

LANDSCAPE MANAGEMENT II

Landscape Management II is a two semester course that extends the content and skills of Landscape Management and provides the student with in-depth exploration of the many career opportunities in the diverse field of landscape management. Students continue to build knowledge and skill in the procedures used in landscape planning and design using current industry standards and practices. Extended laboratory experiences include application of the principles and procedures involved especially in the Midwest and Great Lakes areas with landscape construction; turf management; scheduling and oversight of landscape maintenance; weed control; non-pathogenic and disease prevention, diagnosis, and treatment; communications; management skills necessary in landscaping operations; and the use and maintenance of equipment utilized by landscapers. Students should also participate in leadership development, supervised agricultural experience and career exploration activities in the area of landscape management.

Landscape Management II prepares students for many careers in agriculture, and more specifically landscape management. These careers include but are not limited to: Botanist, Grounds Keeper, Horticulturist, Landscape Designer or Architect, Landscape Supervisor, Nursery Worker, Parks Supervisor, and Turf Care Specialist.

Course Specifications

- DOE Code: 5137
- Recommended Grade Level: 12
- Recommended Prerequisites: Landscape Management I
- Credits: 1-3 credit(s) per semester, 6 credits maximum
- Counts as a Directed Elective or Elective for the General, Core 40, Core 40 with Academic Honors and Core 40 with Technical Honors diplomas
- Pathway Assessment: Dual credit course final exam

Dual Credit

This course provides the opportunity for dual credit for students who meet postsecondary requirements for earning dual credit and successfully complete the dual credit requirements of this course.

Application of Content and Multiple Hour Offerings

Intensive laboratory applications are a component of this course and may be either school based or work based or a combination of the two. Work-based learning experiences should be in a closely related industry setting. Instructors shall have a standards-based training plan for students participating in work-based learning experiences. When a course is offered for multiple hours per semester, the amount of laboratory application or work-based learning needs to be increased proportionally.

Career and Technical Student Organizations (CTSOs)

Career and Technical Student Organizations are considered a powerful instructional tool when integrated into Career and Technical Education programs. They enhance the knowledge and skills students learn in a course by allowing a student to participate in a unique program of career and leadership development. Students should be encouraged to participate in FFA, the CTSO for this area.

Content Standards

Domain - Pests and Diseases

Core Standard 1: Common pests and diseases

Standards

- LM-1.1 Summarize the etiology, clinical signs, treatment, and prevention of common plant diseases
- LM-1.2 Identify weed, insect, and rodent pests
- LM-1.3 Differentiate between infectious and noninfectious diseases
- LM-1.4 Explain the procedures for reporting to environmental agencies
- LM-1.5 Summarize the benefits of Integrated Pest Management (IPM)

Core Standard 2: Pesticide Application and Treatment

Standards

- LM-2.1 Understand safety practices in the use of chemical controls
- LM-2.2 Interpret pesticide labels
- LM-2.3 Explain procedures for storing and disposing of pesticides
- LM-2.4 Evaluate environmental and consumer concerns regarding pest management
- LM-2.5 Mix pesticides according to label directions
- LM-2.6 Understand rules and regulations dictated by the governing bodies

Domain – Equipment Safety and Maintenance Core

Standard 3: Equipment Operations

Standards

- LM-3.1 Describe the types of tools and equipment used in landscape industry
- LM-3.2 Identify and describe the functions of landscape tools and equipment
- LM-3.3 Compare and contrast gas powered and electric powered equipment
- LM-3.4 Understand the operation and function of motorized and hand-operated equipment

Core Standard 4: Equipment Service Safety

Standards

- LM-4.1 Describe the difference between two-cycle and four-cycle engines
- LM-4.2 Distinguish correct use of fuels and mixes
- LM-4.3 Use appropriate protection when servicing and operating
- LM-4.5 Apply information found in owner's manual

Core Standard 5: Equipment Service Procedures

Standards

- LM-5.1 Demonstrate appropriate procedure for checking, changing, and proper disposal fluids
- LM-5.2 Demonstrate appropriate procedure for sharpening equipment cutting edges
- LM-5.3 Demonstrate appropriate procedure for changing belts
- LM-5.4 Demonstrate appropriate procedures for maintaining all other tools and equipment

Domain – Plant Selection

Core Standard 6: Growth Characteristics and Function

Standards

- LM-6.1 Classify plants by mature size, form, color, texture
- LM-6.2 Distinguish between deciduous and evergreen plants
- LM-6.3 Categorize trees, shrubs, herbaceous plants and grasses by function

Domain - Irrigation

Core Standard 7: Installation of Irrigation System

Standards

- LM-7.1 Analyze site conditions
- LM-7.2 Explain the differences between drip and overhead sprinkler systems
- LM-7.3 Calculate area coverage dimensions
- LM-7.4 Establish design capacity of the site (flow rate in gallons per minute and pressure in pounds per square inch)
- LM-7.5 Identify components of drip and sprinkler irrigation systems (i.e., pipes, fittings, valves)
- LM-7.6 Establish irrigation design pattern and spacing to incorporate sprinkler head to sprinkler head

- LM-7.7 Calculate the cost of parts and labor for installation of a complete irrigation system
- LM-7.8 Determine the correct procedure for adjusting the height and spray of sprinklers
- LM-7.9 List the procedure for repairing broken heads and replacing heads
- LM-7.10 Demonstrate and identify the proper start up and shut down procedure of an irrigation system

Domain – Tree, Shrub and Planting Bed Maintenance

Core Standard 9: Pruning and Managing Practices

Standards

- LM-9.1 Identify tools used for pruning trees and shrubs
- LM-9.2 Demonstrate industry standard practices for pruning trees and shrubs
- LM-9.3 Summarize the benefits of mulching
- LM-9.4 Calculate volume of mulch required for a site

Domain – Turf Grass

Core Standard 10: Installation of Turf Grass

Standards

- LM-10.1 Distinguish between warm season, cool season, bunch-type and spreading grass species
- LM-10.2 Interpret a seed label
- LM-10.3 Research local turf restrictions
- LM-10.4 Compare and contrast methods of establishment (seed, sod, plugging, sprigging)
- LM-10.5 Compare and contrast equipment used for establishment
- LM-10.6 Select appropriate turfgrass fertilizer
- LM-10.7 Justify the need for thatch control and core aeration

- LM-10.10 Select grasses according to potential use and environment
Compare and contrast between artificial and natural turfgrass

Domain – Hardscapes

Core Standard 11: Selection of Hardscape Materials

Standards

- LM-11.1 List and define components of a hardscape design (i.e., patios, water features, walkways, shade structures)

- LM-11.2 Compare and contrast wall types used in the landscape (i.e., retaining, seat, decorative)
- LM-11.3 Compare and contrast walkway construction materials and installation methods based on industry and product standards (i.e., concrete, pavers, stone)
- LM-11.4 Perform appropriate mathematical calculations correctly (area, volume, measurement and proportions, etc.)

Domain – Landscape Business

Core Standard 12: Management practices

Standards

- LM-12.1 Investigate certifications, job requirements, education requirements, and personal requirements to start and operate a landscape business
- LM-12.2 Identify the equipment and materials needed to start and operate a landscape business
- LM-12.3 Prepare and present an estimate to a potential customer
- LM-12.4 Identify and interpret health, safety, and welfare standards as dictated by local, state or federal agencies

Domain - Careers

Core Standard 13: Career opportunities in agriculture

Standards

- LM-13.1 Evaluate the nature and scope of landscape management in agriculture, society, and the economy
- LM-13.2 Describe career opportunities and means to achieve those opportunities in landscape management
- LM-13.3 Identify how key organizational structures and processes affect organizational performance and the quality of products and services
- LM-13.4 Demonstrate those qualities, attributes and skills necessary to succeed in, or further prepare for, a chosen career while effectively contributing to society

Domain - Leadership

Core Standard 14: Leadership skills development

Standards

- LM-14.1 Communicate clearly, effectively, and with reason through speaking, writing, visuals, and active listening in formal and informal settings
- LM-14.2 Recognize and explain the role of the FFA in the development of leadership, education, employability, communications and human relations skills
- LM-14.3 Examine roles within teams, work units, departments, organizations, inter-organizational systems, and the larger environment

- LM-14.4 Acquire the skills necessary to positively influence others
- LM-14.5 Develop a skill set to enhance the positive evolution of the whole person

Domain - Supervised Agriculture Experience Core

Standard 15: The SAE program

Standards

- LM-15.1 Explain the nature of and become familiar with those terms related to an SAE program
- LM-15.2 Explore the numerous possibilities for an SAE program which a student might develop
- LM-15.3 Develop an individual SAE program and implementation plan for record keeping skills