

# AGRICULTURE (AGRI)

## AGRI 0020. Introduction to Wildland Ecology and Range Science

Units: 3

Hours: 90 (36 lecture, 54 laboratory)

Basic range management and improvement practices. Proper utilization of rangeland resources, management for sustainable human and environmental values, use by wild and domestic animals, and historical and legal changes in rangeland management. Overview of multiple use principles—maintenance and improvement of range plant communities, conserving biological diversity and environmental quality in rangelands. (CSU)

## AGRI 0028. Independent Study

Units: 1-3

Designed for students interested in furthering their knowledge at an independent study level in an area where no specific curriculum offering is currently available. Independent study might include, but is not limited to, research papers, special subject area projects, and research projects. See Independent Study page in catalog. (CSU, UC-with unit limitation)

## AGRI 0095. Internship in Agriculture

Units: 0.5-4

Designed for advanced students to work in an area related to their educational or occupational goal. Provides new on-the-job technical training under the direction of a worksite supervisor, allowing students to expand knowledge and skills in the chosen field. Mandatory orientation session and faculty approval to determine eligibility. One unit of credit is equal to 54 hours of work. Students may earn up to a total of 16 units in internship courses (any course numbered 95 and PDEV 94). (CSU-with unit limitation)

## AGRI 0156. Introduction to Plant Science

Units: 4

Also known as BIOL 0021

Advisory: Eligibility for ENGL C1000

Hours: 108 (54 lecture, 54 laboratory)

Emphasizes structure, growth, physiology and reproduction of flowering plants and their responses to modifications and environment; including propagation, media, soil and plant nutrition. Explores the interrelationship of plant science with other life sciences and technology. Applies principles of plant science to agricultural systems. (CSU, UC)

## AGRI 0159. Integrated Pest Management

Units: 3

Formerly known as HORT 52

Hours: 54 lecture

Comprehensive study of integrated pest management with emphasis on sustainable management practices of landscape and small crop pests. Includes identification and study of insects, weeds, plant diseases, vertebrate pests, and beneficial organisms. Studies least toxic pest control strategies, labeling, formulations and safe handling of pesticides. (CSU)

## AGRI 0160. Methods of Propagation

Units: 3

Hours: 90 (36 lecture, 54 laboratory)

Plant propagation and production practices with a focus on nursery operations. Topics include sexual and asexual reproduction, planting and transplanting, fertilization, pest and disease management, site layout and structures, preparation and use of propagation and planting media, proper use and maintenance of common tools and equipment, and regulations governing plant production. (CSU)

## AGRI 0163. Wildland Trees and Shrubs (Dendrology)

Units: 4

Also known as BIOL 0024

Advisory: Eligibility for ENGL C1000

Hours: 108 (54 lecture, 54 laboratory)

Study of the botanical characteristics, taxonomy, and physiology of major trees and shrubs of the Western United States, with emphasis on California. Covers plant community relationships, geographic ranges, and human impact on forest ecosystems. Includes identification of specimens in the field and use of herbarium samples. (CSU)

## AGRI 0164. Sustainable Tree Care

Units: 3

Formerly known as HORT 0040

Hours: 90 (36 lecture, 54 laboratory)

Sustainable arboriculture principles and practices for management and care of trees in urban, agricultural, and wildland-urban interface settings. Includes tree biology and culture; landscape tree identification; industry-approved tree maintenance, planting, staking, and pruning techniques; tree risk assessment and mitigation; appropriate selection and pruning of fruit trees. Basic concepts in forest management and current issues in urban and wildland forestry will also be covered. (CSU)

## AGRI 0196. Introduction to Sustainable Agriculture

Units: 3

Hours: 54 lecture

Introduction to the concepts and principles of agroecology and their application to designing and managing sustainable agricultural systems. Includes case studies linking sustainable agriculture principles to practical farming practices. (CSU, UC)

## AGRI 0198. Food, Society and the Environment

Units: 3

Advisory: Eligibility for ENGL C1000

Hours: 54 lecture

Multiple perspectives and global connections between the environment, society and food production. Emphasis on agriculture's central position between nature and society and its key role in humanity's search for a productive and sustainable environment. (CSU, UC)

## AGRI 0200. Introduction to Animal Science

Units: 4

Advisory: Eligibility for ENGL C1000

Hours: 108 (54 lecture, 54 laboratory)

A scientific approach to the field of animal science and the interrelationships of domestic animals and their contribution to the modern agriculture industry. Introduces various disciplines, including cell function, genetics, anatomy and physiology, reproduction, nutrition, animal health, animal products and animal behavior. (C-ID AG-AS 104) (CSU, UC)

## AGRI 0203. Animal Feeds and Nutrition

Units: 4

Formerly known as AGRI 0012

Advisory: Eligibility for ENGL C1000

Hours: 108 (54 lecture, 54 laboratory)

An introduction to the feeds and nutrition of animals including basic digestive system anatomy and physiology; composition and selection of feeds; characteristics of nutrients; principles of nutrition; nutrient requirements of non-ruminant and ruminant animals; and formulating diets to meet these requirements. (CSU)

**AGRI 0212. Direct Farm Marketing**

*Units: 2*

Hours: 36 lecture

Overview of direct farm marketing. Includes innovative marketing alternatives for the small to medium size grower, methods of product development, promotion, pricing and distribution. (not transferable)

**AGRI 0213. Agriculture Mechanics**

*Units: 3*

Hours: 90 (36 lecture, 54 laboratory)

Shop skills essential to mechanized agriculture, including welding, metal and wood fabrication tools, electrical and plumbing. Proper selection, use, repair, and safety of the tools and equipment will be emphasized. (CSU)

**AGRI 0215. Introduction to Agricultural Business and Economics**

*Units: 3*

Advisory: Eligibility for ENGL C1000

Hours: 54 lecture

Provides an overview of the role agriculture business and economics play in United States and world economies and how these aspects impact the agricultural producer in day to day management, the consumer and the food system. Production and supply, marketing and demand, resource allocation and commodity pricing will be discussed as well as social and economic challenges of agriculture in urban and industrialized economies emphasizing California. (CSU, UC)

**AGRI 0221. Introduction to Soil Science**

*Units: 3*

Advisory: Eligibility for ENGL C1000

Hours: 90 (36 lecture, 54 laboratory)

Soils as natural bodies formed by interactive environmental processes, classification and characteristics. Soil response to use and management including erosion, moisture retention, structure, cultivation, organic matter and microbiology. Laboratory topics include soil type, classification, soil reaction, soil fertility and physical properties of soil. (CID AG-PS 128 L) (CSU, UC)

**AGRI 0260. Forest Ecology**

*Units: 3*

Hours: 90 (36 lecture, 54 laboratory)

Ecological principles applied to forest management. Production ecology, biogeochemistry, disturbances, environmental factors, populations, community ecology, forest succession, and forest classification/description. (CSU)

**AGRI 0264. Forest Health and Protection**

*Units: 3*

Advisory: Completion of AGRI 0260 with grade of "C" or better

Hours: 90 (36 lecture, 54 laboratory)

Biotic and abiotic disturbance agents. Identification and ecology of important forest insects and diseases of North America. Predisposing factors that increase susceptibility of forests. Management strategies to reduce impacts. (CSU)

**AGRI 0265. Forest Measurements**

*Units: 4*

Advisory: Completion of AGRI 0260 with grade of "C" or better

Hours: 108 (54 lecture, 54 laboratory)

Surveying including angle and distance measurement, leveling and traverse. Public land survey. Topographic map reading and construction. Tree and forest measurements under field conditions. Forest sampling theory. Introductory statistical analysis of forest measurements. (CSU)

**AGRI 0266. Introduction to Forest Operations**

*Units: 3*

Advisory: Completion of AGRI 0260 with grade of "C" or better

Hours: 90 (36 lecture, 54 laboratory)

Overview of forest operations and environmental issues associated with today's forest management practices. Use of mechanized equipment as a tool to meet various forest management objectives. (CSU)