

BIOLOGY @ WAGNER

The Department of Biological Sciences has designed a curriculum that provides students a broad understanding of principles governing life processes from molecular to ecosystem levels of organization. Students are taught respect for life, the environment and the place of humans in the biosphere. A **common core curriculum** and a capstone internship or research experience insure that all students will have a broad-based and practical understanding of biology. Graduates of the major often attend medical, dental or pharmacy school. Students entering the private sector will often conduct research in their specific field of study.

Wagner College is a competitive, four-year private college founded in 1883. The broad liberal arts curriculum is enhanced by a rich array of internship and other professional and cultural opportunities readily available in New York City.



For more information, contact the Admissions Office at (800) 221-1010 or visit our website at www.wagner.edu.

MISSION:

To provide a quality education with an emphasis on critical thinking and biological relevance to all students — majors and non-majors — within the context of a larger liberal arts setting.

By graduation, biology majors should possess or have demonstrated:

- A basic knowledge of fundamental concepts in cell and molecular biology, and genetics.
- A general knowledge of organismal biology and biodiversity.
- A clear conceptual knowledge of ecological and evolutionary principles.
- A basic knowledge of statistical analysis.

SAMPLE CLASSES

Gene Expression and Development

A course designed to familiarize students with fundamental biological principles emphasizing DNA replication, transcription, translation, control of gene expression, and genomics.

Electron Microscopy

The principles and use of the transmission and scanning electron

microscopes are covered. Students learn the basic techniques of electron microscopic tissue processing and microphotography.

Marine Ecology

After a general description of physical and chemical parameters in marine waters, the course focuses on benthic and pelagic life in different marine environments such as the sunlit ocean surface, deep-sea communities, upwelling areas, coral reefs, submerged vegetation communities, and estuaries.

FIRST YEAR LEARNING COMMUNITY EXAMPLE

Science: The Good, the Bad, and the Controversial

This LC will focus on scientific thought and method as related to human health, pharmaceuticals, waste and pollution. The chemistry and biology behind scientific issues such as industrial drug design, chemical mutagens in water, and compost and solid waste disintegration will be analyzed. *Minds, Machines, and Human Beings* We will examine various philosophical and biological approaches to our understanding of conscious life and their cultural impact. We will discuss the nature

of the mind, the concept of a person, the relation of mind and body, the reduction of mind to brain, and whether a machine could think. Can robotic technology transform, or perhaps, replace human beings?

INTERNSHIP EXAMPLES

Hospital for Joint Disease
Sloan-Kettering Cancer Center
Mount Sinai Hospital
Twin Lakes Wastewater Plant
NYU Medical Center

RESEARCH TOPICS

- “Effect of Ethanol on the Ability of Zebrafish to Respond to Stimuli”
- “Mosquito Larvae”
- “MicroRNA Regulation of Normal & Malignant Hematopoiesis”
- “Bacteria & Dental Caries as Related to Inhibition with Toothpaste and Mouthwash”

CONTACTS

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