

WORKSHEET FOR SELECTING A COURSE SEQUENCE

Mechanisms of Disease 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.

Concentration Requirements (17.5-18 CU)

Introductory Biology (1.5 CU) Semester Year
 BIOL 121 and BIOL 123 1.5 _____

OR Track 2:

BIOL 101 and BIOL 102 3.0 _____

Chemistry (4 CU)
 (Circle Appropriate Course.)
 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 _____

Calculus (1 CU)
 (Circle Appropriate Course.)
 MATH 104 or 114 or 115 1.0 _____

Statistics (1 CU)
 (Circle Appropriate Course.)
 STAT 111 or BIOL 446 1.0 _____

Intermediate Biology (4-4.5 CU)
 (Circle Appropriate Course.)
 BIOL 204 or CHEM 251 1.0 _____

BIOL 205 1.0 _____

BIOL 221 1.0 _____

BIOL 215 or 251 or 404 1.0 _____
Note: BIOL 251 = 1.5 CU

Advanced Electives (5 CU Total)

(Circle Appropriate Courses.)

Microbes and Infectious Disease: (1 CU)

BIOL 375, 406, 430 or 475 1.0 _____

Genetic Disease*:(2 CU)

_____ 1.0 _____

_____ 1.0 _____

Molecular Genetics and Genomics: (1 CU)

BIOL 422 or 431 or 485 1.0 _____

Additional Elective*:(1 CU)

BIOL _____ 1.0 _____

Research Experience (1 CU)

BIOL 399 1.0 _____

Thesis Advisor _____
 (399 Supervisor)

***Please See Back Page**

STUDENT'S NAME _____ Penn SID # _____

ADVISOR'S SIGNATURE _____ DATE _____

For office use only: Declared and entered: _____

ADVANCED ELECTIVES (5 CU):

Take 1 course on Microbes and Infectious Disease (1 CU):

- BIOL375: Microbial Diversity and Pathogenesis (1 CU) (spring, lecture course)
- BIOL406: Molecular Mechanisms of Infectious Disease (1 CU) (spring, seminar course)
- BIOL430: Evolution and Ecology of Infectious Diseases (1 CU) (fall, lecture course)
- BIOL475: Topics in Prokaryotic Biology: From Molecules to Microbes (1 CU) (spring)

Take 2 courses on Genetic Underpinnings of Disease (2 CU):

- BIOL466: Molecular Genetics of Neurological Disease (1 CU) (fall, not offered 2018)
- BIOL482: Cell signaling (1 CU) (fall, not offered 2018)
- BIOL483: Epigenetics (1 CU) (fall, lecture course)
- BIOL484: Cell motility and cytoskeleton (1 CU) (fall)
- BIOL540: Genetic Systems (1 CU) (spring even, lecture course)

Take 1 course on Molecular Genetics & Genomic (1 CU):

- BIOL422: Genomics of Human Disease and Evolution (1 CU) (spring odd)
- BIOL431: Genome Sciences and Genomic Medicine (1 CU) (spring)
- BIOL485: The RNA world: A Functional and Computational Analysis (1 CU) (spring even)

Additional 1 elective from courses listed above or below (1 CU):

Fundamental Biological Processes:

- BIOL230: Evolutionary Biology (1 CU) (spring, lecture course)
- BIOL448: Principles of Drug Action (1 CU) (fall, lecture course)

Microbes and Infectious Disease:

- BIOL376: Microbial Diversity and Pathogenesis Laboratory (1 CU) (spring, laboratory course)

Genetics and Genetic diseases:

- BIOL493: Epigenetics of Human Health and Disease (1 CU) (spring even)

Molecular Genetics and Genomics:

- BIOL437 Introduction to Computational Biology & Biological Modeling (1 CU) (spring)
- BIOL522: Human Evolutionary Genomics (1 CU) (spring even).

Other courses may be appropriate as the additional elective; however, the course requires prior approval by an MD advisor to be credited toward the concentration.

Research Experience (1 CU):

1 CU of independent study (BIOL399) is required for the concentration.