MASTER OF SCIENCE IN CHEMISTRY

Program Description
The Master of Science in Chemistry is designed to train chemists for careers in business, industry, or academics. This degree is also appropriate for those students planning to continue their training in Ph.D. programs at other institutions.

Admissions
Applicants seeking admission to the graduate program in chemistry must submit the following directly to the Office of Graduate Admissions:

1. Graduate Application (http://www.shsu.edu/admissions/apply-texas.html)
2. Application fee (http://www.shsu.edu/dept/graduate-studies/application-fee.html)
3. Official transcript(s) of all previous college work
4. Official GRE scores
5. Three letters of recommendation

Applicants must have a major or minor in chemistry (with at least a 2.5 GPA in their undergraduate chemistry courses typically including Analytical or Quantitative Chemistry, Instrumental Methods, one year of calculus-based Physical Chemistry, and Inorganic Chemistry) or commensurate industrial experience.

For a final admissions decision, a holistic review of each student’s application file will be completed on a competitive basis. Currently a 3.0 GPA is required for financial support.

The Department of Chemistry offers classes in a wide variety of chemical subjects including analytical, forensic, inorganic, organic, and physical chemistry, toxicology, and biochemistry.

Degree Requirements
Master of Science, 31 Semester Hours with Minor and Thesis

Course Area
Chemistry 13
Research and Thesis 6
Minor field that logically supports the major (Computing Science, Mathematics, Physics, Biology, etc.) 12
Total Hours 31

Plan 1 - MS in Chemistry (Thesis Option)
Master of Science, 31 Semester Hours with Minor and Thesis

Specified Course
CHEM 5100 Chemical Literature & Seminar 1
CHEM 6398 Graduate Research In Chemistry 3

Restrict Electives
Select four of the following: 2

CHEM 5361 Physical Organic Chemistry
CHEM 5362 Organic Reaction Mechanisms
CHEM 5368 Analytical Spectroscopy
CHEM 5372 Advanced Biochemistry I
CHEM 5374 Chem Of Coordination Compounds
CHEM 5381 Adv Physl Chem Thermodynamics
CHEM 5385 Selected Topics In Adv Chem

Secondary Field
Select four graduate courses in a field that logically supports the major 3

Thesis
CHEM 6099 Thesis 4

Total Hours 31

1 Usually taken every semester and receives a grade of "IP" until the final semester the research project is completed.
One course from 4 different areas (Analytical Chemistry, Biochemistry, Inorganic Chemistry, Organic Chemistry, and Physical Chemistry) is required.

Courses should be selected in consultation with the Graduate Advisor.

Once enrolled in CHEM 6099, the student must enroll in this course every semester until graduation.

Master of Science, 30 Semester Hours without Minor and with Thesis

Course Area
Chemistry 24
Research and Thesis 6
Total Hours 30

Plan 2 - MS in Chemistry (Thesis Option)

Master of Science, 30 Semester Hours without Minor and with Thesis

Specified Course
CHEM 5100 Chemical Literature & Seminar 1
CHEM 6398 Graduate Research In Chemistry 3

Restricted Electives
Select four of the following: 12
CHEM 5361 Physical Organic Chemistry
CHEM 5362 Organic Reaction Mechanisms
CHEM 5368 Analytical Spectroscopy
CHEM 5372 Advanced Biochemistry I
CHEM 5374 Chem Of Coordination Compounds
CHEM 5381 Adv Physl Chem Thermodynamics

Electives
Select four graduate courses in CHEM 2 11

Thesis
CHEM 6099 Thesis 3

Total Hours 30

1 Usually taken every semester and receives a grade of "IP" until the final semester the research project is completed.
2 Courses should be selected in consultation with the Graduate Advisor. One course from 4 different areas (Analytical Chemistry, Biochemistry, Inorganic Chemistry, Organic Chemistry, and Physical Chemistry) is required. The student may take CHEM 5100 two additional times for a total of three credit hours.
3 Once enrolled in CHEM 6099, the student must enroll in this course every semester until graduation.

Master of Science, 36 Semester Hours with Minor, Non-Thesis

Course Area
Chemistry 24
Minor field that logically supports the major (Computing Science, Mathematics, Physics, Biology, etc.) 12
Total Hours 36

Plan 3 - MS in Chemistry (Non-Thesis Option)

Master of Science, 36 Semester Hours with Minor, Non-Thesis

Specified Courses
CHEM 5100 Chemical Literature & Seminar 1
CHEM 6398 Graduate Research In Chemistry

Restricted Electives
Select four of the following: 12
CHEM 5361 Physical Organic Chemistry
CHEM 5362 Organic Reaction Mechanisms
CHEM 5368 Analytical Spectroscopy
CHEM 5372 Advanced Biochemistry I
CHEM 5374 Chem Of Coordination Compounds
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>CHEM 5381</td>
<td>Adv Physl Chem Thermodynamics</td>
</tr>
<tr>
<td>CHEM 5385</td>
<td>Selected Topics In Adv Chem</td>
</tr>
</tbody>
</table>

**Electives**

Select two graduate courses in CHEM 6

**Secondary Field**

Select four graduate courses in PHYS, BIOL, or MATH 12

Total Hours 36

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1. CHEM 5100 must be taken three times for a total of three credit hours.
2. Courses should be selected in consultation with the Graduate Advisor.

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**Master of Science, 36 Semester Hours without Minor, Non-Thesis**

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<thead>
<tr>
<th>Course Area</th>
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<tbody>
<tr>
<td>Chemistry</td>
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</table>

**Plan 4 - MS in Chemistry (Non-Thesis Option)**

**Master of Science, 36 Semester Hours without Minor, Non-Thesis**

<table>
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<tr>
<th>Specified Courses</th>
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<td>CHEM 5100</td>
<td>Chemical Literature &amp; Seminar 1</td>
</tr>
<tr>
<td>CHEM 6398</td>
<td>Graduate Research In Chemistry</td>
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<td>CHEM 5385</td>
<td>Selected Topics In Adv Chem</td>
</tr>
</tbody>
</table>

**Electives**

Select six graduate courses in CHEM 18

Total Hours 36

1. CHEM 5100 must be taken three times for a total of three credit hours.