

# PLANT & SOIL SCIENCES (PLSC)

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## **PLSC 1107. Plant Science Laboratory. 1 Hour. [TCCN: AGRI 1107]**

Laboratory for PLSC 1307. Course Equivalents: AGRI 1107.

**Prerequisite:** Concurrent enrollment in PLSC 1307.

## **PLSC 1307. Plant Science. 3 Hours. [TCCN: AGRI 1307]**

Students study basic plant morphology, classification, propagation, and crop improvement along with growth and development of crop plants. Students are introduced to soils, climate, and plant protection follow with a final overview of the major groups of cultivated plants.

## **PLSC 2375. Turfgrass Science. 3 Hours.**

Students study the major turfgrass species grown in the U.S. and throughout much of the world. Students explore differences in management, culture, and varietal selection for athletic, ornamental, and utility turfs. Course Equivalents: AGRI 2375

**Prerequisite:** None.

## **PLSC 2395. Ornamental Plant Identification. 3 Hours.**

Students explore identification, growth characteristics, culture, and use of common landscape and greenhouse plants. Materials include trees, shrubs, vines, groundcovers, and turf grasses. Emphasis is placed on temperate region plants. Course Equivalents: AGRI 2395

**Prerequisite:** PLSC 1307.

## **PLSC 2396. Special Topics in Plant and Soil Science. 3 Hours.**

Students examine special topics/issues in Plant and Soil Science at an introductory level. This course may be repeated up to three times as topics and subject matter change.

## **PLSC 2399. Floral Design. 3 Hours.**

Students explore principles and elements of design illustrated with the use of floral materials; techniques involved in design and construction of floral arrangements; and history of and utilization of floral art in society. Course Equivalents: AGRI 2399 .

## **PLSC 3300. Applied Plant Physiology. 3 Hours.**

Students examine core plant processes of photosynthesis, respiration, transpiration, and their effects on the growth quality of agricultural crops. Topics include stress response, hormones, abiotic and biotic factors, and their effects on metabolic processes in agricultural crops.

**Prerequisite:** PLSC 1307.

## **PLSC 3320. Landscape Plant Materials. 3 Hours.**

Students identify common annual and perennial herbaceous landscape plants and examine their climatic adaptation and use. Emphasis is placed on tropical and subtropical landscaping plants, including various trees, shrubs, groundcovers, and vines.

**Prerequisite:** PLSC 1307.

## **PLSC 3374. Controlled Environment Agriculture. 3 Hours.**

This course is designed to cover the principles and techniques involved in the production and management of nurseries and greenhouse crops including ornamental trees, shrubs, annuals, and perennials. Course Equivalents: AGRI 3374

**Prerequisite:** PLSC 1307 and Sophomore standing.

## **PLSC 3379. Turfgrass Culture. 3 Hours.**

Student explore the principles of sexual and asexual propagation of major turf species, soils and rooting media, nutrient management, irrigation, pest control, and selection of appropriate cultivars are covered in this course. Course Equivalents: AGRI 3379

**Prerequisite:** PLSC 1307 and Sophomore standing.

## **PLSC 3395. Plant Propagation Techniques. 3 Hours.**

Students explore in detail the principles and practices involved in propagation of plants. Emphasis is placed on sexual and asexual methods of propagation and the biochemical/hormonal factors involved. Propagation techniques of several horticultural crops are covered and practiced. Course Equivalents: AGRI 3395

**Prerequisite:** PLSC 1307/1107 and Sophomore standing.

## **PLSC 3398. Landscape Design I. 3 Hours.**

Students explore the principles, elements, and factors to be considered in preparation, planning, and design of a residential landscape. Emphasis is placed on the incorporation of plant materials into basic landscape design. Course Equivalents: AGRI 3398

**Prerequisite:** PLSC 1307 and Sophomore standing.

## **PLSC 3440. Soil Science. 4 Hours.**

Students are introduced to the physical, biological, and chemical properties of soils and their relationships to soil formation, soil fertility, soil temperature, soil-plant-water relations, pH and liming, and conservation of soils. Environmental issues are also discussed. Sophomore Standing.

Course Equivalents: AGRI 3440

**Prerequisite:** CHEM 1406, CHEM 1407, CHEM 1411, or CHEM 1412.

## **PLSC 4320. Fruit & Vegetable Production. 3 Hours.**

Students engage in a comprehensive study of the fruit and vegetable industry in the United States. Topics of study may include climatic requirements, growth characteristics, cultural practices, and pest control strategies. Course Equivalents: AGRI 4320

**Prerequisite:** PLSC 1307.

**PLSC 4330. Soil Fertility Management and Fertilizers. 3 Hours.**

Students study the principles of soil fertility, water, nutritional, and climatic relationships. Emphasis is placed on sources of soil nutrients, including commercial fertilizers and biological resources. Course Equivalents: AGRI 4330

**Prerequisite:** PLSC 3440 and Junior standing.

**PLSC 4358. Landscape Operations. 3 Hours.**

Students examine the principles and techniques of constructing and managing amenity landscapes. Emphasis is placed on contract documents, specifications of work, plant establishment, management plans, pruning, soil modification, and building materials.

**Prerequisite:** PLSC 1307.

**PLSC 4368. Landscape Design II. 3 Hours.**

This course is a continuation of PLSC 3398. Design skills will be refined as students experience more variety in design opportunities. Both small residential and larger public spaces are the subjects of student designs. Effective graphic presentations are stressed. In addition, installation, maintenance, and management of residential landscapes are discussed. Course Equivalents: AGRI 4368

**Prerequisite:** PLSC 1307 and Junior standing.

**PLSC 4369. Special Topic. 3 Hours.**

Students examine special topics/issues in Plant Soil Science at an advanced level. This course may be repeated up to three times as topics and subject matter change.

**Prerequisite:** PLSC 1307 and Junior standing.

**PLSC 4370. Forage Crops and Pasture Management. 3 Hours.**

Students study quality evaluation, adaptation, selection, culture, and management of the more important plants used for pasture, hay, and silage. Particular attention is given to those species grown commonly throughout the southeastern US. Course Equivalents: AGRI 4370

**Prerequisite:** Junior standing.

**PLSC 4372. Sports Turf Management. 3 Hours.**

Facility design and construction, water management, soil modification, and unique management practices commonly applied to golf courses and other sports turfs are covered. Management of budgets, personnel, equipment maintenance and irrigation scheduling are also covered. Junior standing. Course Equivalents: AGRI 4372

**Prerequisite:** PLSC 1307 and PLSC 3440.

**PLSC 4383. Range Management. 3 Hours.**

With rangelands comprising the majority of lands in the western US, students explore forage-animal management topics common to the semi-arid and arid regions of the US. Students address the unique management requirements of rangelands, the use of government-owned lands, and the competing uses of rangelands for livestock production, wildlife habitat, and recreational areas for humans. Junior standing. Course Equivalents: AGRI 4383

**Prerequisite:** PLSC 1307 or BIOL 1411.

**PLSC 4397. Integrated Pest Management. 3 Hours.**

Students engage in a comprehensive review of current cultural, biological, mechanical, and chemical techniques used in managing or controlling agricultural and residential pests. Attention is given to environmental hazards, application methods, and safety precautions in handling and storage of pesticides. Course Equivalents: AGRI 4397

**Prerequisite:** AGRI 1307 and Sophomore standing.