

# 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.

<b>Concentration Requirements (17.5-18 CU)</b>		<b>Intermediate Biology (4 CU)</b>	Semester	Year
<b>Introductory Biology (2-3 CU)</b>	Semester	Year		
<b>Track 1 (2 CU)</b>		BIOL 2810 or CHEM 2510 (1 CU)	_____	_____
BIOL 1121/1123	1.5 CU _____	BIOL 2010 (1 CU)	_____	_____
BIOL 1124	0.5 CU _____	BIOL 2210 (1 CU)	_____	_____
<b>OR Track 2 (3 CU)</b>		BIOL 2311 or 2110 or 3310 or 4004 (1 CU)	_____	_____
BIOL 1101	1.5 CU _____			
BIOL 1102	1.5 CU _____			
<b>Chemistry (4 CU)</b>		<b>Advanced Electives (5 CU)</b>		
(Circle Appropriate Course)		(See List on second page)		
CHEM 1011 or 1012 or 1151 (1 CU)	_____	<u>Microbes and Infectious Disease (1 CU)</u>		
CHEM 1021 or 1022 or 1161 (1 CU)	_____	BIOL _____	_____	_____
CHEM 1101 and 1102 (1CU)	_____	<u>Genetic Disease (2 CU)</u>		
CHEM 2411 (1.5 CU)	_____	BIOL _____	_____	_____
CHEM 2421 (1.5 CU)	_____	<u>Molecular Genetics and Genomics (1 CU)</u>		
<b>MATH (2 CU)</b>		BIOL _____	_____	_____
(Circle Appropriate Course)		<u>Additional Elective (1 CU)</u>		
MATH 1400 or 1410 or 1510 (1 CU)	_____	BIOL _____	_____	_____
AND		<b>Research Experience (1 CU)</b>		
STAT 1110 or BIOL 2510 (1 CU)	_____	BIOL 3999 (1 CU)	_____	_____

STUDENT NAME \_\_\_\_\_

PENNID \_\_\_\_\_

## **ADVANCED ELECTIVES (5 CU):**

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

- BIOL3710: Microbial Diversity and Pathogenesis (1 CU) (spring, lecture course)
- BIOL4016: Molecular Mechanisms of Infectious Disease (1 CU) (spring, seminar course)
- BIOL4430: Evolution and Ecology of Infectious Diseases (1 CU) (fall, lecture course)
- BIOL4710: Topics in Prokaryotic Biology: From Molecules to Microbes (1 CU) (spring)

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

- BIOL4233 Genetics of Adaptation (1CU)(spring)
- BIOL4266: Molecular Genetics of Neurological Disease (1 CU) (fall)
- BIOL4022: Cell signaling (1 CU) (fall)
- BIOL4234: Epigenetics (1 CU) (fall, lecture course)
- BIOL4024: Cell motility and cytoskeleton (1 CU) (fall)
- BIOL5240: Genetic Systems (1 CU) (spring even, lecture course)

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

- BIOL4536: Introduction to Computational Biology and Biological Modeling (1 CU) (fall)
- BIOL4231: Genome Sciences and Genomic Medicine (1 CU) (spring)
- BIOL5220: Human Evolutionary Genomics (1 CU) (spring even)

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

#### *Fundamental Biological Processes:*

- BIOL2410: Evolutionary Biology (1 CU) (spring, lecture course)
- BIOL4048: Principles of Drug Action (1 CU) (fall, lecture course)

#### *Microbes and Infectious Disease:*

- BIOL3711: Microbial Diversity and Pathogenesis Laboratory (1 CU) (spring, laboratory course)

#### *Genetics and Genetic diseases:*

- BIOL4244: Epigenetics of Human Health and Disease (1 CU) (spring even)

#### *Molecular Genetics and Genomics:*

- BIOL4536 Introduction to Computational Biology & Biological Modeling (1 CU) (spring)
- BIOL5220: Human Evolutionary Genomics (1 CU) (spring even).

*Other courses may be appropriate as the additional elective; however, the course requires prior approval by a concentration advisor to be credited toward the major requirements.*