

# Health and Human Physiology, MS

## Requirements

The Master of Science program in health and human physiology requires 30–36 s.h. of graduate credit. Required credit varies by subprogram: the child life subprogram requires a minimum of 36 s.h. and is offered without a thesis; the clinical exercise physiology subprogram requires a minimum of 33 s.h. and is offered without a thesis; the MS program in health and human physiology requires a minimum of 30 s.h. and is offered with a thesis.

Students interested in pursuing a PhD after earning a master's degree should choose the MS in health and physiology program with a thesis.

## Child Life Subprogram

The child life subprogram provides expertise in child development through services to support families and to promote children's mastery of life experiences, particularly children's health care events. Professionals in this area enhance effective coping skills through play, education, communication, and family-centered care. The program prepares students to meet credentialing requirements. For more information about the profession, visit the Association of Child Life Professionals.

In order to be admitted to the subprogram, students must:

- hold a BS or BA degree with a grade-point average (GPA) of at least 3.00;
- have completed one course each in human anatomy, medical terminology, and two courses in child development that focus on children and adolescents;
- have verification of 100 hours of paid or volunteer experience in child life or in a pediatric setting; and
- three letters of recommendation (e.g., from a certified child life specialist, professor, advisor, and/or someone who has observed the student working with children and families in health care or non-health care settings)

Students who have not completed an introductory course in child life must enroll in TR:2077 Introduction to Child Life during their first semester.

Applicants whose first language is not English must submit official test scores to verify English proficiency. Applicants can verify English proficiency by submitting official test scores from the Test of English as a Foreign Language (TOEFL), the International English Language Testing System (IELTS), or the Duolingo English Test (DET).

Students who pursue the child life subprogram must successfully pass comprehensive exams in the last semester prior to their child life internship. The comprehensive exam committee works with each student to develop exam questions.

The MS in health and human physiology with the child life subprogram requires the following coursework (minimum of 36 s.h.).

## Core Courses

Course #	Title	Hours
All of these:		
PSQF:4143/ STAT:4143	Introduction to Statistical Methods	3
TR:5165	Child Life: Child Development and Healthcare Interventions	3
TR:5166	Child Life: Seminar	3
TR:5167	Child Life Practicum	3
TR:5211	Professional Ethics and Practice in Pediatrics	3
TR:5260	Play and Childhood	3
TR:5261	Family Systems	3
One of these:		
CSED:4131	Loss, Death, and Bereavement	3
SSW:3786/ ASP:3786	Death/Dying: Issues Across the Life Span	3-4
One of these:		
HHP:6020	Advanced Research Methods and Ethics	1-3
TR:5205	Research Methods and Play Behavior	3

## Internship

The supervised internship requires 600 contact hours with a certified child life specialist.

Course #	Title	Hours
This course:		
TR:5270	Child Life Internship	9

## Clinical Exercise Physiology Subprogram

The clinical exercise physiology subprogram provides advanced scientific and clinical education. It prepares students to be allied health professionals who work in the application of physical activity and behavioral interventions for clinical diseases and health conditions including cardiovascular, pulmonary, metabolic, orthopedic, neuromuscular, immunologic, and hematologic diseases.

In order to be admitted to the subprogram, students must:

- hold a BS or BA degree with a GPA of at least 3.00; and
- have completed anatomy and physiology with laboratories (8 s.h.).

The Master of Science with the clinical exercise physiology subprogram requires the following coursework (minimum of 33 s.h.).

## Core

Course #	Title	Hours
All of these:		
HHP:6030	Physical Activity and Dietary Behavior Change	3
HHP:6150	Advanced Clinical Exercise Physiology (consult advisor for semester hours required)	1,3

HHP:6200	Advanced Metabolic Exercise Testing and Prescription	4
HHP:6260	Advanced Respiratory Pathophysiology (consult advisor for semester hours required)	1,3
HHP:6410	Advanced Integrative Physiology of Exercise (consult advisor for semester hours required)	1,3
HHP:6460	Advanced Cardiovascular Physiology (consult advisor for semester hours required)	1,3
PCOL:3101	Pharmacology I: A Drug's Fantastic Journey	3

## Statistics

Course #	Title	Hours
One of these introductory courses (or equivalent):		
BIOS:4120	Introduction to Biostatistics	3
PSQF:6242	Selected Applications of Statistics	3
STAT:3510/ IGPI:3510	Biostatistics	3
STAT:4143/ PSQF:4143	Introduction to Statistical Methods	3

## Research Methods

Course #	Title	Hours
This course:		
HHP:6020	Advanced Research Methods and Ethics	2

## Internships

Students complete an individually arranged internship, usually during their second year, earning at least 3 s.h. of credit.

Course #	Title	Hours
This course:		
HHP:5935	Clinical Exercise Physiology Internship	3-6

## General Electives

With advisor approval, students choose elective coursework that enhances their concentration in human and exercise physiology, clinical exercise physiology, prescriptive exercise and training for health and fitness, health maintenance, and understanding human disease.

Course #	Title	Hours
HHP:4020	Health Coaching	3
HHP:4350	Health and Human Physiology Practicum	1-3
HHP:4420	Planning and Evaluating Health Interventions	3
HHP:5200	Physical Activity Epidemiology	3
HHP:6130	Advanced Skeletal Muscle Physiology	1,3
HHP:6300	Motor Control Seminar	1

HHP:6400	Integrative Physiology Seminar	1
HHP:6470	Advanced Physiology of Aging	1,3
HHP:6500	Seminar in Health Promotion	1
HHP:6510	Advanced Energetics in Health and Disease	1,3
HHP:7300	Advanced Sensorimotor Neurophysiology	1,3
ACB:5203	Gross Human Anatomy for Graduate Students	5-6
EPID:6350	Nutritional Epidemiology	2
EPID:6360	Nutrition Intervention in Clinical Trials Research	2
EPID:6600	Epidemiology of Chronic Diseases	3
PSY:3010	Health Psychology	3
PSY:3340	Behavior Modification	3
PTRS:6224	Activity-Based Neural and Musculoskeletal Plasticity in Health Care	4
PTRS:7812	Biomedical Instrumentation and Measurement	3
PTRS:7875	Analysis of Activity-Based Neural and Musculoskeletal Plasticity	3

## MS in Health and Human Physiology with Thesis

The health and human physiology program requires a thesis. Students who intend to earn a PhD after completing the master's degree should choose this program. In order to be admitted, students must hold a BS or BA degree with a GPA of at least 3.00.

The Master of Science program in health and human physiology requires the following coursework (minimum of 30 s.h.).

## Introductory Statistics Courses

Course #	Title	Hours
One of these:		
BIOS:4120	Introduction to Biostatistics	3
PCOL:5204	Basic Biostatistics and Experimental Design	1
PSQF:6242	Selected Applications of Statistics	3
STAT:3510/ IGPI:3510	Biostatistics	3
STAT:4143/ PSQF:4143	Introduction to Statistical Methods	3

## Advanced Statistics Courses

Course #	Title	Hours
One of these:		
BIOS:5120/ IGPI:5120/ STAT:5610	Regression Modeling and ANOVA in the Health Sciences	3
STAT:6513/ PSQF:6243	Intermediate Statistical Methods	3

## Research Methods Course

Course #	Title	Hours
This course:		
HHP:6020	Advanced Research Methods and Ethics	3

## Seminar Courses

Course #	Title	Hours
Two enrollments (1 s.h. each) chosen from these:		
HHP:6300	Motor Control Seminar	1
HHP:6400	Integrative Physiology Seminar	1
HHP:6500	Seminar in Health Promotion	1

## General Elective Courses

Students choose elective courses that broaden their knowledge in health and human physiology and related disciplines, and enhance their knowledge in their specific areas of interest, with guidance from their advisor/mentor; electives may include the following.

Course #	Title	Hours
HHP:3050	Obesity	3
HHP:3450	Immunology in Health and Disease	3
HHP:4020	Health Coaching	3
HHP:4320	Nutrition Interventions	3
HHP:4350	Health and Human Physiology Practicum	1-3
HHP:4365	Internship in Health Coaching	3
HHP:4390	Understanding Human Disease	3
HHP:4420	Planning and Evaluating Health Interventions	3
HHP:4450	Human Genetics and Disease	3-4
HHP:5200	Physical Activity Epidemiology	3
HHP:6000	Research	arr.
HHP:6030	Physical Activity and Dietary Behavior Change	3
HHP:6130	Advanced Skeletal Muscle Physiology	1,3
HHP:6150	Advanced Clinical Exercise Physiology	1,3
HHP:6200	Advanced Metabolic Exercise Testing and Prescription	1,4
HHP:6260	Advanced Respiratory Pathophysiology	1,3
HHP:6410	Advanced Integrative Physiology of Exercise	1,3
HHP:6460	Advanced Cardiovascular Physiology	1,3
HHP:6470	Advanced Physiology of Aging	1,3
HHP:6510	Advanced Energetics in Health and Disease	1,3
HHP:7300	Advanced Sensorimotor Neurophysiology	1,3

ACB:5203	Gross Human Anatomy for Graduate Students	5-6
BMB:3110	Biochemistry	3
EPID:4400	Epidemiology I: Principles	3
EPID:6350	Nutritional Epidemiology	2
EPID:6400	Epidemiology II: Advanced Methods	4
EPID:6600	Epidemiology of Chronic Diseases	3
MPB:5153	Graduate Physiology	4
PTRS:7812	Biomedical Instrumentation and Measurement	3
PTRS:7875	Analysis of Activity-Based Neural and Musculoskeletal Plasticity	3

## Thesis

Course #	Title	Hours
This course:		
HHP:7500	Thesis: MS	4