BIOLOGY FOR SECONDARY EDUCATION LICENSURE (BS)

Program Requirements

Code	Title	Credits
Required Biology Courses		
BIO-1210 & 1210Z	General Biology I and General Biology I Laboratory	4
BIO-1220 & 1220Z	General Biology II and General Biology II Laboratory	4
BIO-2280 & 2280Z	Microbiology and Microbiology Laboratory	4
BIO-3400	Genetics	4
BIO-3510 & 3510Z	Ecology and Ecology Laboratory	4
BIO-3530	Evolution	4
Selected Courses		
Select 4 semester hours from the following:		4
BIO-3600 & 3600Z	Molecular Biology and Molecular Biology Laboratory	
CHM-3555 & 3555Z	Biochemistry and Biochemistry Laboratory	
Experiential Courses		
Select 2-4 semester hours from the following:		2-4
BIO-3790	ACCA: Affiliated Course	
BIO-3940	Biology Internship	
BIO-3970	Research in Biology	
BIO-4990	Senior Capstone Biological Sciences	
Supporting Courses		
CHM-1310 & 1310Z	General Chemistry I and General Chemistry I Laboratory	4
CHM-1320 & 1320Z	General Chemistry II and General Chemistry II Laboratory	4
CHM-2410 & 2410Z	Organic Chemistry I and Organic Chemistry I Laboratory	4
or CHM-2450/2450Z	Analytical Chemistry	
Additional Required Courses for Secondary Education Biology Licensure Students		
EDU-3200	Content Area Methods for the Secondary Classroom	4
NSM-1400	Earth and Space Science	4
PHY-2210 & 2210Z	General Physics I and General Physics I Laboratory	4
or PHY-2240/2240Z	Physics I (Calculus Based)	
PHY-2220 & 2220Z	General Physics II and General Physics II Laboratory	4
or PHY-2250/2250Z	Physics II (Calculus Based)	
Education Courses for Secondary Education Licensure [3]		
EDU-2100	Foundations of Teaching and Learning	4
EDU-2260	Learning Theories and Applications K-12	4
EDU-3620	Teaching and Assessing Diverse Learners in the Secondary Classroom	4
EDU-3720	Reading Across the Curriculum	4
EDU-4750	Student Teaching	13
EDU-4760	Student Teaching Seminar	2
SPED-2120	Characteristics and Identification of Disabilities and the Law	4
SPED-4620	Collaboration Models for Inclusion	4
Total Credits		**97-99**

[1] A 3.0 major GPA is required one semester prior to student teaching (EDU-4750 Student Teaching and EDU-4760 Student Teaching Seminar).
[2] BIO SED students must take BIO-3510 Ecology & BIO-3530 Evolution.
[3] Secondary education candidates will also complete the supplemental major in secondary education.

Undergraduate Degree Requirements

A student who graduates from Aurora University with a baccalaureate degree will have met the following requirements:

a. Completion of all requirements for an approved major (with no grades lower than "C").
b. Overall completion of at least 120 semester hours of coursework with a GPA of at least 2.0 on a 4.0 scale (a course may be utilized only once in application toward a degree requirement, unless otherwise noted in the academic regulations). The 120 semester hours of coursework must include:
   - At least 52 semester hours completed at a senior college.
   - Residency Requirement - At least 30 semester hours completed at Aurora University, including the last 24 semester hours in the degree, and including at least 18 semester hours in the major. (Portfolio assessment credit, life and vocational experience credit, off-campus experience credit, examination credit, participation credit, and block credit, shall not count toward the residency requirement).
   - Upper-Division Requirement - A minimum of 30 semester hours numbered 3000 or above. Of these 30 semester hours, 15 semester hours must lie within the major and 15 semester hours must be completed at Aurora University.
c. Completion of all General Education requirements (with no grades lower than "C"), as follows:
   - Quantitative and Formal Reasoning competency requirement (https://catalog.aurora.edu/regulations-policy-catalog/academic-regulations-procedures/general-education/#satisfy-quantitative-reasoning-requirement)
   - ENG-1000 Introduction to Academic Writing
   - IDS-1200 Discover What Matters or IDS-3040 Global Justice
   - IDS-1150 First Year Experience - *Not required for Transfer or AU Online students)*
   - Satisfactory participation in the junior-year mentoring and assessment process designed to guide students to successful completion of their degree and to encourage planning for next steps beyond graduation. (IDS-3500 Junior Mentoring Program I and IDS-3550 Junior Mentoring Program II - *Not required for ADC or AU Online students but may be designated electives for AU Online students admitted with fewer than 15 hours of transfer credit.)*
   - Distribution Requirements
     Students will complete one approved course[1] *from each of the following categories:*

- Artistic Literacy
- Cultural Literacy
- Human Inquiry
- Scientific Inquiry

In addition to the above, ADC and Online students will also complete one approved course[1] from the following category:

- Discovery and Reflection

[1] Only courses that are approved to meet the distribution requirement can be used toward this requirement. See the list of approved courses (https://catalog.aurora.edu/regulations-policy-catalog/academic-regulations-procedures/general-education/#approved-courses-gen-ed-distribution) for available options. Courses taken to meet distribution requirements are 4 semester hours apiece, with the following exceptions:
- An approved transfer course of at least 2.50 semester hours can be used to satisfy a distribution requirement.
- Courses with co-requisite laboratory components may be used to satisfy a distribution requirement, provided that the student successfully complete both the three-credit-hour course and the single-credit-hour lab component.

Learning Outcomes

Outcome 1: Content and Theories of Biology – students should understand and apply the major concepts, theories, and empirical findings in biology. More specifically, students will be able to demonstrate and understanding of

a. Biological evolution and ecological principles

b. The structure and function of the cell as the fundamental unit of life

c. Genetics, heredity and molecular biology

d. The diversity of life, including classification of the major groups of organisms

e. The role of energy in living organisms and systems

Outcome 2: Research Methods of Biology – Students should understand and be able to use basic research methods in biology, including research design, data analysis, and interpretation. More specifically, students will be able to:

a. Analyze biological research studies and draw appropriate conclusions based on data

b. Demonstrate knowledge of the principles of experimental design

c. Apply laboratory and/or field techniques common in the biological sciences

d. Demonstrate knowledge of safe practices in the laboratory and/or field

Outcome 3: Biology and Society – Students should understand interrelationships between biology and society. More specifically students will be able to:

a. Describe the real life applications of biological concepts and theories to a target audience

b. Demonstrate understanding of the relationship between biology and other fields of study, such as business, education, math, history, politics, health, medicine, etc.