

# WORKSHEET FOR SELECTING A COURSE SEQUENCE

## Molecular and Cell Biology Concentration

Please complete this worksheet and return it, along with the Student Information Form, to the Biology Academic Office in Leidy Labs, room 102. When you are provisionally admitted to the major you will be assigned to a major advisor and these documents will become part of your major file.

You must discuss your course selections with your major advisor. The aim of the discussion is to construct a combination of courses that closely reflects your specific interests. Once your major advisor has approved this form, retain a copy for yourself and return the original form, along with your major file, to the Biology Academic Office. You may make changes to your course plan even after your advisor has signed off on it. However, it is your responsibility to ensure that your new course choices fulfill the concentration requirements.

COURSE

### Concentration Requirements (17.5 or 18.0 CU)

#### Introductory Biology Track 1:

BIOL 121 and BIOL 123      1.5      \_\_\_\_\_

#### OR Track 2:

BIOL 101 and BIOL 102      3.0      \_\_\_\_\_

#### 4.0 CU of Chemistry, chosen from the following:

(Circle Appropriate Courses.)

CHEM 101 or 115      1.0      \_\_\_\_\_

CHEM 102 or 116      1.0      \_\_\_\_\_

CHEM 53 and 54      1.0      \_\_\_\_\_

CHEM 241      1.0      \_\_\_\_\_

CHEM 242      1.0      \_\_\_\_\_

CHEM 245      1.0      \_\_\_\_\_

#### 2.0 CU of Calculus and/or Statistics

(Circle Appropriate Courses.)

MATH 104      1.0      \_\_\_\_\_

MATH 114 or 115      1.0      \_\_\_\_\_

STAT 111 or BIOL 446      1.0      \_\_\_\_\_

COURSE

### Intermediate Biology (3 CU)

BIOL 204 or CHEM 251      1.0      \_\_\_\_\_

BIOL 205      1.0      \_\_\_\_\_

BIOL 221      1.0      \_\_\_\_\_

### Intermediate and Advanced Electives:

(Track 1: 5 courses; Track 2: 4 courses)

#### Group 1:

Molecular/Cell course      BIOL \_\_\_\_\_ 1.0 \_\_\_\_\_

Molecular/Cell course      BIOL \_\_\_\_\_ 1.0 \_\_\_\_\_

#### Group 2:

Genetics/Genomics course      BIOL \_\_\_\_\_ 1.0 \_\_\_\_\_

Genetics/Genomics course      BIOL \_\_\_\_\_ 1.0 \_\_\_\_\_

#### Additional elective:

(Track 1 only)      BIOL \_\_\_\_\_ 1.0 \_\_\_\_\_

### Advanced Experimental Research:

BIOL \_\_\_\_\_ 1.0 \_\_\_\_\_

BIOL \_\_\_\_\_ 1.0 \_\_\_\_\_

Thesis Advisor \_\_\_\_\_

(399 Supervisor)

SURB Presentation – Spring \_\_\_\_\_

STUDENT'S NAME \_\_\_\_\_ Penn SID # \_\_\_\_\_

E-MAIL \_\_\_\_\_

ADVISOR'S SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

For office use only: Declared and entered: \_\_\_\_\_

**Group 1: Molecular and Cell Biology**

- BIOL 375 – Microbial Diversity and Pathogenesis (1 CU)
- BIOL 404 – Immunobiology (1 CU)
- BIOL 406 – Molecular Mechanisms of Human Disease (1 CU)
- BIOL 407 – Cancer Biology (1 CU)
- BIOL 480 – Advanced Cell Biology (1 CU)
- BIOL 482 – Cell Signaling (1 CU)
- BIOL 484 – Cell Motility and the Cytoskeleton (1 CU)
- BIOL 486 – Chromosome and the Cell Cycle (1 CU)

**Group 2: Genetics and Genomics**

- BIOL 421 – Molecular Genetics (1 CU)
- BIOL 422 – Genomics of Human Disease and Evolution (1 CU)
- BIOL 431 – Genome Sciences and Genomic Medicine (1 CU)
- BIOL 437 – Introduction to Computational Biology and Biological Modeling (1 CU)
- BIOL 483 – Epigenetics (1 CU)
- BIOL 540 – Genetic Systems (1 CU)
- BIOM 555 – Gene Expression (1 CU)

**Advanced Experimental Research**

- BIOL 376 – Molecular Diversity and Pathogenesis Laboratory (1 CU)
- BIOL 425 – Biochemistry and Molecular Genetics Superlab (1 CU)
- BIOL 399 – Independent Study (1 CU)
- BIOL 499 – Advanced Independent Study (1 CU)