PHYSIOLOGY, M.S.

The physiology graduate training program is interdisciplinary in its approach to scientific research, reflecting the breadth of the discipline of physiology. Powerful new tools in modern biology make it possible to link the cellular and molecular with integrative levels in physiological systems, the cardiovascular, respiratory, renal, endocrine, neurophysiological, gastrointestinal, musculoskeletal, and metabolic systems. The program provides doctoral training in mechanistic studies that use these new tools to study the functions of molecules, cells, tissues, and organ systems in preparation for careers in biomedical research, biotechnology, and academic teaching. Students learn through lecture courses, seminar courses, seminars by speakers from campus and from other institutions, journal clubs and, most important, from their research mentors. Students are encouraged to interact with other training programs and research centers to broaden their knowledge and experience. Gaining expertise in public speaking is an important component of the program.

ADMISSIONS

This master's program is offered for work leading to the Ph.D. Students may not apply directly for the master's, and should instead see the admissions information for the Ph.D. (http://guide.wisc.edu/graduate/medicine-public-health-school-wide/physiology-phd)

FUNDING

GRADUATE SCHOOL RESOURCES

Resources to help you afford graduate study might include assistantships, fellowships, traineeships, and financial aid. Further funding information (https://grad.wisc.edu/funding) is available from the Graduate School. Be sure to check with your program for individual policies and processes related to funding.

PROGRAM RESOURCES

Financial aid is provided to all students, usually in the form of grant-supported research assistantships, institutional fellowships, teaching assistantships, or advanced opportunity fellowships for minority or disadvantaged students. Students are encouraged to contact individual professors in their areas of interest to determine whether support is available for working in that lab.

REQUIREMENTS

MINIMUM GRADUATE SCHOOL REQUIREMENTS

Review the Graduate School minimum academic progress and degree requirements (http://guide.wisc.edu/graduate/policiesandrequirementstext), in addition to the program requirements listed below.

MAJOR REQUIREMENTS

MODE OF INSTRUCTION

| Mode of Instruction Definitions |
|-----------------|-----------------|-----------------|-----------------|-----------------|
| Evening/Weekend | Online           | Hybrid          | Accelerated     |
| Yes             | No              | No              | No              |

CURRICULAR REQUIREMENTS

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Detail</th>
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</thead>
<tbody>
<tr>
<td>Minimum</td>
<td>30 credits</td>
</tr>
<tr>
<td>Credit Requirement</td>
<td></td>
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<tr>
<td>Minimum Residence Credit Requirement</td>
<td>16 credits</td>
</tr>
<tr>
<td>Minimum Graduate Coursework Requirement</td>
<td>Half of degree coursework (15 credits out of 30 total credits) must be completed graduate-level coursework; courses with the Graduate Level Coursework attribute are identified and searchable in the university’s Course Guide (<a href="https://registrar.wisc.edu/course-guide/">https://registrar.wisc.edu/course-guide/</a>).</td>
</tr>
<tr>
<td>Overall Graduate GPA Requirement</td>
<td>3.00 GPA required.</td>
</tr>
<tr>
<td>Other Grade Requirement</td>
<td>The Graduate School requires an average grade of B or better in all coursework (300 or above, not including research credits) taken as a graduate student unless conditions for probationary status require higher grades. Grades of Incomplete are considered to be unsatisfactory if they are not removed during the next enrolled semester.</td>
</tr>
<tr>
<td>Assessments and Examinations</td>
<td>Contact the program for information on required assessments and examinations.</td>
</tr>
<tr>
<td>Language Requirements</td>
<td>Contact the program for information on any language requirements.</td>
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</tbody>
</table>
REQUIRED COURSES
Physiology core curriculum includes:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYSIOL 901</td>
<td>Seminar</td>
<td>1</td>
</tr>
<tr>
<td>NTP/NEURODPT 610</td>
<td>Cellular and Molecular Neuroscience</td>
<td>4</td>
</tr>
<tr>
<td>ANAT&amp;PHY 435</td>
<td>Fundamentals of Human Physiology (or equivalent)</td>
<td>5</td>
</tr>
<tr>
<td>STAT/B M 541</td>
<td>Introduction to Biostatistics</td>
<td>3</td>
</tr>
<tr>
<td>or stat 571</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OBS&amp;GYN 955</td>
<td>Responsible Conduct of Research for Biomedical Graduate Students</td>
<td>2</td>
</tr>
</tbody>
</table>

POLICIES

GRADUATE SCHOOL POLICIES
The Graduate School's Academic Policies and Procedures (https://grad.wisc.edu/acadpolicy) provide essential information regarding general university policies. Program authority to set degree policies beyond the minimum required by the Graduate School lies with the degree program faculty. Policies set by the academic degree program can be found below.

MAJOR-SPECIFIC POLICIES

GRADUATE PROGRAM HANDBOOK
The Graduate Program Handbook (https://pgtp.wisc.edu/handbook-forms) is the repository for all of the program’s policies and requirements.

PRIOR COURSEWORK

Graduate Work from Other Institutions
Courses taken that fulfill the equivalent requirements may be considered to exempt a class: If demonstrated didactic knowledge of physiology, then ANAT&PHY 435 Fundamentals of Human Physiology may be exempted. If considerable background in neuroscience, then NTP/NEURODPT 610 Cellular and Molecular Neuroscience may be exempted. Statistics courses may be considered by the student’s advisory committee for exemption; however, students are still strongly encouraged to participate. These exemptions do not waive a student from any credits, merely from taking the courses. The student will still need to accumulate 30 credits for the degree.

UW–Madison Undergraduate
Courses taken that fulfill the equivalent requirements may be considered to exempt a class: If demonstrated didactic knowledge of physiology, then ANAT&PHY 435 may be exempted. If considerable background in neuroscience, then NTP/NEURODPT 610 may be exempted. Statistics courses may be considered by the student’s advisory committee for exemption; however, students are still strongly encouraged to participate. These exemptions do not waive a student from any credits, merely from taking the courses. The student will still need to accumulate 30 credits for the degree.

UW–Madison University Special
Courses taken that fulfill the equivalent requirements may be considered to exempt a class: If demonstrated didactic knowledge of physiology, then ANAT&PHY 435 may be exempted. If considerable background in neuroscience, then NTP/NEURODPT 610 may be exempted. Statistics courses may be considered by the student’s advisory committee for exemption; however, students are still strongly encouraged to participate. These exemptions do not waive a student from any credits, merely from taking the courses. The student will still need to accumulate 30 credits for the degree.

PROBATION
The Graduate School regularly reviews the record of any student who earned grades of BC, C, D, F, or Incomplete in a graduate course (300 or above), or grade of U in research credits. This review could result in academic probation with a hold on future enrollment or in being suspended from the Graduate School.

ADVISOR / COMMITTEE
Every graduate student is required to have an advisor. An advisor is a faculty member, or sometimes a committee, from the major department responsible for providing advice regarding graduate studies. An advisor generally serves as the thesis advisor. In many cases, an advisor is assigned to incoming students. Students can be suspended from the Graduate School if they do not have an advisor.

To ensure that students are making satisfactory progress toward a degree, the Graduate School expects them to meet with their advisor on a regular basis.

A committee often accomplishes advising for the students in the early stages of their studies.

CREDITS PER TERM ALLOWED
15 credits

TIME CONSTRAINTS
Master’s degree students who have been absent for five or more consecutive years lose all credits that they have earned before their absence. Individual programs may count the coursework students completed prior to their absence for meeting program requirements; that coursework may not count toward Graduate School credit requirements.

OTHER
Students are funded by program dollars to do rotations during their first semester. After having settled on a lab, their research mentor will fund the student, either through his/her research grants, program-available TA-ships, or other fellowships.

PROFESSIONAL DEVELOPMENT

GRADUATE SCHOOL RESOURCES
Take advantage of the Graduate School’s professional development resources (https://grad.wisc.edu/pd) to build skills, thrive academically, and launch your career.
**LEARNING OUTCOMES**

1. Teach physiology, engaging audiences and helping them to learn.
2. Demonstrate a didactic knowledge of physiology.
3. Describe past science, propose future experiments, and defend their ideas to peers in a proposal format.
4. Understand that science and research is based on trust—trust between scientists and colleagues, trust between scientists and policy makers, trust between scientists and advisory boards, and trust between scientists and society.
5. Communicate their science verbally and do so in a clear manner for a variety of audiences.

**PEOPLE**

**Faculty:** See faculty list (http://pgtp.wisc.edu/faculty) on the program website.