Health and Human Physiology, M.S.

Requirements

The Master of Science program in health and human physiology requires 30-36 s.h. of graduate credit. Required credit varies by track: the child life track requires a minimum of 36 s.h. and is offered without thesis; the clinical exercise physiology track requires a minimum of 32 s.h. and is offered without thesis; the health and human physiology track requires a minimum of 30 s.h. and is offered with thesis.

Students interested in pursuing a Ph.D. after earning a master's degree should choose the M.S. health and human physiology track (with thesis).

Child Life Track

The child life track 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 Child Life Council.

In order to be admitted to the program, students must:
- hold a B.S. or B.A. with a g.p.a. of at least 3.00;
- have completed one course each in human anatomy, medical terminology, and two courses in human growth and 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, with at least one from a credentialed child life specialist.

Students who have not completed an introductory course in child life must enroll in TR:1077 Introduction to Child Life during their first semester. For student applicants whose first language is not English, applications must be accompanied by Test of English as a Foreign Language (TOEFL) scores.

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

The Master of Science with the child life track requires the following course work (minimum of 36 s.h.).

Core Courses

All of these:

- PSQF:4143 Introduction to Statistical Methods 3
- SSW:3786 Death/Dying: Issues Across the Life Span 3
- TR:5165 Child Life: Methods and Materials 3
- TR:5166 Child Life: Seminar 3
- TR:5167 Child Life Practicum 3

Internship

The supervised internship requires 480-600 contact hours with a credentialed child life specialist:

- TR:4192 Child Life Internship 9

Clinical Exercise Physiology Track

The clinical exercise physiology track provides an 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, orthopaedic, neuromuscular, immunologic, and hematologic diseases.

In order to be admitted to the program, students must:
- hold a B.S. or B.A. with a g.p.a. 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 track requires the following course work (minimum of 32 s.h.).

Statistics Core

One of these (or equivalent):
- STAT:3510 Biostatistics 3
- BIOS:4120 Introduction to Biostatistics 3
- STAT:4143 Introduction to Statistical Methods 3

Advanced Statistics

One of these (or equivalent):
- BIOS:5120 Regression Modeling and ANOVA in the Health Sciences 3
- STAT:6513 Intermediate Statistical Methods 4

Clinical Exercise Physiology Core

All of these:
- HHP:6150 Advanced Clinical Exercise Physiology 1,3
- HHP:6200 Advanced Metabolic Exercise Testing and Prescription 4
- HHP:6410 Advanced Exercise Physiology 3
- HHP:6460 Advanced Cardiovascular Physiology 1,3
- HHP:6480 Advanced Human Pharmacology 3

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

**Electives**

Students choose elective courses that enhance their concentration in human and exercise physiology, clinical exercise physiology, prescriptive exercise and training for health and fitness, health maintenance, and understanding human disease; select at least two courses from the following, with advisor’s approval:

- **HHP:4400** Health Promotion Clinical Practicum 1
- **HHP:4405** Health Promotion Community and Worksite Practicum 1
- **HHP:4420** Planning and Evaluating Health Interventions 3
- **HHP:6050** Advanced Topics in Obesity 3
- **HHP:6130** Advanced Skeletal Muscle Physiology 1-3
- **HHP:6470** Advanced Physiology of Aging 3
- **HHP:6510** Advanced Energy Metabolism in Health & Disease 1,3
- **ACB:5203** Gross Human Anatomy for Graduate Students 5
- **BIOL:3743** Basic Biology of Human Disease 2
- **EPID:6350** Nutritional Epidemiology 2
- **EPID:6360** Nutrition Intervention in Clinical Trials Research 2
- **EPID:6650** Cardiovascular Disease Epidemiology 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

**Health and Human Physiology Track**

The health and human physiology track requires a thesis. Students who intend to earn a Ph.D. after the master’s degree should choose this track. In order to be admitted to the program, students must:

- Hold a B.S. or B.A. with a g.p.a. of at least 3.00; and
- Have completed courses in anatomy and physiology with laboratory (8 s.h.) and basic physics (3 s.h.).

The Master of Science with the health and human physiology track requires the following course work (minimum of 30 s.h.).

**Advanced Statistics**

One of these:

- **BIOS:5120** Regression Modeling and ANOVA in the Health Sciences 3
- **EPID:5241** Statistical Methods in Epidemiology 4
- **STAT:6513** Intermediate Statistical Methods 4

**Research Methods**

One of these:

- **TR:5205** Research Methods and Leisure Behavior 3
- **EALL:5150** Introduction to Educational Research 3
- **PSQF:6220** Quantitative Educational Research Methodologies 3

**Seminar Courses**

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

**Electives**

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:

- **HHP:5000** Problems arr.
- **HHP:6000** Research arr.
- **HHP:6050** Advanced Topics in Obesity 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 4
- **HHP:6410** Advanced Exercise Physiology 3
- **HHP:6460** Advanced Cardiovascular Physiology 1-3
- **HHP:6470** Advanced Physiology of Aging 3
- **HHP:6480** Advanced Human Pharmacology 3
- **HHP:6510** Advanced Energy Metabolism in Health & Disease 1,3
- **HHP:7300** Advanced Neural Control of Posture and Movement 1-3
- **ACB:5203** Gross Human Anatomy for Graduate Students 5
- **BIOC: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
Admission

Admission to the department’s graduate programs is based on grade-point average and score on the Graduate Record Examination (GRE) General Test. Applicants to the M.S. program must have an undergraduate g.p.a. of at least 3.00.

Applicants must meet the admission requirements of the Graduate College; see the Manual of Rules and Regulations of the Graduate College.

Application deadline is February 1 for admission the following fall.

Career Advancement

The Pomerantz Career Center offers multiple resources to help students find internships and jobs.