

CELLULAR, MOLECULAR, AND MICROBIAL BIOLOGY M.S. - CELLULAR AND DEVELOPMENTAL BIOLOGY

or BIOM 599 Thesis	
BIOM 502	Advanced Immunology
BIOB 567	Molecular Analysis of Development
BCH 582	Proteins and Enzymes
BCH 584	Nucleic Acids
BCH 600	Cell Organization & Mechanisms
Total Hours	30

General Graduate Program Requirements

Graduate School policies and standards can be found on the Graduate School Policies page (<https://catalog.umn.edu/graduate/school-policies/>).

The minimum GPA for any graduate program is 3.0. Individual programs may require more than a 3.0 to remain in good standing.

The minimum grade for a course to be accepted toward any master's or doctoral requirement is C. The minimum grade for a course to be accepted toward a certificate program is B-. Individual programs may require higher grades for specific courses.

Master of Science - Cellular, Molecular, and Microbial Biology; Cellular and Developmental Biology Concentration

- All CMMB M.S. students have a common set of requirements: students must take a total of 30 semester credits, including 20 semester credits of courses (includes any course other than Thesis and Research).
- At least half of the non-thesis and non-research credits toward the degree must be at the 500 or 600 level.
- The following credit limitations apply:
 - A maximum of 6 credits of Special Topics (BCH 591, BIOB 591 and BIOM 591).
 - A maximum of 6 credits of Independent Study (BIOB 592, and BIOM 592).
 - A maximum of 10 credits of research and thesis (BCH 590, BIOB 590, BCH 599, and BIOM 599).

Course Requirements

Code	Title	Hours
Core Courses		
Complete all of the following courses:		
BCH 570 or BIOM 570	Intro to Research	1
BIOB 547	Experimental Molecular, Cellular, and Chemical Biology	2
BIOM 594	Molecular and Biomedical Sciences Seminar	4
Elective, Research, and Thesis		
Complete 23 credits of elective courses.		23
Elective courses can include any graduate-level course in General Biology (BIOB), Microbiology (BIOM), and Biochemistry (BCH). Suggested courses include:		
BCH 590 or BIOM 590 Research	Research	
BCH 599	Thesis	