

Program Leading to the Ph.D. Degree in Biomedical Sciences GSBS - Newark UMDNJ

DESCRIPTION:

The GSBS-Newark offers a program of study leading to the Ph.D. in Biomedical Sciences. The goal of this program is to train research scientists in the latest theory and technology used in modern molecular, cellular and biomedical research and to apply this knowledge to solving biomedical research problems. To achieve this goal, a multi-disciplinary program has been developed that offers a flexible curriculum individually tailored to students needs. This program consists of:

A CORE COURSE

covering Molecular & Cellular Biology, Genetics, Cellular Physiology & Biophysics, Immunology and Neuroscience; 8 credits over 2 semesters

A SEMINAR IN

Biomedical Sciences (2 credits) Ethics in Science, Research & Scholarship

A MINIMUM OF 3 LAB

rotations with members of the research faculty as shown in department listing (2 credits each)

Elective coursework is chosen from any of the traditional departmental offerings, with the guidance and approval of the program committee. A typical series of courses available for first year students is illustrated below:

REQUIRED COURSES

FALL

Core Course Part I (5 credits)
Seminar - 1 credit

SPRING

Core Course Part II (3 credits)
Seminar (1)

Lab Rotation (6 credits; 3 rotations; to begin in Fall or Spring semester)

REPRESENTATIVE ELECTIVE COURSES (CHOOSE 1 OR 2 EACH SEMESTER)

Cell Pathology (2)
Microbial Pathogenesis (3)
Principles of Pharmacology (3)
Protein Structure (2)
Neuroscience I (4)
Human Genetics and Development (3)

Advanced Cell Biology (3)
Current Molecular Techniques (3)
Laboratory Animal Science (3)
Molecular Cellular Immunology (3)
Physiology (5)
Neuroscience II (3)
Molecular & Immunopath. Mech. in Cancer (2)
Signaling Mechanisms in Biological Systems (2)
Advanced Microbial Genetics (4)

Students are expected to choose a Ph.D. mentor from the research faculty, as shown in the department listing, no later than the **beginning** of the fourth semester.

A comprehensive Qualifying Exam is administered at the end of the fourth semester, after which students devote their full time to laboratory research.

A stipend of **\$18,500/year** is awarded to all accepted students, and students in good standing can expect continued support for the duration of their time in the program.