

MSNS – Emphasis in Chemistry

The Master of Science in the Natural Sciences is an interdisciplinary science degree in the sciences and mathematics. Since it is interdisciplinary and cross-disciplinary, it is a degree offered by the College of Sciences and Mathematics and is administered through the Dean's office instead of in individual departments. Either a thesis or a non-thesis option may be pursued in earning the degree. Upon entering the program, graduate students will be assigned to a graduate faculty committee to design a degree plan and to oversee their specific program of study, including development and administration of pertinent culminating projects and examinations.

Students choosing the Chemistry Emphasis will be required to take the ACS exams in all five areas of chemistry (analytical, biochemistry, inorganic, organic, and physical) prior to entering the program. Exams are typically given the week prior to the start of classes. These exams will be used for advising purposes. Students not performing satisfactorily may be required to take undergraduate coursework to make up deficiencies. Non thesis students may also be required to take entrance exams in other departments.

Thesis Option: A minimum of 30 graduate credit hours is required including 24 hours of graduate course work within the college, with exactly 18 hours in a single area or discipline. Three hours each of thesis research (589) and thesis writing (590) will be taken above the 18 hour requirement. Students in the thesis option will be required to successfully complete a comprehensive examination based on their area(s) of study and to defend the thesis. The exam may be written, oral, or a combination of the two methods.

For an emphasis in chemistry, the student must take courses from at least three areas of chemistry and must take at least two courses in one area of chemistry. In addition, all chemistry emphasis students must take CHE 570 seminar. The comprehensive exam will be a written exam covering the student's graduate coursework. The exam will cover at least three areas in chemistry and must be taken prior to the first day of classes of the student's final semester. It is the responsibility of the student to contact the faculty to arrange the timing of the exam. CHE 575/576 taken as research and CHE 581 do not count toward the 18 hours of coursework in chemistry.

Non-Thesis Option: A minimum of 36 graduate credit hours is required including 24 hours of graduate course work within the college, with exactly 18 hours in a single discipline. A maximum of 12 credit hours of graduate work from an area external to the College of Sciences and Mathematics may be included in completing the degree requirements. Students in the non-thesis option will be required to successfully complete a capstone project as well as a comprehensive examination based on their area(s) of study. The exam may be written, oral, or a combination of the two methods.

For an emphasis in chemistry, the student must take courses from at least three areas of chemistry and must take at least two courses in one area of chemistry. In addition, all chemistry emphasis students must take CHE 570. The comprehensive exam will be a written exam covering the student's graduate coursework. The exam will cover at least three areas in chemistry and must be taken prior to the first day of classes of the student's final semester. It is the responsibility of the student to contact the faculty to arrange the timing of the exam. Students may take 1 hour of CHE 575 for credit for their capstone project. CHE 581 will only counts toward the degree for students pursuing the Educational Option.

Students pursuing the M.S. in Natural Sciences will be assessed through traditional measures (tests, labs, projects, etc.) as they progress through their required course work. Since the M.S. in Natural Sciences is inherently interdisciplinary, each student's program of study will be planned in consultation with his or her committee and located in the Dean's administrative office. Progress toward completion will be monitored by the committee.

Full details of admission requirements, administration of the degree, and procedures and policies are available on-line.

Format: The M.S. in Natural Sciences is characterized by flexibility. As such, courses and labs may be offered at alternative times and in a variety of formats including face-to-face, hybrid and online offerings.

Master of Science in Science and Mathematics
Program of Study: Chemistry

MS with Thesis:

All Chemistry students are strongly urged to pursue a degree with thesis. The thesis program requires a minimum of 24 of the 30 hours for graduation be in chemistry. These hours must include the following:

- 18 graduate semester hours of chemistry (must include a minimum of three chemistry areas in which comprehensive exam will cover; one area must have a minimum of two courses).
- CHE 570 (1) – seminar is a required course
- CHE 589 (3) - thesis research
- CHE 590 (3) - thesis writing
- 6 hours elective coursework or minor as approved by committee

Note:

1. up to six hours of undergraduate chemistry courses may be taken and must be approved by committee.

MS non-Thesis:

The non-thesis program requires 36 hours for graduation. These hours must include the following:

- 18 graduate semester hours of chemistry (must include a minimum of three chemistry areas in which comprehensive exam will cover; one area must have a minimum of two courses).
- CHE 570 (1) – seminar is a required course
- CHE 581 (3) – will only count for students pursuing an educational option.
- 18 hours of electives or minor with a minimum of 6 hours of course work within the college (or a maximum of 12 hours outside the college) as approved by committee

Notes:

1. CHE 575, taken as research hours, may count for a maximum of 1 hour of electives and may be used to complete the required capstone project;
2. only six hours of undergraduate chemistry courses may be taken as graduate credit and must be approved by committee
3. **Education option** requires CHE 506 (3), CHE 581 (3), 15 hrs of education courses, and 6 hrs practical (service credit available).