

Teaching, Learning, and Assessment

Learning Outcomes

Impact Statement

Title

Master in Plant Health Management: Expanding Graduate Education Beyond Campus Boundaries

Collaborators

Department of Plant Pathology; Department of Entomology; OSU Extension; MPH M Graduate Co-Chairs: Anne Dorrance and Luis Canas; MPH M Graduate Studies Committee and Academic Staff: Francesca Hand, Melanie Ivey, Wendy Klooster, Monica Lewandowski, Andrew Londo, Andrew Michel, Thomas K. Mitchell, Pierce Paul, David Shetlar, Dominique Tate, Celeste Welty, Sarah Williams.

Summary

Ohio State's Master in Plant Health Management (MPHM) program was established to meet employment needs for professionals with plant health expertise in the agricultural and environmental fields. The MPH M is part of a growing trend in education: professional and online degree programs for working professionals. The program, which is a Professional Science Master's degree, is characterized by an interdisciplinary curriculum that integrates science and workforce skills. Changes in the MPH M program were made to enhance academic and professional success for students. In response to input from alumni, current students, faculty, staff, and the MPH M advisory board (comprised of prospective employers), we have added student support services, increased funding and student employment opportunities, enhanced the MPH M projects (part of the degree requirement), and found ways to incorporate emerging topics into the program. MPH M was established in 2012; the MPH M-Online option was added in 2014.

Situation

For working students – about 85% of the enrollment – it would not be possible to pursue a graduate degree without the online option. However, it is challenging to engage online and part-time students academically and professionally as they balance school, work and family. After the 10th MPH M student graduated in 2016, we developed a detailed approach to obtain feedback.
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THE OHIO STATE UNIVERSITY

COLLEGE OF FOOD, AGRICULTURAL,
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Situation (Continued)

It included an alumni survey to continually seek feedback from graduating students; and we gathered input from prospective employers and industry, current students, faculty and staff. We also examined enrollment and financial data, student performance, and instructor feedback. The MPH M Chair made presentations to the MPH M Advisory Board, Graduate Studies Committee, and department faculty for further input. The interdisciplinary nature of the curriculum, flexibility in the curriculum, and online courses were cited as program strengths. Areas for improvement were identified as: 1. Engagement and communication with students; 2. MPH M project structure, including deliverables such as research/Extension publications or educational materials; 3. Increase funding and professional development opportunities; and 4. Incorporate emerging topics into the curriculum.

Outcome

Communication: We improved communication with students by employing a teaching assistant (TA) to monitor student performance in online courses and be a peer mentor. Our webinar series covers professional development and plant health topics, and MPH M students present their project seminars in preparation for their final examinations. **Projects:** The MPH M Co-Chairs work closely with project advisors to establish goals and expectations for MPH M projects. This has resulted in the publication of scientific papers, fact sheets and training videos. We are linking students with commodity organizations, Extension and university programming, and professional societies; and arranging job shadowing and internships in their locales. A new course will incorporate experiential learning opportunities for distance students. **Funding:** Slightly more than half of our students are self-supporting their education. We continually work to provide student jobs on campus, graduate teaching/research associateships, scholarships and travel funds. **Topics:** we are incorporating emerging topics into courses, inviting seminar speakers to cover new topics, and engaging faculty as project advisors in these areas (e.g., precision agriculture, urban agriculture).

Impact

Since 2012, nearly 50 MPH M students have been enrolled and 23 students have graduated (as of Spring 2019). We have a 99% placement rate – nine are working in industry; and several graduates obtained promotions or found new positions. Four are pursuing Ph.D. degrees, three are working in research laboratories, two are OSU Extension Educators, and the others are working in various technical fields. A dedicated TA to help online students has been a tremendous benefit to both students and instructors; students are often more willing to ask a peer for help. The weekly webinar series has served as a regular meeting place and we have hosted a variety of speakers. The webinar series has become a vital part of the program. We continue to find ways to incorporate hands-on learning experiences. MPH M students have written or contributed to Extension fact sheets, training modules, online courses, Plant Disease Management Reports, research, and citizen science training for their projects. We established the MPH M Grad Studies Support Fund at Ohio State to provide professional and educational opportunities for students. OSU Extension has provided graduate associateships for the Pesticide Safety and Education Program, and both Plant Pathology and Entomology have employed MPH M students as TAs or graders. Students have also found jobs as student assistants in research programs. The enrollment growth has been vital to our departments, and we have built many collaborations inside and outside of the university. As students graduate, we find that their career stories are visible and rewarding indicators of program impact.

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