

# Curriculum - Molecular Biosciences and Biotechnology, BS

Catalog Year: 2026 - 2027 **General Studies Gold**

**Degree:** Bachelor of Science, BS

**College/School:** [The College of Liberal Arts and Sciences](#)

**Plan Code:** LAMBBBS

**Minimum credit hours:** 120

**Upper division minimum credit hours:** 45

Requirement	Minimum Grade	Credit Hours
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## Major Requirements

A minimum of 12 upper-division credit hours used toward the major requirements must be taken from The College of Liberal Arts and Sciences. When selecting courses, the college offering the course can be identified by viewing the course details in Class Search.

<b>BIO 181 General Biology I (SCIT)</b>	C	4
<b>BIO 182 General Biology II (SCIT)</b>	C	4
<b>MIC 220 Biology of Microorganisms</b>	C	3
<b>MIC 206 Microbiology Laboratory (SCIT)</b>	C	1
<b>MBB 343 Genetic Engineering and Society</b> MBB 343 will fulfill the upper division Science and Society Elective.	C	4
<b>MBB 347 Molecular Genetics: From Genes to Proteins</b>	C	4
<b>MBB 484 Internship</b> <b>OR</b> <b>MBB 492 Honors Directed Study</b> <b>OR</b> <b>MBB 495 Undergraduate Research</b>	C	6
<b>MBB 490 Capstone: Issues in Biotechnology</b>	C	2

Requirement	Minimum Grade	Credit Hours
<b>MBB 491 Capstone: Issues in Molecular Biosciences</b>	C	2
<b>Upper Division Major Electives</b>		
<b>BIO 308 Plant Physiology</b>		
<b>BIO 355 / MAT 355 / MBB 355 Introduction to Computational Molecular Biology</b>		
<b>BIO 357 Cell and Molecular Biology Laboratory</b>		
<b>BIO 439 Computing for Research</b>		
<b>BIO 451 Cell Biotechnology: Cell Culture, Immunocytochemistry and Bioimaging</b>		
<b>MBB 350 Applied Genetics</b>		
<b>MBB 440 / BIO 440 Functional Genomics</b>	C	7
<b>MBB 445 / MIC 445 Techniques in Molecular Biology/Genetics AND MBB 446 / MIC 446 Techniques in Molecular Biology/Genetics Lab</b>		
<b>MIC 302 Advanced Bacteriology Laboratory</b>		
<b>MIC 420 / BIO 420 Immunology: Molecular and Cellular Foundations AND MIC 421 Experimental Immunology</b>		
<b>MIC 441 Bacterial Genetics AND MIC 442 Bacterial Genetics Laboratory</b>		

## The College Requirements

Mathematics Proficiency Requirement: All students are required to obtain a grade of "C" or higher in any course that satisfies the ASU General Studies MATH requirement.

Science and Society Requirement: All students pursuing a BS or BSP degree in The College of Liberal Arts and Sciences must complete two courses from the [Science and Society list](#). At least one of the two courses must be upper division and students must earn a "C" or better

in the courses. Both Science and Society courses (i.e., all six credits) may count towards any major, minor, related fields and ASU General Studies requirements.

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Science and Society Elective	C	3
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### **Related Area**

<b>MAT 251 Calculus for Life Sciences (MATH)</b>	C	3
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<b>STP 231 Statistics for Life Science (QTRS)</b>	C	3
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<b>CHM 113 General Chemistry I (SCIT)</b>	C	4
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<b>CHM 116 General Chemistry II (SCIT)</b>	C	4
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<b>PHY 101 Introduction to Physics (SCIT)</b> Pre-health students may need PHY 111 & 113, not PHY 101. Please see advisor for more details.	C	4
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<b>CHM 231 Elementary Organic Chemistry (SCIT)</b> Pre-health students may need CHM 233 & 237 and CHM 234 & 238, not CHM 231 & 235. Please see advisor for more details.	C	3
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<b>CHM 235 Elementary Organic Chemistry Laboratory (SCIT)</b>	C	1
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<b>BCH 361 Principles of Biochemistry</b>	C	3
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<b>BCH 367 Elementary Biochemistry Laboratory</b>	C	1
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### **ASU 101 or College-Specific First-Year Seminar**

ASU 101 or college-specific equivalent First-Year Seminar required of all first-year students.

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### **LIA 101 Student Success in The College of Liberal Arts and Sciences**

**OR** **ASU 101-LA The ASU Experience**

Campus immersion students enroll in LIA 101. ASU Online students enroll in ASU 101-LA.

## First-Year Composition

ENG 101 First-Year Composition **AND** ENG 102 First-Year

Composition

**OR** ENG 105 Advanced First-Year Composition

C

6

**OR** ENG 107 First-Year Composition **AND** ENG 108 First-Year

Composition

## Notes

All baccalaureate degree students must fulfill [university graduation requirements](#), including a minimum of 120 credit hours, with at least 45 credit hours in upper-division courses.

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All undergraduate students must complete [General Studies requirements](#).

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[Mathematics Placement Assessment](#) score determines placement in first mathematics course.

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Students should work with their academic advisor, and consider course prerequisites, in order to complete all degree requirements in four years.

General Studies designations listed next to courses were valid for the 2026 - 2027 academic year. Please refer to the course catalog for current General Studies designations at time of class registration. General Studies credit is applied according to the designation the course carries at the time the class is taken.