



## **Course Description**

### **LDE2310 | Irrigation Design & Maintenance | 3.00 credits**

Students will learn the design, maintenance, and installation of nursery and landscape irrigation systems. All types of nursery systems will be covered including field, shade house, and greenhouse. Both sprinkle and low volume drip systems will be surveyed for appropriateness in nursery and landscape uses. This course includes occasional weekend hands-on activities. A.S. degree only

## **Course Competencies:**

**Competency 1:** The student will understand the water needs of a nursery or landscape according to the site requirements by:

1. Determining the purpose, site analysis problems, and desired effects of the project
2. Determining irrigation requirements for existing or new plants
3. Locating existing utilities
4. Testing their irrigation water quality and determining if improvements are necessary

**Competency 2:** The student will demonstrate a comprehension of irrigation design and methods for both micro as well as overhead irrigation systems by:

1. Designing irrigation systems for both landscapes and nurseries
2. Developing a list of materials required for the project, cost of materials, and equipment and labor requirements
3. Establishing a project schedule

**Competency 3:** The student will understand how to develop a contract and answer customer concerns related to irrigation installation by:

1. Preparing a price for a customer based on specifications
2. Estimating the terms of a contract
3. Conducting a mock project walk-through with a client to assure satisfaction

**Competency 4:** The student will demonstrate an understanding of irrigation system installation by:

Interpreting plans and specifications.

1. Laying out site preparation
2. Installing irrigation equipment in a landscape or nursery
3. Presenting procedures related to irrigation for protecting plants and equipment from adverse weather
4. Identifying and following all safety requirements related to maintenance and equipment used to maintain irrigation systems

## **Learning Outcomes:**

- Communicate effectively using listening, speaking, reading, and writing skills
- Use quantitative analytical skills to evaluate and process numerical data
- Solve problems using critical and creative thinking and scientific reasoning
- Describe how natural systems function and recognize the impact of humans on the environment