

# AGRICULTURE

The Agriculture Program at Ventura College prepares students for success in one of the most vital and diverse industries in the region and beyond. Ventura County is home to one of the most productive multi-billion-dollar agricultural economies in California, providing students with direct access to a wide range of career opportunities across the agricultural sector.

Modern agriculture extends far beyond traditional farming. It includes the science, business, and technology involved in producing, processing, distributing, and marketing agricultural products. Ventura College's Agriculture Program reflects this breadth by offering multiple associate degrees and certificates in agricultural business, plant science, animal science and veterinary technology, food safety, heavy equipment, and pest control adviser preparation. In addition, the program offers noncredit training in food safety and agricultural field supervision to support workforce development and career advancement within the local industry.

Students benefit from hands-on, applied learning experiences that emphasize current, environmentally and economically sound, and modern industry practices. Coursework is designed to develop the technical knowledge, practical skills, and professional competencies needed for immediate employment or career advancement.

The program also provides strong transfer pathways to four-year institutions, particularly the California State University and University of California systems, for students pursuing advanced degrees in agriculture and related fields.

Graduates are prepared for careers in areas such as agricultural operations and management, crop production, animal care and veterinary support, food safety and quality assurance, equipment operation, regulatory compliance, and pest management. Whether entering the workforce, advancing within their current role, or transferring to a university, students gain a solid foundation rooted in the needs and opportunities of Ventura County agriculture and the broader agricultural industry.

Students are encouraged to follow the catalog requirements for their specific certificate or degree and to adhere as closely as possible to the recommended plans of study to ensure timely and successful program completion.

## Credit Courses

### AG V01 Agriculture and Society: Agriculture as the Foundation for Modern Civilization 3 Units

*In-Class Hours:* 52.5 lecture

This course offers an introduction to the origins, evolution, and history of agriculture as the foundation of civilizations throughout history. It analyzes the influence of agriculture within the context of various civilizations and societies throughout history, including its integration in social, economic, and political institutions of those societies, through examination of historical artifacts such as literature, art, and social customs. The course includes evaluation of agriculture rooted in agrarian philosophy influencing economic and biological systems within present day societies, challenges such as global hunger, as well as the implications of future innovations in the production of food and fiber to meet the needs of growing populations. The development of agriculture and modern production systems from the colonization of the present day United States and California will be examined, with a focus on increasing awareness of the prevalence and importance of agriculture, and its impacts on nearly all aspects of modern daily life.

**Grade Modes:** Letter Graded

**Field Trips:** May be required

**Degree Applicability:** Applies to Associate Degree

**AA/AS GE:** 3, 4, B2, C2

**Transfer Credit:** CSU, UC

**UC Credit Limitations:** None

**Cal-GETC** 4

### AG V04 Introduction to Soil Science 3 Units

*Formerly:* ESRM V11; AG 4

*In-Class Hours:* 35.0 lecture, 52.5 laboratory

*C-ID:* AG-PS 128L

This course is an introduction to soil science. The physical, chemical, and biological aspects of soil are explored as a natural resource. Topics include erosion control, nutrient analysis and management, chemical transfer, and plant relationships. Soil morphology, soil moisture, mapping, and soil ecology are explored throughout the course.

**Grade Modes:** Letter Graded

**Field Trips:** May be required

**Degree Applicability:** Applies to Associate Degree

**AA/AS GE:** 5, A1, A2

**Transfer Credit:** CSU, UC

**UC Credit Limitations:** None

**Cal-GETC** 5A, 5C

### AG V05 Agricultural Farm Power: Operation and Maintenance 3 Units

*In-Class Hours:* 35 lecture, 52.5 laboratory

This course involves design principles, selection, maintenance, adjustment, and safe operation of wheel and track type tractors used in agriculture and in the construction industry. Safe operational practices, proper machine and implement inspection and set-up, and basic operational skills will be covered. The lab activities will include the operation of machinery in the field laboratory. Principles and application of safety will be stressed.

**Grade Modes:** Letter Graded

**Field Trips:** Will be required

**Degree Applicability:** Applies to Associate Degree

**AA/AS GE:** None

**Transfer Credit:** CSU

**UC Credit Limitations:** None

**AG V06 Introduction to Plant Science (with Laboratory) 3 Units***In-Class Hours:* 35.0 lecture, 52.5 laboratory*C-ID:* AG - PS 106L

This course is an introduction to plant science, including structure, growth processes, propagation, physiology, growth media, biological competitors, and post-harvest factors of food, fiber, and ornamental plants.

**Grade Modes:** Letter Graded**Field Trips:** May be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** 5, A1**Transfer Credit:** CSU, UC**UC Credit Limitations:** None**Cal-GETC** 5B, 5C**AG V10 Introduction to Agriculture Business 3 Units***In-Class Hours:* 52.5 lecture*C-ID:* AG-AB 104

This course provides a basic understanding of the business and economics of the agricultural industry; an introduction to the economic aspects of agriculture and their implications to the agricultural producer, consumer and the food system; and management principles encountered in the day-to-day operations of an agricultural enterprise as they relate to the decision-making process.

**Grade Modes:** Letter Graded**Field Trips:** May be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU, UC**UC Credit Limitations:** None**AG V11 Agricultural Sales and Communication 3 Units***In-Class Hours:* 52.5 lecture*C-ID:* AG-AB 112

This course covers the study of principles and practices of the selling process: selling strategies and approaches, why and how people buy, prospecting, territory management, and customer service. Self-management, communication, and interpersonal skills necessary in developing managerial abilities, leadership qualities, and facilitating teamwork within the agribusiness sector will be explored. Students will gain experience through role-play, formal sales presentations, and job shadowing. The course content is organized to give students an in-depth understanding of the factors and influences that affect the agribusiness industry on a day-to-day basis.

**Grade Modes:** Letter Graded**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** 1B, D2**Transfer Credit:** CSU**UC Credit Limitations:** None**AG V12 Agriculture Economics 3 Units***In-Class Hours:* 52.5 lecture*C-ID:* AG-AB 124

This course covers the place of agriculture and farming in the economic system; basic economic concepts and problems of agriculture; pricing and marketing problems; and factors of production. State and federal farm programs affecting the farmer's economic position will also be included.

**Grade Modes:** Letter Graded**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** 4, B2**Transfer Credit:** CSU, UC**UC Credit Limitations:** None**Cal-GETC** 4**AG V13 Agricultural and Industrial Computer Applications 3 Units***In-Class Hours:* 52.5 lecture*C-ID:* AG - AB 108 108

This course covers computer use in the workplace with emphasis on agribusiness situations. Computer applications including word-processing, spreadsheets, databases, and presentation managers will be covered. Also included will be accessing information through the Internet and World Wide Web, telecommunications, an introduction to web page design, and other software appropriate to agribusiness.

**Grade Modes:** Letter Graded**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**AG V14 Agricultural Accounting 3 Units***In-Class Hours:* 35.0 lecture, 52.5 laboratory

This course covers the study of the principles of accounting systems and types of records, including their use, how to compute and use measures of earnings, and cost of production to improve agribusiness efficiency. Farm income tax, Social Security, and employee payroll records are included.

**Grade Modes:** Letter Graded**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU, UC**UC Credit Limitations:** None**AG V20 Principles of Pesticide Use 3 Units***In-Class Hours:* 52.5 lecture

This course is a study of common plant pests and their management utilizing pesticides, both synthetic and organic in origin. Analyses will include typical uses, modes of action, mechanisms of selectivity, environmental interactions, and user safety of pesticides. Emphasis is placed on safe and appropriate mixing and application of pesticides. Federal, state and local laws and regulations relating to pesticides, hazardous materials, and ground water protection are identified. This course is designed to prepare students for the state certifications in pesticide application, pest control, and crop advising.

**Grade Modes:** Letter Graded**Field Trips:** May be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None

**AG V21 Introduction to Integrated Pest Management (IPM) 3 Units***Formerly:* ESRM V21*In-Class Hours:* 52.5 lecture

This course includes methods for integrating biological, cultural, physical, horticultural, and chemical strategies into an effective and sustainable pest management program. Current laws, regulations, and IPM (Integrated Pest Management) certification/licensing principles are discussed, focusing on ecologically sound practices. Emphasis is on safety, environmental issues, pest identification, chemicals, eradication and control methods, equipment use, and preparation for state licensing and certification examinations.

**Grade Modes:** Letter Graded**Field Trips:** May be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**AG V22 Introduction to Plant Pathology: Insects and Diseases of Plants 3 Units***Formerly:* ESRM V22*In-Class Hours:* 35.0 lecture, 52.5 laboratory

This course is a comprehensive study of the nature and causes of disease in plants, with particular emphasis on agricultural commodities. The causes and effects of insect and microorganism attacks and disease in plants will be investigated, as well as the environmental, cultural, mechanical, and chemical mechanisms leading to plant disease. Students will learn how to diagnose and remedy plant disease, utilizing various mechanical, chemical, and biological controls, and manage growing conditions to minimize the impact of pathogenic agents.

**Grade Modes:** Letter Graded**Field Trips:** May be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** 5, A1**Transfer Credit:** CSU, UC**UC Credit Limitations:** None**AG V30 Plant Propagation and Production 3 Units***In-Class Hours:* 35.0 lecture, 52.5 laboratory*C-ID:* AG-EH 116L

This course will review the principles and methods of propagating plants, sexual and asexual: field crops, fruits, vegetables, ornamentals, seeds, spores, cuttings, layering, grafting and budding. An emphasis will be placed on agricultural field crop, nursery, and controlled-environment operations including propagation media, rooting aids, planting, transplanting, fertilization, irrigation, plant growth regulators, pest and disease identification and control. The use and maintenance of common tools, equipment and materials will be covered.

**Grade Modes:** Letter Graded**Field Trips:** May be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** 5, A1**Transfer Credit:** CSU, UC**UC Credit Limitations:** None**AG V31 Food Safety - HACCP (Hazard Analysis and Critical Control Point) Training and Certification 1 Unit***In-Class Hours:* 17.5 lecture

This course is a general HACCP (Hazard Analysis and Critical Control Point) training designed for individuals working in the food industry who want to earn a HACCP certification. This HACCP training course teaches participants how to implement and manage the Hazard Analysis and Critical Control Point (HACCP) system, which was designed by the Food and Drug Administration (FDA) as a food safety management system for controlling food hazards. Upon successful completion of the course, students will earn a certificate of completion from the International HACCP Alliance. This HACCP Certificate will be recognized domestically and internationally by food safety inspectors and auditors.

**Grade Modes:** Letter Graded, Credit by exam, license etc.**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** None**AG V32 Produce Safety Rule (PSR) Training 1 Unit***In-Class Hours:* 17.5 lecture

This course is a training in produce safety designed for individuals working in the produce industry. The course is especially relevant for fruit and vegetable growers and others interested in learning about produce safety, the Food Safety Modernization Act (FSMA), Produce Safety Rule, Good Agricultural Practices (GAPs), and co-management of natural resources and food safety. The PSA Grower Training Course is one way to satisfy the FSMA Produce Safety Rule requirement outlined in the Code of Federal Regulations § 112.22(c) which requires that at least one responsible party on a farm has completed food safety training recognized as adequate by the Food and Drug Administration.

**Grade Modes:** Pass/No Pass Grading, Credit by exam, license etc.**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** None**AG V33 Food Safety Foreign Supplier Verification (FSVP) Program Training 1 Unit***In-Class Hours:* 17.5 lecture

This course will provide participants with the knowledge to implement the requirements of the Foreign Supplier Verification Programs (FSVP) for "Importers of Food for Humans and Animals" regulation of the U.S. Food and Drug Administration (FDA). This regulation is one of a number of regulations and guidance documents that implement the provisions of the 2011 Food Safety Modernization Act (FSMA), which focuses on safe food practices.

**Grade Modes:** Pass/No Pass Grading, Credit by exam, license etc.**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** None

**AG V34 Human Food PCQI (Preventive Controls Qualified Individual)****Training 2 Units***In-Class Hours:* 35.0 lecture

This course is intended for individuals working in the food industry seeking to meet the requirements for a human food Preventive Controls Qualified Individual certificate. The Current Good Manufacturing Practice, Hazard Analysis, and Risk-based Preventive Controls for Human Food regulation (referred to as the Preventive Controls for Human Food regulation) is intended to ensure safe manufacturing/processing, packing and holding of food products for human consumption in the United States. The regulation requires that certain activities must be completed by a Preventive Controls Qualified Individual who has successfully completed training in the development and application of risk-based preventive controls.

**Grade Modes:** Pass/No Pass Grading, Credit by exam, license etc.**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** None**AG V35 Animal Food PCQI (Preventive Controls Qualified Individual)****Training 2 Units***In-Class Hours:* 35.0 lecture

This course is intended for individuals working in the food industry seeking to meet the requirements for an animal food Preventive Controls Qualified Individual (PCQI) certificate. The Current Good Manufacturing Practice and Hazard Analysis and Risk-based Preventive Controls for Food for Animals (referred to as the Preventive Controls for Animal Food regulation) is intended to ensure safe manufacturing/processing, packing, and holding of food products for animal consumption in the United States. The regulation requires that certain activities must be completed by a Preventive Controls Qualified Individual who has successfully completed training in the development and application of risk-based preventive controls.

**Grade Modes:** Pass/No Pass Grading, Credit by exam, license etc.**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** None**AG V36 Introduction to Food Safety and Agricultural Practices for Food Safety 3 Units***In-Class Hours:* 52.5 lecture

This is an introductory course in food safety for those majoring in agriculture and/or working in food safety related careers or industries. The course covers conditions and practices that cause food borne illnesses, organisms responsible for food borne illnesses, elements of a food safety control system, and worker sanitation. The course focus is on establishing good agricultural practices (GAP) in food safety as they relate to the production of farm products, including specific guidelines for key agricultural commodities, state and federal regulations, and food safety monitoring. Students will learn to create standard operating procedures (SOP) associated with employee training and the safe production, transportation, and processing of food. Best practices in the retail and home kitchen environments will also be covered.

**Grade Modes:** Letter Graded**Field Trips:** May be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** None**AG V37 Food Safety Management Practices: Field and Facility 3 Units***In-Class Hours:* 52.5 lecture

This course covers the creation and documentation of key elements in a food safety program, including: evaluating current practices, creating and implementing key aspects of a food safety program, and recognizing and documenting pathogen behavior. This course also covers food safety issues and concerns in processing and manufacturing facilities, including: facility sanitation, recognizing potential hazards, analysis of problems in the cold chain, developing improved practices, HACCP (Hazard Analysis and Critical Control Point) principles, employee training, and the inspection process.

**Grade Modes:** Letter Graded**Field Trips:** May be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** None**AG V38 Agricultural Laws and Regulations for Food Safety 3 Units***In-Class Hours:* 52.5 lecture

This course is designed to give the student a better understanding of the issues involved in the regulation of foods and a general understanding of the full scope of food safety laws in the United States. The course covers the laws regulating the production, processing, manufacturing, distribution, and sale of food products in the United States. Topics include the regulation of labeling, food safety, genetic modification, FSMA (Food Safety Modernization Act), inspections, importation, enforcement, and many other issues of concern in the regulation of food in the United States.

**Grade Modes:** Letter Graded**Field Trips:** May be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**AG V39 Introduction to Food Microbiology 2 Units***In-Class Hours:* 17.5 lecture, 52.5 laboratory

This course is an introduction to the principles of food microbiology and food safety. The course investigates the beneficial and harmful effects of microorganisms on food, and includes a survey of the types of microbes found in various types of food, as well as methods for their detection. Evaluation of methods of microbial control and mechanisms of disease of important food microorganisms, as well as sources of food contamination, are presented. An examination of the implementation and effectiveness of food safety programs is also covered.

**Catalog Notes:** This credit course is the same material as the noncredit AG N139 course.**Grade Modes:** Letter Graded**Field Trips:** May be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** None

**AG V42 Plant Identification and Culture: Spring Specimens 3 Units***Formerly:* ESRM V23*In-Class Hours:* 35.0 lecture, 52.5 laboratory*C-ID:* AG-EH 108L

This course covers the identification, growth habits, cultural requirements, and ornamental use of landscape and indoor plants adapted to climates of California. Plants emphasized will come from the current California Association of Nurseries & Garden Centers and National Association of Landscape Professionals Certification Tests Plant Lists. Selections include plants best observed and studied during the spring and/or summer seasons in California. Laboratory required.

**Grade Modes:** Letter Graded**Field Trips:** May be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** 5, A1**Transfer Credit:** CSU, UC**UC Credit Limitations:** None**AG V43 Plant Identification and Culture: Fall Specimens 3 Units***Formerly:* AG V42A*In-Class Hours:* 35.0 lecture, 52.5 laboratory*C-ID:* AG-EH 112L

This course covers the identification, growth habits, cultural requirements, and ornamental use of landscape and indoor plants adapted to climates of California. Plants emphasized will come from the current California Association of Nurseries & Garden Centers and National Association of Landscape Professionals Certification Tests Plant Lists. Selections include plants best observed and studied during the fall and/or winter seasons in California. Laboratory required.

**Grade Modes:** Letter Graded**Field Trips:** May be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** 5, A1**Transfer Credit:** CSU, UC**UC Credit Limitations:** None**AG V54A Conservation of Natural Resources 3 Units***Formerly:* AG V54*Same-As:* ESRM V14*In-Class Hours:* 52.5 lecture

This course explores Earth's natural resources and issues pertaining to their management, conservation, and preservation. Renewable and non-renewable resources will be investigated, and conceptual methods and models for analyzing Earth's hydrosphere, geosphere, biosphere, atmosphere, and pedosphere (soils) will be developed. Discussion will include topics related to ecological relationships of water, energy sources, air, soil, grasslands, wetlands, forests, wildlife, and agricultural factors.

**Grade Modes:** Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading**Field Trips:** May be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU, UC**UC Credit Limitations:** None**AG V61 Introduction to Animal Science 3 Units***In-Class Hours:* 52.5 lecture*C-ID:* AG-AS 104

This course will provide a scientific approach to the livestock industry, encompassing aspects of animal anatomy, physiology, nutrition, genetics, and epidemiology. Topics will include a survey of the livestock industry and the supply of animal products and their uses; there will be a special emphasis on the origin, characteristics, adaptation, and contributions of livestock animals to the modern agriculture industry.

**Catalog Notes:** Fall section open only to students admitted to Veterinary Technology program; Spring section open to all students.**Grade Modes:** Letter Graded**Field Trips:** May be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** 5, A1**Transfer Credit:** CSU, UC**UC Credit Limitations:** None**AG V62 Orientation to Veterinary Science 1 Unit***In-Class Hours:* 17.5 lecture*Enrollment Limitations:* Admitted to the program.

This course directs students in the exploration of veterinary medicine as a career choice, including education, job tasks, and employment options. This course will cover the development and facilitation of client care, client relations, filing of governmental reports, and legal responsibilities of registered veterinary technicians. Topics will include: client and staff communication, veterinary medical ethics, veterinary logs, and legalities. Resume writing and job interviewing skills will also be covered. Other key topics include an orientation to college veterinary science programs and degree/certification requirements.

**Grade Modes:** Letter Graded**Field Trips:** May be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**AG V63 Domestic Animal Care Experience and Handling 1.5 Units***In-Class Hours:* 17.50 lecture, 26.25 laboratory*Enrollment Limitations:* Admitted to the program.

This introductory course provides students with theoretical and practical experience in the basic husbandry of many animal species. Students learn and practice "essential" and "recommended" tasks as required by the American Veterinary Medical Association and the California Veterinary Medical Board Knowledge, Skills and Abilities Tasks List. These tasks include methods of housing or caging, nutrition and feeding, sanitation and hygiene in an animal setting, and handling and restraint of the various species.

**Grade Modes:** Letter Graded**Field Trips:** Will be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** None

**AG V64 Introduction to Veterinary Pharmacology and Office Procedures 3 Units***In-Class Hours:* 52.5 lecture*Enrollment Limitations:* Admitted to the program.

This course will cover the use of veterinary medical records, medical terminology, and Pharmacology. Topics will include: an introduction to medical terminology used in Veterinary Medicine, computer usage, the creation of medical records, an introduction to Pharmacology, medical math, and purchasing and inventory management in relationship to a veterinary establishment.

**Grade Modes:** Letter Graded**Field Trips:** May be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**AG V65 Animal Health and Disease Control 3 Units***In-Class Hours:* 52.5 lecture*Enrollment Limitations:* Admitted to the program.

This course will cover the physiology of animals and how it relates to animal health. The focus will be on prevention and control of infectious diseases affecting domestic animals and livestock species including basic disease concepts, transmission of infectious diseases, principles of sanitation, and fundamentals of immunology. Appropriate veterinary medical terminology will be included. Includes the livestock and veterinary technician's role in promoting animal health and the foundation of disease control programs.

**Catalog Notes:** Fall Section open to all students; spring section open only to students accepted into the Veterinary Technology program.**Grade Modes:** Letter Graded**Field Trips:** May be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**AG V66 Anatomy and Physiology of Animals 4 Units***In-Class Hours:* 52.5 lecture, 52.5 laboratory*Prerequisites:* CHEM V101 (formerly CHEM V20-V20L) or 1 year high school chemistry with grade of "C" or better*Advisories/Rec Prep:* BIOL C1001-V01L and CHEM V120A (Formerly CHEM V01A-V01AL)

This course consists of comparative normal anatomy and physiology of selected domestic animal species. It analyzes the body structures and systems, comparing domestic animals commonly found in veterinary medicine. The physiology section of the course will emphasize functions of internal organs and body systems. The relevant application of structure and function to clinical medical situations is addressed.

Appropriate veterinary medical terminology is included with each system.

**Grade Modes:** Letter Graded**Field Trips:** May be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** 5, A1**Transfer Credit:** CSU, UC**UC Credit Limitations:** None**Cal-GETC** 5B, 5C**AG V67 Basic Small Animal Nursing 3 Units***In-Class Hours:* 35.0 lecture, 52.5 laboratory*Enrollment Limitations:* Admitted to the program.

This course is an introduction to concepts and common procedures used in the nursing care of small domestic animals. Components of routine physical exams and acquisition of various vital signs will be discussed. Wellness protocols for dogs and cats will also be addressed, with an emphasis on vaccine programs. The importance of the veterinary technician in providing care for patients with various conditions and common diseases will be covered in detail.

**Grade Modes:** Letter Graded**Field Trips:** May be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**AG V68 Veterinary Diagnostic Imaging 2 Units***In-Class Hours:* 17.50 lecture, 52.5 laboratory*Enrollment Limitations:* Admitted to the program.

This course is designed to meet the needs of the veterinary technician who will be working for veterinarians in various medical settings. The course covers safety procedures, rules, regulations, x-ray production, and specific techniques associated with the use of radiographic equipment, including positioning techniques for various animal species, as well as radiograph developing techniques. Students will learn how to properly prepare and operate radiographic and darkroom equipment, computer radiographic equipment, and ultrasound equipment to safely and effectively produce diagnostic radiographs and ultrasonic images. Alternate imaging modalities will be introduced and their use in veterinary medicine will be described.

**Grade Modes:** Letter Graded**Field Trips:** May be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**AG V69 Principles of Large Animal Nursing 3 Units***In-Class Hours:* 35.0 lecture, 52.5 laboratory*Enrollment Limitations:* Admitted to the program.

This course is an introduction to the concepts and common procedures used in the nursing care of large domestic animals, such as horses, cattle and swine. Components of routine physical exams and acquisition of various vital signs will be discussed. Emphasis will be on the role of the veterinary technician in providing care for large domestic animal patients with various conditions and common diseases.

**Grade Modes:** Letter Graded**Field Trips:** Will be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None

**AG V70 Advanced Small Animal Nursing 3 Units***In-Class Hours:* 35.0 lecture, 52.5 laboratory*Prerequisites:* AG V67 with a grade of "C" or better*Enrollment Limitations:* Admitted to the program.

This course covers advanced procedures used in the nursing care of small domestic animals. Emphasis is on advanced components of emergency care, critical care, and triage. Advanced nursing techniques, as well as pharmacology, lab samples, neonatal care, and hematology will be discussed.

**Grade Modes:** Letter Graded**Field Trips:** May be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**AG V71 Basic Veterinary Clinical Procedures 1.5 Units***In-Class Hours:* 17.50 lecture, 26.25 laboratory*Enrollment Limitations:* Admitted to the program.

This course is an introduction to basic clinical procedures used in veterinary practice, such as: anesthesia administration, minor surgery, and dental procedures. Instrumentation and equipment will be discussed, as well as practices in sanitation and aseptic techniques. Emphasis will be placed on performance of physical examinations, administration of medications and fluids, operation of general anesthesia and monitoring equipment, and application of operating room skills necessary for surgical assisting.

**Grade Modes:** Letter Graded**Field Trips:** May be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**AG V72 Advanced Veterinary Clinical Procedures 3 Units***In-Class Hours:* 35.0 lecture, 52.5 laboratory*Prerequisites:* AG V71 with grade of "C" or better*Enrollment Limitations:* Admitted to the program.

This course covers advanced clinical procedures used in veterinary practice, with an emphasis on anesthesia and surgery. Elements of pharmacology and pain management will be discussed, as well as practices in surgical operations. Potential issues occurring during anesthesia, and other emergency situations, will also be addressed. Students will receive hands-on experience in the operation of general anesthesia and monitoring equipment while assisting in surgical procedures.

**Grade Modes:** Letter Graded**Field Trips:** May be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**AG V73 Veterinary Dentistry 3 Units***In-Class Hours:* 35.0 lecture, 52.5 laboratory*Enrollment Limitations:* Admitted to the program.

This course will prepare students for all aspects of veterinary dental diagnostics and prophylaxis in domestic animals, such as canines and felines. Emphasis will be placed on tasks necessary for veterinary technicians to perform and assist with, such as dental charting, radiography, prophylaxis, and extractions. Students will also perform dental radiography and prophylaxis on anesthetized animals.

**Grade Modes:** Letter Graded**Field Trips:** May be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**AG V74 Introduction to Laboratory Animal and Exotic Companion Animal Medicine 3 Units***In-Class Hours:* 52.5 lecture*Enrollment Limitations:* Admitted to the program.

This course covers the use of animals in biomedical research, with an emphasis on common laboratory species, animal welfare legislation, and the philosophy of laboratory animal management. This course includes topics such as handling, restraint, husbandry, care, and observation of laboratory species. Additionally, this course will discuss common exotic companion animal species such as reptiles, birds, and small mammals; the focus will be on husbandry, housing, nutrition, and common medical conditions.

**Grade Modes:** Letter Graded**Field Trips:** May be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**AG V75 Veterinary Microbiology, Parasitology, and Laboratory Procedures 3 Units***In-Class Hours:* 35.0 lecture, 52.5 laboratory*Enrollment Limitations:* Admitted to the program.

This course will cover the basic clinical laboratory skills needed by Registered Veterinary Technicians. The course provides students with an introduction to the clinical examination of blood, urine, feces, dermal, and other commonly analyzed samples found in the veterinary field. Topics include: the safe and proper collection of diverse samples, the safe and proper handling of samples, the various methods of sample analysis, and the significance of normal and abnormal results. Emphasis will be placed on the areas of parasitology, cytology, urinalysis, microbiology, and hematology. Additionally, the identification, life cycle, and clinical importance of various parasites are discussed. Students will also gain hands-on experience in restraining animals for specimen collection procedures and in performing laboratory analyses.

**Grade Modes:** Letter Graded**Field Trips:** May be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None

**AG V80 Small Ruminant Science 3 Units***In-Class Hours:* 35 lecture, 52.5 laboratory

This course covers the sheep and goat industries; management of commercial, purebred and small farm flocks; selecting, feeding, breeding and basic care of small ruminants plus marketing of sheep, goats and their products. Laboratory required.

**Grade Modes:** Letter Graded**Field Trips:** Will be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**AG V81 Fundamentals of Animal Feeding and Nutrition 3 Units***In-Class Hours:* 35 lecture, 52.5 laboratory

This course will cover the science of animal nutrition; the fundamentals of digestion and absorption in both ruminants and non-ruminants are discussed. The nutritive value of feedstuffs as they relate to the formulation of livestock rations will be emphasized. Laboratory required.

**Grade Modes:** Letter Graded**Field Trips:** May be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**AG V96 Work Experience Education in Agriculture 1-14 Units***In-Class Hours:* 54-756 paid cooperative

*Enrollment Limitations:* Department Chair approval. Instructor approval and completion of 1 course within the work experience discipline.

Work Experience Education provides supervised employment extending classroom occupational learning at an on-the-job learning station relating to the students' educational or occupational goals. Each unit of credit requires 54 hours of employment during the semester. Work Experience Education is available to all students.

**Catalog Notes:** Students may enroll in up to 14 units of work experience education per semester or term; There is no limit to the number of terms for which a student may enroll in work experience education.

**Grade Modes:** Pass/No Pass Grading**Field Trips:** May be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**AG V96A Veterinary Clinical Work Experience Education I 1-14 Units***In-Class Hours:* 54-756 paid cooperative

*Prerequisites:* Acceptance into the VC Veterinary Technology program; Instructor Approval

*Enrollment Limitations:* Admitted to the program. Current negative TB test or chest x-ray. Department Chair approval. Drug and alcohol clearance. No acrylic or long nails in clinical settings. Current Tetanus and Rabies vaccinations required.

This course is designed to provide Veterinary Technology majors, with actual on-the-job experience at an approved work site which is related to classroom instruction in their fourth semester of the program. Clinical experiences should be useful in preparation for state board exams in veterinary technology. Work Experience Education provides supervised employment extending classroom occupational learning at an on-the-job learning station relating to the students' educational or occupational goals. Each unit of credit requires 54 hours of employment during the semester. Work Experience Education is available to all students.

**Catalog Notes:** Students may enroll in up to 14 units of work experience education per semester or term; There is no limit to the number of terms for which a student may enroll in work experience education.

**Grade Modes:** Pass/No Pass Grading**Field Trips:** May be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**AG V96B Veterinary Clinical Work Experience Education II 1-14 Units***In-Class Hours:* 54-756 paid cooperative

*Prerequisites:* Acceptance into the VC Veterinary Technology program; Instructor Approval

*Enrollment Limitations:* Admitted to the program. Current negative TB test or chest x-ray. Department Chair approval. Drug and alcohol clearance. No acrylic or long nails in clinical settings. Current Tetanus and Rabies vaccinations required.

This course is designed to provide Veterinary Technology majors, with actual on-the-job experience at an approved work site which is related to classroom instruction in their fourth semester of the program. Clinical experiences should be useful in preparation for state board exams in veterinary technology. Work Experience Education provides supervised employment extending classroom occupational learning at an on-the-job learning station relating to the students' educational or occupational goals. Each unit of credit requires 54 hours of employment during the semester. Work Experience Education is available to all students.

**Catalog Notes:** Students may enroll in up to 14 units of work experience education per semester or term; There is no limit to the number of terms for which a student may enroll in work experience education.

**Grade Modes:** Pass/No Pass Grading**Field Trips:** May be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None

**AG V96C Veterinary Clinical Work Experience Education III 1-14 Units**

*In-Class Hours:* 54-756 paid cooperative

*Prerequisites:* Instructor Approval

*Enrollment Limitations:* Admitted to the program. Current negative TB test or chest x-ray. Department Chair approval. Drug and alcohol clearance. No acrylic or long nails in clinical settings. Current Tetanus and Rabies vaccinations required.

This course is designed to provide Veterinary Technology majors, with actual on-the-job experience at an approved work site which is related to classroom instruction in their fourth semester of the program. Clinical experiences should be useful in preparation for state board exams in veterinary technology. Work Experience Education provides supervised employment extending classroom occupational learning at an on-the-job learning station relating to the students' educational or occupational goals. Each unit of credit requires 54 hours of employment during the semester. Work Experience Education is available to all students.

**Catalog Notes:** Students may enroll in up to 14 units of work experience education per semester or term; There is no limit to the number of terms for which a student may enroll in work experience education.

**Grade Modes:** Pass/No Pass Grading

**Repeatable for Credit:** Course may be repeated up to a maximum of 14 units of credit.

**Field Trips:** May be required

**Degree Applicability:** Applies to Associate Degree

**AA/AS GE:** None

**Transfer Credit:** CSU

**UC Credit Limitations:** None

**AG V96D Veterinary Clinical Work Experience Education IV 1-14 Units**

*In-Class Hours:* 54-756 paid cooperative

*Prerequisites:* Acceptance into the VC Veterinary Technology program; Instructor Approval

*Enrollment Limitations:* Admitted to the program. Current negative TB test or chest x-ray. Department Chair approval. Drug and alcohol clearance. No acrylic or long nails in clinical settings. Current Tetanus and Rabies vaccinations required.

This course is designed to provide Veterinary Technology majors, with actual on-the-job experience at an approved work site which is related to classroom instruction in their final semester of the program. Clinical experiences should be useful in preparation for state board exams in veterinary technology. Work Experience Education provides supervised employment extending classroom occupational learning at an on-the-job learning station relating to the students' educational or occupational goals. Each unit of credit requires 54 hours of employment during the semester. Work Experience Education is available to all students.

**Catalog Notes:** Students may enroll in up to 14 units of work experience education per semester or term; There is no limit to the number of terms for which a student may enroll in work experience education.

**Grade Modes:** Pass/No Pass Grading

**Field Trips:** May be required

**Degree Applicability:** Applies to Associate Degree

**AA/AS GE:** None

**Transfer Credit:** CSU

**UC Credit Limitations:** None

## Noncredit Courses

**AG N131 Food Safety - HACCP (Hazard Analysis and Critical Control Point) Training and Certification (NC) 0 Units**

This course is a general HACCP (Hazard Analysis and Critical Control Point) training designed for individuals working in the food industry who want to earn a HACCP certification. This HACCP training course teaches participants how to implement and manage the Hazard Analysis and Critical Control Point (HACCP) system, which was designed by the Food and Drug Administration (FDA) as a food safety management system for controlling food hazards. Upon successful completion of the course, students will earn a certificate of completion from the International HACCP Alliance. This HACCP Certificate will be recognized domestically and internationally by food safety inspectors and auditors.

**Grade Modes:** Pass/No Pass Grading, Credit by exam, license etc.

**Repeatable for Credit:** Unlimited.

**Degree Applicability:** Noncredit course; not applicable for degree credit  
**AA/AS GE:** None

**Transfer Credit:** None

**AG N132 Produce Safety Rule (PSR) Training (NC) 0 Units**

This course is a training in produce safety designed for individuals working in the produce industry. The course is especially relevant for fruit and vegetable growers and others interested in learning about produce safety, the Food Safety Modernization Act (FSMA), Produce Safety Rule, Good Agricultural Practices (GAPs), and co-management of natural resources and food safety. The PSA Grower Training Course is one way to satisfy the FSMA Produce Safety Rule requirement outlined in the Code of Federal Regulations § 112.22(c) which requires that at least one responsible party on a farm has completed food safety training recognized as adequate by the Food and Drug Administration.

**Grade Modes:** Pass/No Pass Grading, Credit by exam, license etc.

**Repeatable for Credit:** Unlimited.

**Degree Applicability:** Noncredit course; not applicable for degree credit  
**AA/AS GE:** None

**Transfer Credit:** None

**AG N133 Food Safety Foreign Supplier Verification (FSVP) Program Training (NC) 0 Units**

This course will provide participants with the knowledge to implement the requirements of the Foreign Supplier Verification Programs (FSVP) for "Importers of Food for Humans and Animals" regulation of the U.S. Food and Drug Administration (FDA). This regulation is one of a number of regulations and guidance documents that implement the provisions of the 2011 Food Safety Modernization Act (FSMA), which focuses on safe food practices.

**Grade Modes:** Pass/No Pass Grading, Credit by exam, license etc.

**Repeatable for Credit:** Unlimited.

**Degree Applicability:** Noncredit course; not applicable for degree credit  
**AA/AS GE:** None

**Transfer Credit:** None

**AG N134 Human Food PCQI (Preventive Controls Qualified Individual) Training (NC) 0 Units**

This course is intended for individuals working in the food industry seeking to meet the requirements for a human food Preventive Controls Qualified Individual certificate. The Current Good Manufacturing Practice, Hazard Analysis, and Risk-based Preventive Controls for Human Food regulation (referred to as the Preventive Controls for Human Food regulation) is intended to ensure safe manufacturing/processing, packing and holding of food products for human consumption in the United States. The regulation requires that certain activities must be completed by a Preventive Controls Qualified Individual who has successfully completed training in the development and application of risk-based preventive controls.

**Grade Modes:** Pass/No Pass Grading, Credit by exam, license etc.

**Repeatable for Credit:** Unlimited.

**Degree Applicability:** Noncredit course; not applicable for degree credit

**AA/AS GE:** None

**Transfer Credit:** None

**AG N135 Animal Food PCQI (Preventive Controls Qualified Individual) Training (NC) 0 Units**

This course is intended for individuals working in the food industry seeking to meet the requirements for an animal food Preventive Controls Qualified Individual (PCQI) certificate. The Current Good Manufacturing Practice and Hazard Analysis and Risk-based Preventive Controls for Food for Animals (referred to as the Preventive Controls for Animal Food regulation) is intended to ensure safe manufacturing/processing, packing, and holding of food products for animal consumption in the United States. The regulation requires that certain activities must be completed by a Preventive Controls Qualified Individual who has successfully completed training in the development and application of risk-based preventive controls.

**Grade Modes:** Pass/No Pass Grading, Credit by exam, license etc.

**Repeatable for Credit:** Unlimited.

**Degree Applicability:** Noncredit course; not applicable for degree credit

**AA/AS GE:** None

**Transfer Credit:** None

**AG N136 Introduction to Food Safety and Agricultural Practices for Food Safety (NC) 0 Units**

This is an introductory course in food safety for those majoring in agriculture and/or working in food safety related careers or industries. The course covers conditions and practices that cause food borne illnesses, organisms responsible for food borne illnesses, elements of a food safety control system, and worker sanitation. The course focus is on establishing good agricultural practices (GAP) in food safety as they relate to the production of farm products, including specific guidelines for key agricultural commodities, state and federal regulations, and food safety monitoring. Students will learn to create standard operating procedures (SOP) associated with employee training and the safe production, transportation, and processing of food. Best practices in the retail and home kitchen environments will also be covered.

**Grade Modes:** Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading

**Repeatable for Credit:** Unlimited.

**Field Trips:** May be required

**Degree Applicability:** Noncredit course; not applicable for degree credit

**AA/AS GE:** None

**Transfer Credit:** None

**AG N137 Food Safety Management Practices: Field and Facility (NC) 0 Units**

This course covers the creation and documentation of key elements in a food safety program, including: evaluating current practices, creating and implementing key aspects of a food safety program, and recognizing and documenting pathogen behavior. This course also covers food safety issues and concerns in processing and manufacturing facilities, including: facility sanitation, recognizing potential hazards, analysis of problems in the cold chain, developing improved practices, HACCP (Hazard Analysis and Critical Control Point) principles, employee training, and the inspection process.

**Grade Modes:** Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading

**Repeatable for Credit:** Unlimited.

**Field Trips:** May be required

**Degree Applicability:** Noncredit course; not applicable for degree credit

**AA/AS GE:** None

**Transfer Credit:** None

**AG N138 Agricultural Laws and Regulations for Food Safety (NC) 0 Units**

This course is designed to give the student a better understanding of the issues involved in the regulation of foods and a general understanding of the full scope of food safety laws in the United States. The course covers the laws regulating the production, processing, manufacturing, distribution, and sale of food products in the United States. Topics include the regulation of labeling, food safety, genetic modification, FSMA (Food Safety Modernization Act), inspections, importation, enforcement, and many other issues of concern in the regulation of food in the United States.

**Grade Modes:** Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading

**Repeatable for Credit:** Unlimited.

**Field Trips:** May be required

**Degree Applicability:** Noncredit course; not applicable for degree credit

**AA/AS GE:** None

**Transfer Credit:** None

**AG N139 Introduction to Food Microbiology (NC) 0 Units**

This course is an introduction to the principles of food microbiology and food safety. The course investigates the beneficial and harmful effects of microorganisms on food, and includes a survey of the types of microbes found in various types of food, as well as methods for their detection. Evaluation of methods of microbial control and mechanisms of disease of important food microorganisms, as well as sources of food contamination, are presented. An examination of the implementation and effectiveness of food safety programs is also covered.

**Catalog Notes:** This noncredit course material is the same as the credit course AG V39.

**Grade Modes:** Pass/No Pass Grading

**Repeatable for Credit:** Unlimited.

**Field Trips:** May be required

**Degree Applicability:** Noncredit course; not applicable for degree credit

**AA/AS GE:** None

**Transfer Credit:** None

**AG N150 Human Resource Management for Agriculture Field Supervisors (NC) 0 Units**

This course is taught primarily in Spanish and aimed at current agriculture laborers or those interested in becoming crew leaders in both agriculture field and facility settings. The course covers human resource management skills, laws regulating agricultural production, and the use of labor in agriculture. Topics include basic human resource management, hiring, required labor documentation, applicable labor laws, wages, and the rights of agricultural laborers. Likewise, effective communication, conflict resolution, negotiation and leadership strategies will be discussed. The course is designed especially for agricultural field supervisors to provide a better understanding of effective management and leadership practices for successful oversight of labor within the production setting.

**Grade Modes:** Pass/No Pass Grading

**Repeatable for Credit:** Unlimited.

**Field Trips:** May be required

**Degree Applicability:** Noncredit course; not applicable for degree credit

**AA/AS GE:** None

**Transfer Credit:** None

**AG N151 Agricultural Laws and Regulations for Agricultural Field Supervisors (NC) 0 Units**

This course is taught primarily in Spanish and aimed at current agriculture laborers or those interested in becoming crew leaders in both agriculture field and facility settings. The course covers laws regulating agricultural production and the use of labor in agriculture. Topics include agricultural exemptions from labor laws, the Migrant and Seasonal Agricultural Worker Protection Act, and the rights of agricultural laborers. Likewise, specific regulations and laws governing agricultural production in California will be discussed. The course is designed especially for agricultural field supervisors to provide them with a better understanding of the issues involved in the regulation of agricultural production and labor within the production setting.

**Grade Modes:** Pass/No Pass Grading

**Repeatable for Credit:** Unlimited.

**Field Trips:** May be required

**Degree Applicability:** Noncredit course; not applicable for degree credit

**AA/AS GE:** None

**Transfer Credit:** None

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