

Chemistry, M.S.

This program requires a minimum of 30 semester credit hours.

Requirements for admission are:

- A grade point average of 3.0 on a 4.0 scale;
- 20 hours of approved undergraduate chemistry, including 12 advanced;
- 8 hours of approved physics and 6 hours of calculus.

Students not satisfying these requirements may be admitted conditionally. The School of Mathematics and Physical Sciences, in examining the applicant's prerequisites, may accept equivalent hours or require additional work. An entering graduate student is normally subjected to five placement examinations in analytical, biochemistry, inorganic, organic and physical chemistry that are used for advising the student's beginning course work.

Students are required to show proficiency by taking courses of at least four out of the five core areas of Chemistry: Organic, Inorganic, Analytical, Physical and Biochemistry. A list of these core areas can be found at the bottom of this page.

Thesis Option

Code	Title	Semester Credit Hours
Core Requirements		
CHEM 5300	Chemistry Graduate Practice	0
CHEM Core Area 1 ¹		3
CHEM Core Area 2 ¹		3
CHEM Core Area 3 ¹		3
CHEM Core Area 4 ¹		3
Thesis Requirement		
CHEM 5306	Thesis Research	3
CHEM 5306	Thesis Research	3
Approved Electives		
CHEM Elective		3
CHEM Elective		3
Elective ²		3
Elective ²		3
Total Semester Credit Hours		30

¹ A list of core chemistry areas can be found at the bottom of this page.

² Elective selection must be approved by the Graduate Coordinator and the Director of the School of Mathematics and Physical Sciences.

Special Topics in Chemistry (CHEM 5412) may be repeated for credit under different topics.

Research Project Option

Code	Title	Semester Credit Hours
Core Requirements		
CHEM 5300	Chemistry Graduate Practice	0
CHEM Core Area 1 ¹		3
CHEM Core Area 2 ¹		3
CHEM Core Area 3 ¹		3
CHEM Core Area 4 ¹		3
Research Project Requirement		

CHEM 5305	Project Research	3
Approved Electives		
CHEM Elective		3
CHEM Elective		3
CHEM Elective		3
Elective ²		3
Elective ²		3
Total Semester Credit Hours		30

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Special Topics in Chemistry (CHEM 5412) may be repeated for credit under different topics.

Course Only Option

Code	Title	Semester Credit Hours
Core Requirements		
CHEM 5300	Chemistry Graduate Practice	0
CHEM Core Area 1 ¹		3
CHEM Core Area 2 ¹		3
CHEM Core Area 3 ¹		3
CHEM Core Area 4 ¹		3
Select two of the following:		6
CHEM 5313	Chemistry and Nanoscience	
CHEM 5343	Forensic Chemistry	
CHEM 5351	Environmental Chemistry	
CHEM 5412	Special Topics in Chemistry	
Approved Electives		
CHEM Elective		3
CHEM Elective		3
Elective ²		3
Elective ²		3
Total Semester Credit Hours		30

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Special Topics in Chemistry (CHEM 5412) may be repeated for credit under different topics.

Chemistry Core Areas

Code	Title	Semester Credit Hours
Organic Chemistry		
CHEM 5323	Advanced Organic Chemistry	3
CHEM 5327	Advanced Organic Synthesis	3
CHEM 5329	Asymmetric Synthesis	3
Inorganic Chemistry		

CHEM 5311	Advanced Inorganic Chemistry	3
Analytical Chemistry		
CHEM 5301	Advanced Chemistry Instruments	3
CHEM 5303	Advanced Analytical Chem	3
CHEM 5308	Chem/Biochem Analysis	3
Physical Chemistry		
CHEM 5328	Physical Organic Chemistry	3
CHEM 5332	Molecular Modeling	3
Biochemistry		
CHEM 5333	Bioinformatics	3
CHEM 5341	Biochem Analysis of Proteins	3
CHEM 5342	Biochem Analysis of Gene Ex	3