



COLLEGE OF NATURAL
SCIENCE AND
MATHEMATICS

BA IN BIOLOGY
DEPARTMENT OF BIOLOGICAL SCIENCES

SOUND LIKE YOU?

Planning to attend professional or graduate school in the life or health sciences

Interested in a biology degree that is less math and chemistry oriented than the BS degree

Looking to gain research experience in an active, funded research laboratory

CELLULAR AND MOLECULAR BIOLOGY EMPHASIS



DEPARTMENTAL OVERVIEW

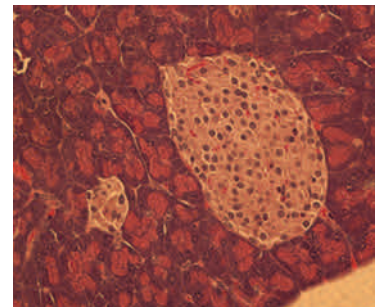
Our department is a cell and molecular focused biology program in the College of Natural Sciences and Mathematics that prepares students for careers in the health care industry, basic science and other biotechnology related fields. Our students address important biological principles using the latest cell and molecular-based approaches in both plant and animal model systems. Research conducted here focuses on human, plant and animal diseases, function or development of nervous and other organ systems, regulation of signaling pathways and other topics that expose students to advanced biological research methods and concepts. Outstanding students may become involved as peer mentors, undergraduate researchers or teaching assistants, or study in England at the University of Salford.

AREAS OF RESEARCH

- Cancer Biology
- Cell Biology
- Cell Cycle Control
- Developmental Biology
- Immunology
- Neurobiology
- Plant Biology

What to expect when you graduate

Students with an interest in the BA in Biology often focus on post-baccalaureate programs such as Medical Technology, PA school, Physical Therapy, Podiatry or other programs that emphasize health care but do not require the advanced math and chemistry associated with the BS. Others pursue advanced degrees in law, business, regulatory affairs or science education. Still others will pursue joint degrees with other programs in the liberal arts.



Pancreatic Islet Cells

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CURRICULUM: Our coursework emphasizes basic biological principles, but also focuses on courses that prepare students for careers in the life sciences. Our emphasis on cell and molecular biology reflects the need to understand these areas to succeed in professional degree programs. A sample curriculum is summarized below:

SAMPLE CURRICULUM

First Year

Fall Semester

NSM 1000 Orientation	1
CHEM 1090 Elementary Chemistry	3
MATH 1320 College Algebra	3
ENGL 1110 College Composition I	3
University Core Elective	3
University Core Elective	3

Total 16 hrs.

Spring Semester

BIOL 2170 Fund of Life Science: Cells	4
BIOL 2180 Fund of Life Science Lab	1
CHEM 1230 General Chemistry I	4
CHEM 1280 General Chemistry I Lab	1
ENGL 1130-1150 Composition II	3
University Core Elective	3

Total 13-16 hrs.

Second Year

Fall Semester

BIOL 2150 Fund of Life Science: Diversity	4
BIOL 2160 Fund of Life Science Lab	1
CHEM 1240 General Chemistry II	4
CHEM 1290 General Chemistry II Lab	1
MATH 1330 or elective	3
University Core Elective	3

Total 13-16 hrs.

Spring Semester

BIOL 3010 Molecular Genetics	3
Foreign Language I	4
CHEM 2410 Organic Chemistry I	3
CHEM 2460 Organic Chemistry I Lab	1
University Core Elective	3

Total 14 hrs.

Third Year

Fall Semester

PHYS 2070 General Physics I	5
CHEM 2420 Organic Chemistry II	3
CHEM 2470 Organic Chemistry II lab	1
BIOL 3030 Cell Biology	3
Foreign Language II	3

Total 15 hrs.

Spring Semester

PHYS 2080 General Physics II	5
BIOL 3070 Human Physiology	3
University Core Elective	3
WAC Elective	3

Total 14 hrs.

Fourth Year

Fall Semester

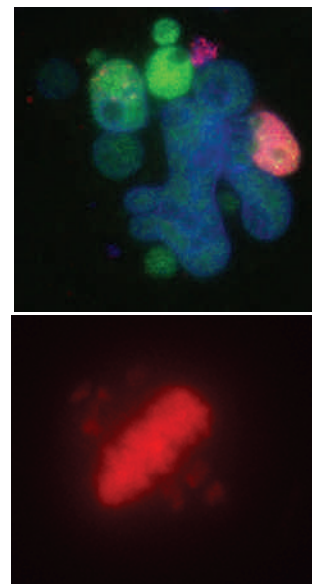
BIOL Elective	3-6
Core electives	3-6
Career-related Electives	6-9

Total 15-18 hrs.

Spring Semester

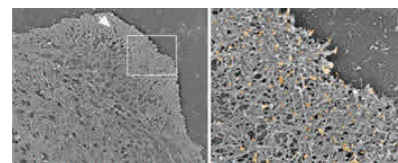
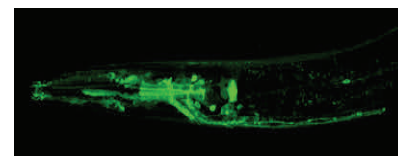
BIOL Elective	3-6
Core Electives (as needed)	3-6
Statistics (MATH 2600 or PSY 2100)	3
BIOL 4700 (WAC)	3

Total 12-15 hrs.



For more information about the University of Toledo visit:
<http://www.utoledo.edu/>

For more detailed information about our research visit:
<http://www.utoledo.edu/nsm/bio/research.html>



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