

PHYSIOLOGY (MS)

Master of Science in Physiology

Unit: School of Medicine (<http://louisville.edu/medicine/>) (GM)
 Department Website: Physiology (<http://louisville.edu/medicine/departments/physiology/>)
 Program Website (<http://louisville.edu/medicine/departments/physiology/degrees/ms-pb/>)
 Academic Plan Code(s): PHZBMS

Program Information

General Procedures and Requirements for the Degree of Master of Science in Physiology

Program Overview and Objectives

The Department of Physiology is located in the Health Sciences Center of the University of Louisville which provides our graduate students with an active and intellectually stimulating environment. Our Graduate Program offers a Master of Science degree to provide several career options:

- To develop competence in directed research for advanced technical positions in industry, government, and university medical research laboratories;
- To prepare students with a good general knowledge of human physiology to enable them to communicate physiological concepts to future students; and
- To explore the possibility of a future career as an independent scientist in medically-related research.
- To enhance student credentials for admission to and performance in professional health care programs.

Minimal Requirements for the Master's Degree

The typical Master of Science (MS) Graduate Program includes a directed research emphasis and consists of 30 credit hours typically over a twelve-month period (three semesters) to include the following: 18 credit hours of basic medical sciences coursework and at least 12 credit hours of electives.

Advisor Selection

The Director of Graduate Studies will meet with the new student to discuss the academic and research interests. The Director of Graduate Studies will serve as a Temporary Advisor until a Permanent Advisor is selected.

During the first semester of their graduate study, beginning graduate students will visit research laboratories in which they have an interest. First-year students must select a Principal Advisor. The selection process involves approval by the student, the Principal Advisor, the Director of Graduate Studies, and the Department Chair.

Admission Requirements

The University of Louisville graduate catalog gives a general description of admission procedures. Application information can be found on the Graduate School website.

The following application items must be submitted to the Graduate School at the University of Louisville:

- Graduate application (<http://www.louisville.edu/graduate/apply/>).
- One official transcript of the applicant's previous work for each college or university that has been previously attended.
- Two letters of recommendation from people who are well acquainted with the applicant's previous academic work.
- TOEFL, IELTS or Duolingo examination scores for foreign students from non-English speaking countries.
- A non-refundable application fee to the University of Louisville.

Applicants must state in a letter to the Department but submitted to the Graduate School (referred to as the Personal Statement in the application materials), why they desire a MS degree in the Department of Physiology.

Successful applicants generally demonstrate the following:

- A cumulative undergraduate grade point average that is usually 2.8 or higher on a scale of 4.00 (A=4, B=3, etc.)
- In the case of a foreign applicant from a non-English speaking country, the applicant must achieve a TOEFL Examination score >85 on the internet exam.

Program Requirements

At least 30 credit hours beyond the baccalaureate degree are required for the degree of Master of Science. A maximum of six (6) credit hours may be credited from post-baccalaureate work in other professional or graduate degree programs.

Minimum Course Requirements

The typical MS program must include the following courses taken on a grade basis:

Code	Title	Hours
PHZB 605	Systemic Physiology I	5
PHZB 606	Systemic Physiology II	5
BIOC 645	Advanced Biochemistry I	4
BIOC 647	Advanced Biochemistry II	4
Electives (see list below)		12
Minimum Total Hours		30

Academic Performance

A student must have at least a 3.0 accumulated GPA to be graduated with a degree of Master of Science in Physiology. In general, a student with a GPA less than 3.0 at the end of the second semester will require a two-thirds majority vote of the Departmental faculty to continue in the Program.

A student may not graduate with more than six (6) credit hours of C grades in their required courses.

Electives

All electives must be graduate-level courses.

Electives may include but are not limited to:

Code	Title	Hours
<i>Fall Electives</i>		
PHZB 604	Stem Cell Biology and Regenerative Medicine	3
PHZB 607	Principles of Presentations: Self, Science, Interviews	3
PHZB 617	Seminar in Physiology and Biophysics	1

PHZB 619	Research	1-20
MBIO 601	Molecular Microbiology	2
MBIO 602	Immunology	3
PHZB 630	Biomedical Applications of Physiology in the Eye	3

Spring Electives

PHZB 608	Physiological Concepts Related to the Metabolic Syndrome	3
PHZB 611	Advanced Human Cardiovascular Physiology	3
PHZB 617	Seminar in Physiology and Biophysics	1
PHZB 619	Research	1-20
BIOC 667	Cell Biology	3
BIOC 675	Cancer Biology	4

Summer Electives

PHZB 619	Research	1-20
PHZB 615	Clinical Physiology	6

Other Potential Graduate Elective Course Areas:

- Communications
- Sociology
- Psychology
- Biostatistics
- Public Health
- Pharmacology
- Oral Biology