Biomedical Sciences Professional Master of Science
Program Description

Overview

The Department of Biomedical Sciences offers a coursework Professional Master's Degree (MS-B) degree with concentrations in the disciplines of Human Anatomy, Veterinary Anatomy, or Neurobiology. Students choose a concentration (Human, Veterinary, Neurobiology), which determines their core curriculum for the program. The degree is earned after satisfactorily completing 32 credits of upper division and graduate-level courses in gross anatomy, dissection, physiology, neuroanatomy, and neurobiology. The Master's Program is designed to provide increased academic strength to pre-professional students; those seeking careers in the health professions, the biotech industry, or biomedical education; and future PhD students. The proscribed curriculum is completed in one year, beginning only during the fall semester, culminating in a final comprehensive examination on the core curriculum in late May/early June.

The Program is designed as a place for talented biomedical students to extend their education beyond that which the undergraduate curriculum can offer. Students in the Master's Program have various career goals. Many are pre-professional students (pre-medical, pre-veterinary, pre-dental, etc.) seeking to strengthen their professional school credentials with an impressive roster of upper division science courses. Others are looking to a career in education, where a Master's degree can expand the available opportunities to teach. Some of our former students have found careers in biomedical technology or industry, while others have gone on to enter doctoral programs. The broad-based, rigorous curriculum of the Department of Biomedical Sciences’ Master's Program is designed to help students meet the demands of a wide variety of biomedical career pathways.

The Master’s Program in Biomedical Sciences is also intended to help students make the step to graduate education. Thirty-two credit hours are finished in two semesters, with most of these coming from 500-level "core" courses in anatomy, physiology and neurobiological sciences. These courses feature extensive laboratory instruction, hands-on dissection, and recitations with problem-based learning exercises. Students are expected to take a proactive approach to their education and learn to apply their knowledge outside the didactic classroom. A required course in Managing a Career in Science makes use of lectures, guest speakers, class discussions and a series of written assignments to mentor students and to further explore available career opportunities. Entering students are counseled that the coursework in the Master's Program will not represent a simple continuation of their undergraduate experience. Our curriculum is more advanced, intense, experiential and integrated than that which is offered at the undergraduate level.

2013 Information Sessions: Interested in or have questions about our one-year Professional Master’s program (MS-B)? Information Sessions will be held Mondays at 10 a.m. and Thursdays at 3 p.m. in Room 102 Physiology. Sessions start January 10th and continue through March. If interested, please RSVP to Heather Hall at (970) 491-2702 or bmsgradinformation@colostate.edu.

Concentrations Within the Program

Three tracks of study are available in the Department's Master's Program: Human Anatomy, Veterinary Anatomy, and Neurobiology. Regardless of the concentration chosen, all students receive a Master's Degree in Biomedical Sciences. Each concentration requires the completion of 32 hours of coursework consisting of a core curriculum plus electives. The electives may be selected from university-wide offerings as long as they are 300-level or greater.

1) The Human Anatomy core curriculum includes:

Managing a Career in Science BMS610A (1 credit)-Fall semester
Mammalian Physiology I BMS500 (4 credits)-Fall semester
Mammalian Physiology II  BMS501 (4 credits)-Spring semester
Neuroanatomy  BMS545 (5 credits)-Spring semester
Human Anatomy Dissection  BMS575/BMS619 (6 credits)-Fall semester

2) The Veterinary Anatomy core curriculum includes:

Managing a Career in Science  BMS610A (1 credit)-Fall semester
Mammalian Physiology I BMS500 (4 credits)-Fall semester
Mammalian Physiology II  BMS501 (4 credits)-Spring semester
Neuroanatomy  BMS545 (5 credits)-Spring semester
Domestic Animal Dissection  BMS531/633 (5 credits)-Spring semester

3) The Neurobiology core curriculum includes:

Managing a Career in Science  BMS610A (1 credit)-Fall semester
Mammalian Physiology I BMS500 (4 credits)-Fall semester
Neuroanatomy  BMS545 (5 credits)-Spring semester
Developmental Neurobiology  NB503 (3 credits)-Spring semester
Neuronal Circuits, Systems and Behavior  NB505 (3 credits)-Spring semester

Graduate School Requirements

As a graduate degree-granting program, we are subject to the rules and requirements of Colorado State University's Graduate School. Admission into our program is contingent upon acceptance by the Graduate School.

The Graduate School requires:

- Bachelor's degree from an accredited university or college
- Undergraduate GPA of 3.0 (A = 4.0)
- For international students, satisfactory TOEFL score (550 paper-based; 213 computer-based; 80 internet-based)

On occasion, applicants who do not meet the stated requirements have merited special consideration due to unusual individual circumstances. Students who do not meet the minimum GPA standards may be admitted after favorable evaluation of their situation by the admissions committee, and subsequent approval by the graduate school. An applicant does not request special consideration; this is determined by the admissions committee. If an applicant is accepted with a GPA below 3.0, he/she is enrolled on “Academic Probation” status and has one semester to remediate his/her GPA to regain good standing. Please see the CSU Graduate Bulletin for details.

Prerequisites

This program assumes a fairly substantial and broad background in science courses. It is not for career-changers who lack a strong science background. Although applicants' background course work is evaluated on an individual basis, the strongest applicants have had some biology, chemistry, physiology, cell biology, genetics, etc. Entering MS-B students are expected to assimilate new material at a rapid rate; thus, we do not want our students exposed to some of these foundational concepts for the first time while in the program. Therefore, we strongly recommend completing background course work in physiology (BMS300) before applying. Additionally, applicants planning to do the Human or Veterinary concentration might also consider a background course in anatomy (BMS301 or BMS305, respectively).

Frequently Asked Questions

Please visit our FAQs page. This link was created especially for you, and is guaranteed to answer at least one question you didn't know you had.