Turf & Landscape Design-18062 Kansas Agr. Ed.

Hours Completed _____ Competencies Completed ____/143
Verification Signatures:

Student: _____ Date: _____

Instructor: _____ Date: _____

Name:

_____PS.NL_____

Key to Integrated Competencies
(CD)- Career Development
(L)- Leadership
(E) - Experienced Based
(LK) - LifeKnowledge Lessons
(LA) – Language Arts
(M) - Math
(S) – Science
(SS) – Social Science

Circle to indicate level of competency achieved:
3 - Skilled-Works Independently **2** Limited skill-Needs assistance **1** -Skill undeveloped-but received instruction **0** -No exposure

020.Nursery and Landscape Industry and Careers
3 2 1 0 1. Identify career opportunities in the nursery and landscaping industry(CD) (LK HS 123)
3 2 1 0 2. Apply for a job for an Green industry related career(CD) (LK HS 36)

021. Characteristics and factors of selecting landscape plants
3 2 1 0 1. Identify the differing growth patterns of turf grasses , ornamental grasses, ground covers, bedding plants, shrubs & trees(S)
3 2 1 0 2. Describe the effects of soil types on landscape plants(S, LA)
3 2 1 0 3. Describe the effects of soil pH on landscape plants(S, LA)
3 2 1 0 4. Describe the effects of slope on landscape plants(S, LA)
3 2 1 0 5. Describe the effects of wind on landscape plants(S, LA)
3 2 1 0 6. Determine the size, shape & color of landscape plants(S, CD)
3 2 1 0 7. Determine the plant hardiness zones of landscape plants(S, CD, SS)
3 2 1 0 8. Determine the economic value of landscape plants(CD, SS)

022. Identification of landscape plants & turf grasses
3 2 1 0 1. Identify the basic structural features of trees, shrubs, ground covers, vines, perennials, & turf grasses(S, CD)
3 2 1 0 2. Identify the distinguishing characteristics of evergreens(S, CD)
3 2 1 0 3. Identify the distinguishing characteristics of turf grasses(S, CD)
3 2 1 0 4. Identify selected trees, shrubs, ground covers, vines, perennials & turf grasses(S, CD)

023. Maintenance & usage of tools & materials used in landscaping operations
3 2 1 0 1. Identify and maintain hand tools and equipment.(CD)
3 2 1 0 2. Identify, maintain, and safely use power tools.(CD)
3 2 1 0 3. Calibrate and adjust landscape equipment (CD, M)
3 2 1 0 4. Identify common landscape materials and their usage (CD)

024. Installation and maintenance of landscape plants
3 2 1 0 1. Transplant a bare-root, container-grown, grow bags or B and B plants(CD, E)
3 2 1 0 2. Stake, guy and wrap a newly-planted tree(CD)
3 2 1 0 3. Identify reasons, techniques and timing for the pruning process(CD)
3 2 1 0 4. Prune landscape plants(CD, E)
3 2 1 0 5. Fertilize landscape plants (CD, S, M, P)
3 2 1 0 6. Determine water needs of specific situations.(S, CD)

025. Installation and maintenance of turf grass
3 2 1 0 1. Determine the proper method of propagation(CD, S, M)
3 2 1 0 2. Describe and demonstrate the procedures for installing turf grasses.(CD, S, E)
3 2 1 0 3. Determine fertilizer needs (CD, M)
3 2 1 0 4. Determine watering needs (CD, M)
3 2 1 0 5. Determine mowing practices & procedures(CD)
3 2 1 0 6. Determine renovation practices & procedures(CD, M, S)
3 2 1 0 7. Interpret seed label information (S, M, CD)
3 2 1 0 8. Calculate % pure seed and cost/pound pure live seed(S, CD, M, E)
3 2 1 0 9. Determine planting rate, date, depth, and mulching needed(S, M, CD, E)
3 2 1 0 10. Conduct soil samples for soil tests (S, CD, E)

026. Installing a landscape bed
3 2 1 0 1. Prepare, amend & install the soil bed(CD, S, M, E)
3 2 1 0 1. Calculate plant spacing(CD, M, E)
3 2 1 0 2. Select & apply bedding materials (CD, M, E)
3 2 1 0 3. Select & apply landscape edging (CD, M, E)
3 2 1 0 4. Evaluate and modify a landscape bed for proper drainage (CD)

027. Landscape Site Evaluation
3 2 1 0 1. Analyze a landscape site (utilities, slope, soil type, existing features, etc.)(CD, M, S, E)
3 2 1 0 2. Draw a base map(CD, M, E)
3 2 1 0 3. Conduct customer criteria (CD, L, LA)

028. Landscape design

3 2 1 0 1. Identify and explain the four elements of landscape design.(CD, LA)
3 2 1 0 2. Effectively use design symbols in a landscape plan.(CD)
3 2 1 0 3. Implement the use of natural and manufactured enrichments in a landscape plan.(CD)
3 2 1 0 4. Identify the five principles of design.(CD)
3 2 1 0 5. Apply both the principles and elements of design to create a landscape design.(CD)
3 2 1 0 6. Select plants for specific purposes in the landscape design(CD, S)
3 2 1 0 7. Select materials & hard goods for specific purposes in the landscape design(CD, S)
3 2 1 0 8. Complete a scaled blueprint of landscape design(CD, M, E)

029. Pesticide & Fertilizer Safety & Usage

3 2 1 0 1. Describe the mode of action of various pesticide formulations(S, LA)
3 2 1 0 2. Accurately interpret a pesticide label for information about use, effectiveness, and safe handling.(CD)
3 2 1 0 3. Identify safety precautions that should be followed when using pesticides.(CD, S)
3 2 1 0 4. Select, mix and apply pesticides to landscape plants(CD, S, M, E)

030. Plant Pest Control

3 2 1 0 1. Identify pests & physiological problems associated with landscape plants(C, S, E)
3 2 1 0 2. Describe the components of an Integrated Pest Management control Program (CD, S)
3 2 1 0 3. Demonstrate safe handling, storage, and application of chemicals(CD)

031. Woody Plant Propagation

1. Perform propagation by cuttings:
   - 3 2 1 0 a. Herbaceous stem cutting (CD, E)
   - 3 2 1 0 b. Softwood stem cutting(CD)
   - 3 2 1 0 c. Semi-hardwood cutting(CD, E)
   - 3 2 1 0 d. Deciduous hardware cutting (CD, E)
   - 3 2 1 0 e. Evergreen hardwood cutting (CD, E)
2. Perform propagation by grafting:
   - 3 2 1 0 a. Cleft graft (CD, E)
   - 3 2 1 0 b. Whip & tongue graft (CD, E)
   - 3 2 1 0 c. Splice graft(CD, E)
   - 3 2 1 0 d. Approach graft (CD, E)
   - 3 2 1 0 e. Side graft (CD, E)
3. Perform propagation by budding:
   - 3 2 1 0 a. T-Bud (CD, E)
   - 3 2 1 0 b. Patch bud (CD, E)
   - 3 2 1 0 c. Chip bud (CD, E)

032. Nursery Production Practices

3 2 1 0 1. Prepare rooted cuttings for potting (CD, E)
3 2 1 0 2. Root prune nursery stock (CD, E)
3 2 1 0 3. Prune & train nursery stock (CD, E)
3 2 1 0 4. Identify and select nursery stock (CD, E)
3 2 1 0 5. Select & divide nursery stock (CD, E)
3 2 1 0 6. Design & layout a nursery field (CD, E)
3 2 1 0 7. Selection & evaluation of nursery stock for harvest (CD, E)

033. Hardscapes & Water Features

1. Install Retaining wall systems by:
   - 3 2 1 0 a. Landscape timbers/railroad ties (CD, E)
   - 3 2 1 0 b. Native stones/rock (CD, E)
   - 3 2 1 0 c. Concrete block (CD, E)
2. Install patios & walkways by:
   - 3 2 1 0 a. Concrete pavers/brick (CD, E)
   - 3 2 1 0 b. Flagstones (CD, E)
   - 3 2 1 0 c. Concrete (CD, E)
   - 3 2 1 0 d. Gravel/mulch (CD, E))
   - 3 2 1 0 e. Install fences & arbors (CD, E)
   - 3 2 1 0 f. Install low voltage landscape lighting (CD, E)
   - 3 2 1 0 g. Identify & select water plants (CD, E)
   - 3 2 1 0 h. Design & install ponds & water gardens (CD, E)
   - 3 2 1 0 i. Select & install pumps, fountains, bubbler heads (CD, E)

034. Irrigation

3 2 1 0 1. Design & layout an irrigation system (CD, E)
3 2 1 0 2. Identify & select irrigation parts & supplies (CD, E)
3 2 1 0 3. Interpret irrigation plans (CD, E)
3 2 1 0 4. Adjust and maintain irrigation systems (CD, E)
3 2 1 0 5. Calculate matched precipitation (CD, E, M)
6. Install irrigation systems:
   - 3 2 1 0 a. Popups (CD, E)
   - 3 2 1 0 b. Rotors (CD, E)
   - 3 2 1 0 c. Drip (CD, E)
   - 3 2 1 0 d. Mist (CD, E)
   - 3 2 1 0 e. Soaker (CD, E)

035. Customer Relations & Business Practices

3 2 1 0 1. Schedule & conduct customer interview(CD, LA, L)
3 2 1 0 2. Design & implement a sales presentation(CD, LA, L)
3 2 1 0 3. Understand & utilize common business documents(CD, M)
3 2 1 0 4. Demonstrate professional ethics(CD,L) (LK HS 35)

036. Math in Nursery/Landscape

1. Understand & calculate basic math applications:
   - 3 2 1 0 a. Square inches per square foot (CD, M, E)
   - 3 2 1 0 b. Square feet per square yard(CD, M, E)
   - 3 2 1 0 c. Square feet per cubic yard (CD, M, E)
   - 3 2 1 0 d. Square feet per acre(CD, M,E)

3 2 1 0 2. Select and determine amount and cost of hardscape materials for a landscape plan(CD)(M)
3 2 1 0 3. Determine & calculate a landscape design budget for the customer(CD, M, E)
3 2 1 0 4. Calculate the price of a landscape design(CD, M, E)
3 2 1 0 5. Develop a cost estimate for a landscape design(CD, M, E)
3 2 1 0 6. Calculate chemical & fertilizer ratios(CD, M, E)

037. General Safety Practices

3 2 1 0 1. Recognize hazardous materials & situations (CD)
3 2 1 0 2. Demonstrate general safety procedures (CD)
3 2 1 0 3. Demonstrate safe handling of chemicals (CD)
3 2 1 0 4. Demonstrate safe handling of tools & equipment (CD)
3 2 1 0 5. Demonstrate basic first aid (CD)

038. Opportunities in FFA

3 2 1 0 1. Research and present a 4-6 minute speech on an agricultural topic.(L, LA, E) (LK HS 86 & 90)L4E
3 2 1 0 2. Serve on a POA committee. (L, E) (LK AHS 47)L6D
3 2 1 0 3. Participate in at least one activity above the chapter level.(L, E)
3 2 1 0 4. Demonstrate concise, impromptu speaking skills. (LA, L, E) (LK HS 84)L3B
3 2 1 0 5. Conduct strengths assessment to determine possible career options. (L, CD, E) (LK HS 31)L10B

039. SAE

3 2 1 0 1. Maintain records on income and expense. (M, CD, E) (LK HS 129)
3 2 1 0 2. Complete a cash flow statement. (M, CD, E)
3 2 1 0 3. Complete year end records. (M, CD, E)
3 2 1 0 4. Complete a SAE packet. (M, CD, E)
3 2 1 0 5. Complete a proficiency award application. (M, CD, E) (LK AHS 53)

Work Place Skills

040. Decision Making/Problem Solving

1. Describe the factors that impact on decision making: (LK HS 20) L2B
3 2 1 0 a. Needs and wants (LK HS 95)
3 2 1 0 b. Values (LK HS 10)
3 2 1 0 c. Goals (LK HS 44)
3 2 1 0 d. Standards
3 2 1 0 2. Distinguish between types of decisions: economic and/or technical. L2B
3 2 1 0 3. Apply the steps In interpreting a problem, coming up with a plan and then a result. (LK HS 40) L2E

041. Computer Literacy

3 2 1 0 1. Define, understand and use common computer technology terminology. L4E
3 2 1 0 2. Compose, organize, and edit financial records using a computer.L4E
3 2 1 0 3. Use functions to store, query, retrieve, and sort data. L4E
3 2 1 0 4. Use presentation and multimedia software to design/create and variety of presentations. L4E
3 2 1 0 5. Access, navigate, and use on-line services.L4D
3 2 1 0 6. Apply ethical considerations to the operation and management of information systems common to the FFA organization. L8A

042. Resource Management

3 2 1 0 1. Locate information and select the materials, tools, and equipment needed to perform an activity or build a project.(CD) L4A
3 2 1 0 2. Determine cost, time, and resources needed to complete a task within an industry or occupation.(CD) L8C
3 2 1 0 3. Explain the relationship between setting goals and managing money. (CD,LK AHS 9) L6E
3 2 1 0 4. Identify fixed a flexible expenses.
3 2 1 0 5. Identify planned and impulse buying

052. Perform basic principles of floral design

3 2 1 0 1. Identify basic principles of floral arranging and floral design (LA, S)
3 2 1 0 2. Identify basic design shapes (S)
3 2 1 0 3. Identify color relationships (S)

053. Discuss the necessary mechanics of floral design

3 2 1 0 1. Identify and safely use design tools and supplies (CD, E)
3 2 1 0 2. Construct bows using basic ribbon widths (S, E, CD)
3 2 1 0 3. Select and prepare appropriate containers (S)
3 2 1 0 4. Perform basic wiring and taping techniques (S, CD, E)
3 2 1 0 5. Package flowers and arrangements for delivery (CD, E)

054. Demonstrate creation of a variety of floral designs

3 2 1 0 1. Identify how floral designs are used (C)
3 2 1 0 2. Construct corsages and boutonnieres (CD, E)
3 2 1 0 3. Construct a bud vase (CD, E)
3 2 1 0 4. Construct a one sided arrangement (CD, E)
3 2 1 0 5. Construct a centerpiece (CD, E)
3 2 1 0 6. Construct an evergreen wreath (CD, E)
3 2 1 0 7. Construct a silk arrangement (CD, E)
3 2 1 0 8. Construct a dried arrangement (CD, E)
3 2 1 0 9. Construct a dish garden (CD, E)

055. Discuss Post-harvest Handling Procedures

3 2 1 0 1. Describe how plant processes affect shelf life (LA, S)
3 2 1 0 2. Demonstrate techniques for the processing of cut plant materials (S, CD, E)
3 2 1 0 3. Demonstrate the care of potted plants (S, CD, E)
3 2 1 0 4. Calculate prices for different sizes of potted plants (M)
3 2 1 0 5. Create displays for a floral shop (CD, E, L)
3 2 1 0 6. Understand financial records for floral shop management (LA, M)
3 2 1 0 7. Understand advertising and marketing of floral shop products (LA, CD,L)
3 2 1 0 8. Demonstrate different public relations concepts (LA, E, CD, L)
3 2 1 0 9. Describe how computers and technology are used in the floral industry (LA)
3 2 1 0 10. Complete a mock job application, resume and interview (LA, CD, E, L)

Discuss global perspectives on the floral