



Agricultural Business Management
Agriculture
Animal Science
Crop Science
Environmental Horticulture
Forestry
Horticulture
Natural Resources Management

Agriculture

The Bakersfield College Agriculture Department offers: Certificates of Achievement, Associate Degree Programs, and Transfer Program. All Agriculture programs should be carefully planned by the student with assistance from the Agriculture Department Advisor and departmental instructors.

Transfer Program

Students may use those units accumulated in the Associate Degree Programs for transfer to a four-year institution. Students must also complete the general education courses required for certification by the UC or CSU system.

CERTIFICATE OF ACHIEVEMENT PROGRAMS

These training programs are designed for those students who prefer career specialization courses and the earliest possible opportunity for job placement and/or the establishment of a self-owned/operated business. Students wishing greater in-depth preparation are advised to take more advanced courses, seek an associate degree, or transfer to a four-year institution.

Certificates are available in the following areas: Agricultural Business Management, Animal Science, Crop Science, Forestry and Ornamental Horticulture. Each program must be approved by the Agriculture Department advisor and Department Chairman.

Agricultural Business Management Certificate

Required Courses: 30 units

Course Number	Title	Units
AGBS B2 or AGBS B52	Agricultural Economics Economics in Agriculture	3.0
AGBS B4	Computer Application in Agriculture	3.0
AGRI B10	Introduction to California Agriculture	3.0
AGRI B249ab or AGRI B248ab or AGRI B49	Cooperative Work Experience Education Cooperative Work Experience Education Agriculture Leadership Training	2.0
ANSC B1 or ANSC B51	Introduction to Animal Science Basic Animal Science	3.0
CRPS B1 or CRPS B51 or ORNH B2	Principles of Crop Production Introduction to Crop Production Fundamentals of Nursery Management and Plant Production	3.0
SOIL B1	Introduction to Soil Science	3.0

Electives: at least 10 units

Animal Science Certificate

Required Courses: 31 units

Course Number	Title	Units
AGBS B4	Computer Application in Agriculture	3.0
AGRI B10	Introduction to California Agriculture	3.0
AGRI B248ab or AGRI B249ab	Cooperative Work Experience Education Cooperative Work Experience Education	3.0
ANSC B1 or ANSC B51	Introduction to Animal Science Basic Animal Science	3.0
ANSC B2 or ANSC B3 or ANSC B4 or ANSC B10	Beef Production Sheep Production Dairy Production Horse Production	3.0

ANSC B6	Applied Animal Nutrition	4.0
ANSC B7	Livestock Diseases	3.0
CRPS B2	Forage Crops	3.0
SOIL B1	Introduction to Soil Science	3.0

Electives: at least 3 units

Crop Science Certificate

Required Courses: 30 units

Course Number	Title	Units
AGBS B2 or AGBS B52	Agricultural Economics Economics in Agriculture	3.0
AGBS B4	Computer Application in Agriculture	3.0
AGRI B10	Introduction to California Agriculture	3.0
AGRI B248ab or AGRI B249ab or AGRI B49	Cooperative Work Experience Education Cooperative Work Experience Education Agriculture Leadership Training (2.0)	3.0
CRPS B1 or CRPS B51	Principles of Crop Production Introduction to Crop Production	3.0
CRPS B2	Forage Crops	3.0
CRPS B4	Vegetable Production	3.0
SOIL B1	Introduction to Soil Science	3.0

Electives: at least 6 -7 units

Forestry Certificate

Required Courses: 34 units

Course Number	Title	Units
AGRI B10	Introduction to California Agriculture	3.0
AGRI B248ab or AGRI B249ab	Cooperative Work Experience Education Cooperative Work Experience Education	3.0
ANSC B6	Applied Animal Nutrition	4.0
FORE B1 or FORE B51	Introduction to Forestry Principles of Forestry	3.0
FORE B2	Natural Resources	3.0
FORE B3	Wildlife Management	3.0
FORE B4 or FORE B5	Wildlife Law Enforcement Identification of California Wildlife	3.0
FORE B6	Forestry Skills	3.0
NRES B1	Range Management	3.0
NRES B2	Parks and Outdoor Recreation	3.0
SOIL B1	Introduction to Soil Science	3.0

Environmental Horticulture Certificate

Required Courses: 36 units

Course Number	Title	Units
ORNH B1 or AGRI B10	Introduction to Ornamental Horticulture Introduction to California Agriculture	3.0
ORNH B2	Fundamentals of Nursery Management and Plant Production	3.0
ORNH B3	Landscape Installation and Maintenance	3.0
ORNH B4	Plant Propagation	3.0
ORNH B5	Nursery Management	3.0
ORNH B6	Ornamental Plant Identification - Ground Covers, Vines, and Dwarf Shrubs	3.0
ORNH B7	Ornamental Plant Identification - Large Shrubs, Small Trees, Large Trees & Palms	3.0
ORNH B8	Introduction to Landscape Design	3.0

SOIL B1	Introduction to Soil Science	3.0
AGRI B248ab or AGRI B249ab	Cooperative Work Experience Education	3.0

Both the scientific and practical aspects of the production of beef, sheep, swine and dairy cattle are stressed in the day courses. Classes dealing with the production and care of horses are offered in the evening.

Electives: at least 6 units of Agriculture

ASSOCIATE IN ARTS DEGREE PROGRAMS

Graduation requirements for an Associate in Arts Degree are found in the beginning of the catalog.

Agricultural Business Management

The Agricultural Business Management major is made up of agriculture and agricultural business courses pertaining to the agriculture industry.

Many jobs in agriculture require training in business courses such as accounting, typing and salesmanship. With a combination of agriculture and business courses, many employment opportunities are available.

Required Courses: 18 units

Course Number	Title	Units
AGBS B2 or AGBS B52	Agricultural Economics Economics in Agriculture	3.0
AGBS B4	Computer Application in Agriculture	3.0
AGRI B10	Introduction to California Agriculture	3.0
AGRI B49 or AGRI B248ab	Agriculture Leadership Training Cooperative Work Experience Education	2.0
CRPS B1 or CRPS B51 or ORNH B2 or	Principles of Crop Production Introduction to Crop Production Fundamentals of Nursery Management and Plant Production	3.0
ANSC B1	Introduction to Animal Science	
SOIL B1	Introduction to Soil Science	3.0

Electives: at least 1 unit

Course Number	Title	Units
ANSC B1	Introduction to Animal Science	3.0
ANSC B51	Basic Animal Science	3.0
ANSC B2	Beef Production	3.0
ANSC B3	Sheep Production	3.0
ANSC B4	Dairy Production	3.0
ANSC B6	Applied Animal Nutrition	4.0
ANSC B7	Livestock Diseases	3.0
AGRI B248ab	Cooperative Work Experience Education	3.0
AGRI B249ab	Cooperative Work Experience Education	3.0
CRPS B2 or ORNH B2	Forage Crops Fundamentals of Nursery Management and Plant Production	3.0
CRPS B4 or	Vegetable Production	3.0
ORNH B4	Plant Propagation	3.0
FORE B2	Natural Resources	3.0
ORNH B6	Ornamental Plant Identification - Ground Covers, Vines, and Dwarf Shrubs	3.0
ORNH B7	Ornamental Plant Identification - Large Shrubs, Small Trees, Large Trees and Palms	3.0

Animal Science

The Animal Science major prepares students for occupations in those areas of agriculture involving production of livestock.

Required Courses: 24 units

Course Number	Title	Units
AGRI B10	Introduction to California Agriculture	3.0
AGRI B49	Agriculture Leadership Training	2.0
ANSC B1 or ANSC B51	Introduction to Animal Science Basic Animal Science	3.0
ANSC B6	Applied Animal Nutrition	4.0
ANSC B7	Livestock Diseases	3.0
CRPS B2 or SOIL B1 or NRES B1	Forage Crops Introduction to Soil Science Range Management	3.0

Electives: at least 6 units:

Course Number	Title	Units
ANSC B2	Beef Production	3.0
ANSC B10	Horse Production	3.0
ANSC B3	Sheep Production	3.0
ANSC B4	Dairy Production	3.0

Other suggested courses

Course Number	Title	Units
AGBS B2	Agricultural Economics	3.0
AGBS B52	Economics in Agriculture	3.0
AGBS B4	Computer Application in Agriculture	3.0
AGRI B248ab	Cooperative Work Experience Education	3.0
AGRI B249ab	Cooperative Work Experience Education	3.0
CRPS B1	Principles of Crop Production	3.0
CRPS B51	Introduction to Crop Production	3.0
NRES B1	Range Management	3.0
CRPS B2	Forage Crops	3.0
SOIL B1	Introduction to Soil Science	3.0

Crop Science

This program provides instruction in the planting, growing, harvesting, and marketing of field, forage, and vegetable crops as well as irrigated and range pasture crops.

Required Courses: 21 units

Course Number	Title	Units
AGBS B2 or AGBS B52	Agricultural Economics Economics in Agriculture	3.0
AGBS B4	Computer Application in Agriculture	3.0
AGRI B10	Introduction to California Agriculture	3.0
CRPS B1 or CRPS B51	Principles of Crop Production Introduction to Crop Production	3.0
CRPS B2	Forage Crops	3.0
CRPS B4	Vegetable Production	3.0
SOIL B1	Introduction to Soil Science	3.0

Electives

Course Number	Title	Units
ANSC B1	Introduction to Animal Science	3.0
ANSC B51	Basic Animal Science	3.0
AGRI B248ab	Cooperative Work Experience Education	3.0
AGRI B249ab	Cooperative Work Experience Education	3.0

AGRICULTURE

AGRI B49	Agriculture Leadership Training	2.0
ORNH B2	Fundamentals of Nursery Management and Plant Production	3.0
ORNH B4	Plant Propagation	3.0

Forestry

The program provides a broad general experience in the arts and science to develop an individual with a well-rounded education, and a core of basic courses which furnish the student with a perspective of the scientific and professional area of forestry, natural resources, fisheries and wildlife. The pre-forestry, resource conservation and wildlife management program at Bakersfield College should conform to the recommended program as prescribed by the school to which the student wishes to transfer.

Required Courses: 26 units

Course Number	Title	Units
AGRI B10	Introduction to California Agriculture	3.0
AGRI B49	Agriculture Leadership Training	2.0
FORE B1 or FORE B51	Introduction to Forestry Principles of Forestry	3.0
FORE B2	Natural Resources	3.0
FORE B3 or FORE B5	Wildlife Management Identification of California Wildlife	3.0
FORE B6	Forestry Skills	3.0
NRES B2	Parks and Outdoor Recreation	3.0
SOIL B1	Introduction to Soil Science	3.0
ORNH B4 or ORNH B6 or ORNH B7	Plant Propagation Ornamental Plant Identification - Ground Covers, Vines, and Dwarf Shrubs Ornamental Plant Identification - Large Shrubs, Small Trees, Large Trees & Palms	3.0

Electives

Course Number	Title	Units
AGRI B248ab or AGRI B249ab	Cooperative Work Experience Education Cooperative Work Experience Education	3.0
AGBS B4	Computer Application in Agriculture	3.0
ANSC B1 or ANSC B51	Introduction to Animal Science Basic Animal Science	3.0
ANSC B6	Applied Animal Nutrition	4.0
FORE B4	Wildlife Law Enforcement	3.0
FORE B7	Wildland Fire Management	3.0
NRES B1	Range Management	3.0

Horticulture

The Horticulture major prepares students for general fruit farming, positions in sales as vineyard foremen, as field and plant representatives, and for work in related agriculture fields as well as for transferring to a four-year college.

Required Courses 18 units

Course Number	Title	Units
AGBS B4	Computer Application in Agriculture	3.0
AGRI B10	Introduction to California Agriculture	3.0
AGRI B49	Agriculture Leadership Training	2.0
CRPS B1 or CRPS B51	Principles of Crop Production Introduction to Crop Production	3.0

ORNH B6	Ornamental Plant Identification - Ground Covers, Vines, and Dwarf Shrubs	3.0
SOIL B 1	Introduction to Soil Science	3.0

Electives: at least 1 unit

Course Number	Title	Units
AGBS B2 or AGBS B52	Agricultural Economics Economics in Agriculture	3.0
ORNH B4	Plant Propagation	3.0

Environmental Horticulture

The Environmental Horticulture major prepares students for all types of careers in the nursery and landscaping industries. Students may elect to secure employment at the end of the two-year program or transfer to a four-year university.

Required Courses: 37 units

Course Number	Title	Units
ORNH B1 or ORNH B51 or AGRI B10	Introduction to Ornamental Horticulture Basic Ornamental Horticulture Introduction to California Agriculture	3.0
ORNH B2	Fundamentals of Nursery Management and Plant Production	3.0
ORNH B3	Landscape Installation and Maintenance	3.0
ORNH B4	Plant Propagation	3.0
ORNH B5	Nursery Management	3.0
ORNH B6	Ornamental Plant Identification - Ground Covers, Vines, and Dwarf Shrubs	3.0
ORNH B7	Ornamental Plant Identification - Large Shrubs, Small Trees, Large Trees & Palms	3.0
ORNH B8	Introduction to Landscape Design	3.0
SOIL B1	Introduction to Soil Science	3.0
AGBS B4	Computer Application in Agriculture	3.0

Electives: at least 7 units

Course Number	Title	Units
AGRI B248 or AGRI B249	Cooperative Work Experience Education Cooperative Work Experience Education	3.0
AGBS B2 or AGBS B52	Agricultural Economics Economics in Agriculture	3.0
ORNH B35	Ornamental Horticulture	1.0
NRES B2	Parks and Outdoor Recreation	3.0
FORE B2	Natural Resources	3.0

ASSOCIATE IN SCIENCE DEGREE PROGRAMS

Graduation requirements for an Associate in Science Degree are found in the beginning of the catalog.

Agricultural Business Management

Required Courses: 30 units

Course Number	Title	Units
AGRI B248ab or AGRI B249ab	Cooperative Work Experience Education Cooperative Work Experience Education	3.0
AGBS B2 or AGBS B52	Agricultural Economics Economics in Agriculture	3.0
AGBS B4	Computer Applications in Agriculture	3.0
AGRI B10	Introduction to California Agriculture	3.0
ANSC B1 or	Introduction to Animal Science	3.0

ANSC B51 or	Basic Animal Science	
ANSC B6 or	Applied Animal Nutrition (4.0)	
ANSC B7	Livestock Diseases	
CRPS B1 or	Principles of Crop Production	3.0
CRPS B51 or	Introduction to Crop Production	
ORNH B2 or	Fundamentals of Nursery Management and Plant Production	
CRPS B2 or	Forage Crops	
CRPS B4 or	Vegetable Production	
ORNH B4	Plant Propagation	
FORE B2	Natural Resources	3.0
FORE B3	Wildlife Management	3.0
SOIL B1	Introduction to Soil Science	3.0

Electives: at least 3 units

Animal Science

Required Courses: 31 units

Select 25 units from the following courses:

Course Number	Title	Units
ANSC B1 or	Introduction to Animal Science	3.0
ANSC B51	Basic Animal Science	
ANSC B6	Applied Animal Nutrition	4.0
ANSC B7	Livestock Diseases	3.0
AGRI B10	Introduction to California Agriculture	3.0
AGRI B49	Agriculture Leadership Training	2.0
AGRI B248ab or	Cooperative Work Experience Education	3.0
AGRI B249ab	Cooperative Work Experience Education	
AGBS B2 or	Agricultural Economics	3.0
AGBS B52	Economics in Agriculture	
AGBS B4	Computer Applications in Agriculture	3.0
CRPS B2	Forage Crops	3.0
NRES B1	Range Management	3.0
SOIL B1	Introduction to Soil Science	3.0

Select 6.0 units from the following:

Course Number	Title	Units
ANSC B2	Beef Production	3.0
ANSC B3	Sheep Production	3.0
ANSC B4	Dairy Production	3.0
ANSC B10	Horse Production	3.0

Crop Science

Required Courses: 30 units

Course Number	Title	Units
AGRI B10	Introduction to California Agriculture	3.0
AGRI B49 or	Agriculture Leadership Training	2.0
AGRI B 248ab or	Cooperative Work Experience Education	
AGRI B249ab	Cooperative Work Experience Education	
AGBS B2	Agricultural Economics	3.0
AGBS B52	Economics in Agriculture	3.0
AGBS B4	Computer Application in Agriculture	3.0
ANSC B1 or	Introduction to Animal Science	3.0
ANSC B6 or	Applied Animal Nutrition	
ANSC B7 or	Livestock Diseases	
ANSC B51	Basic Animal Science	
CRPS B1 or	Principles of Crop Production	3.0
CRPS B51	Introduction to Crop Production	
CRPS B2 or	Forage Crops	3.0
ORNH B2	Fundamentals of Nursery Management and Plant Production	

CRPS B4 or	Vegetable Production	3.0
ORNH B4	Plant Propagation	
SOIL B1	Introduction to Soil Science	3.0

Electives: at least 1 unit

Forestry

Required Courses: 34 units

Select 34 units from the following courses:

Course Number	Title	Units
AGRI B10	Introduction to California Agriculture	3.0
AGRI B49	Agriculture Leadership Training	2.0
AGRI B248ab or	Cooperative Work Experience Education	3.0
AGRI B249ab	Cooperative Work Experience Education	
AGBS B2 or	Agricultural Economics	3.0
AGBS B52	Economics in Agriculture	
ANSC B6	Applied Animal Nutrition	4.0
FORE B1 or	Introduction to Forestry	3.0
FORE B51	Principles of Forestry	
FORE B2	Natural Resources	3.0
FORE B3	Wildlife Management	3.0
FORE B4	Wildlife Law Enforcement	3.0
FORE B5	Identification of California Wildlife	3.0
FORE B6	Forestry Skills	3.0
FORE B7	Wildland Fire Management	3.0
NRES B1	Range Management	3.0
NRES B2	Parks and Outdoor Recreation	3.0
SOIL B1	Introduction to Soil Science	3.0
ORNH B6 or	Ornamental Plant Identification - Ground Covers, Vines, and Dwarf Shrubs	
ORNH B7 or	Ornamental Plant Identification - Large Shrubs, Small Trees, Large Trees & Palms	
ORNH B4	Plant Propagation	

Environmental Horticulture

Required Courses: 41 units

Course Number	Title	Units
AGRI B10 or	Introduction to California Agriculture	3.0
ORNH B1 or	Introduction to Ornamental Horticulture	
ORNH B51	Basic Ornamental Horticulture	
ORNH B2	Fundamentals of Nursery Management and Plant Production	3.0
ORNH B3	Landscape Installation and Maintenance	3.0
ORNH B4	Plant Propagation	3.0
ORNH B5	Nursery Management	3.0
ORNH B6	Ornamental Plant Identification - Ground Covers, Vines, and Dwarf Shrubs	3.0
ORNH B7	Ornamental Plant Identification - Large Shrubs, Small Trees, Large Trees and Palms	3.0
ORNH B8	Introduction to Landscape Design	3.0
AGBS B4	Computer Application in Agriculture	3.0
SOIL B1	Introduction to Soil Science	3.0
BIOL B10	Plant Biology	4.0

Electives: at least 7 units

AGRI B248ab or	Cooperative Work Experience Education	3.0
AGRI B249ab	Cooperative Work Experience Education	
NRES B2	Parks and Outdoor Recreation	3.0
FORE B2	Natural Resources	3.0
CRPS B4	Vegetable Production	3.0
ORNH B35	Ornamental Horticulture	1.0
AGBS B2	Agriculture Economics	3.0

Pre-Veterinary Medicine Option

See Agriculture faculty advisor. The veterinarian diagnoses and treats diseases and disorders of animals; determines the nature of disease or injury and treats animals medically or surgically; performs autopsies to determine causes of death; gives advice on care and breeding of animals. Some engage in general practice, some become involved in research and development, while others are active in such fields as consultation, teaching, technical writing, sales or promotion of commercial products, or provide technical services for commercial firms.

Suggested Courses

Course Number	Title	Units
AGRI B248 or AGRI B249	Cooperative Work Experience Education	3.0
ANSC B1	Introduction to Animal Science	3.0
ANSC B6	Applied Animal Nutrition	4.0
ANSC B7	Livestock Diseases	3.0
BIOL B3a	General Biology I	5.0
BIOL B3b	General Biology II	5.0
CHEM B1a	General Chemistry	5.0
CHEM B1b	General Chemistry and Chemical Analysis	5.0
CHEM B8	Elementary Organic Chemistry	3.0
CHEM B9	Organic Chemistry Laboratory	3.0
MATH B22	Elementary Probability and Statistics	5.0
PHYS B2a	General Physics-Mechanics and Heat	4.0
PHYS B2b	General Physics-Sound, Light, Electricity, Magnetism, Modern Physics	4.0

COURSE DESCRIPTIONS

The following abbreviations are commonly used in the course descriptions: **lect** lecture; **lab** laboratory; **demo** demonstration; **Repeat** repeatability (see policy on course repetition); **CCS** Course Classification System. Hours given in parentheses are total hours for the course. Hours lecture, lab, etc., are hours required per week usually. **Offered:** F=course is offered fall semester; S=course is offered spring semester; SS=course is offered summer session. If there is no designation, the course is offered irregularly. Check with the department for information. Many classes are offered occasionally during the summer. Check the summer class schedule for additional course listings. Prerequisites are expressed as minimum requirements. See page 40 for a complete explanation. (CSU) indicates transferable to California State Universities; (UC) indicates transferable to University of California.

AGRICULTURAL BUSINESS MANAGEMENT

AGBS B2 Agricultural Economics (3 units)

Changes occurring in agriculture, careers in commercial agricultural businesses and public agricultural service agencies, development and growth of farm related industries,

kinds of agricultural businesses, operational characteristics of commercial agricultural industries. **Recommended:** Reading Level 5 or 6. **Hours:** (54) 3 lect. **Offered:** F. **CCS:** Occupational Education. **Transferable:** CSU and private colleges.

AGBS B4 Computer Application in Agriculture (3 units)

Operation of computer systems and equipment in agriculture. Emphasizes use of personal computers and software programs in WordStar, WordPerfect, dBase II and Lotus 1-2-3. **Recommended:** Reading Level 5 or 6. **Hours:** (81) 3 lect, 1.5 lab. **Offered:** F, S. **CCS:** Occupational Education. **Transferable:** CSU and private colleges. (CAN AG 2)

AGBS B52 Economics in Agriculture (3 units)

Introduction to agricultural economics at the local, state and national level. Ag industry business practices, operations and careers. Competition, demand and economic future of agriculture. **Recommended:** Reading 5 or 6. **Hours:** (54) 3 lect. **CCS:** Occupational Education. **Not Transferable:** Associate Degree only.

AGRICULTURE

Credit limitations may apply. For specific information see a counselor.

AGRI B10 Introduction to California Agriculture (3 units)

Survey of the agriculture industry in California. Topics include career, job requirements, agriculture terminology, employment opportunities and an orientation to the college curriculum. Satisfies 0.5 unit educational planning requirement for graduation from Bakersfield College. **Recommended:** Reading Level 5 or 6. **Hours:** (54) 3 lect. Field trips required. **Offered:** F, S. **CCS:** Occupational Education. **Transferable:** CSU and private colleges.

AGRI B49 Agriculture Leadership Training (2 units)

Supervised field work related to lecture instruction including: agricultural competitions; judging contests; livestock shows; recruiting programs; and youth activity planning, preparation and execution. **Recommended:** Reading Level 5 or 6. **Hours:** (72) 1 lect, 3 lab. Field trips required. **Offered:** F, S. **Repeat:** 3. **CCS:** Occupational Education. **Transferable:** CSU and private colleges.

AGRI B248ab Cooperative Work Experience Education (1-8 units. Limit 16 units)

See WEXP B248ab description.

AGRI B249ab Cooperative Work Experience Education (1-4 units. Limit 16 units.)

See WEXP B249ab description.

ANIMAL SCIENCE

ANSC B1 Introduction to Animal Science (3 units)

Scientific and practical aspects of meat animals, horse and dairy cattle, care and management. Emphasizes the nutrition, breeding selection, anatomy and physiology, slaughtering, processing and marketing will be stressed. **Recommended:** Reading Level 5 or 6. **Hours:** (54) 3 lect. Field trips required. **Offered:** F, S. **CCS:** Occupational Education. **Transferable:** UC, CSU and private colleges.

ANSC B2 Beef Production (3 units)

Commercial and purebred beef cattle production in the United States. History and development of the beef cattle industry. Beef breeding, genetics, production costs, marketing and herd management. **Recommended:** Reading Level 5 or 6. **Hours:** (90) 2 lect, 3 lab. Field trips required. **Offered:** F. **CCS:** Occupational Education. **Transferable:** CSU and private colleges.

ANSC B3 Sheep Production (3 units)

Sheep production in the United States, California and Kern County. Emphasizes breeds, breeding, lambing, selection, feeding, shearing, and marketing of lamb and wool including commercial production of market lambs in Kern County. **Recommended:** Reading Level 5 or 6. **Hours:** (90) 2 lect, 3 lab. Field trips required. **CCS:** Occupational Education. **Transferable:** CSU and private colleges.

ANSC B4 Dairy Production (3 units)

Emphasizes the scientific and practical aspects of dairy animals, care and management. Nutrition, breeding selection, anatomy and physiology, production and marketing will be stressed. **Recommended:** Reading Level 5 or 6. **Hours:** (90) 2 lect, 3 lab. Field trips required. **CCS:** Occupational Education. **Transferable:** CSU and private colleges.

ANSC B6 Applied Animal Nutrition (4 units)

Fundamentals of feeding livestock. Includes constituents of feeds, feed nutrients, digestive system of farm animals and their utilization of various feeds and balancing daily rations for farm animals. **Hours:** (108) 3 lect, 3 lab. Field trips required. **Offered:** S. **CCS:** Occupational Education. **Transferable:** CSU and private colleges.

ANSC B7 Livestock Diseases (3 units)

Livestock hygiene and sanitation. Emphasizes the cause, symptoms and prevention of common livestock diseases, external and internal parasites. Safe use of disease preventatives and treatments is stressed. **Recommended:** Reading Level 5 or 6. **Hours:** (54) 3 lect. Field trips required. **Offered:** F. **CCS:** Occupational Education. **Transferable:** CSU and private colleges.

ANSC B10 Horse Production (3 units)

Horse production in the United States. Emphasis is on breeds, nutrition, reproduction and horse behavior. Horse farm

management and horse training will be stressed. **Recommended:** Reading Level 5 or 6. **Hours:** (90) 2 lect, 3 lab. Field trips required. **CCS:** Occupational Education. **Transferable:** CSU and Private colleges.

ANSC B51 Basic Animal Science (3 units)

History of the animal science industry in the United States. Topics include production, marketing, breeds and nutrition. **Recommended:** Reading Level 5 or 6. **Hours:** (54) 3 lect. Field trips required. **CCS:** Occupational Education. **Not Transferable:** Associate Degree only.

ANSC B60 Bovine Reproduction (2 units)

Beef and dairy cattle reproduction management. Emphasis is on semen evaluation, artificial insemination technique, estrus synchronizing, reproductive diseases and embryo development and transfer. **Recommended:** Reading Level 5 or 6. **Hours:** (72) 2 lect, 6 lab for 9 weeks. Field trips required. **CCS:** Occupational Education. **Not Transferable:** Associate Degree only.

ANSC B71 Diseases of Beef and Dairy Cattle (1 unit)

Common disease problems in beef and dairy cattle with emphasis on Kern County. Includes cause, symptoms, prevention and recommended treatment. **Recommended:** Reading Level 5 or 6. **Hours:** (18) 2 lect for 9 weeks. Field trips required. **Repeat:** 1. **CCS:** Occupational Education. **Not Transferable:** Associate Degree only.

ANSC B72 Equine Health (1 unit)

Prevention, symptoms, control and treatment of diseases of horses. Meets the needs of the horse owner or stable manager and taught by a graduate veterinarian who is currently practicing veterinary medicine in Kern County. **Hours:** (18) 2 lect for 9 weeks and selected field trips. Field trips required. **Offered:** S. **CCS:** Occupational Education. **Not Transferable:** Associate Degree only.

ANSC B74 Equine Nutrition (1 unit)

A series of lectures covering the various phases of horse nutrition. Designed for the horse owner or trainer. **Hours:** (18) 2 lect for 9 weeks and selected field trips. Field trips required. **Offered:** F. **CCS:** Occupational Education. **Not Transferable:** Associate Degree only.

ANSC B76 Equine Reproduction (1 unit)

Equine Reproductive Management: Emphasis on understanding the male and female equine reproductive tracts, anatomy, physiology, endocrinology of cycles, artificial insemination techniques, embryonic development, and reproductive diseases. **Recommended:** Reading Level 5 or 6. **Hours:** (18) 2 lect. for 9 weeks. Field trip required. **CCS:** Occupational Education. **Not Transferable:** Associate Degree only.

CROP SCIENCE

Credit limitations may apply. For specific information see a counselor.

CRPS B1 Principles of Crop Production (3 units)

Fundamental practices for field and vegetable crops: basic botany, classification of plants, soils, fertilizers, irrigation, pest control, and crop rotation as well as specific practices for a crop such as cereal crops. **Recommended:** Reading Level 5 or 6. **Hours:** (54) 3 lect. **Offered:** Odd-numbered years. **CCS:** Occupational Education. **Transferable:** CSU and private colleges.

CRPS B2 Forage Crops (3 units)

Study of the common forage crops: alfalfa, common pasture grasses and legumes. Varieties, adaptations, methods of handling and procession. Seeding and seed bed preparation. **Recommended:** Reading Level 5 or 6. **Hours:** (90) 2 lect, 3 lab and/or selected field trips. Field trips required. **Offered:** Even-numbered years. **CCS:** Occupational Education. **Transferable:** CSU and private colleges.

CRPS B4 Vegetable Production (3 units)

Principles and practices of vegetable crop production. Methods used in seeding, propagation and culture of vegetables and the application of the principles underlying vegetable production techniques. **Recommended:** Reading Level 5 or 6. **Hours:** (90) 2 lect, 3 lab. Field trips required. **Offered:** F. **CCS:** Occupational Education. **Transferable:** UC, CSU and private colleges. Elective credit only.

CRPS B51 Introduction to Crop Production (3 units)

Introduction to the crop science industry in Kern County, California and the nation. Topics include basic botany, vegetative growth, plant classification and marketing of crops. **Recommended:** Reading Level 5 or 6. **Hours:** (54) 3 lect. Field trips required. **CCS:** Occupational Education. **Not Transferable:** Associate Degree only.

FORESTRY

Credit limitations may apply. For specific information see a counselor.

FORE B1 Introduction to Forestry (3 units)

The ecological, economic and sociological basis of forest management interrelated with the management of other resources. Topics include a history of forestry in America, the economics of forestry, forestry and national planning and forest uses. **Recommended:** Reading Level 5 or 6. **Hours:** (54) 3 lect. Field trips required. **Offered:** F. **CCS:** Occupational Education. **Transferable:** UC, CSU and private colleges.

FORE B2 Natural Resources (3 units)

Survey of our natural resources and the conservation of those uncaptured natural stores which are useful to humankind. Resources covered are water, soil, air, forests, grasslands, wildlife, oceans, minerals and energy. Ecology, waste

management and human resources are also covered. **Recommended:** Reading Level 5 or 6. **Hours:** (54) 3 lect. Field trips required. **Offered:** F, S. **CCS:** Occupational Education. **Transferable:** UC, CSU and private colleges.

FORE B3 Wildlife Management (3 units)

The practice of wildlife management. Foundations of wildlife production. The identification, life histories and ecology of selected important wildlife species - mammals including fur bearers, water fowl and fish. **Recommended:** Reading Level 5 or 6. **Hours:** (54) 3 lect. Field trips required. **Offered:** S. **CCS:** Occupational Education. **Transferable:** CSU and private colleges.

FORE B4 Wildlife Law Enforcement (3 units)

A brief history of the development of wildlife law enforcement. State functions and jurisdiction; federal jurisdiction, federal wildlife laws, federal versus state jurisdiction; rights of the private citizen. Types of violations and the role of the law enforcement officer. The function of the officer, including arrests, preparation of evidence, interviewing and court appearances. **Recommended:** Reading Level 5 or 6. **Hours:** (54) 3 lect. Field trips required. **Offered:** F, S. **CCS:** Occupational Education. **Transferable:** CSU and private colleges.

FORE B5 Identification of California Wildlife (3 units)

A survey of game birds, fish and mammals of California and the Western United States. Characteristics of game animals and protected species. Practices identifying animals in their environment. Emphasizes protecting species which are in danger of extinction. **Recommended:** Reading Level 5 or 6. **Hours:** (54) 3 lect. Field trips required. **Offered:** F, S. **CCS:** Occupational Education. **Transferable:** CSU and private colleges.

FORE B6 Forestry Skills (3 units)

Survey of the forestry, wildlife and natural resources management industries. Careers, job requirements, terminology, employment opportunities and the identification and/or use of selected tools and equipment. **Recommended:** Reading Level 5 or 6. **Hours:** (90) 2 lect, 3 lab. Field trips required. **Offered:** F, S. **CCS:** Occupational Education. **Transferable:** CSU and private colleges.

FORE B7 Wildland Fire Management (3 units)

Covers the physical theories of wildland fire, the methodology of wildland fire suppression, pre-suppression, and post-fire suppression and equipment. The practice of fire ecology and the use of prescribed control burns to maintain and improve our nation's forests and rangelands. **Recommended:** Reading Level 5 or 6. **Hours:** (54) 3 lect. Field trip required. **Offered:** F. **CCS:** Occupational Education. **Transferable:** CSU and private colleges.

FORE B51 Principles of Forestry (3 units)

History and uses of forests in America. Topics include forestry protection, terminology, legislation and production.

Recommended: Reading Level 5 or 6. **Hours:** (54) 3 lect.

Field trips required. **CCS:** Occupational Education. **Not**

Transferable: Associate Degree only.

HORTICULTURE**HORT B51 Master Gardener (3 units)**

Advanced techniques of horticulture and plant propagation, including vegetables, turf and ornamentals, grapes and subtropical fruits, deciduous fruits, nuts and soils. Topics will include soil preparation, planting, fertilization, pruning practices, insect control, weed control, irrigation and harvest.

Recommended: Reading Level 5 or 6. **Hours:** (54) 3 lect.

Offered: F, S. **Repeat:** 3. **CCS:** Occupational Education. **Not**

Transferable: Associate Degree only.

NATURAL RESOURCES MANAGEMENT**NRES B1 Range Management (3 units)**

Basic range management and improvement practices. Proper utilization of rangeland resources. Overview of multiple use principles. Maintenance and improvement of range plant communities. **Recommended:** Reading Level 5 or 6. **Hours:** (90) 2 lect, 3 lab. Field trips required. **Offered:** S. **CCS:** Occupational Education. **Transferable:** CSU and private colleges.

NRES B2 Parks and Outdoor Recreation (3 units)

Introduction to national, state, county, city, and private park systems. History, philosophy, policy and principles of the formation, administration and functioning of recreational units at the park, district and regional levels. **Recommended:** Reading Level 5 or 6. **Hours:** (54) 3 lect. Field trips required. **Offered:** F, S. **CCS:** Occupational Education. **Transferable:** CSU and private colleges.

ORNAMENTAL HORTICULTURE

Credit limitations may apply. For specific information, see a counselor.

ORNH B1 Introduction to Ornamental Horticulture (3 units)

Survey of the ornamental horticulture industry, including floriculture, nursery production, retail nurseries, landscaping. Career possibilities explored. Overview of basic botany concepts. **Hours:** (90) 2 lect, 3 lab. Field trips required. **CCS:** Occupational Education. **Transferable:** CSU and private colleges.

ORNH B2 Fundamentals of Nursery Management and Plant Production (3 units)

Commercial nursery operation. Propagation media, nursery designs, propagation structures, seedage, cuttage, plant structure, rooting aids, transplanting, stepping up, and potting. Principles of sexual and asexual propagation. **Recommended:** Reading Level 4 or evaluation by instructor.

Hours: (90) 2 lect, 3 lab. Field trips required. **CCS:** Occupational Education. **Transferable:** CSU and private colleges.

ORNH B3 Landscape Installation and Maintenance (3 units)

Covers the planning, installation and maintenance of landscapes in Kern County and California. **Recommended:** Reading Level 5 or 6 or evaluation by instructor. **Hours:** (90) 2 lect, 3 lab. Field trips required. **CCS:** Occupational Education. **Transferable:** CSU and private colleges.

ORNH B4 Plant Propagation (3 units)

Principles of sexual propagation, seedage, and asexual propagation, budding, grafting, cuttings layering, division and separation. Principles of tissue culture. **Recommended:** Reading Level 5 or 6 or evaluation by instructor. **Hours:** (90) 2 lect, 3 lab. Field trips required. **CCS:** Occupational Education. **Transferable:** CSU and private colleges.

ORNH B5 Nursery Management (3 units)

Commercial nursery operations. Propagation, propagation media, nursery design, propagation structures, plant structure, rooting aids, transplanting, stepping up and potting greenhouse and nursery plants. **Recommended:** Reading Level 5 or 6 or evaluation by instructor. **Hours:** (90) 2 lect, 3 lab. Field trips required. **CCS:** Occupational Education. **Transferable:** CSU and private colleges.

ORNH B6 Ornamental Plant Identification - Ground Covers, Vines, and Dwarf Shrubs (3 units)

Identification, habits of growth, culture and landscape use of dwarf shrubs, vines, ground covers, annuals, and biennials, adapted to the Central Valley of California and the surrounding mountains. **Recommended:** Reading Level 5 or 6 or evaluation by instructor. **Hours:** (90) 2 lect, 3 lab. Field trips required. **Offered:** F. **CCS:** Occupational Education. **Transferable:** UC, CSU and private colleges.

ORNH B7 Ornamental Plant Identification - Large Shrubs, Small Trees, Large Trees and Palms (3 units)

Identification, habits of growth, culture and landscape use of large shrubs, small trees, large trees and palms adapted to the Central Valley of California and the surrounding mountains. **Recommended:** Reading Level 4 or evaluation by instructor. **Hours:** (90) 2 lect, 3 lab. Field trips required. **CCS:** Occupational Education. **Transferable:** UC, CSU and private colleges.

ORNH B8 Introduction to Landscape Design (3 units)

Study of the need for landscaping in modern man's environment. Covers residential application, basic drafting, site and user analysis. **Recommended:** Reading Level 5 or 6. **Hours:** (90) 2 lect, 3 lab. Field trips required. **CCS:** Occupational Education. **Transferable:** CSU and private colleges.

ORNH B35 Ornamental Horticulture (1 unit)

Identification, habits of growth, culture and landscape use of plants commonly found on school campuses and adapted to the Central Valley of California. **Recommended:** Reading Level 5 or 6. **Hours:** (18) 9 lect for 2 weeks. Field trips required. **Offered:** F, S. **CCS:** Occupational Education. **Transferable:** CSU and private colleges.

ORNH B51 Basic Ornamental Horticulture (3 units)

Introduction to the ornamental horticulture industry including career opportunities. Overview of basic botany and soil structure. **Recommended:** Reading Level 5 or 6. **Hours:** (54) 3 lect. Field trips required. **CCS:** Occupational Education. **Not Transferable:** Associate Degree only.

ORNH B78 Landscape Maintenance/Laws and Regulations of Pest Control (1 unit)

Designed for students interested in securing the landscape pest control certificate required of all professional landscape gardeners who apply chemicals. **Recommended:** Reading Level 4 or evaluation by instructor. **Hours:** (18) 2 lect for 9 weeks. **CCS:** Occupational Education. **Not Transferable:** Not degree applicable.

ORNH B79 Landscape Pest Management (1 unit)

For students interested in the Qualified Applicator Certificate. Includes information about the certification examination, turf pest, insects and mite control, weed control, and mushroom control in lawns. **Recommended:** Reading Level 4. **Hours:** (18) 2 lect for 9 weeks. **CCS:** Occupational Education. **Not Transferable:** Not degree applicable.

ORNH B80 Pesticide Application and Safety (1 unit)

Designed for professional applicators, advisors or students entering the field of pesticide management. Equipment and safe procedures involving supervision, minimum exposure, fitting/use of a respirator and label interpretation. Application techniques, including right-of-way, non-crop weed control and soil incorporated insecticides. **Recommended:** Reading Level 4. **Hours:** (18) 2 lect for 9 weeks. **CCS:** Occupational Education. **Not Transferable:** Not degree applicable.

SOIL

SOIL B1 Introduction to Soil Science (3 units)

Problems pertaining to the soil which are important in the profitable production of crops, physical properties of soils, fertilizers, crop rotation, erosion and alkali control, cultivation problems and irrigation. **Recommended:** Reading Level 5 or 6. **Hours:** (90) 2 lect, 3 lab. Field trips required. **Offered:** F, S. **CCS:** Occupational Education. **Transferable:** UC, CSU and private colleges. (CAN AG 14)