

# Anatomy & Cell Biology

## Doctor of Philosophy

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The Doctor of Philosophy program in the Department of Anatomy and Cell Biology is designed to prepare you for academic teaching and research or for a career in a variety of organizations that carry on research and development in biologically or medically related areas. Departmental research expertise is in cellular biology, developmental biology, and neuroscience. Research facilities include state-of-the-art instrumentation for transmission and scanning electron microscopy, confocal microscopy, tissue culture, immunohistochemistry, and molecular biology.

### Admission Requirements

1. Completion of a four-year degree from a recognized university.
2. An overall undergraduate GPA of at least 3.00 and 3.50 for all previous graduate work.
3. A year-long sequence of General Biology/Zoology and a year-long sequence of General Chemistry.
4. A course in Organic Chemistry, a course in College Algebra or the equivalent, and a course in Morphology, e.g., Human Anatomy, Comparative Anatomy, Embryology, Histology; courses in Cell Biology, Biochemistry, and Genetics are also recommended.
5. Scores from the GRE General Test and/or the MCAT must be submitted. The GRE Subject Test is not required, but applicants are encouraged to submit those scores if they have taken the test.
6. A minimum TOEFL Score of 550 on the paper-based test or 213 on the computer-based test, or for the Internet based TOEFL, a composite score of 79, with minimum scores of 21/30 (Speaking\*); 19/30 (Listening); 19/30 (Reading); and 17/30 (Writing) for applicants whose native language is not English. Applicants may also meet language requirements by presenting IETLS scores of 6.5. \*Applicants being considered for Graduate Teaching Assistantships must achieve these minimum TOEFL scores, but have a minimum score of 26/30 on the Speaking subtest.
7. Students who have received a bachelor's degree or higher from the United States or English-speaking Canada are not required to submit the TOEFL.
8. Admission to the Anatomy and Cell Biology graduate program can be made either through the M.S. degree program or by application directly to the Ph.D. degree program.
9. Students who elect to begin the M.S. degree program and later decide they wish to pursue the Ph.D. degree may choose to attempt to bypass the M.S. degree by taking a Diagnostic/Qualifying examination. Such an examination is administered by a departmental committee and consists, in part, of the preparation of a written research proposal by the student, with an oral defense of that proposal. By passing it and by meeting other requirements, such as a GPA of 3.5 or higher in graduate level coursework, a student may be admitted to the Ph.D. program without completing the M.S. program. Otherwise, a student admitted

### Degree Requirements

1. A minimum of 90 semester hours of graduate credit (can be completed in eight full semesters and four summer sessions).
2. Please consult Academic Catalog for complete course requirements.

## Faculty and Areas of Expertise

- **Michael M. Atkinson, Ph.D.**, Human Gross Anatomy, Cell Biology, Intercellular Communication
- **Edward C. Carlson, Ph.D.**, Human Gross Anatomy, Cell Biology, Cellular and Extracellular Ultrastructure
- **Patrick A. Carr, Ph.D.**, Neuroscience, Neurochemistry and Synaptology of Spinal Cord and Brainstem Neurons
- **Jane R. Dunlevy, Ph.D.**, Role of Specific Macromolecules in Diseases that Affect the Eye
- **Bryon Grove, Ph.D.**, Cell Biology, Intracellular Signaling Mechanisms
- **Jon Jackson, Ph.D.**, Human Gross Anatomy
- **Robert Kelley, Ph.D.**, University President
- **Mandy Meyer, Ph.D.**, Human Gross Anatomy, Neuroscience
- **Kenneth G. Ruit, Ph.D.**, Embryonic Development of the Spinal Cord, Medical Educational Research
- **John A. Watt, Ph.D.**, Mechanisms of Cellular Communication Involved in Regenerative Events

## Contact Information

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