BIOLOGY, AS

Program Code: Biology-AS

Program Description

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.

Biology Career Map (https://sites.tmcc.edu/flipbook/career-maps/)

Recommended Course Schedule

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 [7]		3
MATH 127	Pre-Calculus II	3
STAT 152	Introduction to Statistics	3
Diversity/Fine Arts [6]		3
	Semester Total	**16**
2nd semester		
BIOL 190A & BIOL 190L	Introduction to Cell and Molecular Biology and Introduction to Cell and Molecular Biology Laboratory	4
CHEM 122	General Chemistry II	4
Elective [3]		3
English [7]		3
	Semester Total	**14**
3rd semester		
BIOL 191A & BIOL 191L	Introduction to Organismal Biology and Intro to Organismal Biology Lab	4
CHEM 341	Organic Chemistry for Scientists and Professionals I	3
Elective [7]		5
Social Science/U.S. Nevada Constitutions [6]		3
	Semester Total	**15**
4th semester		
Elective [7]		5
CHEM 342	Organic Chemistry for Scientists and Professionals II	3
Humanities [6]		3
PHYS 151 or PHYS 180 ***and*** PHYS 180L	General Physics I or Physics for Scientists and Engineers I ***and*** Physics for Scientists/Engineers Lab I	4
	Semester Total	**15**
	Total Units	**60**

[6] See approved General Education list for the AA/AS Degree. (https://catalog.tmcc.edu/degrees-certificates/general-education/aa-as/)

[7] See program recommendations or requirements.

Program Requirements

Associate of Science degrees are designed for students who plan to transfer to a four-year college or university.

To earn an 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 AS (https://catalog.tmcc.edu/degrees-certificates/general-education/as/).
4. Have no financial or library obligation to the college.

Code	Title	Units
General Education Requirements		
English		*3-6*
Must include ENG 102 or ENG 114 [1]		
Fine Arts		*3*
Humanities		*3*
Recommended:		
PHIL 210	World Religions	
Mathematics		*3*
Required:		
MATH 127	Pre-Calculus II [3]	
Science		*[6]*
Required: [2]		
CHEM 121 & CHEM 122	General Chemistry I and General Chemistry II	8
Social Science		*3*
Recommended: PSC 101, CH 203, or HIST 111		
Additional College Requirements		
Diversity [2]		[3]
Recommended:		
PHIL 210	World Religions	
Science		[6]
U.S. and Nevada Constitutions courses [2]		[3]
Recommended: PSC 101, CH 203, or HIST 111		
Degree Requirements		
BIOL 190A & BIOL 190L	Introduction to Cell and Molecular Biology and Introduction to Cell and Molecular Biology Laboratory	4
BIOL 191A & BIOL 191L	Introduction to Organismal Biology and Intro to Organismal Biology Lab	4
Chemistry: Choose from one of the following options:		4-6
CHEM 220	Introductory Organic Chemistry	
OR		
CHEM 341	Organic Chemistry for Scientists and Professionals I	
AND		

CHEM 342	Organic Chemistry for Scientists and Professionals 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)		[2]
STAT 152	Introduction to Statistics	3
Elective Requirements		
Select 11-15 units of the following:		11-15
BIOL 100	General Biology for Non-Majors [5]	
BIOL 105	Introduction to Neuroscience [5]	
BIOL 106	Introduction to Evolution and Adaptation [5]	
BIOL 112	Introduction to Animal Behavior [5]	
BIOL 113	Life in the Ocean [5]	
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	
CHEM 241L	Organic Chemistry for Life Sciences Lab I	
CHEM 242L	Organic Chemistry for Life Sciences Lab II	
PBH 220	Introduction to Public Health Biology	
MATH 126	Pre-Calculus I	
MATH 181	Calculus I [3]	
NUTR 223	Principles of Nutrition	
NUTR 233	Community and Lifecycle Nutrition	
PHYS 152	General Physics II [4]	
PHYS 181 & 181L	Physics for Scientists and Engineers II and Physics for Scientists/Engineers Lab II [4]	
Or any transferable college level units. [5]		
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. PHYS 152 or PHYS 180L and PHYS 181L are required for a B.S. in Biology at UNR.
5. This course does not count toward required Biology courses for B.S. in Biology Degree at UNR.

Program Outcomes

Students completing the degree will:

PSLO1: Explain biological concepts as they relate to molecular structure and function, cellular processes, genetics, anatomical structural and physiological function of organisms, and evolutionary processes.

PSLO2: Apply the method of scientific inquiry by designing a controlled experiment, collecting, analyzing, and interpreting data, and presenting findings in written and oral formats.

PSLO3: Critically evaluate the scientific merits and claims of biological information from various sources and develop arguments based on biological facts and evidence.

PSLO4: Employ quantitative reasoning skills to data analysis and interpretation.

PSLO5: Use standard laboratory equipment and follow safe laboratory practices.

PSLO6: Apply standard scientific format with accurate use of citations, graphs, and statistics.

PSLO7: Analyze community and global issues from a biological perspective.

Transfer Agreements

AA/AS degrees are designed for students who plan to transfer to a four-year college or university. General information about general transfer agreements can be found on the Academic Advisement website (https://www.tmcc.edu/advisement/transfer-students/transfer-agreements/). Students who intend to transfer to another college or university should speak with a TMCC Academic Advisor and consult with that institution. The transfer institution determines how TMCC courses will transfer. TMCC has agreements with the following institutions towards a bachelor's degree in the same or similar discipline.

- Great Basin College (https://www.gbcnv.edu/admissions/transfer-to.html)
- University of Nevada, Reno (https://www.unr.edu/admissions/transfer/credits/transfer-agreements/)