

# CHEMISTRY, MASTER OF SCIENCE

## Admission Criteria

In addition to the general requirements for admission to the Graduate School (see the General Information Section of this bulletin), applicants for admission to graduate standing in chemistry are expected to present evidence of having completed the following courses with the indicated semester credit hours :

Code	Title	Hours
	General chemistry with laboratory	8
	Organic chemistry with laboratory	8
	Quantitative analysis with laboratory	4
	Physical chemistry with laboratory	8
	Instrumental methods of analysis	3
	College Physics	6
	Calculus	8

A diagnostic examination or qualifying examination covering the fundamentals of chemistry is required of all applicants prior to official admission to candidacy for the Master of Science in Chemistry degree. Only two attempts to pass this examination are permitted.

## Degree Requirements

The requirements for the Master of Science in Chemistry are summarized below:

1. Satisfactory performance on the qualifying examination.
2. Completion of a total of thirty (30) semester credit hours of graduate level courses (usually 500 level or above). A minimum of twenty-four (24) of these credit hours must be in chemistry, including six (6) hours of research (CHEM 861 Research Problems taken twice). The remaining six (6) hours may be taken in related disciplines such as biology and/ or mathematics.
3. Completion and presentation (through an oral defense) of a thesis to a committee composed of members of the Department of Chemistry and representatives of the Graduate School.
4. Fulfillment of general requirements for graduation as outlined by the Graduate School (see the General Information Section of this bulletin).

Persons wishing to acquire the Professional Certificate for Teachers of Chemistry or wishing to earn the M.Ed. for Teachers of Chemistry should contact an advisor in the College of Education.

## Curriculum Summary Degree Plan

Students must meet the general requirements for all graduate students as prescribed in this bulletin. Degree Plans must be approved by the graduate program advisor prior to submission to the Graduate School.

## Master of Science (Thesis)

This plan is designed to provide instructional enhancement to meet the needs of teachers, practitioners and others who wish to supplement their undergraduate education and expand their research capabilities in chemistry through study beyond the master's degree.

## Allocation of Thirty Semester Hour Course Requirements Summary

General Requirements: Minimum thirty (30) semester credit hours and a research project (thesis).

Code	Title	Hours
	General Core Curriculum (p. 1)	18
	Electives (p. 1)	12
<b>Total Hours</b>		<b>30</b>

## General Core Curriculum Requirements

Code	Title	Hours
CHEM 531	Advanced Inorganic Chemistry	3
CHEM 543	Advanced Analytical Chem	3
CHEM 633	Advanced Organic Chemistry	3
CHEM 635	Advanced Physical Chemistry	3
CHEM 861	Research Problems <sup>1</sup>	6
<b>Total Hours</b>		<b>18</b>

<sup>1</sup> Enroll twice

## Electives

Code	Title	Hours
Select twelve credit hours from the following:		12
CHEM 445	Biochemistry <sup>1</sup>	
CHEM 499	Seminar <sup>1</sup>	
CHEM 533	Organic Reactions	
CHEM 623	Topics In Chemistry	
CHEM 624	Topics In Chemistry	
CHEM 625	Spec Topics In Chem	
CHEM 634	Adv Organic Chem	
CHEM 636	Advanced Physical Chemistry	
MATH 439	Introduction to Analysis <sup>1</sup>	
MATH 577	Fourier Series	
MATH 578	Laplace Transforms	
<b>Total Hours</b>		<b>12</b>

<sup>1</sup> Undergraduate/graduate credit

Approved selected ES (Environmental Toxicology) courses.