MASTER OF SCIENCE IN BIOLOGY
COLLEGE OF ARTS AND SCIENCES

Available on the Jackson Campus

Purpose Statement:

To enhance student preparation for professional school, graduate school, or career opportunities.

Program Description

The Master of Science in Biology is offered through two tracks: Pre-Professional and General Biology. The Pre-

career opportunities through advanced training in Biology. The program includes mentoring and advising for students for both professional programs and career preparation. The Master of Science in Biology is very affordable compared to similar programs around the country, and students who complete advanced training in Biology at Union are extremely well prepared to be successful at the professional level (for more information, please visit the program website at *www.uu.edu/msbio*).

Admission Information

Admission Requirements

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- Three letters of recommendation.
- Scores from professional exam required (i.e, GRE, MCAT, PCAT, etc.).

Retention Criteria

- Must maintain minimum 3.0 GPA
- If not achieved after Fall term, student will be.8 o0 1eo8entudent will be.8 o0 1eo8ent0e6.0.7 (f)-0/Span ⁄Lang bentering class has been filled w

list and will be notified if they are selected for inclusion in the program for the upcoming academic year. Students who are placed on the alternate list and who are not admitted will receive a refund of half of their Application Fee ($25).

Completion Requirements

Both the Pre-Professional and General Biology tracks require 30 credit hours and a final GPA of 3.0 to graduate. Students complete the 30 hours over a sequence of three terms, typically taking 14 hours in the fall, 4 hours in the winter, and 12 hours in the spring. This sequence includes a 2 hour required course in the fall, Career Development in Biology, and a 2 hour required Graduate Project in both the fall and spring, leading to the completion of a non-thesis final paper. At least one course during each fall, winter and spring term must include the accompanying lab section. Students may take additional laboratory sections if space permits.

A. BIO 518, 570, 571
B. Fall Semester: Three courses from BIO 510, 512, 514, 517, 521, 525, or 540 (one of the selected courses must have a lab component). Additional options for General Track: BIO 501, 536, 543, 555, 559.
C. Winter Term: One course from BIO 510, 541, or 542; Additional options for General Track: BIO 556, 557.
D. Spring Semester: Three courses from BIO 505, 507, 510, 515, 516, 522 , or 523 (one of the selected courses must have a lab component). Additional options for General Track: BIO 511, 535, 537, 538, 558.
E. Special Topics in Cell and Molecular Biology may be considered if applicable (BIO 597).

Each student is assigned a mentor who will work closely with the student to select appropriate courses. The mentor will also work with the student throughout the Graduate Project courses to complete the non-thesis final paper.

Financial Information

- Application Fee: $50
- Laboratory Fees: A lab fee will be assessed for each lab course.
- Tuition/semester hour: $500
- Deposit: $500 (will be applied to your first semester's tuition following matriculation); due May 1 or within two weeks of acceptance of your application. The deposit is 100% refundable within 20 business days of the acceptance of your application, 50% refundable between 21 and 35 days after acceptance of your application, non-refundable after 35 days of acceptance of your application). No refunds of deposits will be given after July 1.
- General Student Fee: $22/hour
- All financial information is subject to change without notice.

Financial Assistance

Financial aid information for graduate students is available on our website at *www.uu.edu/financialaid/graduate/*. Generally, graduate students may be eligible for Federal Direct student loans or private alternative student loans (*www.uu.edu/financialaid/loans/alternative-lender-list.cfm*), depending on the program of study and the eligibility of the borrower. Union University is also approved by the Department for Veterans Affairs to offer educational benefits to veterans,

522/522L. Advanced Human Anatomy and Physiology II (3) and Advanced Human Anatomy & Physiology II Lab (1) S
Prerequisite: BIO 521.
A continuation of BIO 521 studying body systems: endocrine, cardiovascular, respiratory, urinary, digestive, and lymphatic. Three hours lecture and optional 3 hours laboratory/week.

523/523L. Cell Biology (3) and Cell Biology Lab (1) S
A study of biological systems at the cellular and subcellular levels emphasizing functional aspects such as protein processing and sorting, membrane systems, energy generation in mitochondria and chloroplasts, and cell signaling. Three hours lecture and optional 3 hours laboratory/week.

525/525L. Molecular Biology (3) and Molecular Biology Lab (1) F
Basic principles of molecular biology focusing on recombinant DNA methods as applied to a variety of biological questions. Students will learn basic research laboratory skills through a wide range of methods from gel electrophoresis to subcloning. Three hours lecture and optional 3 hours laboratory/week.

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