

## **Guided Curriculum for Bioinformatics/Genomics focus:**

### **Required:**

**Choose 8 credits from the following courses**

#### **Primary**

- Molecular Genetics of Model Organisms MBGC 5055Q (2 cr) Block 3
- Introduction to Genomics, Proteomics and Bioinformatics MBGC 5002Q (2 cr) Block 4

#### **Secondary**

- Cellular Pathology PATH5100Q (2 cr) Block 8
- Protein Dynamics in Health and Disease MBGC 5030Q (2cr) Block 5
- Nucleic Acids MBGC5070Q, MBGC 5071Q (2x2 cr) Blocks 7 & 8

**Electives: (any course listed as "required" can also serve as an elective)**

#### **Primary (course numbers are incomplete, apologies)**

- Advanced Bioinformatics BIOC 5003Q (2 cr)
- Human Genetics MICR 5045Q (2 cr)
- Viruses, Cells and Disease BIOC5125Q (2 cr)
- Molecular and Cellular Immunology PATH 5210Q (3 cr)
- Animal Models on Human Disease GSND 5215Q (2 cr)
- Principles of Pharmacology CBNP 5020Q (2 cr)
- Introduction to Structural Biology (1 cr)

#### **Secondary**

- Methods in Stem Cells, Transgenics, Imaging Techniques (2 cr)
- Developmental Biology (2 cr)
- Neuroscience (2x2 cr)
- Classic and 21<sup>st</sup> Century Pathogens TIII5620Q (2 cr)
- Cancer Biology MBGC 5015Q, 5020Q (2x2 cr) Blocks 3 & 4
- Signalling Mechanisms in Biological Systems MBGC 5220Q (2 cr) Block 5

**The following courses are NJIT courses and are also suggested**

- **CS 610 - Data Structures and Algorithms (3 credits)**
- **CS 631 - Data Management System Design (3 credits)**