



**Master's
of Science
Degree
Plan B:
Non-Thesis**

***DEPARTMENT OF
BIOLOGY***

**CASE
WESTERN
RESERVE
UNIVERSITY**

DEPARTMENT OF BIOLOGY

Masters of Science Degree (Plan B) Non-Thesis

The Plan B Master of Science Degree in Biology is a non-thesis, graduate degree program. The purpose of the program is to provide advanced exposure to biology for interested professionals, to provide additional training for those wishing to resume or change careers, or to provide additional preparation in biology for students interested in pursuing professional studies in the health sciences. Although students are not required to write an M.S. Thesis, the program does require independent study of all degree candidates.

REQUIREMENTS FOR THE MASTER'S DEGREE

The Biology Graduate Affairs Committee (GAC) assigns an advisor to each candidate. If the candidate has another preference, the student is free to obtain an alternative advisor. Within the first semester of study, the candidate and advisor must complete a Program of Study form and submit it to the Chair of the GAC. The Program of Study will specify the course work required to complete the academic requirements for the M.S. Degree and may be amended at any time during the degree program as circumstances warrant. By the end of the first year of study, the candidate and advisor must submit 2 nominations to complete the formation of an advisory committee, which will monitor the candidate's program and conduct the final examination. The selection of an advisory committee also signals the area of concentration in Biology (chemical biology, cell and molecular biology, organismal biology, or population biology) that will form the basis of the comprehensive portion of the final examination. These nominations will be submitted to the Chair of the GAC for its approval. At least two members of the Advisory Committee must hold faculty appointments in the Biology Department. The GAC will approve members of the Advisory Committee with regard to their competence in the area of biology selected by the student and advisor. The candidate must meet with the Advisory Committee at the end of the first year of study.

A. ACADEMIC REQUIREMENTS

1. Program of Study

All candidates must complete a total of 30 credit hours in course work at the 300 level or higher. At least 18 of these credit hours must be at the 400 levels or above. Further, at least 15 credit hours must be in courses offered by the Biology Department.

The remaining course work may include courses offered by any department within the University, subject to the advisor's approval and Graduate School Regulations. Candidates are limited to 3 credit hours of independent study (BIOL 599) and are required to take three credit hours of BIOL 601, Research in Biology, which will form the basis of the written component of the final examination (see below). Both of these courses require completion of a Course Proposal Form (available in the Biology Departmental Office) and approval by the advisor and Advisory Committee. In the case of enrollment in BIOL 599, the letter grade assigned will reflect the evaluation by the entire Advisory Committee. The candidate's program of study must also include at least one seminar course that requires presentation of a seminar on a topic different from the topic to be covered in the BIOL 601. Finally, at least one course must be taken in each of the following areas of biology: cell and molecular biology (including chemical biology), organismal biology, and population biology.

2. Maintenance of Good Standing

To maintain good standing, a candidate must complete a program of study after the first semester of graduate study and have a cumulative grade point of 3.0 or higher at the end of each year. Receipt of two grades of "C" or a grade of "F", "NP" or "U" in any courses will be considered cause for separation from the graduate program.

B. EXAMINATION OF CANDIDATE

Candidates for the Master of Science degree are required to report to the Chair of the GAC by the end of the first month of the final semester of study in order to schedule the examination. The candidate must also obtain all appropriate forms for completion of the degree program from the Graduate School. Failure to comply with these regulations may prohibit a student from completing degree requirements for that semester. The candidate's Advisory Committee with a non-voting member of the GAC will serve as

an Examining Committee. At least one month prior to the examination, the Examining Committee must meet with the student to review the appropriateness of the BIOL 601 paper for the written portion of the examination and to give the student guidelines on the scope and resolution expected for the comprehensive examination.

1. Examination Format

The examination will be in two parts:

- A comprehensive oral examination in one of the four areas of biology (chemical biology, cell and molecular biology, organismal biology, or population biology) as selected with the formation of the candidates advisory committee.
- An oral defense of the research paper written to complete the requirement for BIOL 601. The research paper must address a question in biology, review the appropriate, contemporary scientific literature on the subject, include an analysis of its current status, and finish with suggestions for future experimental work or observations. Guidelines for the research paper are available in the Biology Office.

2. Examination Results

The Examination Committee will recommend one of the following outcomes of the final exam:

a. Pass.

All three examiners agree that the student has passed both parts of the exam.

b. Fail with recommendation for reexamination in one or both parts of the exam.

At least one of three examiners votes to fail candidate on one or both parts of the exam.

c. Fail.

All three examiners vote to fail the student and do not recommend re-examination or one or more examiners vote to fail a candidate on one or both parts of a reexamination. The candidate may appeal to the GAC for review. The GAC may then set another examination or reexamination or sustain the Examination Committee's decision.

FOR FURTHER INFORMATION CONTACT:

Julia A. Brown

Graduate Degree Programs in Biology

Department of Biology

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REQUIREMENTS FOR ADMISSION

1. Bachelor's degree, preferably in one of the sciences.
2. Acceptance by the Graduate Admissions Committee of the Department of Biology.
3. Acceptance by the Graduate School of the University.
4. A minimum cumulative grade point average of 2.5, with a grade point average of at least 2.9 in the sciences.
5. Submission of test scores for the Graduate Record Examination.

APPLICATIONS

Applications should be mailed directly to the Graduate Admission Committee of the biology department. Please indicate clearly on the application that you are applying.

Graduate Admissions Committee

Department of Biology

Case Western Reserve University

Cleveland, OH 44106-7080

Email: jab12@po.cwru.edu

Stipend and tuition support is available for those who qualify.

Formal application materials can be found at the:

CWRU Graduate Studies Application Information and Forms Page.

