

# Chemistry

The Associate of Science (A.S.) in Chemistry degree program is for students who wish to pursue baccalaureate studies in the chemical or physical sciences or who plan to continue with professional studies, such as pre-pharmacy, pre-medical or pre-dental programs. This curriculum parallels the first two years of study offered in the chemistry programs of other colleges and universities.

## Student Learning Outcomes:

Upon completion of this program, graduates will be able to:

- Demonstrate preparedness to successfully transfer into a chemistry program at a four-year institution
- Demonstrate a foundational knowledge of general inorganic and organic chemistry principles and concepts by applying this knowledge to the solution of problems and performance of experiments.
- While adhering to all safety rules, competently perform routine laboratory tasks in the chemistry laboratory using the instrumentation for measurement and analysis which is commonly available
- Effectively collect, interpret, evaluate and communicate scientific data in multiple formats using computer technology as needed.

**Program Entry Requirements:** This is a select program. In order to enter the program, students must have placement at ENGL 101 and MATH 162 (or MATH 161 completed with a C or better) levels.

**Program of Study and Graduation Requirements:** To qualify for the A.S. degree in Chemistry, students must successfully complete a minimum of 60 credit hours as prescribed and attain a grade point average of 2.0 ("C" average). Students must pass all Science and Mathematics courses with a grade of "C" or better.

## Chemistry Course Sequence (Current)

Course Number and Name	Prerequisites and Co-requisites	Credits	Gen Ed Req.
<b>First Semester</b>			
ENGL 101- English Composition I		3	ENGL 101
MATH 171 - Calculus I	MATH 162 with a grade of "C" or better or dept. head approval or placement	4	Mathematics
CHEM 121- College Chemistry I	CHEM 110 with a grade of "C" or better or dept. head approval	4	Natural Science
CIS 103- Applied Computer Technology		3	Technological Competency

<b>Second Semester</b>			
ENGL 102 - The Research Paper	ENGL 101 with a grade of "C" or better	3	ENGL 102, Info Lit
MATH 172 - Calculus II	MATH 166 with a grade of "C" or better or MATH 171 with a grade of "C" or better	4	
CHEM 122- College Chemistry II	CHEM 121 with a grade of "C" or better	4	
PHYS 140 - Mechanics, Heat and Sound	MATH 171	5	
<b>Third Semester</b>			
CHEM 221- Organic Chemistry I	CHEM 122 with a grade of "C" or better	5	
CHEM 214 - Chemical Analysis	CHEM 122 with a grade of "C" or better MATH 162 with a grade of "C" or better	5	
PHYS 241 - Electricity, Magnetism and Light	PHYS 140 and MATH 172 or dept. head approval	5	
<b>Fourth Semester</b>			
CHEM 222 - Organic Chemistry II	CHEM 221 with a grade of "C" or better or dept. head approval	5	
Directed Elective <sup>1</sup>		4	
Social Science Elective		3	Social Science
Humanities Elective		3	Humanities
<b>Minimum Credits to Graduate: 60 <sup>2</sup></b>			

**General Education Requirements:** All General Education requirements are met through required courses (as indicated above) except for the American/Global Diversity requirement, the Interpretive Studies requirement and the Writing Intensive requirement. Therefore, in order to graduate, students in this program must choose one course that is designated American/Global Diversity, one course that is designated Writing Intensive and one course that is designated Interpretive Studies. The same course may be used to fulfill all three requirements. View the courses that fulfill all [degree requirements](#) and receive a more detailed explanation of the College's general education requirements to help in your selection.

<sup>1</sup> CIS 106: Introduction to Computer Programming (4) or BIOL 123: Principles of Biology I (4) or BIOL 281: Biochemistry I (4) or BTT 101: Biomedical Technician Training (3) [Students who choose this elective will need 1 additional credit to graduate]

<sup>2</sup> Students who are required to take [CHEM 110](#) prior to [CHEM 121](#) will need 64 credits to graduate.