PhD in Biomedical Sciences

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About the Doctoral Degree Program

The Biomedical Sciences Area PhD is a multidisciplinary program that integrates molecular, cellular and systemic biology within the context of biomedical research. The program provides the student with the background to investigate questions relevant to the Medical sciences at the integrative, molecular or cellular level and to relate the findings to mammalian physiology. Training in both fundamental and state-of-the-art research methodologies help students develop the skills necessary for competitive biomedical research. The program is administered through the Department of Biomedical Sciences (College of Veterinary Medicine) that has research faculty representing a diversity of medical-related basic science disciplines, including anatomy, biochemistry, histology, pathology, molecular biology, physiology, pharmacology and toxicology. The program offers a rich environment for graduate study and a unique opportunity for training scientists in comprehensive interdisciplinary research.

Financial Aid from the Program

Some programs require an extra form or statement from those who wish to be considered for internal assistantships, fellowships or other funding packages. Check the program website or ask the program contact for details.

Admission Criteria

• Fall deadline: December 15
• Spring deadline: September 15
• Summer deadline: Not Applicable
• Minimum TOEFL scores:
  - Internet-based test (iBT) 100
  - Paper-based test (PBT) 600

• Minimum GRE scores:
  - Prior to August 1, 2011: Verbal + Quantitative 1000, Analytical 3.5
  - On or After August 1, 2011: Verbal + Quantitative 300, Analytical 3.5

• Minimum GPA: 3.0
• Required prerequisite courses: Biology (10 hrs), Physics (3 hrs), Biochemistry (3 hrs), Chemistry (10 hrs), Calculus (3 hrs)

NOTE: The GRE requirement may be waived for applicants with an MD or DVM.

Degree Requirements

To attain the PhD degree, 72 hours of graduate credit must be completed:

15 hours or more at the 8000/9000 level (exclusive of research, problems and independent study courses)

The core curriculum includes:

• physiology (10 credit hours)
• biochemistry/cell biology or histology (4 or 5 credit hours, respectively)
• multidisciplinary approaches to biomedical research (2 credit hours)
• departmental seminar (2 credit hours)

Minimum of 1 additional 7000-level course in each of the following areas:

• molecular biology
• cellular biology
• integrative biology

Rate and Quality of PhD Progress

A grade of 3.0 or better is required in the core curriculum and serves in lieu of a qualifying examination for the degree. The choice of additional courses will be made individually by the student in consultation with his/her advisor and doctoral program committee. Following completion of the plan of study, candidates for the PhD degree must pass a comprehensive examination designed by the doctoral program committee that reflects an understanding of the multidisciplinary approach to biomedical research. The PhD candidate is evaluated semiannually by a faculty committee to ensure a satisfactory rate of progress as defined by timely completion of core courses and productivity in research activities as stipulated by the student’s doctoral program committee. The PhD candidate must carry out original research culminating in a written dissertation, present the dissertation work at a departmental seminar and defend it in an oral examination given by the doctoral program committee. The program for the PhD degree must be completed within five years of passing the comprehensive examination.