

SOUTHEAST COMMUNITY COLLEGE
COURSE SYLLABUS
ADVANCED TECHNOLOGIES & SKILLED TRADES
Horticulture & Turfgrass Management Program
Revision Date: August 2020

CATALOG DESCRIPTION

Course Number: HORT 1154
Course Title Greenhouse Management
Prerequisite(s): None

Catalog Description: Study of greenhouse operations including ventilation, lighting, and temperature control.

Credit Hours: 2.0

Class Hours: 23

Lab Hours: 23

Total Contact Hours: Total of Class + Lab Hours 46

II. COURSE OBJECTIVES: *Course will:*

1. Introduce a number of skills a greenhouse grower should have to ensure a successful business.
2. Introduce the different styles of greenhouse structures.
3. Introduce various components of a greenhouse structure.
4. Introduce and demonstrate how to calculate the heat requirements for a greenhouse.
5. Introduce the basic principles of greenhouse venting and cooling.
6. Introduce how light intensity and day length affect plant growth and flowering.
7. Introduce the effect temperature has on a plants physiological processes.
8. Introduce the effects of gases in the atmosphere on plants.
9. Introduce the components used in a greenhouse growing media.
10. Introduce the plants water and nutrient requirements.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES:

A. STUDENT LEARNING OUTCOMES: *Student will be able to:*

1. Develop a working knowledge in various aspects for successful greenhouse management.
2. Understand the daily operations needed within a greenhouse.
3. Develop an understanding of the financial considerations involved with maintaining and operating a successful greenhouse.
4. Develop a working knowledge of proper greenhouse design including heating, ventilation, and humidity regulation.
5. Develop a working knowledge of proper greenhouse ventilation and humidity regulation.
6. Develop how light intensity is manipulated to affect plant growth and flowering.
7. Demonstrate how temperature can alter a plants physiological requirements.

8. Understand the different components of greenhouse media and the advantages and disadvantages of each.
9. Gain an understanding of various greenhouse plant diseases and insects including some controls.

B. GENERAL EDUCATION LEARNING OUTCOMES

GELO #3: Critical Thinking & Problem Solving

Critical thinkers have the ability to evaluate a problem or assumption and determine an appropriate course of action. They use reason and evidence to make judgments and decisions. Critical thinking and problem-solving skills rank highly among employer expectations.

Outcomes:

- 1) Collect, identify, interpret and analyze data.
- 2) Synthesize information to arrive at reasoned solutions to problems.
- 3) Evaluate ideas presented in writing, medial, speech, or artistic presentations.
- 4) Evaluate the validity of arguments, alternatives, data, outcomes, and/or impacts of actions.
- 5) Acquire and integrate knowledge and construct relationships across disciplines.

IV. CONTENT/TOPICAL OUTLINE (*course outline may provide more detailed information*)

- A. Management of various aspects within a greenhouse environment.
- B. Operations within a greenhouse
- C. Economical considerations of maintaining a greenhouse.
- D. Greenhouse design and maintenance
- E. Greenhouse problems and their effective treatments
- F. Operation and maintenance of campus greenhouses
- G. Poinsettia of Bedding plant production occurring within campus greenhouses

V. INSTRUCTIONAL MATERIALS

A. Required Text(s):): *The Commercial Greenhouse*; 3rd Edition; Broodley, James W.
ISBN-13: 978-1-4180-3079-7 OR ISBN-10: 1-4180-3079-1

B. Other Resources:

class notes, handouts, and other information. Bring calculator each day.

VI. METHODS OF PRESENTATION/INSTRUCTION

Methods of presentation typically include a combination of the following, but are not limited to:

- a. Lectures
- b. Slide and Video Presentations
- c. Research and Writing Assignments
- d. Field Trips
- e. Guest Speakers
- f. Greenhouse Project
- g. Laboratory or Field Assignments

VII. METHODS OF EVALUATION

- A. Methods of evaluation typically include a combination of the following:
- B. Quizzes, tests, and exams
- C. Problem worksheets
- D. Research Project
- E. Participation

SCC STANDARD GRADING SCALE POLICY:

A+ 95-100	C+ 75-79
A 90-94	C 70-74
B+ 85-89	D+ 65-69
B 80-84	D 60-64
	F Below 60

VIII. SPECIFIC COURSE REQUIREMENTS:

- a. Successful completion of all exams, projects, and assignments
- b. Participation in class and class activities; including field trips
- c. Utilize proper safety wear at all times in lab
- d. Achieve passing grade of 60% or higher based on SCC grading scale.