

PLANT SCIENCE (RH) (SAPL)

SAPL 101. Environmental Sustainability of Food Production in Developed Countries. (3 Credits)

Foundations of modern systems that produce the majority of food calories consumed in North America and other developed countries. Benefits and environmental risks associated with modern food production systems. Alternative food production systems and sustainability. Local food production and food security. Food production and climate change.

SAPL 110. Turfgrass Management. (3 Credits)

An overview of turfgrass adaptation, selection, and management. Topics include turfgrass growth, physiology, soil interactions, establishment, and maintenance. Cultural system practices for lawns, golf courses, athletic fields, and other turf areas. Turfgrass pest management practices for weeds, insects and diseases.

Enrollment Requirements: May not be taken out of sequence after passing SAPL 315.

SAPL 115. Turfgrass Management Laboratory. (1 Credit)

Grass establishment, grass identification, athletic field turfgrass playability evaluations, soil testing, turfgrass pest identification, turfgrass pest monitoring techniques and fertilizer spreader and sprayer calibration.

Enrollment Requirements: SAPL 110, which may be taken concurrently.

SAPL 120. Introduction to Plant Science. (4 Credits)

A general course designed to give students a broad view of the field of horticulture as well as a working knowledge of the fundamentals of plant growth.

SAPL 130. Introduction to the Horticulture of Cannabis. (3 Credits)

Fundamentals of the production cycle of Cannabis including horticultural management, identification of crop issues, elite feminized seed production, seed propagation, vegetative propagation, pruning, training, optimization of cannabinoid content and post-harvest handling. Overviews of Cannabis business operations world-wide and in Connecticut, exploring lab testing procedures, cannabidiol extraction technologies, the Connecticut medical marijuana program and government regulation of the industry. Taught with PLSC 2130.

Enrollment Requirements: Recommended preparation: SAPL 120.

SAPL 160. The Great American Lawn: History, Culture and Sustainability. (3 Credits)

The largest irrigated crop in the U.S. is located right outside your window. Examines the health, social, cultural, and environmental impacts of one of America's greatest obsessions. Taught with PLSC 1060.

SAPL 210. Golf Course Management. (3 Credits)

Discussion of the specialized field of golf course management. Topics: cultural techniques including soil aeration, topdressing, mowing, and thatch removal; grass or species selection, fertilization, irrigation, personnel, golf course pest management and equipment and inventory management. Field trips required.

SAPL 211. Landscape Architecture: Graphics I - Design Drawing. (4 Credits)

Knowledge and theory of graphic representation, exploration of landscape, design, and materials. Introduction to basic design principles. Application of graphic and design theory through free-hand drawing in a studio environment.

Enrollment Requirements: Not open to students who have completed LAND 2110.

SAPL 230. Principles of Turfgrass Irrigation Systems. (3 Credits)

Turfgrass irrigation systems, principles of hydraulics, irrigation components, design, installation and repair. Students will design irrigation systems for various turf areas. Field trips and fieldwork will be required. Taught with PLSC 3300.

SAPL 300. Introduction to Soil Science. (3 Credits)

Physical and chemical properties of soils; nature and use of fertilizer and lime materials; management of soils for crop production including soil testing, tillage and fertilization practices, and conservation practices.

Enrollment Requirements: May not be taken out of sequence after passing SAPL 315.

SAPL 315. Advanced Turfgrass Management. (3 Credits)

Effects of environmental stresses and turfgrass management practices on growth, development and physiology of turfgrasses. Implementation of proper management practices to promote optimal turfgrass health under stress conditions. Taught with PLSC 3150.

Enrollment Requirements: SAPL 110 and 300.

SAPL 410. Woody Plants: Common Trees, Shrubs and Vines. (3 Credits)

Taxonomy, identification, ornamental characteristics, cultural requirements and landscape use of deciduous and evergreen woody plants most often utilized in landscapes of the northeastern United States and similar environs.

Enrollment Requirements: SAPL 120.

SAPL 430. Herbaceous Ornamental Plants. (3 Credits)

Identification, nomenclature, cultural requirements and landscape uses of herbaceous perennials, ornamental grasses, ferns, annuals and bulbs. Study of live plants is required.

SAPL 440. Small Fruit Production. (3 Credits)

The commercial production of small fruits and grapes in the Northeast and Mid-Atlantic regions including varieties, fruit-growing systems and pruning, site requirements, harvesting methods, post-harvest requirements, marketing, pest complexes and IPM strategies of the major berry crops.

SAPL 500. Principles and Concepts of Agroecology. (3 Credits)

Application of ecological processes to modern agricultural production practices. Crops and their environment. Soil quality and maintenance of soil productivity. Sustainability of agroecosystems.

SAPL 520. Floral Art. (2 Credits)

The study of flower arrangement as an art form with emphasis on historical background, artistic principles, color harmony, and care of perishable media. Individual expression is encouraged in the creation of floral composition.

SAPL 540. Garden Center Management. (3 Credits)

Techniques and concepts essential in managing and operating a garden center. Topics include goal setting, retailing, finance, business planning and pricing.

SAPL 550. Urban Plant Systems: Construction and Maintenance. (3 Credits)

Technical information on the effective construction and maintenance of planted systems. Structural and functional components of plant systems. Provision of ecosystem services. Overviews of a wide spectrum of planted systems including streetscaping, green roofs and green walls, rain gardens and bioretention, and phytoremediation systems. Techniques of soil modification. Plant selection. Establishment and maintenance of woody and herbaceous plants: planting, preservation, pruning, mulching, irrigation, and fertilization. Taught with PLSC 3550.
Enrollment Requirements: Recommended preparation: SAPL 120,410,430. Not open for credit to students who have passed SAPL 740.

SAPL 560. Indoor Plants and Interiorscaping. (3 Credits)

Taxonomy, identification, ornamental characteristics, cultural requirements and use of tropical plants. Principles of interiorscaping in the home, office, public buildings, and related locations.

SAPL 610. Organic and Sustainable Vegetable Production. (3 Credits)

This course presents the ideas and principles underlying organic agriculture and, importantly, exposes students to how commercial growers translate these principles and ideas into sustainable, working farms. Focus is on the fundamentals of soil management and crop plant husbandry as applied to vegetable production; students will gain an appreciation of horticultural principles of vegetable crop growth. Course materials will emphasize and highlight sustainable (i.e. 'organic') practices. Much of the course material will be relevant to commercial growers and home gardeners. The field laboratory will consist of field trips to organic and conventional farms to observe production and marketing practices. Formerly offered as SAPL 620.

SAPL 640. Plant Propagation. (3 Credits)

Theory and practice in sexual and asexual propagation of horticultural plants, emphasizing the anatomical, physiological, and ecological principles involved. Laboratories provide practical experience with seeds, division, cuttings, budding, grafting, layering and tissue culture.

SAPL 660. Nursery Production. (3 Credits)

Principles of field and container production of nursery stock. Emphasis on production practices for woody nursery stock from propagation to sales.

SAPL 670. Greenhouse Technology and Operations. (3 Credits)

Introduction to greenhouse crop management with emphasis on structures, environmental control systems, and management techniques used to control crop response.

Enrollment Requirements: SAPL 120.

SAPL 680. Advanced Cannabis Horticulture. (3 Credits)

Advanced concepts of Cannabis production, management, processing and product development that build upon SAPL 130. Students will choose highly focused study of either indoor controlled environment production or outdoor cultivation of Cannabis for part of the course. Taught with PLSC 3680.

Enrollment Requirements: SAPL 130 or PLSC 2130 or permission of instructor.

SAPL 770. Hydroponic Crop Production. (3 Credits)

Introduction of hydroponics and soilless cultivation with emphasis on its underlying technologies, commercial practices, and sciences. This course will offer a series of lectures and lab activities to facilitate student learning on the hydroponic crop production, including components of hydroponics, various types of hydroponics, and cultural practices to optimize crop production using hydroponics under a controlled environment.

Enrollment Requirements: Recommended preparation: PLSC 3620, PLSC 3640, PLSC 3660 or PLSC 3670 or SAPL 620, SAPL 640, SAPL 660, or SAPL 670.

SAPL 810. Plant Pest Control. (3 Credits)

A practical survey of practices used for insect, disease and weed pests of turf, flowers, shrubs, trees and food crops. Consideration will be given to quarantine, mechanical, biological and chemical means of control. Field trips may be required.

SAPL 840. Integrated Pest Management. (3 Credits)

Principles of integrated pest management covering insect, disease, and weed problems with emphasis on turfgrass, ornamentals, and greenhouse production. Environmental impacts and pest control strategies will be covered.

Enrollment Requirements: SAPL 800 or 810.

SAPL 991. Internship. (1-6 Credits)

Students will work with professionals in an area of their interest. Written reports, daily logs, and/or evaluations by professional supervisors may be required. Open to qualified students with consent of advisor and Department Head.

May be repeated for a total of 6 credits

SAPL 995. Special Topics. (1-6 Credits)

Total credits allowed toward graduation requirements are restricted as outlined in Ratcliffe Hicks Section.

May be repeated for credit

SAPL 999. Independent Study. (1-6 Credits)

An independent study project is mutually arranged between a student and an instructor. Total credits allowed toward graduation requirements are restricted as outlined in the Ratcliffe Hicks section of the Undergraduate Catalog.

May be repeated for credit