

CHEMISTRY

The Associate Degree in Science with an emphasis in Chemistry (Transfer Preparation) 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:

- Successfully execute chemistry experiments using standard laboratory equipment, modern instrumentation, and classical purification techniques.
- Describe the particle nature of matter, explain the attractions and/or bonds between chemical units, and predict the physical and chemical properties they possess.
- 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.
- 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.
- 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 (Transfer Preparation)

Associate Degree Major Requirements	Units
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REQUIRED CORE:

Select at least 39 units from the following:	39
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CHEM 1A	General Chemistry I (5)
CHEM 1B	General Chemistry II (5)
CHEM 12A	Organic Chemistry I (5)
CHEM 12B	Organic Chemistry II (5)
MATH 20A	Calculus w/Analytic Geometry I (5)
MATH 20B	Calculus w/Analytic Geometry II (5)
MATH 20C	Calculus of Several Variables (5)
PHYS 3A	Science and Engineering Physics I (4)
PHYS 3B	Science and Engineering Physics II (4)
PHYS 3C	Science and Engineering Physics III (4)

TOTAL MAJOR UNITS	39
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Associate Degree Requirements (as described above)	39
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Contact an MPC counselor for major preparation at specific institutions.

Complete Competency Requirements, and CSU General Education or IGETC Pattern, for a total of 60 transferable units (see pages 72-75 in the 2017-18 MPC Catalog).

TOTAL DEGREE UNITS	60
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