



AGR 114: Sustainable Agriculture

This course is an introduction to the principles and practices of sustainable agriculture for small organic farms and gardens. Topics include sustainable agriculture principles and practices, economics, soil science, conservation, tillage, and fertility, composting, cover crops, crop rotation, plant biology, weeds, pest and disease control. Three hours of lecture and two hours of laboratory per week, including field trips. Competency met: Scientific Reasoning and Discovery. Spring

Course Student Learning Outcomes

1. Describe and apply the scientific method to address observations and problems.
2. Describe and apply the principles of scientific inquiry.
3. Compare and contrast industrial vs. organic agriculture practices and impacts.
4. Discuss and appraise the economic trends in agricultural markets.
5. Discuss principles and practices of soil science and soil conservation.
6. Conduct and interpret physical and chemical soil analysis results.
7. Recognize and explain plant nutrient deficiencies and their remedies.
8. Describe and execute soil fertility techniques including composting, cover crops, crop rotations, and fertilization.
9. Recognize and describe plant morphology and physiology.
10. Explain and apply diverse weed management techniques and practices.
11. Conduct and discuss a whole farm case study to identify specific experiences, lessons learned, constraints, and opportunities on local organic farms.
12. Analyze, discuss, and debate agricultural issues including biotechnology, climate change, environmental degradation, and food quality.

Credits: 4

Subject: Sustainable Agriculture
Instructional Support Fee Applies