CHEMISTRY, ASSOCIATE OF SCIENCE

The Associate of Science Degree in Chemistry prepares students for transfer to a four-year school as juniors in either chemistry or biochemistry majors. The curriculum provides fundamental knowledge of the major fields of chemistry, covering a full year of both general and organic chemistry. Students will gain laboratory experience in organic synthesis, analytical methods, and spectroscopy. Chemistry is called the central science and as such, it serves as a foundation for careers in many fields, such as medicine, environmental science, and materials science.

This degree is designed to transfer to Southern Oregon University's Bachelor of Science in Chemistry program. Other transfer options may be available. Consult your advisor for details.

GRADUATION REQUIREMENTS

Students must complete a minimum of 95 credit hours with a cumulative Grade Point Average (GPA) of 2.0 or better. All courses must be completed with a grade of 'C' or better. Twenty-four (24) credits must be completed at Southwestern before the degree is awarded.

Courses that are developmental in nature (designed to prepare students for college transfer courses) are not applicable to this degree.

Students must complete the graduation application process one term prior to the term of completion (e.g., spring term graduates must apply during winter term).

PROGRAM STUDENT LEARNING OUTCOMES

Upon successful completion of this program, the student will be able to:

- Demonstrate knowledge of chemical structure to predict and explain the physical properties of chemical materials.
- Demonstrate knowledge of chemical reactivity to predict and explain the outcomes of reactions.
- Demonstrate knowledge of chemical quantitation to predict and explain chemical phenomena.
- Critical Thinking: Collect and analyze data using classical methods and modern instrumentation and evaluate experimental results using the principles of the scientific method.
- Information Literacy: Locate, summarize, and critique scientific articles, as well as synthesize scientific information from various sources to communicate the results of their own experiments.
- Global Learning: Demonstrate personal and social responsibility, environmental stewardship, and global self-awareness.

Math and writing placement are unique to each student and are determined during the admissions and intake advising process. Additional math or writing courses may be required prior to taking the math or writing program requirements in this degree.

PROGRAM GUIDE

Course	Title	Credits
First Year		
Fall		
BI201	Introductory Biology	4
CHEM221	General Chemistry I	5
MTH251	Calculus I Differential Calculus	4
WR121Z	Composition I	4
	Credits	**17**
Winter		
CHEM222	General Chemistry II	5
BI202	Introductory Biology	4
MTH252	Calculus II Integral Calculus	4
WR227Z	Technical Writing	4
	Credits	**17**
Spring		
CHEM223	General Chemistry III	5
COMM111Z	Public Speaking	4
BI203	Introductory Biology	4
Western Culture [1]		3
	Credits	**16**
Second Year		
Fall		
CHEM245	Organic Chemistry I	4
MTH254	Vector Calculus I	4
PH211	General Physics with Calculus I	5
Difference, Power, and Discrimination [2]		3
	Credits	**16**
Winter		
CHEM246	Organic Chemistry II	4
PH212	General Physics with Calculus II	5
Social Processes and Institutions [3]		3
Cultural Diversity [4]		3
	Credits	**15**
Spring		
CHEM247	Organic Chemistry III	4
PH213	General Physics with Calculus III	5
PE231	Wellness for Life	3
Literature and the Arts [5]		3
	Credits	**15**
	Total Credits	**96**

1. Western Culture - options: ART204, ART205, ART206, ENG107, ENG108, ENG109, ENG201, ENG204, ENG205, ENG206, HST101, HST102, HST103, HST201, HST202, HST203, MUS201, MUS202, MUS203, PHL101, PHL102.
2. Difference, Power, and Discrimination - options: HST201, HST202, HST203, SOC206 , SOC213
3. Social Processes and Institutions - options: ANTH221 , ANTH222 , ANTH223 , ECON201, ECON202, HST101, HST102, HST103, PS201, PS205, PSY201 , PSY202 , PSY203 , SOC204, or SOC205.

[4] Cultural Diversity - options: ANTH224, ANTH230, ANTH231, ANTH232, HST104, HUM204, HUM205, HUM206

[5] Literature and the Arts - options: ART204, ART205, ART206, ENG104, ENG105, ENG106, ENG107, ENG108, ENG109, ENG201, ENG204, ENG205, ENG206, ENG262, MUS201, MUS202, MUS203.