60

CHEMISTRY, ASSOCIATE IN SCIENCE

The Associate in Science degree with an emphasis in Chemistry is designed to prepare students who wish to pursue a Bachelor's degree in Chemistry at a four-year institution. Students enrolled in this program will use the scientific method to investigate phenomena in the natural world and use concepts, experiments, and/or theory to explain them.

Learning Outcomes

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

- Describe the particle nature of matter, explain the attractions and/or bonds between chemical units, and predict the physical and chemical properties they possess.
- Describe chemical compounds and their reactions using the fundamental language of chemistry, including the use of proper chemical names, molecular formulas, chemical equations, structural drawings, and reaction mechanisms.
- Predict the likelihood and extent of a chemical reaction by analyzing the kinetic and thermodynamic properties of the system.
- Solve chemistry-specific problems by identifying the essential parts of the problem, formulating a strategy for solving the problem, applying appropriate techniques to arrive at a solution, testing the correctness of the solution, and interpreting the results.
- Successfully execute chemistry experiments using standard laboratory equipment, modern instrumentation, and classical purification techniques.
- Communicate the concepts and results of chemistry experiments through effective writing and/or oral communication using the discipline standards for reporting and citation.
- Follow the proper procedures and regulations for safe handling and use of chemicals.

Associate in Science Degree Major Requirements

Code	Title	Units	
Required Core			
Select at least 36 units from the following:			
CHEM 1A	General Chemistry I		
CHEM 1B	General Chemistry II		
CHEM 12A	Organic Chemistry I		
CHEM 12B	Organic Chemistry II		
MATH 20A	Calculus with Analytic Geometry I		
MATH 20B	Calculus with Analytic Geometry II		
MATH 20C	Calculus of Several Variables		
PHYS 3A	Science and Engineering Physics I		
PHYS 3B	Science and Engineering Physics II		
PHYS 3C	Science and Engineering Physics III		
TOTAL MAJOR UNITS			
Additional Requirements			
Complete Competency Requirements, general education pattern 24			

(MPC General Education or Cal-GETC), and electives, if needed, for a total of 60 degree-applicable units.

Contact an MPC counselor for major preparation at specific institutions.

Total Units

Please refer to the program requirements section of the Catalog for information about associate degree requirements and certificate requirements including Information Competency, and General Education requirements.

The model sequence of coursework below is one pathway for students to complete the program. The information below is not an official educational plan. An MPC Counselor can assist you with creating a personalized education plan based on your academic, career, and personal goals. Visit MPC's Counseling website for more information about Counseling and up-to-date program requirements.

Suggested Course Sequence

	Total Units	60
	Units	12
MPC GE Area 6		3
Elective (COMM C Recommended)	21000, PHYS 3C, and MATH 32	4
CHEM 12B	Organic Chemistry II	5
Spring	Units	16
MPC GE Area 4		3
MPC GE Area 1B ((ENGL C1001 Recommended)	4
MATH 20C	Calculus of Several Variables	4
CHEM 12A	Organic Chemistry I	5
Year 2 Fall		
X A	Units	16
MPC GE Area 3		3
PHYS 3A	Science and Engineering Physics I	4
MATH 20B	Calculus with Analytic Geometry II	4
CHEM 1B	General Chemistry II	5
Spring	Units	10
recommended)		16
MPC GE Area 7 (C	COUN 10, 59, 71, or COUN 50 or 51	3
MATH 20A	Calculus with Analytic Geometry I	4
CHEM 1A	General Chemistry I	5
LIBB 50	Introduction to Library and Besearch Skills	1
Fall ENGL C1000	Academic Beading and Writing	Units 3
Year 1		