UNIVERSITY COLLEGE of the FRASER VALLEY

COURSE IMPLEMENTATION DATE: January 1987
COURSE REVISED IMPLEMENTATION DATE: September 2007
COURSE TO BE REVIEWED: March 2011
(Four years after UPAC final approval date) (MONTH YEAR)

OFFICIAL COURSE OUTLINE INFORMATION

Students are advised to keep course outlines in personal files for future use.
Shaded headings are subject to change at the discretion of the department and the material will vary - see course syllabus available from instructor

FACULTY/DEPARTMENT: **Science, Health and Human Services - Agriculture Technology**

AGRI 124		**2**
COURSE NAME/NUMBER	FORMER COURSE NUMBER	UCFV CREDITS

Introduction to Horticulture
COURSE DESCRIPTIVE TITLE

CALENDAR DESCRIPTION:

This course introduces binomial nomenclature; the environmental factors affecting plant growth: physical, biological, and chemical control of plant growth; and an introduction to the major horticultural crop groups: fruits, vegetables, greenhouse crops, nursery crops, and turf.

PREREQUISITES: **None**
COREQUISITES: **None**

SYNONYMOUS COURSE(S)
(a) Replaces: _____ *(Course #)*
(b) Cannot take: _____ *(Course #)* for further credit.

SERVICE COURSE TO: _____ *(Department/Program)* _____ *(Department/Program)*

TOTAL HOURS PER TERM: **60**
STRUCTURE OF HOURS:

Lectures:	**36**	Hrs
Seminar:		Hrs
Laboratory:		Hrs
Field Experience:		Hrs
Student Directed Learning:	**24**	Hrs
Other (Specify):		Hrs

TRAINING DAY-BASED INSTRUCTION
LENGTH OF COURSE:
HOURS PER DAY:

MAXIMUM ENROLLMENT: **25**
EXPECTED FREQUENCY OF COURSE OFFERINGS: **Once a year, Fall semester**

WILL TRANSFER CREDIT BE REQUESTED? (lower-level courses only)	☒ Yes	☐ No
WILL TRANSFER CREDIT BE REQUESTED? (upper-level requested by department)	☐ Yes	☒ No
TRANSFER CREDIT EXISTS IN BCCAT TRANSFER GUIDE:	☒ Yes	☐ No

AUTHORIZATION SIGNATURES:

Course Designer(s): Norma Senn
Chairperson: Norma Senn *(Curriculum Committee)*
Department Head: Norma Senn
Dean: Wanda Gordon
UPAC Approval in Principle Date:
UPAC Final Approval Date: Mar. 30, 2007

LEARNING OBJECTIVES / GOALS / OUTCOMES / LEARNING OUTCOMES:

Upon successful completion of this course, students will be able to:
Explain plant classification and nomenclature
Recognize phyla, order, family, genus, species epithet, botancial variety, and cultivar names when written out
Describe plant anatomy and function from the cell organelle level to cell types, tissue systems, and organs
Describe life cycles of Anthophyta
Describe pollination and fertilization in Anthophyta
Explain functions of the naturally occuring plant hormones and how they influence plant growth
Describe how plant hormones are used commercially
Describe photosynthesis and respiration
Describe how growers manipulate photosynthesis and respiration commercially
Describe how photosynthesis and respiration are influenced by the following environmental factors: light, temperature, water, gases, plant nutrition
Explain plant growth responses to changing photoperiods
Describe how commercial growers manipulate growth by controlling photoperiod
List mineral elements required for plant growth and list their basic roles in plant growth
Describe how water and plant metabolites are moved throughout plants
Describe transpiration
Describe how transpiration can be minimized
Explain how temperature affects plant growth and hardiness
Explain how plant growth can be controlled by pruning and training
Identify 20 commonly grown tropical potted plants including family, genus, and species epithet
Describe common methods of propagation and best growth practices of at least 20 tropical potted plants

METHODS:

This course is primarily lecture-based; reading assignments are assigned regularly; hands-on "lab" work is incorporated into the course.

PRIOR LEARNING ASSESSMENT RECOGNITION (PLAR):

Credit can be awarded for this course through PLAR (Please check:) ☒ Yes ☐ No

METHODS OF OBTAINING PLAR:

Challenge exam, credit transfer, articulated agreements.

TEXTBOOKS, REFERENCES, MATERIALS:

[Textbook selection varies by instructor. An example of texts for this course might be:]

Kingsley Stern, Plant Biology

SUPPLIES / MATERIALS:

None

STUDENT EVALUATION:

[An example of student evaluation for this course might be:]

Quizzes - 30%
Paper/presentation - 30%
Final exam - 35%
Participation/attendance - 5%

COURSE CONTENT:

[Course content varies by instructor. An example of course content might be:]

Tentative Lecture Outline and Reading Assignments

1. Introduction to the course and course mechanics. Begin basic definitions. Introduction to taxonomy (how plants are classified and named). Reading: Chapter 1, 8, 16, 22, 23

2. Introduction to Plant Anatomy and Structure from the cell to the whole plant. Reading: Chapter 2, 3, 4, 5, 6, 7, 8

3. Basic Life Cycles, Meristems, Buds, Reproduction. Reading: Chapter 6, 8, 10, 12, 13, 14

4. Growth Regulators. Reading: Chapter 11

5. Environmental Factors Affecting Plant Growth. Reading: Chapter 9, 10

6. Light and Temperature: Chapter 10, 11

    Photosynthesis

    Respiration

    Photoperiod

    Phototropism

7. Water. Reading: Chapter 9

8. Gases. Reading: Chapter 10: Oxygen and Carbon Dioxide

9. Temperature and Its Effect on Growth and Climate Zones. Reading: Chapter 11

10. If there's time, we will briefly cover a few topics in plant nutrition, however, we may skip this if time is needed for other topics. Reading: Chapter 9

11. Physical Control of Plant Growth (pruning and training)

12. Genetic and Biological Control of Plant Growth. Reading: Chapter 13

Plants of the day

To get you started learning specific plants, we will begin each class block with a "Plant of the Day". YOU ARE REQUIRED TO LEARN THE SCIENTIFIC AND COMMON NAMES OF EACH PLANT, BE ABLE TO IDENTIFY THEM ON THE QUIZZES AND FINAL EXAM, AND TELL ME WHY A PLANT IS GROWN, HOW IT IS GROWN, AND HOW IT IS PROPAGATED. You will need to know family, genus, species, and common name, and all must be spelled correctly. Indoor plants will be emphasized in this course since AGRI 220 is devoted entirely to landscape plants. The object is to acquaint you with some plant identification and to allow you to become familiar with the terms and concepts of family, genus, and species. The plants will be available for you to examine at your leisure in the greenhouse.