

CHEMISTRY, M.S.

The M.S. in Chemistry will develop a student's ability to integrate advanced chemistry knowledge and critical-thinking skills to effectively approach scientific problems grounded in chemistry. In addition, graduates will gain the ability to clearly and persuasively communicate advanced scientific ideas across scientific disciplines and to non-scientists alike.

The curriculum is designed to prepare graduates for successful careers in industry or chemistry education. It is anchored by four core courses covering fundamental chemistry concepts in thermodynamics, bonding, effective scientific communication and spectroscopy. These core courses are supplemented by 10 elective courses spanning all sub-disciplines of chemistry, including chemistry education.

Contact Information

chemistry@css.edu

Learning Outcomes

Upon completing the M.S. in Chemistry, students will be able to:

1. Demonstrate an expanded knowledge of chemistry. Students will be able to articulate an understanding of complex concepts in several chemistry sub-disciplines, such as biochemistry, chemical education, analytical, inorganic, organic, and physical chemistry.
2. Critically read and evaluate scientific literature to develop critical assessment of scientific ideas.
3. Effectively communicate complex scientific concepts, consequences, and the rationale underpinning conclusions, to specialist and non-specialist audiences clearly and unambiguously.
4. Examine scientific ethical issues to properly identify ethical responsibility in science-related professions.
5. Integrate advanced knowledge and critical thinking skills to evaluate scientific problems to gain new scientific insight.

Requirements

Students must achieve the following program requirements for all courses listed under Program Requirements and Program Required Courses for the Chemistry, M.S.

Program Requirements

Major Credits: 30

Minimum GPA: 3.0

Minimum Grade: C

Program Required Courses

Code	Title	Credits
Core Courses		12
CHM 6001	Bonding and Materials	
CHM 6002	Topics in Thermodynamics ¹ or CHM 6005 Topics in Kinetics	
CHM 6003	Advanced Spectroscopy	
CHM 6004	Chemical Information and Communication	
Elective Courses		18
CHM 6005	Topics in Kinetics or CHM 6002 Topics in Thermodynamics	

CHM 6101	Medical Biochemistry
CHM 6102	Bioanalytical Chemistry
CHM 6103	Chemical Education
CHM 6104	Energy and Environment
CHM 6105	Introduction to Computational Chemistry
CHM 6107	Advanced Instrumental
CHM 6110	Pharmaceutical Chemistry
CHM 6111	Chemistry of the Elements
CHM 6112	Advanced Organic Chemistry
CHM 6113	Organometallic Reactions and Structures
CHM 6777	Topics in Chemistry

Total Credits **30**

¹ If both CHM 6002 Topics in Thermodynamics and CHM 6005 Topics in Kinetics are taken, one will be counted as an elective.

Degree Requirements

To graduate from The College of St. Scholastica, graduate students must meet the following minimum degree requirements.

Minimum GPA: 3.0