

# BIOCHEMISTRY

## 2019–2020 ACADEMIC YEAR

Name: \_\_\_\_\_

I.D. Number: \_\_\_\_\_

### CORE OF DISCOVERY (42)

- \_\_\_\_\_ \_First Year Seminar (2)
- \_\_\_\_\_ \_LENG 111 College Composition (3)
- \_\_\_\_\_ \_LENG 112 Critical Analysis & Composition (3)
- \_\_\_\_\_ \_LENG Literature Series (3)
- \_\_\_\_\_ \_LTHE 101 Foundations Theology/Morality (3)
- \_\_\_\_\_ \_LTHE 201 The Bible: An Introduction (3)
- \_\_\_\_\_ \_LPHI 131 Introduction to Philosophy (3)
- \_\_\_\_\_ \_LPHI Philosophy II Series\* (3)
- \_\_\_\_\_ \_LPHI 237 or any 300-level LTHE course (3)
- \_\_\_\_\_ \_LFIN Fine Arts Series\* (3)
- \_\_\_\_\_ \_LHST 111 History Without Borders (3)
- \_\_\_\_\_ \_SPCH 111 or SPCH 113 (3)
- \_\_\_\_\_ \_Social Science Elective\* (3)
- \_\_\_\_\_ \_LBST 383 Senior Seminar (3)
- \_\_\_\_\_ \_Leadership Seminar (1)

\* Refer to Undergraduate Catalog for course options.

### MATHEMATICS (9)

- \_\_\_\_\_ \_MATH 140 Calculus I (3)
- \_\_\_\_\_ \_MATH 141 Calculus II (3)
- \_\_\_\_\_ \_MATH 213 Applied Statistics (3)

### PHYSICS (8)

- \_\_\_\_\_ \_PHYS 210 Fundamentals of Physics I (3)
  - \_\_\_\_\_ \_PHYS 211 Fundamentals of Physics I Lab (1)
  - \_\_\_\_\_ \_PHYS 212 Fundamentals of Physics II (3)
  - \_\_\_\_\_ \_PHYS 213 Fundamentals of Physics II Lab (1)
- OR**
- \_\_\_\_\_ \_PHYS 105 College Physics I (3)
  - \_\_\_\_\_ \_PHYS 106 College Physics I Lab (1)
  - \_\_\_\_\_ \_PHYS 108 College Physics II (3)
  - \_\_\_\_\_ \_PHYS 109 College Physics II Lab (1)

### CHEMISTRY OR BIOLOGY ELECTIVES\*\* (8)

- \*\* Must be 200-, 300-, or 400-level CHEM courses **OR**
- BIOL 126/127: Ecosystems Biology & Evolution + Lab
  - BIOL 331/332: Microbiology + Lab
  - BIOL 338/339: Immunology + Lab
  - BIOL 358/359: Plant Physiology and Lab
  - BIOL 375/376: Cell Biology Lab (**recommended**)
- Please consult with your advisor.*

### CHEMISTRY (44)

- \_\_\_\_\_ CHEM 111 General Chemistry I (3)
- \_\_\_\_\_ CHEM 112 General Chemistry I Lab (1)
- \_\_\_\_\_ CHEM 114 General Chemistry II (3)
- \_\_\_\_\_ CHEM 115 General Chemistry II Lab (1)
- \_\_\_\_\_ CHEM 221 Organic Chemistry I (3)
- \_\_\_\_\_ CHEM 222 Organic Chemistry I Lab (1)
- \_\_\_\_\_ CHEM 224 Organic Chemistry II (3)
- \_\_\_\_\_ CHEM 225 Organic Chemistry II Lab (1)
- \_\_\_\_\_ CHEM 325 Organic Spectroscopic Mthds (3)
- \_\_\_\_\_ CHEM 326 Organic Spectroscopic Mthds Lab (1)
- \_\_\_\_\_ CHEM 331 Physical Chemistry I (3)
- \_\_\_\_\_ CHEM 332 Physical Chemistry I Lab (1)
- \_\_\_\_\_ CHEM 361 Inorganic Chemistry (3)
- \_\_\_\_\_ CHEM 366 Structural Biochemistry (3)
- \_\_\_\_\_ CHEM 367 Structural Biochemistry Lab (1)
- \_\_\_\_\_ CHEM 414 Computational Chemistry (2)
- \_\_\_\_\_ CHEM 368 Biochemical Pathways (3)
- \_\_\_\_\_ CHEM 336 Intro to Modern Analy Chem (3)
- \_\_\_\_\_ CHEM 337 Intro to Modern Analy Chem Lab (2)
- \_\_\_\_\_ CHEM 356 Chemical Literature (1)
- \_\_\_\_\_ Undergraduate Research (1 ea over 2 smstrs) (2)
- \_\_\_\_\_ CHEM 380 or 381 or 382 **OR**
- \_\_\_\_\_ BIOL 487, 488 or 489

### BIOLOGY (16)

- \_\_\_\_\_ BIOL 122 Molecular & Cellular Biology (3)
- \_\_\_\_\_ BIOL 123 Molecular & Cellular Biology Lab (1)
- \_\_\_\_\_ BIOL 124 Animal Form & Function (3)
- \_\_\_\_\_ BIOL 125 Animal Form & Function Lab (1)
- \_\_\_\_\_ BIOL 265 Genetics (3)
- \_\_\_\_\_ BIOL 266 Genetics Lab (1)
- \_\_\_\_\_ BIOL 373 Cellular Biochemistry (3)
- \_\_\_\_\_ BIOL 374 Cellular Biochemistry (1)

### GENERAL ELECTIVE (1)

- \_\_\_\_\_ \_\_\_\_\_ (1)

**Minimum Total Credits: 128**  
**Effective Date: Fall 2019**

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# BIOCHEMISTRY

## 2019–2020 ACADEMIC YEAR

Name: \_\_\_\_\_

I.D. Number: \_\_\_\_\_

### FRESHMAN

#### Fall (16 credits)

- 3 CHEM 111: General Chemistry I
- 1 CHEM 112: General Chemistry I Lab
- 3 MATH 140: Calculus I
- 3 LENG 111: College Composition
- 3 BIOL 122: Molecular & Cellular Biology
- 1 BIOL 123: Molecular & Cellular Biology Lab
- 2 First-Year Seminar

#### Spring (17 credits)

- 3 CHEM 114: General Chemistry II
- 1 CHEM 115: General Chemistry II Lab
- 3 MATH 141: Calculus II
- 3 LENG 112: Critical Analysis & Composition
- 3 BIOL 124: Animal Form and Function
- 1 BIOL 125: Animal Form and Function Lab
- 3 LTHE 101: Foundations of Theology and Morality

### SOPHOMORE

#### Fall (17 credits)

- 3 CHEM 221: Organic Chemistry I
- 1 CHEM 222: Organic Chemistry I Lab
- 3 PHYS 210: Fundamentals of Physics I
- 1 PHYS 211: Fundamentals of Physics I Lab
- 3 LHST 111: History without Borders
- 3 LPHI 131: Introduction to Philosophy
- 3 SPCH 111: Public Speaking  
or SPCH 113: Human Communication

#### Spring (15 credits)

- 3 CHEM 224: Organic Chemistry II
- 1 CHEM 225: Organic Chemistry II Lab
- 3 PHYS 212: Fundamentals of Physics II
- 1 PHYS 213: Fundamentals of Physics II Lab
- 3 BIOL 265: Genetics
- 1 BIOL 266: Genetics Lab
- 3 LENG: Literature Series

### JUNIOR

#### Fall (18 credits)

- 3 CHEM 331: Physical Chemistry I
- 1 CHEM 332: Physical Chemistry I Lab
- 3 CHEM 325: Organic Spectroscopic Methods
- 1 CHEM 326: Organic Spectroscopic Methods Lab
- 3 CHEM 366: Structural Biochemistry
- 1 CHEM 367: Biochemistry Lab
- 3 LTHE 201: The Bible
- 3 LPHI: Philosophy II Series

#### Spring (17 credits)

- 3 CHEM 336: Intro to Modern Analytical Chemistry
- 2 CHEM 337: Intro to Modern Analytical Chemistry Lab
- 1 CHEM 356: Chemical Literature
- 3 MATH 213: Applied Statistics
- 3 BIOL 373: Cellular Biochemistry
- 1 BIOL 374: Cellular Biochemistry Lab
- 3 LPHI 237 or any 300-level LTHE course
- 1 Leadership Seminar

### SENIOR

#### Fall (16 credits)

- 4 Chemistry or Biology Electives\*
- 3 CHEM 361: Inorganic Chemistry
- 3 CHEM 368: Biochemical Pathways
- 2 CHEM 414: Computational Chemistry
- 1 Undergraduate Research (in Chemistry or Biology)
- 3 LFIN: Fine Arts Series

#### Spring (12 credits)

- 4 Chemistry or Biology Electives\*
- 3 Social Science
- 3 LBST 383: Senior Seminar
- 1 Undergraduate Research (in Chemistry or Biology)
- 1 General Elective

**TOTAL = 128 CREDITS**

\* Must be 200-, 300-, or 400-level CHEM courses; or Ecosystems Biology and Evolution + Lab (BIOL 126/127); Microbiology + Lab (BIOL 331/332); BIOL 338/339: Immunology + Lab; Plant Physiology + Lab (BIOL 358/359); Cell Biology (BIOL 375/376) (**strongly recommended**). Please consult with your advisor.