



MA Biological Sciences 2018-19 Learning Outcome Assessment Report

Learning Outcome 1 – Adequate Progress

Methods

We assessed students' adequate progress using completion data gathered from the Department of Biological Sciences. Data were gathered in May 2019, including students graduating with an MA degree in the Spring/Summer, Fall, and Winter terms from 2009-2019. We included ten years of students (2009-2019) in the data set to accommodate a small sample size and a lack of previous data analysis. Future assessments will be done on a year-by-year basis. The number of semesters for MA students to complete the program or the number taken prior to leaving the program to enter another graduate or professional program, were tabulated.

Results

A total of 94 students entered the MA in Biological Sciences program between Fall 2009 and Winter 2019; of these students, 36 (38%) successfully completed their MA degree and 11 (12%) switched to other programs including MS or PhD programs at Wayne State or elsewhere, medical schools, and law schools. Overall, 83% of students pursuing their MA degree completed their program in 15 semesters or fewer, which exceeded our stated goal of 75%. Our data set did not allow us to calculate the time spent in the program for those students who left for other programs. We caution that students leaving the programs for others do not always notify the department that they have done so, so that our "leave for other program" percentage is likely to be underestimated.

Learning Outcome 2 – Mastery of Current Biological Theory

Methods

Following either completion of the MA program or upon leaving the program for another graduate or professional program, students will complete an exit survey that will assess students' confidence in biological theory in their chosen field. Surveys will be distributed and completed within 30 days of the student leaving the program. Each student completing the survey will be evaluated individually using their self-assessed scores and the percent of students meeting the minimum criteria reported.

The survey for this learning outcome is currently being developed. Survey questions will include the following:

- How familiar are you with current biological theory in your chosen subdiscipline?
- To what degree did the MA program develop your knowledge of current theory?
- To what degree did the MA program improve your knowledge of current theory?

Survey responses will be scored on a scale of 1-4, where “4” corresponds to “Very familiar” or “High degree”. Scores will be added across the respondents and reported as a mean value for each student. The percent of students meeting the minimum criteria will be reported.

Results

The survey for this learning outcome will be developed during summer 2019 and the learning outcome will first be assessed beginning in Fall 2019.

Learning Outcome 3 – Mastery of Oral Communication

Methods

All students in the MA of Biological Sciences program are required to take BIO 8995 (Seminar in Biological Sciences), which requires students to attend the departmental seminar, read papers by the speakers each week, and lead discussions of the assigned readings. Student success in these courses is in part based on leading the discussions. Final grades for students taking BIO 8995 during the academic year (either Fall or Winter semesters) will be utilized for this assessment. The number of students earning a letter grade of “A-“ or higher will be tabulated, and the percent of students meeting this minimum criteria for this learning outcome will be reported.

Results

This learning outcome will first be assessed beginning Fall 2019.

Learning Outcome 4 – Mastery of Written Communication

Methods

Data for this assessment will include the numerical grade for each student for a writing assignment from two courses selected by the student as part of their curriculum in completing the MA program. Numerical grades for the two assignments will be collected following completion of the MA program or when the student leaves to begin another graduate or professional program. The point scores from the two papers will be averaged for each student, and the percent of students meeting the minimum criterion for this learning outcome will be reported.

Results

This learning outcome will first be assessed beginning Fall 2019.

2019-20 Action Plan

As a consequence of the 2018-19 assessment results, three actions are planned for the 2019-20 academic year:

1. Improved tracking of MA students who leave the program, either upon completion or when leaving for other programs.
2. Development of an exit survey for MA students who complete the program or leave for other programs that will include questions to address Learning Outcomes #2 and #4.

3. Development of a standard methodology to assess students' ability to lead discussions in the BIO 8995 course, given the course has a different instructor virtually every time it is offered.

Timeline for Action Plan

A timeline for the implementation of the action plan for the 2019-20 academic year follows:

1. An improved database will be developed for tracking current and recent MA students, for implementation beginning in Fall 2019.
2. An exit survey for MA students completing or leaving the program will be developed during the summer of 2019 and implemented in Fall 2019.
3. A standard methodology to assess students' ability to lead discussions in the BIO 8995 course will be developed beginning in Fall 2019, and implemented no later than Winter 2020.