

Student Learning Outcomes

1. Technical Competencies (TC)

Integrate skills and knowledge to solve problems related to plants, insects, and microbes in natural and managed ecosystems

Detailed SLOs

In natural and managed ecosystems (or agroecosystems) students will be able to apply knowledge of current technologies to

- a. integrate multiple methods to identify important plants, insects, and microbes
- b. Understand the biology and ecology of pests and beneficial species
- c. provide cost effective, socially acceptable, and environmentally sound pest management solutions

2. Agricultural Literacy (AL)

Demonstrate understanding of social, economic, and biophysical aspects of the management of biological problems in natural and managed ecosystems

Detailed SLOs

- a. Identify participants and evaluate their roles in pest management policy, including regulatory frameworks
- b. Describe the similarities and differences among management of biological problems in *natural and managed ecosystems*
- c. Develop logical, objective, balanced arguments regarding contemporary problems in *natural and managed ecosystems*
- d. Explain the benefits and risks of management practices in natural and managed ecosystems

3. Critical Thinking (CT)

Describe, assess, analyze and synthesize knowledge from across the curriculum to create solutions for pests and beneficial species in natural and managed ecosystems

Detailed SLOs

- a. Demonstrate ability to acquire knowledge about agroecosystems and identify gaps and critical problems
- b. Integrate knowledge from across the curriculum
- c. Analyze qualitative and quantitative information and derive conclusions
- d. Synthesize knowledge to create solutions to complex problems

4. Leadership (L)

Promote and practice inclusion to form effective teams that solve complex problems in natural and managed ecosystems

Detailed SLOs

- a. Function effectively within diverse teams to solve complex problems and achieve desired outcomes in natural and managed ecosystems
- b. Create and facilitate inclusive and diverse teams

5. Communication (C)

Communicate effectively with diverse audiences regarding sustainable pest and pathogen management in natural and managed ecosystems

Detailed SLOs

- a. Demonstrate the ability to effectively engage stakeholders to identify pest and pathogen management needs
- b. Excel in written and verbal communication of scientific results and analyses of information related to sustainable pest and pathogen management to diverse audiences including peers, stakeholders, public and the media