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