

BIOLOGY

Faculty

Atnip, Brown, Chase, Clifford, Johnson, Murphy, Polley, Robinson

Students who are planning to enroll in biology courses should consider the following: A maximum of four semester hours credit may be applied toward graduation by completing both BIOL 1000 and BIOL 1010.

Associate of Science Degree Biology

This degree program is intended for students who plan to continue their education beyond the associate degree. It provides a curriculum which is broad based in the biological sciences and helps students meet the requirements for a variety of other degree programs. It is the recommended major for students planning to pursue a 4-year biology degree on the Casper College campus via the UW/CC program. It is also advised for students who desire to pursue baccalaureate and/or graduate education in the biological sciences.

(Recommended Curriculum)

General Education (Minimum 32 hours)	Hours
General education coursework can be completed from within or outside of the major field of study.	
1. Exploration and Participation	
Included in the major requirements below	
2. Communication	
ENGL 1010 English I: Composition	3
ENGL 1020 English II: Composition	3
3. Relationship with the World	
Human behavior	3
U.S. and Wyoming constitutions.....	3
Cultural environment	3
4. General Education Electives	
Must be chosen from areas 1, 2, or 3 above; no more than 15 credits in any one area.	
5. Physical Education	1

Major Requirements

BIOL	1000	Introduction to Biology I.....	or
BIOL	1010	General Biology I.....	4
BIOL	2022	Animal Biology.....	4
BIOL	2023	Plant and Fungal Biology	4
CHEM	1025	Chemistry I	3
CHEM	1028	Chemistry Laboratory I.....	1
CHEM	1035	Chemistry II	3
CHEM	1038	Chemistry Laboratory II.....	1
		Mathematics	6-10
MOLB	2210	General Microbiology	4
PHYS	1110	General Physics I	4
PHYS	1120	General Physics II	4
		*Biological sciences electives.....	9

* Biological sciences electives may be chosen from sophomore to senior level courses at the direction of the academic advisor.

Students who wish to study ecology should major in biology.

A minimum of 64 approved semester hours are required for graduation. For specific graduation requirements see "Academic Policies" and "Degree Requirements."

ONLY COURSES NUMBERED 1000 OR ABOVE CAN BE USED TOWARD THE ASSOCIATE OF SCIENCE DEGREE.

Associate of Science Degree Forensic Science

See Criminal Justice section for recommended curriculum.

Associate of Science Degree Medical Technology

This course of study prepares students to enter a baccalaureate program in medical technology.

(Recommended Curriculum)

General Education (Minimum 32 hours)	Hours
General education coursework can be completed from within or outside of the major field of study.	
1. Exploration and Participation	
Included in the major requirements below	
2. Communication	
ENGL 1010 English I: Composition	3
ENGL 1020 English II: Composition	3
3. Relationship with the World	
PSYC 1000 General Psychology.....	4
U.S. and Wyoming constitutions.....	3
Cultural environment	3
4. General Education Electives	
Must be chosen from areas 1, 2, or 3 above; no more than 15 credits in any one area.	
5. Physical Education	1

Major Requirements

BIOL	1000	Introduction to Biology I.....	or
BIOL	1010	General Biology I	4
BIOL	2022	Animal Biology.....	or
BIOL	2023	Plant and Fungal Biology	4
CHEM	1025	Chemistry I	3
CHEM	1028	Chemistry Laboratory I.....	1
CHEM	1035	Chemistry II	3
CHEM	1038	Chemistry Laboratory II.....	1
CHEM	2320	Organic Chemistry I.....	3
CHEM	2325	Organic Chemistry Laboratory I	1
CHEM	2340	Organic Chemistry II.....	3
CHEM	2345	Organic Chemistry Laboratory II	1
MATH	1400	Pre-Calculus Algebra.....	4
MATH	1405	Pre-Calculus Trigonometry.....	3
*MATH	2200	Calculus I.....	5
MOLB	2210	General Microbiology	4
MOLB	2220	Pathogenic Microbiology	4
*PHYS	1110	General Physics I	4
*PHYS	1120	General Physics II	4

* Students should refer to the requirements of their professional school or transfer institution.

A minimum of 64 approved semester hours are required for graduation. For specific graduation requirements see "Academic Policies" and "Degree Requirements."

ONLY COURSES NUMBERED 1000 OR ABOVE CAN BE USED TOWARD THE ASSOCIATE OF SCIENCE DEGREE.

Associate of Science Degree Pre-Physical Therapy

Pre-professional degree programs are designed to prepare students for entry into a bachelor degree program and then into their identified area of professional schooling. It is necessary for pre-professional students to work closely with an academic advisor to ensure that the requirements of the identified professional school(s) are met. For each pre-professional student, the degree program will be modified to provide the student with coursework that will best prepare them for their future studies and professional practice. Students expecting to qualify for admission into professional schools are urged to study carefully the particular requirements of the institution from which they wish to obtain a degree. Since society imposes leadership responsibilities on professionally trained people, most professional schools recommend that pre-professional training should stress 1) proficiency in language, 2) broad cultural background in the liberal arts or humanistic studies and in the social and behavioral sciences, and 3) completion of some basic science course and familiarity with the use of the scientific laboratory method.

This is a transfer degree. This course curriculum transfers to the University of North Dakota.

(Recommended Curriculum)

General Education (Minimum 32 hours)	Hours
General education coursework can be completed from within or outside of the major field of study.	
1. Exploration and Participation	
Included in the major requirements below	
2. Communication	
ENGL 1010 English I: Composition	3
ENGL 1020 English II: Composition	3
3. Relationship with the World	
PSYC 1000 General Psychology.....	4
U.S. and Wyoming constitutions	3
Cultural environment	3
4. General Education Electives	
Must be chosen from areas 1, 2, or 3 above; no more than 15 credits in any one area.	
5. Physical Education	1

Major Requirements

BIOL	1000	Introduction to Biology I.....	or
BIOL	1010	General Biology I.....	4
BIOL	2022	Animal Biology.....	or
BIOL	2023	Plant and Fungal Biology	or
MOLB	2210	Microbiology	4
CHEM	1025	Chemistry I.....	3
CHEM	1028	Chemistry Laboratory I.....	1
CHEM	1035	Chemistry II	3
CHEM	1038	Chemistry Laboratory II.....	1
MATH	1400	Pre-Calculus Algebra.....	4
MATH	1405	Pre-Calculus Trigonometry	3
PHYS	1110	General Physics I	4
PHYS	1120	General Physics II	4
PSYC	2300	Developmental Psychology.....	3
PSYC	2360	Lifespan: Adulthood and Aging.....	1
SOC	1000	Introduction to Sociology.....	3
ZOO	2040	Human Anatomy.....	4
ZOO	2041	Human Anatomy Lab.....	1
ZOO	2110	Human Physiology	4
*Fine arts and humanistic studies/ social sciences			
*World cultures course			

* Students should refer to the requirements of their professional school or transfer institution for course listing acceptable toward graduation at that institution. It is possible to receive an AS degree from Casper College with 70 hours completed although most professional schools require more than 70 hours of prerequisite course work. This course curriculum is from the University of North Dakota.

A minimum of 64 approved semester hours are required for graduation. For specific graduation requirements see "Academic Policies" and "Degree Requirements."

ONLY COURSES NUMBERED 1000 OR ABOVE CAN BE USED TOWARD THE ASSOCIATE OF SCIENCE DEGREE.

Pre-Professional curricula advised by biology department faculty include Medicine, Dentistry, Optometry, Physical Therapy, Occupational Therapy and Veterinary Medicine. See Pre-Professional programs on page 132 for additional degree information.

Associate of Science Degree Wildlife Management

The curriculum is designed to provide students with an array of experiences in the biological sciences, including exposure to plant and vertebrate biology in a variety of field settings, and access to a departmentally operated greenhouse and vertebrate museum.

This is a transfer degree.

(Recommended Curriculum)

General Education (Minimum 32 hours) Hours

General education coursework can be completed from within or outside of the major field of study.

1. Exploration and Participation
Included in the major requirements below
2. Communication
ENGL 1010 English I: Composition 3
ENGL 1020 English II: Composition 3
3. Relationship with the World
Human behavior 3
U.S. and Wyoming constitutions..... 3
Cultural environment 3
4. General Education Electives
Must be chosen from areas 1, 2, or 3 above;
no more than 15 credits in any one area.
5. Physical Education1

Major Requirements

BIOL	1000	Introduction to Biology I.....	or
BIOL	1010	General Biology I.....	4
BIOL	2022	Animal Biology.....	or
BIOL	2023	Plant and Fungal Biology	4
BIOL	2400	General Ecology.....	3
BIOL	2410	Field Ecology.....	2
CHEM	1025	Chemistry I.....	3
CHEM	1028	Chemistry Laboratory I.....	1
CHEM	1035	Chemistry II	3
CHEM	1038	Chemistry Laboratory II.....	1
		Mathematics.....	6-10
		*Biological science elective	4
		Electives.....	16

*Biological science electives may be chosen from sophomore to senior level courses at the direction of the academic advisor.

A minimum of 64 approved semester hours are required for graduation. For specific graduation requirements see "Academic Policies" and "Degree Requirements."

ONLY COURSES NUMBERED 1000 OR ABOVE CAN BE USED TOWARD THE ASSOCIATE OF SCIENCE DEGREE.