](#); and doctoral standing.

Schedule Type: Dissertation

Contact Hours: 15 other

Grade Mode: Satisfactory/Unsatisfactory-IP

FREQUENTLY ASKED QUESTIONS

What is exercise science?

Exercise science deals with the study of both the immediate and long term effects of physical activity focusing on the “how” and “why” the body responds to physical activity. Exercise Science encompasses a wide variety of disciplines including, but not limited to: Biomechanics, Sports Nutrition, Sport Psychology, Motor Control/Development, and Exercise Physiology. The study of these disciplines is integrated into the academic preparation of Exercise Science professionals. Exercise Science professionals work in the health and fitness industry, and are skilled in evaluating health behaviors and risk factors, conducting fitness assessments, writing appropriate exercise prescriptions, and motivating individuals to modify negative health habits and maintain positive lifestyle behaviors for health promotion. They conduct these activities in university, corporate, commercial or community settings where their clients participate in health promotion and fitness- related activities. (Source - CAAHEP)

How is exercise science different than athletic training/physician assistant studies?

Exercise Science is a science-based degree that prepares you to work in many different types of health, fitness and medical fields. Athletic training studies prepare individuals to function in very specific professional roles within the allied healthcare field.

Why study exercise science at Kent State University?

Kent State University has a long track record of producing graduates that go on to meaningful careers that cultivate and enrich lives of others.

If you are interested in attaining the knowledge, skills, and abilities to succeed as a health, exercise, and fitness professional, and are committed to assisting others in improving their health and physical fitness by increasing their participation in safe and effective exercise.

Are there other requirements?

Yes. You must acquire certification in Cardiopulmonary Resuscitation (CPR), Automated External Defibrillator (AED) for any research hours or internships. Certification can be done by the faculty in the program.

What is a national certification? Does the EXSC curriculum prepare me for it?

Most employers expect Exercise Science professionals to have earned professional certification from a nationally recognized organization. The Exercise Program has a review course for the ACSM Exercise Physiologist Certified (ACSM EP; EXSC45022), as well as one for the NSCA CSCS (EXSC45023) in which the program pays for you to take the certification examination. You must be a member of the organization. Such organizations are:

American College of Sports Medicine

- Certified Personal Trainer (ACSM-CPT)
- Certified Group Exercise Instructor (ACSM-GEI)
- Certified Exercise Physiologist (ACSM-EP)
- Certified Clinical Exercise Physiologist (ACSM-CEP) [requires clinical hours]
- Certified Inclusive Fitness Trainer (ACSM-CIFT)
- Certified Cancer Exercise Trainer (ACSM-CET)

FREQUENTLY ASKED QUESTIONS

-

National Strength and Conditioning Association

- Certified Strength and Conditioning Specialist (NSCA-CSCS)
- Certified Special Population Specialist (NSCA-CSPS)
- Certified Personal Trainer (NSCA-CPT)
- Tactical Strength and Conditioning – Facilitator (NSCA-TSAC-F)

Exercise Science and Exercise Physiology Major

Student Remediation Policy

Purpose

The Exercise Science Student Remediation Policy is established to provide a framework for assisting students who encounter academic challenges and need additional support to successfully progress through the program. This policy aims to promote student success while maintaining academic standards and program integrity.

Scope

This policy applies to all students enrolled in the Exercise Science Major at Kent State University

Policy Statement

Prerequisite Adherence

Students are required to adhere to all course prerequisites as specified in the program curriculum. Prerequisites serve as foundational knowledge and skills necessary for success in advanced courses.

Academic Advising and Monitoring

The program will assign academic advisors to all students in the Exercise Science Major.

Advisors will regularly monitor students' academic progress and provide guidance on course selection.

In cases where a student's performance raises concerns, academic advisors will initiate a remediation plan.

Remediation Plan

When a student's academic performance falls below acceptable standards in a course, the academic advisor will work with the student to develop a remediation plan.

The remediation plan may include recommendations for additional study, tutoring, or attendance at academic support resources provided by the institution.

The student and advisor will establish clear goals and timelines for improvement. The Kent State policy on grade remediation can be found [here](#).

Repeat Course Option

If a student receives a failing grade or does not meet the minimum competency requirements in a course, they may have the option to repeat the course.

The repeated course will replace the previous grade in the student's transcript, but both grades will appear on the transcript.

Academic Support Services

The institution offers academic support services, including tutoring, study groups, and academic workshops.

Students are encouraged to take advantage of these resources to address areas where they may need additional assistance.

Faculty Support

Faculty members are available for individual consultation and support.

Students who are struggling in a course are encouraged to reach out to the course instructor for clarification and guidance.

Probation and Dismissal

Students who do not demonstrate satisfactory progress or improvement in accordance with the remediation plan may be subject to academic probation or dismissal from the program.

Academic probation or dismissal decisions will be made in accordance with institutional policies. The Kent State policy for undergraduate academic dismissal can be found [here](#), for graduate dismissal can be found [here](#).

Appeal Process

Students have the right to appeal academic probation or dismissal decisions in accordance with the institution's established appeal procedures.

Confidentiality

All academic and remediation records will be treated with confidentiality in accordance with applicable laws and institutional policies.

Review and Revision

This policy will be reviewed periodically to ensure its effectiveness and alignment with the program's goals and institutional policies. Revisions may be made as needed.

Student Complaint Procedure to Accreditation agency (CASCE)

Registering a complaint with an accrediting agency is an important process for students to voice their concerns and seek resolution for issues related to their educational institution's accreditation. Here's a step-by-step process for a student to register a complaint with an accrediting agency:

Understand Accreditation Standards and Policies:

Before filing a complaint, the student should familiarize themselves with the accreditation standards and policies of the accrediting agency. This information can usually be found on the agency's website or in their documentation.

Gather Information:

The student should gather all relevant information and documentation related to their complaint. This may include records of communication with the educational institution, relevant policies or regulations, and any supporting evidence.

Contact the Educational Institution:

Prior to involving the accrediting agency, the student should attempt to resolve the issue with the educational institution directly. They should contact the appropriate department or individual within the institution, such as the ombudsman, academic advisor, or student affairs office, to discuss their concerns and seek a resolution.

Review the Accrediting Agency's Complaint Process:

The student should review the accrediting agency's complaint process, which is typically outlined on the agency's website. This process may include specific guidelines and forms for filing complaints.

Draft the Complaint:

The student should draft a clear and concise complaint that outlines the issue, provides supporting evidence, and references any relevant accreditation standards or policies. It's important to maintain a professional and respectful tone throughout the complaint.

Submit the Complaint to the Accrediting Agency:

Following the agency's guidelines, the student should submit their complaint to the accrediting agency. This may involve completing an online form, sending an email, or mailing a physical copy of the complaint.

Await Confirmation and Response:

The accrediting agency will typically acknowledge receipt of the complaint and initiate an investigation. The agency may contact the student for additional information or clarification during this process.

Cooperate with the Investigation:

If requested, the student should cooperate fully with the accrediting agency's investigation, providing any additional documentation or information required.

Review the Agency's Findings:

Once the investigation is complete, the accrediting agency will provide the student with a report of their findings and any recommended actions or resolutions.

Follow Up and Advocate for Resolution:

The student should stay engaged in the process and advocate for a fair resolution based on the agency's findings. If necessary, they can communicate further with the agency to seek clarification or request additional actions.

Seek Legal Advice (if needed):

If the student is dissatisfied with the outcome or believes that their complaint has not been adequately addressed, they may consider seeking legal advice or exploring other avenues for resolution, such as contacting relevant government agencies or regulatory bodies.

Maintain Records:

Throughout the process, the student should keep records of all correspondence and documents related to their complaint for future reference.

It's important for students to follow the specific complaint procedures outlined by the accrediting agency, as these processes can vary between agencies. Additionally, students should approach the complaint process professionally and with a focus on resolving the issue in a constructive manner.

Contact Information for the Accreditation Agency:

CASCE

719-632-6722 x164

accreditation@nsca.com

<https://www.nsca.com/education/>

[casce](#)

CASCE

1885 Bob Johnson Dr.

Colorado Spring, CO

80906

Kent State University Grievance Policy

Purpose:

The Kent State University Exercise Science and Exercise Physiology Programs are committed to maintaining a positive and supportive learning environment for all students. This Grievance Policy is designed to provide a structured process for students to express their concerns and seek resolution for issues related to the Exercise Science and Exercise Physiology Program. The Kent State Policy can be found [here](#).

Scope:

This policy applies to all students enrolled in the Exercise Science and Exercise Physiology Program at Kent State University.

Definition of Grievance:

A grievance is defined as a formal written complaint submitted by a student regarding a perceived injustice or unfair treatment within the Exercise Science Program.

Process

Informal Resolution:

Before initiating a formal grievance, students are encouraged to attempt an informal resolution. Students should first discuss their concern with the relevant faculty member, instructor, or staff member involved. If the issue remains unresolved or is of a sensitive nature, students may seek guidance from the School Director.

Formal Grievance Submission:

If the issue remains unresolved after attempting an informal resolution or if the student is not comfortable pursuing an informal resolution, they may submit a formal grievance. The formal grievance should be submitted in writing to the Program Director within 30 calendar days of the incident or concern. The grievance should include:

- A clear and concise description of the issue or concern.
- Relevant supporting documentation or evidence.
- The desired outcome or resolution sought.
- Review and Investigation:
- The School Director will review the grievance and may conduct an investigation if necessary. The investigation may involve interviewing relevant parties and gathering additional information.

Decision and Resolution:

The School Director will make a decision regarding the grievance within 30 calendar days of receiving the formal complaint. The decision will be communicated in writing to the student. If a resolution is proposed, it will also be outlined in the communication.

Appeal Process:

If the student is dissatisfied with the decision or resolution provided by the School Director, they may appeal the decision within 15 calendar days of receiving the Program Coordinator's response. Appeals should be submitted in writing to the Dean of the College.

Confidentiality:

All parties involved in the grievance process are expected to maintain confidentiality to the extent permitted by law. Information related to the grievance will only be shared with individuals directly involved in the resolution process.

Retaliation:

Kent State University prohibits any form of retaliation against students who file a grievance in good faith. Students who believe they have experienced retaliation should report it to the Program Director or Dean of the College immediately.

Recordkeeping:

All records related to grievances will be maintained by the Exercise Science Program for a minimum of three years.

Contact Information:

School Director: Dr. Ellen Glickman FACSM, eglickma@kent.edu

Dean of the College: Dr. James Hannon, jhannon@kent.edu

This policy provides a structured and fair process for students in the Exercise Science Program at Kent State University to address their concerns and seek resolution while emphasizing the importance of open communication and confidentiality. It should be made readily available to all students within the program.

Kent State University Leave of Absence Policy for Graduate Students

Purpose: A leave of absence may be granted for graduate students for one or more semesters for personal, family, financial, or other compelling reasons. The policy can be found [here](#).

Eligibility: To be eligible for a leave of absence, a student must be seeking a graduate degree, have completed at least one full term of enrollment prior to the date a leave is to begin, be in good academic standing and be making reasonable progress toward the degree. Leaves will not be granted to students who fit one of the following criteria:

- Completed less than one full term of enrollment
- Not in good academic standing
- Received an extension of the degree time limit

APPENDIX A: Arranged Coursework Form

School of Health Sciences | Approval to Register – Arranged Coursework

Any coursework arranged between a student and individual faculty member must include a proposal, outline, or contract indicating the work that will be done to fulfill the course requirement. This form must be completed for arranged coursework **prior** to registration for the course. After completing the form, submit the completed form to the supervising faculty member for their signature. If approved, the permit will be placed in the system. *Check your schedule for the permit and register for the class.

Please choose from the following courses (credit hours):

ATTR 45096/63096 Individual Investigation in Athletic Training (1-3)		HED 44096/54096/74096 Individual Investigation in Health Ed. & Prom. (1-3)
ATTR 63098 Research (1-15)		HED 80292 Practicum in HEDP (3)
EXPH 63096 Individual Investigation (1-3)		SPA 44096/54096/64096 Individual Investigation (1-3)
EXSC 45096 Individual Investigation in Exercise Science (1-3)		SPA 70798 Research Project in Audiology (1-15)
EXSC 43098 - Research (1-6 hours)		SPA 64098/84098 Research (1-15)
EXPH 63098/83098 Research (1-15)		NUTR 45098/55098 Research in Nutrition (1-3)
NUTR 41096/51096 Individual Investigation in Nutrition (1-3)		

Semester of course enrollment _____ Year of course enrollment _____

Student Name _____ Banner ID _____

Course Number including CRN if available & Name _____

Credit Hours _____

Start Date _____ Expected Date of Completion _____

Description of Project: (You must attach a complete proposal or contract as indicated on the back side of this form).

Student's Signature

Date

Supervising Faculty Member

Date

Permit Entered by _____ Date _____

Revised 1/2020

A. Description of the Project for an **Individual Investigation or Practicum** must include the following items:

*This information must be typed on a separate sheet of paper and attached to the Arranged Coursework form before approval of the Individual Investigation.

1. An individual project, approved by the supervising faculty member, with clear, specific, well described expectations and procedures. This may include a detailed proposal and culminating report.
2. A student is expected to work on the project for 45 student involved hours per one hour of credit.
3. The Description of the Project for Arranged Coursework must include the following items:
 - a. Site – if applicable
 - b. Site supervisor – if applicable
 - c. Student Involved Hours (45 per credit hour)
 - d. Nature of involvement (a clear and specific description of what the student will do).
 - e. A specific statement of the evidence the student will submit to indicate successful completion of the course including grading procedures, a timeline, and completion date for the project.
4. The student must submit their completed project for evaluation to the supervising faculty.

B. Description of the Project for **Research** must include the following items:

*This information must be typed on a separate sheet of paper and attached to the Arranged Coursework form before approval of the Research.

1. A research project, approved by the supervising faculty member, with clear, specific, well described expectations and procedures. This includes a detailed culminating report.
2. A student is expected to work on the project for 45 student involved hours per one hour of credit.
3. The Description of the Project for Arranged Coursework must include the following items:
 - a. Site - if applicable
 - b. Site supervisor - if applicable
 - c. Student Involved Hours (45 involved hours per credit hour)
 - d. Nature of involvement (a clear and specific description of the student's involvement in the research project).
 - e. A specific statement of the evidence the student will submit to indicate successful completion of the course including grading procedures, a timeline and completion date for the project.
4. The student must submit their completed project for evaluation to the supervising faculty member .

APPENDIX B:: Arranged Coursework Form

ATTR, EXSC, EXPH | Approval to Register – Arranged Coursework

Any coursework arranged between a student and individual faculty member must include a proposal, outline, or contract indicating the work that will be done to fulfill the course requirement. This form must be completed for arranged coursework **prior** to registration for the course. After completing the form, submit the completed form to the supervising faculty member for their signature. If approved, the permit will be placed in the system. ***Check your schedule for the permit and register for the class.

Please choose from the following courses (credit hours):

ATTR 63199 – Thesis I (2 to 6 hrs)	EXPH 65192 - Intern in Ex Phys (1-6 hrs)
ATTR 63299 – Thesis II (2 hours)	EXPH 75192 - Intern in Ex Phys (1-6 hrs)
EXSC 45492 - Intern. in Fitness/Cardiac Rehab. (1-8 hours)	EXPH 63199 - Thesis I (2-6 hours)
	EXPH 63299 - Thesis II (2 hours)
	EXPH 83199 - Dissertation I (15 hours)
	EXPH 83299– Dissertation II (15 hours)

Semester of course enrollment _____ Year of course enrollment _____

Student Name _____ Banner ID _____

Course Number including CRN & Name _____

Credit Hours _____

Start Date _____ Expected Date of Completion _____

Description of Work: (You must attach a complete proposal or contract as indicated on the back side of this form).

Student's Signature
Supervisin Date

Permit entered by: _____ Date: ____

APPENDIX C: Graduate Assistant Application

GRADUATE ASSISTANT AND TEACHING FELLOWSHIP INFORMATION AND APPLICATION

Graduate appointments are designed both to serve the needs of the University and to assist in the professional development of the student. Kent State University graduate appointments are awarded without regard to race, sex, religion, age, or handicap.

A graduate assistant or teaching fellow must maintain good academic standing and must carry a minimum of eight hours of graduate credit during each semester (six credit hours in summer). Appointees may not accept any other paid employment within the University during the tenure of their appointment.

Applications for Graduate Appointments indicate a current interest and availability for a graduate appointment. Your application will remain active for one year. In order for your application to remain active after that date, it will be necessary to:

1. Submit a new application and resume

OR

2. Request in writing that your application remain active.

PLEASE NOTE THE FOLLOWING:

- ☐ You ***must*** be admitted into a degree program in order to be considered for a graduate appointment.
- ☐ This application is ***not*** complete without an accompanying summary or resume outlining your educational background and professional work experiences. ***Incomplete applications will not be considered.***
- ☐ Graduate appointees are selected by departmental program areas. Your application for graduate appointment should be submitted to your department for review. Please contact your area coordinator/department chair if you have questions concerning available positions.

GRADUATE ASSISTANTSHIP--A graduate assistant assists with instruction, research, or administrative duties beneficial to the appointee's professional development and to the employing department or office. Master's, educational specialists, and doctoral students are eligible.

TEACHING FELLOWSHIP--A teaching fellow normally teaches courses or supervises students in field experiences related to the appointee's professional development. Teaching fellows must be doctoral students and hold a master's degree.

APPLICATION FOR GRADUATE ASSISTANTSHIP
COLLEGE OF EDUCATION, HEALTH, AND HUMAN SERVICES



Please return completed form with RESUME to the school below to which you have been admitted or applying for admission.

<u>School of Teaching, Learning and Curriculum Studies</u> Room 404 White Hall smstewar@kent.edu	<u>School of Lifespan Development and Educational Sciences</u> Room 405 White Hall sburkha7@kent.edu	<u>School of Foundation, Leadership and Administration</u> Room 316 White Hall fla@kent.edu	<u>School of Health Sciences</u> Room 100 Nixson Hall bjones5@kent.edu
--	--	--	---

A graduate assistantship is an appointment made by Kent State University to full-time graduate students who display a high level of scholarship and academic excellence. The award is merit based, not need-based, and includes a stipend and tuition.

PERSONAL DATA

Name: _____ KSU ID _____

Last Name First Name Middle Initial

Current Address: _____ Telephone: (____) _____

Number & Street City State Zip

Permanent Address: _____ Telephone: (____) _____

Number & Street City State Zip

Email Address: _____ Fax: (____) _____

Degree and program to which you are applying or currently in: Degree _____ Program _____

Year and Term Applying for Graduate Appointment: Fall _____ Spring _____

ACADEMIC DATA

Degrees Completed:

Bachelor's Degree: _____ in _____ Date Completed: _____

School: _____

Graduate Degree: _____ in _____ Date Completed: _____

School: _____

PREFERRED WORK ASSIGNMENT

Briefly describe the types of work that would most interest you. List in order of preference. Examples may include teaching, advising, research, assisting program coordinator/school director, working in student affairs, etc.

I am interested in the following type of appointment (check as many as applicable):

_____ 20 hours per week assistantship – minimum course load of 8 credits hours per semester.

_____ 15 hours per week assistantship – minimum course load of 8 credit hours per semester.

____ 10 hours per week assistantship – minimum course load of 8 credit hours per semester.

(Continue on next page)

In the following section, please indicate the special skills or experience that you have in each area. Please check all that apply and explain briefly the type and years of experience in each area (attach an additional sheet, if necessary).

Office Administrative Experience:

Promotional Publication/Design Expertise:

Public Speaking/Communication :

Computer Skills:

____ Word Processing:

____ Spreadsheets:

____ Presentation Software:

____ Database Software:

____ HTML or Web Design Software:

____ Programming:

____ Experience with various hardware configurations:

Teaching or Tutoring:

Research:

Statistical Analysis/Advanced Mathematics:

Foreign Languages:

Other:

Please list any past scholarships, academic awards, honors, or membership in honorary/professional societies.

Please comment on anything else that may help us better evaluate you as a candidate for a graduate assistantship.

Are you able to come to campus for an interview, if required, before school begins? _____ Yes _____ No

My signature verifies that all of the information given above is complete and accurate.

Signature: _____ **Date:** _____

Application for Graduate Appointment.doc
10/20

Appendix D: Graduate Assistant Policy and Procedures

School of Health Science Exercise Science and Exercise Physiology Laboratories **Procedures and Policies**

Exercise Science Faculty

Jacob Barkley, Ph.D., Professor
Angela Ridgel, Ph.D., Professor
John McDaniel, Ph.D., Professor
J. Derek Kingsley, PhD, Associate Professor, Program Coordinator
Adam Jajtner, PhD, Associate Professor
Ellen Glickman, Ph.D., Professor, HS School Director
Meghan Magee, Ph.D, Assistant Professor

Exercise Science Staff:

Student worker, at main desk

Building Manager:

Mark Lyberger Ph.D.

The purpose of this document is to outline procedures that are relevant to new students and staff. Returning students: please review these policies, as you serve as mentors for new students.

I. General Information

A. The purpose of the Exercise Science Laboratory is to provide facilities for instruction, research, and service activities. *There will be no commitment of the laboratory, its equipment or supplies, equipment loans or space without the expressed consent of the appropriate faculty member and the Graduate Coordinator.*

B. The Graduate/Undergraduate Coordinators are directly responsible to the Director of Health Sciences (Dr. Ellen Glickman). We must all work together to ensure the smooth and efficient operation of the classrooms, laboratories and surrounding areas.

II. Functions of Non-Faculty Personnel

A. Student Worker

1. The student's desk is a work area. **Do not congregate around it or unnecessarily disturb them while they are working.**
2. The student worker can assist in making copies for your class. Please plan ahead and fill out a photocopy form. You may also make copies for yourself. Try to conserve paper/ink if possible use Blackboard and electronic documents.

B. Departmental Secretary

- a. Most of the forms that you will need may be obtained **online** or from the Secretary (graduation applications-facility use requisitions, etc.).
- b. The secretary's area is **"off limits"** to all students at all times, including times that the office is closed. Students may not use the photocopy machine or printer without permission. At no time are students allowed to access business or academic files.
- c. Office supplies are to be obtained from the secretary.
- d. By university policy, secretaries are not allowed to give examinations or distribute or collect class materials. If you cannot be present when a student takes an exam outside of class time, you must have someone who has an academic appointment (i.e. faculty, graduate assistant) observe the exam.
- e. All faculty and graduate assistants must inform their students that the secretary cannot take messages regarding missing classes or exam. In addition, students should not call with inquiries about whether class will be held.

C. Laboratory Manager (Program Coordinator)

1. The Laboratory Manager's primary responsibility is the overall operations of the laboratory. Specific duties include:
 - a. Laboratory safety
 - b. Monitoring and maintaining supplies and equipment
 - c. Equipment maintenance
 - d. Collating the needed general laboratory supplies
 - e. Management of laboratory space
2. The Laboratory Manager is responsible for the supervision of laboratory cleanliness, equipment, and supplies, as well as enforcement of policies regarding the use of equipment and supplies. It is expected that students will maintain laboratory cleanliness, use supplies judiciously, and carefully use equipment only when trained in its use, by following established protocols.
3. Students (GA's) are responsible for cleaning up after their own work, including cleaning dishes.
4. All day-to-day laboratory purchases are to be made through the Coordinator (Dr. Kingsley). Vicki Neading will be the one who purchases these items.

D. Additional duties of the Program Coordinator

- a. Specific responsibilities include:
 - i. Scheduling and coordinating testing services
 - ii. Supervision of other students on specific assignments within the laboratory
 - iii. Training individuals in the use of equipment. Students should contact the Laboratory Assistant for scheduling of training.
 - iv. Duties as assigned by the graduate coordinator/lab manager

E. Senior Exercise Program Assistants

Students assigned as fitness program assistants are directly responsible to the faculty member in charge of that program. In general, responsibilities include:

- a. Overall organization and administration of the daily program including conduct of exercise sessions
- b. Keeping medical and program records
- c. Promotion of the program including the development of publicity materials
- d. Organization of students who work with the program
- e. Exercise testing and prescription
- f. Working with the program director in the development of new policies and instructional materials
- g. Cooperating with the laboratory assistant in scheduling and administration of program activities.

F. Ph.D. Laboratory Research Assignment

- a. The purpose of the Ph.D. laboratory assignment is to help complete the work of the laboratory and to provide doctoral students with experience in research and laboratory procedures. The hours are assigned to the Ph.D. academic advisor, and students who generally work on the advisor's research, specifically research that will lead to the student's dissertation. As part of this assignment, students are also expected to be involved in the following tasks under the supervision of the Graduate Coordinator:
 - i. Assist in fitness and laboratory contract testing
 - ii. Assist fellow students in collecting data
 - iii. Be involved in ongoing research

III. Graduate Assistants' Responsibilities

A. Dress professionally when you are teaching in the classroom. No shorts, torn clothing, sweatpants or grubby clothes are allowed. No open toed shoes or flip flops. You are representing the department--- act and look like a professional. Stand when you teach. Do not sit.

B. The contract for the GA's begins the **Thursday before classes** start. All students are expected to be in the office/lab during this week. Students should not schedule vacations or other activities at this time.

C. Graduate assistants must attend all staff meetings and seminars. GA's should enroll in EXPH 65095/75095 Research Seminar (1 credit hour). It is your responsibility to notify the Seminar Coordinator in advance if it is necessary to miss a seminar or the Graduate Coordinator if you must miss a scheduled laboratory meeting.

D. Graduate assistants must keep a schedule on file with the secretary. This should include not only the hours you are in class or teaching, but also where your classes are held and your office hours. ***It is essential that you are present during your office hours. Give your home address and telephone number to the secretary, and make changes as they occur throughout the year.***

E. Policy on Additional Employment—THIS WILL BE ENFORCED!!!!

Graduate assistantships are intended to provide minimal support to enable a student to spend the maximum amount of time in the pursuit of his/her graduate studies with the objective of completing the degree in the shortest amount of time. To this end, it is considered inappropriate for a full-time graduate assistant to be engaged in substantial additional employment other than in an incidental way. Except in unusual circumstances and with the approval of the academic college dean and the dean of Graduate Studies, a graduate assistant may not hold an additional formal appointment through which the total commitment of service at KSU thus exceeds 20 hours per week.

The U.S. Citizenship and Immigration Service (USCIS) has limited part-time employment for international students to no more than 20 hours per week during the semester. Allowing an international student to work more than 20 hours per week could have serious implications for the student and the University. International students may work up to 28-hours when classes are not in session (winter and spring breaks and summer).

IV. Memberships and Conferences

A. Professional Memberships

Enrollment in an academic program is a commitment to your chosen profession. All students in Exercise Sciences/Exercise Physiology are encouraged to join appropriate professional groups: American College of Sports Medicine (ACSM), Midwest ACSM (MWACSM), National Strength and Conditioning Association (NSCA). We also strongly recommend that you obtain professional certification (C-EP or CSCS). Students from our programs can get a discount for the exam.

B. Professional Scientific Meetings

Students are also encouraged to attend professional meetings. This can be accomplished at modest expense by driving with other students/faculty, sharing rooms, and utilizing available travel funds from the Graduate Student Senate or through the School of Health Sciences (if available). The EHHS Graduate Student Senate representative will have information on applying for Graduate Student Senate monies.

V. Research funding

Students are encouraged to solicit funds for thesis and dissertation research from outside the University. You should initiate discussions about funding possibilities with faculty and other students. Check the RAPS (<http://www.kent.edu/research/student-resources>) or GSS website (<http://www.kent.edu/graduatestudies/gss-awards>) for funding information, as well as other organizations that provide support. In addition, current information regarding funding agencies as well as other potential funding possibilities are posted on the GA bulletin board. Remember that acceptance of funds is a commitment of the laboratory and the school. Therefore, the following procedures must be observed:

A. All proposals for external funding must be developed with a faculty member and submitted through The Office of Research and Sponsored Programs (RASP) or Office of Development. All money received will be placed in an account with RASP, the Kent State University Foundation (Office of Development), or in an account in HS under the name of the supervising faculty member and spent according to University policies.

VI. Laboratory Responsibilities

A. Graduate students will have the opportunity to participate in many learning experiences that occur outside of the formal classroom. It is expected that you will take advantage of these valuable opportunities. It is also expected

that, in addition to routine duties, all students enrolled in exercise physiology programs will become involved in research by other students and faculty.

B. Open toed shoes are not allowed in the lab at any time.

C. Students working in the laboratory are expected to review Laboratory Safety, OSHA, blood borne pathogen, radioactive, hazardous waste and Human Subject Protection policies. <https://www.kent.edu/compliance/research-safety-and-compliance>

D. The following training courses should be completed, as appropriate:

1. Human Subject Protection (on-line CITI training) Citiprogram.org
2. Laboratory Safety Course (<https://www.kent.edu/compliance/laboratory-safety>)
3. Hazardous Chemical Waste Training <http://www.kent.edu/compliance/research-compliance-and-safety>
4. OSHA training (Dennis Baden, Manager, at 330-672-1950 or dbaden@kent.edu)
5. Biological Safety <https://www.kent.edu/compliance/biological-safety>
6. CPR (Drs. Kingsley/Jajtner)

E. Some laboratories are accessed with a BESTcard. New students should contact the appropriate faculty member to gain access. Access to labs will be based on need.

F. Individuals not involved in research protocols or analysis should not be in the laboratory where biohazardous materials are used.

G. When you are working in the lab, label EVERYTHING and keep thorough notes about your procedures and unusual observations during analysis.

H. Clean up after yourself and keep a neat lab.

I. BEFORE you run out of supplies, inform the Program Coordinator. Do not use supplies that are not designated for your use.

J. If equipment breaks, contact the Program Coordinator immediately. This equipment is used by others.

K. Material Safety Data Sheets (MSDS) are available for all chemicals used in the lab. Please review the hazards of the materials you are working with before starting experiments or analysis.

L. All received shipments should be recorded into the laboratory inventory and packing slips given to the Academic Laboratory Manager. All chemicals should be marked with the date received, added to the inventory and stored appropriately.

M. The laboratory will generate several types of waste. Trash should be separated into sharps, biohazard, and regular trash receptacles, as appropriate. Hazardous chemicals and waste should be disposed of according to laboratory and University policies.

N. All pharmaceuticals are kept in a locked location and must remain secure during use. Any need of these materials must first be approved by the Laboratory Director.

O. No food or drink is permitted in the laboratory. Enforce this rule for ALL individuals coming into the lab.

P. Always use subject codes. Check with P.I. before analyzing any samples that have subject names on them. It is current policy that no sample shall contain the actual name of the participant. The use of names is a violation of ethics guidelines, so please be vigilant in coding your samples. All information regarding subjects as well as the codes for each subject must be kept confidential and stored in a secure and locked location.

Q. Be generally aware. If something doesn't seem right, investigate it or ask another student, appropriate staff or faculty member.

R. NEVER be afraid to ask questions

S. ALWAYS ask an unknown person if they need help if they are in the lab.

T. Lock and pull the door shut when no one is in the lab.

VII. Space Allocation and Use

A. No bicycles should be parked in the reception area, classrooms or in hallways. If you bring your bike into the lab then it should be stored in the storage closet or in the GA office area. These are a hazard for research subjects and students.

B. Dogs and other pets are not allowed in university buildings. Please leave your animals at home.

C. Use of the laboratory space must be scheduled in advance on the google calendar.

1. All **research and teaching** in shared spaces MUST be recorded on the google calendar. You will be given access to the appropriate pages. Please schedule early to avoid conflict and be aware of research that is going on. Please be quiet and avoid distraction during research sessions and class sessions. We all have to get along and share space. If you do not schedule your space ahead of time then you cannot get upset if someone else needs to use it. https://calendar.google.com/calendar/render?pli=1#main_7

D. Classroom areas may be used for examinations and testing in courses provided there is no conflict with scheduled classes or ongoing research.

E. Room 171 is not an instructional area.

F. Scheduling conflicts that cannot be resolved will be decided by the Graduate Coordinator.

G. Many procedures used in the laboratory require special precautions. This applies especially to the biochemistry laboratory. Please observe all safety and laboratory policies when working in the laboratory. When in doubt, see the Laboratory Manager or the appropriate faculty member.

H. Do not play personal radios. Use headphones if you want to listen to music.

I. It is expected that you maintain a professional manner and respect the need of others for quiet and orderly work areas.

VIII. Lab Supplies

A. Supplies are the property of the State of Ohio.

B. Research supplies must be purchased through the Laboratory Manager. If you need supplies for your research, you must obtain a form from the Laboratory Manager and faculty advisor if grant monies are to be used.

C. Depending on the availability of supplies, it may take several days to receive them. Therefore, plan ahead. Request orders BEFORE you run out of supplies.

D. Report low supplies to the Laboratory Manager. We cannot place data collection or teaching labs in jeopardy due to supplies running out unexpectedly. Supplies purchased with grant money cannot be used for instructional purposes.

IX. Equipment

A. Equipment is provided for student and faculty research and instruction. Therefore, equipment cannot be committed to outside activities unless such use helps to fulfill the primary objectives of the laboratory. Equipment loans must be

approved by the Graduate Coordinator and the Laboratory Manager. *No equipment is to be used outside the laboratory without the approval of the Graduate Coordinator, even if used within the MACC Annex.*

B. The Strength training room should NOT be used for a personal workout area for any students or GA's. This area is to be used exclusively for research and teaching. Please use the student rec if you need to work out.

C. Use of equipment must be scheduled in advance with the Laboratory Manager and must be scheduled on the google calendar.

D. Equipment should not be used before students have received appropriate instruction on its use. Do NOT play with equipment to figure out how it works.

E. It is expected that normal care will be taken when using laboratory equipment. However, equipment does malfunction and accidents happen. In such cases, it is very important that you notify the Academic Laboratory Manager or a faculty member immediately.

X. Policy for the Use of Drugs in Research

Due to the potential danger regarding the misuse of drugs, State of Ohio regulations require that certain policies be observed in their use. This policy applies whether the drugs are purchased by University procedures or contributed to an individual by a manufacturer or distributor for a specific research project.

1. Procurement of Drugs

a. Dr. Glickman holds a State of Ohio Pharmacy License to obtain drugs for experimental and research use. All drugs must be obtained through these licenses. Drugs will be purchased, contributed, and used for experiments only after the dosage has been approved by a licensed physician. In addition, all experimental procedures must be approved by the Kent State University Institutional Review Board.

- i. All purchasing records of drugs must be kept for at least two years.
- ii. Upon receipt, drugs will be logged into the logbook, indicating the date of receipt, amount, and the project for which they have been obtained. They will then be locked in a cabinet designated for storage.

2. Use of drugs in experiments

- a. Drugs must be checked out for use through Dr. Glickman.
- b. Records of drug use will be kept in a logbook. The following information will be recorded:
 - i. Date
 - ii. The research project the drug is being used for and the subject. All subject information must be kept confidential; therefore, no names of subjects can be placed in the drug record. Use subject codes.
 - iii. The amount administered
 - iv. The amount remaining
 - v. The concentration administered
 - vi. The route of administration
 - vii. The individual who administered the drug along with signature

XII. Laboratory Security

A. The double doors to the rear exit of the laboratory are **to remain locked at all times**. They are to be used only for the transfer of equipment and supplies.

B. By University policy, only those employed as faculty, staff, or graduate assistant will be given outside building keys. If necessary, students who are not graduate assistants may arrange for access via the Graduate Coordinator, following school policy.

C. It is against University policy to loan keys/card keys to others.

D. The appropriate faculty member will determine access to the laboratories that requires use of a BEST Card. This will usually be determined at the beginning of each semester. The graduate coordinator/building manager will make this determination.

E. University policy dictates that buildings are officially closed from 10:00pm to 5:40am. The official hours are M - Th 5:30 am-10PM; F, 5:30-8PM; Sat-Sun, 8:00AM-8:00P. If you believe you will need access to the building outside these hours please talk to the Program Coordinator.

F. It is important to minimize traffic within the laboratory. Visitors are to wait in the entry area until you are called to receive them. If you are the last individual leaving for the night, please check that all doors are closed and locked.

G. QUESTION ANYONE WHOSE RIGHT TO BE IN THE LABORATORY IS NOT CLEAR.

XII. Telephone Use

A. Students are not permitted to make long distance calls unless permission is given by a faculty member. Long distance calls for laboratory purposes will be paid for by the department, however these calls must be cleared by the appropriate faculty member and placed using their office phone. All graduate assistant calls should be received or originated from the telephone provided in the Graduate Assistant office area. Graduate students should use extension 22857 (330-672-2857) as their contact number.

XIII. Kitchen Area/Food

You are welcome to use the kitchen area, but you are *responsible for cleaning up after yourself*. ***Do not leave dishes in the sink and clean the microwave of spills. In addition, do not leave food in the refrigerator for long periods of time, allowing it to spoil. Do not keep food in your desk unless it is sealed. We have a large problem with mice and bugs.***