Health and Human Physiology, PhD

Learning Outcomes

Graduates will:

- demonstrate understanding and critical evaluation of the scholarly literature in the area of specialization within human physiology and/or health promotion;
- formulate testable research questions and hypotheses resulting in proper experimental study design and analysis plans;
- conduct quantitative or qualitative research including data collection, analysis, and interpretation of results in the context of current scientific knowledge;
- present research results in oral, poster, and/or written format to the scientific community;
- prepare a research grant or fellowship for an extramural federal, state, or private funding agency; and
- prepare original research manuscript(s) as the first author for submission to a peer-reviewed scientific journal.

Requirements

The Doctor of Philosophy in health and human physiology requires a minimum of 72 s.h. of graduate credit.

Doctoral students should have a strong background in the natural sciences and/or health promotion, and a working knowledge of statistics and research methodology. Students will acquire additional knowledge of statistics and research methodology after entering the program.

The PhD in health and human physiology requires the following coursework. All courses must be taken on an A–F graded basis.

Required Courses

Course #	Title	Hours
All of these:		
HHP:6020	Advanced Research Methods	3
HHP:6600	Professional Skills for Graduate Students Seminar (taken four times for 1 s.h. each)	4
One of these:		
BIOS:4120	Introduction to Biostatistics	3
PSQF:4143/ STAT:4143	Introduction to Statistical Methods	3
STAT:3510/ IGPI:3510	Biostatistics	3

Advanced Statistics Courses

Students complete two advanced statistics courses selected in consultation with an advisor. These may be selected from the following courses, or other course selections may be approved.

Course #	Title	Hours
Two of these:		
BIOS:5120/ IGPI:5120/ STAT:5610	Regression Modeling and ANOVA in the Health Sciences	3
BIOS:5130/ IGPI:5130	Applied Categorical Data Analysis	3
BIOS:6310/ IGPI:6310/ STAT:6550	Introductory Longitudinal Data Analysis	3
PSQF:6243/ STAT:6513	Intermediate Statistical Methods	3

Independent Research

Students complete a minimum of 10 s.h. of HHP:6000 Research. Students are permitted, but not required, to take an additional 12 s.h. of this course and apply it toward electives, for a maximum total of 22 s.h. of this course counting toward the degree.

Dissertation

Students complete 12 s.h. of HHP:7900 Thesis: PhD. Students are permitted additional enrollments in this course to maintain the doctoral continuous registration requirement, but credits earned beyond the 12 s.h. will not count toward the PhD.

Electives

Elective courses must bring the total credit for the degree to a minimum of 72 s.h. Students may select elective courses from health and human physiology (prefix HHP) courses numbered 3000 or above, excluding the following list, and they may select other approved courses in the subsequent list. Electives courses are selected in consultation with, and must be approved by, the student's academic advisor/mentor.

Students may take HHP:7000 Practicum in College Teaching on an S/U basis and apply it to elective credit.

Course #	Title	Hours
Not from these:		
HHP:3420	Practicum in Health Education and Outreach	3
HHP:3820	Community Wellness Guided Practicum	arr.
HHP:3930	Practicum in Health and Human Physiology	1-3
HHP:3994	Undergraduate Research	1-3
HHP:4365	Internship in Health Coaching	3
HHP:4400	Health Promotion Clinical Practicum	1
HHP:4500	Undergraduate Independent Project	arr.
HHP:4700	Health and Human Physiology Teaching Internship	0-3
HHP:4900	Honors Research	3
HHP:4910	Honors Research II	3
HHP:4930	Health and Human Physiology Internship	arr.
HHP:5935	Clinical Exercise Physiology Internship	1-6

HHP:7500	Thesis: MS	0-4
HHP:7900	Thesis: PhD	arr.

Students are strongly encouraged to select electives from the following list.

Course #	Title	Hours
HHP:4020	Health Coaching	3
HHP:4230	Motor Control Theory	3
HHP:4320	Clinical Nutrition Interventions	3
HHP:4420	Planning and Evaluating Health Interventions	3
HHP:5200/ EPID:5250	Physical Activity Epidemiology	3
HHP:6030	Advanced Health 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:6310	Advanced Sport and Exercise Nutrition	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:7000	Practicum in College Teaching	3
HHP:7300	Advanced Sensorimotor Neurophysiology	1,3
ACB:5203	Gross Human Anatomy for Graduate Students	5-6
BMB:3110	Biochemistry	3
BMB:3120	Biochemistry and Molecular Biology I	3
BMB:3130	Biochemistry and Molecular Biology II	3
CBH:5235	Community-Based Participatory Research	3
CBH:5310	Qualitative Research for Public Health	3
EPID:4350/ CBH:4350	Maternal and Child Health Seminar	1
EPID:4400	Epidemiology I: Principles	3
EPID:5350/ CBH:5350	Foundations of Maternal and Child Health	3
EPID:5450/ CBH:5450	Foundations of Maternal and Child Health II	3
EPID:6100	Writing a Grant Proposal	3
EPID:6350	Nutritional Epidemiology	2
EPID:6400	Epidemiology II: Advanced Methods	4
EPID:6600	Epidemiology of Chronic Diseases	3
EPID:6900	Design of Intervention and Clinical Trials	3
FRRB:7000	Redox Biology and Medicine	4
MMED:6230	Pathogenesis of Metabolic and Cardiovascular Disorders	3
MPB:5153	Graduate Physiology	4
NSCI:7235/ NEUR:7235	Neurobiology of Disease	3
OEH:4310	Occupational Ergonomics: Principles	3
PCOL:3101	Pharmacology I: A Drug's Fantastic Journey	3
PCOL:3102	Pharmacology II: Mechanisms of Drug Action	3
PTRS:5210	Kinesiology and Pathomechanics	4
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

Graduate Education

Graduate education prepares students with advanced knowledge and skills in specialized fields. At the University of Iowa, the Graduate College advocates for student-centered graduate education and supports equitable application of rules and policies across graduate programs.

Academics

University of Iowa graduate credentials are regulated by policies and requirements found in the Graduate College Manual of Rules and Regulations. This includes minimum grade-point average (GPA) requirements for academic standing and degree conferral. The Graduate College sets the minimum requirement. Individual graduate programs may establish higher GPA requirements.

Admissions

Graduate student applicants must meet admission requirements for both the Graduate College and the program to which they have applied. University of Iowa graduate admission requirements are published by the Graduate College and on the Graduate Admissions website.

Financial Support

Graduate students might be eligible for financial support. Several contingencies apply, including degree program and award type, satisfactory progress toward degree, satisfactory completion of all duties related to an appointment, and availability of funding. Graduate students should inquire directly with their program for more information about funding availability. The Graduate Student Employment Standards govern the employment relationship between the University of Iowa and all graduate teaching and research assistants in all matters except wages, which are covered by an existing

collective bargaining agreement or the conditions of an applicable federal grant.

Admission

Applicants to the PhD program must have a grade-point average of at least 3.00 on undergraduate work and previous graduate work. They must also meet the admission requirements of the Graduate College; see the Manual of Rules and Regulations on the Graduate College website.

Application deadline is Feb. 1 for admission the following fall.

Career Advancement

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

Academic Plans

Sample Plan of Study

Sample plans represent one way to complete a program of study. Actual course selection and sequence will vary and should be discussed with an academic advisor. For additional sample plans, see MyUI.

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Course	Title	Hours
Academic Career		
Any Semester		
72 s.h. of graduate level coursework must be completed; graduate transfer credits allowed upon approval. More information is included in the General Catalog and on department website. [a, b]		
	Hours	**0**
First Year		
Fall		
STAT:3510 or BIOS:4120 or PSQF:4143	Biostatistics or Introduction to Biostatistics or Introduction to Statistical Methods	3
HHP:6020	Advanced Research Methods	3
HHP:6600	Professional Skills for Graduate Students Seminar [c]	1
Elective course [d]		3
	Hours	**10**
Spring		
HHP:6000	Research [e]	3
HHP:6600	Professional Skills for Graduate Students Seminar [c]	1
Advanced statistics course [f]		3
Elective course [d]		3
	Hours	**10**
Second Year		
Fall		
HHP:6000	Research [e]	3
HHP:6600	Professional Skills for Graduate Students Seminar [c]	1
Advanced statistics course [f]		3
Elective course [d]		3
	Hours	**10**
Spring		
HHP:6000	Research [e]	4
Elective course [d]		3
Elective course [d]		3
Exam: Doctoral Comprehensive Exam [g]		
	Hours	**10**
Third Year		
Fall		
HHP:6600	Professional Skills for Graduate Students Seminar [c]	1
HHP:7900	Thesis: PhD [h]	3
Elective course [d]		3
Elective course [d]		3
	Hours	**10**
Spring		
HHP:7900	Thesis: PhD [h]	3
Elective course [d]		3
Elective course [d]		4
Exam: Doctoral Comprehensive Exam [i]		
	Hours	**10**
Fourth Year		
Fall		
HHP:7900	Thesis: PhD [h]	3
Elective course [d]		3
Elective course [d]		3
	Hours	**9**
Spring		
HHP:7900	Thesis: PhD [h]	3
Exam: Doctoral Final Exam [j]		
	Hours	**3**
	Total Hours	**72**

a All courses must be taken on an A-F graded basis.
b Students must complete specific requirements in the University of Iowa Graduate College after program admission. Refer to the Graduate College website and the Manual of Rules and Regulations for more information.
c Take four times for 1 s.h. each.
d Complete elective courses to bring the total credit hours for the degree up to a minimum of 72 s.h. Students may select health and human physiology (prefix HHP) courses numbered 3000 or above; see the General Catalog for both the list of approved elective courses and the list of courses which not be counted toward the degree. Elective are selected in consultation with, and must be approved by, the student?s academic advisor/mentor.
e Students complete a minimum of 10 s.h. of HHP:6000. Students are permitted, but not required, to take an additional 12 s.h. of this course and apply it toward electives, for a maximum total of 22 s.h.
f Complete two advanced statistics courses from BIOS:5120, BIOS:5130, BIOS:6310, PSQF:6243.
g For students entering with an MA or MS degree.
h Students complete 12 s.h. of HHP:7900. Students are permitted additional enrollments in this course to maintain the doctoral continuous registration requirement, but credits earned beyond the 12 s.h. will not count toward the PhD.
i For students entering with a BA or BS degree.
j Dissertation defense.