

Academic Assessment Plan

Department of Biological Sciences

I. OVERVIEW: GRADUATE PROGRAM IN BIOLOGICAL SCIENCES

The graduate programs in Biological Sciences (M.S. and Ph.D.) offer the opportunity for advanced study and research for students that desire a comprehensive view of biological sciences. Accomplishment is judged by competence and a developing sense of responsibility for the advancement of knowledge rather than the fulfillment of routine requirements. It is expected that all candidates for advanced degrees will have a period of study in residence, complete the required courses in advanced biology appropriate for the chosen discipline, demonstration of advanced competence in the chosen area of expertise, satisfactory introduction to allied subjects, the ability to communicate at a scholarly level, and the satisfactory performance in examinations.

II. DEGREE PROGRAM: PHD IN BIOLOGY

A. Learning Outcomes: PhD in Biology

- Mastery of the chosen discipline of biology at the graduate level
- Capacity for original research as evidenced by the preparation and defense of a Ph.D. dissertation
- Ability to communicate effectively both as a participant and presenter in graduate seminars
- Demonstrated excellence in the classroom for teaching assistants
- Professional development in science via the presentation of research at national conferences, applying for and receiving nationally competitive grants, publishing research articles and books in the chosen discipline, participation in departmental professional development seminars
- Participation in the academic life of the Department (attending seminars and public lectures)

B. Assessment Techniques: Ph.D. in Biology

- Review of initial application to the Ph.D. program by Graduate Studies Committee
- Successful completion of the two required Department of Biological Sciences seminar courses
- Successful completion of 24 credit hours (minimum) of coursework applicable to the student's discipline of biology as prescribed by the doctoral advisory committee
- Successful completion of both the written and oral comprehensive exams in the chosen discipline of biology. This must be accomplished within the first three calendar years in the doctoral program
- Annual meetings with the student's doctoral advisory committee
- Monitoring the degree to which Ph.D. candidates present their research at national and international conferences, and scientific publication resulting from their graduate research
- Evaluating the degree to which Ph.D. candidates actively pursue internal and external sources of funding for their research

- Successful defense of dissertation in front of at least four experts in the field
- Chair and Director of Graduate Studies will track the progress of Ph.D. graduates after they complete their doctoral degrees

C. Timelines for Data Collection and Analysis: PhD in Biology

- PhD students meet two major assessment timelines: 1) the doctoral candidacy written and oral examinations; and 2) the doctoral dissertation defense. These events do not occur on a regular basis
- Exit interviews of graduating doctoral students will be conducted by the Director of Graduate Studies.
- Analysis of interviews (those who graduate and those who quit the program) will be analyzed by the Director of Graduate Studies and the Graduate Studies Committee.
- The GSC will present findings to the chair and the faculty

D. Use of Results: PhD in Biology

- Analysis will be the responsibility of the Director of Graduate Studies and the Graduate Studies Committee
- Key findings will be reported to the department chair and faculty. On the basis of the metrics examined, the Graduate Studies Committee will make appropriate recommendations for changes to the program (For example, the GSC recommended the doctoral candidacy exam occur within the first three calendar years of graduate study to ensure timely completion and to create a mid-range milestone for evaluation)

III. DEGREE PROGRAM: MS IN BIOLOGICAL SCIENCES

A. Learning Outcomes: M.S. in Biology

- Mastery of the chosen discipline of biology at the graduate level
- Capacity for original research as evidenced by the preparation and defense of a M.S. thesis
- Ability to communicate effectively both as a participant and presenter in graduate seminars
- Demonstrated excellence in the classroom for teaching assistants
- Professional development in science via the presentation of research at national conferences, applying for and receiving nationally competitive grants, publishing research articles and books in the chosen discipline, participation in departmental professional development seminars
- Participation in the academic life of the Department (attending seminars and public lectures)

B. Assessment Techniques: M.S. in Biology

- Review of initial application to the Master's program by Graduate Studies
- Successful completion of two Department of Biological Sciences seminar courses
- Successful completion of 24 credit hours (minimum) of coursework applicable to the student's discipline of biology as prescribed by the M.S. advisory committee
- Annual meetings with the student's M.S. advisory committee

- Monitoring the degree to which M.S. students present their research at national and international conferences, and scientific publication resulting from their graduate research
- Successful defense of a thesis in front of at least three experts in the field
- Chair and Director of Graduate Studies will track the progress of M.S. graduates after they complete their M.S. degrees

C. Timelines for Data Collection and Analysis: M.S. in Biology

- M.S. students must meet one assessment timeline: the preparation of a written thesis and subsequent M.S. defense. These events do not occur on a regular basis
- Exit interviews of graduating M.S. students will be conducted by the Director of Graduate Studies
- Analysis of interviews (those who graduate and those who quit the program) will be analyzed by the Chair of the GSC in conjunction with the Graduate Studies Committee (GSC)
- The GSC will present findings to the chair and the faculty

D. Use of Results: M.S. Biology

- Analysis will be the responsibility of the Director and the GSC
- Key findings will be reported to the department chair and faculty. On the basis of the metrics examined, the Graduate Studies Committee will make appropriate recommendations for changes to the program