Plant and Soil Science Courses

PLS 1107 - Applied Plant Science Lab
Hours: 1
(PLS 1107) Course will provide students with hands-on exercises in the lab, greenhouse, and field. Students will grow agronomic and vegetable crops, examine seeds with a hand-lenses, separate plants into their morphological components, prepare and view cross sections of leaves and stems, identify agronomically important seeds and plants, conduct a seed or plant experiment via greenhouse or take-home components, calculate fertilizers and other agronomic math problems, and view agronomic equipment.

PLS 1115 - Introduction to Horticulture Laboratory
Hours: 1
(AGRI 1115) Introduction to the techniques and science for the growth and propagation of horticultural plants, including identification, propagation, fertilization, and pruning.

PLS 1307 - Introduction to Plant Science & Agronomy
Hours: 3
(PLS 1307) An introduction to the principles of plant growth, plant morphology, crop development and production, tillage and soil conservation practices, pest management, crop improvement, and crops of the world.

PLS 1315 - Introduction to Horticulture
Hours: 3
(AGRI 1315) Introduction to the science and art of modern horticultural plant production and growth, including propagation, fertilization, pest control, and pruning; major groups of garden crops including vegetables, fruits and nuts, ornamentals, houseplants, and florist crops. crops; lab includes propagation and culture of garden plants in field and greenhouse.

PLS 2313 - Economic Entomology
Hours: 3
(AGRI 2313) Three semester hours (2 lecture, 2 lab). This course introduces students to the major orders of insects and other arthropods of economic importance with specific emphasis on those beneficial and harmful to agricultural and horticultural crops, livestock, pets, and food products. Control techniques using Integrated Pest Management will be included.

PLS 230 - Ornamental Plant Identification
Hours: 3
Three semester hours (2 lec / 2 lab) Ornamental trees, shrubs, vines, and garden annuals and perennials. Their identification, nomenclature, classification, cultural requirements and landscape uses.

PLS 297 - Special Topics
Hours: 1-4
Organized class. May be repeated when topics vary.

PLS 303 - Introduction to Floral Design
Hours: 3
Three semester hours (2 lec / 2 lab) Introduction to the history and uses of floral art in society. Principles and elements of design will be discussed and demonstrated using floral materials.

PLS 305 - Landscape Design
Hours: 3
Design of residential and commercial landscapes. The student will learn basic design concepts and themes, be able to create landscape plans, and will be able to provide a cost estimate for the design. Prerequisites: PLS 230 or instructor approval.

PLS 306 - Plant Propagation
Hours: 3
Three semester hours (2 lec / 2 lab) This course provides an introduction to sexual and asexual plant propagation. The student will learn the skills and techniques to successfully propagate plants from seeds and other vegetative structures. Prerequisites: PLS 1315 or PLS 1307.

PLS 309 - Soil Science
Hours: 3
Origin, formation, fertility and management of soils. Prerequisites: PlS 115 or 1415, and Chem 1405 or 1411.

PLS 320 - Soil Fert-Plant Nutrition
Hours: 3
Soil Fertility and Plant Nutrition. Three semester hours. Elements required for plant nutrition and their effects on plant growth. Principles of uptake, transport and assimilation. Prerequisite: PLS 309.

PLS 323 - Field Crops
Hours: 3
Three semester hours (2 lecture, 2 lab). Principles of agronomic crop production practices. Major field crops and management techniques will be studied. Prerequisites: PLS 1307 OR PLS 1315.

PLS 324 - World Herbs and Vegetables
Hours: 3
A comprehensive overview of major and minor vegetable crops and culinary herbs grown around the world, U.S., and Texas in terms of center of origin, history, classification, economic importance and marketing patterns, nutritional value, physiological growth and development patterns, and commercial production practices. Prerequisites: PLS1307 Introduction to Plant Science or PLS 1315 Introduction to Horticulture.

PLS 326 - Forage and Pasture Crops
Hours: 3
Three semester hours (2 lec / 2 lab) The production, harvesting, storage, and uses of forage crops, hay and pasture crops, improvements, care and management of pastures given special emphasis. Practice work includes identification of seeds and plants, judging of hay, and field and pasture observation. Prerequisites: PLS 1307 OR PLS 1315, PLS 309.

PLS 327 - Hydroponic Crop Production
Hours: 3
Three semester hours (2 lec / 2 lab) Principles of hydroponic production systems, including types of system, nutrient solution preparation and management, crop response to aerial environmental factors and their manipulation, new technologies inherent to controlled environment agriculture (plant factories, vertical farming). Hands-on experience with the practice of hydroponic production of major vegetables (leafy greens, culinary herbs, and vine crops). Prerequisites: PLS 324 World Herbs and Vegetables.

PLS 329 - Soil Science Laboratory
Hours: 1
Atudents will explore laboratory techniques to determine soil physical and chemical properties that are related to plant growth. Prerequisites: PlS 115 or 1415, and Chem 1405 or 1411.

PLS 355 - Interior Plantscaping
Hours: 3
Three semester hours (2 lec / 2 lab) This course provides an introduction into interior plantscapes. The course will include identification, selection, installation, maintenance, and management of plants used in interior landscapes.

PLS 381 - Crop Physiology
Hours: 3
Physiological processes underlying crop management practices and their alternatives. Prerequisites: Chem 1407, PlS 115 or PLS 1415.

PLS 397 - Special Topics
Hours: 1-4

PLS 420 - Crop Production Practicum
Hours: 3
Crop Production Practicum. Three semester hours (1 lecture, 4 lab). Study of crop production practices in this area by actually planting, growing, harvesting, and marketing a crop: (a) Wheat or Oats; (b) Corn; (c) Grain Sorghum; (d) Cotton. A report, including costs and returns, will be due upon completion of the project. Course may be repeated when subject varies, up to a maximum of 9 hours. Prerequisite: PlS 115.

PLS 430 - Greenhouse Management
Hours: 3
Three semester hours (2 lec / 2 lab) This course covers greenhouse structures and equipment needed for successful plant production in a greenhouse. The student will learn about greenhouse construction, production, and management as a business venture. Prerequisites: PLS 1315 or 1307.

PLS 434 - Principles of Weed Science
Hours: 3
Three semester hours (2 lec / 2 lab) An introduction to the principles of weeds, weed control, and herbicides. Prerequisites: PLS 1307 or PLS 1315.

PLS 450 - Landscape Management
Hours: 3
Three semester hours (2 lec / 2 lab) This course covers information related to the management of landscapes on residential and commercial properties. Topics will include items related to effective installation and maintenance of landscape properties, including financial and personnel aspects of managing a landscape business. Prerequisites: PLS 1315 or instructor approval.

PLS 455 - Turfgrass Management
Hours: 3
Three semester hours (2 lec / 2 lab) Establishment and maintenance of turfgrasses in lawns, sports fields, and golf courses. Course will include selection, planting, fertilization, maintenance, and pest and disease control.

PLS 460 - Plant Taxonomy
Hours: 3
Three semester hours (2 lec / 2 lab) A systematic overview of the plant kingdom focusing on classification and identification of unknown specimens.

PLS 489 - Independent Study
Hours: 1-4
Independent Study. One to four semester hours. Individualized instruction/research at an advanced level in a specialized content area under the direction of a faculty member. May be repeated when the topic varies. Prerequisite: Consent of department head.

PLS 490 - Independent Study
Hours: 3

PLS 491 - H Ind Honors Readings
Hours: 3

PLS 497 - Special Topics
Hours: 0-4
Special Topics. One to four semester hours. Organized class. May be repeated when topics vary.