

April 2, 2026

Dear Dr. Rossbach and members of the Advisory Committee,

It is a true honor to be nominated for the Darrell R. Latva Biological Sciences Teaching Excellence Award. I accept the nomination and welcome the opportunity to describe the students who have shaped my teaching and the learning environment I strive to create for them.

When I interviewed at Western Michigan University, undergraduate and graduate students wanted stronger preparation in statistics and bioinformatics. Many needed these skills for their research but did not feel confident using quantitative methods or computational tools. Their concerns revealed an important curricular need and inspired the creation of “Bioinformatics for Biologists,” which I am now teaching for the fourth time.

Students enter the course with varied backgrounds. Some have previous programming or statistical experience, while others are writing code and analyzing large biological datasets for the first time. Many initially approach the material cautiously. They worry about incorrect commands, unexpected results, or error messages.

The course is designed to help students replace that hesitation with *curiosity and persistence*. Students work with authentic biological datasets generated in my laboratory and use computational tools to answer meaningful scientific questions. Rather than following a fixed sequence of commands, they examine their results, determine whether an approach worked, identify problems, and revise their analyses. They learn that successful bioinformatics depends not on avoiding mistakes, but on recognizing, investigating, and correcting them.

Students are encouraged to “try it and see if it works.” When an approach generates an error, they receive guidance toward the source of the problem rather than simply being given the corrected answer. They may then debug their work, resubmit it, and demonstrate what they learned through the revision process. Error messages become opportunities to investigate rather than reasons to stop. The classroom becomes a place where students can ask questions, test ideas, laugh at shared frustrations, and continue working without embarrassment.

Students are also given time to think deeply. Assignments emphasize a smaller number of challenging problems rather than a large number of repetitive exercises completed under pressure. Students are evaluated on the quality of their reasoning, the care of their analytical process, and their ability to interpret biological results—not on whether they immediately obtain the expected answer. This structure allows them to persist through uncertainty and develop the independence required for authentic scientific research.

Over the course of the semester, students who were initially reluctant to write code begin troubleshooting their own analyses. They become more willing to experiment, more comfortable asking why a result looks unexpected, and more confident explaining what their data mean. The quiet “Yes!” or “Yay!” that follows a successfully corrected analysis reflects more than

obtaining the right answer. It marks a moment when a student recognizes that they can solve a problem that once appeared inaccessible.

My role is to create the conditions in which those moments can occur: sufficient time, meaningful problems, constructive feedback, and permission to make mistakes. My own experiences as a learner helped me recognize the value of those conditions, but my students continue to show me why they matter. Their questions shape how I explain difficult concepts. Their challenges lead me to reconsider how assignments are structured. Their successes demonstrate that quantitative biology becomes more accessible when students are supported as developing scientists rather than judged by the speed or correctness of their first attempt.

The most rewarding outcome of the course is not simply that students complete an analysis. It is that they leave more prepared to use analytical skills in their own laboratory work, more confident in their ability to confront unfamiliar problems, and more willing to see themselves as quantitative biologists. I look forward to continuing to learn from my students and to supporting the mistakes, discoveries, frustrations, and joyful breakthroughs through which they become increasingly independent scientists.

Sincerely,

A handwritten signature in black ink, appearing to read 'Andrew W. Thompson'.

Andrew W. Thompson, Ph.D.
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