

UNIVERSITY OF MARYLAND
Biochemistry Graduate Program

DESCRIPTION OF M.S. DEGREE REQUIREMENTS

This document describes the admission, course, and degree requirements for the M.S. degrees in Biochemistry. The Biochemistry graduate program emphasizes the Ph.D. degree and M.S. students are accepted only in rare cases. Financial assistance is not generally available to M.S. students. An M.S. degree is not required for admission to the Ph.D. program in Biochemistry.

A. ADMISSION REQUIREMENTS

Admission to graduate study at the University of Maryland normally requires a minimum of a Bachelor of Science (B.S.), Bachelor of Arts (B.A.), or equivalent degree with a minimum of 30 semester or 40 quarter hours of chemistry, an overall grade point average greater than 3.0 (on a scale where the average grade is 2.0), and 3 letters of reference indicating a potential for independent, creative scientific research. The undergraduate program in Biochemistry should have included at least 1 year of general chemistry, 1 year of organic chemistry, and 1 semester of biochemistry, as well as laboratory courses in organic chemistry and biochemistry. A course in physical chemistry and a laboratory course in analytical chemistry are also desirable. **These requirements represent minimum standards and the competition for available space may limit admissions to persons with credentials above these levels.**

The general Graduate Record Examination scores (GRE - Verbal, Quantitative, Analytical) are required of all applicants; the Advanced Subject examination (Biochemistry, Chemistry, etc.) is recommended but not required. Applicants from non-English speaking countries must also present the results of the Test of English as a Foreign Language (TOEFL) and the Test of Spoken English (TSE).

B. FIRST YEAR ADVISING

Initial advising of graduate students takes place during orientation immediately prior to the first semester at the University. Each incoming graduate student meets with a faculty advisor who assists the student in their initial course selection so as to advance their knowledge and best prepare a student for their subsequent area of research specialization.

C. TEACHING REQUIREMENTS

The opportunity to serve as a Teaching Assistant is generally not offered to students in pursuit of a terminal M.S. degree. Special exceptions can be made at the request of M.S. students pursuing a thesis-option degree. International students will be required to pass an English assessment examination prior to appointment as a Teaching Assistant.

D. REQUIREMENTS FOR THE M.S. DEGREE - THESIS OPTION

- 30 credits of graduate coursework including 24 credits of graduate coursework by the end of the fourth semester. A 3.0 GPA or better is required. This program must include 12 credits of coursework at the 600 level or higher, and at least 12 course credits must be represented by courses in Biochemistry. The Biochemistry Core courses (BCHM 661, 662, 671, and 675) must be included in the coursework. The core courses must be completed by the end of the 4th semester in graduate school with a minimum grade of B- in each course. Two credits may be in Seminar (BCHM 889A).
- Six credits out of the 30 total credits must be research (BCHM799).

- Completion of a thesis based on the student's research.
- Presentation of one seminar, generally immediately before the final oral examination.
- A final oral examination by the student's advisory committee

E. REQUIREMENTS FOR THE NON-THESIS M.S. DEGREE

- 30 credits of graduate coursework. A 3.0 GPA or better is required. This program must include at least 18 credits of coursework at the 600 level or higher. A minimum of 18 of these credit hours must be in Chemistry or Biochemistry, of which at least 14 must be at or above the 600 level.
- The Biochemistry Core courses (BCHM 661, 662, 671, and 675) must be included in the coursework. The core courses must be completed by the end of the 4th semester in graduate school with a minimum grade of B– in each course. Two credits may be in Seminar (BCHM 889A). Six credit hours (out of the total 30) must be in BCHM699.
- A scholarly paper must be submitted to and approved by three faculty members. The paper must be at least 20 double-spaced pages in length and must be original work by the degree candidate. It may not have been prepared for any previous assignment, such as to satisfy the requirements for any course that the candidate has taken. The faculty readers will submit to the candidate several questions related to the paper content. These questions must be answered in writing by the candidate to complete the degree requirements.

F. OFF-CAMPUS RESEARCH

Because of the proximity of the University of Maryland to many national laboratories, students may have the opportunity to perform part of their research at one of these labs. A description of the proposed research and administrative arrangements must be prepared and submitted to the Graduate Program Director for prior approval.