



Course Syllabus

Course Overview

Foundations of Gardening (FOG) is a 10-week, fully online course offered by MSU Extension. It provides a comprehensive introduction to gardening, featuring self-paced learning modules and live virtual lectures from field experts. Participants who meet the course requirements will receive a Certificate of Completion.

All coursework is completed virtually through the D2L platform, where participants can access readings, submit assignments, and prepare for live sessions. Assessments are open-book and taken online. Additionally, participants can engage in discussions with peers via the course forum.

This course serves as a prerequisite for those interested in becoming an MSU Extension Master Gardener (EMG) volunteer. However, it is also open to individuals who simply wish to enhance their gardening knowledge. More details on the MSU EMG program, please visit our web page: https://www.canr.msu.edu/master_gardener_volunteer_program/ or contact us at: MSUE.MG@msu.edu

Course Topics

The course covers the following key topics:

- Plant Science for Gardeners
- Plant Propagation
- Soils and Plant Growth
- Entomology for Gardeners
- Plant Diseases, Pests, and Problems
- Smart Lawncare
- Gardening with Flowers
- Trees and Shrubs
- Growing Fruits and Vegetables
- Environmental Gardening



Course Access & Enrollment

Once payment is completed and enrollment is confirmed, the course will be visible on D2L but will not open until the official start date. Each week, a new unit will become available.

After the course ends, materials remain accessible for six additional weeks before access expires.

Course Schedule

FOG Course Orientation

One week before the course starts, an optional live Zoom session will introduce participants to the course structure, expectations, and the use of Zoom for webinars.

Week 1: Plant Science for Gardeners

- Lesson 1: Introduction to Plants and Plant Classification
- Lesson 2: The Plant Cell, Tissues, and Organs (Part 1)
- Lesson 3: Plant Tissues and Organs (Part 2)
- Lesson 4: Plant Growth and Development
- Lesson 5: Plant Chemistry

Week 2: Basics of Plant Propagation

- Lesson 1: Sexual Propagation—Seeds
- Lesson 2: Seedling Care
- Lesson 3: Asexual Propagation
- Lesson 4: Environmental Factors Affecting Propagation

Week 3: Soils and Plant Growth

- Lesson 1: Soil Formation and Composition
- Lesson 2: Soil Biology and Composting
- Lesson 3: Physical Properties of Soil
- Lesson 4: Soil and Plant Nutrition
- Lesson 5: Soil Sampling and Analysis

Week 4: Entomology for Gardeners

- Lesson 1: Introduction to Entomology and Insect-like Creatures
- Lesson 2: Insect Orders and Types of Injury
- Lesson 3: Integrated Pest Management (IPM)
- Lesson 4: Responsible Pesticide Use
- Lesson 5: Pollinators and Their Protection

Week 5: Plant Diseases, Pests, and Problems

- Lesson 1: Integrated Pest Management (IPM) for Gardeners

- Lesson 2: Diagnostics for Gardeners
- Lesson 3: Gardening for Wildlife
- Lesson 4: Preventative Gardening Practices

Week 6: Smart Lawncare

- Lesson 1: Introduction to Lawns
- Lesson 2: Establishing and Improving a Lawn
- Lesson 3: Lawn Care Best Practices
- Lesson 4: Common Lawn Issues and Solutions
- Lesson 5: Sustainable Lawn Alternatives

Week 7: Gardening with Flowers

- Lesson 1: Introduction to Flowering Plants
- Lesson 2: Growing and Caring for Flowers
- Lesson 3: Planting and Establishing Flowers
- Lesson 4: Maintenance and Troubleshooting
- Lesson 5: Flower Garden Styles

Week 8: Trees and Shrubs

- Lesson 1: Selecting the Right Plant for the Right Place
- Lesson 2: Planting Woody Ornamentals
- Lesson 3: Maintaining Healthy Trees
- Lesson 4: Pruning Trees and Shrubs
- Lesson 5: Managing Common Tree and Shrub Issues
- Lesson 6: Landscape Design Fundamentals

Week 9: Growing Fruits and Vegetables

- Lesson 1: Vegetable Gardening Basics
- Lesson 2: Planting and Caring for Small Fruits
- Lesson 3: Planting and Caring for Tree Fruits
- Lesson 4: Incorporating Edible Plants into Landscaping

Week 10: Environmental Gardening

- Lesson 1: Protecting Water Resources
- Lesson 2: Natural Shorelines and Ecosystems
- Lesson 3: Native and Invasive Species
- Lesson 4: Climate-Resilient Gardening

Course Materials

This is a fully online course requiring a computer or tablet for access. Participants will need Adobe Acrobat Reader for PDF documents and Zoom for virtual lectures. Instructions for downloading and using Zoom are provided in the course.

Readings will be available for download in the D2L platform and will remain accessible for six weeks after the course ends. A printed manual containing the readings is also available for purchase, with ordering details provided at the start of the session.

Course Requirements

To earn a **Foundations of Gardening** certificate, participants must pass all ten unit post-assessments and the final exam with a score of 80% or higher. The certificate is valid for up to three years for those applying to become an MSU EMG.

Assessments

Each unit begins with a 10-question pre-assessment (quiz) to measure a participant's current knowledge. The pre-assessments are not graded. Submitting the unit pre-assessment opens the unit learning materials.

The unit ends with a 10-question post-assessment that is graded. Participants are eligible to take the final examination if they achieve a score of 80% or higher on all ten unit post-assessments. There are two attempts on the post-assessments. Submitting a post-assessment opens the next unit's pre-assessment.

After the final virtual class lecture, the Final Examination opens. This is an open-book exam comprised of 100 multiple choice, matching, and true/false questions. The Final Exam is not accessible until a participant has achieved 80% or better on all ten unit assessments. A participant who achieves a score of 80% or higher on the final examination will earn a Certificate of Completion. This is a prerequisite to apply to become an MSU EMG.

Live Virtual Classes

Live virtual classes complement self-paced learning by covering complex topics and providing interactive discussions. While attendance is strongly encouraged, recordings will be available for those unable to attend. Each session is led by MSU experts and includes a Q&A session. Experts will also be available via email for questions throughout the course.

Contacts

Questions related to the MSU Extension Foundations of Gardening course:
MSUE.FOG@msu.edu

Questions related to the MSU Extension Master Gardener Program: MSUE.MG@msu.edu