# CHEMISTRY (MA)

Department: Chemistry and Biochemistry

## General MA Admission Requirements

In addition to the admission requirements for Graduate Education, the applicant shall have a bachelor's degree in chemistry, biochemistry, or a related field and shall have completed one year each of college-level calculus and physics. The student must have achieved a cumulative GPA of 3.0 in the last 60 hours of undergraduate course work, a cumulative GPA of 2.75 in undergraduate chemistry courses, and a C or better in each of the following courses and their accompanying labs: general chemistry, organic chemistry (two semesters), and analytical chemistry (one semester) and at least one additional course in one of the fundamental areas of chemistry (physical chemistry, inorganic chemistry, or biochemistry).

## Specific MA Program Requirements

- Applicants are required to take the GRE general exam and to provide their scores as part of their application to the program. This requirement may be waived at the discretion of the Department.
- Preparation of a graduate Program of Study in consultation with their major advisor and the graduate coordinator will be completed by the end of the first semester in the program. The M.A. program is expected to take at least two years to complete. Remedial undergraduate courses will not apply to the 33 semester hours required for the M.A. degree.
- To graduate from the program, a student must have completed, either at the undergraduate or graduate level, courses in the four following fundamental areas: inorganic, biochemistry, thermodynamics/kinetics, and quantum mechanics. Students who have not already met this requirement at the time of admission may complete the courses at Bradley, but no more than nine hours will be counted toward the M.A. degree.
- Degree candidates must complete the Literature Review course (CHM 686 Literature Review), the capstone experience for the M.A. degree, with a grade of B or better in their last semester in the program. For CHM 686 Literature Review, the student must prepare a concise, up-to-date, well-written review paper on a literature topic that was selected in consultation with the student's seminar advisor and present a seminar to the Department on this topic. After the seminar, the student must meet with their graduate committee to complete the comprehensive assessment as required by Graduate Education.
- Students must complete a total of 33 semester hours including the required courses listed below. The graduate coordinator will review the transcript of each student to ensure that students do not repeat courses they have already completed (C or better) at the undergraduate level.

| Code | Title | Hours |
|---|---|---|
| **Core Requirements** [1] | | |
| CHM 536 | Inorganic Chemistry | 3.0 |
| CHM 560 | Principles of Biochemistry | 3.0 |
| CHM 570 | Chemical Thermodynamics and Kinetics | 3.0 |
| CHM 576 | Quantum Chemistry and Spectroscopy | 3.0 |
| **Additional Requirements** | | |
| CHM 520 | Instrumental Analysis | 4.0 |
| CHM 524 | Fundamentals of Separation Science | 3.0 |
| CHM 686 | Literature Review | 1.0 |
| **Electives** | | |
| Select 500-level Chemistry courses to reach the 33.0 required hours, including a minimum of 2 hrs of laboratory electives from: [2] | | 13.0 |
| CHM 541 | Materials Chemistry Laboratory | |
| CHM 561 | Principles of Biochemistry Laboratory | |
| CHM 571 | Physical Chemistry Laboratory | |
| CHM 599 | Research [3] | |
| CHM 697 | Research [3] | |
| **Total Hours** | | **33** |

1. At least one of these requirements must be fulfilled by undergraduate coursework. Any remaining deficiencies can be taken at the graduate level.
2. A maximum of six graduate credit hours from cognate fields may be used to fulfill this requirement.
3. No more than 2 hours of graduate research (CHM 599 Research or CHM 697 Research) can be applied toward an MA degree.