

# BS in Cell Biology and Physiology (285721) MAP Sheet

Life Sciences, Cell Biology and Physiology

For students entering the degree program during the 2025-2026 curricular year.



## FRESHMAN YEAR

### 1<sup>st</sup> Semester

CELL 120 (Biological Science) 3.0  
CHEM 105 4.0  
First-Year Writing or A HTG 100 3.0  
Religion Cornerstone Course 2.0  
Quantitative Reasoning (if needed) 0-3.0  
UNIV 101 2.0  
Total Hours 14-17.0

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### 2<sup>nd</sup> Semester

CHEM 106 3.0  
CHEM 107 1.0  
PHSCS 105 3.0  
First-Year Writing or A HTG 100 3.0  
Religion Cornerstone Course 2.0  
Languages of Learning Elective 3-4.0

Total Hours 15-16.0

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## SOPHMORE YEAR

### 3<sup>rd</sup> Semester

CELL 220 4.0  
MMBIO 240 3.0  
MMBIO 241 1.0  
CHEM 351 3.0  
GE Course 3.0  
Religion Cornerstone Course 2.0  
Total Hours 16.0

### 4<sup>th</sup> Semester

CELL 325 3.0  
CELL Experimental Learning (see major requirement #4) 1-2.0  
CHEM 352 3.0  
PHSCS 106 3.0  
Global & Cultural Awareness Course 3.0

Religion Cornerstone Course 2.0

Total Hours 15-16.0

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## JUNIOR YEAR

### 5<sup>th</sup> Semester

CELL 360 3.0  
CELL Experimental Learning (see major requirement #4) 1-2.0  
CHEM 481 3.0  
PWS 340 3.0  
GE Course 3.0  
Religion Elective 2.0  
Total Hours 15-16.0

### 6<sup>th</sup> Semester

CELL 362 3.0  
CELL 363 1.0  
CELL 382 3.0  
Advanced Writing (WRTG 316 Recommended) 3.0  
GE Course 3.0  
Religion Elective 2.0  
Total Hours 15.0

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## SENIOR YEAR

### 7<sup>th</sup> Semester

CELL 455R 0.5  
Major Elective or Capstone 3.0  
Major Elective 3.0  
General Elective 3.0  
Religion Elective 2.0  
Total Hours 11.5

### 8<sup>th</sup> Semester

Major Elective or Capstone 3.0  
GE Course 3.0  
General Electives 6.0  
Complete Senior Survey/ Exit Interview (See Department) 0.0  
Pass ETS Biology Field Exam (See College Advisement Center) 0.0  
Total Hours 12.0

See University Core requirements here:

<https://catalog.byu.edu/generaleducation>

Note: The Senior Survey, Exit Interview, and ETS Biology Field Exam must be completed during the last semester. You will be contacted during the graduation clearance process.

Note: This degree program requires a minimum of 120.0 hours for graduation. Students are encouraged to complete an average of 15 credit hours each semester or 30 credit hours each year, which could include spring and/or summer terms. Taking fewer credits substantially increases the cost and the number of semesters to graduate.

Note: Enrollment in UNIV 101 can substitute for one of the following GE requirements: Civilization 1, Civilization 2, Arts, Letters, or Social Science.

## THE DISCIPLINE

Cell Biology and Physiology are exciting branches of biology that study the structure, function, and molecular mechanisms of cells, tissues, organs, and organ systems of living organisms. Knowledge and advancement in these fields underlies our modern

understanding of human health and disease. Faculty and students work to understand such remarkable processes as how the heart develops and works to pump blood, how brain cells communicate with one another, how insulin regulates blood sugar, and how specific gene products determine the morphology and functional capacity of the nervous system. Building on a foundation of chemistry, physics, and biology, the integration of molecular, cellular, systems, and whole-body function is what distinguishes the Cell Biology and Physiology major from other life science majors.

### **CAREER OPPORTUNITIES**

A major in Cell Biology and Physiology prepares students to pursue advanced professional or graduate degrees or to enter directly into employment. This major provides outstanding preparation for students seeking admittance into professional programs in medicine, dentistry, optometry, podiatry, chiropractic, or pharmacy. Students who have aspirations of doing health-related research, postsecondary life science teaching, or biotech innovation will find excellent preparation for entrance into graduate programs and beyond. Graduates will also have the academic and laboratory skills necessary for employment in medical, biotech, and pharmaceutical industries. This degree offer students pursuing advanced degrees in business, public management, or law the knowledge and training necessary for admission to professional schools and work in governmental agencies, health care and biotechnical industries, and patent or health care law.

### **STUDENT INVOLVEMENT IN RESEARCH**

Students majoring in Cell Biology and Physiology have the opportunity to become involved in mentored laboratory research with the faculty (CELL 295R and 495R) and to participate in off-campus research internships (CELL 399R). Both types of research experiences should be sought early in your BYU education to allow sufficient time for development of the knowledge and skills needed to be proficient in the lab. Students that become highly engaged in on-campus research and generate sufficient data to participate with faculty in writing a peer-reviewed primary research article reporting their results can fulfill their capstone requirement (CELL 498 in requirement 5 of the MAP). Explore faculty research interests under the RESEARCH tab at [cell.byu.edu](http://cell.byu.edu).

### **EXPERIENTIAL LEARNING**

The Cell Biology and Physiology major provides many fantastic options for students to participate in experiential learning. Students may choose to participate in on-campus mentored research (CELL 295 and CELL 495), offcampus internships (LFSCI199R and CELL 399R), life science teaching (CELL 349, STDEV 132, and STDEV 133), biotech innovation and entrepreneurship (CELL 444 and CELL 445), or exploring current research by directed literature readings (CELL 450R). Students may choose any combination of experiential learning courses that best supports their goals and desires. Experiential learning options should be sought out early in your BYU education.

### **FINANCING**

Various private, federal, and university sources of scholarships, fellowships, and grants are available. Please see the Life Sciences Advisement Center (2060 LSB) for information regarding college- level and department-level scholarships. Advanced undergraduates may be hired as teaching assistants for CELL courses or research assistants in CELL labs.

### **MAP DISCLAIMER**

While every reasonable effort is made to ensure accuracy, there are some student populations that could have exceptions to listed requirements. Please refer to the university catalog and your college advisement center/department for complete guidelines.

### **DEPARTMENT INFORMATION**

#### **Department of Cell Biology and Physiology**

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### **ADVISEMENT CENTER INFORMATION**

#### **Life Sciences Advisement**

Brigham Young University  
2060 Life Sciences Building  
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