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 program 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 may acquire additional knowledge of statistics and research methodology after entering the program.

All PhD students complete a common core of courses, elective courses, 10 s.h. of independent research in HHP:6000 Research, and a 12 s.h. dissertation requirement in HHP:7900 Thesis: PhD They must complete a dissertation in their specialization area.

Some courses in the program are offered by other departments. Faculty members from those departments frequently serve on comprehensive examination committees and on dissertation committees for the initial presentation of a candidate's prospectus. They also participate in the final examination.

The PhD with a major in health and human physiology requires the following coursework.

Core Courses

<table>
<thead>
<tr>
<th>Course #</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>All of these:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HHP:6000</td>
<td>Research</td>
<td>arr.</td>
</tr>
<tr>
<td>HHP:6020</td>
<td>Advanced Research Methods and Ethics</td>
<td>3</td>
</tr>
<tr>
<td>HHP:7000</td>
<td>Practicum in College Teaching (only for students without a teaching assistantship)</td>
<td>arr.</td>
</tr>
</tbody>
</table>

Introductory Statistics Course

<table>
<thead>
<tr>
<th>Course #</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOS:4120</td>
<td>Introduction to Biostatistics</td>
<td>3</td>
</tr>
<tr>
<td>PSQF:6242</td>
<td>Selected Applications of Statistics</td>
<td>3</td>
</tr>
</tbody>
</table>

Advanced Statistics Courses

<table>
<thead>
<tr>
<th>Course #</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two advanced statistics courses, such as the following (consult advisor):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIOS:5120/IGPI:5120/STAT:5610</td>
<td>Regression Modeling and ANOVA in the Health Sciences</td>
<td>3</td>
</tr>
<tr>
<td>STAT:6513/PSQF:6243</td>
<td>Intermediate Statistical Methods</td>
<td>3</td>
</tr>
</tbody>
</table>

Seminar Courses

<table>
<thead>
<tr>
<th>Course #</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Four enrollments (1 s.h. each) from the following:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HHP:6300</td>
<td>Motor Control Seminar</td>
<td>1</td>
</tr>
<tr>
<td>HHP:6400</td>
<td>Integrative Physiology Seminar</td>
<td>1</td>
</tr>
<tr>
<td>HHP:6500</td>
<td>Seminar in Health Promotion</td>
<td>1</td>
</tr>
</tbody>
</table>

General Electives

Students are expected to obtain broad-based knowledge in their specialization area. This normally entails approximately 30 s.h. of coursework. Students choose specialization electives with guidance from their advisor/mentor. Electives may include any of the following.

<table>
<thead>
<tr>
<th>Course #</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHP:4020</td>
<td>Health Coaching</td>
<td>3</td>
</tr>
<tr>
<td>HHP:4320</td>
<td>Nutrition Interventions</td>
<td>3</td>
</tr>
<tr>
<td>HHP:4365</td>
<td>Internship in Health Coaching</td>
<td>3</td>
</tr>
<tr>
<td>HHP:4420</td>
<td>Planning and Evaluating Health Interventions</td>
<td>3</td>
</tr>
<tr>
<td>HHP:5200</td>
<td>Physical Activity Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td>HHP:6030</td>
<td>Physical Activity and Dietary Behavior Change</td>
<td>3</td>
</tr>
<tr>
<td>HHP:6130</td>
<td>Advanced Skeletal Muscle Physiology</td>
<td>1,3</td>
</tr>
<tr>
<td>HHP:6150</td>
<td>Advanced Clinical Exercise Physiology</td>
<td>1,3</td>
</tr>
<tr>
<td>HHP:6200</td>
<td>Advanced Metabolic Exercise Testing and Prescription</td>
<td>1,4</td>
</tr>
<tr>
<td>HHP:6260</td>
<td>Advanced Respiratory Pathophysiology</td>
<td>1,3</td>
</tr>
<tr>
<td>HHP:6310</td>
<td>Advanced Sport and Exercise Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>HHP:6410</td>
<td>Advanced Integrative Physiology of Exercise</td>
<td>1,3</td>
</tr>
<tr>
<td>HHP:6460</td>
<td>Advanced Cardiovascular Physiology</td>
<td>1,3</td>
</tr>
<tr>
<td>HHP:6470</td>
<td>Advanced Physiology of Aging</td>
<td>1,3</td>
</tr>
<tr>
<td>HHP:6510</td>
<td>Advanced Energetics in Health and Disease</td>
<td>1,3</td>
</tr>
<tr>
<td>HHP:7300</td>
<td>Advanced Sensorimotor Neurophysiology</td>
<td>1,3</td>
</tr>
<tr>
<td>ACB:5203</td>
<td>Gross Human Anatomy for Graduate Students</td>
<td>5-6</td>
</tr>
<tr>
<td>BMB:3110</td>
<td>Biochemistry</td>
<td>3</td>
</tr>
<tr>
<td>BMB:3120</td>
<td>Biochemistry and Molecular Biology I</td>
<td>3</td>
</tr>
</tbody>
</table>
### Independent Research

Students must enroll in the independent research course.

<table>
<thead>
<tr>
<th>Course #</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHP:6000</td>
<td>Research</td>
<td>10</td>
</tr>
</tbody>
</table>

### Dissertation

Students working on a dissertation register for the following course.

<table>
<thead>
<tr>
<th>Course #</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHP:7900</td>
<td>Thesis: PhD</td>
<td>12</td>
</tr>
</tbody>
</table>

### Admission

Admission to the graduate program is based on grade-point average, and score on the Graduate Record Examination (GRE) General Test or International English Language Testing System (IELTS). International students also can submit acceptable scores on the Test of English as a Foreign Language (TOEFL) or the Duolingo English Test (DET).

Applicants to the PhD program must have a grade-point average of at least 3.00 on undergraduate work and previous graduate work. They also must 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.

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### Career Advancement

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

### 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.

#### Health and Human Physiology, PhD

<table>
<thead>
<tr>
<th>Course #</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHP:6020</td>
<td>Advanced Research Methods and Ethics</td>
<td>3</td>
</tr>
<tr>
<td>Specialization Area elective</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Introductory Statistics course</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Seminar course</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Hours</td>
<td>11</td>
<td></td>
</tr>
</tbody>
</table>

#### First Year

**Fall**
- HHP:6000 Research 3
- Advanced Statistics course 3
- Specialization Area elective 4
- Seminar course 1

**Hours** 11

#### Second Year

**Fall**
- HHP:6000 Research 3
- Advanced Statistics course 3
- Specialization Area elective 4
- Seminar course 1

**Hours** 10

#### Spring

- HHP:6000 Research 4
- Specialization Area elective 3
- Specialization Area elective 4
- Comprehensive Exam 4

**Hours** 11

#### Third Year

**Fall**
- Specialization Area elective or HHP:6000 Research 3
- Specialization Area elective or HHP:6000 Research 3
- HHP:7900 Thesis: PhD 3
- Seminar course 1

**Hours** 10
### Spring

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specialization Area elective or HHP:6000 Research</td>
<td>3</td>
</tr>
<tr>
<td>Specialization Area elective or HHP:6000 Research</td>
<td>4</td>
</tr>
<tr>
<td>HHP:7900 Thesis: PhD</td>
<td>3</td>
</tr>
</tbody>
</table>

### Hours

10

### Fourth Year

### Fall

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specialization Area elective or HHP:6000 Research</td>
<td>3</td>
</tr>
<tr>
<td>HHP:7900 Thesis: PhD</td>
<td>3</td>
</tr>
</tbody>
</table>

### Hours

6

### Spring

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHP:7900 Thesis: PhD</td>
<td>3</td>
</tr>
<tr>
<td>Final Exam: Dissertation Defense</td>
<td>3</td>
</tr>
</tbody>
</table>

### Hours

3

### Total Hours

72

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a. 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.

b. Work with faculty advisor to determine appropriate graduate coursework and sequence.


d. Choose from HHP:6300, HHP:6400, HHP:6500; enroll four times for 1 s.h. each.


f. For students entering with an MA or MS degree.

g. For students entering with a BA or BS degree.