

Agriculture Course Descriptions

29-101-102. AGRICULTURE AND NATURAL RESOURCES SCIENCE. 1:1:0

The role of Agriculture and Natural Resources in human history, present and future. Discussion of current opportunities. One one-hour lecture per week. Credit, one hour.

29-103. BASIC AGRICULTURE. 3:2:2

Introduction to the fundamental principles of scientific agriculture. This course will examine the relationship of agriculture to human survival and human interactions, the place of agriculture in human history and how it relates to population growth and the roles that the consumption and production of food and fiber play in society. Science elective for non-agriculture majors. Two one-hour lectures and one two-hour laboratory per week. Credit, three hours.

29-204. FRUIT PRODUCTION. 3:2:2

A study of scientific principles impacting fruit production. Breeding and selection, asexual techniques, and development of fruiting bodies will be included. Adaptation, cultural practices, and storage of major fruit species will be considered. Prerequisite: General Horticulture. Two one-hour lectures and one two-hour laboratory period per week. Credit, three hours.

29-206. INTRODUCTION TO ANIMAL SCIENCE. 3:2:2

A study of the various species of livestock and their commercial production. Breed characteristics will be studied as they relate to selection, feeding, care, disease control and marketing for maximum economic performance. The role of animal agriculture in U.S. society today will be stressed. Prerequisites: Biology 101-102, Chemistry 101. Two lectures and one two-hour laboratory per week. Credit, three hours.

29-207. INTRODUCTION TO ANIMAL NUTRITION. 3:2:2

Basic nutrition and feeding practices for the various species of commercial livestock. Feeds, their sources, composition, characteristics and feed value will be explored. Ration balancing and its practical field application will be discussed. Prerequisites: Agriculture 206, Math 103-104. Two lectures and one two-hour recitation per week. Credit, three hours.

29-208. SOIL SCIENCE. 3:2:2

A study of soils, their physical and chemical characteristics, with special emphasis on those factors which affect plant growth. Soil formation, the use of fertilizers, and soil and water conservation are considered. Special emphasis is placed on the soils of Delaware and their management. Two lectures and one two-hour laboratory period per week. Prerequisite: College Chemistry, Biology 102 and Mathematics 103 and 104. Credit, three hours.

29-209. MEAT AND MEAT PROCESSING. 3:3:0

A study of slaughtering, grading, cutting, processing, identification, buying and cooking of cuts of meat. Credit, three hours.

29-210. LANDSCAPING. 3:2:2

Theory and practice of landscape design with special application to the home grounds. Practice in drawing and estimating planting plans and differential leveling will also be

emphasized. Grading, propagations, plant combinations and uses in association with structures and gardens will be studied. Two lectures and one two-hour laboratory period per week. Credit, three hours.

29-219. GENERAL HORTICULTURE. 3:2:2

A study of fruit, vegetable and ornamental plants; the factors which influence their culture, value, and importance, with particular references to the Delmarva Peninsula. Two lectures and one two-hour laboratory per week. Credit, three hours.

29-304. MARKETING AGRICULTURAL PRODUCTS. 3:3:0

To acquaint the student with the basic nature of agriculture product marketing as it relates to producers, consumers, food processors, wholesalers and retailers. Examine how food marketing works and its role in the food industry and the economy. Three one-hour lectures per week. Credit, three hours.

29-305. INTRODUCTION TO POULTRY SCIENCE. 3:2:2

Poultry production with emphasis on integrated broiler operations on the Delmarva Peninsula. Strains, housing, equipment, nutrition and disease control will be discussed. Embryology and table egg production will also be addressed. Prerequisites: Biology 101-102. Two lectures and one two-hour laboratory per week. Credit, three hours.

29-306. ADVANCED POULTRY SCIENCE. 3:2:2

An advanced study of the commercial poultry industry with special emphasis on commercial broiler production. Building design, equipment, ventilation and feeding systems will be covered. Emphasis will also be directed toward flock health, nutrition, daily care and commercial processing. In addition, hands on experience with raising a commercial flock of 1000 broilers will be a primary focus of the laboratory. Prerequisites: Introduction to Poultry Science 305, Biology 102. Credit, three hours.

29-307. ECONOMIC ENTOMOLOGY. 3:2:2

Course description goes here. Credit, three hours.

29-308. PLANT PATHOLOGY. 3:2:2

A study of parasitic and non-parasitic diseases. Fungal, bacterial, and viral diseases will be considered. Damage due to nutrient deficiencies, air pollutants, and other environmental causes will be studied. Insects damaging plants will be studied. Two lectures and one two-hour laboratory period per week. Prerequisites: Biology 102. Offered in alternate years. Credit, three hours.

29-309. FARM MANAGEMENT. 3:3:0

The problem of organizing, coordinating, and managing farm enterprises. A study of the methods used in farm business analysis together with farm accounting and bookkeeping. Prerequisites: Math 121 and 122, Economics 201, Animal Science 206 and Crops 317. Three one-hour lectures per week. Credit, three hours.

29-310. VEGETABLE GARDENING. 3:2:2

Fundamentals in the production of vegetable crops. Scientific principles of plant growth will be applied to vegetable production practices. Adaption and breeding will be included. Production systems and soil interactions will be included. Production systems and soil interactions will be studied. Prerequisite: General Horticulture. Two lectures and one two-hour laboratory period per week. Credit, three hours.

29-315. LIVESTOCK SELECTION AND BREEDING. 3:2:2

An in depth study of the livestock breeding industry with special emphasis on methods of evaluating animals using visual, genetic and performance records. Selection criteria, rations, index systems, expected progeny differences, expected breeding values and repeatability will be covered for the major livestock species. Live animal evaluation will be the primary focus of the laboratory. Prerequisites: Introduction to Animal Science and Biology 102. Credit, three hours.

29-317. FUNDAMENTALS OF CROP PRODUCTION. 3:2:2

An introduction to the fundamentals of crop growth and the study of the more important field crops. Emphasis will be placed on the effects of various cultural practices on the plant growth. Crop distribution and breeding will be considered. Cropping systems will be developed and analyzed. Prerequisite: Biology 102. Two lectures and one two-hour laboratory per week. Credit, three hours.

29-319. HORTICULTURAL PLANT MATERIALS. 3:2:2

Ecology, taxonomy, and landscape uses of herbaceous and wood plant materials. Two lectures and one two-hour laboratory per week and field trips. Credit, three hours.

29-323. AGRICULTURE AND NATURAL RESOURCES MACHINERY. 3:4:2

Principles of function and operation, stressing proper selection, use and management of agriculture and natural resource machinery. Two two-hour lectures per week. Credit, three hours.

29-324. AGRICULTURAL AND NATURAL RESOURCES POWER. 3:2:2

A study of the types of power available to operate agricultural and natural resources equipment. Combustion engines, electric motors and other power sources will be explored. Design, operating principles and maintenance will be emphasized. Measurements of power and power source selection will be considered. Two lectures and one two-hour laboratory period per week. Credit, three hours.

29-325. INTRODUCTION TO ENTOMOLOGY. 3:2:2

Course description goes here. Credit, three hours.

29-350. PROBLEMS IN AGRICULTURE AND NATURAL RESOURCES.

An opportunity to pursue independent study and research. May be elected during junior and senior years. Prerequisites: approval by instructor. Credit, one to three hours per semester.

29-404. SUSTAINABLE AGRICULTURE. 3:3:0

An evaluation of agricultural production practices to determine the potential for profitable production, maintaining environmental quality, and insuring that food requirements of the population will be met. The biology of food production systems will be explored to determine relationships between inputs, output and social-environmental impacts. The interface between

mechanization, specialized buildings, labor, and biological systems will be evaluated.

Prerequisites: Animal Science 206, Soil Science 208, Crop Production 317. Three one-hour lectures per week. Credits, three hours.

29-406. BEEF AND SHEEP PRODUCTION 3:2:2

A study of the principle of nutrition, physiology, and reproduction as they relate to the economic production of beef and lamb. Sound management techniques and their integration into a sustainable enterprise will be studied. Breeding and selection as it relates to both registered and commercial herds and flocks will be considered. Prerequisites: Animal Science 206, Animal Nutrition 207. Two one-hour lectures and one two hour laboratory per week. Credits, three hours.

29-407. METHODS OF TEACHING AGRICULTURE. 3:3:0

This course, through numerous demonstrations, indicates how basic educational principles and techniques may be applied in the teaching of agriculture in the secondary school. The importance of demonstration as a method is given special consideration. Problems of organization, management and evaluation in department of agriculture in secondary schools are explored. Credit, three hours.

29-408. PLANT CELL AND TISSUE CULTURE. 4:3:3

An introduction to the theory, application, and technique of plant cell and tissue culture. Cell theory, totipotency, and the genetic basis of plant cell and tissue culture will be presented, along with methods and techniques for the culture, growth, and development of plant cells and tissues. Prerequisites: Biology 101 and 102, Plant Physiology 306. Two one and one-half hour lectures and one three-hour laboratory per week. Credits, four hours.

29-409. PRINCIPLES OF WEED SCIENCE. 3:2:2

This course is a study of weeds and their control. Principles involving weed plant classification, weed biology and ecology, and plant and herbicide chemistry will be presented. Practices which prevent, eliminate, and control weeds in grain crops, legumes, vegetables, fruit, pasture, and other crop ecologies will be discussed. Herbicide formulations and safe herbicide use will be taught. Prerequisites: Biology 102, Crops 317 or Horticulture 219. Two one-hour lectures and one two-hour laboratory per week. Credit, three hours.

29-419. PLANT PROPAGATION AND GREENHOUSE MANAGEMENT. 3:2:2

Techniques and principles of plant propagation by seeds, grafts, buds, cuttings, layers and division. Fundamentals of greenhouse management and construction. Two lectures, two hours of laboratory per week including field trips. Credit, three hours.

29-420. FOOD DISTRIBUTION MANAGEMENT. 3:3:0

A study of the application of administrative management principles relative to firms engaged in food distribution with emphasis on food retailing organizations. Credit, three hours.

29-449. APPLY JOB - GRADUATE SCHOOL. 1:1:0

Provides an opportunity to learn the techniques of preparing to successfully apply for jobs and graduate school and to practice taking the Graduate Record Exam. Grades are based on class participation and on production of resumes and other career-oriented materials. One one-hour lecture per week. Credit, one hour.

29-451. AGRICULTURE AND NATURAL RESOURCES ECOSYSTEMS. 3:2:2

A senior level philosophical course, integrating concepts in social, physical, and biological

sciences with an introduction to the quantitative synthesis of ecological systems. The course is designed to provide the specialist with a total view of resource use and management. Prerequisites: Biology 205 and Natural Resources 321 or consent of the instructor. Offered in spring semesters. Credit, three hours.

29-463. FORAGE CROP PRODUCTION AND MANAGEMENT. 3:2:2

A study of the characteristics, adaptation, improvement management and utilization of grasses and legumes for animal feed and their role in row crop agriculture. Two one-hour lectures and one two-hour laboratory per week. Prerequisites, Agriculture 317, 208. Credit, three hours.

29-464. BEEF PRODUCTION AND MANAGEMENT. 3:2:2

Course description goes here. Credit, three hours.

29-466. PORK PRODUCTION AND MANAGEMENT. 3:2:2

Application of the principles of nutrition, physiology, and herd selection, breeding, and marketing to swine production and management. Structure of the industry, enterprise establishment, systems of production, production practices and herd improvement programs will be discussed. Evaluation of production responses and economic returns will be covered. Prerequisites, Agriculture 206 and 207. Two one-hour lectures and one two-hour laboratory per week. Credit, three hours.

29-495. CO-OP AGRICULTURE AND NATURAL RESOURCES.

Course description goes here.

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