

# Chemistry MS

## Master of Science in Chemistry - Option I Thesis

The program requires completion of ten courses (30 semester hours) as noted below. In addition, students are required to enroll in CHEM 501 Graduate Seminar for four semesters they are in residence completing degree requirements.

Other Chemistry courses may be substituted for the four elective courses upon consent of the department head and/or a majority vote of all Chemistry faculty.

### Required Courses (6 semester hours)

CHEM 518	Thesis (6 semester hours required)	6
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Only 6 semester hours of credit for 518 per degree will be given upon satisfactory completion of the requirement.

### Seminar course (4 semester hours)

CHEM 501	Graduate Seminar	1
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Enrollment required for four semesters in residence completing degree requirements.

### Core Courses (15 semester hours)

CHEM 513	Organic Mechanisms & Structure	3
CHEM 514	Biochemistry	3
CHEM 521	Chemical Thermodynamics	3
CHEM 531	Advanced Inorganic Chem	3
CHEM 541	Adv Analytical Chemistry	3

### Prescribed Chemistry Elective Courses (9 semester hours)

Three graduate-level courses in chemistry.	9
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Appropriate substitutions require departmental approval prior to registration.

<b>Total Hours</b>	<b>34</b>
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## Master of Science in Chemistry - Option II Non-Thesis

Choose one of three Professional Tracks - (36 semester hours)

### Track I: Professional Chemistry Track

Concentration in Analytical Chemistry, Biochemistry, Inorganic Chemistry, Organic Chemistry or Physical Chemistry

### Required Courses (3 semester hours)

CHEM 595	Research Lit & Techniques (3 semester hours required)	3
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### Core Courses (15 semester hours)

CHEM 513	Organic Mechanisms & Structure	3
CHEM 514	Biochemistry	3
CHEM 521	Chemical Thermodynamics	3
CHEM 531	Advanced Inorganic Chem	3
CHEM 541	Adv Analytical Chemistry	3

### Prescribed Chemistry Elective Courses (18 semester hours)

Select 18 semester hours (6 courses) from the following:

CHEM 502	Safety in the Chemical Laboratory	3
CHEM 515	Synthetic Organic Transformations	3
CHEM 517	Applied Biochemistry & Biotechnology	3
CHEM 522	Quantum Chemistry	3
CHEM 527	Chemical and Biochemical Characterization Methods I	3
CHEM 528	Chem Biochem Charact II	3
CHEM 529	Workshop in Chemistry	3-6
CHEM 533	Kinetics and Mechanism	3
CHEM 536	Organometallic Chemistry	3
CHEM 547	Advanced Instrumental Analysis I	3
CHEM 548	Advanced Instrumental Analysis II	3

CHEM 589	Independent Studies	1-4
CHEM 597	Special Topics	1-4
<b>Total Hours</b>		<b>36</b>

## Track II: Professional Chemical Business Track

The curriculum of the Professional Chemical Business track is similar to the curriculum of the Professional Chemistry track. However, two courses (6 sh) from the College of Business will be used to replace two core courses listed in the core curriculum of the Professional Chemistry track and two (6 sh) more replacing electives. The courses need to be approved by the Department Head before they are taken.

## Track III: Professional Chemical Education Track

The curriculum of the Professional Chemical Education track is similar to the curriculum of the Professional Chemistry track. Two courses (6 sh) from the College of Education can be used to replace two core courses listed in the core curriculum of the Professional Chemistry track and two (6 sh) more replacing electives. The courses need to be approved by the Department Head before they are taken.

## Master of Science in Chemistry Accelerated (BS-MS) Option II Non-Thesis

The BS-MS accelerated degree program allows undergraduate students in the Chemistry program to begin coursework towards the non-thesis option of the Master of Science in Chemistry program during their senior year at Texas A&M University-Commerce. Students can earn a B.S. and M.S. degree in five years upon completion of degree requirements for both degrees. For this accelerated program, 6 credits of graduate coursework can be applied to both the BS and MS degrees. Once admitted, the BS/MS candidate must maintain a 3.25 Undergraduate GPA. In the final semester of the student's undergraduate program, a new online Apply Texas Application for the master's Accelerated program must be submitted to gain admission and continue taking classes to complete the master's program.

### Required course (3 semester hours required)

CHEM 595	Research Lit & Techniques	3
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### Core courses completed as part of undergraduate Chemistry BS degree plan (6 semester hours)

CHEM 521A	Chemical Thermodynamics *	3
CHEM 531A	Advanced Inorganic Chem *	3

### Remaining core courses (9 semester hours)

CHEM 513	Organic Mechanisms & Structure	3
CHEM 514	Biochemistry	3
CHEM 541	Adv Analytical Chemistry	3

### Prescribed Chemistry Elective Courses (18 credit hours)

Select 18 semester hours (6 courses) from the following:

CHEM 502	Safety in the Chemical Laboratory	1-3
CHEM 515	Synthetic Organic Transformations	3
CHEM 517	Applied Biochemistry & Biotechnology	3
CHEM 522	Quantum Chemistry	3
CHEM 527	Chemical and Biochemical Characterization Methods I	3
CHEM 528	Chem Biochem Charact II	3
CHEM 529	Workshop in Chemistry	3-6
CHEM 533	Kinetics and Mechanism	3
CHEM 536	Organometallic Chemistry	3
CHEM 547	Advanced Instrumental Analysis I	3
CHEM 548	Advanced Instrumental Analysis II	3
CHEM 589	Independent Studies	1-4
CHEM 597	Special Topics	1-4
<b>Total Hours</b>		<b>36</b>

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Courses shared with BS

### Track III: Professional Chemical Education Track

The curriculum of the Professional Chemical Education track is similar to the curriculum of the Professional Chemistry track. Two courses (6 sh) from the College of Education can be used to replace two core courses listed in the core curriculum of the Professional Chemistry track and two (6 sh) more replacing electives. The courses need to be approved by the Department Head before they are taken.

**Note:** Successful completion of the Comprehensive Exam is required of all students.