

# M.S., CHEMISTRY

## Admission Requirements

Complete the following admission requirements:

- Submit GRE General Test scores.
- If English is not your native language, submit scores from both the Test of Spoken English and the Test of Written English, as well as TOEFL scores. Requests, including justification, for exceptions to this requirement should be made to the chair of the department.

## Program Requirements

### Minimum Requirements for Chemistry M.S.: 30 credits

#### OPTIONAL CONCENTRATIONS: BIOCHEMISTRY AND NEUROSCIENCE (P. 1), ENVIRONMENTAL CHEMISTRY (P. 1)

Code	Title	Credits
<b>General University Requirements</b>		
Complete the general university requirements. ( <a href="http://catalog.uaf.edu/graduate/mastersdegrees/#generaluniversityrequirementstext">http://catalog.uaf.edu/graduate/mastersdegrees/#generaluniversityrequirementstext</a> )		
<b>Master's Degree Requirements</b>		
Complete the master's degree requirements. ( <a href="http://catalog.uaf.edu/graduate/mastersdegrees/#masterofsciencewithprojecttext">http://catalog.uaf.edu/graduate/mastersdegrees/#masterofsciencewithprojecttext</a> )		
<b>Chemistry Program Requirements</b>		
Complete any deficiencies concurrently with this degree.		
Complete two credits of advisory committee-approved seminar courses from the two seminar course choices below. <sup>1</sup>		2
CHEM F691	Research Presentation Techniques	
CHEM F688	Biochemical and Molecular Biology Seminar	
Complete 6-9 credits from relevant advisory-committee approved graduate-level courses or select one of the following concentrations		6-9
Biochemistry and Neuroscience		
Environmental Chemistry		
Complete 7-10 credits of courses approved by the advisory committee.		7-10
<b>Thesis or Project Requirements</b>		
Complete the thesis or project option as described below. <sup>2</sup>		12

<sup>1</sup> Students in the Biochemistry and Neuroscience concentration should take Biochemical and Molecular Biology Seminar and students in Environmental Chemistry concentration should take Research Presentation Techniques.

<sup>2</sup> The minimum credits required is 30. The required M.S. course work above represents 18 credits. The minimum number of thesis credits required is 6. For the thesis option the remaining 6 credits can either be thesis credits or courses at the F400 level or higher. For the project

option, the remaining 6 credits can be courses at the F400 level or higher.

## THESIS OR PROJECT OPTIONS

### Thesis Option

Code	Title	Credits
CHEM F699	Thesis	6
Thesis credits or committee-approved courses that are F400 level or higher.		6
Submit a committee-approved, written research-based thesis proposal and pass an oral comprehensive examination centered on the proposal.		
Complete a committee-approved, research-based written thesis and pass an oral defense of the thesis.		

### Project Option

Code	Title	Credits
CHEM F698	Non-thesis Research/Project	6
Committee-approved courses that are F400 level or higher.		6
Submit a committee-approved, literature-based written project proposal and pass an oral comprehensive examination centered on the proposal.		
Complete a committee-approved, literature-based written project and pass an oral defense of the project.		

## OPTIONAL CONCENTRATIONS

### Biochemistry and Neuroscience

Code	Title	Credits
Complete 9 credits from the following list of core courses		9
CHEM F654	Protein Structure and Function	
CHEM F657	Molecular Foundations of Gene Expression	
CHEM F670	Cellular and Molecular Neuroscience	
CHEM F674	Membrane Biochemistry and Biophysics	
CHEM F675	Cellular Signaling	

### Environmental Chemistry

Code	Title	Credits
Complete 6 credits from the following list of core courses:		6
CHEM F606	Atmospheric Chemistry	
CHEM F609	Aqueous and Environmental Geochemistry	
CHEM F631	Environmental Fate and Transport	
CHEM F655	Environmental Toxicology	

**SEE BIOCHEMISTRY AND NEUROSCIENCE ([HTTP://CATALOG.UAF.EDU/GRADUATE/GRADUATE-DEGREE-PROGRAMS/BIOCHEMISTRY-NEUROSCIENCE/](http://catalog.uaf.edu/graduate/graduate-degree-programs/biochemistry-neuroscience/)).**

**SEE ENVIRONMENTAL CHEMISTRY ([HTTP://CATALOG.UAF.EDU/GRADUATE/GRADUATE-DEGREE-PROGRAMS/ENVIRONMENTAL-CHEMISTRY/](http://catalog.uaf.edu/graduate/graduate-degree-programs/environmental-chemistry/)).**