

CHEMISTRY (BIOCHEMISTRY) - MASTER OF SCIENCE

The Master of Science in Chemistry with a concentration in Biochemistry can be obtained through either a [thesis option](#) or a [non-thesis option](#). Both options require at least 30 credits of course work. The thesis option program is designed to teach students modern approaches to chemistry and biochemistry (courses), experimental methods to problem-solving (research), and communication skills in the discipline (seminars and colloquia). All M.S. candidates are required to complete the courses below. Thesis-option students must also pass a qualifying exam at the end of the first year and a final comprehensive examination which includes a written thesis. Non-thesis option students must pass a final exam, the format and content of which will be decided by a departmental committee.

| Prefix | Title | Credits |
|-------------------------------------------------------|-----------------------------------------------------------------------------|--------------|
| Required Courses | | |
| CHEM 475 | Central Concepts in Chemistry - Safety | 1 |
| CHEM 476 | Central Concepts in Chemistry - Research Ethics | 1 |
| CHEM 477 | Central Concepts in Chemistry - Professional Development (Required Courses) | 1 |
| CHEM 510 | Graduate Student Seminar ¹ | 3 |
| BCHE 542 | Biochemistry I | 3 |
| BCHE 545 | Molecular and Biochemical Genetics | 3 |
| BCHE 546 | Biochemistry II: Central and Intermediary Metabolism | 3 |
| BCHE 600 | Research ² | 9-12 |
| <i>Additional Graduate-level courses</i> ³ | | 6-12 |
| Total Credits | | 30-39 |

¹ Only 3 credits of CHEM 510 Graduate Student Seminar will count toward the M.S. degree. For the thesis option, at least one credit of CHEM 510 Graduate Student Seminar must be taken for a letter grade of B- or better. The remaining CHEM 510 Graduate Student Seminar credits for the thesis option and all credits for the non-thesis option may be taken as S/U.

² Required only for thesis-option.

³ Additional courses are chosen based on major emphasis area, through consultation with the thesis committee or an advisor and can include research credits. These courses may include any course numbered 450 or above in the following subject areas: CHEM, BCHE, PHYS, MATH, CSCI, BIOL, A ST, CHME, GENE, MOLB, SOCI, EDUC, EPWS, ENVS, ANSC.