Research Opportunities

Students may enroll (with Departmental permission) in independent biochemical research studies to gain further familiarity with modern biochemical and molecular biology techniques. Students are encouraged to publish and present their research findings at scientific meetings. Competitive fellowships for summer research internships are available.

Research Support

The biochemistry research faculty members maintain equipment typically found in modern biochemistry and molecular biology laboratories. Noteworthy equipment includes PCR apparatus; inverted microscopes for reflected light with camera and VCR; X-band EPR equipped for low temperature; diode array stopped-flow spectrophotometer; chemical freeze-quench apparatus; densitometer; confocal microscope; and image analysis system; fluorescence microscopes; solid-state laser pumped titanium sapphire time-resolved photon counting fluorescence spectrometer; phase and modulation fluorometer; HPLC; ultracentrifuges; cold rooms equipped with FPLC; sterilizers and incubator rooms; and extensive computer resources.

In addition, the Chemistry, Biology and Physics Departments provide state-of-the-art equipment for support of research, including a 450 MHz FT-NMR; GC/MS and several GC systems; FT-IR spectrometer; atomic absorption spectrometer; spectrofluorimeter; stopped-flow spectroscopy; high-pressure spectroscopy equipment; STM/AFM digital instrument; total carbon analyzer; scanning and transmission electron microscopes; potentiostats/galviosstats; cyclic voltammetry; several gas and liquid chromatographs and analytical uv/vis spectrophotometers. Departmental facilities also includes a well-equipped machine shop and machinist available to faculty and graduate students.

About Brooklyn College

Brooklyn College is widely regarded as one of the best public urban colleges in the United States. Founded in 1930, the College moved in 1937 to its present campus in Flatbush: twenty-six tree-lined acres featuring a broad Quadrangle surrounded by Georgian-style buildings. As one of the eleven senior colleges of the City University of New York, Brooklyn College shares the mission of providing access and academic excellence to students.

For additional information, contact:

The Deputy Chairperson
Department of Chemistry
(Room 359NE)
Brooklyn College
2900 Bedford Avenue
Brooklyn, New York 11210-2889
Tel: 718-951-5458

or, consult the Department of Chemistry Web site:

http://academic.brooklyn.cuny.edu/chem/faculty.html

Requirements for the Minor in Biochemistry

http://academic.brooklyn.cuny.edu/chem/faculty.html
Introduction
The interdisciplinary science of biochemistry utilizes fundamental chemical theory and research techniques for explorations into biological problems. A background in biochemistry helps to prepare students for science careers that explore life processes at the cellular and molecular level.

Description
The Minor in Biochemistry has been offered through the Department of Chemistry since Fall 2000. Designed to provide students with a basic foundation in the biological sciences, the Biochemistry Minor prepares students for the burgeoning professional opportunities in the biotechnology and pharmaceutical industries, government, research and teaching, graduate education in biochemistry or the medical sciences.

Minor in Biochemistry

Courses and Requirements
To complete the minor in biochemistry, the following courses are required, each completed at Brooklyn College with a grade of C- or higher:

- Biology 17
- Chemistry 1, or both 1.1 and 1.2
- Chemistry 2
- Chemistry 41 or Biology 17.1
- Chemistry 51
- Chemistry 52
- Chemistry 57
- Chemistry 58 or 58.1

To learn more about the Minor in Biochemistry degree option, visit our website at: http://academic.brooklyn.cuny.edu/chem/faculty.html

Course Descriptions:
(See the current Undergraduate Bulletin for further information)

Biology 17 (Molecular Biology): Principles and problems of the structure and functions of cell components. Emphasis will be placed on the molecular composition of cells and on methods of research (2 credits).

Chemistry 1 or 1.1/1.2 (General Chemistry I): Principles of chemistry. Emphasis on the facts, theories, and laboratory techniques needed for further courses in the sciences (5 credits).

Chemistry 2 (General Chemistry II): Continuation of Chemistry 1 (5 credits).


Biology 17.1 (Laboratory in Eukaryotic Cell Biology and Function): Experiments are designed around fundamental questions in the eukaryotic cell biology and physiology with a strong emphasis on contemporary sophisticated cell and molecular biology techniques. Computer simulations are prerecorded video disks which supplement the experiments (2 credits).

Chemistry 51 (Organic Chemistry I): Structures and properties of fundamental classes of organic compounds. Emphasis on reactivity, reaction mechanisms, synthesis, stereochemistry, and applications to allied fields. Chemistry 51 and 52 are required for admission to medical and dental school (5 credits).

Chemistry 52 (Organic Chemistry II): Continuation of Chemistry 51 (5 credits).
