

B.S. IN BIOLOGY - MEDICAL LABORATORY SCIENCE CONCENTRATION

Curriculum

Code	Title	Credits
GENERAL EDUCATION REQUIREMENTS (https://catalog.wcupa.edu/undergraduate/general-education-requirements/)		
Academic Foundations		
First Year Experience requirement		4
English Composition requirement		6-7
Mathematics requirement		3-4
MAT 121	Introduction to Statistics I	
or MAT 125	Introduction to Statistics and Probability	
Interdisciplinary requirement		3
Diverse Communities requirement		3
Ethics requirement		3
Distributed Disciplinary Foundations		
Science requirement		6-8
CHE 103	General Chemistry I	
PHY 130	General Physics I	
Behavioral & Social Science requirement		6
Humanities requirement		6
Arts requirement		3
ADDITIONAL BACCALAUREATE REQUIREMENTS (https://catalog.wcupa.edu/undergraduate/general-education-requirements/)		
University Requirements		
Writing Emphasis requirement		9
Speaking Emphasis requirement		9
Degree Requirements		
Capstone requirement		1-15
MAJOR REQUIREMENTS		
Core Courses		
BIO 110	General Biology I ¹	4
BIO 111	General Biology II ¹	4
BIO 210	Genetics ¹	3
BIO 210L	Genetics Lab ¹	1
BIO 211	Cell Biology ¹	4
CHE 103	General Chemistry I	3
CRL 103	General Chemistry I Lab	1
CHE 104	General Chemistry II	3
CRL 104	General Chemistry II Lab	1
CHE 231	Organic Chemistry I	4
CRL 231	Organic Chemistry I Lab	2
CHE 232	Organic Chemistry II	3
PHY 130	General Physics I ²	4
or PHY 170	Physics I	
PHY 140	General Physics II ²	4
or PHY 180	Physics II	
MAT 121	Introduction to Statistics I	3
or MAT 125	Introduction to Statistics and Probability	
Select one semester of calculus		3-4
Other Required Courses		
BIO 214	General Microbiology ¹	4

BIO 465	Immunology ¹	4
BIO 407	Hospital Internship in Medical Laboratory Science, Fall ¹	13
BIO 408	Hospital Internship in Medical Laboratory Science, Spring ¹	13

Capstone Requirement

BIO 490	Capstone: Seminar in Biology ^{1,3}	3
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Total Minimum Credits Required		120
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¹ Courses must be passed with a grade of C- (70%) or better.

² The recommended Physics sequence is PHY 130 & PHY 140. Students may substitute the PHY 170 & PHY 180 sequence, but PHY 130 may not be used as a prerequisite for PHY 180 and PHY 170 may not be used as a prerequisite for PHY 140.

³ This course fulfills the Capstone requirement.

Sample Course Plan

To track their individual degree progress, students are advised to access their Degree Audit via RamPortal regularly. For more information, visit the Degree Audit FAQ webpage (<https://www.wcupa.edu/academicEnterpriseSystems/student-system-modernization/degree-audit-faqs.aspx>).

The following is a sample suggested course sequence for this program; course offerings and availability are not guaranteed. Students should consult their academic advisor with any questions.

Course	Title	Credits
Year One		
Semester One		
BIO 110	General Biology I	4
CHE 103 & CRL 103	General Chemistry I and General Chemistry I Lab	4
WRT 120	Effective Writing I	3
FYE 100X	First Year Experience	4
Credits		15
Semester Two		
BIO 111	General Biology II	4
CHE 104 & CRL 104	General Chemistry II and General Chemistry II Lab	4
MAT 121	Introduction to Statistics I ¹	3
or MAT 125	or Introduction to Statistics and Probability	
WRT 2XX	200-Level WRT Course	3
Behavioral/Social Science Gen Ed		3
Credits		17
Year Two		
Semester Three		
BIO 210 & 210L	Genetics and Genetics Lab ²	4
CHE 231 & CRL 231	Organic Chemistry I and Organic Chemistry I Lab	6
Humanities & Ethics Gen Ed		3
Arts Gen Ed		3
Credits		16
Semester Four		
BIO 211	Cell Biology ²	4
BIO 214	General Microbiology ²	4
CHE 232	Organic Chemistry II	3

MAT 145	Calculus for the Life Sciences	3-4
or	or Brief Calculus	
MAT 143	or Calculus I	
or		
MAT 161		
Humanities Gen Ed		3
Credits		17-18
Year Three		
Semester Five		
BIO 465	Immunology	4
PHY 130	General Physics I	4
Diverse Communities Gen Ed		3
Interdisciplinary Gen Ed		3
Upper-Level Directed Elective		3
Credits		17
Semester Six		
BIO 490	Capstone: Seminar in Biology	3
PHY 140	General Physics II	4
Behavioral & Social Science Gen Ed		3
Speaking Emphasis Gen Ed		3
Directed Elective		3
Credits		16
Year Four		
Semester Seven		
BIO 407	Hospital Internship in Medical Laboratory Science, Fall	13
Credits		13
Semester Eight		
BIO 408	Hospital Internship in Medical Laboratory Science, Spring	13
Credits		13
Total Credits		124-125

¹ Students should take Statistics (MAT 121 or MAT 125) in the first year.

² All required 200-level biology courses should be completed by the end of Semester #5.

NOTE: An average of 16 semester hours per semester must be completed to enter the Medical Laboratory Science training in the fourth year. If a student follows the proposed outline of courses, a total of 98 semester hours will be earned at WCU. The additional semester hours necessary for graduation will be earned at the affiliated hospital.