

Programs of Study

Requirements for the Associate in Arts for transfer (AA-T) or Associate in Science for transfer (AS-T)

The Student Transfer Achievement Reform Act (Senate Bill 1440, now codified in California Education Code sections 66746-66749) guarantees admission to a California State University (CSU) campus for any community college student who completes an “associate degree for transfer”, a newly established variation of the associate degrees traditionally offered at a California community college. The Associate in Arts for Transfer (AA-T) or the Associate in Science for Transfer (AS-T) is intended for students who plan to complete a bachelor’s degree in a similar major at a CSU campus. Students completing these degrees (AA-T or AS-T) are guaranteed admission to the CSU system, but not to a particular campus or major. In order to earn one of these degrees, students must complete a minimum of 60 required semester units of CSU-transferable coursework with a minimum GPA of 2.0. Students transferring to a CSU campus that does accept the AA-T or AS-T will be required to complete no more than 60 units after transfer to earn a bachelor’s degree (unless the major is a designated “high-unit” major). This degree may not be the best option for students intending to transfer to a particular CSU campus or to university or college that is not part of the CSU system. Students should consult with a counselor when planning to complete the degree for more information on university admission and transfer requirements.

At the time of catalog publication, a student may earn an AA-T in Psychology, Sociology, and Communication Studies. Additional majors are being developed. Please see a counselor or the 2011-12 catalog addendum at www.bakersfieldcollege.edu for more information.

The following is REQUIRED for all AA-T or AS-T degrees:

1. Minimum of 60 CSU-transferable semester units.
2. Minimum grade point average (GPA) of at least 2.0 in all CSU-transferable coursework. While a minimum of 2.0 is required for admission, some majors may require a higher GPA. Please consult with a counselor for more information.
3. Completion of a minimum of 18 semester units in an “AA-T” or “AS-T” major as detailed in the Program section of the catalog. All courses in the major must be completed with a grade of C or better or a “P” if the course is taken on a “pass-no pass” basis (title 5 § 55063). (Very few courses are pass-no pass basis for requirements in a major.)
4. Certified COMPLETION of the California State University General Education-Breadth pattern (CSU GE Breadth) OR the Intersegmental General Education Transfer Curriculum (IGETC) pattern (see pages 45-47 for more information).

ACCOUNTING

See Business Administration

AGRICULTURE

Agriculture Business Management Certificate of Achievement

Upon completion of the following courses with at least a “C” grade in each course, the student will be awarded an Agriculture Business Management Certificate of Achievement.

Total Units: 32

Required Courses:

Course Number	Title	Units
AGBS B2 or AGBS B52	Agricultural Economics Economics in Agriculture	3.0
SOIL B1 or CRPS B1	Introduction to Soil Science Principles of Crop Production	3.0
AGRI B1	Agriculture, Environment and Society	3.0
AGBS B6	Agricultural Sales and Communication	3.0
CRPS B1	Principles of Crop Production	3.0
MCAG B1 or COMS B5 or COMS B2	Introduction to Agricultural Mechanics Introduction to Microsoft Office 2010 Introduction to Computer Information Systems	3.0
WEXP B248	Cooperative Work Experience Education	3.0
CRPS B2 or NRES B1	Forage Crops Range Management	3.0
ANSC B1 or ANSC B2 or ANSC B4 or ANSC B10	Introduction to Animal Science Beef Production Dairy Production Horse Production	3.0
FORE B2 or FORE B1 or FORE B3 or FORE B5 or FORE B6	Natural Resources Introduction to Forestry Wildlife Management Identification of California Wildlife Forestry Skills	3.0
AGRI B49	Agriculture Leadership Training	2.0

Agricultural Business Management Associate in Arts Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of “C” or better.

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. Agriculture Business Management Associate in Arts Degree is recommended for students planning to transfer to a 4-year college.

Total Units: 20

Required Courses:

Course Number	Title	Units
AGBS B2	Agricultural Economics	3.0
SOIL B1	Introduction to Soil Science	3.0
AGRI B1	Agriculture, Environment and Society	3.0
AGBS B6	Agricultural Sales and Communication	3.0
CRPS B1 or FORE B1 or	Principles of Crop Production Introduction to Forestry	3.0

ANSC B1 or ORNH B1	Introduction to Animal Science	
MCAG B1 or COMS B5 or COMS B2	Introduction to Ornamental Horticulture	
	Introduction to Agricultural Mechanics	3.0
	Introduction to Microsoft Office 2010	
	Introduction to Computer Information Systems	
AGRI B49	Agriculture Leadership Training	2.0

Agricultural Business Management Associate in Science Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of "C" or better.

Total Units: 32

Required Courses:

Course Number	Title	Units
AGBS B2	Agricultural Economics	3.0
SOIL B1	Introduction to Soil Science	3.0
AGRI B1	Agriculture, Environment and Society	3.0
AGBS B6	Agricultural Sales and Communication	3.0
CRPS B1	Principles of Crop Production	3.0
MCAG B1 or COMS B5 or COMS B2	Introduction to Agricultural Mechanics	3.0
	Introduction to Microsoft Office 2010	
	Introduction to Computer Information Systems	
WEXP B248	Cooperative Work Experience Education	3.0
CRPS B2 or NRES B1	Forage Crops	3.0
	Range Management	
ANSC B1 or ANSC B2 or ANSC B4 or ANSC B10	Introduction to Animal Science	3.0
	Beef Production	
	Dairy Production	
	Horse Production	
FORE B2 or FORE B1 or FORE B3 or FORE B5 or FORE B6	Natural Resources	3.0
	Introduction to Forestry	
	Wildlife Management	
	Identification of California Wildlife	
	Forestry Skills	
AGRI B49	Agriculture Leadership Training	2.0

Animal Science Certificate of Achievement

See also *Preveterinary Medical Option and Registered Veterinary Technician*.

Upon completion of the following courses with at least a "C" grade in each course, the student will be awarded an Animal Science Certificate of Achievement.

Certificate prepares students for entry level employment in food animal production and animal management and care. Career opportunities in Animal Science include entry level production jobs such as feed mill tech, beef tech, swine tech, poultry tech, groomer, small animal assistant tech, and pet store employee.

Total Units: 30

Required Courses:

Course Number	Title	Units
AGRI B1	Agriculture, Environment and Society	3.0
ANSC B1	Introduction to Animal Science	3.0
AGRI B49	Agriculture Leadership Training	2.0

Select 22 units from the following courses:

Course Number	Title	Units
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	Animal Diseases	3.0
ANSC B10	Horse Production	3.0
ANSC B11	Livestock Selection and Evaluation	3.0
ANSC B22	Animals and Society	3.0
ANSC B20	Companion Animal Care	4.0
MCAG B1	Introduction to Agricultural Mechanics	3.0
ANSC B60	Bovine Reproduction	2.0
ANSC B71	Diseases of Beef and Dairy Cattle	1.0
ANSC B72	Equine Health	1.0
ANSC B74	Equine Nutrition	1.0
ANSC B80	Introduction to Veterinary Technology	2.0
ANSC B82	Anatomy and Physiology of Domestic Animals	2.0
ANSC B84	Small Animal Diseases	1.5
ANSC B86	Pharmacology for Veterinary Technicians	1.5
ANSC B88	Surgery, Dental and Anesthesiology for Veterinary Technicians	1.5
ANSC B90	Emergency Medicine, Surgery/Nursing Procedures for Veterinary Technicians	2.0
ANSC B92	Clinical Pathology for Veterinary Technicians	2.0
ANSC B94	Caged Birds, Laboratory, and Exotic Animal Medicine	2.0
ANSC B96	Radiology, Ultrasound, and Diagnostic Imaging for Veterinary Technology	1.5
WEXP B248 or WEXP B249	Cooperative Work Experience Education	3.0
	Cooperative Work Experience Education	

Animal Science Associate in Arts Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of "C" or better.

The Animal Science major prepares students for occupations in those areas of agriculture involving production of livestock. Both the scientific and practical aspects of the production of horse, beef, sheep, swine, dairy cattle and companion animals are stressed in the courses.

Career opportunities in Animal Science include Feed salesperson, beef production, swine production and dairy production.

Total Units: 23

Required Courses:

Course Number	Title	Units
AGBS B2	Agricultural Economics	3.0
AGRI B1	Agriculture, Environment and Society	3.0
ANSC B1	Introduction to Animal Science	3.0
ANSC B2 or ANSC B3 or ANSC B4 or ANSC B10	Beef Production	3.0
	Sheep Production	
	Dairy Production	
	Horse Production	
ANSC B6	Applied Animal Nutrition	4.0
ANSC B7	Animal Diseases	3.0
AGRI B49	Agriculture Leadership Training	2.0

MCAG B1 or	Introduction to Agricultural Mechanics	3.0
ANSC B11 or	Livestock Selection and Evaluation	
NRES B1	Range Management	

Animal Science Associate in Science Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of “C” or better.

The Associate of Science major is designed to prepare students for occupations in areas of agriculture involving production of livestock, focusing on food animal production and companion animals. Career opportunities in Animal Science include Dairy Herdsman, Ranch Manager, Swine Production Manager, and Feed Sales.

Total Units: 29

Required Courses:

Course Number	Title	Units
AGBS B2	Agricultural Economics	3.0
AGRI B1	Agriculture, Environment and Society	3.0
ANSC B1	Introduction to Animal Science	3.0
MCAG B1	Introduction to Agricultural Mechanics	3.0
WEXP B248 or WEXP B249	Cooperative Work Experience Education	3.0
AGRI B49	Agriculture Leadership Training	2.0

Select 6 units from the following courses:

ANSC B2	Beef Production	3.0
ANSC B3	Sheep Production	3.0
ANSC B4	Dairy Production	3.0
ANSC B10	Horse Production	3.0

Select 6 units from the following courses:

ANSC B6	Applied Animal Nutrition	4.0
ANSC B7	Animal Diseases	3.0
ANSC B11	Livestock Selection & Evaluation	3.0
ANSC B20	Companion Animal Care	4.0
ANSC B60	Bovine Reproduction	2.0
ANSC B71	Diseases of Beef and Dairy Cattle	1.0
ANSC B72	Equine Health	1.0
ANSC B74	Equine Nutrition	1.0
ANSC B80	Introduction to Veterinary Technology	2.0
ANSC B82	Anatomy and Physiology of Domestic Animals	2.0
ANSC B84	Small Animal Diseases	1.5
ANSC B85	Large Animal Diseases	1.5
ANSC B86	Pharmacology for Veterinary Technicians	1.5
ANSC B88	Surgery, Dental and Anesthesiology for Veterinary Technicians	1.5
ANSC B90	Emergency Medicine, Surgery/Nursing Procedures for Veterinary Technicians	2.0
ANSC B92	Clinical Pathology for Veterinary Technicians	2.0
ANSC B94	Caged Birds, Laboratory, and Exotic Animal Medicine	2.0
ANSC B96	Radiology, Ultrasound, and Diagnostic Imaging for Veterinary Technology	1.5
NRES B1	Range Management	3.0

Environmental Horticulture Certificate of Achievement

The Certificate of Achievement in Environmental Horticulture is designed for the student desiring specialized training in order to enter the workforce in the least amount of time. See also Plant Science.

Upon completion of the following courses with at least a “C” grade in each course, the student will be awarded an Environmental Horticulture Certificate of Achievement.

Total Units: 29

Required Courses:

Course Number	Title	Units
CRPS B3	Integrated Pest Management	3.0
ORNH B1	Introduction to Ornamental Horticulture	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 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
WEXP B248 or WEXP B249	Cooperative Work Experience Education	3.0
AGRI B49	Agriculture Leadership Training	2.0

Environmental Horticulture Associate in Arts Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of “C” or better.

The Associate in Arts degree in Environmental Horticulture is designed for the student planning to transfer to a 4 year college or university. See also Plant Science.

Total Units: 21

Required Courses:

Course Number	Title	Units
SOIL B1	Introduction to Soil Science	3.0
CRPS B10	Plant Biology	4.0
ORNH B1	Introduction to Ornamental Horticulture	3.0
ORNH B4	Plant Propagation	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
AGRI B49	Agriculture Leadership Training	2.0

Environmental Horticulture Associate in Science Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of “C” or better.

The Associate in Science degree in Environmental Horticulture is designed for the student desiring to enter the workforce after earning a 2 year degree. See Plant Science.

Total Units: 33

Required Courses:

Course Number	Title	Units
CRPS B3	Integrated Pest Management	3.0
CRPS B10	Plant Biology	4.0
ORNH B1	Introduction to Ornamental Horticulture	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 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
SOIL B1	Introduction to Soil Science	3.0
AGRI B49	Agriculture Leadership Training	2.0

Forestry Certificate of Achievement

Upon completion of the following courses with at least a “C” grade in each course, the student will be awarded a Forestry Certificate of Achievement.

The Certificate of Achievement in Forestry is designed for students desiring to enter the workforce after completing one year of college. Many technician level careers are available in the forestry/natural resources/wildlife fields. Career opportunities include Forestry, natural resources, wildlife, parks and outdoor recreation, fisheries, rangeland and watershed technician positions.

Total Units: 36

Required Courses:

Course Number	Title	Units
AGBS B2 or AGBS B52	Agricultural Economics Economics in Agriculture	3.0
SOIL B1	Introduction to Soil Science	3.0
AGRI B1	Agriculture, Environment and Society	3.0
FORE B1	Introduction to Forestry	3.0
FORE B2	Natural Resources	3.0
FORE B6	Forestry Skills	3.0
MCAG B1	Introduction to Agricultural Mechanics	3.0
WEXP B248 or WEXP B249	Cooperative Work Experience Education Cooperative Work Experience Education	1.0
AGRI B49	Agriculture Leadership Training	2.0

Select 12 units from the following courses:

Course Number	Title	Units
FORE B3	Wildlife Management	3.0
FORE B4	Wildlife Law Enforcement	3.0
FORE B5	Identification of California Wildlife	3.0
FORE B7	Wildland Fire Management	3.0
CRPS B3	Integrated Pest Management	3.0
CRPS B10	Plant Biology	4.0
NRES B1	Range Management	3.0
NRES B2	Parks and Outdoor Recreation	3.0
BIOL B11	Concepts of Biology	4.0

COMS B5	Introduction to Microsoft Office 2010	3.0
COMS B37	Introduction to Geographic Information Systems	3.0

Forestry Associate in Arts Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of “C” or better.

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. Students planning to go to work after completing a 2-year degree should complete the A.S. degree and not the A.A. degree. Career opportunities include forestry, fishing industries and wildlife management.

Total Units: 24

Required Courses:

Course Number	Title	Units
AGBS B2	Agricultural Economics	3.0
SOIL B1	Introduction to Soil Science	3.0
AGRI B1	Agriculture, Environment and Society	3.0
FORE B2	Natural Resources	3.0
FORE B6	Forestry Skills	3.0
FORE B1 or FORE B3	Introduction to Forestry Wildlife Management	3.0
FORE B4 or FORE B5 or FORE B7 or CRPS B3 or COMS B37 or	Wildlife Law Enforcement Identification of California Wildlife Wildland Fire Management Integrated Pest Management Introduction to Geographic Information Systems	3.0
COMS B2 or	Introduction to Computer Information Systems	
COMS B5	Introduction to Microsoft Office 2010	
WEXP B248 or WEXP B249	Cooperative Work Experience Education Cooperative Work Experience Education	1.0
AGRI B49	Agriculture Leadership Training	2.0

Forestry Associate in Science Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of “C” or better.

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. Students planning to go to work after completing a 2-year degree should complete the A.S.

degree. Career opportunities include forestry, fishing industries and wildlife management.

Total Units: 34

Required Courses:

Course Number	Title	Units
AGBS B2	Agricultural Economics	3.0
SOIL B1	Introduction to Soil Science	3.0
AGRI B1	Agriculture, Environment and Society	3.0
CRPS B3	Integrated Pest Management	3.0
FORE B1	Introduction to Forestry	3.0
FORE B2	Natural Resources	3.0
FORE B6	Forestry Skills	3.0
MCAG B1	Introduction to Agricultural Mechanics	3.0
WEXP B248 or WEXP B249	Cooperative Work Experience Education	1.0
AGRI B49	Agriculture Leadership Training	2.0

Select 7 units from the following courses:

FORE B3	Wildlife Management	3.0
FORE B4	Wildlife Law Enforcement	3.0
FORE B5	Identification of California Wildlife	3.0
FORE B7	Wildland Fire Management	3.0
CRPS B10	Plant Biology	4.0
NRES B1	Range Management	3.0
NRES B2	Parks and outdoor Recreation	3.0
BIOL B11	Concepts of Biology	4.0
COMS B2	Introduction to Computer Information Systems	3.0
COMS B5	Introduction to Microsoft Office 2010	3.0
COMS B37	Introduction to Geographic Information Systems	3.0

Horticulture Associate in Arts Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of “C” or better.

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.

Total Units: 24

Required Courses:

Course Number	Title	Units
AGBS B2	Agricultural Economics	3.0
SOIL B1	Introduction to Soil Science	3.0
AGRI B1	Agriculture, Environment and Society	3.0
CRPS B1	Principles of Crop Production	3.0
CRPS B10	Plant Biology	4.0
AGBS B6	Agriculture Sales and Communication	3.0
MCAG B1 or ORNH B4 or ORNH B6	Introduction to Agricultural Mechanics Plant Propagation Ornamental Plant Identification - Ground Covers, Vines, and Dwarf Shrubs	3.0
AGRI B49	Agriculture Leadership Training	2.0

Plant Science Certificate of Achievement

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.

Career opportunities in Crop Science include Farm labor foreman, irrigation manager, seed lab technician, starting research technician, soils lab technician, pest control technician.

Upon completion of the following courses with at least a “C” grade in each course, the student will be awarded a Plant Science Certificate of Achievement.

Total Units: 27

Required Courses:

Course Number	Title	Units
AGBS B2	Agricultural Economics	3.0
SOIL B1	Introduction to Soil Science	3.0
AGRI B1	Agriculture, Environment and Society	3.0
ORNH B4	Plant Propagation	3.0
CRPS B3	Integrated Pest Management	3.0

Crops Emphasis

Course Number	Title	Units
CRPS B1	Principles of Crop Production	3.0
CRPS B2	Forage Crops	3.0
CRPS B4	Vegetable Production	3.0
WEXP B248 or WEXP B249	Cooperative Work Experience Education Cooperative Work Experience Education	3.0

Plant Science Associate in Arts Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of “C” or better.

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. See also Environmental Horticulture. Career opportunities in Crop Science include Truck and market farm management, orchard and vinyard management, horticulture pest control, low volume irrigation equipment supply and sales, agriculture research technician.

Total Units: 22

Required Courses:

Course Number	Title	Units
AGBS B2	Agricultural Economics	3.0
SOIL B1	Introduction to Soil Science	3.0
AGRI B1	Agriculture, Environment and Society	3.0
CRPS B10	Plant Biology	4.0
ORNH B4	Plant Propagation	3.0

Horticulture Emphasis

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

Crops Emphasis

Course Number	Title	Units
CRPS B1	Principles of Crop Production	3.0
CRPS B2 or CRPS B4	Forage Crops Vegetable Production	3.0

Plant Science Associate in Science Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of “C” or better.

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. See also Environmental Horticulture. Career opportunities in Crop Science include farm management, agricultural pest control, fertilizer sales and application, soil laboratory technician, irrigation equipment supply and sales, agricultural research technician.

Total Units: 25-28

Required Courses:

Course Number	Title	Units
AGBS B2	Agricultural Economics	3.0
SOIL B1	Introduction to Soil Science	3.0
AGRI B1	Agriculture, Environment and Society	3.0
CRPS B10	Plant Biology	4.0
ORNH B4	Plant Propagation	3.0
CRPS B3	Integrated Pest Management	3.0

Horticulture Emphasis

Course Number	Title	Units
ORNH B2	Fundamentals of Nursery Management and Plant Production	3.0
ORNH B36	Beginning Floral Design	3.0
or		
ORNH B3	Landscape Installation and Maintenance	3.0
ORNH B8	Introduction to Landscape Design	3.0

Crops Emphasis

Course Number	Title	Units
CRPS B1	Principles of Crop Production	3.0
CRPS B2	Forage Crops	3.0
CRPS B4	Vegetable Production	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. See also Animal Science.

Suggested Courses

Course Number	Title	Units
WEXP B248 or WEXP B249	Cooperative Work Experience Education	3.0
ANSC B1	Introduction to Animal Science	3.0
ANSC B6	Applied Animal Nutrition	4.0
ANSC B7	Animal Diseases	3.0
BIOL B3a	General Biology I	5.0
BIOL B3b	General Biology II	5.0

CHEM B1a	General Chemistry I	5.0
CHEM B1b	General Chemistry and Chemical Analysis	5.0
CHEM B18	Elementary Organic Chemistry	5.0
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

Registered Veterinary Technicians Option Job Skills Certificate

This certificate is required by the California Veterinary Medical Board in order to qualify students to be eligible to take the California Veterinary Medical Board’s Registered Veterinary Technician licensing exam.

Upon completion of the following courses with at least a “C” grade in each course, the student will be awarded a Registered Veterinary Technicians Job Skills Certificate.

Total Units: 17.5

Required Courses:

Course Number	Title	Units
ANSC B80	Introduction to Veterinary Technology	2.0
ANSC B82	Anatomy and Physiology of Domestic Animals	2.0
ANSC B84	Small Animal Diseases	1.5
ANSC B85	Large Animal Diseases	1.5
ANSC B86	Pharmacology for Veterinary Technicians	1.5
ANSC B88	Surgery, Dental and Anesthesiology for Veterinary Technicians	1.5
ANSC B90	Emergency Medicine, Surgery/Nursing Procedures for Veterinary Technicians	2.0
ANSC B92	Clinical Pathology for Veterinary Technicians	2.0
ANSC B94	Caged Birds, Laboratory, and Exotic Animal Medicine	2.0
ANSC B96	Radiology, Ultrasound, and Diagnostic Imaging for Veterinary Technology	1.5

AIR CONDITIONING, HEATING AND REFRIGERATION

Air Condition/Heating/Refrigeration Job Skills Certificate

This certificate covers the principles of refrigeration and air conditioning applied to domestic and commercial systems. The repair and maintenance of HVAC major system components and controls is emphasized.

Upon completion of the following courses with at least a “C” grade in each course, the student will be awarded an Air Conditioning, Heating, and Refrigeration Job Skills Certificate.

Total Units: 6

Required Courses:

Course Number	Title	Units
ACRF B54a	Air Conditioning and Refrigeration	3.0
ACRF B54b	Air Conditioning and Refrigeration	3.0

AMERICAN SIGN LANGUAGE

American Sign Language Associate in Arts Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of “C” or better.

The major in American Sign Language provides a linguistic and grammatical study of the language and an in-depth look into the culture of deaf people. The objective of the program is to provide students with a foundation for achieving fluency and the opportunity to transfer to a four-year institution. Employment opportunities include interpreting, teaching and social service. If transferring to an institution other than UC or CSU, students should check with the receiving institution to ensure transferability of ASL courses as foreign language credit.

Total Units: 20

Required Courses:

Course Number	Title	Units
ASL B1	American Sign Language 1	5.0
ASL B2	American Sign Language 2	5.0
ASL B3	American Sign Language 3	5.0
ASL B4	American Sign Language 4	5.0

Other Suggested Courses

ASL B6	American Deaf Culture	3.0
ASL B7	ASL Literature and Performance	3.0

ANIMAL SCIENCE

See Agriculture

ANTHROPOLOGY

Anthropology Associate in Arts Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of “C” or better.

Anthropology is the scientific study of humanity, examining human biology and culture today and in the past, and biological and cultural change through time. Students with an Anthropology major concentrate in one of the following areas: cultural anthropology, biological/physical anthropology or archeology. The major in anthropology prepares students for a variety of research/academic positions (e.g. museums, colleges and universities, zoos or government agencies); and non-academic/research positions (e.g. businesses, archeological companies or professional writing). The objective of this program is to prepare students for transfer to a four-year university. Anthropology’s emphasis on research skills, organizational skills, critical thinking, technical writing, project management and use of holistic perspective make it an excellent undergraduate major for a variety of fields and graduate programs.

Career opportunities in Anthropology include teaching, government service, research, and law.

Total Units: 18

Required Courses:

Course Number	Title	Units
ANTH B1	Physical Anthropology	3.0
ANTH B2	Cultural Anthropology	3.0
ANTH B3	Introduction to Archaeology	3.0
ANTH B5	North American Indians	3.0
PSYC B1a	General Psychology	3.0
SOCI B1	Introduction to Sociology	3.0

APPRENTICESHIP PROGRAMS

Apprenticeship courses are designed for indentured apprentices under the Shelley-Maloney California Apprenticeship Standards Act. The Apprentice Agreement states that the student will supplement on-the-job training with related classroom instruction during each year of apprenticeship.

Apprentice classes meet three to eight hours per week and yield two to six units of credit. Joint Apprenticeship Committees administering each program are composed of representation from labor, management, California State Division of Apprenticeship Standards, and Bakersfield College. These committees adopt state approved standards for operation and assure equal opportunity for applicants. Related training in apprenticeable occupations, in addition to those listed below, may be offered as the need arises.

Information for entry into apprenticeship programs may be obtained from the college coordinator of apprenticeship training. Interested persons are encouraged to apply for any of these programs and may contact the Bakersfield College Apprenticeship Department at 395-4408 for further information.

- Carpentry
- Electricians
- Operating Engineers
- Plumbers and Steamfitters
- Sheet Metal

Apprenticeship Associate Degree Program

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of “C” or better.

	Units
Apprenticeship classes for duration of apprentice period (45 units maximum)	12-45
Work Experience (four semesters, maximum of 16 units)	4-16
Related technical subjects as recommended by JAC	0-6

In addition, students must comply with the requirements as shown in the catalog under Graduation Requirements. The departmental counselor can assist the student in planning for the A.A. degree.

Apprenticeship Certificate of Achievement Programs

Apprenticeship classes for duration of apprentice period	Units 12-45
Work Experience	16
4-16 Electives (as recommended by JAC) to reach 30 units total (if needed).	

ARCHITECTURE

Architectural CAD Job Skills Certificate

This certificate covers the principles of architectural CAD to include basic 2D and 3D AutoCAD application as well as BIM related software covering architectural practices including both residential and light commercial working documents. Emphasis is also placed on architectural delineation using software.

Upon completion of the following courses with at least a "C" grade in each course, the student will be awarded an Architectural CAD Job Skills Certificate.

Total Units: 11

Required Courses:

Course Number	Title	Units
INDR B10	Introduction to Industrial Drawing & Graphics	1.0
INDR B11	Introduction to Computer Aided Drafting & Design (CAD)	1.0
INDR B20a	Computer Aided Drafting & Design CAD	3.0
ARCH B16	Digital Tools for Graphics Communication	3.0
ARCH B33	Architectural Computer Practice	3.0

Architectural Drafting Associate in Arts Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of "C" or better.

Total Units: 27.5

Required Courses:

Course Number	Title	Units
ARCH B1	Introduction to Architecture & Environmental Design	1.5
ARCH B6	Materials of Construction	3.0
ARCH B11	Design and Perspective Drawing	4.0
ARCH B12	Design Drawing and Color	4.0
ARCH B16	Digital Tools for Graphics Communication	3.0
ARCH B21	Architectural Design Fundamentals I	4.0
ARCH B33	Architectural Computer Practice	3.0
INDR B11	Introduction to Computer Aided Drafting & Design (CAD)	1.0

Electives

Course Number	Title	Units
INDR B20a	Computer Aided Drafting & Design (CAD)	3.0
ARCH B55	Building Codes	3.0

Architecture/Architectural Drafting Associate in Science Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of "C" or better. This degree covers the principles of architectural CAD to include basic 2D and 3D AutoCAD application as well as BIM related software covering architectural practices including both residential and light commercial working documents. Emphasis is also placed on architectural delineation using software. Career opportunities include architectural draftsmen, CAD operator, and CAD manager.

Total Units: 39.5

Required Courses:

Course Number	Title	Units
ARCH B1	Introduction to Architecture & Environmental Design	1.5
ARCH B6	Materials of Construction	3.0
ARCH B11	Design and Perspective Drawing	4.0
ARCH B12	Design Drawing and Color	4.0
ARCH B16	Digital Tools for Graphics Communication	3.0
ARCH B21	Architectural Design Fundamentals I	4.0
ARCH B22	Architectural Design Fundamentals II	4.0
ARCH B33	Architectural Computer Practice	3.0
INDR B11	Introduction to Computer Aided Drafting & Design (CAD)	1.0
MATH B1a or MATH B6a	Precalculus I / Analytic Geometry and Calculus I	4.0
PHYS B2a	General Physics-Mechanics & Heat	4.0

Recommended Courses

Course Number	Title	Units
INDR B20a	Computer Aided Drafting & Design (CAD)	3.0

Suggested sequence of courses for Architecture/Architectural Drafting A.S. Degree

First Semester

Course Number	Title	Units
ARCH B1	Introduction to Architecture & Environmental Design	1.5
ARCH B11	Design and Perspective Drawing	4.0
ARCH B16	Digital Tools for Graphics Communication	3.0

Second Semester

Course Number	Title	Units
ARCH B6	Materials of Construction	3.0
ARCH B12	Design Drawing and Color	4.0
INDR B11	Introduction to Computer Aided Drafting & Design (CAD)	1.0

Third Semester

Course Number	Title	Units
ARCH B21	Architectural Design Fundamentals I	4.0
ARCH B31	Architectural Practice	3.0
ARCH B32	Architectural Computer Graphics	1.0
PHYS B2a	General Physics-Mechanics & Heat	4.0

Fourth Semester

Course Number	Title	Units
ARCH B22	Architectural Design Fundamentals II	4.0
ARCH B33	Architectural Computer Practice	3.0

ART

See also Digital Arts

Art Associate in Arts Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of "C" or better.

Total Units: 18

Required Courses:

Course Number	Title	Units
ART B2 or ART B3	Drawing I Drawing II	3.0
ART B4	Two Dimensional Design	3.0
ART B1	Art Appreciation	3.0

Electives: at least 9 units

- ART B6, B7, B8 Painting and Drawing Series
- ART B10, B11, B12 Ceramic Series
- ART B13, B14 Sculpture Series
- ART B17, B46, B47, B48 Photography Series
- ART B20, B24, B25, B40, B41, B42 Digital Arts Series
- ART B35, B36, B37 Art History Series

AUTOMATED PRODUCTION AND MANUFACTURING PROCESSES TECHNOLOGY

See Manufacturing/Machine Technology

AUTOMOTIVE



Auto Brakes and Wheel Alignment Certificate of Achievement

This program develops student's knowledge and skills in automotive brake and suspension systems operation, trouble-shooting, maintenance, repair, and wheel alignment procedures.

Total Units: 24

Required Courses:

Course Number	Title	Units
AUTO B106	Automotive Brakes, Suspension, Steering and Alignment	9.0
AUTO B64 or AUTO B14	Automotive Electricity and Electronics Auto Tune-Up: Electrical/ Ignition/Accessories (11.0)	4.0
INDT B10 or Equivalent	Occupational Readiness	3.0

Electives: to equal at least 24 units

Course Number	Title	Units
AUTO B61	Basic & Enhanced Area Clean Air Car Course	4.0
AUTO B2a or AUTO B75a &	Automotive Engine Overhaul Introduction to Engine Overhaul (3.0)	9.0

AUTO B75b	Engine Repair Techniques (3.0)	
WELD B1a	Introduction to Oxygen Acetylene Welding and Cutting	
2.0		
WELD B1b	Introduction to the Welding Processes	2.0
WEXP B249	Cooperative Work Experience Education	1-4.0
INDT B275	Special Problems in Automotive	2-3.0



Auto Engine Overhaul Certificate of Achievement

This program develops student's knowledge and skills in the areas of automotive and light truck engine overhaul and machining procedures. Program includes instruction in theory of operation, diagnostic, and repair procedures.

Total Units: 24

Required Courses:

For Day Students:

Course Number	Title	Units
AUTO B2a	Automotive Engine Overhaul	9.0
AUTO B2b	Automotive Engines Machining	9.0
INDT B10 or Equivalent	Occupational Readiness	3.0

For Night Students:

Course Number	Title	Units
AUTO B75a	Introduction to Engine Overhaul	3.0
AUTO B75b	Engine Repair Techniques	3.0
AUTO B75c	Advanced Engine Overhaul	3.0
AUTO B75d	Advanced Engine Machining	3.0
INDT B10 or Equivalent	Occupational Readiness	3.0

Electives: to equal at least 24 units

Course Number	Title	Units
AUTO B1ab	Introduction to Automotive Technology	2-2.0
AUTO B14	Auto Tune-Up: Electrical/ Ignition/Accessories	11.0
AUTO B15	Auto Tune-Up:Fuel Systems and Emission Control	11.0
AUTO B64	Automotive Electricity and Electronics	4.0
AUTO B61	Basic & Enhanced Area Clean Air Car Course	4.0
AUTO B112	Automotive Transmissions and Gear Boxes	9.0
INDT B275	Special Problems in Automotives	2-3.0
WELD B1a	Introduction to Oxygen Acetylene Welding and Cutting	2.0
WELD B1b	Introduction to the Welding Processes	2.0
WEXP B249	Cooperative Work Experience Education	4.0



Auto Tune-Up and Emission Systems Certificate of Achievement

This program develops student's knowledge and skills in the areas of automotive and light truck tune-up and emission control systems. Program includes instruction in theory of ignition, fuel, and computer control systems as well as emission test procedures and complete diagnostic and repair procedures.

Total Units: 26

Required Courses:

Course Number	Title	Units
AUTO B14	Auto Tune-Up: Electrical/Ignition/Accessories	11.0
AUTO B15	Auto Tune-Up: Fuel Systems and Emission Control	11.0
INDT B10 or	Occupational Readiness Equivalent	3.0

Electives: to equal at least 26 units

Course Number	Title	Units
AUTO B59	Automotive Air Conditioning	4.0
AUTO B64	Automotive Electricity and Electronics	4.0
AUTO B61	Basic & Enhanced Area Clean Air Car Course	4.0
AUTO B75a or	Introduction to Engine Overhaul	3.0
AUTO B2a	Automotive Engine Overhaul	9.0
ELET B1	Basic Electronics (DC and AC)	4.0
ENGL B50	Introduction to College Composition	4.0
WEXP B249	Cooperative Work Experience Education	1-4.0
INDT B275	Special Problems in Automtives	2-3.0

Automotive Heating, Ventilation & Air Conditioning (HVAC) Job Skills Certificate

This program develops student’s knowledge and skills in automotive and light truck heating and air conditioning systems. The program includes instruction and theory in the operation, diagnosis, environmental concerns from refrigerants, electrical controls and computer operation, and proper repairs to these systems. Career opportunities in Automotive Technology prepares automotive technicians for employment as auto technicians for operation, diagnosis, environmental concerns from refrigerants, electrical controls and computer operation, and proper repairs to these systems.

Total Units: 15

Required Courses:

Course Number	Title	Units
AUTO B59	Automotive Air Conditioning	4.0
AUTO B14	Auto Tune-Up: Electrical/Ignition/Accessories	11.0

Automotive Power-Trains Certificate of Achievement

This program develops student’s knowledge and skills in the areas of automotive and light truck standard and automotive transmissions, differential and drive train components. Program includes instruction in theory of operation, diagnostic and repair procedures as well as complete repair procedures.

Total Units: 24

Required Courses:

Course Number	Title	Units
AUTO B112	Automotive Transmissions and Gear Boxes	9.0
AUTO B14 or	Auto Tune-Up: Electrical/ Ignition/Accessories	11.0
	Automotive Electricity and Electronics (4.0)	
INDT B10 or	Occupational Readiness	3.0

Equivalent

Electives: to equal at least 24 units

Course Number	Title	Units
AUTO B106	Automotive Brakes, Suspension, Steering and Alignment	9.0
AUTO B61	Basic & Enhanced Area Clean Air Car Course	4.0
AUTO B2a or	Automotive Engine Overhaul	9.0
AUTO B75a	Introduction to Engine Overhaul	3.0
WEXP B249	Cooperative Work Experience Education	1-4.0
INDT B275	Special Problems in Automotive	2-3.0
WELD B74a	Introduction to GMAW & FCAW	2.0
WELD B74b	Introduction to GTAW	2.0

Basic and Advanced Clean Air Car Course Job Skills Certificate

This course prepares the student to take the California State Smog Test. It also helps prepare the student to take the ASE (Automotive Service Excellence) A-6, A-8 and L-1 tests. All elements of this class are mandated by the California Department of Consumer Affairs, Bureau of Automotive Repair and are subject to periodic change and addition by that agency.

Total Units: 15

Required Courses

Course Number	Title	Units
AUTO B15	Auto Tune-up: Fuel Systems and Emission Controls	11.0
AUTO B61	Basic and Enhanced Area Clean Air Car Course	4.0

Industrial Technology, Automotive Option Associate in Science Degree

Careers opportunities in automotive technology include automotive tune-ups, engine overhaul, clean-air and emissions testing.

Total Units: 32

Select 32 units from the following courses:

Course Number	Title	Units
AUTO B2a	Automotive Engine Overhaul	9.0
AUTO B2b	Automotive Engines Machining	9.0
AUTO B106	Automotive Brakes, Suspension, Steering and Alignment	9.0
AUTO B112	Automotive Transmissions and Gear Boxes	9.0
AUTO B14	Auto Tune-Up: Electrical/Ignition/Accessories	11.0
AUTO B15	Auto Tune-Up: Fuel Systems and Emission Controls	11.0
ELET B1	Basic Electronics (DC and AC)	4.0

BIOLOGY

See also Primary Care Associate

Biology Associate in Science Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of “C” or better.

Biology is the study and application of principles of

cell biology, ecology, evolution, genetics, anatomy and physiology as it relates to humans and other organisms. Laboratory and field trip activities emphasize the integrated and interdependent nature of living systems. Course work trains students to use observation and investigation to identify questions and pursue answers using the scientific method. Graduates with biology degrees may pursue jobs in a variety of fields including; biochemistry, biotechnology, botany, ecology, entomology, genetics, health, immunology, medicine, molecular biology, oceanography, pharmacy, teaching, wildlife management, zoology and related clinical fields. Biology majors may choose to specialize in research based on a particular organism or an aspect of biology related to those listed above. Career opportunities in Biology include many fields of biology, medical school, dental school and veterinary school.

Emphasis in General Biology

Total Units: 20

Required Courses:

Course Number	Title	Units
BIOL B3a	General Biology I	5.0
BIOL B3b	General Biology II	5.0
CHEM B1a	General Chemistry I	5.0
CHEM B1b	General Chemistry and Chemical Analysis	5.0

Electives:

Course Number	Title	Units
BIOL B16	General Microbiology	5.0
BIOL B21	Special Projects in Biology	1-2.0

Biology Associate in Science Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of “C” or better.

Courses required for the Human Biology Associate of Science degree include biology and chemistry courses necessary for transfer to allied health programs such as nursing, physical therapy, Physician Assistant, and radiology. Please refer to the Suggested Program information and check with a counselor concerning specific degree requirements to specific programs and transfer institutions. Please note that many of the courses have prerequisites that are best taken in the appropriate order to ensure success.

Career opportunities in Biology include Nursing, physical therapy, medical technologist, and physician assistant.

Emphasis in Human Biology

Total Units: 18

Required Courses:

Course Number	Title	Units
BIOL B32	Human Anatomy & Physiology I	4.0
BIOL B33	Human Anatomy & Physiology II	4.0
BIOL B16	General Microbiology	5.0

Electives to equal at least 18 units:

Course Number	Title	Units
BIOL B21	Special Projects in Biology	1-2.0
BIOL B34	Pathophysiology	3.0
BIOL B255	Human Anatomy & Physiology Success Lab	0.5- 1.0
CHEM B2a	Introductory General Chemistry	4.0
CHEM B11	Introduction to General, Organic and Biochemistry	5.0
CHEM B1a	General Chemistry I	5.0
CHEM B1b	General Chemistry and Chemical Analysis	5.0
MEDS B60	Medical Terminology	3.0
NUTR B10	Elementary Nutrition	3.0

Note: Students transferring to a 4-year institution for a B.S. in Biology generally take the CHEM B1a, B1b sequence. Note: Students transferring for a B.S. in Nursing should consult the university of choice as to which chemistry sequence meets transfer needs.

Suggested Program for Biology Majors

This suggested program meets all Intersegmental General Education Transfer Curriculum (IGETC) requirements. This program is a series of courses that community college students can use to satisfy lower-division general-education requirements at any California State University (CSU) or University of California (UC) campus. It will permit a student to transfer to a campus of the CSU or the UC system without the need, after transfer, to take additional lower-division general-education courses to satisfy campus general education requirements. The program also meets or exceeds the minimum entrance requirements for most medical schools and other health professional programs. This program assumes you are academically prepared for university-level courses. Students requiring additional preparation in mathematics, reading or English will require at least one additional semester and should consult a counselor for advice.

First Semester

Course Number	Title	Units
BIOL B3a	General Biology I	5.0
CHEM B1a	General Chemistry I	5.0
ENGL B1a	Expository Composition	4.0
	Art or Humanities Elective	3.0

Second Semester

Course Number	Title	Units
BIOL B3b	General Biology II	5.0
CHEM B1b	General Chemistry and Chemical Analysis	5.0
ENGL B2 or	Advanced Composition and Critical Thinking	5.0
PHIL B9	Critical Thinking and Advanced Composition (4.0)	

Third Semester

Course Number	Title	Units
MATH B6a	Analytic Geometry and Calculus I	4.0
PHYS B2a	General Physics-Mechanics and Heat	4.0
COMM B1	Public Speaking	3.0
	Art or Humanities elective	3.0
	Social or Behavioral Science elective	3.0

Fourth Semester

Course Number	Title	Units
MATH B6b	Analytic Geometry and Calculus II	4.0
PHYS B2b	General Physics-Sound, Light, Electricity, Magnetism, Modern Physics	4.0
	Art or Humanities elective	3.0
	Social or Behavioral Science elective	3.0

Note: Some UC campuses now require calculus-based physics for biology majors and other particular courses. If you are planning to transfer to a UC campus, contact their admissions office for advice.

BUSINESS ADMINISTRATION

The Business Department strives to promote and enhance the economic development of the community; to provide for lifelong learning and academic excellence through course content, application, and technology; to serve diverse populations with a sense of worth and dignity; to establish work ethics relative to a positive work environment; to meet workforce needs through skills development, training, and personal growth; and to communicate a sense of vision and renewal through a creative utilization of productive and innovative resources.

Accounting Associate in Arts Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of "C" or better.

Total Units: 30.5

Required Courses:

Course Number	Title	Units
BSAD B53a	Introduction to Accounting 1	3.0
BSAD B53b	Introduction to Accounting 2	3.0
BSAD B54	Payroll Accounting	3.0
BSAD B55	Computer Accounting Applications	3.0
BSAD B40	Personal Finance	3.0
BSAD B51	Business Mathematics	3.0
BSAD B264	Ten-Key Proficiency	0.5
BSAD B18	Business Law	3.0
BSAD B20	Introduction to Business	3.0
BSAD B5	Human Relations/People Skills	3.0
COMS B5	Introduction to Microsoft Office 2010	3.0

Note: BSAD B1 may be substituted for BSAD B53a and BSAD B53b.

Administrative Office Assistant

The Administrative Office programs are designed to provide the skills and competencies needed to become an efficient, productive member of an office support team. Courses are designed to help students learn to analyze and coordinate office duties and systems, develop proficiency in the use of integrated software, and improve oral and written communication. Emphasis is placed on non-technical as well as technical skills. Students have the option of completing certificates and/or a two-year degree program.

Office Assistant Job Skills Certificate

This certificate prepares students as entry-level office support staff. Students are urged to continue beyond the Job Skills Certificate and earn a Certificate of Achievement or Associate of Arts Degree.

Upon completion of the following courses with at least a "C" grade in each course, the student will be awarded an Office Assistant Job Skills Certificate.

Total Units: 11

Required Courses:

Course Number	Title	Units
BSAD B252abc	Computer Keyboarding, Parts 1-2-3	3.0
BSAD B287	Filing	1.5
BSAD B85/B285	Business English	3.0
COMS B5	Introduction to Microsoft Office 2010	3.0
BSAD B264	Ten-Key Proficiency	0.5

Office Assistant Certificate of Achievement

An Office Assistant Certificate of Achievement increases the student's employability as office support staff. Students who have completed the Job Skills Certificate courses can quickly upgrade to the Certificate of Achievement by completing the following courses with at least a "C" grade.

Total Units: 27.5

Required Courses:

Course Number	Title	Units
BSAD B252abc	Computer Keyboarding, Parts 1-2-3	3.0
BSAD B287	Filing	1.5
BSAD B85/B285	Business English	3.0
COMS B5	Introduction to Microsoft Office 2010	3.0
BSAD B264	Ten-Key Proficiency	0.5
BSAD B53a	Introduction to Accounting	3.0
BSAD B5	Human Relations/People Skills	3.0
BSAD B88	Office Procedures	3.0
BSAD B253abc	Document Processing, Part 1-2-3	3.0
BSAD B280 or WEXP B248 or WEXP B249	Machine Transcription Cooperative Work Experience Education	1.5 1-3.0
BSAD B20	Introduction to Business	3.0

Administrative Office Assistant Associate in Arts Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of "C" or better.

Designed to prepare the student for employment as office support staff to assist managers, executives, and professionals.

Total Units: 30.5

Required Courses:

Course Number	Title	Units
BSAD B252abc	Computer Keyboarding, Parts 1-2-3	3.0
BSAD B253abc	Document Processing, Parts 1-2-3	3.0
BSAD B287	Filing	1.5
BSAD B85/B285	Business English	3.0
BSAD B88	Office Procedures	3.0
BSAD B5	Human Relations/People Skills	3.0

COMS B5	Introduction to Microsoft Office 2010	3.0
BSAD B53a	Introduction to Accounting I	3.0
BSAD B264	Ten-Key Proficiency	0.5
BSAD B280 or WEXP B248 or WEXP B249	Machine Transcription Cooperative Work Experience Education	1-3.0
BSAD B20	Introduction to Business	3.0
BSAD B65	Principles of Organizational Communication	3.0

Bookkeeping Certificate of Achievement

The Bookkeeping program provides students with the knowledge and skills necessary for employment and growth in the accounting profession. Using the “language of business,” accountants assemble and analyze, process, and communicate essential information about financial operations.

Upon completion of the following courses with at least a “C” grade in each course, a student will be awarded a Bookkeeping Certificate of Achievement.

Total Units: 25.5

Required Courses:

Course Number	Title	Units
BSAD B53a	Introduction to Accounting 1	3.0
BSAD B53b	Introduction to Accounting 2	3.0
BSAD B54	Payroll Accounting	3.0
BSAD B55	Computer Accounting Applications	3.0
BSAD B51	Business Mathematics	3.0
BSAD B264	Ten-Key Proficiency	0.5
BSAD B252a	Computer Keyboarding, Part 1	1.0
BSAD B20	Introduction to Business	3.0
COMS B5	Introduction to Microsoft Office 2010	3.0
BSAD B5	Human Relations/People Skills	3.0

Business Administration Associate in Arts Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of “C” or better.

The general purpose of the program in Business Administration at the university and state college is twofold. First, it is organized to help students to develop a broad understanding of our economy and our society in order to serve as a basis for responsible administrative and executive positions in business and government. Second, it offers the opportunity for students to acquire skills in specialized and professional types of employment.

Since requirements vary, the current catalog of the chosen college or university should be consulted for specific requirements of the School of Business Administration.

This suggested program will meet most of the lower division requirements at the California State colleges and universities as well as fulfilling the major requirements for the Associate in Arts Degree from Bakersfield College.

Total Units: 25 or 26

Required Courses:

Course Number	Title	Units
BSAD B1	Financial Accounting	4.0
BSAD B2	Managerial Accounting	4.0
COMS B5 or COMS B2 or COMS B3	Introduction to Microsoft Office 2010 Introduction to Computer Information Systems Computer Concepts and Survival Skills	3.0
ECON B1	Principles of Economics-Micro	3.0
ECON B2	Principles of Economics-Macro	3.0
MATH B23 or MATH B2 or MATH B6a	Finite Mathematics Basic Functions and Calculus for Business Analytic Geometry and Calculus I	3.0 5.0 4.0
MATH B22	Elementary Probability and Statistics	5.0

General Business Job Skills Certificate

A Job Skills Certificate in General Business will provide the student with broad-based knowledge and skills in business. These core classes provide the foundation for a variety of successful careers in business. Students must complete courses with at least a “C” grade.

Total Units: 12

Required Courses:

Course Number	Title	Units
BSAD B5	Human Relations/People Skills	3.0
BSAD B20	Introduction to Business	3.0
COMS B5	Introduction to Microsoft Office 2010	3.0
BSAD B53a or BSAD B1	Introduction to Accounting 1 Financial Accounting (4)	3.0

General Management Job Skills Certificate

The management curriculum is designed to provide the knowledge and skills necessary for success as a manager in today’s demanding organizational climate. The program benefits the individual who aspires to a management position in any organization, including business, government or service organizations.

Upon completion of the following courses with at least a “C” grade in each course, the student will be awarded a General Management Job Skills Certificate.

Total Units: 12

Required Courses:

Course Number	Title	Units
BSAD B61	Human Resources Management	3.0
BSAD B65	Principles of Organizational Communication	3.0
BSAD B5	Human Relations/People Skills	3.0
BSAD B43	Principles of Management	3.0

Marketing Certificate of Achievement

The Marketing Program provides students with knowledge, techniques, and perspectives relating to the principles and practice of marketing goods and services in a global economy.

Bakersfield College’s Marketing Program helps students develop a strong understanding of the techniques used in successful business marketing. That training starts with a

strong emphasis on the relationship theory and practice in contemporary marketplaces. Upon completion of the following courses with at least a “C” grade in each course, a student will be awarded a Marketing Certificate of Achievement.

Total Units: 21

Required Courses:

Course Number	Title	Units
BSAD B20	Introduction to Business	3.0
BSAD B9	Fundamentals of Marketing	3.0
BSAD B85/B285 or BSAD B65	Business English / Principles of Organizational Communication	3.0
BSAD B90	Fundamentals of Retailing	3.0
COMS B5	Introduction to Microsoft Office 2010	3.0
BSAD B5	Human Relations/People Skills	3.0
BSAD B53a or BSAD B1	Introduction to Accounting I / Financial Accounting (4.0)	3.0

Marketing Associate in Arts Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of “C” or better.

Total Units: 24

Required Courses:

Course Number	Title	Units
BSAD B20	Introduction to Business	3.0
BSAD B9	Fundamentals of Marketing	3.0
BSAD B90	Fundamentals of Retailing	3.0
BSAD B51 or MATH B23	Business Mathematics / Finite Mathematics	3.0
BSAD B53a & BSAD B53b or BSAD B1	Introduction to Accounting 1 / Introduction to Accounting 2 / Financial Accounting (4.0)	3.0
BSAD B5	Human Relations/People Skills	3.0
COMS B5	Introduction to Microsoft Office 2010	3.0

California Real Estate Certificate of Achievement

The Real Estate courses offered are recognized by the State of California and accepted as prerequisites for the students to sit for their licensing examinations. These courses are also available for continuing education credits. Upon completion of these courses, the students will have the knowledge to allow them to comply with real estate practice standards imposed by the Real Estate License Law and Commission rules for the State of California. Students have the option of completing certificate and/or two-year degree programs.

This certificate is approved by and operated in cooperation with the California Department of Real Estate and the California Association of Realtors. Upon completion of the following courses with at least a “C” grade in each course, a student will be awarded a Real Estate Certificate of Achievement.

Total Units: 24

Required Courses:

(Should be taken in listed order)

Course Number	Title	Units
BSAD B39	Principles of Real Estate	3.0
BSAD B74 or	Legal Aspects of Real Estate	3.0

BSAD B18	Business Law	
BSAD B75 or BSAD B1 or BSAD B53a	Real Estate Economics / Financial Accounting (4.0) / Introduction to Accounting (3.0)	3.0
BSAD B76	Real Estate Finance	3.0
BSAD B77	Basic Appraisal Principles	3.0
BSAD B78	Real Estate Practice	3.0
BSAD B20	Introduction to Business	3.0

Electives: at least 3 units

Course Number	Title	Units
BSAD B71	Escrow Procedures	3.0
BSAD B79	Real Estate Investment and Taxation	3.0
BSAD B80	Basic Appraisal Procedures	3.0
BSAD B43	Principles of Management	3.0
BSAD B72	Property Management	3.0
WEXP B248 or WEXP B249	Cooperative Work Experience Education / Cooperative Work Experience Education	1-4.0
BSAD B73	Common Interest Developments (CIDs)	3.0
BSAD B81	Residential Sales Comparisons & Income Approaches	3.0

California Real Estate Associate in Arts Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of “C” or better.

Total Units: 24

Required Courses:

Course Number	Title	Units
BSAD B75 or BSAD B1 or BSAD B53a & BSAD B53b	Real Estate Economics / Financial Accounting / Introduction to Accounting 1 (3.0) / Introduction to Accounting 2 (3.0)	3.0
BSAD B39	Principles of Real Estate	3.0
BSAD B74 or BSAD B18	Legal Aspects of Real Estate / Business Law	3.0
BSAD B76	Real Estate Finance	3.0
BSAD B77	Basic Appraisal Principles	3.0
BSAD B78	Real Estate Practice	3.0
BSAD B20	Introduction to Business	3.0

Electives: at least 3 units

Course Number	Title	Units
BSAD B51	Business Mathematics	3.0
BSAD B264	Ten-Key Proficiency	0.5
BSAD B40	Personal Finance	3.0
BSAD B61	Human Resource Management	3.0
BSAD B71	Escrow Procedures	3.0
BSAD B73	Common Interest Developments (CIDs)	3.0
BSAD B81	Residential Sales Comparisons & Income Approaches	3.0
BSAD B79	Real Estate Investment and Taxation	3.0
BSAD B80	Basic Appraisal Procedures	3.0
WEXP B248 or WEXP B249	Cooperative Work Experience Education / Cooperative Work Experience Education	1-4.0

Retail Management Certificate of Achievement

A Certificate of Achievement in Retail Management is designed to prepare students for entry-level employment. The Certificate will provide the student with broad-based knowledge and skills in retailing including grocery chains.

This foundation can be built into many successful careers. The certificate is approved by members of the Western Association of Food Chains, all the major supermarket chains in the western 13 states. It encompasses several business essentials, including the “soft skills” of management and communication required for career success in the retail food industry. Upon completion of the following courses with at least a “C” grade in each course, a student will be awarded a Retail Management Certificate of Achievement.

Total Units: 30 or 31

Required Courses:

Course Number	Title	Units
COMM B1 or COMM B7	Public Speaking Organizational Communication	3.0
BSAD B65	Principles of Organizational Communication	3.0
BSAD B51	Business Mathematics	3.0
COMS B5	Introduction to Microsoft Office 2010	3.0
BSAD B9	Fundamentals of Marketing	3.0
BSAD B43	Principles of Management	3.0
BSAD B53a or BSAD B1	Introduction to Accounting 1 Financial Accounting (4.0)	3.0
BSAD B90	Fundamentals of Retailing	3.0
BSAD B5	Human Relations/People Skills	3.0
BSAD B61	Human Resources Management	3.0

CABINETMAKING

See Woodworking

CHEMISTRY

Chemistry Associate in Science Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of “C” or better.

The A.S. in chemistry is appropriate for students interested in transferring to a 4-year university as a major in the sciences. The major will provide students with a complete general education in math and core physical sciences as well as an introduction to some basic computer systems skills. Additionally, the degree provides the student employment opportunities within local industries as a laboratory technician.

Career opportunities in Chemistry for transfers, are varied and broad, ranging from all chemical industries, physics, all other areas of the physical sciences, engineering, and all areas of the biological sciences and allied health fields. Examples of local industries include: agriculture, geo and petrochemical businesses, analytical services and laboratories, (etc).

Total Units: 38

Required Courses:

Course Number	Title	Units
CHEM B1a	General Chemistry I	5.0
CHEM B1b	General Chemistry & Chemical Analysis	5.0
CHEM B18	Elementary Organic Chemistry	5.0

MATH B6a	Analytic Geometry & Calculus I	4.0
MATH B6b	Analytic Geometry & Calculus II	4.0
MATH B6c	Calculus III	4.0
COMS B2	Introduction to Computer Information Systems	3.0

Select 8 units:

PHYS B4a* and PHYS B4b*	Mechanics & Wave Motion Heat, Electricity & Magnetism	4.0 4.0
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or

PHYS B2a and PHYS B2b	General Physics-Mechanics & Heat General Physics-Sound, Light, Electricity, Magnetism, Modern Physics	4.0 4.0
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Electives

PHYS B4c*	Optics & Modern Physics	4.0
BIOL B3b	General Biology II	5.0

or

BIOL B16	General Microbiology	5.0
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Suggested Program for Chemistry A.S. Degree

First Semester

Course Number	Title	Units
CHEM B1a	General Chemistry I	5.0
MATH B6a	Analytic Geometry & Calculus I	4.0
COMS B2	Introduction to Computer Information Systems	3.0

Second Semester

Course Number	Title	Units
CHEM B1b	General Chemistry & Chemical Analysis	5.0
PHYS B4a*	Mechanics & Wave Motion	4.0
MATH B6b	Analytic Geometry & Calculus II	4.0

Third Semester

Course Number	Title	Units
CHEM B18	Elementary Organic Chemistry	5.0
MATH B6c	Calculus III	4.0
PHYS B4b* or PHYS B2a	*Heat, Electricity, & Magnetism General Physics-Mechanics & Heat	4.0 4.0

Fourth Semester

Course Number	Title	Units
PHYS B4c*	Optics & Modern Physics	4.0
PHYS B2b	General Physics-SLEMMP	4.0

Note: BIOL B3b no longer has BIOL B3a as prerequisite.

UC Berkeley, CSU San Jose, CSU San Diego, CSU Fresno

The courses listed below are required for the above institutions and for most other four-year colleges and universities in order to transfer into the third year of a chemistry major program. Before planning a study list, the community college student should consult his/her counselor and study the catalog of the senior institution to which he/she intends to transfer.

The introductory courses in Physics (Physics B2a-B2b or B4a-B4c) and Chemistry (Chemistry B1a-B1b, B2a or B11) are designed to provide a foundation and understanding of the

laws and principles of the physical world (matter and energy). These courses should be completed early in a student's academic program to insure greater success in subsequent courses.

Required Courses: 34 units

Course Number	Title	Units
CHEM B1a	General Chemistry I	5.0
CHEM B1b	General Chemistry & Chemical Analysis	5.0
MATH B6a	Analytic Geometry & Calculus I	4.0
MATH B6b	Analytic Geometry & Calculus II	4.0
MATH B6c	Calculus III	4.0
PHYS B4a	Mechanics & Wave Motion	4.0
PHYS B4b	Heat, Electricity, & Magnetism	4.0
PHYS B4c	Optics & Modern Physics	4.0

Recommended Courses

Course Number	Title	Units
MATH B6d	Ordinary Differential Equations	3.0
COMS B2	Introduction to Computer Information Systems	3.0

CHICANO(A)/LATINO(A) STUDIES

Chicano(a)/Latino(a) Studies is an interdisciplinary program designed to broaden the student's understanding about the history and cultural background (politics, literature, art) of a people expected to represent the majority population in the Southwestern United States within the next generation.

A Chicano(a)/Latino(a) Studies A.A. Degree will academically prepare students planning to enter professions such as law, medicine, teaching, criminal science, journalism, business and any other that requires a liberal arts education.

Total Units: 18

Required Courses:

Course Number	Title	Units
CHST/HIST B30a	Early Chicano History	3.0
CHST/HIST B30b	History of Chicanos in the Southwest	3.0
CHST/HIST B33	Latin American History	3.0

Any one of the classes below:

Course Number	Title	Units
SPAN B1ab	Elementary Spanish	5.0
SPAN B2ab	Elementary Spanish	5.0
SPAN B3	Intermediate Spanish	4.0
SPAN B4	Intermediate Spanish	4.0
SPAN B10	Spanish for Heritage Speakers	4.0

Electives: to equal at least 18 units

Course Number	Title	Units
CHST B30e	Art of Latin America	3.0
CHST/SOCI B36	Sociology of the Chicano	3.0
MUSC B20ma	Mariachi Ensemble	1- 3.0
SOCI B45	Minority Relations	3.0

CHILD DEVELOPMENT

CDA (Child Development Associate)

The CDA may be substituted for nine semester units of child development credit.

Child Development Assistant Teacher Job Skills Certificate

The Job Skills Certificate may be earned by students who satisfactorily complete the 6 units of course work listed below with a grade of "C" or better. This course work meets the requirements for the Child Development Assistant Teacher Permit.

Career opportunities in Child Development include Assistant Child Development Teacher.

Total Units: 6

Required Courses:

Course Number	Title	Units
CHDV B36	Developmentally Appropriate Curriculum	3.0
CHDV B20	Principles and Practices	3.0

Child Development Associate Teacher Job Skills Certificate

The Job Skills Certificate may be earned by students who satisfactorily complete the 12 units of course work listed below with a grade of "C" or better. This course work meets the requirements for the Child Development Associate Teacher Permit. This course work also meets the Child Development requirements for a fully qualified teacher in a licensed Preschool Child Development Center or School-Age Center.

Total Units: 12

Required Courses:

Course Number	Title	Units
CHDV B20	Principles and Practices	3.0
CHDV B36	Developmentally Appropriate Curriculum	3.0
CHDV B42	Child, Family and Community	3.0
CHDV B49	Child Health, Safety and Nutrition	3.0

Child Development Teacher Certificate of Achievement

The Certificate of Achievement may be earned by students who satisfactorily complete 28 units of course work listed below with a grade of "C" or better. This course work meets the Child Development requirements for the Child Development Teacher Permit. Students may apply for the Permit at the Kern County Superintendent of Schools, Office of Credentials, 636-4750 or 636-4751. Students must also meet the General Education requirement and Experience requirement in accordance with the California Commission on Teacher Credentialing.

Total Units: 28

Required Courses:

Course Number	Title	Units
CHDV B20	Principles and Practices	3.0
CHDV B21	Child Growth and Development: Birth through Adolescence	3.0
CHDV B22	Observation and Assessment - Birth through Adolescence	3.0
CHDV B32	Teaching in a Diverse Society	3.0
CHDV B36	Developmentally Appropriate Curriculum	3.0
CHDV B40	Creative Art, Movement, & Music Activities For Young Children	3.0
CHDV B42	Child, Family and Community	3.0

CHDV B49	Child Health, Safety and Nutrition	3.0
CHDV B41	Supervised Field Experience in Early Childhood Education	4.0

Child Development Master Teacher Certificates of Achievement

The Certificate of Achievement for Master Teacher may be earned by students who satisfactorily complete the required specialization courses listed below with a grade of “C” or better in addition to the courses required for the Child Development Teacher Certificate of Achievement.

Child Development Master Teacher: Infant Toddler Certificate of Achievement

The Certificate of Achievement for Infant Toddler may be earned by taking the 28 units of child development courses required for the Child Development Teacher Certificate of Achievement and the following courses.

Total Units: 36

Required Courses:

Completion of the Child Development Teacher Certificate of Achievement (28 units) and:

Course Number	Title	Units
CHDV B13c	Child Growth and Development: The Infant Toddler Years	3.0
CHDV B53a	Early Childhood Education: Adult Supervision	2.0
CHDV B44	Infant/Toddler Care and Development with Supervised Field Experience	3.0

Child Development Master Teacher: Special Education Certificate of Achievement

Total Units: 36

Required Courses:

Completion of the Child Development Teacher Certificate of Achievement (28 units) and:

Course Number	Title	Units
CHDV B53a	Early Childhood Education: Adult Supervision	2.0
CHDV B33	Survey of Special Education	3.0
CHDV B52	Care of Infants & Toddlers with Disabilities	3.0

Child Development and Family Relations Associate in Science Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of “C” or better. This program is designed to train students to work in a variety of early childhood settings. The two-year program primarily serves students desiring an early childhood background, supervised student teaching experience and fulfillment of academic requirements for a Child Development Teacher Permit.

Total Units: 25

Required Courses 8 (in suggested sequential order):

Course Number	Title	Units
CHDV B20	Principles and Practices	3.0
CHDV B36	Developmentally Appropriate Curriculum	3.0
CHDV B42	Child, Family and Community	3.0

CHDV B49	Child Health, Safety and Nutrition	3.0
CHDV B21	Child Growth and Development: Birth Through Adolescence	3.0
CHDV B22	Observation & Assessment-Birth Through Adolescence	3.0
CHDV B32	Teaching in a Diverse Society	3.0
CHDV B41	Supervised Field Experience in Early Childhood Education	4.0

The *Associate Degree* requires completion of the major (25 units) with a “C” or better grade in each course plus the completion of the General Associate Degree requirements - nutrition, children’s literature, and recommended: physical education/Dance, and music. General education requirements with a 2.0 or better GPA for a total of 60 semester units minimum.

Students interested in transferring to a 4-year university must follow the CSU-GE or IGETC transfer pattern. Contact a counselor for more information on which classes meet transfer requirements.

COMMUNICATION

Communication Associate in Arts Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of “C” or better.

The Communication Program is designed to give students communication skills in professional, personal, and public contexts. Communication classes provide life skills put to use everyday in a wide variety of circumstances whether that interaction takes place one on one or in groups large and small. An Associate in Arts Degree in Communication is an ideal springboard into future educational and professional endeavors, and it is an ideal double major for nearly every discipline and career.

Total Units: 18

Select 18 units from the following courses:

Course Number	Title	Units
COMM B1	Public Speaking	3.0
COMM B2	Interpersonal Communication	3.0
COMM B4	Persuasive Communication	3.0
COMM B5	Rhetoric and Argumentation	3.0
COMM B6	Intercultural Communication	3.0
COMM B7	Organizational Communication	3.0
COMM B8	Small Group Communication	3.0
COMM B9	Health Communication	3.0
COMM B10	Leadership and Communication	3.0
COMM B49a	Communication Ambassadors	3.0

Associate in Arts in Communication Studies for Transfer

The Associate in Arts in Communication Studies for Transfer is intended for all students who plan to complete an AA in Communication studies. This degree is especially valuable for those students planning on completing a bachelor’s degree in Communication or a similar major at a CSU campus

because the Associate in Arts in Communication Studies for Transfer guarantees admission to the CSU system (but not to a particular campus or major). In order to earn the Associate in Arts in Communication Studies for Transfer, students must complete a minimum of 60 required semester units of CSU-transferable coursework which includes the CSU General Education or IGETC requirements with a minimum GPA of 2.0. Students transferring to a CSU campus that does accept the Associate in Arts in Communication Studies for Transfer will be required to complete no more than 60 units after transfer to earn a bachelor's degree (unless the major is a designated "high-unit" major). This degree may not be the best option for students intending to transfer to a particular CSU campus or to university or college that is not part of the CSU system. Students should consult with a counselor when planning to complete the degree for more information on university admission and transfer requirements. No additional graduation requirements are required to complete this degree.

The Associate in Arts in Communication Studies for Transfer equips students with relational and presentation skills that provide a foundation for success throughout students' educational careers, business careers and personal interactions. Students learn about verbal and nonverbal channels of communication that inform, persuade, manage, interpret, direct, or influence social interaction in diverse contexts. The degree introduces students to both established and contemporary theories of human communication pertaining to societal construction, maintenance, and perpetuation of acceptable patterns of communicative conduct. Students choosing this degree also acquire pragmatic communication skills enabling them to competently navigate social interaction within interpersonal, small group, public, organizational, and intercultural contexts. Students learn field-specific nomenclature as well as effective oral, listening, and critical thinking skills needed to successfully manage communication encounters in a variety of professional and personal environments. Students will be prepared in this lower division work for a baccalaureate degree in Communication Studies, Speech Communication, or a similar degree.

The successful student will be able to:

- Construct, use, and interpret messages across multiple channels to inform, persuade, manage, negotiate, relate, and generally influence each other within and across varying cultural venues.
- Identify and value disparate systems of social norms and values that influence the human communicative process.
- Understand the various theoretical and pragmatic skills that enable them to navigate social interaction within multiple interpersonal, small group, public, and intercultural contexts.
- Become familiar with both field-specific nomenclature as well as effective oral, listening, and critical thinking skills.

Core Course Required: 3 units

COMM B1*	Public Speaking	3.0
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Select two courses from the following: 6 units

COMM B2*	Interpersonal Communication	3.0
COMM B5*	Argumentation and Rhetoric	3.0
COMM B8*	Small Group Communication	3.0

Select three courses from the following: 9 units

COMM B4*	Persuasive Communication	3.0
COMM B6*	Intercultural Communication	3.0
COMM B21	Oral Interpretation	3.0
COMM B7*	Organizational Communication	3.0

The courses below should be considered to make up the additional units making a total of 60 units:

COMM B9	Health Communication	3.0
COMM B10	Communication and Leadership	3.0
ENGL B2	Advanced Composition and Critical Thinking	5.0
JRNL B1	Media and Society	3.0
JRNL B2	Beginning Reporting	3.0
PSYC B1a	General Psychology	3.0
SOCI B1	Introduction to Sociology	3.0

CSU Breadth or IGETC General Education Pattern: 37-39 units (*Courses with an asterisk can be double counted for General Education).

Total Units: 60 - completion of a General Education pattern and 18 units within the major.

No additional graduation requirements are required to complete this degree.

Communication Certificate of Achievement

The Communication Certificate is designed to enhance a student's ability to communicate in social, professional, and relational contexts. This certificate is intended to enhance the communication skills of students from all majors and career plans. Students are required to take four classes for a total of twelve units.

Total Units: 12

Select 12 units from the following courses:

Course Number	Title	Units
COMM B1	Public Speaking	3.0
COMM B2	Interpersonal Communication	3.0
COMM B4	Persuasive Communication	3.0
COMM B5	Rhetoric and Argumentation	3.0
COMM B6	Intercultural Communication	3.0
COMM B7	Organizational Communication	3.0
COMM B8	Small Group Communication	3.0
COMM B10	Leadership and Communication	3.0

COMPUTER GRAPHIC ARTS

See Digital Arts

COMPUTER STUDIES

Computer Information Systems Certificate of Achievement

Designed for the student who plans to specialize in business computer applications. Upon completion of the following courses with at least a “C” grade in each course, a student will be awarded a Computer Information Systems Certificate of Achievement.

Total Units: Minimum of 36

Required Courses:

Course Number	Title	Units
COMS B2 or	Introduction to Computer Information Systems	3.0
COMS B3	Computer Concepts & Survival Skills	3.0
COMS B5	Introduction to Microsoft Office 2010	3.0
COMS B10	Structured Program Design using Python	2.0
COMS B16	COBOL Programming Language	3.0
COMS B32	Programming with Visual Basic	3.0
COMS B34	SQL and Database Systems Design	3.0
COMS B37	Introduction to Geographic Information Systems (GIS)	3.0
COMS B82	CompTIA Network+ (Networking Technologies)	3.0
BSAD B1 or	Financial Accounting	4.0
BSAD B53a and	Introduction to Accounting (3)	
BSAD B20	Introduction to Business (3)	

Programming Emphasis -- Select 9 units from the following courses:

Course Number	Title	Units
COMS B14	Introduction to Programming with Java	3.0
COMS B25	Programming with C	3.0
COMS B35	OOP and Data Structures with C++	3.0
COMS B74a	Web Design: Macromedia Dreamweaver	3.0
COMS B74b	Web Design: HTML & XML	3.0
COMS B74c	Web Programming: JavaScript/CSS	3.0

Networking Emphasis -- Select 9 units from the following courses:

Course Number	Title	Units
COMS B41	CompTIA Linux+	3.0
COMS B91	MCSE Administering and Supporting Microsoft Server 2003	3.0
COMS B92	Windows 2000 Professional (MCSE 70-210 Exam Prep)	3.0
COMS B93	Microsoft Active Directory Services (MCSE 70-219 Exam Prep)	3.0
COMS B95	MCSE Internetworking with Microsoft TCP/IP	3.0
COMS B100	Computer Hardware Diagnostics	4.0

Business Emphasis -- Select 9 units from the following courses:

Course Number	Title	Units
BSAD B2	Managerial Accounting	4.0
BSAD B20	Introduction to Business	3.0
MATH B22	Elementary Probability and Statistics	5.0

Computer Information Systems Associate in Arts Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of “C” or better.

Designed for the student who plans to transfer to California State University system or private colleges as a Computer Information Systems, Management Information Systems, or Data Processing major. Provides an emphasis in business computer applications with a broad educational background.

Total Units: Minimum of 22

Required Courses:

Course Number	Title	Units
COMS B2 or	Introduction to Computer Information Systems	3.0
COMS B3 or	Computer Concepts & Survival Skills	
COMS B5	Introduction to Microsoft Office 2010	
COMS B10 or	Structured Program Design using Python	2.0
COMS B14	Introduction to Programming with Java (3.0)	
COMS B16 or	COBOL Programming Language	3.0
COMS B35	OOP and Data Structures with C++	
COMS B32	Programming with Visual Basic	3.0
BSAD B1	Financial Accounting	4.0
MATH B22 or	Elementary Probability and Statistics	5.0
PSYC B5	Elementary Statistics for the Behavioral and Social Sciences (5.0)	
COMS B34	SQL and Database Systems Design	3.0

Other Suggested Courses

Course Number	Title	Units
COMS B5	Introduction to Microsoft Office 2010	3.0
COMS B10	Structured Program Design using Python	2.0
COMS B25	Programming with C	3.0
COMS B35	OOP and Data Structures with C++	3.0
COMS B37	Introduction to Geographic Information Systems (GIS)	3.0
COMS B41	CompTIA Linux+	3.0
COMS B74a	Web Design: Macromedia Dreamweaver	3.0
COMS B74b	Web Design: HTML & XML	3.0
COMS B74c	Web Programming: JavaScript/CSS	3.0
COMS B82	CompTIA Network+ (Networking Technologies)	3.0
COMS B91	MCSE Administering and Supporting Microsoft Server 2003	3.0
COMS B93	Microsoft Active Directory Services (MCSE 70-219 Exam Prep)	3.0
COMS B95	MCSE Internetworking with Microsoft TCP/IP	3.0
MATH B2	Basic Functions and Calculus for Business	5.0
BSAD B2	Managerial Accounting	4.0
BSAD B20	Introduction to Business	3.0
ECON B1	Principles of Economics-Micro	3.0
ECON B2	Principles of Economics-Macro	3.0
BSAD B43	Principles of Organization and Management	3.0
BSAD B9	Fundamentals of Marketing	3.0
COMM B1	Public Speaking	3.0

Computer Information Systems Associate in Science Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of “C” or better.

Designed for the student who plans to specialize in business computer applications. The student will learn professional skills leading to employment and will gain a broad educational background. Provides a foundation for further studies in

Computer Information Systems, Management Information Systems, or Data Processing.

Total Units: Minimum of 36

Required Courses:

Course Number	Title	Units
COMS B2 or	Introduction to Computer Information Systems	3.0
COMS B3	Computer Concepts & Survival Skills	3.0
COMS B5	Introduction to Microsoft Office 2010	3.0
COMS B10	Structured Program Design using Python	2.0
COMS B16	COBOL Programming Language	3.0
COMS B32	Programming with Visual Basic	3.0
COMS B14 or	Introduction to Programming with Java	3.0
COMS B35	OOP and Data Structures with C++	3.0
COMS B34	SQL and Database Systems Design	3.0
COMS B82	CompTIA Network+ (Networking Technologies)	3.0
BSAD B1	Financial Accounting	4.0

Programming Emphasis -- Select 9 units from the following courses:

Course Number	Title	Units
COMS B25	Programming with C	3.0
COMS B35	OOP and Data Structures with C++	3.0
COMS B37	Introduction to Geographic Information Systems (GIS)	3.0
COMS B74a	Web Design: Macromedia Dreamweaver	3.0
COMS B74b	Web Design: HTML & XML	3.0
COMS B74c	Web Programming: JavaScript/CSS	3.0

Networking Emphasis -- Select 9 units from the following courses:

Course Number	Title	Units
COMS B41	CompTIA Linux+	3.0
COMS B91	MCSE Administering and Supporting Microsoft Server 2003	3.0
COMS B93	Microsoft Active Directory Services (MCSE 70-219 Exam Prep)	3.0
COMS B95	MCSE Internetworking with Microsoft TCP/IP	3.0
COMS B100	Computer Hardware Diagnostics	4.0

Business Emphasis -- Select 9 units from the following courses:

Course Number	Title	Units
BSAD B2	Managerial Accounting	4.0
BSAD B20	Introduction to Business	3.0
ART B20	Digital Art I - Vector Art	3.0

Other Suggested Courses

Course Number	Title	Units
MATH B2	Basic Functions and Calculus for Business	5.0
ECON B1	Principles of Economics-Micro	3.0
ECON B2	Principles of Economics-Macro	3.0
BSAD B43	Principles of Organization and Mgt.	3.0
BSAD B9	Fundamentals of Marketing	3.0
COMM B1	Public Speaking	3.0

Computer Science Certificate of Achievement

Designed for the student who plans to specialize in math, science, or engineering computer applications. Upon completion of the following courses with at least a "C" grade in each course, a student will be awarded a Computer Science

Certificate of Achievement.

Total Units: Minimum of 36

Required Courses:

Course Number	Title	Units
COMS B2 or	Introduction to Computer Information Systems	3.0
COMS B3	Computer Concepts & Survival Skills	3.0
COMS B10	Structured Program Design using Python	2.0
COMS B14	Introduction to Programming with Java	3.0
COMS B25	Programming with C	3.0
COMS B32	Programming with Visual Basic	3.0
COMS B35	OOP and Data Structures with C++	3.0
COMS B82	CompTIA Network+ (Networking Technologies)	3.0
MATH B6a	Analytic Geometry and Calculus I	4.0

Electives: at least 12 units

Course Number	Title	Units
COMS B5	Introduction to Microsoft Office 2010	3.0
COMS B14	Introduction to Programming with Java	3.0
COMS B16	COBOL Programming Language	3.0
COMS B34	SQL and Database Systems Design	3.0
COMS B37	Introduction to Geographic Information Systems (GIS)	3.0
COMS B41	CompTIA Linux+	3.0
COMS B74a	Web Design: Macromedia Dreamweaver	3.0
COMS B74b	Web Design: HTML & XML	3.0
COMS B74c	Web Programming: JavaScript/CSS	3.0
COMS B91	MCSE Administering and Supporting Microsoft Server 2003	3.0
COMS B93	Microsoft Active Directory Services (MCSE 70-219 Exam Prep)	3.0
COMS B95	MCSE Internetworking with Microsoft TCP/IP	3.0
COMS B100	Computer Hardware Diagnostics	4.0
MATH B22	Elementary Probability and Statistics	5.0

Computer Science Associate in Science Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of "C" or better.

Designed for the student who plans to transfer to California State University system or private colleges and to specialize in computer science, math, science, or engineering applications. Students will learn professional skills leading to employment and will gain a broad educational background.

Total Units: Minimum of 37

Required Courses:

Course Number	Title	Units
COMS B2 or	Introduction to Computer Information Systems	3.0
COMS B3	Computer Concepts & Survival Skills	3.0
COMS B10	Structured Program Design using Python	2.0
COMS B25	Programming with C	3.0
MATH B6a	Analytic Geometry and Calculus I	4.0
MATH B6b	Analytic Geometry and Calculus II	4.0
MATH B6c	Calculus III	4.0
MATH B22	Elementary Probability and Statistics	5.0

Electives: at least 12 units

Course Number	Title	Units
COMS B14	Introduction to Programming with JAVA	3.0
COMS B32	Programming with Visual Basic	3.0
COMS B34	SQL and Database Systems Design	3.0
COMS B35	OOP and Data Structures with C++	3.0
COMS B41	CompTIA Linux+	3.0
COMS B82	CompTIA Network+ (Networking Technologies)	3.0
COMS B91	MCSE Administering and Supporting Microsoft Server 2003	3.0
COMS B92	Windows 2000 Professional (MCSE 70-210 Exam Prep)	3.0
COMS B93	Microsoft Active Directory Services (MCSE 70-219 Exam Prep)	3.0
COMS B95	MCSE Internetworking with Microsoft TCP/IP	3.0
COMS B100	Computer Hardware Diagnostics	4.0
MATH B6d	Ordinary Differential Equations	3.0
MATH B6e	Elementary Linear Algebra	3.0

Other Suggested Courses

Course Number	Title	Units
COMS B5	Introduction to Microsoft Office 2010	3.0
COMS B37	Introduction to Geographic Information Systems (GIS)	3.0
COMS B74a	Web Design: Macromedia Dreamweaver	3.0
COMS B74b	Web Design: HTML & XML	3.0
COMS B74c	Web Programming: JavaScript/CSS	3.0
PHYS B2a	General Physics-Mechanics and Heat	4.0
PHYS B2b	General Physics-Sound, Light Electricity, Magnetism, Modern Physics	4.0
PHIL B7	Introduction to Logic	3.0
ELET B1	Basic Electronics (DC and AC)	4.0

Web Development Certificate of Achievement

This program is designed for the student who plans to design, create and maintain Websites. The student will learn professional skills leading to employment and will gain a broad educational background, In addition, the program provides a foundation for further studies in this and other computer-related fields.

Total Units: Minimum of 32.5

Required Courses:

Course Number	Title	Units
COMS B74a	Web Design: Macromedia Dreamweaver	3.0
COMS B74b	Web Design: HTML & XML	3.0
COMS B74c or COMS B74e	Web Programming: JavaScript/CSS Intermediate Web Development: Web Authoring Tools (3.0)	3.0
COMS B75b or COMS B75c	Web Programming: Active Server Pages Web Programming: PHP	3.0
COMS B101	Web Systems and Security	3.0
COMS B82	CompTIA Network+ (Networking Technologies)	3.0
ART B20	Digital Art I - Vector Art	3.0
BSAD B91	E - Commerce	1.0
BSAD B65	Principles of Organizational Communication	3.0

Design Emphasis -- Select 9 units from the following courses:

Course Number	Title	Units
ART B42	Graphic Design	3.0
ART B40	Digital Illustration	3.0
ART B24	Digital Art II - Raster Art	3.0
ART B25	Typography	3.0
COMS B76a	Web Design: Macromedia Flash	3.0
JRNL B1	Media and Society	3.0

Web Programming Emphasis -- Select 9 units from the following courses:

Course Number	Title	Units
COMS B10	Structured Program Design using Python	2.0
COMS B14	Introduction to Programming with Java	3.0
COMS B32	Programming with Visual Basic	3.0
COMS B34	SQL and Database Systems Design	3.0
COMS B79	Advanced Programming with Visual Basic	3.0
COMS B76a	Web Design: Macromedia Flash	3.0

Cross-Discipline Emphasis -- Select 9 units from the following courses:

Any combination of 9 units from the above elective classes.

Web Development Associate in Science Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of "C" or better.

This program is designed for the student who plans to design, create and maintain Websites. The student will learn professional skills leading to employment and will gain a broad educational background, In addition, the program provides a foundation for further studies in this and other computer-related fields.

Total Units: Minimum of 26.5

Required Courses:

Course Number	Title	Units
COMS B74a	Web Design: Macromedia Dreamweaver	3.0
COMS B74b	Web Design: HTML & XML	3.0
COMS B74c or COMS B74e	Web Programming: JavaScript/CSS Intermediate Web Development: Web Authoring Tools (3.0)	3.0
COMS B101	Web Systems and Security	3.0
COMS B82	CompTIA Network+ (Networking Technologies)	3.0
ART B20	Digital Art I - Vector Art	3.0
BSAD B91	E - Commerce	1.0

Design Emphasis -- Select 9 units from the following courses:

Course Number	Title	Units
ART B42	Graphic Design	3.0
ART B40	Digital Illustration	3.0
ART B24	Digital Art II - Raster Art	3.0
ART B25	Typography	3.0
COMS B76a	Web Design: Macromedia Flash	3.0
JRNL B1	Media and Society	3.0
COMS B76b	Web Design: Advanced Flash	1.5

Web Programming Emphasis -- Select 9 units from the following courses:

Course Number	Title	Units
COMS B10	Structured Program Design using Python	2.0
COMS B14	Introduction to Programming with Java	3.0
COMS B32	Programming with Visual Basic	3.0
COMS B34	SQL and Database Systems Design	3.0
COMS B75b	Web Programming: Active Server Pages	3.0
COMS B76a	Web Design: Macromedia Flash	3.0

Cross-Discipline Emphasis -- Select 9 units from the following courses:
Any combination of 9 units from the above elective classes.

CONSTRUCTION

Construction Technology Certificate of Achievement

Total Units: 32

Required Courses:

Course Number	Title	Units
ARCH B6	Materials of Construction	3.0
ARCH B55	Building Codes	3.0
CNST B1	Introduction to Construction	3.0
CNST B2	Estimating and Scheduling	3.0
CNST B50a or CNST B50b or WEXP B249	Residential Construction Residential Construction Cooperative Work Experience Education	6.0
INDR B11	Introduction to Computer Aided Drafting and Design (CAD)	1.0
INDR B10	Introduction to Industrial Drawing and Graphics	1.0
INDT B10 or Equivalent	Occupational Readiness	3.0
WOOD B2	Furniture and Cabinetmaking	3.0

Electives:

Course Number	Title	Units
ARCH B56	Building and Related Codes	3.0
AUTO B1ab	Introduction to Automotive Technology	4.0
INDR B20a	Computer Aided Drafting and Design (CAD)	3.0
MATH B50	Modern College Arithmetic & Pre-Algebra	4.0
WELD B1a	Introduction to the Welding Process	2.0

Note: Students should consult with their counselors for best possible selections for their programs of study.

Industrial Technology, Construction Option Associate in Science Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of "C" or better.

Total Units: 30

Required Courses:

Course Number	Title	Units
ARCH B55	Building Codes	3.0
CNST B1	Introduction to Construction	3.0
CNST B2	Estimating and Scheduling	3.0
INDR B10	Introduction to Industrial Drawing and Graphics	1.0
INDT B10 or Equivalent	Occupational Readiness	3.0
WEXP B249 or	Cooperative Work Experience Education	6.0

CNST B50a or CNST B50b	Residential Construction (6.0) Residential Construction (6.0)	
WOOD B2	Furniture and Cabinetmaking	3.0

Electives: to equal at least 30 units

Course Number	Title	Units
INDR B11	Introduction to Computer Aided Drafting and Design (CAD)	1.0
INDR B20a	Computer Aided Drafting and Design (CAD)	3.0
ARCH B56	Building and Related Codes	3.0
ARCH B6	Materials of Construction	3.0

CORRECTIONAL ADMINISTRATION

Correctional Administration Associate in Arts Degree

This program includes classes that will guide students toward careers in law enforcement, the courts and the law, and state, local, and private corrections. These courses have been endorsed by the Joint Apprenticeship Committee of the California Department of Corrections, California Youth Authority, and the California Correctional Peace Officers Association.

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of "C" or better.

This program includes classes that will guide students toward careers in law enforcement and policing, the courts and the law, and state, local, and private corrections.

Total Units: 24

Required Courses:

Course Number	Title	Units
CRIM B21	Introduction to Correctional Administration	3.0
CRIM B50	Criminal Justice Report Writing	3.0
CRIM B60	Legal Aspects of Corrections	3.0
CRIM B2	Criminal Law	3.0
CRIM B12	Forensic and Scientific Aspects of Evidence	3.0
CRIM B55	Special Topics in Criminal Justice	3.0

Electives: at least 6 units

Course Number	Title	Units
CRIM B22	Institutional Supervision and Treatment of the Offender	3.0
CRIM B23	Fundamentals of Interviewing & Counseling	3.0
CRIM B24	Probation, Parole & Community Corrections	3.0
CRIM B5	Community Relations	3.0
CRIM B8	Criminal Investigation	3.0
CRIM B9	Juvenile Justice System	3.0

CRIMINAL JUSTICE

Criminal Justice Associate in Arts Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of "C" or better.

This program includes classes that will guide students toward careers in law enforcement and policing, the courts and the law, and state, local, and private corrections.

Total Units: 24

Required Courses:

Course Number	Title	Units
CRIM B1	Introduction to Criminal Justice	3.0
CRIM B2	Criminal Law	3.0
CRIM B3	Introduction to Evidence	3.0
CRIM B4	Constitutional Criminal Procedure	3.0
CRIM B12	Forensic and Scientific Aspects of Evidence	3.0
CRIM B55	Special Topics in Criminal Justice	3.0

Electives: at least 6 units.

Course Number	Title	Units
CRIM B5	Community Relations	3.0
CRIM B8	Criminal Investigation	3.0
CRIM B9	Juvenile Justice System	3.0
CRIM B10	Organized Crime	3.0
CRIM B24	Probation, Parole & Community Corrections	3.0
CRIM B50	Criminal Justice Report Writing	3.0

DIETETIC SERVICES

See Foods/Nutrition

DIGITAL ARTS

Digital Arts Certificate of Achievement

The program is designed to prepare students for entry level positions in various graphic art fields such as advertising, graphic design, illustration, and digital imaging. The core learned disciplines are the principles of design, an understanding of the visual elements, exposure to art and design history, conceptual visual problem solving, and the production of a graphic portfolio using established computer graphic software. Upon completion of the following courses with at least a "C" grade in each course, a student will be awarded a Digital Arts Certificate of Achievement.

Total Units: 27

Required Courses:

Course Number	Title	Units
ART B1 or ART B2 or ART B8	Art Appreciation Drawing I Figure Drawing I	3.0 3.0
ART B4	Two Dimensional Design	3.0
ART B20	Digital Art I - Vector Art	3.0
ART B42	Graphic Design	3.0
ART B40	Digital Illustration	3.0
ART B41	Advertising Design	3.0
ART B25	Typography	3.0

Electives: at least 3 units

Course Number	Title	Units
ART B16	Digital Photography	3.0
ART B17	Black and White Photography	3.0
ART B24	Digital Art II - Raster Art	3.0

Digital Arts Associate in Arts Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of "C" or better.

Total Units: 18

Required Courses:

Course Number	Title	Units
ART B20	Digital Art I - Vector Art	3.0
ART B42	Graphic Design	3.0
ART B40	Digital Illustration	3.0
ART B41	Advertising Design	3.0
ART B25	Typography	3.0

Electives: at least 3 units

Course Number	Title	Units
ART B2	Drawing I	3.0
ART B8	Figure Drawing I	
ART B4	Two Dimensional Design	3.0
ART B1 or ART B16	Art Appreciation Digital Photography	3.0 3.0
ART B17	Black and White Photography	3.0
ART B24	Digital Art II - Raster Art	3.0

ECONOMICS

Economics Associate in Arts Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of "C" or better.

The major in economics is designed for students interested in preparing for advanced degrees in Economics, Business, Law and for those students concerned with the economic behavior of consumers, businesses, and governments. Economics majors have a wide variety of career opportunities in business, law, journalism, education, politics, finance and banking, government, public and private overseas service, and labor leadership. Many economics majors go on to pursue graduate study in a related professional area, such as law, business, or public administration.

Total Units: 19

Required Courses:

Course Number	Title	Units
ECON B1	Principles of Economics-Micro	3.0
ECON B2	Principles of Economics-Macro	3.0
MATH B2	Basic Functions and Calculus for Business	5.0
MATH B22	Elementary Probability and Statistics	5.0
COMS B2	Introduction to Computer Information Systems	3.0

Electives

Course Number	Title	Units
ENGL B1a	Expository Composition	4.0
PHIL B7	Introduction to Logic	3.0
HIST B17b	History of the U.S. Since 1877	3.0
POLS B1	American Government: National, State and local	3.0
PSYC B1a	General Psychology	3.0
BSAD B1	Financial Accounting	4.0
BSAD B2	Managerial Accounting	4.0
COMM B1	Public Speaking	3.0
MATH B23	Finite Mathematics	3.0

ELECTRONICS TECHNOLOGY**Electronics Technology Certificate of Achievement***Total Units: 34*

Required Courses:

Course Number	Title	Units
ELET B1	Basic Electronics (DC and AC)	4.0
ELET B5	Programmable Logic Controllers	3.0
ELET B6	Analog and Digital Electronics	4.0
ELET B55a	Electric Motors-Controls	4.0
ELET B56	Instrumentation & Process Control	3.0
ELET B61	Telecommunications	3.0
ELET B62	Radio Communications	3.0
ELET B70	Mechanical Systems	3.0
INDT B10 or Equivalent	Occupational Readiness	3.0

Electives: at least 4 units

Course Number	Title	Units
ELET B4	Computer Integrated Manufacturing	3.0
ELET B63	Electronic Systems Installation	3.0
INDR B11	Introduction to Computer Aided Drafting and Design (CAD)	1.0
MFGT B1ab	Machine Tool Processes	3.0

Industrial Technology, Electronics Option Associate in Science Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of "C" or better.

Total Units: 35

Required Courses:

Course Number	Title	Units
ELET B1	Basic Electronics (DC and AC)	4.0
ELET B5	Programmable Logic Controllers	3.0
ELET B6	Analog and Digital Electronics	4.0
ELET B55a	Electric Motors-Controls	4.0
ELET B56	Instrumentation & Process Control	3.0
ELET B61	Telecommunications	3.0
ELET B62	Radio Communications	3.0
ELET B70	Mechanical Systems	3.0
INDR B10 or equivalent	Occupational Readiness	3.0

Electives: at least 4 units

Course Number	Title	Units
ELET B4	Computer Integrated Manufacturing	3.0
ELET B63	Electronic Systems Installation	3.0
INDR B11	Introduction to Computer Aided Drafting and Design (CAD)	1.0
MFGT B1ab	Machine Tool Processes	3.0

EMERGENCY MEDICAL TECHNOLOGY**EMERGENCY MEDICAL TECHNICIAN-1 (EMT-1)**

The Emergency Medical Technician-1 (EMT-1) course consists of 152 hours, which includes 24 hours of emergency room/ambulance experience. The course prepares the

student to perform basic emergency care as part of a mobile emergency team. It also provides the student with an understanding of the skills and assessment techniques needed to care for an ill or injured person in the pre-hospital setting. Upon successful completion of the course, students are eligible to take an examination for certification as an Emergency Medical Technician 1. EMT-1's are employed by ambulance companies and some private industries to provide emergency care in case of illness or injury. The course is required for ambulance personnel, the California Highway Patrol and many other first care providers. Students may later choose to become paramedics.

ENROLLMENT

Enroll through the Bakersfield College Admission and Records Office. The course is offered each fall and spring two evenings per week for 16 weeks. This is a 7.5 unit course.

PRE-ADMISSION REQUIREMENT

1. Each student must possess a current American Heart Association BLS -Healthcare Provider card. (Bakersfield College offers a BLS course (MEDS B52).
2. Each student must be at least 18 years of age by the completion date of the course.
3. Mandatory physical examination/immunizations and fit testing must be completed 4 weeks after start of the course. Costs of meeting health requirements are paid by the student. Failure to meet these requirements will result in student ineligibility for clinical rotations.
4. Completion of the 3 unit Medical Terminology Course (MEDS B60) is strongly recommended.

CONDITIONAL ENROLLMENT

As a condition of enrollment in any Allied Health Program, students are required to submit to and pass a designated drug and alcohol screening, a background screening, and physical examination clearance (at the student's expense). Please note the following:

- A history of felony conviction(s) or any bar, exclusion or other ineligibility for federal program participation could render a student ineligible for clinical placement, as determined by the clinical agencies.
- If a student cannot obtain background clearance from the clinical agencies, it will not be possible to place the student in the clinical areas, which is a required component of the program. In the event that a student cannot obtain a background clearance, the space will be forfeited. Students who are found to be ineligible for clinical placement by the clinical agency after admission to the program shall be subject to dismissal from the program, as they will be unable to complete mandatory clinical rotations.
- A physical examination completed by a physician of the student's choice is required after acceptance to the Program to demonstrate that a student meets the technical standards necessary to meet the Program objectives. Appropriate immunizations and/or vaccinations and fit testing are also required and are performed at the student's expense.

More information can be found on the Allied Health web site at www2.bakersfieldcollege.edu/alliedhealth/ or in the Bakersfield College Allied Health Office, MS 178.

LICENSURE/CERTIFICATION ELIGIBILITY

Students with a misdemeanor and/or felony arrest conviction, either current or prior, may not receive certification or licensure from the State or County. Also, proof of citizenship (social security card and certified birth certificate) and fingerprinting are required by State certification/licensure agencies. Anyone who wishes clarification may contact the Kern County Emergency Medical Services Office at (661) 868-5200. Upon successful completion of the course, students will be eligible to sit for the National Registry EMT-Basic Examination (NREMT).

ACCREDITATION AND PROGRAM APPROVAL

Bakersfield College is accredited by the Western Association of Schools and Colleges. The Emergency Medical Technician (EMT) Program is approved by Kern County Emergency Medical Services and meets all State and County requirements.

Emergency Medical Technician 1 (EMT-1) Job Skills Certificate

Total Units: 7.5

This certificate complies with state requirements and ensures that the student has met the local EMS (Kern County Authority) approval for county protocol training. It is also required for ambulance personnel and some other first care providers such as law enforcement and fire personnel. The certificate provides proof of successful completion of an approved EMT-1 program which is enforcement and fire personnel. The certificate provides proof of successful completion of an approved EMT-1 program which is necessary for the student to take the national licensure exam. Students must complete the required course with at least a “B” grade.

Career Opportunities in Emergency Medical Technology

Employment as an emergency medical technician with the fire department, hospitals, and a variety of healthcare settings statewide.

Total Units: 7.5

Required Course:

Course Number	Title	Units
EMTC B50	Emergency Medical Technician I	7.5

ENGINEERING

People working in the field of engineering and related technical fields “bridge the gap” between scientific principles and the application of these principles to the needs of society. The field is quite diversified with exciting job opportunities for people with varied mathematical, scientific, and technical skills.

An engineer uses experience and judgment, as well as advanced training in engineering, science, and mathematics to formulate ideas and designs, and to determine standards, specifications, work orders and schedules so that projects can be economically beneficial to mankind. A Bachelor of Science Degree in Engineering is required. Many engineers earn Master’s or Doctor’s degrees. Career opportunities in Engineering include Junior Civil Engineer, Engineering Technician and Designer.

Engineering Associate in Science Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of “C” or better.

Total Units: 47

Required Courses:

Course Number	Title	Units
*MATH B6a	Analytic Geometry & Calculus I	4.0
MATH B6b	Analytic Geometry & Calculus II	4.0
MATH B6c	Calculus III	4.0
MATH B6d	Ordinary Differential Equations	3.0
*CHEM B1a	General Chemistry I	5.0
*PHYS B4a	Mechanics & Wave Motion	4.0
PHYS B4b	Heat, Electricity, & Magnetism	4.0
PHYS B4c	Optics & Modern Physics	4.0
ENGR B17	Introduction to Electric Circuits	3.0
ENGR B36	Engineering Mechanics-Statics	3.0
ENGR B45	Properties of Materials	3.0
ENGR B19C/C++	Computer Programming for Science, Engineering and Technology	3.0
**ENGR B47	Introduction to Engineering and Design	3.0

* May be used to also fulfill general education requirements.
 **Meets student development requirement.

University of California, California State University and Private Universities

Working together with a counselor or academic advisor, a student may develop a program of study leading to transfer into the upper division of a Bachelor’s Degree program in Engineering.

Bakersfield College offers all of the courses required for two full years of engineering education. Completion of these courses, called the “engineering core” prepares students for transfer at the junior level to the colleges and universities offering Bachelor’s degrees in engineering. Four –year colleges and universities neither require, nor recommend, that engineering majors complete lower division general education requirements prior to transfer. Please check www.assist.org for complete transfer requirements. The following Bakersfield College courses satisfy the engineering core program:

Course Number	Title	Units
MATH B6a	Analytic Geometry & Calculus I	4.0
MATH B6b	Analytic Geometry & Calculus II	4.0
MATH B6c	Calculus III	4.0
MATH B6d	Ordinary Differential Equations	3.0
PHYS B4a	Mechanics & Wave Motion	4.0
PHYS B4b	Heat, Electricity & Magnetism	4.0
CHEM B1a	General Chemistry I	5.0

ENGR B17	Introduction to Electric Circuits	3.0
ENGR B19C/C++	Computer Programming for Science Engineering and Technology	3.0
ENGR B36	Engineering Mechanics – Statics	3.0
ENGR B45	Properties of Materials	3.0
ENGR B47	Introduction to Engineering & Design	3.0

The following technical electives may be required for particular engineering disciplines:

Course Number	Title	Units
MATH B6e	Elementary Linear Algebra	3.0
PHYS B4c	Optics & Modern Physics	4.0
INDR B10	Introduction to Industrial Drawing & Graphics	1.0
INDR B11	Introduction to Computer Aided Drafting & Design (CAD)	1.0
CHEM B1b	General Chemistry & Chemical Analysis	5.0
COMS B35	OOP and Data Structures with C++	3.0
ENGR B17L	Electric Circuit Laboratory	1.0
ENGR B24	Engineering Graphics & Descriptive Geometry	2.0
ENGR B37	Engineering Mechanics – Dynamics	3.0
ENGR B40	Surveying I	3.0
GEOL B10	Introduction to Geology	3.0
BIOL B3a	General Biology	5.0

The following general education courses may also be required for transfer:

- ENGL B1a
- COMM B1, B2, or B8
- PHIL B7 (CSU), PHIL B9, or ENGL B2
- (One) Arts or Humanities course
- (One) Social and Behavioral Science course

Engineering Technology Associate in Science Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of “C” or better.

Cal Poly Pomona; California State University, Sacramento; California State University, Long Beach

Engineering technologists and engineering technicians are members of a technical team that also includes scientists, engineers and craftsmen. The members of the technical team perform job functions that are complementary and sometimes overlapping. By virtue of their education, training and interests, engineering technologists and engineering technicians are usually differentiated as follows:

An engineering technologist uses applied and basic training in mathematics, science, and engineering classes, engineering methods learned through classes and experience, and developed technical (hands-on) skills in direct support of engineering activities. A Bachelor of Science degree in Engineering Technology is required.

An engineering technician operates in a support role to aid in design, production, manufacturing, operations, and maintenance. Under professional direction, the engineering technician conducts tests, trouble shooting and analysis, and other similar projects, or carries out functions such as drafting, surveying,

designing and technical sales. An Associate in Science degree or a Certificate of Engineering Technology is required.

Bakersfield College offers courses required for two years of engineering technology education. Completion of these courses, called the “engineering technology core” prepares students either for transfer to the colleges and universities offering bachelor’s degrees in Engineering Technology, or for completion of an Associate in Science degree in Engineering Technology. A beginning engineering technology student should have completed high school mathematics through intermediate algebra or MATH BD at Bakersfield College, one year of high school drafting, and be eligible for ENGL B50.

The following courses are required to satisfy the engineering technology core and Associate in Science program:

Total Units: 40

Required Courses:

Course Number	Title	Units
**ENGR B47	Introduction to Engineering and Design	3.0
ENGR B45	Properties of Materials	3.0
ENGR B24	Engineering Graphics and Descriptive Geometry	2.0
INDR B10	Introduction to Industrial Drawing & Graphics	1.0
INDR B11	Introduction to Computer Aided Drafting and Design (CAD)	1.0
*CHEM B2a	Introductory General Chemistry	4.0
*PHYS B2a	General Physics-Mechanics and Heat	4.0
PHYS B2b	General Physics-Sound, Light, Electricity, Magnetism, Modern Physics	4.0
*MATH B6ab	Analytic Geometry and Calculus	8.0
ENGR B19C/C++	Computer Programming for Science, Engineering and Technology (C)	3.0

* May be used to also fulfill general education requirements

**Meets student development requirement

In addition, seven or more units from the following approved programs and/or subject areas are to be selected. See counselor or advisor for specific courses.

Electronics/Electrical Technology; Construction Technology; Manufacturing Processes Technology; Welding/Fabrication; Industrial Drawing and Graphics.

ENGLISH

Studies in English provide preparation for the professions, government service, and politics. Career opportunities in English include teaching, journalism, publishing, advertising, and copywriting.

Students seeking an Associate Degree must take the writing course English B1a and may take a literature class to fulfill the humanities requirement. Students seeking a Baccalaureate Degree should take English B1a and may take English B1b and other literature courses to fulfill specific General Education requirements. Students planning to major in English should take English B1a and B1b and at least two of

the following: English B5a, B5b, B20a, B20b, B30a, B30b. Students planning to transfer to the University of California should consider English B2. For specific information, students should consult the catalog of the school to which they intend to transfer.

English Associate in Arts Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of “C” or better.

Total Units: 18

Required Courses:

Course Number	Title	Units
ENGL B1a	Expository Composition	4.0
ENGL B1b	Introduction to Types of Literature	3.0

Choose 6 units from the following:

Course Number	Title	Units
ENGL B5a	Survey of English Literature	3.0
ENGL B5b	Survey of English Literature	3.0
ENGL B30a	Survey of American Literature	3.0
ENGL B30b	Survey of American Literature	3.0

Electives: at least 5 units

ENGL B2	Advanced Composition & Critical Thinking	5.0
ENGL B10	Introduction to Shakespeare	3.0
ENGL B20a	Survey of World Literature	3.0
ENGL B21	African-American Literature	3.0
ENGL B23	Women’s Literature	3.0
ENGL B27	The Bible as Literature	3.0
ENGL B28	Classical Mythology	3.0
ENGL B35	Children’s Literature and Storytelling	3.0
ENGL B41a	Introduction to Creative Writing	3.0

ENVIRONMENTAL HORTICULTURE

See Agriculture

FIRE TECHNOLOGY

Fire Technology Certificate of Achievement

This certificate was developed to assist students who desire to become a firefighter, or desire Fire Technology as a career. This certificate will aid existing firefighters in promoting/advancing through the ranks of engineer, captain, battalion chief, etc. The Bakersfield Fire Department requires an A.A./A.S. Degree before a captain can take the promotional exam for battalion chief. This course of study will transfer to a four-year institute.

Note: Fire B-1 is a prerequisite and must be completed before taking other core fire technology courses. Fire B-1 can be waived if the student has completed either academy (B-62 or B-63) and B-2 can be waived for students who have a minimum of two years continuous experience as a full-time paid firefighter. A G.P.A. of at least 2.0 is required in the fire technology program. Of the 30 units required, a minimum of 12 units must be completed at Bakersfield College.

Bakersfield College’s Regional Fire Technology Academy (RFTA) was authorized by the California Fire Service Training and Education System (CFSTES) in 1980, with programs of study leading to Certified Fire and Certified Fire Chief. RFTA sponsors many cooperative training programs with federal, state, and local fire protection agencies. Individuals may develop a program suitable to their career goals with the aid of a college counselor. Courses may lead to the achievement of specific career goals, immediate employment, an Associate Degree, or transfer credits that satisfy requirements for a Bachelor’s Degree in Fire Technology.

Total Units: 32

Required Courses:

Course Number	Title	Units
FIRE B1	Fire Protection Organization	3.0
FIRE B2 or FIRE B7	Personal Fire Safety & Emergency Action Building Construction for Fire Protection	3.0
FIRE B3 or FIRE B51b	Fire Command, Strategy, Tactics Fire Command 1A (2.0)	3.0
FIRE B4	Fire Behavior and Combustion	3.0
FIRE B5 or FIRE B51d & FIRE B51e	Fire Prevention Technology Fire Prevention 1A (2.0) Fire Prevention 1B (2.0)	3.0
FIRE B6	Fire Protection Equipment & Systems	3.0
FIRE B72h	Emergency Medical Technician 1	4.0

Required General Education Courses:

*ENGL B50 or ENGL B1a	Introduction to College Composition Expository Composition	4.0
PSYC B1a or SOCI B1	General Psychology Introduction to Sociology	3.0
COMM B1 or COMM B2 or COMM B4 or COMM B8	Public Speaking Interpersonal Communication Persuasive Communication Small Group Communication	3.0

*ENGL B60 may be substituted for ENGL B50 or ENGL B1a for Fire Technology Certificate of Achievement only.

Note: FIRE B1 and B2 are waived for students who have a minimum of 2 years service as a paid, full-time firefighter. A G.P.A. of at least 2.0 is required in the certificate program. Of the 30 units required, a minimum of 12 units must be completed at Bakersfield College.

Fire Technology Associate in Arts Degree

This degree program of study was developed to assist students who desire to become a firefighter, or desire Fire Technology as a career. This certificate will aid existing firefighters in promoting/advancing through the ranks of engineer, captain, battalion chief, etc. The Bakersfield Fire Department requires an A.A./A.S. Degree before a captain can take the promotional exam for battalion chief. This course of study will transfer to a four-year institute.

Note: Fire B-1 is a prerequisite and must be completed before taking other core fire technology courses. Fire B-1

can be waived if the student has completed either academy (B-62 or B-63) and B-2 can be waived for students who have a minimum of two years continuous experience as a full-time paid firefighter. A G.P.A. of at least 2.0 is required in the fire technology program. Of the 30 units required, a minimum of 12 units must be completed at Bakersfield

Bakersfield College’s Regional Fire Technology Academy (RFTA) was authorized by the California Fire Service Training and Education System (CFSTES) in 1980, with programs of study leading to Certified Fire and Certified Fire Chief. RFTA sponsors many cooperative training programs with federal, state, and local fire protection agencies. Individuals may develop a program suitable to their career goals with the aid of a college counselor. Courses may lead to the achievement of specific career goals, immediate employment, an Associate Degree, or transfer credits that satisfy requirements for a Bachelor’s Degree in Fire Technology.

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of “C” or better.

Total Units: 22

Required Courses:

Course Number	Title	Units
FIRE B1	Fire Protection Organization	3.0
FIRE B2 or FIRE B7	Personal Fire Safety & Emergency Action Building Construction for Fire Protection	3.0
FIRE B3	Fire Command, Strategy, Tactics	3.0
FIRE B4	Fire Behavior and Combustion	3.0
FIRE B5	Fire Prevention Technology	3.0
FIRE B6	Fire Protection Equipment & Systems	3.0
FIRE B72h	Emergency Medical Technician 1	4.0

Fire Technology Associate in Science Degree

This degree program of study was developed to assist students who desire to become a firefighter, or desire Fire Technology as a career. This certificate will aid existing firefighters in promoting/advancing through the ranks of engineer, captain, battalion chief, etc. The Bakersfield Fire Department requires an A.A./A.S. Degree before a captain can take the promotional exam for battalion chief. This course of study will transfer to a four-year institute.

Note: Fire B-1 is a prerequisite and must be completed before taking other core fire technology courses. Fire B-1 can be waived if the student has completed either academy (B-62 or B-63) and B-2 can be waived for students who have a minimum of two years continuous experience as a full-time paid firefighter. A G.P.A. of at least 2.0 is required in the fire technology program. Of the 30 units required, a minimum of 12 units must be completed at Bakersfield

Bakersfield College’s Regional Fire Technology Academy (RFTA) was authorized by the California Fire Service Training and Education System (CFSTES) in 1980, with programs of study leading to Certified Fire and Certified Fire Chief. RFTA sponsors many cooperative training programs with federal,

state, and local fire protection agencies. Individuals may develop a program suitable to their career goals with the aid of a college counselor. Courses may lead to the achievement of specific career goals, immediate employment, an Associate Degree, or transfer credits that satisfy requirements for a Bachelor’s Degree in Fire Technology.

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of “C” or better.

Total Units: 32

Required Courses:

Course Number	Title	Units
FIRE B1	Fire Protection Organization	3.0
FIRE B2 or FIRE B7	Personal Fire Safety & Emergency Action Building Construction for Fire Protection	3.0
FIRE B3	Fire Command, Strategy, Tactics	3.0
FIRE B4	Fire Behavior and Combustion	3.0
FIRE B5	Fire Prevention Technology	3.0
FIRE B6	Fire Protection Equipment & Systems	3.0
FIRE B72h	Emergency Medical Technician 1	4.0
FIRE B51a	Fire Management 1A	2.0
FIRE B51b	Fire Command 1A	2.0
FIRE B51d	Fire Prevention 1A	2.0
*FIRE B51c and *FIRE B51e or WEXP B248 or WEXP B249	Fire Command 1B Fire Prevention 1B Cooperative Work Experience Cooperative Work Experience (4.0)	2.0 2.0 4.0

*Note: Students may substitute up to 4 units of work experience credit in place of FIRE B51c and/or FIRE B51e.

Wildland Fire Technology Associate in Science Degree

This degree is designed for people who desire to enter or enhance their career in a state or federal wildland firefighting agency. The course material is linked with the National Multi-Agency Coordinating Group certification process. Students are given the opportunity to take several didactic and practical tests administered throughout the program to attain both state and national level wildland competencies. The core curriculum includes certification material to secure the basic wildland red card needed for employment in a wildland fire agency. Additional course work is designed to meet or exceed the National Fire Protection Association’s 1051 Standard on Wildland Fire Fighter Professional Qualifications. The elective material is designed to allow a student to obtain some degree of specialization that may tailor a student’s education to qualify for supervisor positions in a wildland organization. Students may be placed in paramilitary and physically demanding environments designed to introduce the student to the job tasks and skills required to operate in the wildland fire services. Career opportunities include the Forest Service and the Bureau of Land Management. Discharged military service personnel can use their military service time towards their career in the Forest Service or the BLM.

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of

“C” or better.

Total Units: 30

Required Courses:

Course Number	Title	Units
FIRE B25a	Wildland Fire Behavior	3.0
FIRE B25b	Wildland Firefighter Safety & Survival	3.0
FIRE B25c	Wildland Fire Operations	3.0
FIRE B25d	Wildland Public Information Officer, Prevention, & Investigation	3.0
FIRE B25e	Wildland Fire Logistics, Finance, & Planning	3.0
Electives: at least 15 units		
FIRE B25f	Wildland Firefighter	4.0
FIRE B25g	Wildland Engine Firefighter	3.0
FIRE B25h	Wildland Fire Dispatching	3.0
FIRE B26a	Initial Attack Incident Commander Type 4 (ICT4) (S-200)	1.0
FIRE B26d	Interagency Incident Business Management (S-260)	1.0
FIRE B26e	Fire Operations in the Wildland Urban Interface (S-215)	1.5
FIRE B26g	Crew Boss (S-230)	1.5
FIRE B26k	Field Observer (S-244)	1.0
FIRE B26m	Display Processor (S-245)	0.5
FIRE B27a	Basic Incident Command System (I-200)	1.0
FIRE B27b	I-300 Intermediate Incident Command System (I-300)	1.5
FIRE B28b	L-280 Followership to Leadership	0.5

Chief Officer Certification (Nfpa Standard 1021) Certificate of Achievement

The Fire Chief Certification will prepare students currently employed in fire science occupations to qualify for promotions such as to Battalion Chief and higher. This training utilizes curricula developed by the California Fire Service Training and Education System (CFSTES, the training branch of the California State Fire Marshall) and meets California Board of Fire Services standards. Certification as a CSFM Fire Officer provides in-service fire personnel the ability to promote and advance in their careers and may provide for educational pay incentives.

Total Units: 22

Required Courses:

Course Number	Title	Units
FIRE B50a	Fire Command 2-Command Tactics at Major Fires	2.0
FIRE B50b	Fire Command 2b-Scene Management at Major Incidents	2.0
FIRE B50c	Fire Command 2c-High-Rise Fire Tactics	2.0
FIRE B50d	Fire Command 2d-Management of Large-Scale Disasters	2.0
FIRE B50e	Fire Command 2e-Wildland Fire Tactics	2.0
FIRE B50f	Fire Management 2a-Organizational Development and Human Relations	2.0
FIRE B50g	Fire Management 2b-Finance and Business Management for Chief Officers	2.0
FIRE B50h*	Fire Management 2c-Computer Application for the Fire Service	2.0
FIRE B50i	Fire Management 2d-Master Planning	2.0

FIRE B50j	Fire Management 2e-Staff Assignments and Line Functions	2.0
FIRE B50k*	Fire Investigation	2.0

*Courses are offered from State Fire Marshall’s Office only.

Fire Officer Certification (Nfpa Standard 1021) Certificate of Achievement

The Fire Officer Certification will prepare students currently employed in fire science occupations to qualify for promotions such as to fire officer. This training utilizes curricula developed by the California Fire Service Training and Education System (CFSTES, the training branch of the California State Fire Marshall) and meets California Board of Fire Services standards. Certification as a CSFM Fire Officer provides in-service fire personnel the ability to promote and advance in their careers and may provide for educational pay incentives.

Total Units: 18

Required Courses:

Course Number	Title	Units
FIRE B51a	Fire Management 1a	2.0
FIRE B51b	Fire Command 1a	2.0
FIRE B51c	Fire Command 1b	2.0
FIRE B51d	Fire Prevention 1a	2.0
FIRE B51e	Fire Prevention 1b	2.0
FIRE B51f	Fire Investigation 1a	2.0
FIRE B51g	Fire Instructor 1a	2.0
FIRE B51h	Fire Instructor 1b	2.0
FIRE B51i	Fire Prevention 1c	2.0

FOODS/NUTRITION

Child Nutrition Management Certificate of Achievement

Program emphasizes quality food production, production records, nutrition standards and student service in child nutrition programs including public and private schools, child-care centers and day-care centers.

A Certificate of Achievement may be earned by students who satisfactorily complete 24 units from the courses listed below with a minimum grade of “C” in all required courses. A Sanitation Certificate such as Serv Safe or equivalent is required for this certificate.

Total Units: 24

Required Courses:

Course Number	Title	Units
FDSV B50	Introduction to the Foodservice Industry	2.0
FDSV B52	Foodservice Sanitation and Safety	2.0
or		2.0
FDSV B55a & FDSV B55c & NUTR B10	Foodservice Production Theory I (2.5) Foodservice Production Laboratory I (2.0) Elementary Nutrition	3.0
WEXP B248 or WEXP B249	Cooperative Work Experience Education	2.0
ENGL	English Course	3.0
COMS	Computer Studies Course	1.0-3.0

Electives: to equal at least 24 units

Course Number	Title	Units
FDSV B55a	Foodservice Production Theory I	2.5
FDSV B55b	Foodservice Production Theory II	2.5
FDSV B55c	Foodservice Production Laboratory I	2.0
FDSV B55d	Foodservice Production Laboratory II	2.0
FDSV B59	Foodservice Production Management	3.0
FDSV B71	Servsafe Certification	0.5

Child Nutrition Program Management Option Associate in Science Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of "C" or better. Program emphasizes quality food production, production records, nutrition standards and student service in Child Nutrition Programs including public and private schools, childcare centers and day care centers. A Sanitation Certificate such as Serv Safe or equivalent is required for this A.S. Degree.

Total Units: 30

Required Courses:

Course Number	Title	Units
FDSV B50	Introduction to the Foodservice Industry	2.0
FDSV B52	Foodservice Sanitation and Safety	2.0
FDSV B55a	Foodservice Production Theory I	2.5
FDSV B55c	Foodservice Production Laboratory I	2.0
NUTR B10	Elementary Nutrition	3.0
WEXP B248 or WEXP B249	Cooperative Work Experience Education	2.0
COMS	Computer Studies Course	1.0-3.0

Electives: to equal at least 30 units

Course Number	Title	Units
FDSV B55b	Foodservice Production Theory II	2.5
FDSV B55d	Foodservice Production Laboratory II	2.0
FDSV B59	Foodservice Production Management	3.0
FDSV B60	Cost Control	3.0
FDSV B71	ServSafe Certification	0.5

Culinary Arts Certificate of Achievement

Program emphasizes quality food production and service in commercial and institutional food service operations. Course work includes practical training in the campus restaurant, the Renegade Room.

A Certificate of Achievement may be earned by students who satisfactorily complete 24.5 units from the courses listed below with a minimum grade of "C" in all required courses.

A sanitation certificate such as Serv Safe or equivalent is required for this Certificate.

Total Units: 24.5

Required Courses:

Successful completion of the Servsafe exam and:

Course Number	Title	Units
FDSV B50	Introduction to the Foodservice Industry	2.0
FDSV B51	Food & Nutrition Orientation	0.5
FDSV B52	Foodservice Sanitation and Safety	2.0

FDSV B55a	Foodservice Production Theory I	2.5
FDSV B55b	Foodservice Production Theory II	2.5
FDSV B55c	Foodservice Production Laboratory I	2.0
FDSV B55d	Foodservice Production Laboratory II	2.0
FDSV B55f	Fundamentals of Baking	2.0
FDSV B55i	Food and Nutrition Internship	1.0
FDSV B59	Food Service Production Management	3.0
NUTR B10	Elementary Nutrition	3.0
WEXP B248	Cooperative Work Experience Education	2.0

Culinary Arts Associate in Science Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of "C" or better.

Program emphasizes quality food production and service in commercial and institutional food service. Course work includes practical training in the campus restaurant, the Renegade Room. A Sanitation Certificate such as Serv Safe or equivalent is required for this A.S. Degree. All courses used for meeting the requirements for degrees must be completed with a grade of "C" or better.

Career opportunities in Food Service include Sous Chef, Food Service Manager, Food Buyer, and Cook.

Total Units: 27.5

Required Courses:

Successful completion of the Servsafe exam and:

Course Number	Title	Units
FDSV B50	Introduction to the Foodservice Industry	2.0
FDSV B51	Food and Nutrition Orientation	0.5
FDSV B52	Foodservice Sanitation and Safety	2.0
FDSV B55a	Foodservice Production Theory I	2.5
FDSV B55b	Foodservice Production Theory II	2.5
FDSV B55c	Foodservice Production Laboratory I	2.0
FDSV B55d	Foodservice Production Laboratory II	2.0
FDSV B55e	Advanced Foodservice Practicum	3.0
FDSV B55f	Fundamentals of Baking	2.0
FDSV B55i	Food and Nutrition Internship	1.0
FDSV B59	Foodservice Production Management	3.0
NUTR B10	Elementary Nutrition	3.0
WEXP B248	Cooperative Work Experience Education	2.0

Dietetic Services Supervisor Program Certificate of Achievement

Program provides training for students planning employment in the foodservice department of a health care operation. Courses in this program meet State of California Department of Health Services certification requirements. Consult with a member of the Foods and Nutrition Program staff before scheduling courses in the program. At this time appropriate clinical field experience will be planned. A Certificate of Achievement may be earned by students who satisfactorily complete 18.5 units from the courses listed below with a minimum grade of "C" in all required courses. A Sanitation Certificate such as Serv Safe or equivalent is required for this certificate.

Total Units: 18.5

Required Courses:

Successful completion of the Servsafe exam and:

Course Number	Title	Units
FDSV B50	Introduction to the Foodservice Industry	2.0
FDSV B52	Foodservice Sanitation and Safety	2.0
FDSV B55a	Foodservice Production Theory I	2.5
FDSV B55c	Foodservice Production Laboratory I	2.0
FDSV B59	Foodservice Production Management	3.0
NUTR B10	Elementary Nutrition	3.0
NUTR B50	Modified Diets	2.0
FDSV B64a	Dietetic Service Supervisor Practicum	2.0

Foodservice Management Option Associate in Science Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of "C" or better. A Sanitation Certificate such as Serv Safe or equivalent is required for this A.S. Degree.

Total Units: 29.5

Required Courses:

Successful completion of the Servsafe exam and:

Course Number	Title	Units
FDSV B50	Introduction to the Foodservice Industry	2.0
FDSV B51	Food & Nutrition Orientation	0.5
FDSV B52	Foodservice Sanitation and Safety	2.0
FDSV B55a	Foodservice Production Theory I	2.5
FDSV B55b	Foodservice Production Theory II	2.5
FDSV B55c	Foodservice Production Laboratory I	2.0
FDSV B55e	Advanced Foodservice Practicum	3.0
FDSV B55i	Food and Nutrition Internship	1.0
FDSV B59	Foodservice Production Management	3.0
NUTR B10	Elementary Nutrition	3.0
WEXP B248	Cooperative Work Experience Education	2.0
BSAD B53a	Introduction to Accounting I	3.0
SPST B201L	Special Projects and Studies	3.0

FORESTRY

See Agriculture

FRENCH

French Associate in Arts Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of "C" or better.

The major in French provides a linguistic and grammatical study of the French language and an in-depth examination of French culture and geography. The objective of the program is to prepare students for transfer to a four-year university. Employment opportunities for graduates include translation and foreign service. Career opportunities in French can lead to careers in teaching, translating, and foreign service.

Total Units: 20

Required Courses:

Course Number	Title	Units
FREN B1	Elementary French	5.0
FREN B2	Elementary French	4.0
FREN B3	Intermediate French	4.0
FREN B4	Intermediate French	4.0
COMM B1	Public Speaking	3.0

GEOLOGY

Geology Associate in Science Degree

The major in geology is appropriate for students interested in the natural science who desire to be employable within the local petroleum industry as a geo-tech, or who plan to transfer to a 4-year university with a major in geology. The major is designed to provide students with complete general education in math and science, a well-rounded introduction to physical and historical geology, as well as an introduction to some basic engineering skills.

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of "C" or better.

Total Units: 33

Required Courses:

Course Number	Title	Units
GEOL B10	Introduction to Geology	3.0
GEOL B10L	Introduction to Geology Laboratory	1.0
GEOL B11	Historical Geology	3.0
GEOL B11L	Historical Geology Laboratory	1.0
GEOL	Electives	3.0
CHEM B1a or CHEM B2a	General Chemistry I Introductory General Chemistry (4.0)	5.0
INDR B10	Introduction to Industrial Drawing & Graphics	1.0
MATH B1b	Precalculus II	4.0
MATH BD	Intermediate Algebra	5.0
COMS B37	Introduction to Geographic Information Systems (GIS)	3.0
PHYS B2a	General Physics-Mechanics & Heat	4.0

Suggested Program for Geology A.S. Degree

First Semester

Course Number	Title	Units
GEOL B10	Introduction to Geology	3.0
GEOL B10L	Introduction to Geology Laboratory	1.0
INDR B10	Introduction to Industrial Drawing & Graphics	1.0
MATH BD	Intermediate Algebra	5.0

Second Semester

Course Number	Title	Units
MATH B1b	Precalculus II	4.0
GEOL	Elective	3.0

Third Semester

Course Number	Title	Units
CHEM B2a	Introductory General Chemistry	4.0
COMS B37	Introduction to Geographic Information Systems (GIS)	3.0

Fourth Semester

Course Number	Title	Units
PHYS B2a	General Physics-Mechanics & Heat	4.0
GEOL B11	Historical Geology	3.0
and GEOL B11L	Historical Geology Laboratory	1.0

Suggested Electives

Course Number	Title	Units
ACDV B5	Tutor Training and Practicum	2.0
ANTH B3	Introduction To Archaeology	3.0
ART B3cd	Three Dimensional Design	3.0
BSAD B5	Human Relations/People Skills	3.0
GEOL B12	Geology of California	3.0
GEOL B21	Topics in Geology	1-3.0
GEOL B35a	Rocks and Minerals	1.0
GEOL B35b	Geology of Kern County	1.0

Suggested Transfer Program

Before planning a study list, the community college student should consult his/her counselor and study the catalog of the senior institution to which he/she wants to transfer.

UCLA

Course Number	Title	Units
CHEM B1a	General Chemistry I	5.0
CHEM B1b	General Chemistry & Chemical Analysis	5.0
MATH B6a	Analytic Geometry & Calculus I	4.0
MATH B6b	Analytic Geometry & Calculus II	4.0
PHYS B2a	General Physics-Mechanics & Heat	4.0
PHYS B2b	General Physics-Sound, Light, Electricity, Magnetism, Modern Physics	4.0
BIOL B3a	General Biology I	5.0
BIOL B3b	General Biology II	5.0

San Diego State University

Course Number	Title	Units
GEOL B10	Introduction to Geology	3.0
GEOL B10L	Geology Laboratory	1.0
CHEM B1a	General Chemistry I	5.0
CHEM B1b	General Chemistry & Chemical Analysis	5.0
BIOL B11	Concepts of Biology	4.0
MATH B6a	Analytic Geometry & Calculus I	4.0

Recommended Courses

Course Number	Title	Units
INDR B10	Introduction to Industrial Drawing & Graphics	1.0
MATH B6b	Analytic Geometry & Calculus II	4.0

HISTORY

The major in history is designed for students interested in gaining an understanding of our political, economic and social past. The major is an important part of the liberal arts program and can serve as preparation for graduate study in education,

law, business, government and journalism. Many employers value the writing and thinking skills acquired by History majors. The knowledge gained in history is fundamental for an understanding of many of the other fields of learning.

Bakersfield College offers a wide variety of history courses in addition to those listed below. The student should select courses according to his/her area of specialization as well as the requirements of the college to which he/she plans to transfer. The student should also consult his/her counselor and the appropriate four-year college catalogs in determining an appropriate minor, foreign language requirements, and other core requirements.

History Associate in Arts Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of "C" or better.

Total Units: 18

Required Courses:

Course Number	Title	Units
HIST B4ab or HIST B1 and	European Civilization World History from the Origins of Civilizations to 1500 (3.0)	6.0
HIST B2	History of the World Since 1500 (3.0)	

AND one of the following:

Course Number	Title	Units
HIST B17ab	History of the U.S.	6.0
HIST B20ab	African American History of the United States	6.0
HIST B30ab	Chicano History	6.0

AND any two of the following courses:

Course Number	Title	Units
ECON B2	Principles of Economics-Macro	3.0
HIST B25	Introduction to Women in American History	3.0
HIST B18	History of California	3.0
HIST B36	History of Native American Indians	3.0
GEOG B1	Physical Elements of Geography	3.0
POLS B1	American Government: National, State and local	3.0
POLS B2	Comparative Government	3.0
POLS B3	International Politics	3.0
SOCI B1	Introduction to Sociology	3.0
HIST B3	Modern Global Societies	3.0
HIST B33	Latin American History	3.0
HIST B15	Civilizations of the Middle East	3.0

Recommended Courses

Course Number	Title	Units
ENGL B2	Advanced Composition and Critical Thinking	5.0
PHIL B6a	Introduction to Philosophy	3.0
PSYC B1a	General Psychology	3.0
ANTH B2	Cultural Anthropology	3.0

HORTICULTURE

See Agriculture

HUMAN SERVICES

Human Services Job Skills Certificate

The Human Service certificate emphasizes classroom instruction as well as hands-on-experience through interning with community Human Services agencies. The field of Human Services is very broad. It is concerned with meeting human needs and improving the overall quality of people’s lives. The field is interdisciplinary, meaning that knowledge from a variety of other fields of study is applied to the overall goal of helping people.

Upon completion of the following courses with at least a “C” grade in each course, the student will be awarded a Human Services Job Skills Certificate.

Total Units: 15

Required Courses:

Course Number	Title	Units
COMS B5	Introduction to Microsoft Office 2010	3.0
ENGL B50	Introduction to College Composition	4.0
HMSV B40	Introduction to Human Services	3.0
HMSV B5	Human Services Internship	2.0
SOCI B1	Introduction to Sociology	3.0

Human Services Associate in Arts Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of “C” or better.

The major in Human Services provides the student with an academic background for entry-level positions in various human services agencies. It also prepares the student for upper-division work in human services and other behavioral sciences. The field is interdisciplinary with the overall career goal of helping people.

Total Units: 19

Required Courses:

Course Number	Title	Units
HMSV B40	Introduction to Human Services	3.0
SOCI B1	Introduction to Sociology	3.0
SOCI B45	Minority Relations	3.0
PSYC B1a	General Psychology	3.0
PSYC B40 or CHDV B21	Introduction to Lifespan Psychology Child Growth and Development: Birth Through Adolescence	3.0

In addition, a total of four units of HMSV B5 is required. Two units are permitted in a give semester. All units must be completed in agencies where assignment and supervision is approved by the Program Coordinator. Students wishing to enroll in HMSV B5 must have completed HMSV B40.

Course Number	Title	Units
HMSV B5	Human Services Internship	4.0

Human Services Associate in Science Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of “C” or better.

The major in Human Services provides the student with an academic background for entry-level positions in various human services agencies. It also prepares the student for upper-division work in human services and the other behavioral sciences. The field is interdisciplinary and knowledge applies to any career related to the goal of helping people.

Total Units: 30

Required Courses:

Course Number	Title	Units
HMSV B40	Introduction to Human Services	3.0
SOCI B1	Introduction to Sociology	3.0
SOCI B45	Minority Relations	3.0
PSYC B1a	General Psychology	3.0
PSYC B40 or CHDV B21	Introduction to Lifespan Psychology Child Growth and Development: Birth Through Adolescence	3.0

In addition, a total of four units of HMSV B5 is required. Two units are permitted in a give semester. All units must be completed in agencies where assignment and supervision is approved by the Program Coordinator. Students wishing to enroll in HMSV B5 must have completed HMSV B40.

Course Number	Title	Units
HMSV B5	Human Services Internship	4.0

Electives: at least 11 units

Course Number	Title	Units
ANTH B1	Physical Anthropology	3.0
ANTH B2	Cultural Anthropology	3.0
ANTH B5	North American Indians	3.0
PSYC B1b	Biological Psychology	3.0
PSYC B2	Interpersonal & Group Process Skills	3.0
PSYC B5	Elementary Statistics for the Behavioral and Social Sciences	5.0
PSYC B20 or SOCI B20	Social Psychology	3.0
PSYC B30	Human Sexuality	3.0
PSYC B33	Psychology of Personal and Social Adjustment	3.0
PSYC B45	Principles of Learning and Behavior	3.0
HMSV B5	Human Services Internship	1.4.0
SOCI B2	Problems of Modern Society	3.0
SOCI B28	Women in the World	3.0
SOCI B36	Sociology of the Chicano	3.0
COMS B2 or COMS B52a or	Introduction to Computer Information Systems Introduction to the Microcomputer and Windows (1.5) Any computer related course	3.0
SPAN B1ab	Elementary Spanish	5.0

COMS B2 and COMS B5 are recommended for the Human Services Program, but a maximum of 3 units of any computer-related course(s) needed for a specific career application will be accepted.

INDUSTRIAL DRAWING

AutoCAD Job Skills Certificate

This certificate covers the principles of industrial drawing/ CAD with the emphasis on using the AutoCAD software package from basic 2D principles through 3D solid modeling to obtain graphic solutions, design refinements, modifications and delineations. Software customization is also emphasized. Career opportunities include drafter, CAD operator, engineering tech, CAD manager, and architecture CAD operator.

Upon completion of the following courses with at least a "C" grade in each course, the student will be awarded an AutoCAD Job Skills Certificate.

Total Units: 8

Required Courses:

Course Number	Title	Units
INDR B10	Introduction to Industrial Drawing and Graphics	1.0
INDR B11	Introduction to Computer Aided Drafting and Design (CAD)	1.0
INDR B20a	Computer Aided Drafting and Design (CAD)	3.0
INDR B20b	Computer Aided Drafting and Design (CAD)	3.0

Industrial Drawing Associate in Arts Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of "C" or better.

Total Units: 20

Required Courses:

Course Number	Title	Units
INDR B10	Introduction to Industrial Drawing and Graphics	1.0
INDR B11	Introduction to Computer Aided Drafting and Design (CAD)	1.0
INDR B20a	Computer Aided Drafting and Design (CAD)	3.0
INDR B50	Process Piping	3.0
INDR B51	Electrical Design	3.0
INDR B52	Geographic Information Systems (GIS)	3.0
INDR B40	Parametric Modeling Fundamentals	3.0

Electives: at least 3 units

Course Number	Title	Units
ARCH B16	Digital Tools for Graphics Communication	3.0
INDR B20b	Computer Aided Drafting and Design (CAD)	3.0

Industrial Technology, Industrial Drawing Option Associate in Science Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of "C" or better.

Total Units: 30

Required Courses:

Course Number	Title	Units
INDR B10	Introduction to Industrial Drawing and Graphics	1.0
INDR B11	Introduction to Computer Aided Drafting and Design (CAD)	1.0
INDR B20a	Computer Aided Drafting and Design (CAD)	3.0
INDR B20b	Computer Aided Drafting and Design (CAD)	3.0
INDR B40	Parametric Modeling Fundamentals	3.0
INDR B50	Process Piping	3.0
MATH BD	Intermediate Algebra	5.0
INDR B51	Electrical Design	3.0
INDR B52	Geographic Information Systems (GIS)	3.0
MFGT B1ab or WOOD B2	Machine Tool Processes Furniture and Cabinetmaking	3.0
COMS B5	Introduction to Microsoft Office 2010	3.0

Electives:

Course Number	Title	Units
ENGR B24	Engineering Graphics and Descriptive Geometry	2.0
WELD B1a	Introduction to Oxygen Acetylene Welding and Cutting	2.0
WELD B1b	Introduction to the Welding Processes	2.0

Suggested Program for Industrial Technology Industrial Drawing Option Associate in Science Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of "C" or better.

First Semester

Course Number	Title	Units
INDR B10	Introduction to Industrial Drawing and Graphics	1.0
INDR B11	Introduction to Computer Aided Drafting and Design (CAD)	1.0
MATH BD	Intermediate Algebra	5.0

Second Semester

Course Number	Title	Units
INDR B20a	Computer Aided Drafting and Design (CAD)	3.0
MATH BD	Intermediate Algebra	5.0
INDR B50 or INDR B52	Process Piping Geographic Information Systems (GIS)	3.0

Third Semester

Course Number	Title	Units
INDR B50 or INDR B52	Process Piping Geographic Information Systems (GIS)	3.0
INDR B51	Electrical Design	3.0

Fourth Semester

Course Number	Title	Units
COMS B5	Introduction to Microsoft Office 2010 General Education	3.0
INDR B40	Parametric Modeling Fundamentals	3.0

INDUSTRIAL TECHNOLOGY**Industrial Technology (General) Associate in Science Degree**

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of "C" or better.

Total Units: 30

Required Courses:

Course Number	Title	Units
MFGT B1ab	Machine Tool Processes	3.0
ELET B1	Basic Electronics (DC and AC)	4.0
INDR B10	Introduction to Industrial Drawing and Graphics	1.0
INDR B11	Introduction to Computer Aided Drafting and Design (CAD)	1.0
INDR B20a	Computer Aided Drafting and Design (CAD)	3.0
INDT B10	Occupational Readiness	3.0
WELD B1a	Introduction to Oxygen Acetylene Welding and Cutting	2.0
WELD B1b	Introduction to the Welding Processes	2.0

Electives: at least 3 units

Course Number	Title	Units
INDR B20b	Computer Aided Drafting and Design (CAD)	3.0
MFGT B2	CNC Lathe Programming & Operation	3.0
WOOD B2	Furniture and Cabinetmaking	3.0
AUTO B1ab	Introduction to Automotive Technology	4.0
CNST B1	Introduction to Construction	3.0
COMS B5	Introduction to Microsoft Office 2010	3.0

JOURNALISM**Journalism Associate in Arts Degree**

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of "C" or better.

Designed to provide training for entry into newspaper and magazine journalism and photojournalism.

Total Units: 18

Required Courses:

Course Number	Title	Units
JRNL B1	Media and Society	3.0
JRNL B2	Beginning Reporting	3.0
JRNL B15	Press Photography	3.0
JRNL B16	Multimedia Reporting	3.0

Select 6 units from the following courses:

JRNL B27a	Newspaper Production/Reporters	3-6.0
JRNL B27e	Newspaper Production/Photographers	3-6.0
JRNL B26	Newspaper Production/Editors	4.0

LIBERAL ARTS**Liberal Arts Associate in Arts Degree**

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of "C" or better.

The Liberal Arts major at Bakersfield College is designed to provide students with the opportunity to earn an associate in arts degree in a broad area of study. The major is interdisciplinary and allows students to develop a variety of skills transferable to numerous occupations and fields of study. The major is intended to provide general knowledge and to develop the intellectual capacities, such as reasoning and judgment, as opposed to professional or vocational skills. This major is suitable for transfer students preparing for upper division study in a variety of fields in the liberal arts and for those students undecided as to major or further study. Students may satisfy requirements for the Liberal Arts major by completing one of the two options listed below. With any option selected, students must also complete all graduation requirements for Bakersfield College including a total of 60 degree applicable units with an overall grade point average of 2.00.

Select one of the following options:

1. Option One.
 - a. Complete the Intersegmental General Education Transfer Curriculum (IGETC) with a "C" GPA.
 - b. Complete at least 18 units from recommended lower division major preparation for the major at the approved university of your choice with a "C" grade in each course.
 - c. UC transferable elective units, if needed, to total 60 units.
- OR
2. Option Two.
 - a. Complete CSU General Education Breadth with a "C" GPA.
 - b. Complete at least 18 units from recommended lower division major preparation for the major at the approved university of your choice with a "C" grade in each course.
 - c. CSU transferable elective units, if needed, to total 60 units.

LIBERAL STUDIES**Liberal Studies Associate in Arts Degree**

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of "C" or better.

Courses listed are based on information available at the time of publication of this catalog for the Liberal Studies Major Credential Track at CSU Bakersfield and are intended for students who plan to obtain a multiple subjects teaching

credential. Students are advised to see a counselor for the most current requirements for a Liberal Studies major at CSU Bakersfield. Students transferring to other colleges or universities are advised to consult the catalog of the school they plan to attend. This degree is articulated directly with CSU Bakersfield and may not be applicable to any other CSU.

Total Units: 18

Select 18 units from the courses in Areas One through Eight:

AREA One: Language

Course Number	Title	Units
ENGL B1a	Expository Composition	4.0
ENGL B1b or ENGL B10	Introduction to Types of Literature Introduction to Shakespeare	3.0
ENGL B21 or ENGL B23 or ENGL B30a or ENGL B30b or ENGL B35	African American Literature Women's Literature Survey of American Literature Survey of American Literature Children's Literature and Storytelling	3.0
COMM B1	Public Speaking	3.0

AREA Two: Mathematics

Course Number	Title	Units
MATH B4a	Mathematics for Elementary School Teaching I	5.0

AREA Three: Sciences

Course Number	Title	Units
BIOL B11	Concepts of Biology	4.0
PHSC B12	General Physical Science	4.0
ERSC B10	Introduction to Earth Science	3.0
ERSC B10L	Earth Science Laboratory	1.0

AREA Four: Humanities and Social Sciences

Course Number	Title	Units
HIST B17a	History of the United States	3.0
POLS B1	American Government: National, State, and Local	3.0
HIST B18	History of California	3.0
HIST B1	World History from the Origins of Civilizations to 1500	3.0
GEOG B2	Human Geography	3.0
PHIL B7 or PHIL B9 or COMM B5	Introduction to Logic Critical Thinking and Advanced Composition (4) Rhetoric and Argumentation	3.0

AREA Five: Visual and Performing Arts

Course Number	Title	Units
ART B1 or ART B2 or ART B35 or ART B36 or MUSC B2 or MUSC B22 or THEA B1 or THEA B20	Art Appreciation Drawing I Survey of Western Art I Survey of Western Art II Basic Elements of Music Music Appreciation Introduction to Acting A Survey of Theatre and the Roots of Entertainment	3.0

AREA Six: Health and Physical Education

Course Number	Title	Units
HLED B1	Principles of Health Education	3.0

AREA Seven: Human Development

Course Number	Title	Units
*PSYC B1a or PSYC B40 or CHDV B21	General Psychology Introduction to Lifespan Psychology Child Growth & Development: Birth through Adolescence	3.0 3.0 3.0

AREA Eight: Ethnic, Gender, Cultural and Handicapped Perspectives

No course articulated.

AREA Nine: Introductory Field Experience and Technology

Course Number	Title	Units
EDUC B24	Early Field Experience for Elementary Teachers	3.0
COMS B2 or COMS B3 or COMS B5	Introduction to Computer Information Systems Computer Concepts & Survival Skills Introduction to Microsoft Office 2010	3.0

MANAGEMENT

See Business Administration

MANUFACTURING/MACHINE TECHNOLOGY

Basic Machine Tool Operations-Lathe, Mill Job Skills Certificate

This certificate covers the principles of machine tool technology to include the use of precision measuring, drilling machines, saws, lathes and milling machines.

Upon completion of the following courses with at least a "C" grade in each course, the student will be awarded a Basic Machine Tool Operations-Lathe, Mill Job Skills Certificate.
Total Units: 3

Required Courses:

Course Number	Title	Units
MFGT B1ab	Machine Tool Processes	3.0

Computer Numerical Control Programming Job Skills Certificate

This certificate covers the principles of set-up, operation and programming of computer numerical control (CNC) lathes and milling machines.

Upon completion of the following courses with at least a "C" grade in each course, the student will be awarded a Computer Numerical Control Programming Job Skills Certificate.
Total Units: 6

Required Courses:

Course Number	Title	Units
MFGT B2	CNC Lathe Programming & Operation	3.0
MFGT B3	CNC Mill Programming	3.0

Control Systems Technology Certificate of Achievement

Total Units: 31

Required Courses:

Course Number	Title	Units
COMS B5	Introduction to Microsoft Office 2010	3.0
INDR B10	Introduction to Industrial Drawing and Graphics	1.0
INDR B11	Introduction to Computer Aided Drafting & Design (CAD)	1.0
INDT B10	Occupational Readiness	3.0
ELET B5	Programmable Logic Controllers	3.0
TECM B52	Introduction to Technical Mathematics	3.0
ELET B1	Basic Electronics (DC and AC)	4.0
ELET B55a	Electric Motors -- Controls	4.0
ELET B56	Instrumentation and Process Control	3.0

Electives: at least 6 units

Course Number	Title	Units
ELET	Electives	6.0

Industrial Technology, Control Systems Technology Associate in Science Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of "C" or better.

Total Units: 28

Required Courses:

Course Number	Title	Units
COMS B5	Introduction to Microsoft Office 2010	3.0
INDR B10	Introduction to Industrial Drawing and Graphics	1.0
INDR B11	Introduction to Computer Aided Drafting & Design (CAD)	1.0
INDT B10	Occupational Readiness	3.0
ELET B5	Programmable Logic Controllers	3.0
TECM B52	Introduction to Technical Mathematics	3.0
ELET B1	Basic Electronics (DC and AC)	4.0
ELET B55a	Electric Motors -- Controls	4.0
ELET B56	Instrumentation and Process Control	3.0
COMS B82	MCSE/CNE Networking Technologies - Network+	3.0

Manufacturing Technology Certificate of Achievement

Total Units: 30

Required Courses:

Course Number	Title	Units
MFGT B1ab	Machine Tool Processes	3.0
MFGT B2	CNC Lathe Programming & Operation	3.0
MFGT B3	CNC Mill Programming	3.0
INDR B10	Introduction to Industrial Drawing and Graphics	1.0
INDR B11	Introduction to Computer Aided Drafting and Design (CAD)	1.0
TECM B52 or MATH BA or equivalent	Introduction to Technical Mathematics Elementary Algebra	3.0
INDT B10 or	Occupational Readiness	3.0

equivalent WELD B1a	Introduction to Oxygen Acetylene Welding and Cutting	2.0
WELD B1b	Introduction to the Welding Processes	2.0
WELD B54a	Blueprint Reading for Welders and Machinists	3.0

Electives: at least 7 units

Course Number	Title	Units
INDR B20a	Computer Aided Drafting and Design	3.0
INDR B40	Parametric Modeling Fundamentals	3.0
INDT B273	Special Problems in Machine Tool Metal Working	2-3.0
WELD B74a	Introduction to GMAW (Gas Metal Arc Welding) and FCAW (Flux Core Arc Welding)	2.0
WELD B74b	Introduction to GTAW (Gas Tungsten Arc Welding)	2.0
WEXP B249	Cooperative Work Experience Education	1.0

Industrial Technology, Manufacturing Technology Option Associate in Science Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of "C" or better.

Total Units: 27

Required Courses:

Course Number	Title	Units
MFGT B1ab	Machine Tool Processes	3.0
MFGT B2	CNC Lathe Programming & Operation	3.0
MFGT B3	CNC Mill Programming	3.0
INDR B10	Introduction to Industrial Drawing and Graphics	1.0
INDR B11	Introduction to Computer Aided Drafting and Design (CAD)	1.0
TECM B52 or equivalent	Introduction to Technical Mathematics	3.0
WELD B1a	Introduction to Oxygen Acetylene Welding and Cutting	2.0
WELD B1b	Introduction to the Welding Processes	2.0
WELD B54a	Blueprint Reading for Welders and Machinists	3.0

Electives: at least 3 units

Course Number	Title	Units
INDR B20a	Computer Aided Drafting and Design (CAD)	3.0
INDR B40	Parametric Modeling Fundamentals	3.0
INDT B273	Special Problems in Tool Metal Working	2-3.0
WELD B53ab	Shielded Metal Arc Welding	4.0
WELD B74a	Introduction to GMAW (Gas Metal Arc Welding) and FCAW (Flux Core Arc Welding)	2.0
WELD B74b	Introduction to GTAW (Gas Tungsten Arc Welding)	2.0
WEXP B249	Cooperative Work Experience Education	1.0

MARKETING

See Business Administration

MATHEMATICS

Mathematics Associate in Arts Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of “C” or better. This degree represents the standard freshman and sophomore level classes for a mathematics major. Career opportunities include teaching, actuarial, and statistics.

Total Units: 18

Required Courses:

Course Number	Title	Units
MATH B6a	Analytic Geometry and Calculus I	4.0
MATH B6b	Analytic Geometry and Calculus II	4.0
MATH B6c	Calculus III	4.0
MATH B6d	Ordinary Differential Equations	3.0
MATH B6e	Elementary Linear Algebra	3.0

Recommended Courses

Course Number	Title	Units
PHIL B7	Introduction to Logic	3.0
PHYS B4a	Mechanics and Wave Motion	4.0
ENGR B19C/C++	Computer Programming for Science, Engineering and Technology (C)	3.0
MATH B21	Special Projects in Mathematics	1-2.0
MATH B22	Elementary Probability and Statistics	5.0

MUSIC

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of “C” or better.

Students who plan to major or minor in music should commit themselves to the highest possible level of proficiency in theory, piano, literature, group performance, and applied (individual) instruction in their performance area. Students should take the required courses in music and complete courses in general education for the transfer college of their choice. Elective courses will both enrich the student’s background and balance weak areas of knowledge for later academic growth. Career opportunities in music include performer, conductor, composer, arranger, recording artist, recording engineer, critic, musicologist, theorist, private teacher, single-subject teacher, professor, copyist, church musician, music therapist, sound technician, tour manager, and agent.

Music Associate in Arts Degree

Total Units: 24-26

Required Courses:

Course Number	Title	Units
MUSC B4a	Elementary Theory	3.0
MUSC B4b	Elementary Theory	3.0
MUSC B5a	Class Piano	1.0
MUSC B5b	Class Piano	1.0
MUSC B15a	Ear Training and Sight Singing	1.0
MUSC B15b	Ear Training and Sight Singing	1.0
MUSC B21a	History of Music	3.0
MUSC B21b	History of Music	3.0
MUSC B4c	Intermediate Theory-Contemporary Materials	3.0

MUSC B15c Intermediate Ear Training/Sight Singing 1.0

Group Performance (Select one each semester. A minimum of four semesters of performance courses is required for the AA degree).

Course Number	Title	Units
MUSC B10ad	Concert Band	4.0
MUSC B12ad	College Orchestra	4.0
MUSC B13ad	Jazz Ensemble	4.0
MUSC B14ad	College Choir	6.0
MUSC B18ad	Drum Line	4.0

Other Suggested Courses

Course Number	Title	Units
MUSC B2	Basic Elements of Music	3.0
MUSC B6ab	Class Voice	2.0
MUSC B6cd	Class Voice	2.0
MUSC B9a	Beginning Class Guitar	1.0
MUSC B9b	Intermediate Class Guitar	1.0
MUSC B9c	Advanced Class Guitar	1.0
MUSC B17ad	Chamber Singers	6.0
MUSC B22	Music Appreciation	3.0
MUSC B23	Appreciation of Jazz	3.0
MUSC B24	A Survey of World Music	3.0
MUSC B27	History of American Popular Music	3.0
MUSC B60ab	Concepts and Applications of Music Technology	6.0
MUSC B230a	Music Laboratory	0.5
MUSC B230b	Music Laboratory	0.5
MUSC B230c	Music Laboratory	0.5

NURSING

See also Registered Nursing, LVN-RN Program, Vocational Nursing, Nurse Assistant

Associate Degree Nursing Program

Total Units: 41

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of “C” or better.

Mission

The mission of the Bakersfield College Associate Degree Nursing Program is to prepare entry-level registered nurses as providers and managers of care across the health/illness continuum and as members within the profession. Graduate nurses will collaborate with members of the health care team, be effective communicators, be politically aware, and demonstrate a commitment to life long learning.

Application Procedure

The Allied Health office must receive all application forms and transcripts during the designated filing periods. For detailed information on the application period and procedures, please refer to the Allied Health web site at [www2.bakersfieldcollege.edu/allied health/](http://www2.bakersfieldcollege.edu/allied%20health/) or come by the Bakersfield College Allied Health Office in MS 178.

Conditional Enrollment

As a condition of enrollment in any Allied Health Program,

students are required to submit to and pass a designated drug and alcohol screening, a background screening, and physical examination clearance (at the student's expense). Please note the following:

- A history of felony conviction(s) or any bar, exclusion or other ineligibility for federal program participation could render a student ineligible for clinical placement, as determined by the clinical agencies.
- If a student cannot obtain background clearance from the clinical agencies, it will not be possible to place the student in the clinical areas, which is a required component of the program. In the event that a student cannot obtain a background clearance, the space will be forfeited. Students who are found to be ineligible for clinical placement by the clinical agency after admission to the program shall be subject to dismissal from the program, as they will be unable to complete mandatory clinical rotations.
- A physical examination completed by a physician of the student's choice is required after acceptance to the Program to demonstrate that a student meets the technical standards necessary to meet the Program objectives. Appropriate immunizations and/or vaccinations and fit testing are also required and are performed at the student's expense. More information can be found on the Allied Health web site at www2.bakersfieldcollege.edu/alliedhealth/ or in the Bakersfield College Allied Health Office, MS 178.

Program Costs

An estimated cost for the first semester of the program is approximately \$2,500.

Program Approval/Accreditation

The California Board of Registered Nursing approves the Bakersfield College Associate Degree Nursing Program. The Western Association of Schools and Colleges accredits Bakersfield College.

Licensure/Certification Eligibility

Record of any misdemeanor and/or felony is subject to review by the Board of Registered Nursing before a RN license may be granted. Anyone who wishes clarification may contact the Board of Registered Nursing, PO Box 944210, Sacramento, CA 94244. Applicants for RN Licensure must submit a valid Social Security number at the time of application.

Career Opportunities in Registered Nursing

Employment in a variety of healthcare facilities and settings.

Prerequisite Requirements

All prerequisites must be completed with a "C" grade or higher.

- ENGL B1A (Expository Composition) 4 units at Bakersfield College or equivalent course at another accredited college.
- MATH BD (Intermediate Algebra) or higher, 3 units at Bakersfield College or an equivalent course at another accredited college

- CHEM B11 (Introduction to General, Organic and Biochemistry) or CHEM B2a (Introductory General Chemistry) or CHEM B1a (General Chemistry) a minimum of 3-4 units is required at Bakersfield College or an equivalent course at another accredited college. (CSUB requires Chem B11)
- BIOL B16 (General Microbiology) 5 units at Bakersfield College or equivalent course at another accredited college. and
- BIOL B32 (Human Anatomy and Physiology I) 4 units at Bakersfield College or equivalent course at another accredited college. and
- BIOL B33 (Human Physiology and Anatomy II) 4 units at Bakersfield College or equivalent course at another accredited college. or
- Human Anatomy (minimum 4 units) equivalent course at another accredited college and
- Human Physiology (minimum 4 units) equivalent course at another accredited college.

General Education Courses

General education courses are required to graduate from Bakersfield College with an Associate Degree in Nursing. It is suggested that most of these courses be completed prior to beginning the Nursing Program.

- Social Science (3 units) – Any course listed in Area A of the Bakersfield College Catalog.
- Arts, Literature, Philosophy, and Foreign Language (3 units) - Any course listed in area C in the Bakersfield College Catalog.
- *SOCI B1 or *ANTH B2
- *PSYC B1A
- *COMM B1 (COMM B1 is required for CSUB transfer) or *COMM B2
- Physical Education (1 unit)
- (A student development course is recommended to be taken during the first semester of courses at Bakersfield College to assure priority registration.)
- NURS B100 or STDV B1, STDV B2, STDV B3, STDV B6
- Health Education (waived for RN students)

Note: All graduation requirements of the college must be met to earn an Associate of Science (A.S.) in Nursing and to take the NCLEX RN – Licensure Exam.

*Board of Registered Nursing requirement

Recommended Courses

Course Number	Title	Units
NURS B100	Strategies for Success in a Nursing Program	2.0
(this course should be taken one or two semesters prior to entering the Program). Nurse Assistant Certification (information available upon request)		
MEDS B69	Nurse Assistant	6.0
MEDS B60	Medical Terminology	3.0
highly recommended, prior to taking BIOL B32.		

Associate Degree Nurse Program Curriculum*First Semester*

Course Number	Title	Units
NURS B20	Fundamentals of Nursing	4.0
NURS B21	Medical Surgical Nursing 1	5.0
NURS B22	Pharmacology	3.0

Second Semester

Course Number	Title	Units
NURS B23	Medical Surgical Nursing 2	4.5
NURS B24	Obstetrics - Maternity Nursing	3.0
NURS B25	Mental Health- Psychiatric Nursing	3.5

Third Semester

Course Number	Title	Units
NURS B26	Medical Surgical Nursing 3	5.5
NURS B27	Pediatric Nursing	3.5

Fourth Semester

Course Number	Title	Units
NURS B28	Medical Surgical Nursing 4	7.0
NURS B29	Gerontology - Community Nursing	2.0

BC LVN to Associate Degree Nursing Program AS Degree Program*Total Units: 20***Mission**

The mission of the Bakersfield College LVN-Associate Degree Nursing Program is to prepare entry-level registered nurses as providers and managers of care across the health/illness continuum and as members within the profession. Graduate nurses will collaborate with members of the health care team, be effective communicators, be politically aware, and demonstrate a commitment to life long learning.

Application Procedure

The Allied Health office must receive all application forms and transcripts during the designated filing periods. For detailed information on the application period and procedures, please refer to the Allied Health web site at [www2.bakersfieldcollege.edu/allied health/](http://www2.bakersfieldcollege.edu/allied%20health/) or come to the Bakersfield College Allied Health Office in MS 178.

Conditional Enrollment

As a condition of enrollment in any Allied Health Program,

students are required to submit to and pass a designated drug and alcohol screening, a background screening, and physical examination clearance (at the student's expense). Please note the following:

- A history of felony conviction(s) or any bar, exclusion or other ineligibility for federal program participation could render a student ineligible for clinical placement, as determined by the clinical agencies.
- If a student cannot obtain background clearance from the clinical agencies, it will not be possible to place the student in the clinical areas, which is a required component of the program. In the event that a student cannot obtain a background clearance, the space will be forfeited. Students who are found to be ineligible for clinical placement by the clinical agency after admission to the program shall be subject to dismissal from the program, as they will be unable to complete mandatory clinical rotations.
- A physical examination completed by a physician of the student's choice is required after acceptance to the Program to demonstrate that a student meets the technical standards necessary to meet the Program objectives. Appropriate immunizations and/or vaccinations and fit testing are also required and are performed at the student's expense. More information can be found on the Allied Health web site at www2.bakersfieldcollege.edu/alliedhealth/ or in the Bakersfield College Allied Health Office, MS 178.

Program Costs

An estimated cost for the program is approximately \$1,500.

Program Approval/ Accreditation

The California Board of Registered Nursing approves the Bakersfield College Associate Degree Nursing Program. The Western Association of Schools and Colleges accredits Bakersfield College.

Licensure/Certification Eligibility

Record of any misdemeanor and/or felony is subject to review by the Board of Registered Nursing before a RN license may be granted. Anyone who wishes clarification may contact the Board of Registered Nursing, PO Box 944210, Sacramento, CA 94244. Applicants for RN Licensure must submit a valid Social Security number at the time of application.

Career Opportunities in Registered Nursing

Employment in a variety of healthcare facilities and settings.

Prerequisite Requirements

All prerequisites must be completed with a "C" grade or higher.

- ENGL B1A (Expository Composition) 4 units at Bakersfield College or equivalent course at another accredited college.
- MATH BD (Intermediate Algebra) or higher, 3 units at Bakersfield College or an equivalent course at another

accredited college

- CHEM B11 (Introduction to General Organic and Biochemistry) or CHEM B2a (Introductory General Chemistry) or CHEM B1a (General Chemistry) a minimum of 3-4 units is required at Bakersfield College or an equivalent course at another accredited college. (CSUB requires Chem B11)
- BIOL B16 (General Microbiology) 5 units at Bakersfield College or equivalent course at another accredited college. and
- BIOL B32 (Human Anatomy and Physiology I) 4 units at Bakersfield College or equivalent course at another accredited college. and
- BIOL B33 (Human Physiology and Anatomy II) 4 units at Bakersfield College or equivalent course at another accredited college. or
- Human Anatomy (minimum 4 units) equivalent course at another accredited college and
- Human Physiology (minimum 4 units) equivalent course at another accredited college.
- Proof of IV Certification
- One year experience working as an LVN
- Possession of current California Vocational Nurse License.
- American Heart Association BLS - Healthcare Provider card current within one year.
- Overall GPA of 2.5.
- Graduation from high school or an equivalent education.

General Education Courses Units

General education courses are required to graduate from Bakersfield College with an Associate Degree in Nursing. It is suggested that most of these courses be completed prior to beginning the Nursing Program.

- Social Science (3 units) – Any course listed in Area A of the Bakersfield College Catalog.
- Arts, Literature, Philosophy, and Foreign Language (3 units)- Any course listed in Area C of the Bakersfield College Catalog.
- *SOC1 B1 or *ANTH B2 (“C” grade or higher)
- *PSYC B1A (“C” grade or higher)
- *COMM B1, COMM B2, or COMM B3 (“C” grade or higher)
- Physical Education (1 unit)
- (A student development course is recommended to be taken during the first semester of courses at Bakersfield College to assure priority registration.)
- NURS B100, STDV B1, STDV B2, STDV B3, or STDV B6

- Health Education (waived for RN students)
- * Board of Registered Nursing requirement (must be completed with a grade of “C” or higher).

Note: All graduation requirements of the college must be met to earn an Associate of Science (A.S.) in Nursing and to take the NCLEX RN – Licensure Exam .

LVN-ADN Program Curriculum

The following courses are taken after the student enters the Program.

Third Semester

Course Number	Title	Units
NURS B26	Medical Surgical Nursing 3	5.5
NURS B25	Mental Health - Psychiatric Nursng	3.5
NURS B70	Role Transition: Bridging Nursing Theory to Practice	2

Fourth Semester

Course Number	Title	Units
NURS B28	Medical Surgical Nursing 4	7
NURS B29	Gerontology - Community Nrsng	2

Program Accreditation

The California Board of Registered Nursing accredits the Bakersfield College Associate Degree Nursing Program. The Western Association of Schools and Colleges accredits Bakersfield College.

Licensure/Certification Eligibility

Conviction of any offenses other than minor traffic violations must be reported to the Board of Registered Nursing at the time of application for licensure. For clarification contact the ADN Program Director or the Board of Registered Nursing, 400 R Street, Suite 4030, Sacramento, California, 95814, (916) 322-3350 .

BC LVN to Non-Degree Nurse (30 unit option)

Total Units:20

Students seeking information regarding the 30-unit option preparation for the registered nurse licensing examination may receive further information from the Dean of the Associate Degree Nursing Program. The 30 unit option is specific to California; the majority of other states will not license a 30 unit option RN. As a 30 unit option you are not a graduate of Bakersfield college’s Nursing Program and are not eligible for the program pin.

Transfer Policy

1. Academic credit earned in regionally accredited institutions of higher education for comparable prelicensure courses will be accepted for transfer.
2. A student who has successfully completed nursing courses in an approved or accredited nursing program may be eligible to receive credit for equivalent courses within the Nursing Program curriculum.

3. Equivalency will be determined on the basis of catalog description, course outline content comparison, and hours distribution.
4. A challenge examination may be required when equivalency cannot be determined.

Challenge by Examination Policy

1. Challenge examinations are available for all courses in the nursing education curriculum. Students seeking challenge by examination credit will be counseled individually by the Director.
2. Challenge examination for credit based on previous education/experience must be requested by the student six weeks prior to the start of the semester in which the course is scheduled to be taught.

Career Opportunities in Registered Nursing

Employment in a variety of healthcare facilities and settings.

Prerequisite Requirements

All prerequisite courses must be completed prior to submission of program enrollment form. Courses in-progress at the time of application will not be considered.

1. The following courses must be completed with a grade of "C" or higher:
 - a. Introductory Physiology (with lab) must meet Board of Registered Nursing requirements in Physiology.
 - b. General Microbiology (with lab) must meet Board of Registered Nursing requirements in Microbiology.
2. Additional Prerequisites:
 - a. Graduation from high school or an equivalent education.
 - b. Possession of a current California Vocational Nurse License.
 - c. Employment as a LVN for at least 1 year.
 - d. IV Certification.

30 Unit Option Curriculum

Third Semester

Course Number	Title	Units
NURS B25	Mental Health-Psychiatric Nursing	3.5
NURS B26	Medical Surgical Nursing 3	5.5
NURS B70	Role Transition: Bridging Theory to Practice	2.0

Fourth Semester

Course Number	Title	Units
NURS B28	Medical Surgical Nursing 4	7.0
NURS B29	Gerontology - Community Nursing	2.0

Vocational Nursing Program Certificate of Achievement Mission

The mission of the Bakersfield College Vocational Nursing Program is to prepare entry-level vocational nurses as providers of care across the health/illness continuum and as members within the profession

Application Procedure

The Allied Health office must receive all application forms and transcripts during the designated filing periods. For detailed information on the application period and procedures, please refer to the Allied Health web site at www2.bakersfieldcollege.edu/alliedhealth/ in the Bakersfield College Allied Health Office in MS 178.

Conditional Enrollment

As a condition of enrollment in any Allied Health Program, students are required to submit to and pass a designated drug and alcohol screening, a background screening, and physical examination clearance (at the student's expense). Please note the following:

- A history of felony conviction(s) or any bar, exclusion or other ineligibility for federal program participation could render a student ineligible for clinical placement, as determined by the clinical agencies.
- If a student cannot obtain background clearance from the clinical agencies, it will not be possible to place the student in the clinical areas, which is a required component of the program. In the event that a student cannot obtain a background clearance, the space will be forfeited. Students who are found to be ineligible for clinical placement by the clinical agency after admission to the program shall be subject to dismissal from the program, as they will be unable to complete mandatory clinical rotations.
- A physical examination completed by a physician of the student's choice is required after acceptance to the Program to demonstrate that a student meets the technical standards necessary to meet the Program objectives. Appropriate immunizations and/or vaccinations and fit testing are also required and are performed at the student's expense.

More information can be found on the Allied Health web site at www2.bakersfieldcollege.edu/alliedhealth/ or in the Bakersfield College Allied Health Office, MS 178.

Program Costs

An estimated cost for the first semester of the program is approximately \$2,500.

Program Approval/Accreditation

The California Board of Vocational Nursing and Psychiatric Technicians accredits the Bakersfield College Vocational Nursing Program. The Western Association of Schools and Colleges accredits Bakersfield College.

Licensure/Certification Eligibility

Conviction of any offenses other than minor traffic violations must be reported to the Board of Vocational Nursing and Psychiatric Technicians at the time of application for licensure. For clarification contact the VN Program Director or the Board of Vocational Nursing and Psychiatric Technicians, 2535 Capitol Oaks Drive, Suite 205, Sacramento, California, 95833, (916) 263-7800 Applicants for VN Licensure must submit a valid Social Security number at the time of application.

Certificate of Achievement

Upon completion of the program of study for Vocational Nursing, the student is eligible for a Certificate of Achievement.

Career Opportunities in Vocational Nursing

Employment as a Licensed Vocational Nurse in a variety of health care settings.

Prerequisite Requirements

All prerequisites must be completed prior to the start of the Program with a “C” grade or higher. Priority is provided to students with all prerequisite courses completed at the time of submitting an enrollment form.

- Proof of graduation from high school or an equivalent education.
- BIOL B18 (Essentials of Human Anatomy and Physiology) at Bakersfield College or an equivalent course at another accredited college.
- PSYC B1a (General Psychology) at Bakersfield College or an equivalent course at another accredited college.
- MATH BA or B200a (Elementary Algebra) at Bakersfield College or an equivalent course at another accredited college).
- Eligibility for ENGL B1a (Expository Composition) as demonstrated by qualifying scores on the college assessment test or completion of ENGL B50 at Bakersfield College or equivalent course from another accredited college with a “C” or higher.
- Nurse Assistant certification - highly recommended.
- MEDS B60 (Medical Terminology) - highly recommended.

Note: Students desiring to continue their education and become a registered nurse need to refer to the prerequisites required for the Associate Degree Nursing Program.

Vocational Nurse Program Curriculum

The following courses are taken after the student enters the Vocational Nursing Program.

First Semester

Course Number	Title	Units
VNRS B1	Nursing Fundamentals	3.0
VNURS B1LV	Vocational Nursing Laboratory	6.0
VNRS B1G	Gerontological Nursing	1.0
VNRS B31AB	Basic Pharmacology	2.0
VNRS B75	Medical/Surgical Nursing I	3.5
	TOTAL	15.5

Second Semester

Course Number	Title	Units
VNRS B85	Medical-Surgical Nursing II	2.5
VNRS B85LV	Medical Surgical Nursing II - Clinical Laboratory	1.5
VNRS B86	Medical Surgical Nursing III	4.0
VNRS B86LV	Medical Surgical Nursing III - Clinical Laboratory	3.0
VNRS B6	Pediatric Nursing	1.5
VNRS B97LV	Pediatrics - Clinical Laboratory	1.5
VNRS B50a	Advanced Pharmacology	0.5

TOTAL		14.5
<i>Third Semester</i>		
Course Number	Title	Units
VNRS B95	Medical/Surgical Nursing IV	4.0
VNRS B95LV	Medical/Surgical Nursing IV - Laboratory	2.5
VNRS B96	Medical/Surgical Nursing V	2.0
VNRS B96LV	Medical/Surgical Nursing V - Laboratory	2.0
VNRS B7	Parent/Newborn Nursing	1.5
VNRS B87LV	Maternal Newborn - Clinical Laboratory	1.5
VNRS B50B	Advanced Pharmacology, Part B	0.5
	TOTAL	14.0

Nurse Assistant

General Information

The Nurse Assistant (NA) course prepares the student to provide services to those who need health care. The student will learn the role of the caregiver, the health care environment, health care safety, adult needs in health and illness, and basic care giving skills.

Nurse Assistant Program Mission

The mission of the Bakersfield College Nurse Assistant Program is to provide vocational education that will prepare the student to provide basic services to those who need healthcare. The program is committed to improving and advancing the health and welfare of our community by preparing competent, safe, health care professionals.

Enrollment

Enroll in MEDS B69 through the Bakersfield College. Consult the current class schedule for course offerings. For more information go to www2.bakersfieldcollege.edu/allied health/ or come by the Bakersfield College Allied Health Office in MS 178.

Conditional Enrollment

As a condition of enrollment in any Allied Health Program, students are required to submit to and pass a designated drug and alcohol screening, a background screening, and physical examination clearance. Please note the following:

- A history of felony conviction(s) or any bar, exclusion or other ineligibility for federal program participation could render a student ineligible for clinical placement, as determined by the clinical agencies.
- If a student cannot obtain background clearance from the clinical agencies, it will not be possible to place the student in the clinical areas, which is a required component of the program. In the event that a student cannot obtain a background clearance, the space will be forfeited. Students who are found to be ineligible for clinical placement by the clinical agency after admission to the program shall be subject to dismissal from the program, as they will be unable to complete mandatory clinical rotations.
- A physical examination completed by a physician of the student’s choice is required after acceptance to the Program to demonstrate that a student meets the technical standards

necessary to meet the Program objectives. Appropriate immunizations and/or vaccinations and fit testing are also required and are performed at the student's expense.

More information can be found on the Allied Health web site at www2.bakersfieldcollege.edu/alliedhealth/ or in the Bakersfield College Allied Health Office, MS 178.

Program Costs

An estimated cost for the program (fees, textbooks, uniforms, and examination) is approximately \$1,000. Financial aid may be available.

Program Approval Accreditation

The California Department of Public Health approves the Bakersfield College Nurse Assistant Program. The Western Association of Schools and Colleges accredits Bakersfield College.

Licensure/Certification Eligibility

Students with a misdemeanor and/or felony arrest conviction, either current or prior, may not receive certification or licensure from the State or County. Also, a Social Security number and fingerprinting are required by State certification/licensure agencies. Anyone who wishes clarification may contact the Allied Health Office at 661-395-4281.

Nurse Assistant Job Skills Certificate

Upon successful completion of the Nurse Assistant course, the student is eligible to take the competency exam for a Certified Nurse Assistant administered by the American Red Cross. This provides proof to the California Department of Public Health that

the student has met the requirements for licensure. Students must complete the required courses with at least a "C" grade. Total Units: 6

Career Opportunities in Nurse Assistant

Employment as a Certified Nurse Assistant in a variety of health care settings.

Nurse Assistant Curriculum:

Course	Title	Units
MEDS B69	Nurse Assistant	6.0

OFFICE TECHNOLOGY

See Business Administration

PHILOSOPHY

A major in philosophy has always been and continues to be one of the strongest traditional liberal arts majors in higher education. Some students major in Philosophy as a precursor to graduate work and academic careers, teaching and doing research in Philosophy and Education. Philosophy's emphasis on critical thinking, theories of knowledge, value and reality, truth, rational argument and proof make it an excellent pre-professional undergraduate major (e.g., for law, theology,

medicine, business, computer science) or minor (e.g., for the natural, physical and social science and humanities majors).

Philosophy Associate in Arts Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of "C" or better.

Total Units: 18

Required Courses:

Course Number	Title	Units
PHIL B6a	Introduction to Philosophy	3.0
PHIL B7 or	Introduction to Logic	3.0
PHIL B9	Critical Thinking and Advanced Composition	4.0
PHIL B10	Introduction to Ethics	3.0
Electives - at least 9 units		
Course Number	Title	Units
PHIL B12	Ethics of Living and Dying	3.0
PHIL B18	History of Ancient Philosophy	3.0
PHIL B32	World Religions: East	3.0
PHIL B33	World Religions: West	3.0
PHIL B37	Introduction to World Religions	3.0

PHYSICAL EDUCATION

Physical Education Associate in Arts

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of "C" or better.

A major in Physical Education will encourage students to perceive learning as the merging of cognitive, affective, social, and psychomotor domains. A major in Physical Education allows students to transfer to a four-year university/college and is a starting point for a variety of Graduate and Doctoral Degrees. A degree in Physical Education can lead to employment in a variety of teaching and coaching avenues along with athletics and recreation based jobs, including athletic training, physical therapy, adaptives, etc.

The major requirements for an Associate Degree in Physical Education may be satisfied by completing 23 units as outlined below.

Total Units: 23

Required Courses:

Course Number	Title	Units
HLED B1	Principles of Health Education	3.0
PHED B39a	Prevention and Care of Athletic Injuries	3.0
PHED B40	Introduction to Physical Education	3.0
PHED B31	Standard First Aid	1.0
BIOL B32	Human Anatomy and Physiology I	4.0
BIOL B33	Human Anatomy and Physiology II	4.0

Electives: at least 5 units from one of the activities listed below:

Team Activities	Units
PHED B5wsb Advanced Softball (Women)	1.00
PHED B5vb Volleyball (Women)	1.00
PHED B6bb Basketball	1.00
PHED B6g-golf	1.00

PHED B6sc Soccer	1.00
PHED B6t Tennis	1.00
PHED B6v Volleyball	1.00
PHED B7b Advanced Baseball	1.00
PHED B7fb Advanced Football	1.00
PHED B7w Advanced Wrestling	1.00
PHED B9s Advanced Swimming	1.00
PHED B9t Advanced Tennis	1.00
PHED B9tr Advanced Track	1.00
PHED B10 Intercollegiate Football	2.00
PHED B11 Intercollegiate Basketball	2.00
PHED B12 Intercollegiate Track and Field	2.00
PHED B13 Intercollegiate Tennis	2.00
PHED B14 Intercollegiate Baseball	2.00
PHED B16 Intercollegiate Golf	2.00
PHED B17 Intercollegiate Cross-Country	2.00
PHED B20 Intercollegiate Wrestling	2.00
PHED B22 Women's Intercollegiate Tennis	2.00
PHED B23 Women's Intercollegiate Soccer	2.00
PHED B24 Intercollegiate Golf for Women	2.00
PHED B25 Women's Intercollegiate Volleyball	2.00
PHED B26 Women's Intercollegiate Track and Field	2.00
PHED B27 Women's Intercollegiate Cross-Country	2.00
PHED B28 Women's Intercollegiate Basketball	2.00
PHED B29 Women's Intercollegiate Softball	2.00

Individual Activities

PHED B3adp Adaptive Physical Education	1.00
PHED B6a Archery	1.00
PHED B6bLb Beginning Ballet (Same as DANC B6bLb)	1.00
PHED B6da Dance Aerobics	1.00
PHED B6fcx Fitness Center	1.00
PHED B6jd Jazz Dance (Same as DANC B6jd)	1.00
PHED B6kx CardioKickboxing Fitness	1.00
PHED B6md Modern Dance (Same as DANC B6md)	1.00
PHED B6pl Pilates	1.00
PHED B6py Pilates/Yoga Mat Flow	1.00
PHED B6wt Weight Training	1.00
PHED B6y Yoga	1.00

Aquatics

PHED B2dwr Deep Water Running	1.00
PHED B2sb Beginning Swimming	1.00
PHED B2ssf Swim and Stay Fit	1.00
PHED B2wa Water Aerobics	1.00
PHED B2wp Water Polo	1.00

PHYSICS

Physics Associate in Science Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of "C" or better. The Associate in Science Degree in Physics is designed to prepare students to begin upper division course work in pursuit of a Bachelor's Degree (or ultimately a graduate degree) in physics upon transfer to a four-year college or university. Earning this degree should allow the student to become acquainted with the basic knowledge of physics contained in a calculus-based introductory physics sequence and the mathematics that supports that level of competency. The student will demonstrate proficiency in communication, critical thinking, quantitative problem

solving, and laboratory science skills. This degree represents a step in a path preparing students for careers in any of the many branches of physics, physics education, and other technical fields, such as some engineering disciplines in which physics is an integral part.

Total Units: 34

Required Courses:

Course Number	Title	Units
PHYS B4a	Mechanics & Wave Motion	4.0
PHYS B4b	Heat, Electricity, & Magnetism	4.0
PHYS B4c	Optics & Modern Physics	4.0
CHEM B1a	General Chemistry I	5.0
CHEM B1b	General Chemistry & Chemical Analysis	5.0
MATH B6a	Analytic Geometry & Calculus I	4.0
MATH B6b	Analytic Geometry & Calculus II	4.0
MATH B6c	Calculus III	4.0

All Four-Year Colleges and Universities

Before planning a study list, the community college student should consult a counselor and study the catalog of the senior institution to which he/she intends to transfer.

The introductory courses in Physics (Physics B2a-B2b or B4a-B4c) and Chemistry (Chemistry B1a-B1b, B2a) are designed to provide a foundation and understanding of the laws and principles of the physical world (matter and energy). These courses should be completed early in a student's academic program to insure greater success in subsequent courses.

Course Number	Title	Units
PHYS B4a	Mechanics & Wave Motion	4.0
PHYS B4b	Heat, Electricity, & Magnetism	4.0
PHYS B4c	Optics & Modern Physics	4.0
CHEM B1a	General Chemistry I	5.0
CHEM B1b	General Chemistry & Chemical Analysis	5.0
MATH B6a	Analytic Geometry & Calculus I	4.0
MATH B6b	Analytic Geometry & Calculus II	4.0
MATH B6c	Calculus III	4.0
MATH B6d	Ordinary Differential Equations	3.0

Recommended Courses

Course Number	Title	Units
BIOL B3a	General Biology I	5.0
BIOL B11	Concepts of Biology	4.0

POLITICAL SCIENCE

Political Science Associate in Arts Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of "C" or better.

The majors in Political Science are designed for students interested in gaining an understanding of the structure and functions of governments. The majors are an important part of the liberal arts program and prepare students for further study and careers in education, law, business, government, international relations and journalism.

The student should select the major emphasis, and courses according to his/her area of specialization as well as the requirements of the college to which he/she plans to transfer. The student should also consult his/her counselor and the appropriate four-year college catalogs in determining an appropriate minor, foreign language requirements, and other requirements.

Total Units: 18

Required Courses:

Course Number	Title	Units
POLS B1	American Government: National, State and local	3.0
POLS B2 or POLS B3	Comparative Government International Politics	3.0
POLS B12 or POLS B16	Contemporary Issues in California State and Local Government Vital Political Problems	3.0
HIST B4ab or HIST B17ab or HIST B20ab or HIST B30ab	European Civilization History of the U.S. African American History of the US Chicano History	6.0
ECON B2 or PSYC B5 or MATH B22	Principles of Economics-Macro Elementary Statistics for the Behavioral and Social Sciences (5.0) Elementary Probability and Statistics (5.0)	3.0

Political Science, Emphasis in Domestic Policy Associate in Arts Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of "C" or better.

Total Units: 18

Required Courses:

Course Number	Title	Units
POLS B1	American Government: National, State and local	3.0
POLS B12	Contemporary Issues in California State and Local Government	3.0
POLS B16	Vital Political Problems	3.0
HIST B17ab	History of the U.S.	6.0
ECON B2 or PSYC B5 or MATH B22	Principles of Economics-Macro Elementary Statistics for the Behavioral and Social Sciences (5.0) Elementary Probability and Statistics (5.0)	3.0

Electives

Course Number	Title	Units
ENGL B2	Advanced Composition & Critical Thinking	5.0
HIST B18	History of California	3.0
PSYC B1a	General Psychology	3.0
SOCI B1	Introduction to Sociology	3.0

Political Science, Emphasis in International Relations Associate in Arts Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of "C" or better.

Total Units: 18

Required Courses:

Course Number	Title	Units
POLS B1	American Government: National, State and local	3.0
POLS B2	Comparative Government	3.0
POLS B3	International Politics	3.0
HIST B4ab	European Civilization	6.0
ECON B2 or PSYC B5 or MATH B22	Principles of Economics-Macro Elementary Statistics for the Behavioral and Social Sciences (5.0) Elementary Probability and Statistics (5.0)	3.0

PRE-VETERINARY MEDICINE

See Agriculture

PRIMARY CARE ASSOCIATE (Physician's Assistant)

Stanford University Medical Center administers a program to train individuals who function in association with physicians in the maintenance and delivery of primary health care to medically underserved communities.

Upon completion of the prerequisite pre-clinical program at Bakersfield College or other accredited institutions, students admitted to the program have 15 months of clinical experience coordinated through Stanford University Medical Center. Students participate in didactic course work full-time for the first quarter (3 months) at Stanford Medical Center in Palo Alto, California. Then they complete an equivalent of five days of didactic instruction each month (12 months) thereafter. All clinical experience occurs in an office practice preceptorship. Contact Counseling Department for further information.

Prerequisites:

Minimum requirements for application and admission include:

1. United States citizen or permanent visa.
2. High School Diploma or equivalent.
3. A minimum of 18 months direct patient care experience.
4. Satisfactory completion of the following academic prerequisites or their equivalents.

General Education courses are required for the P.C.A. Program. It is recommended that an AA or AS degree at Bakersfield College be completed prior to applying to the program.

The student must have a preceptor site established in order to complete the clinical experiences necessary for the program. Some assistance may be available in locating a preceptor.

Upon successful completion of the P.C.A. program. The graduate will sit for a certifying examination administered by the National Commission on Certification of Physician's Assistants. Passing this examination allows the Physician's Assistant to perform direct patient services under the supervision of primary care physicians certified by the California Board of Medical Quality Assurance.

Pre-Clinical Program Requirements

A minimum grade of “C” must be attained in each of these courses. Only work from a regionally accredited college can be accepted.

Algebra - Elementary. One year of high school math or MATH BA at Bakersfield College.

Chemistry - Introductory. One year of high school chemistry or equivalent.

Cultural Anthropology or Sociology: ANTH B2, SOCI B1 at Bakersfield College, or another acceptable course.

English Composition - Freshman level: ENGL B50 (formerly ENGL B1), ENGL B1a at Bakersfield College, or other acceptable course.

General Psychology - PSYC B1a at Bakersfield College or other acceptable course.

Microbiology with laboratory; BIOL B16 at Bakersfield College, or other acceptable course.

*American History and Institutions. See Graduation and General Education Section of this catalog.

*Computer Literacy - Two semester units. Must include experience at a terminal (COMS B2) at Bakersfield College, or other acceptable course.

*Ethnic Studies - A course that reflects the experience of an American ethnic group.

*Humanities - One course from List A and one course from List B. (A) Literature, Philosophy (not Logic), or Western Civilization. (B) Art Appreciation, Music Appreciation, or Theatre Arts Appreciation.

*Physical Education - Four quarter courses or three semester courses.

*Speech - Public Speaking or interpersonal communication: COMM B1 or COMM B2 at Bakersfield College, or other acceptable course.

*These courses are required if candidate does not possess an A.A., A.S. or higher academic degree.

PSYCHOLOGY

Associate in Arts in Psychology for Transfer

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of “C” or better.

The Associate in Arts in Psychology for Transfer is intended for those transfer-directed students who plan to complete an AA in Psychology because it guarantees admission to the

CSU system (but not to a particular campus or major). In order to earn the Associate in Arts in Psychology for Transfer, students must complete a minimum of 60 required semester units of CSU-transferable coursework which includes the CSU General Education or IGETC requirements with a minimum GPA of 2.0. Students transferring to a CSU campus that does accept the Associate in Arts in Psychology for Transfer will be required to complete no more than 60 units after transfer to earn a bachelor’s degree (unless the major is a designated “high-unit” major). This degree may not be the best option for students intending to transfer to a particular CSU campus or to university or college that is not part of the CSU system. Students should consult with a counselor when planning to complete the degree for more information on university admission and transfer requirements. This degree eliminates the additional Bakersfield College graduation requirements.

The major in psychology provides a study of the behavior of individuals and groups. The four-year degree in this major contributes to the foundational knowledge for positions in research and teaching, counseling, and working in clinical settings. The successful student will be able to:

- Demonstrate an understanding of the perspectives, theories, methods and core concepts of the behavioral sciences.
- Explain the major problems and issues in the disciplines in their contemporary, historical and geographical contexts.
- Demonstrate an understanding of and an ability to describe the contributions and perspectives of women, ethnic and other minorities, and Western and non-Western peoples.

Core Courses Required: 15 units

Course Number	Title	Units
PSYC B1a*	General Psychology	3.0
PSYC B1b*	Biological Psychology	3.0
PSYC B5*	Elementary Statistics for the Behavioral and Life Sciences	5.0
PSYC B6*	Research Methods for the Behavioral and Social Sciences	4.0

Select two courses from the following: 6 units

PSYC B2	Interpersonal and Group Process Skills	3.0
PSYC B20*	Social Psychology	3.0
PSYC B30*	Human Sexuality	3.0
PSYC B33*	Psychology of Adjustment	3.0
PSYC B40	Lifespan Psychology	3.0

CSU Breadth or IGETC General Education Pattern: 38 units

(*Courses with an asterisk can be double counted for General Education)

Total Units: 60 - completion of a General Education pattern and 21 units within the major.

RADIOLOGIC TECHNOLOGY

Radiologic Technology

Radiologic Technology is a health care profession whose practitioners work in hospitals, imaging centers, and private physicians’ offices. The radiologic technologist (radiographer)

is a member of the health care team who works directly with the patient and the physician performing a wide variety of diagnostic x-ray procedures. The role of the graduate radiographer may be that of staff radiographer, special imaging radiographer, supervisor, administrator or educator, depending upon the level of education and experience obtained.

The Bakersfield College Associate in Science Degree Radiologic Technology Program provides concurrent didactic and clinical education. The program is 24 months in length (excluding prerequisite coursework) and begins each year in June. Students should anticipate making a full time commitment to the program during the school year. Summer sessions are required and semester/terms may be scheduled beyond the regular college session dates. The Program is primarily scheduled during the day; however an evening clinical rotation will be completed during the second year of the program. Clinical education sites include hospitals and imaging centers located in Bakersfield, California and Delano, California. Students may be assigned to any clinical education center in any geographical location.

The program provides the theory, skill and experience necessary to apply for admission to the certification exam administered by the American Registry of Radiologic Technologists (ARRT); and for certification from the State of California, Department of Public Health, Radiologic Health Branch, as a Certified Radiologic Technologist (CRT). The student is also eligible to write the State Fluoroscopy Permit exam. Students must earn a minimum of “C” in all radiography courses, have met the State mandated curriculum and clinical hours, met all clinical education competencies and earned the Associate in Science degree to be recommended for these examinations/certifications. For program information, brochure and enrollment application form, consult the following website at www2.bakersfieldcollege.edu/alliedhealth/

Radiologic Technology Program Mission, Goals and Outcomes

The mission of the Bakersfield College Radiologic Technology Program is to promote student success by providing quality instruction for graduates to competently practice radiography at the entry level. The Program goals and outcomes are;

- 1) Students will be clinically competent.
- 2) Students will critically think and problem solve.
- 3) Students will demonstrate effective communication skills.
- 4) Students will demonstrate professional growth and development.
- 5) The Program will graduate entry-level radiographers.

Radiologic Technology Program Prerequisite Requirements

All prerequisite coursework must be completed prior to applying for the Radiologic Technology Program. When there are more applicants than space available, priority is provided to applicants that reside within the Kern Community College District. Non-resident applications will not be considered.

Students are strongly encouraged to complete prerequisite courses prior to enrolling in general education courses. This will improve a student’s opportunity to apply for program enrollment. The following prerequisite courses must be completed with a “C” grade or higher:

1. BIOL B18 (Essentials of Human Anatomy and Physiology) OR

BIOL B32 (Human Anatomy and Physiology I) and BIOL B33 (Human Anatomy and Physiology II)

OR equivalent course(s) at another accredited college.

Note: BIOL B14 (Human Anatomy) and BIOL B15 (Human Physiology) were previously taught at Bakersfield College and they meet this requirement.

2. MATH BD (Intermediate Algebra) at Bakersfield College OR

equivalent course at another accredited college. A higher level college math course will be accepted in lieu of this algebra requirement.

3. MEDS B60 (Medical Terminology - 3 units) at Bakersfield College or equivalent course at another accredited college.

4. ENGL B1a (Expository Composition - 4 units); or an equivalent course from another accredited college. This prerequisite must be met by all new and Wait List applications received in February 2013.

5. Graduation from high school or an equivalent education (GED).

Enrollment Procedures and Filing Period

Enrollment forms and all required documents must be received by the Radiologic Technology Program Office during the application month of February. Late applications will not be accepted. The next application period for new applicants will be February 2013. Due to the large number of students on the current Program Wait List, new applications will not be accepted in 2012. Students currently on the Wait List must refer to #7 under Enrollment Application Procedures for more information.

Enrollment Application Procedures

1. Complete required prerequisite courses (see above).
2. Obtain enrollment application forms from the Allied Health Department located in Room 178 of the Math-Science Building on the main campus; or by telephone at (661) 395-4284; or on the website at www2.bakersfieldcollege.edu/alliedhealth/.
3. Arrange for an official copy of your high school transcript to be mailed directly to the: Radiologic Technology Program, Bakersfield College, 1801 Panorama Drive, Bakersfield, California 93305. A copy of High School Equivalency (GED) is required if your high school transcript does not identify graduation. Note: You may also hand deliver this transcript providing the transcript is “official” and sealed.
4. If you are a Bakersfield College student with no other college courses other than Bakersfield College courses: Provide the Program with an unofficial Bakersfield transcript

from the college web site or an unofficial transcript from the Admissions and Records Office. If you plan to qualify for the English prerequisite through an assessment score, you must also provide this to the Program.

5. If you have taken courses from any other college other than Bakersfield College:
 - a. Apply for admission to Bakersfield College either in person or online at www.bakersfieldcollege.edu, click on Admissions and Records and follow the directions under "Enrolling."
 - b. Submit an official copy of your transcripts from your previous college to the Office of Admissions & Records and request an evaluation of your transcripts. This process requires the form "Request for Evaluation". You may obtain this form in the Office of Admissions & Records or on-line under Admissions & Records- "Other Forms." Note: This process can take up to 12-16 weeks. Once your transcripts have been evaluated and posted to your Bakersfield College transcript, the student must either print a copy of the Bakersfield College transcript from the website or request one from the Office of Admissions and Records. This evaluation must be completed and then submitted to the Program prior to the end of the Program enrollment filing period during the month of February. **It is the responsibility of the student to supply this information to the Program during the month of February prior to the end of the enrollment filing period.**
6. Late application materials will not be considered for the current application period. Applicants are responsible for ensuring that their application is complete. The program is NOT responsible for late materials or incomplete applications. The application must be thoroughly completed and signed to be considered for eligibility.
7. Students on the Wait List must reapply annually during the enrollment month of February. This is required every year to keep the applicant's file current. If the student does NOT reapply, the student will be removed from the Wait List. Applications will be accepted in February 2012 for current Wait List students only.
8. If the Radiologic Technology Program has more applicants for enrollment than space available and the current Wait List will fill the next program class of students, priority is provided to residents of the Kern Community College District.

General Education Requirements

General education courses are required to graduate from the Bakersfield College Associate in Science Degree Radiologic Technology Program. It is suggested that these courses be completed prior to program enrollment. Refer to the Bakersfield College General Education and Graduation Requirements in this catalog for more specific information and requirements for the college (the list below does NOT identify all requirements). All students are encouraged to regularly check the college requirements for graduation to ensure that AS degree requirements will be met at the end of the radiography program.

1. Student Development: It is recommended that students complete this component as they begin college coursework.
2. Computer Studies (3 units) - COMS B2 or COMS B5 or equivalent is *necessary* to meet radiologic technology program completion.
3. Behavioral Science - Psychology B1a recommended
4. Arts, Literature, Philosophy and Foreign Language-Humanities - Philosophy B12 recommended.
5. Health Education - Students that successfully complete the Radiologic Technology Program are waived from the Health Education requirement for graduation.
6. An individual who has previously received an associate degree or higher must meet and earn the Associate in Science Degree requirements for the Radiologic Technology Program to meet eligibility requirements for certification and licensure.

Health Requirements and Screenings

1. A physical examination will be required after the students receive notification of enrollment into the program to demonstrate that a student meets the technical standards necessary to meet the objectives of the program. A copy of the Essential Technical Standards required for Radiologic Technologists may be obtained in the Allied Health Division Office located in the Math-Science building, room 178 or on the program website at www2.bakersfieldcollege.edu/alliedhealth.
2. As a condition of enrollment to the Radiologic Technology Program, all students are required to submit to and pass a designated drug and alcohol screen.
3. As a condition of enrollment in any Allied Health Program with a clinical component, students are required to submit to and pass a designated background check. Every student offered space in the program will be required to submit to a background screening as part of his or her clinical requirements for admission. Please note the following:
 - A history of felony conviction(s) or any bar, exclusion or other ineligibility for federal program participation could render a student ineligible for clinical placement, as determined by the clinical agencies.
 - If a student cannot obtain background clearance from the clinical agencies, it will not be possible to place the student in the clinical areas, which is a required component of the program.
 - In the event that a student cannot obtain a background clearance, the space will be forfeited.
 - Students who are found to be ineligible for clinical placement by the clinical agency after admission to the radiography program shall be subject to dismissal from the program, as they will be unable to complete mandatory clinical rotations.
4. Immunizations/health tests are needed for acceptance in a clinical education center and to protect the health and welfare of the student and community. Immunizations may include, but not be limited to, rubella, varicella, Hepatitis B, and Tuberculosis screening and the seasonal flu vaccine is also required.

5. The medical exams, drug/alcohol screens, background screen, immunizations and tests are performed at the expense of the student.
6. The student must possess a current Basic Life Support/ CPR (cardiopulmonary resuscitation) card by the American Health Association (Healthcare Provider card). This card must be provided at the start of the program and be kept valid during the entire 24-month program.

Program Supply Information

Students will be required to purchase uniforms, textbooks and selected equipment, provide transportation to off campus clinical education centers in Bakersfield, California and Delano, California and pay current college fees. Estimated costs for books, uniforms, fees and required equipment for the first year of the program are approximately \$1,200 to 1,400. Subsequent semesters usually require enrollment fees, supplies, books and course syllabi (approximately \$1,200). Expenses for the last semester of enrollment also include the program pin and application fees for national and state licensure/registration examinations (approximately \$450).

Licensure/Certification Eligibility

The American Registry of Radiologic Technologists (ARRT) requires review of any conviction, misdemeanor or felony, or a sanction by the Program regarding an academic honor code, or review of suspension or dismissal by a radiography program and review of licensure suspension, denial or other disciplinary action by a regulatory authority or certification board other than the ARRT. This review may be conducted prior to or during the program. For more information contact the ARRT at: 1225 Northland Drive, Mendota Heights, MN 55120, (651) 687-0048w, www.arrt.org.

The State Department of Public Health, Radiologic Health Branch and the American Registry of Radiologic Technology requires possession of either a Social Security number or Tax payer ID number to apply for licensure and/or registration.

Accreditation

Bakersfield College is accredited by the Western Association of Schools and Colleges. The Radiologic Technology Program is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT), 20 N. Wacker Drive, Suite 2850, Chicago, Illinois 60606-3182, (312) 704-5300 or www.jrcert.org. The program is also approved by the State of California, Department of Public Health, Radiologic Health Branch, P.O. Box 997414, MS-7610, Sacramento, CA , 95899-7414, (916) 327-5106 or www.cdph.ca.gov/rhb

Career Opportunities in Radiologic Technology

This degree is a Career and Technical Education (CTE) program which prepares students for both State licensure and national certification in radiography which is necessary for employment in x-ray technology.

Associate Degree Radiologic Technology Program

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of “C” or better.

The following courses are taken after students have been enrolled in the Radiologic Technology Program.

First Summer

Course Number	Title	Units
RADT B1a	Intro to Radiologic Technology	2.0
RADT B1b	Patient Care	2.0
RADT B4a	Intro to Clinical Education	1.5
TOTAL		5.5

First Fall Semester

Course Number	Title	Units
RADT B2a	Radiograph Anatomy and Positioning 1	3.0
RADT B3a	Radiographic Principles 1	3.0
RADT B4b	Clinical Education 1	4.0
RADT B12	Radiobiology/Radiation Protect	2.0
TOTAL		12.0

First Spring Semester

Course Number	Title	Units
RADT B2B	Radiograph Anatomy and Positioning 2	3.0
RADT B3B	Radiographic Principles 2	3.0
RADT B6	Clinical Education 2	4.0
	General Education (if needed)	3.0
TOTAL		13.0

Second Summer

Course Number	Title	Units
RADT B7	Clinical Education 3	6.5

Second Fall Semester

Course Number	Title	Units
RADT B2C	Radiograph Anatomy/Position 3	3.0
RADT B5	Radiation Physics	3.0
RADT B10	Clinical Education 4	6.5
	General Education (if needed)	3.0
TOTAL		15.5

Second Spring Semester

Course Number	Title	Units
RADT B9A	Sectional Anatomy/Medical Imag	3.0
RADT B11	Radiographic Pathology	2.0
RADT B30	Principles of Venipuncture	1.0
RADT B13	Clinical Education 5	8.0
TOTAL		14.0

Principles of Fluoroscopy Job Skills Certificate

This certificate provides fluoroscopy skills for students completing the Associate in Science Radiologic Technology program. The certificate is required as proof of completion to meet the regulations specified by the California Code of Regulations (CCR), Title 17:Public Health, Article 8: Additional School Requirements and Record Keeping, Section. 30437.

Upon successful completion of the following courses with at least a “C” grade in each course, the student will be awarded a Principles of Fluoroscopy Job Skills Certificate.

Required Courses

Course Number	Title	Units
RADT B50	Principles of Fluoroscopy	2.0

OR

Completion of Radiologic Technology Program courses (some hours are contained within each of the following courses.

These courses are state approved by the California Department of Public Health)

RADT B2a	Radiographic Anatomy & Positioning 1	3.0
RADT B2b	Radiographic Anatomy & Positioning 2	3.0
RADT B3a	Radiographic Principles 1	3.0
RADT B3b	Radiographic Principles 2	3.0
RADT B4a	Introduction to Clinical Education	1.5
RADT B5	Radiation Physics	3.0
RADT B9a	Sectional Anatomy for Medical Imaging	3.0
RADT B9c	Principles of Angiography	1.0
RADT B12	Radiobiology and Radiation Protection	2.0

Principles of Venipuncture Job Skills Certificate

The purpose of this certificate is for successful completion of the Principles of Venipuncture course taught at Bakersfield College. The venipuncture regulations and requirements are part of the Health and Safety Code of California, Section 106985. The certificate is necessary for job readiness and to indicate competency for the performance of venipunctures at the job site. The State of California code requires a certificate to indicate proficiency.

Course Number	Title	Units
RADT B30	Principles of Venipuncture	1.0

Note: The clinical components of all radiologic technology courses are graded on a Pass/No Pass basis only.

Radiologic Technology students are exempt from the maximum of three Pass/No Pass units which may be taken in a semester and from the maximum of 12 Pass/No Pass units which may be applied toward the AS degree at Bakersfield College.

REAL ESTATE

See Business Administration

REGISTERED NURSING

See Nursing

SOCIOLOGY

Associate in Arts in Sociology for Transfer

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of

“C” or better.

The Associate in Arts in Sociology for Transfer is intended for those transfer-directed students who plan to complete an AA in Sociology because it guarantees admission to the CSU system (but not to a particular campus or major). In order to earn the Associate in Arts in Sociology for Transfer, students must complete a minimum of 60 required semester units of CSU-transferable coursework which includes the CSU General Education or IGETC requirements with a minimum GPA of 2.0. Students transferring to a CSU campus that does accept the Associate in Arts in Sociology for Transfer will be required to complete no more than 60 units after transfer to earn a bachelor’s degree (unless the major is a designated “high-unit” major). This degree may not be the best option for students intending to transfer to a particular CSU campus or to university or college that is not part of the CSU system. Students should consult with a counselor when planning to complete the degree for more information on university admission and transfer requirements. No additional graduation requirements are required to complete this degree.

Sociology is the study of groups, institutions, social relationships, and social problems in contemporary society. The sociology major prepares the student for careers in law, social work, human services, urban development, law enforcement agencies, public service, counseling, mental health, teaching, and community service. Students will be prepared for a baccalaureate degree in Sociology or a similar degree.

Successful student in the degree program will be able to:

- Demonstrate an understanding of the perspectives, theories, methods and core concepts of the social sciences.
- Explain the major problems and issues in the disciplines in their contemporary, historical and geographical contexts.
- Demonstrate an understanding of and an ability to describe the contributions and perspectives of women, ethnic and other minorities, and Western and non-Western peoples.

Core Course Required: 3 units

Course Number	Title	Units
SOCI B1*	Introduction to Sociology	3.0

Select two of the following courses: 7-8 units

Course Number	Title	Units
SOCI B2*	Problems of Modern Society	3.0
PSYC B5*	Elementary Statistics for Behavioral and Social Science	5.0
PSYC B6*	Research Methods for the Behavioral and Social Sciences	4.0

Select three of the following courses or any course not already used above: 9 units

Course Number	Title	Units
SOCI B28*	Women in the World	3.0
SOCI B45*	Minority Relations	3.0
CRIM B1*	Introduction to Criminal Justice	3.0
SOCI B20*	Social Psychology	3.0
SOCI B36*	Sociology of the Chicano	3.0

CSU Breadth or IGETC GE Pattern: 36-39 units

Courses marked with an asterisk may be double counted for the Sociology degree and General Education depending upon the General Education pattern.

The courses below should be considered to make up the additional units making a total of 60 units:

Course Number	Title	Units
SOCI B21	Special Projects/Sociology	1-4.0
	Any transferable anthropology or psychology course	3.0

No additional graduation requirements are required to complete this degree.

Total Units: 60 - completion of a GE pattern and 19-21 units within the major.

SPANISH

Spanish Associate in Arts Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of "C" or better.

The major of Spanish provides a linguistic and grammatical study of the language and an in-depth look into the culture of Spanish-speaking peoples. The objective of the program is to prepare students for transfer to a four-year university. Employment opportunities are numerous, and include both academic and non-academic positions, including working for corporations, business entities, and not-for-profits. Numerous career pathways are open to students demonstrating a proficiency in spoken and written Spanish including, but not limited to, teaching, social service, and retail.

Total Units: 18

Required Courses:

Course Number	Title	Units
SPAN B1ab	Elementary Spanish	5.0
SPAN B2ab	Elementary Spanish	5.0
SPAN B3	Intermediate Spanish	4.0
SPAN B4 or SPAN B10	Intermediate Spanish / Spanish for Heritage Speakers	4.0

SPEECH

See Communication

THEATRE ARTS

Theatre Arts Associate in Arts Degree

Effective Fall 2009 all courses used for meeting the requirements for degrees must be completed with a grade of "C" or better.

Students must comply with the requirements as shown in the catalog under graduation requirements. Students should seek the advice of a Theatre Instructor, Counselor or Advisor for assistance in planning for an Associate Degree.

Total Units: 19

Required Courses:

Course Number	Title	Units
THEA B2ab	Elements of Acting	6.0
THEA B27	Acting Theatre Laboratory	4.0
THEA B28	Technical Theatre Laboratory	2.0
THEA B12a	Introduction to Shakespeare	3.0
THEA B1	Introduction to Acting	3.0
THEA B35	Introduction to Acting	1.0

Note: Theatre majors should enroll for at least one unit of THEA B27 or THEA B28 per semester.

Electives

Course Number	Title	Units
THEA B31	Introduction to Film Studies	3.0
THEA B32	Contemporary Film Studies	3.0
ART B1	Art Appreciation	3.0
ART B2	Drawing I	3.0
WOOD B1	Introduction to Woodworking Technologies	3.0
DANC B6bLb	Beginning Ballet	1.0
DANC B6jd	Jazz Dance	1.0
DANC Bmd	Modern Dance	1.0
THEA B20	Survey Theatre/Entertainment	3.0

VOCATIONAL NURSING

See Nursing

WELDING

Blueprint Reading and Layout for Welders Job Skills Certificate

This certificate covers the principles of blueprint reading as it applies to welders. Emphasis is placed on the ability to visualize and interpret working drawings. Welding symbols and basic shop math are included. Layout techniques including mathematical and pipe fitting technology are covered.

Upon completion of the following courses with at least a "C" grade in each course, the student will be awarded a Blueprint Reading and Layout for Welders Job Skills Certificate.

Total Units: 6

Required Courses:

Course Number	Title	Units
WELD B54a	Blueprint Reading for Welders and Machinists	3.0
WELD B54b	Template Development and Layout for the Welder	3.0

Gas Metal Arc/Gas Tungsten Arc Welding/Flux Core Arc Welding Job Skills Certificate

This certificate emphasizes welding processes of gas metal arc welding (GMAW), gas tungsten arc welding (GTAW) and flux core arc welding (FCAW). Theory and application as well as safety of these applications while welding on mild steel, aluminum and stainless steel are emphasized.

Upon completion of the following courses with at least a "C" grade in each course, the student will be awarded a Gas Metal Arc/Gas Tungsten/Flux Core Arc Welding Job Skills

Certificate.

Total Units: 8.0

Required Courses:

Course Number	Title	Units
WELD B1a	Introduction to Oxygen Acetylene Welding and Cutting	2.0
WELD B1b	Introduction to the Welding Processes	2.0
WELD B53ab	Shielded Metal Arc Welding	4.0
WELD B74a	Introduction to GMAW & FCAW	2.0

Shielded Metal Arc Welding Job Skills Certificate

This certificate emphasizes welding processes from oxy-acetylene cutting and brazing through shielded metal arc welding using many different welding electrodes and all positions. Blueprint reading and pattern layouts for welding are highlighted.

Upon completion of the following courses with at least a “C” grade in each course, the student will be awarded a Shielded Metal Arc Welding Job Skills Certificate.

Total Units: 12

Required Courses:

Course Number	Title	Units
WELD B1a &	Introduction to Oxygen Acetylene Welding and Cutting	2.0
WELD B1b &	Introduction to the Welding Processes	2.0
WELD B53ab &	Shielded Metal Arc Welding	4.0
WELD B54a &	Blueprint Reading for Welders and Machinists	3.0
WELD B54b	Template Development and Layout for the Welder	3.0

Welding Certificate of Achievement

Total Units: 30.0

Required Courses:

Course Number	Title	Units
WELD B1a	Introduction to Oxygen Acetylene Welding and Cutting	2.0
WELD B1b	Introduction to the Welding Processes	2.0
WELD B53ab	Shielded Metal Arc Welding	4.0
WELD B55ab	Structural Plate Certification	4.0
WELD B55cd	ASME Pipe Certification	4.0
WELD B65ab	Welded Steel Structures	3.0
WELD B74a	Introduction to GMAW & FCAW	2.0
WELD B74b	Introduction to GTAW	2.0
MFGT B1ab	Machine Tool Processes	3.0
WELD B54a	Blueprint Reading for Welders & Machinists	3.0
INDT B10 or Equivalent	Occupational Readiness	3.0

Industrial Technology, Welding Option Associate in Science Degree

Total Units: 37

Select from:

Course Number	Title	Units
WELD B1a	Introduction to Oxygen Acetylene Welding and Cutting	2.0

WELD B1b	Introduction to the Welding Processes	2.0
WELD B53ab	Shielded Metal Arc Welding	4.0
WELD B55ab	Structural Plate Certification	4.0
WELD B55cd	ASME Pipe Certification	4.0
WELD B74a	Introduction to GMAW & FCAW	2.0
WELD B74b	Introduction to GTAW	2.0
WELD B54a	Blueprint Reading for Welders & Machinists	3.0
WELD B54b	Template Development and Layout for the Welder	3.0
WELD B65ab	Welded Steel Structures	3.0
MFGT B1ab	Machine Tool Processes	3.0
INDR B10	Introduction to Industrial Drawing and Graphics	1.0
INDR B11	Introduction to Computer Aided Drafting and Design (CAD)	1.0
INDT B271	Special Problems in Welding	2-3.0
INDT B10 or Equivalent	Occupational Readiness	3.0

WOODWORKING/CABINETMAKING

Woodworking/Cabinetmaking Job Skills Certificate

This certificate covers the principles of woodworking to include materials, hand tools, wood cutting machinery and wood finishing. Emphasis will be put on designs to include modular construction, new materials and processes. Advanced bidding techniques are discussed.

Upon completion of the following courses with at least a “C” grade in each course, the student will be awarded a Woodworking/Cabinetmaking Job Skills Certificate.

Total Units: 6

Select 6 units from the following courses:

Course Number	Title	Units
WOOD B1	Introduction to Woodworking Technologies	3.0
WOOD B2	Furniture and Cabinetmaking	3.0
WOOD B5	Intermediate Cabinetmaking	3.0

Cabinetmaking Certificate of Achievement

Total Units: 33

Required Courses:

Course Number	Title	Units
WOOD B1	Introduction to Woodworking Technologies	3.0
WOOD B2	Furniture and Cabinetmaking	3.0
CNST B1	Introduction to Construction	3.0
WOOD B5	Intermediate Cabinetmaking	3.0
WOOD B65a	Advanced Cabinetmaking	3.0
WOOD B65b	Advanced Cabinetmaking	3.0
ENGL	Approved Course	4.0
MATH B50 or Math Placement Assessment Level 2 or Above	Modern College Arithmetic & Pre-Algebra	4.0
INDR B10	Introduction to Industrial Drawing and Graphics	1.0
INDT B10 or Equivalent	Occupational Readiness	3.0

Electives: to equal at least 33 units

Course Number	Title	Units
INDT B249ab	Cooperative Work Experience Education	1-4.0
INDT B274	Special Problems in Woodworking	2-3.0

INDR B11	Introduction to Computer Aided Drafting and Design (CAD)	1.0
INDR B20a	Computer Aided Drafting and Design (CAD)	3.0
FORE B2	Natural Resources	3.0
ENGL B50	Introduction to College Composition	4.0

Industrial Technology, Woodworking and Cabinetmaking Option Associate in Science Degree

Total Units: 29

Required Courses:

Course Number	Title	Units
WOOD B1	Introduction to Woodworking Technologies	3.0
WOOD B2	Furniture and Cabinetmaking	3.0
WOOD B5	Intermediate Cabinetmaking	3.0
WOOD B65a	Advanced Cabinetmaking	3.0
WOOD B65b	Advanced Cabinetmaking	3.0
FORE B1	Introduction to Forestry	3.0
INDR B11	Introduction to Computer Aided Drafting and Design (CAD)	1.0
INDR B20a	Computer Aided Drafting and Design (CAD)	3.0
INDR B10	Introduction to Industrial Drawing and Graphics	1.0
CNST B1	Introduction to Construction	3.0
INDT B10 or Equivalent	Occupational Readiness	3.0

Suggested Electives

Course Number	Title	Units
FORE B2	Natural Resources	3.0
INDR B30b	Industrial Drawing	3.0
MFGT B1ab	Machine Tool Processes	3.0