

WSU M.A. in Biological Sciences 2021-2022 Assessment Plan

Mission Statement

The mission of the MA in Biological Sciences is to provide students who are interested in pursuing future career opportunities in health-related professions, education, and biomedically-related businesses with a broad exposure to advanced topics in biological sciences ranging from environmental to cellular/ molecular processes. Students will be given a firm foundation of the key working theory and recent advances that are currently accepted in the fields of biology. Our course-credit based program offers students flexibility to design their curriculum from courses within and outside of our department and to proceed at a pace that balances career and personal constraints.

M.A. in Biological Sciences Program Outcomes

Students successfully completing the M.A. in Biological Sciences should be able to:

1. Demonstrate a strong understanding of current state of knowledge in their chosen fields;
2. Become familiar with current biological theory and recent advances in their chosen field to identify significant gaps in the current arena of knowledge in their specific disciplines;
3. Integrate current scientific literature and their existing biology knowledge base to synthesize and contribute new ideas in specialized fields of biology;
4. Communicate their biological subdiscipline in written and oral forms as is common and appropriate for their field.

Assessment Learning Outcomes

The following learning outcomes for the M.A. in Biological Sciences will be utilized for the 2021-2022 assessment:

1. Students will demonstrate mastery of current biological theory in their chosen field evidenced by an ability to recall specific theory at the completion of the program;
2. Students will demonstrate mastery of written communication through writing in the biological sciences.

Assessment 1 – Mastery of Current Biological Theory

Learning Outcome

Students will demonstrate mastery of current biological theory in their chosen field.

Data Sources

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.

Data Gathering and Timeline

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.

Data Evaluation

Survey questions 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.

Criteria for Acceptable Performance

80% of students completing their thesis will score a minimum of 3.0 for each of the three questions on the exit survey.

MA Student Exit Survey

Question	4	3	2	1
How familiar are you with current biological theory in your chosen subdiscipline of biology?	Very familiar; I know as much as I need to move on to the next step of my career	Moderately familiar: I am confident in what I know about theory but will continue to develop my knowledge base	Somewhat familiar: I understand theory but not enough, and I may not be ready to learn more on my own	Unfamiliar; I am not confident I know more than I did upon completing my undergraduate degree
To what degree did the MA program help to develop your knowledge of biological theory?	High degree; I gained direction and additional information that made be better understand biological theory	Moderately high degree: The program provided a solid foundation for me to learn more on my own	Moderately low degree: I learned about theory but am not confident in what I know	Low degree; I learned little from the program and/or I feel like I have no better knowledge of theory than I did before I started
To what degree did the MA program help to improve your knowledge of biological theory	High degree: my knowledge of theory has advanced dramatically since I began the program	Moderately high degree: My knowledge of theory is better than it was before I began the program	Moderately low degree: My knowledge of theory is only marginally better than it was before I began the program	Low degree: My knowledge of theory remains unchanged since before I started the program

Assessment 2 – Mastery of Written Communication

Learning Outcome

Students will demonstrate mastery of written communication through writing in the biological sciences.

Data Sources

Data for this assessment will include a score for each student for a writing assignment from a course selected by the student as part of their curriculum in completing the MA program. Writing samples will be scored on a four-point scale (4=outstanding; 3=acceptable, 2=below average, 1=unacceptable).

Data Gathering and Timeline

Writing samples will be collected in the winter term of each assessment year; it is important that students are queried for samples multiple times during their degree program to compensate for an expected low response rate.

Data Evaluation

The scores from the writing samples will be tallied for each student, and the percent of students meeting the minimum criterion for this learning outcome will be reported.

Criteria for Acceptable Performance

A minimum of 85% of students completing their MA degree in Biological Sciences will earn a score of "3" or higher on the writing assignments from their curriculum.