INTEGRATIVE PHYSIOLOGY  
- DOCTOR OF PHILOSOPHY (PHD)

The objectives of the doctoral program are to:

- provide an academic foundation for understanding how humans and other animals function at the level of genes, cells, tissues, organs and systems, and
- develop the professional skills required to become a research scientist.

Requirements

Admission Requirements

To obtain materials for application and for any additional information, visit the Integrative Physiology (http://www.colorado.edu/intphys/grad) website.

Entering graduate students must have an undergraduate preparation equivalent to the basic core curriculum requirements in integrative physiology at the University of Colorado or departmental approval of their academic preparation for graduate study.

All graduate applicants must have an introductory course in statistics or research design. In addition, students should have the knowledge base that would be obtained by completing human anatomy lecture and lab, as well as human physiology lecture and lab courses.

Satisfactory scores on the Graduate Record Examination (general) tests are also required for admission to the department. These scores should be submitted at the time of application.

Deficiencies

If the undergraduate preparation of a prospective graduate student is not adequate, the student may be allowed to pursue graduate study with the understanding that identified deficiencies will be completed. The graduate admissions committee will determine the nature and extent of these deficiencies.

Deficiencies in any area of the undergraduate major may be met by completing approved coursework in the subject at CU Boulder or at other institutions. All entering graduate students with deficiencies must satisfy at least one deficiency per semester until all deficiencies are satisfied. Graduate courses taken before removing deficiencies may be accepted for graduate degree credit only if prior approval of the graduate coordinator has been granted.

Course Requirements

Students must complete 30 semester hours of coursework at or above the 5000 level.

Required Courses and Semester Credit Hours

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPHY 5100</td>
<td>Colloquium in Integrative Physiology (2 academic-year semesters)</td>
<td>4</td>
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</table>

Required Courses

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<tbody>
<tr>
<td>IPHY 5800</td>
<td>Advanced Statistics and Research Methods in Integrative Physiology</td>
<td>4</td>
</tr>
<tr>
<td>IPHY 6830</td>
<td>Professional Skills for the Research Scientist</td>
<td>3</td>
</tr>
<tr>
<td>IPHY 8990</td>
<td>Doctoral Dissertation</td>
<td>30</td>
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Electives

19 hours of elective coursework.

Total Credit Hours

60

Advisory Committee

The student’s advisory committee will consist of the student’s mentor (chair of the committee), a faculty member in the student’s interest area, and either the graduate coordinator or the chair of the department. The committee will assist the student in developing a program of study.

Preliminary Review

After the first academic year, which usually consists of 16 to 18 hours of coursework, the student completes the preliminary review process. The student’s advisory committee will perform this review. The preliminary evaluation includes an evaluation of the student’s academic status (minimum GPA of 3.0 is required), a detailed proposal of the student’s program of study, written input from the student’s mentor, and other pertinent materials deemed necessary by the committee.

The outcome of the preliminary review process can be one of three judgments: pass, fail, or probation. A student who passes may continue to pursue the doctoral degree. A student who fails will be dismissed from the doctoral program. A student on probation must complete any deficiencies determined by the committee before continuing to pursue the doctoral degree. Regardless of the outcome, the committee will submit a written report to the graduate coordinator for filing.

Comprehensive Examination

The comprehensive exam will be administered to the student within four semesters of entry into the doctoral program. The format of the exam, and the composition of the comprehensive exam committee will be determined by the mentor in consultation with the student. The examination will be based on a document that is about 25 pages in length and designed to demonstrate the student’s comprehensive knowledge on a topic. The composition of the committee (a minimum of five members) is submitted to the Dean of the Graduate School for approval. Students are given two opportunities to pass the exam. The written portion of the exam is based on the student’s coursework and requires demonstration of a broad-based knowledge in integrative physiology. Specific areas to be examined are determined by the mentor and the student.

Dissertation

Successful completion of the exam advances the student to doctoral candidate status, and the student may then begin a dissertation. All students must complete a formal written dissertation that conforms to the requirements established by the Graduate School at CU Boulder.

Final Examination

After completion of the dissertation, a final examination is scheduled. The exam consists of a written submission of the dissertation work and an oral defense. The final examination committee consists of at least five members, one of whom must be from outside the department. Three of the members must be Boulder campus resident faculty.