

BIOLOGY, AS

The Associate of Science, Biology is a two-year transferable program. The curriculum includes a core of courses in the biological and physical sciences and mathematics. All courses recommended will partially satisfy the bachelor of science in biology at the University of Nevada, Reno.

Outcomes

Students completing the emphasis will:

- Apply principles of mathematics and physical sciences to laboratory practices and biological processes.
- Explain concepts and theories in molecular structure and function, cellular processes, and genetics.
- Demonstrate knowledge of the structural and physiological functions of organisms, their ecological context, and the evolutionary relationships and hierarchical organization of biological diversity.
- Demonstrate proficient use of standard laboratory equipment and follow safe laboratory practices; apply the method of scientific inquiry by designing a controlled experiment, and collecting, analyzing and interpreting data; and present findings in written and oral formats.

AA/AS degrees are designed for students who plan to transfer to a four-year college or university.

To earn an AA/AS degree, students must:

1. Maintain a minimum cumulative GPA of 2.0 (see requirements for graduation.)
2. Complete a minimum of 15 units within the college.
3. Satisfy General Education requirements for the AA/AS (<http://catalog.tmcc.edu/degrees-certificates/general-education/aa-as>).
4. Have no financial or library obligation to the college.

Code	Title	Units
General Education Requirements		
<i>English</i>		3-6
Must include ENG 102 or ENG 114 ¹		
<i>Fine Arts</i>		3
<i>Humanities</i>		3
Recommended:		
PHIL 210	World Religions	
<i>Mathematics</i>		3
Including:		
MATH 126	Pre-Calculus I ((or higher)) ³	
<i>Science</i>		[6]
Required: ²		
CHEM 121 & CHEM 122	General Chemistry I and General Chemistry II	8
or CHEM 201 & CHEM 202	General Chemistry for Scientists and Engineers and General Chemistry for Scientists and Engineers II	
<i>Social Science</i>		3
Recommended: PSC 101, CH 203, or HIST 111		
Additional College Requirements		

Diversity ²		[3]
Recommended:		
PHIL 210	World Religions	
<i>Science</i>		[6]
U.S. and Nevada Constitutions courses ²		[3]
Recommended: PSC 101, CH 203, or HIST 111		
Degree Requirements		
BIOL 190 & 190L	Introduction to Cell and Molecular Biology and Introduction to Cell and Molecular Biology Laboratory	4
BIOL 191 & 191L	Introduction to Organismal Biology and Intro to Organismal Biology Lab	4
Chemistry: Choose from one of the following options: ⁴		4-8
CHEM 220	Introductory Organic Chemistry	
OR		
CHEM 241 & 241L	Organic Chemistry I and Organic Chemistry for Life Sciences Lab I	
AND		
CHEM 242 & 242L	Organic Chemistry II and Organic Chemistry for Life Sciences Lab II	
PHYS 151	General Physics I	4
or PHYS 180 & 180L	Physics for Scientists and Engineers I and Physics for Scientists/Engineers Lab I	
Science GE Units (from CHEM 121 & CHEM 122 or CHEM 201 & CHEM 202)		[2]
STAT 152	Introduction to Statistics	3
Elective Requirements		
Select 11-18 units of the following:		11-18
BIOL 105	Introduction to Neuroscience	
BIOL 106	Introduction to Evolution and Adaptation	
BIOL 202	General Botany	
BIOL 223	Human Anatomy and Physiology I	
BIOL 224	Human Anatomy and Physiology II	
BIOL 251	General Microbiology	
BIOL 298	Independent Study in Biology	
CHS 200	Introduction to Public Health Biology	
MATH 127	Pre-Calculus II ³	
MATH 181	Calculus I ³	
NUTR 233	Community and Lifecycle Nutrition	
PHYS 152	General Physics II ⁵	
PHYS 181 & 181L	Physics for Scientists and Engineers II and Physics for Scientists/Engineers Lab II ⁵	
Or any transferable college level units. ⁶		
Total Units		60

¹ If you place into ENG 102 or ENG 114 the additional 3 required units will become elective units.

² Course may also count toward additional degree requirements. Please consult with Academic Advisement.

³ Math 181 is required for B.S. in Biology at UNR

⁴ CHEM 341/CHEM 342, at UNR, applies as CHEM 241/CHEM 241L & CHEM 242/CHEM 242L

⁵ PHYS 152 or PHYS 180L and PHYS 181L are required for a B.S. in Biology at UNR.

⁶ BIOL 100 cannot be used towards B.S. in Biology at UNR.

Recommended courses are listed in the course sequence; however, other courses may apply. Please see an advisor or the department.

1st semester		Units
CHEM 121	General Chemistry I	4
English	⁸	3
MATH 126	Pre-Calculus I	3
STAT 152	Introduction to Statistics	3
Diversity/Fine Arts	⁷	3
Semester Total		16
2nd semester		
BIOL 190 & 190L	Introduction to Cell and Molecular Biology and Introduction to Cell and Molecular Biology Laboratory	4
CHEM 122	General Chemistry II	4
English	⁸	3
MATH 127	Pre-Calculus II	3
Semester Total		14
3rd semester		
Elective	⁸	4
Social Science/U.S. Nevada Constitutions	⁷	3
BIOL 191 & 191L	Introduction to Organismal Biology and Intro to Organismal Biology Lab	4
CHEM 241 & 241L	Organic Chemistry I and Organic Chemistry for Life Sciences Lab I	4
Semester Total		15
4th semester		
Elective	⁸	4
Humanities	⁷	3
CHEM 242 & 242L	Organic Chemistry II and Organic Chemistry for Life Sciences Lab II	4
PHYS 151 or PHYS 180 <i>and</i> PHYS 180L	General Physics I or Physics for Scientists and Engineers I <i>and</i> Physics for Scientists/Engineers Lab I	4
Semester Total		15
Total Units		60

⁷ See approved General Education list for the AA/AS Degree. (<http://catalog.tmcc.edu/degrees-certificates/general-education/aa-as>)

⁸ See program recommendations or requirements.