

DEGREE, CERTIFICATE, AND TRANSFER PROGRAMS

ACCOUNTING (10/07)

An Associate in Arts Degree in Accounting is available in preparation for employment in the field of bookkeeping or accounting as a full-charge bookkeeper or junior accountant. For the A.A. Degree, students must meet the graduation requirements and complete the following courses:

	Units
ACTG-04A Fundamentals of Financial Accounting	4
ACTG-04B Fundamentals of Managerial Accounting	4
ACTG-31 Computerized Accounting	2
ACTG-51 Applied Accounting.....	4
BUS-10 Introduction to Business.....	3
BUS-18A Business Law.....	4
CPSC-30 Computer Applications	3

Plus six units from the following:

ACTG-52 Payroll Records and Accounting	3
ACTG-53 Fundamentals of Income Tax Accounting	3
ACTG-54 Cost Accounting	3
ACTG-56 Governmental and Not-For-Profit Accounting	3
ACTG-70A-ZZ Special Topics in Accounting	$\frac{1}{2}$ - 3
	30

Suggested electives include:

BUS-43 Business Communication.....	3
CPSC-01 Introduction to Management Information Systems.....	3
ECON-01A Introduction to Macroeconomics	3
ECON-01B Introduction to Microeconomics	3
MATH-10 Elementary Statistics.....	3
MATH-15 Finite Mathematics.....	3

Certificate of Achievement:

A Certificate of Achievement will be awarded upon the satisfactory completion of 30 units of course work in this area of study which includes the core courses indicated for the A.A. Degree in Accounting.

ADDICTION STUDIES

The Associate in Arts Degree in Addiction Studies, which is fully accredited by the California Association for Alcohol and Drug Educators (CAADE), is available for students who meet the graduation requirements and complete the following required courses with a 2.0 GPA or higher in each class:

	Units
ADST-41 Introduction to Addiction Studies.....	3
ADST-42A Screening, Assessment, and Treatment Planning in Addiction Counseling	3
ADST-42B Introduction to Addiction Counseling Skills	3
ADST-43 Professional Responsibilities and Ethical Practice in Addiction Counseling	3
ADST-44 Pharmacology of Substance Abuse	3
ADST-45 Leadership and Counseling in Addiction Groups	3
ADST-46 Addiction Education and Prevention	3
COOP-41 Cooperative Education.....	6
PSYC-01A Introduction to Psychology	3
PSYC-23 Personal and Social Adjustment	3
or	
PSYC-51 Applied Psychology.....	3
	33

Certificate of Achievement:

A fully accredited CAADE Certificate of Achievement will be awarded upon the satisfactory completion of the 33-unit curriculum listed above plus an additional six units from the following electives with a 2.0 GPA or higher in each class:

	Units
ADST-49A-ZZ Special Topics in Addiction Studies.....	$\frac{1}{2}$ - 4
CLDV-02 Child, Family and Community	3
COMM-05 Interpersonal Communication	3
CPSC-30 Computer Applications	3
CRIM-33 Family Violence.....	3
HLTH-10 Contemporary Health	3
HMSV-50 Survey and Utilization of Community Resources.....	3
PSYC-22 Human Sexuality	3
SOC-01 Introduction to Sociology.....	3
SOC-02 Contemporary Social Problems	3
SOC-28 Marriage and the Family	3
	39

ADMINISTRATIVE OFFICE MANAGEMENT

(2/07)

The Administrative Office Management program offers a variety of options that guide students toward successful employment in business.

Associate in Arts Degree

Refer to the general education requirements for specific information regarding general education, unit and scholarship requirements. Completion of the certificate program, in addition to the general education and district requirements, qualifies the student for an Associate in Arts Degree.

Core Courses (required of all Administrative Office Management majors.)

	Units
ACTG-51 Applied Accounting.....	4
AOM-50B Keyboarding and Document Formatting	3
AOM-51 Keyboarding/Word Processing.....	3
AOM-53 Advanced Office Applications.....	4
AOM-54 Machine Transcription	2
AOM-57 Records Management.....	2
BUS-43 Business Communication.....	3
BUS-53 Business English.....	3
CPSC-30 Intro to Computer Applications	3
MGMT-31 Elements of Supervision	3
	30

Program Options

In addition to the core, the following are required for the program options listed below:

Administrative Office Professional	
AOM-55C AOM Seminar.....	1
AOM-52B AOM Speed & Accuracy.....	2
AOM-72 Office Practice.....	3
COOP-41A Cooperative Education Office Technology	2
	38
Administrative Legal Office Professional	
AOM-55A AOM Legal Office Seminar	1
AOM-69 Legal Office Practice.....	3
BUS-18A Business Law	4
COOP-41A Cooperative Education Office Technology	2
	40

Administrative Medical Office Professional	
BIOL-50	Survey of Anatomy and Physiology..... 3
ALLH-67	Medical Terminology 3
COOP-41A	Cooperative Education Office Technology 2
AOM-55B	Medical Office Seminar 1
AOM-68	Medical Office Practice 3
	42

Suggested electives include:

BUS-10	Introduction to Business..... 3
CPSC-01	Introduction to Management Information Systems..... 4
CPSC-24	Introduction to Computer Studies and Technology 3
BUS-49A-ZZ	Special Topics in Business..... ½ - 3

Certificate of Achievement:

A Certificate of Achievement will be awarded upon the successful completion of the 30-unit core plus one of the program options listed above.

AGRICULTURAL CHEMICALS

Certificate of Achievement:

A Certificate of Achievement in Agricultural Chemicals will be awarded upon satisfactory completion of the 18-unit core courses listed below:

	Units
AGBS-18	Agricultural Computer Applications 3
PLSC-10	Elements of Plant Science 3
PLSC-12	Weeds 3
PLSC-13	Economic Entomology 3
SOIL-10	Soil Science 3
SOIL-11	Fertilizers and Soil Amendments..... 3
	18

AGRICULTURE BUSINESS

The Associate in Science Degree in Agriculture Business is available upon satisfactory completion of the graduation requirements in addition to the Agriculture Business core and 12 units from the elective list. The Associate in Arts Degree is available upon satisfactory completion of the graduation requirements in addition to the Agriculture Business core and 3 units from the elective list.

	Units
Core:	
AGBS-10	Introduction to Agriculture Business..... 3
AGBS-11	Agricultural Economics..... 3
AGBS-12	Agricultural Accounting..... 3
AGBS-13	Agricultural Marketing 3
AGBS-17	Agricultural Sales and Communication 3
AGBS-18	Agricultural Computer Applications 3
MECH-31	Equipment Safety 1
	19

Electives:

AGBS-14	Farm Management..... 3
AGBS-30*	Agricultural Leadership 2
AGBS-31*	Agricultural Ambassadors 3
AGBS-48	Agriculture Business: Problems 2
AGBS-70A-ZZ	Special Topics in Agriculture Business..... ½ - 4
ANSC	Animal Science Electives** 1-4
PLSC	Plant Science Electives*** 1-4
MECH	Mechanized Ag Electives 1-4

*AGBS-30 and AGBS-31 are both repeatable three times.

**Includes Animal Science and Dairy Husbandry courses.

***Includes Plant Science, Crop Production, Soil Science, Landscape Horticulture, and Fruit Production courses.

Certificate of Achievement:

A Certificate of Achievement will be awarded upon satisfactory completion of the 19 unit core, plus 15 units from the electives above (at least five elective units must be AGBS courses).

Suggested agriculture courses to meet General Education Breadth Requirements: AGBS-11 (Area D); ANSC-10 or PLSC-10 (area B2); and SOIL-10 (area B1).

AGRICULTURE, GENERAL/AGRICULTURAL EDUCATION

The Associate in Science Degree in General Agriculture is available upon satisfactory completion of the graduation requirements in addition to the General Agriculture Core and 18 units from the elective list. The Associate in Arts Degree is available upon satisfactory completion of the graduation requirements in addition to the General Agriculture Core and nine units from the elective list. Students must complete elective courses from three of the five agricultural areas.

	Units
Core:	
AGBS-18	Agricultural Computer Applications 3
AGRI-10	Agriculture, Environment, and Society 3
ANSC-10	Elements of Animal Science..... 3
LAND-11	Elements of Landscape Horticulture 3
MECH-31	Equipment Safety 1
	13

Electives:

Agriculture Business	
AGBS -10	Introduction to Agriculture Business..... 3
AGBS -12	Agricultural Accounting..... 3
AGBS-13	Agricultural Marketing 3
AGBS-17	Agricultural Sales and Communication 3
AGBS-30	Agricultural Leadership 2
Animal Science	
ANSC-11	Elements of Animal Nutrition 3
ANSC-13	Animal Disease and Parasite Control 3
ANSC-15	Livestock Selection 3
ANSC-30	Fitting, Showing, and Merchandising Livestock 1.5
Crop Science/Plant Science/Soil Science	
CROP-10	Elements of Agronomy 3
CROP-12	Vegetable Crops..... 3
CROP-13	Forage Crops 3
PLSC-13	Economic Entomology 3
SOIL-11	Fertilizer and Soil Amendments 3
Landscape Horticulture	
LAND-10A	Plant Identification and Usage: Fall..... 3
LAND-12	Landscape Design 3
LAND-14	Landscape Construction and Installation 3
LAND-16	Plant Propagation..... 3
Mechanized Agriculture	
MECH-06	Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding..... 3
Mech-10	Agricultural Skills..... 3
MECH-15	Small Engine Repair and Maintenance..... 3
MECH-35	Compact Power Equipment 3

Certificate of Achievement:

A Certificate of Achievement will be awarded upon satisfactory completion of the 13-unit core plus 24 units from the elective list. Students must complete elective courses from all five agricultural areas.

Suggested agriculture courses to meet General Education Breadth Requirements:

AGBS -11*	(Area D) Agricultural Economics 3
PLSC-10*	(Area B2) Elements of Plant Science..... 3
SOIL-10*	(Area B1) Soil Science..... 3

*Transfer students should consult with their counselor regarding General Education Breadth Requirements.

ANIMAL SCIENCE

An Associate in Arts Degree in Animal Science is available upon satisfactory completion of the graduation requirements and completing the 22-unit core.

	Units
Core:	
AGBS-18	Agricultural Computer Applications 3
ANSC-10	Elements of Animal Science..... 3
ANSC-11	Elements of Animal Nutrition 3
ANSC-12	Livestock Breeding and Selection 3

ANSC-13	Animal Disease and Parasite Control	3
CROP-13	Forage Crops	3
MECH-31	Equipment Safety	1

GEOL-01	Physical Geology	4
MATH-10	Elementary Statistics.....	3
SCI-30	Science Lab Experience	1
SOIL-10	Soil Science	3

Plus one animal production course from the following list:

ANSC-16	Horse Husbandry	3
ANSC-17	Beef Production.....	3
ANSC-18	Sheep Production.....	3
ANSC-19	Swine Production	3
DAIR-10	Elements of Dairy	3
		22

An Associate in Science Degree in Animal Science is available upon satisfactory completion of the graduation requirements, completion of the core courses listed above, plus eight units from the electives list.

Electives:

AGBS-12	Agricultural Accounting.....	3
ANSC-15	Livestock Selection	2
ANSC-16	Horse Husbandry	3
ANSC-17	Beef Production.....	3
ANSC-18	Sheep Production.....	3
ANSC-19	Swine Production	3
ANSC-22	Applied Livestock Practices	3
ANSC-30	Fitting, Showing, and Merchandising Livestock	1.5
ANSC-70	Special Topics in Animal Science	1-3
DAIR-10	Elements of Dairy	3
DAIR-11	Dairy Cattle Selection.....	2
MECH-06	Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding.....	3
MECH-12	Agriculture Equipment.....	3

Certificate of Achievement:

A Certificate of Achievement will be awarded upon satisfactory completion of the 22-unit core and 14 units from the electives above.

ANTHROPOLOGY

This major is designed for students interested in Anthropology who intend to continue their studies at one of the California State Colleges or at the University of California; students should work with their counselors for specific requirements.

For an Associate in Arts Degree in Anthropology, students must meet the graduation requirements and the 18-unit curriculum below. It is recommended that breadth classes be chosen from the lists below whenever possible.

	Units	
ANTH-01	Physical Anthropology	3
ANTH-01L	Physical Anthropology Lab.....	1
ANTH-02	Cultural Anthropology.....	3
ARCH-01	Introduction to Archaeology.....	3
ARCH-01L	Field Archaeology.....	1

Students must also select an additional seven units from the following lists according to the student's area of concentration:

Cultural Anthropology Concentration		
ANTH-10	Southeast Asian Culture.....	3
GEOG-02	World Geography	3
MATH-10	Elementary Statistics.....	3
PHIL-15	Comparative Religions	3
SCI-30	Science Lab Experience	1

Physical Anthropology Concentration

BIOL-09	Introduction to Genetics	3
BIOL-16	General Human Anatomy.....	4
CHEM-04A	General Chemistry	5
CHEM-04B	General Chemistry	5
GEOL-01	Physical Geology	4
MATH-10	Elementary Statistics.....	3
SCI-30	Science Lab Experience	1

Archaeology Concentration

GEOG-01	Physical Geography	3
GEOG-01L	Physical Geography Lab.....	1

ARTS AND HUMANITIES

The degree in Arts and Humanities offers a focus on the broad basic cultural manifestations of the arts and humanities. The area of emphasis is on the intellectual, cultural and aesthetic development of the arts and humanities rather than on the application of skills.

This area of emphasis provides an opportunity to earn an AA degree in a broad area of study and is intended for students who may need to explore possibilities before committing themselves to a career or transferring to a four-year university.

Students are strongly encouraged to consult with a counselor for specific information regarding their career planning.

For an Associate in Science Degree with an area of emphasis in Arts and Humanities, students must meet the basic graduation requirements and complete 18 units from the courses listed below.

Select nine units from each of the following two categories. Courses listed below may be counted as general education requirements as well as area of emphasis requirements.

Category 1: Arts

ART-01	Art History – Ancient through Gothic	3
ART-02	Art History – Renaissance through Modern	3
ART-06	Art of the 20th Century	3
ART-12A	Sculpture	3
ART-15	Fundamentals of Design in Art.....	3
ART-24A	Drawing I.....	3
DRAM-01	Introduction to Theater	3
DRAM-03/ENGL-03	History of Dramatic Literature.....	3
MUS-01	Fundamentals of Music	3
MUS-11	History of Classical Music (Early Music through Baroque Era).....	3
MUS-12	History of Classical Music (Classical Era to the Present Day).....	3
MUS-13	History and Appreciation of Jazz.....	3
MUS-14	History of American Popular Music	3

Category 2: Humanities

HUM-01	Studies in Humanities – Ancient to Early Renaissance.3
HUM-01H	Honors Studies in Humanities - Ancient to Early Renaissance
HUM-02	Studies in Humanities – Renaissance to Present
HUM-02H	Honors Studies in Humanities – Renaissance to Present.....
HUM-21	Humanities and Film
ENGL-01B	Introduction to Literature
ENGL-04A	Introduction to World Literature: Ancients to 1650
ENGL-04B	Introduction to World Literature: 1650 to Present
ENGL-06A	Major English Writers
ENGL-06B	Major English Writers
ENGL-10	American Literature from Beginnings to Civil War.....
ENGL-11	American Literature from Post-Civil War to Present.....
ENGL-14	Introduction to Film.....
ENGL-18	African and African-American literature.....
PHIL-01	Introduction to Philosophy.....
PHIL-01H	Honors Introduction to Philosophy
PHIL-03	Ancient Philosophy.....
PHIL-04	Modern Philosophy
PHIL-05	Contemporary Moral and Social Issues
PHIL-12	Logic.....
PHIL-15	Comparative Religions

AUTOMOTIVE TECHNOLOGY

For an Associate in Arts Degree in Automotive Technology, students must meet the graduate requirements and complete one of the following certificate options (with the exception of Automotive Engines -- no A.A. is available):

Automotive Engines (Certificate Only)		Units
AUTO-04	Introduction to Automotive Technology	3
AUTO-41	Automotive Engines	4
AUTO-48C	Special Problems in Automotive Engines.....	2
DRFT-59	Basic Drafting.....	3
		12

Automotive Parts and Service Professional Option (9/07)		
AOM-50B	Keyboarding and Document Formatting	3
AUTO-04	Introduction to Automotive Technology	3
AUTO-60	Consumer Automotive Service.....	2
AUTO-65	Automotive Parts and Service Advising	4
BUS-43	Business Communication.....	3
BUS-53	Business English.....	3
INDT-38	Industrial Technology Computer Applications and Literacy.....	3
MGMT-50B	Values and Ethics.....	1/2
MGMT-50C	Time Management	1/2
MGMT-50D	Communication in the Workplace	1/2
MGMT-50H	Customer Service.....	1/2
MGMT-51F	Conflict Resolution	1/2
MGMT-51G	Stress Management & Job Burnout	1/2
		24

Body and Fender Option		
AUTO-04	Introduction to Automotive Technology	3
AUTO-32	Wheel Alignment and Suspension	4
AUTO-50	Basic Auto Body Repair and Painting	4
AUTO-51	Advanced Auto Body.....	4
AUTO-62	Basic Electronics for Technicians.....	3
DRFT-59	Basic Drafting.....	3
WELD-06	Oxy-Fuel Welding and Shielded Metal Arc Welding.....	3
		24

Engine Performance Option		
AUTO-04	Introduction to Automotive Technology	3
AUTO-42	Automotive Electrical Systems.....	3
AUTO-43	Automotive Fuel Systems	3
AUTO-47	Engine Performance	4
AUTO-48B	Special Problems in Engine Performance.....	2
AUTO-55	Basic/Enhanced Emission Control Devices and Servicing	5
AUTO-62	Basic Electronics for Technicians.....	3
DRFT-59	Basic Drafting.....	3
		26

Suspension and Brakes Option		
AUTO-04	Introduction to Automotive Technology	3
AUTO-32	Wheel Alignment and Suspension	4
AUTO-33	Brakes.....	4
AUTO-48D	Special Problems in Automotive Suspension.....	2
or		
AUTO-48E	Special Problems in Automotive Brakes	2
AUTO-62	Basic Electronics for Technicians.....	3
DRFT-59	Basic Drafting.....	3
WELD-06	Oxy-Fuel Welding and Shielded Metal Arc Welding.....	3
		22

Transmissions Option		
AUTO-04	Introduction to Automotive Technology	3
AUTO-36	Automotive Manual Transmissions and Drive Trains	4
AUTO-46	Automatic Transmissions	4
AUTO-48A	Special Problems in Automotive Transmissions.....	2
AUTO-62	Basic Electronics for Technicians.....	3
DRFT-59	Basic Drafting.....	3
		19

Certificate of Achievement:

A Certificate of Achievement will be awarded upon successful completion of one of the certificate options listed above. For successful completion, a student must complete the requirements with a minimum grade point of 2.0 in each course required for the certificate.

AUTOMOTIVE PROGRAM, TOYOTA-APPROVED (9/07)

The Associate in Arts Degree in Toyota-Approved Automotive is designed to prepare students for employment as an automotive technician or parts and service advisor. Students must meet the graduation requirements and complete the major requirements for one of the following options:

Toyota-Approved Automotive Program Option		Units
AUTO-04	Intro to Automotive Technology	3
AUTO-32	Wheel Alignment and Suspension	4
AUTO-33	Brakes	4
AUTO-36	Automotive Manual Transmission Drive Trains	4
AUTO-41	Automotive Engines	4
AUTO-42	Automotive Electrical Systems.....	3
AUTO-43	Automotive Fuel Systems	3
AUTO-44	Auto Air Conditioning, Heating & Cooling	4
AUTO-46	Automatic Transmissions	4
AUTO-47	Engine Performance	4
AUTO-55	Basic/Enhanced Emission Control Devices and Servicing	5
AUTO-62	Basic Electronics for Technicians.....	3
AUTO-65	Automotive Parts and Service Advising	4
COOP-41	Cooperative Education.....	8
		57

Students must also complete the following requirements:

1. Pass two ASE certification tests from area A-1 to A-8.
2. Pass Refrigerant Recovery and Recycling Certification tests offered by one of the following organizations: ASE, Mobile Air Conditioning Society, or International Mobile Air Conditioning Association.
3. Meet dealership hiring requirements that may include drug testing and DMV driving record print out.
4. Pass relevant Toyota certification tests with a minimum score of 80%.

Certificate of Achievement:

A Certificate of Achievement in Toyota-Approved Automotive Program will be awarded upon the satisfactory completion of the full program option above with the exception that students must complete two units from one of the following courses: AUTO-48A, 48B, 48C, or 48D). For successful completion, a student must complete the requirements with a minimum grade point of 2.0 in each course required for the certificate.

BIOLOGICAL SCIENCE (12/06)

The student majoring in biological science is generally preparing for transfer to a four-year institution and a career in research, teaching, lab technology, one of the health care professions, or related fields.

Math requirements for biology majors vary widely. It is important to study early the requirements of the student's choice of four-year schools, to allow for careful planning of math courses.

For an Associate in Science Degree in Biological Science, a student must meet the basic graduation requirements (CHEM-04A and BIOL-04 or BIOL-04H should be taken for science breadth), and complete the courses listed below:

		Units
BIOL-12	Principles of Botany	5
BIOL-13	General Zoology.....	5
CHEM-04B	General Chemistry	5
CHEM-12A	Organic Chemistry I	5
		20

And select 10-11 units from the following:

BIOL-06	Environmental Science	3
BIOL-09	Introduction to Genetics	3
BIOL-20	Microbiology	4
BIOL-31	Introduction to Biotechnology.....	4
CHEM-04A	General Chemistry	5
CHEM-12B	Organic Chemistry II	5
MATH-04A	Analytical Geometry and Calculus	4
MATH-04B	Analytical Geometry and Calculus	4
MATH-05A	Applied Calculus	4
MATH-05B	Applied Calculus	4
MATH-10	Elementary Statistics.....	3
MATH-12	FORTRAN Programming	4
or		
MATH-14	C++ Programming.....	3
PHYS-02A	General Physics	4
PHYS-02B	General Physics	4

BIOTECHNOLOGY

The student majoring in Biotechnology is generally preparing for employment in the biotechnology industry or for transfer to a four-year institution to complete the requirements for a bachelor's degree. For the Associate in Science Degree in Biotechnology, a student must meet the basic graduation requirements and complete 30 units from the courses listed below. It is intended that the student complete both courses in the CHEM-02AB sequence, or both courses in the CHEM-04AB sequence, with the first course in the sequence satisfying the physical science breadth requirements. BIOL-04 or BIOL-04H (for students transferring to a university) or BIOL-01 should be taken to satisfy the life science breadth requirement.

Units

BIOL-20	Microbiology	4
BIOL-31	Introduction to Biotechnology I.....	4
BIOL-33	Biotechnology II: Advanced Laboratory Techniques	4
CHEM-02B	Introductory Chemistry	4
or		
CHEM-04B	General Chemistry	5
BIOL-09	Introduction to Genetics	3
		19-20

And the remaining 10-11 units from the following courses:

BIOL-06	Environmental Science	3
BIOL-16	General Human Anatomy	4
BIOL-12	Principles of Botany	5
CPSC-01	Introduction to Management Information Systems.....	4
or		
CPSC-30	Computer Applications	3
ENTC-30	Introduction to Environmental Technology	3
BIOL-18	Principles of Physiology	4
PLSC-10	Elements of Plant Science	3
BIOL-13	General Zoology.....	5

For a Certificate of Achievement in Biotechnology, students must complete the following required courses:

BIOL-01	General Biology for Non-Majors.....	4
or		
BIOL-04	Principles of Biology for Science Majors	4
or		
BIOL-04H	Honors Principles of Biology for Science Majors	4
BIOL-20	Microbiology	4
BIOL-31	Introduction to Biotechnology I.....	4
BIOL-33	Biotechnology II: Advanced Laboratory Techniques	4
CHEM-02A	Introductory Chemistry	4
and		
CHEM-02B	Introductory Chemistry	4
or		
CHEM-04A	General Chemistry	5
and		
CHEM-04B	General Chemistry	5
BIOL-09	Introduction to Genetics	3
		27-29

BUSINESS ADMINISTRATION

The Associate in Arts Degree in Business Administration is designed to give students who choose to work toward the Bachelor of Science Degree a well-balanced introduction to professional careers in business. Certain basic courses are included in the first two years of study which should give the student the proper background for upper division study in Business Administration. These include:

		Units
ACTG-04A	Fundamentals of Financial Accounting	4
ACTG-04B	Fundamentals of Managerial Accounting.....	4
BUS-10	Introduction to Business.....	3
BUS-18A	Business Law	4
CPSC-01	Introduction to Management Information Systems.....	4
ECON-01A	Introduction to Macroeconomics	3
ECON-01B	Introduction to Microeconomics	3
MATH-10	Elementary Statistics.....	3
MATH-15	Finite Mathematics	3
		31

ECON-01A and ECON-01B may be used to meet degree requirements.

Students should refer to the catalog of the school to which they plan to transfer to determine whether that school requires any specific courses in addition to, or other than, those listed above.

BUSINESS, GENERAL (2/07)

The Associate in Arts Degree in General Business is designed to provide students with general preparation for entry into employment in the business community.

Students must meet the graduation requirements and complete the following major requirements:

		Units
ACTG-51	Applied Accounting.....	4
BUS-10	Introduction to Business.....	3
BUS-18A	Business Law	4
BUS-35	Money Management	3
CPSC-30	Computer Applications	3
or		
CPSC-31	Word Processing.....	1
and		
CPSC-32	Spreadsheet.....	1
and		
CPSC-33	Database.....	1
ECON-01A	Introduction to Macroeconomics	3
AOM-50B	Keyboarding and Document Formatting	3
		23

Suggested electives include:

CPSC-01	Introduction to Management Information Systems.....	4
BUS-49A-ZZ	Special Topics in Business.....	½ -3
MGMT-31	Principles of Management.....	3
MDSE-32	Salesmanship.....	3
MGMT-33	Elements of Effective Leadership.....	3

Certificate of Achievement:

A Certificate of Achievement will be awarded upon the satisfactory completion of 30 units of course work in this area of study which includes the core courses indicated for the A.A. Degree in General Business.

CHEMISTRY

The following Chemistry curriculum is designed for students planning to transfer to a California State University. It is assumed that the student has completed two years of a foreign language, one year of chemistry, and math through pre-calculus in high school.

For an Associate in Science Degree in Chemistry a student must meet the graduation requirements (PHYS-02A or PHYS-04A and a course in the life sciences are suggested as courses to satisfy the breadth requirements in

the science area) and complete the courses listed below:

	Units
CHEM-04A General Chemistry	5
CHEM-04B General Chemistry	5
CHEM-12AB Organic Chemistry I, II	10
PHYS-02B General Physics	4
or	
PHYS-04B Physics	4
	24

And select seven units from the following:

MATH-04ABC Analytical Geometry and Calculus	12
MATH-05AB Applied Calculus	6
MATH-06 Elementary Differential Equations	3
MATH-12 FORTRAN Programming	3
MATH-14 C++ Programming	3

CHEMISTRY - PRE-PROFESSIONAL

An Associate in Science Degree in Chemistry Pre-Professional is for students intending to study one of the professional areas. These areas include medicine, pharmacy, dentistry, chiropractic, and veterinary medicine. The suggested curriculum below should be modified according to the area of study and major selected. Students should see their counselor for assistance in tailoring a program to specific needs.

A student must complete the graduation requirements (BIOL-01 and PHYS-02A or PHYS-04A are suggested to satisfy breadth requirements in the science area) and complete the courses listed below:

	Units
CHEM-04A General Chemistry	5
CHEM-12A Organic Chemistry I	5
PHYS-02B General Physics	4
or	
PHYS-04B Physics	4
BIOL-13 General Zoology	5

And select 11 units from the following:

BIOL-12 Principles of Botany	5
CHEM-04B General Chemistry	5
CHEM-12B Organic Chemistry II	5
MATH-04A Analytical Geometry and Calculus	4
MATH-04B Analytical Geometry and Calculus	4
MATH-05A Applied Calculus	3
MATH-05B Applied Calculus	3

CHILD DEVELOPMENT (12/07)

For an Associate in Arts in Child Development, students must meet the graduation requirements and complete the following courses:

Core:	Units
CLDV-01 Child Growth and Development	3
CLDV-02 Child, Family and Community	3
CLDV-03 Introduction to Early Childhood Education	3
CLDV-04 Observation and Assessment	3
CLDV-05 Health, Safety and Nutrition	3
CLDV-06 Teaching in a Diverse Society	3
CLDV-07 Introduction to Curriculum for the Young Child	3
CLDV-07L Practicum	3
	24

Note: Students having pre-school teaching experience should take a two-unit field experience course. Students not having this experience should take the three unit field experience course.

Child Development Permits

Merced College has been approved by the California Commission on Teacher Credentialing to verify requirements for all levels of the child Development Permit listed below. These permits authorize teaching in state and federal preschool programs. To apply for a permit, go to the merced college Child Development Center or the merced college Business

Division office, or www.childdevelopment.org.

Associate Teacher Permit (12/07)

Merced college will approve a child Development Associate Teacher Permit from the California commission on Teacher Credentialing when students have the education below and an additional 50 days of preschool teaching experience (3+ hours per day within the last 2 years):

<i>Education:</i>	Units
CLDV-01 Child Growth and Development	3
CLDV-02 Child, Family and Community	3
Plus any six units of child development courses to make a total of 12 units.*	

Teacher Permit, Option 1 (12/07)

Merced College will approve a Child Development Teacher Permit, Option 1, from the California Commission on Teacher Credentialing, when students have the education below and a total of at least 175 days of preschool teaching experience (3+ hours per day within the last 4 years).

Education:
Complete Associate Teacher Permit requirements \ **and** 12 more units of CLDV courses to total at least 24 units.* **and** 16 units of general education.**

*Note: If you take practicum classes, you may take them for either units or experience, but not both. If you need the experience, count practicums as experience and take any other CLDV classes to make a total of 24 units. If you don't need experience, because you have been working in a preschool program, you may take practicum classes as part of your 24 units.

**Note: You must have at least one A.A. degree level course in each of the following general education breadth areas to total 16 units:

- English/Language Arts
- Math or Science
- Humanities/Fine Arts
- Social Science

Teacher Permit, Option 2 (12/07)

Merced College will approve a Child Development Teacher Permit, Option 2, from the California Commission on Teacher Credentialing when students have the education below. No Teaching experience is required for this option.

Education:
Complete the Child Development A.A. Degree requirements*.

*Note: If you plan to transfer to a B.A. program your breadth requirements for the A.A. must be transferable to CSU/UC. Check with a counselor for specific transfer requirements for your major.

Master Teacher Permit (12/07)

Merced College will approve a Master Teacher Permit, Option 1, for the California Commission on Teacher Credentialing, when students have the education below and have a total of at least 350 days of preschool teaching experience (3+ hours per day within the last 4 years). You may earn as many specializations as you want.

Education:
Teacher Permit, Option 1 (24 CLDV units + experience)

or
Teacher Permit, Option 2 (A.A. degree in CLDV)

<u>and</u>	
CLDV-37 Supervising Adults in ECE Settings	2

and completion of any specialization below:

<u>Infant/Toddler Specialization</u>	
CLDV-30C Infant/Toddler Curriculum	2
CLDV-35 Infant/Toddler Development	2
CLDV-35L Infant/Toddler Lab	2
	6

Preschool Specialization

CLDV-30A Creative Art, Math, Science	2
or	
CLDV-30B Language, Music, Movement	2

and		
CLDV-40B	ECE Supervised Field Experience	3
CLDV-70A-ZZ	Special Topics	1
		6

School-Age Specialization

CLDV-30D	School-Age Curriculum	2
CLDV-56	School-Age Development	2
CLDV-56L	School-Age Lab.....	2
		6

Family Child Care Specialization

CLDV-33	Working with Families	1
CLDV-52	Diversity Curriculum	1
CLDV-55	Day Care Issues.....	1
CLDV-70A-ZZ	Special Topics	3
		6

Early Literacy Specialization

CLDV-30B	Preschool Curriculum B	2
CLDV-51	Early Literacy for Young Children.....	1

and		
ENGL-31	Children's Literature	3
or		
CLDV-70A-ZZ	Special Topics	3
		6

Early Intervention Assistant Specialization

CLDV-11	Introduction to Early Intervention	3
CLDV-38	Children with Special Needs	3
		6

Working with "Families in Crisis" Specialization

CLDV-33	Working with Families	1
CLDV-54	Sexual Development of Young Children.....	1
CLDV-57	Child Abuse and Neglect.....	1
CRIM-33	Violence in the Family	3
		6

Nutrition and Foods Specialization

NUTR-40	Menu Planning	3
NUTR-41	Infant Feeding	1
NUTR-43	Children and Weight Concerns	1
NUTR-70A-ZZ	Special Topics in Nutrition	1
		6

Site Supervisor Permit (12/07)

Merced College will approve a Site Supervisor Permit, Option 1, for the California Commission on Teacher Credentialing, when students have the education below and a total of at least 350 days of preschool teaching experience which includes 100 days of supervising adults (3+ hours per day within the last 4 years):.

<u>Education</u>		Units
Teacher Permit, Option 2 (A.A. degree in CLDV)		
and		
CLDV-34A	Administration and Supervision of ECE Programs: Licensing and Staffing.....	3
CLDV-34B	Administration and Supervision of ECE Programs: Managing People, Time and Resources	3
CLDV-37	Supervising Adults in ECE Settings	2

COMMUNICATION STUDIES

The Communication Studies curriculum is designed to assist students from all majors in developing communication skills. Those students interested in majoring in communication studies, with possible emphasis in public speaking, small group discussion, interpersonal communication, intercultural communication, or oral interpretation, should consult the catalog of the college to which they plan to transfer for these and other options.

For an Associate in Arts Degree in Communication Studies, students must meet the graduation requirements and complete the additional 21-unit curriculum listed below:

		Units
COMM-01	Fundamentals of Speech	3
or		
COMM-01H	Honors Fundamentals of Speech.....	3

COMM-02*	Oral Interpretation	3
COMM-04	Small Group Discussion and Communication.....	3
COMM-05	Interpersonal Communication	3
COMM-30	Introduction to Intercultural Communication.....	3
PHIL-10	Critical Thinking.....	3
or		
PHIL-13	Critical Reasoning & Writing	3

Plus six units from the following electives:

ANTH-10	Southeast Asian Culture.....	3
ANTH-32	Anthropological Study of Women.....	3
DRAM-10	Beginning Acting	3
ASLG-01	Beginning Sign Language.....	3
LBST-10	Introduction to Education I	3
MGMT-32	Human Resources Management	3
MGMT-33	Elements of Effective Leadership.....	3
MKTG-30	Marketing	3
MKTG-33	Advertising	3
PSYC-23	Personal and Social Adjustment	3
SOC-01	Introduction to Sociology.....	3

24

*Offered in the spring semester only.

COMPUTER STUDIES

The Associate in Science Degree in Management Information Systems is designed for students pursuing degrees in Business Administration, Computer Information Systems, or Management Information Systems. Students should determine what other lower division requirements are required by the institution to which they intend to transfer.

Associate in Science -- Management Information Systems

		Units
ACTG-04A	Financial Accounting	4
ACTG-04B	Managerial Accounting.....	4
BUS-10	Introduction to Business.....	3
CPSC-01	Introduction to Management Information Systems.....	4
CPSC-05	Visual Basic Programming	3
CPSC-06	Programming Concepts and Methodology I.....	3
ECON-01A	Introduction to Macroeconomics	3
MATH-10	Elementary Statistics.....	3

Plus at least three units from the following courses:

MATH-04A	Applied Geometry and Calculus.....	3
MATH-05A	Applied Calculus	3
MATH-15	Finite Mathematics.....	3
		30

The Associate in Science Degree in Computer Science is designed for students pursuing degrees in Computer Science or Computer Engineering.

Associate in Science -- Computer Science

CPSC-01	Introduction to Management Information Systems.....	4
CPSC-06	Programming Concepts and Methodology I.....	3
CPSC-39	Introduction to Object-Oriented Programming	4
MATH-04AB	Analytical Geometry and Calculus	8
MATH-10	Elementary Statistics.....	3
MATH-14	C++ Programming.....	3
		25

Plus a minimum of 12 units from the following courses:

CHEM-04A	General Chemistry	5
CHEM-04B	General Chemistry	5
CPSC-05	Visual Basic Programming	3
MATH-04C	Analytical Geometry and Calculus	4
MATH-06	Elementary Differential Equations.....	3
MATH-08	Linear Algebra.....	3
PHYS-04A	Physics.....	4
PHYS-04B	Physics.....	4
		37

CORRECTIONS (10/06)

For an Associate in Arts Degree in Corrections, students must complete the graduation requirements and the course work listed below with a 2.0 GPA or higher in each class.

	Units
CORR-01 Introduction to Corrections.....	3
CORR-04 Concepts of Criminal Law for Corrections.....	3
CORR-41 Correctional Writing.....	3
CORR-42 Control and Supervision in Corrections.....	3
CORR-43 Correctional Interviewing.....	3
CORR-44 Legal Aspects of Corrections	3
	18

Plus six units from the following electives:

CRIM-06 Introduction to Evidence.....	3
CRIM-08 Introduction to Investigation	3
CRIM-30 Juvenile Procedures.....	3
CRIM-33 Family Violence.....	3
CRIM-35 Narcotics	3
CRIM-37 Communication and Ethics in Law Enforcement.....	3
CRIM-39 Police Tactics	1
CORR-30 Probation and Parole	3
CORR-32 Adult Correctional Officer Core Academy	6

A Certificate of Achievement in Corrections can be obtained by completion of the following classes with a 2.0 GPA or higher:

CRIM-06 Introduction to Evidence.....	3
CRIM-08 Introduction to Investigation	3
CRIM-30 Juvenile Procedures.....	3
CRIM-35 Narcotics	3
CRIM-37 Communication and Ethics in Law Enforcement.....	3
CRIM-39 Police Tactics	1
CORR-01 Introduction to Corrections	3
CORR-04 Concepts of Criminal Law for Corrections.....	3
CORR-30 Probation and Parole	3
CORR-41 Correctional Writing.....	3
CORR-42 Control and Supervision	3
CORR-43 Correctional Interviewing.....	3
CORR-44 Legal Aspects of Corrections	3
	34

CRIMINAL JUSTICE

For an Associate in Arts Degree in Criminal Justice, students must complete the graduation requirements and the 24-unit curriculum listed below. These courses must be in addition to the basic graduation requirements, and a 2.0 GPA or higher must be earned in each class.

	Units
CRIM-01 Criminology	3
or	
CRIM-02 Introduction to Criminal Justice	3
CRIM-03 Criminal Procedures.....	3
CRIM-04 Criminal Law	3
CRIM-05 Community and Human Relations	3
CRIM-06 Introduction to Evidence.....	3
CRIM-10 Writing for Criminal Justice	3
CRIM-37 Communication and Ethics in Law Enforcement.....	3

Plus three units from the following electives:

CRIM-08 Introduction to Investigation	3
CRIM-30 Juvenile Procedures.....	3
CRIM-33 Violence in the Family	3
CRIM-35 Narcotics	3
CRIM-36 Patrol Procedures	3
CRIM-39 Police Tactics	1
CRIM-42A 832 PC Arrest Methods	3
CRIM-42B 832 PC Firearms	1
CRIM-42C Reserve Peace Officer Module Level 3.....	7
CRIM-42D Reserve Peace Officer Module Level 2.....	13.5
CRIM-49A-ZZ Special Problems in Criminal Justice	1/2-3
CORR-30 Probation and Parole	3
	24

A Certificate of Achievement in Criminal Justice can be obtained by completion of the following classes with a 2.0 GPA or higher in each class taken:

CRIM-01 Criminology	3
or	
CRIM-02 Introduction to Criminal Justice	3
CRIM-03 Criminal Procedures.....	3
CRIM-04 Criminal Law	3
CRIM-05 Community and Human Relations	3
CRIM-06 Introduction to Evidence.....	3
CRIM-08 Introduction to Investigation	3
CRIM-10 Writing for Criminal Justice	3
CRIM-35 Narcotics	3
CRIM-37 Communication and Ethics in Law Enforcement.....	3
CRIM-39 Police Tactics	1

Plus three units from the following classes:

CRIM-30 Juvenile Procedures.....	3
CRIM-33 Family Violence.....	3
CRIM-36 Patrol Procedures	3
CRIM-49A-ZZ Special problems in Criminal Justice	1/2 - 3
CORR-30 Probation and Parole	3
	31

CROP SCIENCE

The Associate in Science Degree in Crop Science is available upon satisfactory completion of the graduation requirements in addition to 30 units from the following list; the Associate in Arts Degree is available upon satisfactory completion of the graduation requirements in addition to 19 units from the following list. The core must be completed for each degree.

	Units
Core:	
CROP-10 Elements of Cereal Grain Production.....	3
CROP-12 Commercial Vegetable and Garden Production.....	3
PLSC-12 Weeds	3
SOIL-10 Soil Science	3
SOIL-11 Fertilizers and Soil Amendments.....	3
MECH-12 Agriculture Equipment.....	3
MECH-31 Equipment Safety	1
	19

Electives:

AGBS-18 Agricultural Computer Applications	3
CROP-13 Forage Crops	3
FPRO-12 Vineyard Production and Management.....	3
FPRO-13 Fruit Tree Maintenance	3
MECH-21 Hydraulics	3
MECH-22A Diesel Engines	4
PLSC-13 Economic Entomology	3
LAND-16 Plant Propagation.....	3

Certificate of Achievement:

A Certificate of Achievement will be awarded upon satisfactory completion of the 19 unit core and 18 units from the electives above.

CSU TRANSFER BREADTH CERTIFICATE OF ACHIEVEMENT (2/08)

A minimum of 39 units from the following:

Students must complete a minimum of 39 units used to satisfy the CSU Transfer Breadth Requirements. Students must receive full certification of the CSU General Education Breadth lower division pattern, which requires a grade of "C" or better in Area A and Area B-4. See the CSU Transfer Breadth requirements patterns listed in the Merced College catalog or consult with a Merced College counselor.

CUSTOMER SERVICE

See Management/Supervisory Training

DIAGNOSTIC RADIOLOGIC TECHNOLOGY

(12/06)

The Diagnostic Radiologic Technology Program is a full-time Associate Degree and Certificate of Achievement program to which a minimum of 16 students are admitted each fall semester. The entire program is 29 consecutive months in length and is composed of five semesters and two twelve-week summer sessions. Students wishing to enter the program must make formal application, including verification of completion of prerequisites. Upon verification that all prerequisites have been met, the applicant will be placed on a waiting list. Prerequisites completed more than ten years ago are subject to evaluation, and repetition of course work may be required when deemed appropriate. Applications are accepted year-round.

Mission Statement

The mission of the Merced College Diagnostic Radiologic Technology Program is to prepare our students for careers as diagnostic radiographers by providing a continually-improving educational program which is accredited by the JRCERT and by instilling in our students a commitment to continued professional growth and lifelong learning.

Program Review and Student Learning Objectives

In support of this mission, the Diagnostic Radiologic Technology Program:

1. will uphold the standards for satisfactory educational preparation for entry into the program
2. will provide a curriculum which
 - a. emphasizes the principles of radiation protection for patients, self, and others
 - b. supports and assesses the knowledge and skills required to intelligently perform the tasks typically required for entry level practice into the profession
3. will encourage students to develop
 - a. effective communication skills
 - b. critical thinking skills to enhance their problem-solving skills
 - c. a commitment for life-long learning in preparation for a complex and changing society
4. will advocate and expect ethical and compassionate treatment for patients.

Requirements for Application (Prerequisites)

ALLH-67, BIOL-16, CHEM-02A, ENGL-A, ENGL-41, ENGL-41L, MATH-A, and RADT-50 (formerly COOP-41ART). All prerequisites and program requirements must be passed with a grade of "C" or better, and their combined GPA must be 2.35 or higher.

Program requirements must be satisfied prior to submitting an application to the program. An official transcript listing all program prerequisites must accompany an application before the application will be officially accepted. Applications are accepted year-round. For additional program information and application forms, refer to the Radiologic Technology Handbook available at the Merced College Bookstore, or visit the RADT program web site and download the forms at: www.mccd.edu/alliedhealth/radtechhp.htm.

Upon admission to the program, students are required to have a physical examination providing evidence of good health and immunization, and must provide annual proof of a negative TB skin test OR an annual TB screening and a chest X-ray at least every four years. Students will also have to supply a criminal background clearance upon admission to the program. A negative criminal background clearance may deny the student's eligibility to sit for the ARRT national exam. If you are unsure about your eligibility status, the ARRT has an exam pre-clearance process that will help identify your eligibility to sit for this exam prior to completing the program. It is recommended that you request this evaluation as soon as possible so that your ability to sit for the ARRT exam is not jeopardized. Further information can be found at www.ARRT.org.

Also upon admission, additional information on malpractice insurance and uniforms will be provided. While enrolled in the program, students will be assigned to various clinical facilities in addition to the on-campus portions

of the program. This ensures the strongest educational experience for each student. By application and acceptance into this program, the student agrees to accept clinical assignments in whatever hospital or clinical site the student is assigned within our 75 mile service area. During internship, clinical assignments may include day, evening, and weekend hours.

In order to progress satisfactorily in the RADT program, students must complete Diagnostic Radiologic Technology courses in the specified sequence with a minimum grade of "C" in each course, and maintain an overall GPA of 2.35 in supportive and RADT course work.

Required:	Units
First Semester (Fall) – Effective: Summer 2007	
RADT-41 Introduction to Medical Imaging	4
RADT-42 Radiologic Procedures I	4
Second Semester (Spring) – Effective: Summer 2007	
RADT-40 Radiologic Science I	3
RADT-43A Radiologic Procedures II	4
RADT-43B Clinical Education I	5
First Summer Session – Effective: Summer 2008	
RADT-44A Radiologic Science II	2
RADT-44B Clinical Education II	3.5
Third Semester (Fall) – Effective: Summer 2008	
RADT-45A Radiologic Procedures III	1
RADT-45B Clinical Education III	5.5
RADT-45C Advanced Radiologic Procedures I	2
RADT-45D Radiologic Pathology	1.5

A.S. Degree breadth requirements and the above listed courses must be completed by the end of the fourth session (i.e., Third Semester - Fall), at which time an Associate in Science Degree in Diagnostic Radiologic Technology is awarded. The internship portion of the RADT Program commences with:

Fourth Semester (Spring) – Effective: Summer 2008	
RADT-67A Advanced Radiologic Procedures II	2
RADT-67B Advanced Clinical Education I	10
RADT-67D Fluoroscopy	2
Second Summer Session – Effective: Summer 2009	
RADT-68A Principles of Radiation Protection and Biology	2
RADT-68B Advanced Clinical Education II	7
Fifth Semester (Fall) – Effective: Summer 2009	
RADT-69A Integrative Study in Radiologic Technology	2
RADT-69B Advanced Clinical Education III	9
RADT-69C Sectional Anatomy	1
RADT-69D Principles of Venipuncture5

Students successfully completing the Internship are awarded a Certificate of Achievement in Diagnostic Radiologic Technology. Upon successful completion of the Associate in Science Degree AND Certificate of Achievement in Diagnostic Radiologic Technology, graduates are eligible to write the American Registry of Radiologic Technologist (ARRT) Examination for Radiography, and, if successful, to obtain the credentials necessary for employment in the field.

DIESEL EQUIPMENT TECHNOLOGY

The Associate in Arts Degree or Associate in Science Degree in Diesel Equipment Technology is available upon satisfactory completion of the graduation requirements and completion of 39 units from the following major requirements.

	Units
MECH-06 Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding	3
MECH-21 Hydraulics	3
MECH-22AB Diesel Engines	8
MECH-23 Diesel Fuel System Diagnostics	2
MECH-24 Power Trains	4
MECH-26 Power Equipment Electrical Systems	3
MECH-30 Equipment Mechanics Skills	2
MECH-31 Equipment Safety	1
MECH-32 Applied Electrical and Hydraulic Service	3

MECH-33	Power Equipment Air Conditioning.....	2
MECH-35	Compact Power Equipment	3
MECH-40	Equipment Repair	2
MECH-51	Truck Brakes and Chassis	4
		39

Certificate of Achievement:

A Certificate of Achievement in Diesel Equipment Technology will be awarded upon successful completion of 39 units from the major requirements listed above.

DRAFTING TECHNOLOGY

An Associate in Arts Degree is available for students who meet the graduation requirements and successfully complete the courses listed below for either Computer-Aided Drafting - Architectural - Level II or Computer-Aided Design - Mechanical - Level II (an A.A. is not available for either Level I certificate):

Computer-Aided Drafting - Architectural - Level I		Units
DRFT-04A	Computer-Aided Drafting - AutoCAD	3
DRFT-04B	Computer-Aided Drafting - AutoCAD	3
DRFT-42A	Architectural Drafting - AutoCAD.....	3
DRFT-42B	Architectural Drafting - Solid Builder	3
DRFT-44	Print Reading and Sketching.....	3
INDT-38	Industrial Technology Computer Applications and Literacy.....	3
		18

Computer-Aided Drafting - Architectural - Level II		
DRFT-04AB	Computer-Aided Drafting - AutoCAD	6
DRFT-25	Graphics.....	3
DRFT-42A	Architectural Drafting - AutoCAD.....	3
DRFT-42B	Architectural Drafting - Solid Builder	3
DRFT-44	Print Reading and Sketching.....	3
INDT-38	Industrial Technology Computer Applications and Literacy.....	3
		21

Computer-Aided Design - Mechanical - Level I		
DRFT-04ABC	Computer-Aided Drafting (AutoCAD)	9
DRFT-05	Computer Graphics	3
DRFT-44	Print Reading and Sketching.....	3
INDT-38	Industrial Technology Computer Applications and Literacy.....	3
		18

Computer-Aided Design - Mechanical - Level II		
DRFT-04ABC	Computer-Aided Drafting - AutoCAD	9
DRFT-05	Computer Graphics	3
DRFT-25	Graphics.....	3
DRFT-44	Print Reading and Sketching.....	3
INDT-38	Industrial Technology Computer Applications and Literacy.....	3
		21

Certificate of Achievement:

A Certificate of Achievement will be awarded upon successful completion of one of the full certificate options listed above. For successful completion, a student must complete the requirements with a minimum grade point of 2.0 in each course required for the certificate.

DRAMA

These courses are designed to fulfill most lower division degree requirements of four-year colleges and universities. In addition, the Associate in Arts Degree in Drama will prepare the student for pre-professional and community theater. For an Associate in Arts Degree in Drama, students must meet the graduation requirements and complete the following courses:

		Units
DRAM-01	Introduction to Theater	3
DRAM-02	Drama Productions	6

DRAM-03	History of Dramatic Literature	3
DRAM-04	Actor's Workshop	6
DRAM-10	Beginning Acting	3
DRAM-15	Beginning Theater Crafts	3

Plus six units from the following electives:

DRAM-09	Voice Production for the Performer	3
DRAM-11	Intermediate Acting	3
DRAM-16	Intermediate Theater Crafts	3
ENGL-08	Shakespeare	3
		30

ELECTRONICS/ELECTRICAL AND COMPUTER TECHNOLOGIES

The Electronics Department at Merced College is offering cross-disciplinary curricula that prepare students for rewarding entry-level technician positions in various high-tech fields as Electronics, Electrical, Computer Networking and Industrial Electronics, and Instrumentation and Process Control.

These programs introduce students to electrical and electronics tools, components, circuits, energy sources, analog and digital integrated devices that can be found in complex technical equipment. Hands-on laboratory exercises are designed to develop real-world practical skills in using modern test equipment for troubleshooting circuits and repairing various industrial computerized systems and networks, specific to each area of study.

ELECTRICAL TECHNOLOGY (2/08)

For an Associate in Arts Degree in Electrical Technology (Electrician), students must meet the graduation requirements and complete the following required courses:

		Units
DRFT-44	Print Reading and Sketching.....	3
ELCT-30	Exploring the World of Electricity and Electronics.....	3
or		
ELCT-31	Direct Current and Alternating Current Circuits.....	5
or		
ELCT-52	Introduction to Electricity and Electronics	3
ELCT-41	Industrial Motor and Equipment Control.....	3
ELCT-42A	Principles and Applications of Programmable Logic Controllers.....	2
ELCT-47	Electrical Motors, Generators, Transformers, and AC Distribution	3
ELCT-55 A-Z	Electrical Conduit Bending Theory and Techniques.....	1
INDT-36 A-Z	Electrical Wiring	3
INDT-49 A-Z	Electrical Codes and Ordinances.....	3
WELD-06	Oxy-Fuel Welding and Shielded Metal Arc Welding.....	3

Plus six units from the following electives:

INDT-10	Industrial Technical Skills	3
INDT-25	Fluid Power	3
INDT-41	Power Transmission	3
INDT-51	Ventilation & Air Conditioning Systems	6
		30-32

Certificate of Achievement:

A Certificate of Achievement will be awarded upon the satisfactory completion of a minimum of 30 units of course work listed above. For successful completion, a student must complete the requirements with a minimum grade point of 2.0 in each course required for the certificate.

ELECTRONICS TECHNOLOGY (2/08)

For an Associate in Arts Degree in Electronics Technology (Electronics Technician or Computer and Networking Technology), students must meet the graduation requirements and complete one of the following options:

		Units
Electronics Technician Option		
DRFT-04A	Computer-Aided Drafting - AutoCAD	3
ELCT-30	Exploring the World of Electricity and Electronics.....	3

or		
ELCT-31	Direct Current and Alternating Current Circuits.....	5
ELCT-31SL	DC/AC Electronic Circuits Software Lab.....	1
ELCT-32	Semiconductors and Integrated Circuits.....	5
ELCT-32SL	Semiconductors and Integrated Circuits Software Lab.2	
ELCT-34	Digital Logic Circuits and Systems.....	3
ELCT-34SL	Digital Logic Circuits and Systems Software Lab.....	1
ELCT-35	Microcontrollers, Programming, and Interfacing with Robotics Applications.....	4
ELCT-36	Networking Topologies and Cabling.....	3
ELCT-43A	Industrial Instrumentation and Process Control.....	3
ELCT-43B	Graphical Programming for Electronics Data Acquisition.....	1.5
ELCT-44	Electronic Shop Practices: Fabrication, Soldering, Rework, and Equipment Repair.....	3
ELCT-51A	PC Configuration, Assembly & Repair.....	3
		35.5-37.5

Computer and Networking Technology Option

ELCT-30	Exploring the World of Electricity and Electronics.....	3
or		
ELCT-31	Direct Current and Alternating Current Circuits.....	5
ELCT-31SL	DC/AC Electronic Circuits Software Lab.....	1
ELCT-32	Semiconductors and Integrated Circuits.....	5
ELCT-32SL	Semiconductors and Integrated Circuits Software Lab.2	
ELCT-34	Digital Logic Circuits and Systems.....	3
ELCT-34SL	Digital Logic Circuits and Systems Software Lab.....	1
ELCT-36	Networking Topologies and Cabling.....	3
ELCT-40A	Cisco Certified Networking Associate (CCNA) Course I.....	3
ELCT-40B	Cisco Certified Networking Associate (CCNA) Course II.....	2
ELCT-40C	Cisco Certified Networking Associate (CCNA) Course III.....	2
ELCT-40D	Cisco Certified Networking Associate (CCNA) Course IV.....	2
ELCT-44	Electronic Shop Practices: Fabrication, Soldering, Rework, and Equipment Repair.....	3
ELCT-51A	Personal Computer Configuration, Assembly and Repair.....	3
ELCT-51B	A+ Certification Training.....	3
INDT-38	Industrial Technology Computer Applications and Literacy.....	3
		39-41

Certificate of Achievement:

A Certificate of Achievement may be earned by the successful completion of one of the Electronics Technology options listed above. For successful completion, a student must complete the requirements with a minimum grade point of 2.0 in each course required for the certificate.

INDUSTRIAL ELECTRONICS TECHNOLOGY

(2/08)

For an Associate in Arts Degree in Industrial Electronics Technology (Industrial Electronics Technician), students must meet the graduation requirements and complete the following required courses:

		Units
DRFT-44	Print Reading and Sketching.....	3
ELCT-30	Exploring the World of Electricity and Electronics.....	3
or		
ELCT-31	Direct Current and Alternating Current Circuits.....	5
ELCT-31SL	DC/AC Electronic Circuits Software Lab.....	1
ELCT-32	Semiconductors and Integrated Circuits.....	5
ELCT-32SL	Semiconductors and Integrated Circuits Software Lab.2	
ELCT-34	Digital Logic Circuits and Systems.....	3
ELCT-34SL	Digital Logic Circuits and Systems Software Lab.....	1
ELCT-41	Industrial Motor and Equipment Control.....	3
ELCT-42A	Programmable Logic Controllers.....	2
ELCT-42B	Advanced Topics in PLC Programming.....	1
ELCT-43A	Industrial Instrumentation and Process Control.....	3

ELCT-47	Electrical Motors, Generators, Transformers, and AC Distribution.....	3
ELCT-55	Electrical Conduit Bending Theory and Techniques.....	1
INDT-49	Electrical Codes and Ordinances.....	3
	Plus six units from the following electives:	
INDT-10	Industrial Technical Skills.....	3
INDT-25	Fluid Power.....	3
INDT-41	Power Transmission.....	3
		40-42

Certificate of Achievement:

A Certificate of Achievement will be awarded upon the satisfactory completion of the 42 units of course work listed above. For successful completion, a student must complete the requirements with a minimum grade point of 2.0 in each course required for the certificate.

INSTRUMENTATION AND PROCESS CONTROL (2/08)

For an Associate in Arts Degree in Instrumentation and Process Control, students must meet the graduation requirements and complete the following required courses:

		Units
ELCT-30	Exploring the World of Electricity and Electronics.....	3
or		
ELCT-31	Direct Current and Alternating Current Circuits.....	5
ELCT-31SL	DC/AC Electronic Circuits Software Lab.....	1
ELCT-32	Semiconductors and Integrated Circuits.....	5
ELCT-32SL	Semiconductors and Integrated Circuits Software Lab.2	
ELCT-34	Digital Logic Circuits and Systems.....	3
ELCT-34SL	Digital Logic Circuits and Systems Software Lab.....	1
ELCT-35	Microcontrollers, Programming, and Interfacing with Robotics Applications.....	4
ELCT-41	Industrial Motor and Equipment Control.....	3
ELCT-42A	Programmable Logic Controllers.....	2
ELCT-42B	Advanced Topics in PLC Programming.....	1
ELCT-43A	Industrial Instrumentation and Process Control.....	3
ELCT-43B	Graphical Programming for Electronics Data Acquisition.....	1.5
ELCT-44	Fabrication, Soldering, and Equipment Repair.....	3
ELCT-47	Electrical Motors, Generators, Transformers and AC Distribution.....	3
ELCT-55	Electrical Conduit Bending Theory and Techniques.....	1
INDT-25	Fluid Power.....	3
		39.5-41.5

Certificate of Achievement:

A Certificate of Achievement will be awarded upon the satisfactory completion of the 41.5 units of course work listed above. For successful completion, a student must complete the requirements with a minimum grade point of 2.0 in each course required for the certificate.

EMERGENCY MEDICAL TECHNICIAN

Emergency Medical Technology is designed to prepare future workers for emergency medical care services. The curriculum in Emergency Medical Technology includes:

		Units
ALLH-50	Emergency Medical Technician I.....	4
ALLH-51	Emergency Medical Technician I, Ambulance.....	1

These courses meet the requirements of Title 22, Division of California Administrative Code. Students successfully completing the courses are eligible to take the EMT-1 certifying exam from any EMS agency within the State of California.

Limitations on enrollment for both ALLH-50 and ALLH-51:

Participants must have a current CPR card based on American Red Cross or American Heart Association that includes one- and two-rescuer CPR plus infant CPR; negative TB skin test or negative chest X-ray for TB.

Advisories: ENGL-84; ALLH-67; a first aid course equivalent to the course offered by the Red Cross.

ALLH-50 and ALLH-51 should be taken concurrently in order to verify that the student has met all EMT I course requirements.

ENGINEERING (1/07)

Widely diversified professional engineering programs are available at California universities. Merced College offers the first two years of engineering to prepare students for transfer at the junior class level into a bachelor's degree program.

Students must be aware that completion of the course selection below does not necessarily satisfy all lower division requirements as specified by the Engineering Liaison Committee. The program is listed in such a way as to permit sufficient flexibility for students transferring to a variety of institutions. Students must work closely with their counselors to assure a smooth transition to the four-year institution of their choice.

For an Associate in Science Degree in Engineering, students must meet the graduation requirements (MATH-04A, CHEM-04A, and a life science course are suggested to satisfy breadth requirements in the science area) and complete the courses listed below:

	Units
ENGR-10 Engineering Materials	3
ENGR-15 Elementary Mechanics (Statics).....	3
ENGR-18 Electrical Circuits Analysis	4
ENGR-30 Introduction to Engineering	2
MATH-04B Analytical Geometry and Calculus	4
MATH-04C Analytical Geometry and Calculus	4
MATH-06 Differential Equations	3
	23

A minimum of seven additional units from the following list of courses is required for an A.S. Degree. Care should be taken in selecting courses appropriate to the area of engineering, and the student's intended transfer institution:

CHEM-04B General Chemistry	5
ENGR-12 FORTRAN Programming	3
or	
ENGR-14 C++ Programming.....	3
ENGR-25 Graphics.....	3
MATH-08 Linear Algebra	3
PHYS-04A Physics.....	4
PHYS-04B Physics.....	4
PHYS-04C Physics.....	4
	30

An Associate in Arts Degree in Engineering is designed for students investigating the area of engineering and who have sufficient units to graduate but lack specific prerequisites to advance to junior class standing in engineering. It must be noted that an A.A. in engineering does not necessarily satisfy entry requirements to four-year engineering curricula.

For an A.A. Degree in Engineering, students must meet the graduation requirements, and complete 18 units from the courses listed below.

Complete 5 to 8 units from the following:

ENGR-10 Engineering Materials	3
ENGR-15 Elementary Mechanics (Statics).....	3
ENGR-30 Introduction to Engineering	2

Complete the remaining 10 to 13 units from the following courses:

CHEM-04B General Chemistry	5
ENGR-12 FORTRAN Programming	3
ENGR-14 C++ Programming.....	3
ENGR-18 Electrical Circuits Analysis	3
ENGR-25 Graphics.....	3
MATH-04B Analytical Geometry and Calculus	4
MATH-04C Analytical Geometry and Calculus	4
MATH-06 Elementary Differential Equations.....	3
MATH-08 Linear Algebra.....	3

PHYS-04A Physics.....	4
PHYS-04B Physics.....	4
PHYS-04C Physics.....	4
	18

ENGINEERING TECHNOLOGY

Engineering Technology is that part of the technological field which requires the application of scientific and engineering knowledge and methods combined with technical skills in support of engineering activities; it lies in the occupational spectrum between the craftsman and the engineer.

Engineering Technology prepares the student for junior class standing at California State University at Pomona, San Jose, San Luis Obispo, and Sacramento, and Northrop Institute of Technology in most specialized fields of engineering technology. This program leads to a Bachelor's in Science Degree and classification as an engineering technologist.

For an Associate in Science Degree in Engineering Technology, students must meet the basic graduation requirements (PHYS-04A and a life science course should be taken for science breadth) and complete the 30-unit curriculum listed below:

	Units
CHEM-04A General Chemistry	5
ENGR-10 Engineering Materials	3
ENGR-12 FORTRAN Programming	3
ENGR-15 Elementary Mechanics (Statics).....	3
ENGR-25 Graphics.....	3
ELCT-31 Direct Current and Alternating Current Circuits.....	5
MATH-04A Analytical Geometry and Calculus	4
PHYS-04B Physics.....	4
	30
Suggested electives include:	
ENGR-30 Introduction to Engineering	2
MATH-02 College Algebra and Trigonometry.....	4
PHYS-04A Physics.....	4

ENGLISH

The English curriculum prepares the student in written and analytical skills and acquaints the student with a wide range of literature. An English major qualifies a student for employment in educational institutions, business and industry, and communications. It is a frequently recommended major for students interested in pre-law, journalism, or library work.

For an Associate in Arts Degree in English, the student must complete the graduation requirements and the 21-unit curriculum listed below with a minimum GPA in his or her English courses. The courses listed below must be in addition to the basic graduation requirements.

	Units
ENGL-01B Introduction to Literature	3
Plus 18 units from the following courses:	
ENGL-03 The History of Dramatic Literature	3
ENGL-04A Introduction to World Literature: Ancients to 1650	3
ENGL-04B Introduction to World Literature: 1650 to Present	3
ENGL-05 Introduction to Fiction.....	3
ENGL-06A Major English Writers	3
ENGL-06B Major English Writers	3
ENGL-07 Studies in Literature - Poetry.....	3
ENGL-08 Shakespeare	3
ENGL-10 American Literature - Beginnings to Civil War.....	3
ENGL-11 American Literature - Civil War to Present.....	3
ENGL-12 Creative Writing.....	3
ENGL-13 Critical Reasoning and Writing.....	3
or	
PHIL-13 Critical Reasoning and Writing.....	3
ENGL-14 Introduction to Film.....	3
ENGL-18 African and African-American Literature	3
ENGL-22 Research and Bibliography	1
ENGL-31 Children's Literature	3
ENGL-47 Special Topics in Language and Literature	3
	21

Suggested electives to meet applicable A.A./A.S. Breadth Requirements:

ART-01	Art History - Ancient through Gothic.....	3
ART-02	Art History - Renaissance Through Modern.....	3
Foreign Languages.....		5
HIST-04AB	History of Civilization: Parts I & II.....	6
HUM-01	Studies in Humanities - Pre-History to Renaissance	3
or		
HUM-01H	Honors Studies in Humanities - Ancient to Renaissance	3
HUM-02	Studies in Humanities - Renaissance to Present.....	3
or		
HUM-02H	Honors Studies in Humanities - Renaissance to Present.....	3
PHIL-03	Ancient Philosophy.....	3
PHIL-04	Modern Philosophy	3

ENVIRONMENTAL TECHNOLOGIES

Environmental Technologies is a program designed to train and educate technicians for employment in business, industry, and governmental agencies to assist in compliance with federal, state, and local regulations. For an Associate in Science Degree in Environmental Technologies, students must meet the basic graduation requirements and complete the courses listed below:

	Units	
BIOL-01	General Biology for Non-Majors.....	4
or		
BIOL-04	Principles of Biology for Science Majors	4
or		
BIOL-04H	Honors Principles of Biology for Science Majors	4
BIOL-06	Environmental Science	3
CHEM-02A	Introductory Chemistry	4
CHEM-02B	Introductory Chemistry	4
ENTC-30	Introduction to Environmental Technology	3
ENTC-32	Industrial Hazardous Waste Generation, Treatment, and Reduction.....	3
ENTC-34	Health Effects of Hazardous Materials.....	3
ENTC-36	Hazardous Waste Management Applications.....	4
ENTC-38	Safety and Emergency Response.....	4
ENTC-40	Hazardous Materials Management Applications.....	4
	36	

The following courses are suggested to fulfill general education requirements/and or recommended as electives:

BIOL-16	General Human Anatomy.....	4
or		
BIOL-50	Survey of Anatomy and Physiology.....	3
COMM-01	Fundamentals of Speech	3
or		
COMM-05	Interpersonal Communication	3
CPSC-30	Computer Applications	3
ECON-01A	Introduction to Macroeconomics	3
or		
PSYC-01A	Introduction to Psychology	3
ENGL-01A	Composition and Reading I.....	3
GEOL-01	Physical Geology	4
MATH-C	Intermediate Algebra	5
NUTR-10	Nutrition	3
POSC-01	Essentials of the American Political System	3
A Technical Writing Course.....		3

Certificate of Achievement:

A Certificate of Achievement will be awarded upon the satisfactory completion of the major listed above.

FIRE TECHNOLOGY

For an Associate in Arts in Fire Technology, students must meet the graduation requirements and complete the following required courses with a 2.0 GPA or higher in each class:

	Units	
FIRE-30	Fire Protection Organization	3
FIRE-31	Fire Behavior and Combustion.....	3

FIRE-32	Fire Prevention Technology.....	3
FIRE-33	Fire Protection Equipment and Systems.....	3
FIRE-34	Building Construction for Fire Protection.....	3
	15	

Plus six units from the following electives:

FIRE-35	Fire Fighting Tactics and Strategy.....	3
FIRE-36	Hazardous Materials	3
FIRE-37	Fire Hydraulics	3
FIRE-38	Fire Apparatus and Equipment.....	3
FIRE-39	Fire Company Organization and Procedure.....	3
FIRE-49A-ZZ	Special Problems in Fire Technology	0.5 - 3
FIRE-61	EMT I NA/FS - EMT I Non-Ambulance/FS	5
FIRE-65F	Hazardous Materials – First Responder Operations (Haz Mat Fro).....	1
FIRE-65G	First Responder Operations/Decontamination (Decon Fro)	0.5
FIRE-67B	Auto Extrication	0.5
FIRE-69B	First Responder Re-certification.....	1
FIRE-70	Fire Department Administration.....	3

Certificate of Achievement:

A Certificate of Achievement will be awarded upon the satisfactory completion of 30 units of course work in this area of study, which must include the first five courses listed for the A.A. Degree in Fire Technology. A 2.0 GPA or higher must be earned in each class.

Students must complete the courses listed in the following categories in order to meet NFPA Professional Standards for California Fire Service Certification. Additionally, students must fulfill state-mandated employment time requirements for each classification.

Firefighter

FIRE-63AB	Basic Firefighter I, Academy
FIRE-64	Basic Firefighter II, Academy

Fire Officer I

The following courses are designed to provide the fire officer with instruction according to the standards identified within the California Fire Service Master Plan for Training and Education. Successful completion of all eight courses may enable the participant to receive certification as a Fire Officer I.

FIRE-47A	Fire Investigation IA
FIRE-71A	Fire Instructor I (Module A)
FIRE-71B	Fire Instructor I (Module B)
FIRE-72A	Fire Command I (Module A)
FIRE-72B	Fire Command I (Module B)
FIRE-73A	Fire Prevention I (Module A)
FIRE-73B	Fire Prevention I (Module B)
FIRE-75	Fire Management I

FOODS AND NUTRITION (2/08)

For an Associate of Arts Degree in Foods and Nutrition, students must meet the graduation requirements and complete the following courses:

	Units	
Core:		
NUTR-10	Nutrition.....	3
NUTR-20	Principles of Foods.....	3
NUTR-36	Nutrition and Food Service Supervised Field Experience	2.5
NUTR-42	Quantity Food Preparation	3
NUTR-44	Food Safety and Sanitation.....	2
NUTR-45	Introduction to Therapeutic Diets	2
MGMT-50-52	Management 50 Series	1.5
	17	

Plus seven units from the following courses:

CPSC-30	Introduction to Computer Applications	3
NUTR-26ABC	Independent Study in Foods and Nutrition.....	1-3
NUTR-39	Nutrition for Young Children	3
NUTR-40	Menu Design	3
NUTR-41	Infant and Toddler Feeding	1
NUTR-43	Children and Weight Concerns	1
NUTR-70A-ZZ	Special Topics in Foods and Nutrition	1-3

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 Certificate of Achievement for Foods and Nutrition:
 A Certificate of Achievement will be awarded upon the satisfactory completion of the 24-unit curriculum listed above.

Certificate of Achievement for Dietetic Service Supervisor:
 Upon satisfactory completion of the 17-unit core listed above, students meet the California Department of Health licensing requirements for Dietetic Service Supervisor.

FOREIGN LANGUAGES

Studies in foreign languages provide specialists to work in areas such as anthropology, economics, political science, literature, international business, and the travel industry. While teaching is one of the principal areas of employment, other careers may be found in interpreting, translating, research, diplomacy, libraries, publishing, and the service industries.

For an Associate in Arts Degree in French, German, or Spanish, students should meet the graduation requirements and complete the 26-unit curriculum as listed below. The courses listed below must be in addition to the basic graduation requirements:

French		Units
FREN-01	Elementary French.....	5
FREN-02	Elementary French.....	5
FREN-03	Intermediate French.....	5
FREN-04	Intermediate French.....	5
HIST-04A	History of Civilization Part I.....	3
HIST-04B	History of Civilization: Part II.....	3
		26

German		Units
GERM-01	Elementary German.....	5
GERM-02	Elementary German.....	5
GERM-03	Intermediate German.....	5
GERM-04	Intermediate German.....	5
HIST-04A	History of Civilization: Part I.....	3
HIST-04B	History of Civilization: Part II.....	3
		26

Spanish		Units
SPAN-01	Elementary Spanish.....	5
or		
SPAN-10	Spanish for Spanish Speakers.....	5
SPAN-02	Elementary Spanish.....	5
or		
SPAN-11	Spanish for Spanish Speakers.....	5
SPAN-03	Intermediate Spanish.....	5
SPAN-04	Intermediate Spanish.....	5
HIST-04A	History of Civilization: Part I.....	3
HIST-04B	History of Civilization: Part II.....	3
		26

FOSTER CARE EDUCATION

A Certificate of Specialization in Foster Care Education will be awarded upon the satisfactory completion of 15 units from the following courses:

		Units
CLDV-02	Child, Family and Community.....	3
CLDV-09	Human Development.....	3
or		
CLDV-01	Child Growth and Development.....	3
NUTR-10	Nutrition.....	3
or		
NUTR-39	Nutrition for Young Children.....	3
CLDV-82A-Z	Foster Care Education.....	2
		11

Plus a minimum of four units from the following:
 COMM-04 Small Group Discussion and Problem Solving..... 3
 or
 COMM-05 Interpersonal Communication..... 3

CLDV-35	Infant and Toddler Care.....	2
CLDV-35L	Infant and Toddler Care Lab.....	2
PSYC-01A	Introduction to Psychology.....	3
		15

GEOGRAPHY

Geography is the study of the physical aspects of the planet. Topics studied include population pressures, food supply, and resource availability. Physical Geography is a natural science about weather, climate, and earth processes creating different landforms, while World Geography is a social science of how mankind utilizes earth resources to create different cultures and standards of living. The study of Geography enables a student to better understand world problems and events; it prepares a student for a career as a planner, teacher, journalist, earth scientist, and for other occupations.

Lower division preparation for transfer students intending to major in geography should include:

		Units
ANTH-02	Cultural Anthropology.....	3
ENGL-01A	Composition and Reading I.....	3
ENGL-01B	Introduction to Literature.....	3
GEOG-01	Physical Geography.....	3
GEOG-01L	Physical Geography Lab.....	1
GEOG-02	World Geography.....	3
GEOL-01	Physical Geology.....	4

Other pertinent courses are:
 ECON-01A Introduction to Macroeconomics..... 3
 BIOL-01 General Biology for Non-Majors..... 4
 HIST-04AB History of Civilization: Parts I & II..... 6
 PHSC-01 Physical Science Survey..... 3

GEOLOGY

The Geology curriculum is suggested for those students interested in any branch of earth science. This curriculum is designed to meet the lower division requirements of most universities offering a major in the earth sciences. This curriculum could lead to careers in fields such as paleontology, mineralogy, geophysics, hydrology, marine geology, and geochemistry, as well as general geology. People trained in these disciplines are employed in research companies as well as by companies associated with mining and petroleum industries.

For an Associate in Science Degree in Geology, the student must complete the graduation requirements (PHYS-02A or PHYS-04A and ARCH-01 are suggested to satisfy the breadth requirements in the science area), and complete the courses listed below:

		Units
BIOL-01*	General Biology for Non-Majors.....	4
or		
BIOL-04	Principles of Biology.....	4
or		
BIOL-04H	Honors Principles of Biology for Science Majors.....	4
CHEM-04A	General Chemistry.....	5
CHEM-04B	General Chemistry.....	5
GEOL-01	Physical Geology.....	4
PHYS-02B	General Physics.....	4
or		
PHYS-04B	Physics.....	4
		22

The student must also select at least eight units from the following list (depending on the choice of four-year institution):

ENGR-25	Graphics.....	3
GEOL-02	Historical Geology.....	3
MATH-04A	Analytical Geometry and Calculus.....	4
MATH-04B	Analytical Geometry and Calculus.....	4
MATH-04C	Analytical Geometry and Calculus.....	4
MATH-12	FORTTRAN Programming.....	3
MATH-14	C++ Programming.....	3
PHYS-04C	Physics.....	4

HEALTH SCIENCES

The Associate in Arts Degree in Health Sciences is intended for students planning to transfer into an Allied Health program. To earn the degree, a student must complete the basic graduation requirements (CHEM-02A is recommended for science breadth) and the courses listed below:

	Units
BIOL-01 General Biology for Non-Majors.....	4
CHEM-02B Introduction to Chemistry.....	4
NUTR-10 Nutrition.....	3

And select eight units from the following:

BIOL-16 General Human Anatomy.....	4
BIOL-20 Microbiology.....	4
BIOL-18 Principles of Physiology.....	4

**HEATING, VENTILATION, AIR
CONDITIONING, AND REFRIGERATION
TECHNOLOGY**

An Associate in Arts Degree in HVAC is available for students who meet the graduation requirements, and complete one of the certificate options listed below:

HVAC Technician Option		Units
DRFT-44 Print Reading and Sketching.....		3
ELCT-47 Electrical Motors, Generators, Transformers, and AC Distribution.....		3
ELCT-52 Introduction to Electricity and Electronics.....		3
INDT-49 Electrical Codes and Ordinance.....		3
INDT-50 HVAC - Heating and Control Systems.....		6
INDT-51 Ventilation and Air Conditioning.....		6
INDT-52 Refrigerant Usage Certification - EPA Requirements....		1
INDT-71JJ HVAC Sheet Metal I.....		1
MATH-B Applied Mathematics.....		5
WELD-06 Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding.....		3
WELD-07 Fundamentals of T.I.G. and M.I.G. Welding.....		3
		37

Commercial Refrigeration Technician Option

ELCT-41 Industrial Motor and Equipment Control.....	3
ELCT-42 Programmable Logic Controllers.....	2
ELCT-47 Electrical Motors, Generators, Transformers, and AC Distribution.....	3
ELCT-52 Introduction to Electricity and Electronics.....	3
INDT-40 Commercial Refrigeration Design, Installation, and Service.....	3
INDT-49 A Electrical Codes and Ordinances.....	3
INDT-51 Ventilation and Air Conditioning.....	6
MATH-B Applied Mathematics.....	5
WELD-06 Fundamentals of Oxy-Fuel & Shielded Metal Arc Welding.....	3
WELD-07 Fundamentals of T.I.G. and M.I.G. Welding.....	3
	34

Certificate of Achievement:

A Certificate of Achievement will be awarded upon successful completion of one of the full certificate options listed above. For successful completion, a student must complete the requirements with a minimum grade point of 2.0 in each course required for the certificate.

HISTORY

The following history program is designed for the first two years of work required for students majoring in history who are interested in obtaining either a secondary or elementary teaching credential. Students should work with their counselor for specific transfer requirements.

For an Associate in Arts Degree in History, students must meet the graduation requirements and complete the 18-unit curriculum from the two lists below (3-12 units from the first list, and 6-15 units from the second

list). The courses listed below must be in addition to the basic graduation requirements.

Students must select a minimum of three units from the following (depending on the student's choice of four-year institution):

	Units
HIST-04A History of Civilization: Part I.....	3
HIST-04B History of Civilization: Part II.....	3
HIST-17A Political and Social History of the United States.....	3
HIST-17B Political and Social History of the United States.....	3

Students must choose a minimum of six units from the list below:

HIST-05 History of Europe Since 1901.....	3
HIST-08A History of the Americas.....	3
HIST-08B History of the Americas.....	3
HIST-09A Introduction to East Asian Civilization: China.....	3
HIST-09B Introduction to East Asian Civilization: Japan.....	3
HIST-21 History of Minorities -- Ethnic Groups, 19th Century to the Present.....	3
HIST-22 History of Minorities - Black Emphasis.....	3
HIST-23 History of Hispanic-Americans in the Southwest U.S. ...	3
HIST-24 History of the Native American.....	3
HIST-29 History of California.....	3
or	
HIST-39ABC Exploring California's Past.....	3
	18

HORSE MANAGEMENT

The Associate in Science Degree in Horse Management is available upon satisfactory completion of the graduation requirements and 30 units from the following list which includes the core courses; the Associate in Arts Degree is available upon satisfactory completion of the graduation requirements and the 20-unit core.

Core:		Units
AGBS-12 Agricultural Accounting.....		3
ANSC-11 Elements of Animal Nutrition.....		3
ANSC-16 Horse Husbandry.....		3
ANSC-39 People and Livestock in the Sierras (deactivated 12/06).....		3
ANSC-46A Specialized Horse Training.....		4
CROP-13 Forage Crops.....		3
MECH-06 Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding.....		3
MECH-31 Equipment Safety.....		1
		20

Electives:

AGBS-18 Agricultural Computer Applications.....	3
ANSC-12 Livestock Breeding and Selection.....	3
ANSC-13 Animal Disease and Parasite Control.....	3
ANSC-40 Beginning Horsemanship (Western).....	2
ANSC-41 Intermediate Horsemanship (Western).....	2
ANSC-46B Specialized Horse Training.....	4
ANSC-47A Back Country Animal Management.....	1
ANSC-48 Tack Repair.....	1
ANSC-52 Hoof Care and Trimming.....	2
MECH-12 Agriculture Equipment.....	3

Certificate of Achievement:

A Certificate of Achievement will be awarded upon the satisfactory completion of the 23-unit core, and 16 units from the electives above.

HORSESHOEING

A Certificate of Specialization will be awarded upon the satisfactory completion of ANSC-50 (Horseshoeing), and another Certificate of Achievement will be awarded upon the satisfactory completion of ANSC-51 (Advanced Horseshoeing).

HUMAN SERVICES

The Associate in Arts Degree in Human Services is available for students who meet the graduation requirements and complete the following required courses:

	Units
COOP-41	Cooperative Education.....2-4
COMM-05	Interpersonal Communication3
CPSC-30	Computer Applications3
HMSV-50	Survey and Utilization of Community Resources.....3
HMSV-51	Human Behavior and the Helping Process3
HMSV-61	Social Welfare3
PSYC-23	Personal and Social Adjustment3
PSYC-51	Applied Psychology.....3

Students must take two of the three following courses:

ANTH-10	Southeast Asian Culture: Emphasis Hmong Culture.....3
HIST-22	History of Minorities -- Black Emphasis.....3
HIST-23	History of Hispanic Americans in the Southwest US....3

Students must also choose one course from the following electives:

ADST-41	Introduction to Addiction Studies.....3
CRIM-33	Family Violence.....3
PSYC-01A	Introduction to Psychology3
PSYC-09	Human Development3
SOC-28	Marriage and the Family3
SCSC-01	Introduction to Social Science.....3

32-35

Certificate of Achievement:

A Certificate of Achievement will be awarded upon the satisfactory completion of the curriculum listed above.

HUMANITIES

Humanities is the study of cultural manifestations in all its varieties, such as literature, philosophy, foreign language, and the fine arts. It is the study of intellectual, cultural, and aesthetic development through history with an integration of multi-cultural influences. A humanities major prepares a student for employment in many diverse fields, including education and research, law, international business, government, and the creative arts.

For an Associate in Arts Degree in Humanities, students must meet the graduation requirements and complete the 20-unit curriculum listed below. These courses must be in addition to those taken to satisfy the basic graduation requirements.

	Units
HUM-01	Studies in Humanities - Ancient to Early Renaissance .3
or	
HUM-01H	Honors Studies in Humanities - Ancient to Early Renaissance3
HUM-02	Studies in Humanities - Renaissance to Present.....3
or	
HUM-02H	Honors Studies in Humanities - Renaissance to Present.....3

Plus an additional 14 units from the electives below. (Students must take at least three units from each of the four elective areas.)

Literature (3 units)

ENGL-01B, 03, 06A, 06B, 08, 09, 10, 11, 18

Philosophy and Humanities (3 units)

PHIL-03, 04, 05, 15

HUM-15, 21, 47

Art and Music (3 units)

ART-01, 02, 03, 04

MUS-11, 12, 13, 14

Foreign Language (5 units)

FREN-02, 03, 04, 39

GERM-02, 03, 04, 39

HMNG-02

SPAN-02, 03, 04, 39

INDUSTRIAL MAINTENANCE TECHNOLOGY

An Associate in Arts Degree in Industrial Maintenance Technology is available for students who successfully complete the graduation requirements and complete the following certificate program:

	Units
DRFT-44	Print Reading and Sketching.....3
ELCT-41	Industrial Motor and Equipment Control.....3
ELCT-47	Electrical Motors, Generators, Transformers, and AC Distribution3
ELCT-52	Introduction to Electricity and Electronics3
INDT-10	Industrial Technical Skills3
INDT-25	Fluid Power3
INDT-32	Building Construction Concepts3
INDT-36	Electrical Wiring3
INDT-41	Power Transmission3
INDT-49	Electrical Codes and Ordinances.....3
MATH-B	Applied Mathematics.....5
WELD-06	Fundamentals of Oxy-Fuel & Shielded Metal Arc Welding3
WELD-07	Fundamentals of T.I.G. and M.I.G. Welding3
WELD-40A	Welding Design and Construction.....3

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Certificate of Achievement:

A Certificate of Achievement will be awarded upon successful completion of the full certificate listed above. For successful completion, a student must complete the requirements with a minimum grade point of 2.0 in each course required for the certificate.

INDUSTRIAL TECHNOLOGY

Industrial Technology is a program which blends technical, scientific, and business principles, and which prepares versatile individuals for technological management, production supervision, and related leadership positions.

For locating the various degrees and certificates that fall under Industrial Technology, students should refer to the following degree and certificate titles in this portion of the catalog:

- Automotive Technology
- Automotive Technology, Toyota-Approved
- Drafting Technology
- Heating, Ventilation, Air Conditioning, and Refrigeration Technology
- Industrial Maintenance Technology
- Laser Electro-Optics Technology
- Welding Technology

INTERNATIONAL STUDIES (5/08)

In order to meet the ever-changing needs of a diverse community, Merced College has developed a degree that embodies the spirit of global education. The International Studies area of emphasis allows students to take courses that will foster an appreciation of various cultural perspectives. Students will gain an understanding of the benefits of living in a culturally diverse world. The development of cross-cultural tolerance and competencies provides students with skills valued in careers involving intercultural relations such as those in the fields of public service, teaching, health care arts, and business.

The Merced College International Studies Area of Emphasis helps prepare students for upper division International Studies majors at universities in California and other states. It also can help currently employed individuals increase their skills in dealing with international issues they and their employers may encounter.

Students are strongly encouraged to consult with a counselor for specific information regarding their career planning.

For an Associate in Arts Degree in the area of emphasis in International Studies, students must meet the basic graduation requirements and complete 18 units from the courses listed below.

Select courses from at least two of the following three categories, with at least six units in each of the two categories. Courses listed below may be counted as general education requirements as well as area of emphasis requirements.

Category 1: Foreign Languages

	Units
ASLG-01	Beginning American Sign Language..... 3
ASLG-02	Intermediate American Sign Language..... 3
ASLG-03	Advanced American Sign Language..... 3
FREN-01	Elementary French..... 5
FREN-02	Elementary French..... 5
FREN-03	Intermediate French..... 5
FREN-04	Advanced French..... 5
GERM-01	Elementary German..... 5
GERM-02	Elementary German..... 5
GERM-03	Intermediate German..... 5
GERM-04	Intermediate German..... 5
GERM-39	Advanced German..... 1
HMNG-01	Elementary Hmong..... 5
HMNG-02	Elementary Hmong..... 5
JPNS-01A	Elementary Japanese..... 2.5
JPNS-01B	Elementary Japanese..... 2.5
JPNS-02	Elementary Japanese..... 5
SPAN-01	Elementary Spanish..... 5
SPAN-02	Elementary Spanish..... 5
SPAN-03	Intermediate Spanish..... 5
SPAN-04	Intermediate Spanish..... 5
SPAN-10	Spanish for Spanish Speakers..... 5
SPAN-11	Spanish for Spanish Speakers..... 5
SPAN-35	Written Accents..... 1
SPAN-39	Advanced Spanish..... 1

Category 2: Global and Cultural Understanding

ANTH-02	Cultural Anthropology..... 3
ANTH-10	Southeast Asian Culture..... 3
ANTH-30	Man, Culture, and Society..... 2
ART-01	Art History – Ancient through Gothic..... 3
ART-02	Art History – Renaissance through Modern..... 3
ART-06	Art of the 20th Century..... 3
COMM-30	Introduction to Intercultural Communication..... 3
DRAM-03	History of Dramatic Literature..... 3
ECON-01A	Introduction to Macroeconomics..... 3
ENGL-01B	Introduction to Literature..... 3
ENGL-04A	Introduction to World Literature: Ancients to 1650..... 3
ENGL-04B	Introduction to World Literature: 1650 to Present..... 3
GEOG-02	World Geography..... 3
HUM-01	Studies in Humanities – Ancient to Early Renaissance..... 3
HUM-01H	Honors Studies in Humanities–Ancient to Early Renaissance..... 3
HUM-02	Studies in Humanities – Renaissance to Present..... 3
HUM-02H	Honors Studies in Humanities – Renaissance to Present..... 3
HUM-15	Comparative Cultures..... 3
MUS-11	History of Classical Music (Early Music through Baroque Era)..... 3
MUS-12	History of Classical Music (Classical Era to the Present Day)..... 3
MUS-13	History and Appreciation of Jazz..... 3
POSC-02	An Introduction to World Political Systems..... 3
SOC-01	Introduction to Sociology..... 3
SOC-02	Contemporary Social Problems..... 3

Category 3: History and Philosophy

HIST-04A	History of Civilization: Part I..... 3
HIST-04B	History of Civilization: Part II..... 3
HIST-05	History of Europe from 1901 to the Present..... 3
HIST-08A	History of the Americas: Part I..... 3
HIST-08B	History of the Americas: Part II..... 3
HIST-09A	Introduction to East Asian Civilization: China..... 3
HIST-09B	Introduction to East Asian Civilization: Japan..... 3
HIST-21	The History of Minorities in America – Ethnic Groups, 19th Century to Present..... 3

HIST-22	History of Minorities – Black Emphasis..... 3
HIST-23	U.S. History of Hispanic-Americans in the Southwest .. 3
HIST-24	History of the Native American..... 3
PHIL-01	Introduction to Philosophy..... 3
PHIL-01H	Honors Introduction to Philosophy..... 3
PHIL-03	Ancient Philosophy..... 3
PHIL-04	Modern Philosophy..... 3
PHIL-05	Contemporary Moral and Social Issues..... 3
PHIL-15	Comparative Religions..... 3

INTERSEGMENTAL GENERAL EDUCATION (IGETC) TRANSFER BREADTH CERTIFICATE OF ACHIEVEMENT ^(5/08)

A minimum of 34 units from the following: Students must complete a minimum of 34 units used to satisfy the IGETC Transfer Breadth Requirements. Students must receive full certification of the IGETC pattern which requires a minimum of grade “C” or better in each IGETC course. See the IGETC Transfer Breadth requirements patterns listed in the Merced College catalog or consult with a Merced College counselor.

JOURNALISM

The mass communications industry is experiencing rapid growth worldwide. Merced College’s A.A. program in journalism enables students to obtain skills they will use when transferring to a four-year institution. A two-year degree may qualify students for entry-level jobs with local mass media.

The Associate in Arts in Journalism consists of the following courses:

	Units
JOUR-01	Mass Media and Society..... 3
JOUR-08	Introduction to Newswriting and Reporting..... 3
JOUR-32	Newspaper Staff (repeat once)..... 6
PHOT-10A	Basic Photography..... 3

Choose three units from:

POSC-01	Essentials of the American Political System..... 3
POSC-02	An Introduction to World Political Systems..... 3

Choose three units from:

ENGL-12	Creative Writing..... 3
ENGL-13	Critical Reasoning and Writing..... 3
PHOT-10B	Intermediate Photography..... 3
	21

Suggested Area C2 breadth course: PHIL-05 - Contemporary Moral and Social Issues.

LAB TECHNOLOGY

The Associate in Science Degree in Lab Technology provides a student with sufficient training to enable him/her to perform lab work in food processing quality control labs or related technical lab work.

	Units
BIOL-06	Environmental Science..... 3
BIOL-20	Microbiology..... 4
CHEM-04B	General Chemistry..... 5
CHEM-06*	Quantitative Analysis..... 4
CPSC-01	Introduction to Management Information Systems..... 4
MATH-02	College Algebra and Trigonometry..... 4
	24

Suggested Area A2/B Breadth courses:

BIOL-01, CHEM-04A, and MATH-C.

*Students must contact the Science, Math, and Engineering Division Chairperson for a suitable substitute for this course.

LANDSCAPE HORTICULTURE (12/06)

The Associate in Arts Degree is earned upon satisfactory completion of the 19-unit core in addition to the graduation requirements. The Associate in Science degree is earned upon satisfactory completion of the 19-unit core and electives for a total of 30 units in addition to the graduation requirements.

Core:	Units
LAND-10A Plant Identification and Usage: Fall.....	3
or	
LAND-10B Plant Identification and Usage: Spring.....	3
LAND-11 Elements of Landscape Horticulture	3
LAND-12 Landscape Design	3
LAND-14 Landscape Construction and Installation	3
MECH-31 Equipment Safety.....	1
PLSC-10 Elements of Plant Science	3
SOIL-10 Soil Science	3
	19

Electives:	
AGBS-18 Agricultural Computer Applications	3
DRFT-04A Fundamentals of Computer-Aided Drafting.....	3
FPRO-13 Fruit Tree Maintenance	3
LAND-15 Landscape Maintenance.....	3
LAND-17 Nursery and Garden Center Practice.....	3
MECH-15 Small Engine Repair and Maintenance.....	3
or	
MECH-35 Compact Power Equipment	3
PLSC-13 Economic Entomology	3
LAND-16 Plant Propagation.....	3
SOIL-11 Fertilizer and Soil Amendments	3

Certificate of Achievement:

A Certificate of Achievement will be awarded upon the satisfactory completion of the 19 unit core and 18 units from the electives above.

LASER ELECTRO-OPTICS TECHNOLOGY

An Associate in Arts Degree in Laser Electro-Optics Technology prepares the student to enter the workforce in the fields of lasers and electro-optics as technicians, installers, technologists, engineers, and scientists. Students must meet the graduation requirements and complete the following major requirements (PHYS-02A is recommended to fulfill breadth requirements):

	Units
ELCT-31 Direct Current and Alternating Current Circuits.....	5
and	
ELCT-49A DC/AC Electronic Circuits Software Lab	1
or	
ELCT-31A Direct Current Circuits.....	3
and	
ELCT-31B Alternating Current Circuits	3
ELCT-32 Semiconductors and Integrated Circuits	5
ELCT-33 Pulse Circuits, Operational Amplifiers, and Linear Integrated Circuits	3
ELCT-34 Digital Logic Circuits and Systems.....	3
LEOT-37 Laser Electronics.....	3
ELCT-44 Electronic Shop Practices	3
ELCT-49B Electronic Circuits Software Lab	1
ELCT-49C Electronic Circuits Software Lab	1
ELCT-49D Electronic Circuits Software Lab	1
LEOT-42 Vacuum Technology	3
LEOT-30 Introduction to Laser Electro-Optics Technology.....	3
LEOT-32 Laser Technology	3
LEOT-34 Laser Electro-Optics Devices.....	3
LEOT-36 Laser Applications	3
PHYS-02B General Physics	4
	45

A Certificate of Achievement will be awarded upon the satisfactory completion of the major listed above. For successful completion, a student

must complete the requirements with a minimum grade point of 2.0 in each course required for the certificate.

LIBERAL STUDIES - ELEMENTARY TEACHING PREPARATION

The Liberal Studies - Elementary Teaching Preparation major is designed primarily for students who intend to prepare for a career teaching at the elementary level.

For an Associate in Arts Degree in Liberal Studies, students should meet the graduation requirements and complete the 34-unit curriculum listed below. The courses listed below must be in addition to the basic graduation requirements:

Core:	Units
COMM-01* Fundamentals of Speech	3
or	
COMM-01H* Honors Fundamentals of Speech.....	3
CPSC-30 Computer Applications	3
ENGL/PHIL-13* Critical Reasoning and Writing.....	3
or	
ENGL/PHIL-13H* Honors Critical Reasoning and Writing	3
ENGL-31 Children's Literature	3
HIST-17A United States History and United States Constitution	3
or	
HIST-17AH Honors United States History and United States Constitution	3
LBST-10 Introduction to Education I	3
LBST-20 Introduction to Education II	3
MATH-20A Basic Structure of Mathematics I	3
PHSC-01 Introduction to Physical and Earth Science.....	3
PHSC-01L Introduction to Physical and Earth Science Laboratory 1	1

Plus six units from the following:

ART-12A Sculpture	3
or	
ART-15 Fundamentals of Design in Art.....	3
or	
ART-24A Drawing I	3
BIOL-01 General Biology for Non-Majors.....	4
CLDV/PSYC-09 Human Development	3
COMM-30 Introduction to Intercultural Communication	3
ENGL-08 Introduction to Shakespeare	3
ENGL/HUM-18 African and African American Literature.....	3
HIST-29 History of California.....	3
HUM-15 Comparative Cultures	3
or	
PHIL-15 Comparative Religions	3
MATH-20B Basic Structure of Mathematics II	3
MUS-14 American Popular Music	3
	34

Students should see the Liberal Studies counselor for general breadth lower-division requirements specific to the transfer Institution.

*COMM-01 and ENGL/PHIL-13 may count for the major and for general breadth lower division requirements.

LIFE SCIENCE

To earn an Associate in Arts Degree in Life Science, the student must complete the basic graduation requirements (a course in chemistry should be taken for science breadth) and the courses listed below:

	Units
BIOL-01* General Biology for Non-Majors.....	4
or	
BIOL-04* Principles of Biology for Science Majors	4
or	
BIOL-04H Honors Principles of Biology for Science Majors	4
BIOL-12 Principles of Botany	5

or		
BIOL-13	General Zoology.....	5
		9
And select nine additional units from the following:		
BIOL-16	General Human Anatomy.....	4
BIOL-04*	Principles of Biology for Science Majors.....	4
or		
BIOL-04H	Honors Principles of Biology for Science Majors.....	4
BIOL-06	Environmental Science.....	3
BIOL-08	Conservation of Natural Resources.....	3
BIOL-20	Microbiology.....	4
BIOL-31	Introduction to Biotechnology I.....	4
BIOL-12	Principles of Botany.....	5
or		
BIOL-13	General Zoology.....	5
CHEM-02B	Introductory Chemistry.....	4
CHEM-04A	General Chemistry.....	5
CHEM-04B	General Chemistry.....	5
MATH-10	Elementary Statistics.....	3
MATH-12	FORTRAN Programming.....	3
MATH-14	C++ Programming.....	3
BIOL-18	Principles of Physiology.....	4

*Note: A student may not take BIOL-01 for credit after having taken BIOL-04 or BIOL-04H.

MANAGEMENT, MERCHANDISING/ MARKETING (2/07)

The Associate in Arts Degree in Merchandising/Marketing Management is in preparation for employment in the merchandising and marketing areas. Students must meet the graduation requirements and complete the major requirements with the following core courses:

		Units
ACTG-04A	Fundamentals of Financial Accounting.....	4
or		
ACTG-51	Applied Accounting.....	4
BUS-10	Introduction to Business.....	3
BUS-18A	Business Law.....	4
CPSC-01	Introduction to Management Information Systems.....	4
or		
CPSC-30	Computer Applications.....	3
ECON-01A	Introduction to Macroeconomics.....	3
MDSE-31	Retail Management.....	3
MDSE-33	Advertising.....	3
MGMT-31	Principles of Management.....	3
MGMT-50	Management Series.....	1
MKTG-30	Marketing.....	3
		30-31

Suggested electives include:

BUS-35	Money Management.....	3
BUS-49A-ZZ	Special Topics in Business.....	½ - 3
COMM-04	Small Group Discussion and Problem Solving.....	3
MDSE-32	Salesmanship.....	3
MGMT-37	Small Business Management.....	3

Certificate of Achievement:

A Certificate of Achievement will be awarded upon the satisfactory completion of 30 units of course work in this area of study which includes the core courses indicated for the Associate in Arts Degree in Merchandising/Marketing Management.

MANAGEMENT, SMALL BUSINESS (2/07)

The Associate in Arts Degree in Small Business Management offers training in the establishment and operation of a small business and the process of business plan creation.

Students must meet the graduation requirements and complete the following required courses:

		Units
ACTG-04A	Fundamentals of Financial Accounting.....	4
or		
ACTG-51	Applied Accounting.....	4
BUS-10	Introduction to Business.....	3
BUS-18A	Business Law.....	4
CPSC-01	Introduction to Management Information Systems.....	4
or		
CPSC-30	Computer Applications.....	3
ECON-01A	Introduction to Macroeconomics.....	3
MGMT-31	Principles of Supervision.....	3
MGMT-32	Human Resources Management.....	3
MGMT-37	Small Business Management.....	3
MGMT-50-52	Management Series.....	1
MKTG-30	Marketing.....	3
		30-31

Suggested electives include:

BUS-35	Money Management.....	3
BUS-49A-ZZ	Special Topics in Business.....	½ - 3
COMM-04	Small Group Discussion and Problem Solving.....	3

Certificate of Achievement:

A Certificate of Achievement will be awarded upon the satisfactory completion of 30 units of course work in this area of study which includes the core courses indicated for the A.A. Degree in Management, Small Business.

MANAGEMENT/SUPERVISORY TRAINING (2/07)

The Associate in Arts Degree in Management/Supervisory Training is in preparation for entry levels in management/supervision as well as for advanced preparation for those employed in supervisory positions. Students must meet the graduation requirements and complete the major requirements with the following courses:

		Units
ACTG-04A	Fundamentals of Financial Accounting.....	4
or		
ACTG-51	Applied Accounting.....	4
BUS-18A	Business Law.....	4
CPSC-01	Introduction to Management Information Systems.....	4
or		
CPSC-30	Computer Applications.....	3
ECON-01A	Introduction to Macroeconomics.....	3
MGMT-31	Principles of Supervision.....	3
MGMT-32	Human Resources Management.....	3
MGMT-33	Elements of Effective Leadership.....	3
MGMT-34	Employment Law.....	3
MGMT-50-52	Management 50 Series.....	3
		30-31

Suggested electives include:

BUS-10	Introduction to Business.....	3
BUS-35	Money Management.....	3
BUS-49A-ZZ	Special Topics in Business.....	½ - 3
COMM-04	Small Group Discussion and Problem Solving.....	3
ECON-01B	Introduction to Microeconomics.....	3
MGMT-37	Small Business Management.....	3
MGMT-50	Management Series.....	½ - 3 ½
MGMT-51	Management Series.....	½ - 3 ½
MGMT-52	Management Series.....	½ - 3 ½

Certificate of Achievement:

A Certificate of Achievement will be awarded upon the satisfactory completion of 30 units of course work in this area of study which includes the core courses indicated for the A.A. Degree in Management/Supervisory Training.

Customer Service

MGMT-50B	Values and Ethics.....	½
MGMT-50C	Time Management.....	½
MGMT-50D	Communication in the Workplace.....	½

MGMT-50F	Team Building.....	½
MGMT-50G	Decision Making and Problem Solving.....	½
MGMT-50H	Customer Service.....	½
MGMT-50I	Attitude in the Workplace	½
MGMT-51F	Conflict Resolution	½
MGMT-51G	Stress Management.....	½
MGMT-52D	Managing Organizational Change.....	½
		5

For a Customer Service Academy Certificate, students must complete all ten management courses listed above.

MATHEMATICS (12/06)

The following curriculum is designed for students majoring in mathematics in the California State University system. The student should check with specific requirements in the catalog of the college to which he/she plans to transfer.

For an Associate in Arts Degree in Mathematics, students must meet the graduation requirements and complete 21 units from the courses listed below:

All of the following:		Units
MATH-04A	Analytical Geometry and Calculus	4
MATH-04B	Analytical Geometry and Calculus	4
MATH-04C	Analytical Geometry and Calculus	4

Plus 3-6 units from the following:		
MATH-06	Elementary Differential Equations.....	3
MATH-08	Linear Algebra	3

And the remaining 3-6 units from the following:		
MATH-12/CPSC-12/ENGR-12	FORTTRAN Programming.....	3
MATH-14/ENGR-14	C++ Programming	3
MATH-10	Statistics.....	3
PHYS-04A	Physics.....	4
or		
PHYS-04B	Physics.....	4
		21

MECHANIZED AGRICULTURE - COMPACT POWER EQUIPMENT

Certificate of Achievement:
A Certificate of Achievement in Compact Power Equipment will be awarded to students who successfully complete the following core courses:

Core:		Units
MECH-15	Small Engine Repair and Maintenance.....	3
MECH-21	Hydraulics	3
MECH-22A	Diesel Engines	4
MECH-26	Power Equipment Electrical Systems	3
MECH-30	Equipment Mechanics Skills	2
MECH-31	Equipment Safety.....	1
MECH-35	Compact Power Equipment	3
MECH-40	Equipment Repair	2
		21

MECHANIZED AGRICULTURE TECHNOLOGY/HEAVY EQUIPMENT MECHANICS

The Associate in Arts Degree or Associate in Science Degree in Mechanized Agriculture Technology/Heavy Equipment Mechanics is available upon completion of the graduation requirements, the 22-unit core, and 15 units from the elective list.

Core:		Units
MECH-12	Agriculture Equipment.....	3
MECH-21	Hydraulics	3
MECH-22A	Diesel Engines	4
MECH-24	Power Trains	4

MECH-26	Power Equipment Electrical Systems	3
MECH-30	Equipment Mechanics Skills	2
MECH-31	Equipment Safety	1
MECH-33	Power Equipment Air Conditioning.....	2
		22

Electives:		
MECH-06	Fundamentals of Oxy-Fuel Welding and Shielded Metal Arc Welding.....	3
MECH-13	Agriculture Equipment.....	3
MECH-15	Small Engine Repair and Maintenance.....	3
MECH-22B	Diesel Engines	4
MECH-23	Diesel Fuel System Diagnostics.....	2
MECH-32	Applied Electrical and Hydraulic Service.....	3
MECH-35	Compact Power Equipment	3
MECH-40	Equipment Repair	2
		38

Certificate of Achievement:
A Certificate of Achievement in Mechanized Agriculture Technology/Heavy Equipment Mechanics will be awarded upon completion of the 22-unit core and 15 units from the electives list.

MUSIC (4/07)

For an Associate in Arts Degree in Music, students must meet the basic graduation requirements in addition to the 34-unit curriculum below.

Core:		Units
MUS-04ABCD	Music Theory I-IV	12
MUS-11	History of Classical Music	3
MUS-12	History of Classical Music	3
MUS-24AB	Applied Music I & II	4
MUS-27A	Piano I	2
		24

And choose one area of concentration (12 units):

Piano Concentration		
MUS-27BCD	Piano II-IV	6
MUS-24CD	Applied Music III & IV	4
Plus four units from the following music ensembles:		
MUS-41AB	Concert Band I & II.....	2-4
MUS-42AB	Jazz Ensemble I & II	2-4
MUS-44	Chorus.....	2-4

Vocal Concentration		
MUS-24CD	Applied Music III & IV	4
MUS43AB	Beginning and Advanced Voice.....	6
MUS-47	Song Interpretation: Music Theater.....	3
Plus four units from the following vocal ensembles:		
MUS-44	Chorus.....	2-4
MUS-45	Chamber Singers	2-4

Instrumental Concentration		
MUS-24CD	Applied Music III & IV	4
Plus six units from the following music ensembles:		
MUS-40	Orchestra	2-6
MUS-41ABC	Concert Band I-III	2-6
MUS-42ABC	Jazz Ensemble I-III.....	2-6
Plus four units from the following electives:		
MUS-13	History of Jazz.....	3
MUS-28	Jazz Improvisation	2
MUS-36A	Beginning Guitar	2
MUS-39A-ZZ	Special Problems in Music	3

Guitar Concentration		
MUS-36ABC	Guitar	6
MUS-24CD	Applied Music III & IV	4
Plus four units from the following music ensembles:		
MUS-41AB	Concert Band I & II.....	2-4
MUS-42AB	Jazz Ensemble I & II	2-4
MUS-44	Chorus.....	2-4

Music History Concentration

Six units from the following courses:

MUS-13	History of Jazz.....	3
MUS-14	History of American Popular Music	3

Plus six units from the following electives:

MUS-27BCD	Piano	2-6
MUS-36ABC	Guitar	2-6
MUS-39A-ZZ	Special Problems in Music.....	3-6

BIOL-25	The Oceans.....	3
ENTC-30	Introduction to Environmental Technology	3
PLSC-10	Elements of Plant Science	3

NURSE ASSISTANT (10/06)

Program prerequisites: Orientation workshop; CPR card - Module A/C; negative TB skin test or chest X-ray within past six months; physical within past six months; DOJ fingerprint clearance; Penal Code violations clearance.

A statement of eligibility will be awarded upon the satisfactory completion of the following courses:

ALLH-60	Nurse Assistant	5.5
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Successful completion of the above course is required to apply for the CNA certification exam.

NATURAL SCIENCES (5/08)

The degree in Natural Sciences offers an introduction to the physical and life sciences. Students interested in a career within the areas of research, teaching, health care professions, or related fields would be served by this degree.

This area of emphasis provides an opportunity to earn an AA degree in a broad area of study and is intended for students who may need to explore possibilities before committing themselves to a career or transferring to a four-year university.

Students are strongly encouraged to consult with a counselor for specific information regarding their career planning.

For an Associate in Science Degree with an area of emphasis in Natural Sciences, students must meet the basic graduation requirements and complete 18 units from the courses listed below.

Select nine units from each of the following two categories. Courses listed below may be counted as general education requirements as well as area of emphasis requirements.

Category 1: Physical Science

Choose one of the following courses:

ASTR-01	Principles of Astronomy.....	3
CHEM-02A	Introductory Chemistry.....	4
GEOL-01	Physical Geology	3
PHYS-01	Introduction to Physical and Earth Science.....	3
PHYS-02A	General Physics.....	4

Plus five to six from the following courses:

ARCH-01	Introduction to Archaeology.....	3
ASTR-01L	Introductory Astronomy Laboratory.....	1
CHEM-02B	Introductory Chemistry: Organic and Biochemistry.....	4
CHEM-04A	General Chemistry	5
CHEM-04B	General Chemistry	5
GEOG-01L	Physical Geography Laboratory.....	1
GEOG-01	Physical Geography.....	3
PHYS-01L	Introduction to Physical and Earth Science Laboratory	1
PHYS-02B	General Physics	4
PHYS-04A	Physics	4
PHYS-04B	Physics.....	4
PHYS-04C	Physics.....	4
PHYS-10	Concepts in Physics.....	3
SOIL-10	Soil Science	3

Category 2: Life Science

Choose one of the following courses:

BIOL-01	General Biology for Non-Majors.....	4
BIOL-06	Environmental Science	3
BIOL-08	Conservation of Natural Resources	3
BIOL-16	General Human Anatomy.....	4

Plus five to six from the following courses:

ANSC-10	Elements of Animal Science.....	3
ANTH-01	Physical Anthropology.....	4
BIOL-04	Principles of Biology for Science Majors.....	4
BIOL-04H	Honors Principles of Biology for Science Majors	4
BIOL-09	Introduction to Genetics	3
BIOL-13	General Zoology.....	5
BIOL-18	Principles of Physiology	4
BIOL-20	Microbiology.....	4

NURSING (2/07)

All individuals who meet minimum enrollment requirements are eligible to apply to the nursing programs. Criteria and complete information on the selection process as well as the philosophy and objectives of each program are described in the Nursing Application Handbook which is available in the Merced College Bookstore and online. The handbook is extensive and may contain additional information to the following brief program outline.

Completion of the Registered Nursing Program at Merced College and all requirements of the A.S. Degree qualify students to take the National Council Licensure Examination for Registered Nurses (NCLEX-RN). (It is the student's responsibility to meet all requirements to sit for the NCLEX-RN exam.)

Mission Statement

The mission of the Merced college Registered Nursing Program is to prepare our students for careers as professional Registered Nurses by providing a continually-improving educational program which is accredited by the CA Board of Registered Nursing and by instilling in our students a commitment to continued professional growth and lifelong learning.

Nursing, Registered

The Registered Nursing Program at Merced College prepares students to take the National Council Licensure Examination for Registered Nurses (NCLEX-RN), leading to licensure as a Registered Nurse (RN) and is designed to prepare competent nurses for service in the community. The Registered Nursing Program requires two academic years beyond the completion of the prerequisite courses and non-nursing breadth requirements. Graduates will earn the Associate of Science Degree upon completion of designated courses and competency requirements.

Program Application

Applications are available from the division's web site and the college bookstore. It is the applicant's responsibility to submit all required paperwork within a one week submission period during normal division office hours. Applications must be received by the Allied Health Division Office by the application deadlines listed below:

Fall Semester Application Week:..... Last Week of January
 Spring Semester Application Week:..... First Week of August

Selection Process

The Merced college RN Program uses the California Community College Chancellor's Model for selection of program applicants. The following four values are included in the selection formula of the Chancellor's merit-based model:

1. Degree Applicable GPA
 - Includes all degree applicable upper and lower division course work
 - Applicants must submit transcripts from all colleges attended. Failure to submit all transcripts ;may result in dismissal from the RN program.
2. English-01A or its Equivalent
 - The most recent grade will be used.

- AP or other test scores cannot be used. Equivalency will be determined by the Merced College Transcript Evaluator. These decisions will be considered final.
3. Core Life Science GPA
 - BIOL-16, (formerly ANAT-25), BIOL-18, (formerly PHYS-01), and BIOL-20 or equivalents,
 - The most recent grade for the core life science courses will be used.
 4. Core Life Science Attempts
 - Within 5 years of applying to the program a student's transcript(s) may show only four attempts to complete the three core life science courses. The overall composite score is lowered for each additional attempt of the core life science coursework.
 - Please note: Grades of "W" count as attempts.

Using the merit-based selection process above, those applicants scoring 80% or higher will be included in a merit-based selection pool. Randomized selection will be used to select an incoming class of students from this merit-based selection pool. These students will be sequentially numbered from one to the maximum allowed for the incoming class, including a predetermined number of alternate students.

Depending on the number of qualified applicants and constraints of the Chancellor's Office Merit-based selection model, the merit-based selection pool will vary in size from semester to semester.

Units in Residence

Priority will be given to applicants who have completed 12 or more units at Merced College.

Multiple Applications

There is no waiting list maintained for entrance into the RN Program. Applicants applying to the program a second time must reactivate their application and are responsible for updating their information to comply with local and/or state requirements. It is possible to be accepted into the qualified merit-based selection pool more than one selection period.

Requirements for Accepted Applicants Only

The following must be completed prior to starting the first course in the RN Program:

- Health clearance (including necessary immunizations)
- Criminal background check (requires proof of valid social security number)
- Malpractice insurance
- CPR certification
- Drug screening

Note: Fingerprinting is required prior to mental health rotation.

Preassessment Testing Requirement

Students selected into the RN Program must pass an assessment test (currently using TEAS). Applicants who do not meet the established score of 67 must attend a remediation program (completion of ALLH-52) within one year in order to be considered for enrollment in the next RN class. Study materials are available in the Learning Resource Center. Students may submit a copy of a previous TEAS test score in lieu of taking the test again.

NURSING, REGISTERED (2/07)

Advisory:

REGN-50* Nursing Careers Seminar..... 1/4
 *This course is highly recommended. Please see an academic advisor to discuss options.

Prerequisite courses:

	Units
BIOL-16** General Human Anatomy.....	4
BIOL-18** Principles of Physiology	4
BIOL-20** Microbiology	4
CHEM-02A Introductory Chemistry.....	4
ENGL-01A Composition and Reading I.....	3

Required courses (non-nursing) which also fulfil A.S. breadth requirements:

ANTH-02 Cultural Anthropology.....	3
or	
SOC-01 Introduction to Sociology.....	3
COMM-01 Fundamentals of Speech	3
or	
COMM-05 Interpersonal Communication	3
CLDV-09*** Human Development (Also Psyc-09).....	3
HIST-17A Political and Social History of the United States	3
or	
HIST-17B Political and Social History of the United States	3
or	
POSC-01 Essentials of the American Political System	3
HUM Any Humanities A.S. Breadth Area C (see catalog).....	3
PHED Any activity	2

Required courses (nursing):

First Semester

REGN-15 Nursing in Health and Illness I	9
REGN-16 Pharmacology I	2
REGN-17 Nursing Skills Simulation I.....	1

Second Semester

REGN-25 Nursing in Health and Illness II	9
REGN-26 Pharmacology II	2
REGN-27 Nursing Skills Simulation II.....	1

Third Semester

REGN-02**** Clinical Skills Transition - LVN to RN	1
REGN-35 Nursing in Health and Illness III	9
REGN-36 Pharmacology III	1
REGN-37 Nursing Skills Simulation III.....	1
REGN-38 Professional Relationships and Responsibilities I.....	1

Fourth Semester

REGN-45 Nursing in Health and Illness IV	9
REGN-46 Pharmacology IV	1
REGN-47 Nursing Skills Simulation IV	1
REGN-48 Professional Relationships and Responsibilities II.....	1

**It is highly recommended that once enrolled in these classes, students do not drop them. Program applicants need to understand that multiple attempts to improve grades earned in these classes can negatively affect their eligibility.

***Must be completed prior to or concurrently with REGN-25.

****Required for LVN's who have met admission selection criteria, have successfully completed REGN-01 and have been accepted into the Registered Nursing Program's third semester.

Competencies as required by Merced College for graduation:

Writing: Met by completion of ENGL-01A within program prerequisites.
 Math: Met by MATH-A or higher level math course.
 Reading: Met by ENGL-41 or completion of A.S. Breadth courses with "C" grade or better.

[Completion of the Registered Nursing Program at Merced College satisfies CILC areas A through G.]

LVN to RN Pathway

The pathway for California Licensed Vocational Nurses requires one academic year beyond completion of the prerequisite courses, non-nursing breadth requirements, and competencies. LVN to RN students enter into the third semester of the RN curriculum identified above after completion of REGN-01 and all other prerequisites. Applicants submit an application found on the Allied Health web site. Graduates will earn the Associate in Science Degree on completion of designated courses and competency requirements. Communication, natural and social science, and nursing courses must be completed with a grade of "C" or better to be eligible for licensure requirements of the State Board of Nursing.

Effective 2009-2010 calendar year:

Applications must be submitted during the same application week as the generic RN students and are required in the semester before entering REGN-01. For example, if the LVN to RN student wishes to enroll in REGN-01 for the fall semester he/she must submit his/her application during the January application period. Enrollment eligibility to the LVN to RN pathway requires the completion of previously identified prerequisite courses. Applicants must meet the same selection requirements as generic RN students entering the program in the first semester. In addition, REGN-01 and CLDV-09/PSYC-09 are prerequisites for the LVN to RN applicant who has already met the selection criteria. Randomized selection is used to select a cohort from the pool of qualified applicants according to available seats. Applicants selected from the pool must complete the assessment test (currently using TEAS). A score less than 67 requires the applicant to complete the same remediation requirements (completion of ALLH-52) as all other generic RN students before admission into the program. Only those students formally accepted into the program may register for courses identified as Registered Nursing Curriculum. Students may, however, enroll in other courses designated as non-nursing program requirements while awaiting selection into the program.

Transfer

Credits earned in the Merced College Registered Nursing Program may be transferable to California State Universities. Since prerequisite science and social science courses vary at each institution, students are advised to consult the catalog of their intended transfer school and establish a transfer plan with the Allied Health Counselor.

NURSING, VOCATIONAL

The Vocational Nursing curriculum comprises three semesters of combined didactic and clinical work on campus and at affiliated health care facilities. Upon satisfactory completion of the prerequisites and the nursing courses, a Certificate of Achievement is awarded and the student is then eligible for the National Licensure Examination. An Associate in Arts Degree is also available for those students who complete the Merced College General Education requirements.

In accordance with the rules and regulations of the Board of Vocational Nurse and Psychiatric Technicians Examiners, a student's previous education and/or experience will be evaluated by the Nursing Department on an individual basis for credit and/or advanced placement.

Minimum requirements for admission to the LVN program:

5. Must be a high school (or higher) graduate with a grade point average of 2.0 or higher, or the equivalent as measured by the General Education Development (G.E.D.) Test or by the California State High School Proficiency examination. Applicants with high school grade point averages below 2.0 must have completed 15 units of college-level work with a grade point average of 2.0 or higher.
6. Must be in good health.
7. Must have completed within five years of the date of application the following courses or their equivalent with a grade of "C" or better: BIOL-16 or 50, NUTR-10, ALLH-67, and VOCN-46A.
8. Must have completed ENGL-A and MATH-80, their equivalents, or a higher level English or math course with a grade of "C" or better.

Application: Qualified applicants must meet the above prerequisites, provide transcripts documenting high school graduation or G.E.D./Proficiency score results and file a completed application with the Allied Health Office. Applications are accepted year round, but enrollment is determined on a first come, first served basis.

A freshman class will be admitted every fourth semester. For further information contact the Allied Health Counselor.

Enrollment in the Nursing Program requires that students purchase appropriate nursing uniforms, obtain malpractice insurance, have a physical examination, show proof of immunization, have a current CPR card, and have transportation to the clinical facilities.

	Units
First Semester	
VOCN-40 Foundations of Nursing	11
VOCN-46B Pharmacology for Nurses.....	2
VOCN-47A Nursing Guidance I	1
Second Semester	
VOCN-42 Principles and Practices of Nursing Care I.....	14
VOCN-47B Nursing Guidance II	1
Third Semester	
VOCN-44 Principles and Practices of Nursing Care II.....	14
VOCN-47C Nursing Guidance III	1

A student must achieve a final score of 75% or better in each of the core nursing courses to continue in the program. When two courses must be taken concurrently, passing grades must be maintained in both for the student to continue in either course.

PARALEGAL STUDIES (11/06)

The Associate in Arts Degree in Paralegal Studies is designed for the student who desires employment and advancement in the field of paralegal work. Students must meet the graduation requirements and, in addition, complete the following required courses:

	Units
BUS-18A Business Law	4
BUS-43 Business Communication.....	3
PLGL-50 Intro. To Paralegal Studies	3
PLGL-51 Legal Research/Writing.....	4
PLGL-52 Civil Litigation	4
PLGL-53 Law Office Practices	3
PLGL-59 Evidence/Trial Preparation	3
	24

And nine units from the following courses:

CRIM-04 Criminal Law	3
MGMT-34 Employment Law.....	3
PLGL-54 Torts	3
PLGL-57 Estate Planning and Probate Procedures.....	3
PLGL-60 Family Law	3
REAL-42 Real Estate Principles	3
	33

Certificate of Achievement:

A Certificate of Achievement will be awarded upon the satisfactory completion of 33 units of course work in Paralegal Studies, including the core courses listed above.

PHILOSOPHY

The philosophy curriculum stresses analytical reasoning, writing, and oral expression. The study of philosophy has had a historic role in liberal arts education because it develops careful, independent thinking and aids in defining one's most fundamental values and beliefs. A philosophy major prepares a student for employment in many fields, including teaching, law, medicine, business, the ministry, social work, government, and the fine arts.

For an Associate in Arts Degree in Philosophy, the student must complete the graduation requirements and the 21-unit curriculum listed below.

	Units
HIST-04A History of Civilization: Part I	3
and HIST-04B History of Civilization: Part II	3
or HUM-01* Studies in Humanities - Ancient to Early Renaissance .	3
and HUM-02* Studies in Humanities - Renaissance to Present.....	3
PHIL-03 Ancient Philosophy.....	3
PHIL-04 Modern Philosophy	3
PHIL-05 Contemporary Moral and Social Issues	3
PHIL-10 Critical Thinking.....	3
PHIL-12 Logic.....	3
or	

PHIL-15	Comparative Religions.....	3
		21

*Honors HUM-01H can be substituted for HUM-01; Honors HUM-02H can be substituted for HUM-02.

ASTR-01	Principles of Astronomy.....	3
CHEM-04B	General Chemistry.....	5
GEOG-01	Physical Geography.....	3
GEOL-02	Historical Geology.....	4
PHYS-02B	General Physics.....	4

PHOTOGRAPHY

For an Associate in Arts Degree in Photography, students must meet the graduation requirements and complete the 28-unit curriculum listed below. The courses listed below must be in addition to those taken to satisfy basic graduation requirements.

		Units
ART-15	Fundamentals of Design in Art.....	3
ART-40A	Digital Art.....	3
PHOT-10A	Basic Photography.....	3
PHOT-10B	Intermediate Photography.....	3
PHOT-11A	Digital Camera Basics.....	3
PHOT-30	Introduction to Color Photography.....	3
PHOT-31	Basic View Camera.....	2
PHOT-32	Studio Photography.....	2
Plus three units of Art History from:		
ART-02	Art History - Renaissance through Modern.....	3
ART-06	Art of the 20th Century.....	3
Plus three units from the following photo electives:		
JOUR-32	Newspaper Staff.....	3
PHOT-34	Photo Expression.....	2
PHOT-49	Independent Study in Photography.....	1
		28

A Certificate of Achievement in Photography may be earned by completing the 28-unit curriculum listed above.

PHYSICAL EDUCATION

For an Associate in Arts Degree in Physical Education, students should meet the graduation requirements and complete the 20-unit curriculum listed below.

		Units
HLTH-11	Advanced First Aid and Emergency Care.....	3
PHED-10 A-H	Life Fitness Activity Course.....	2
PHED-11 A-E	Individual or Dual Activity Course.....	1
PHED-12 A-H	Team Activity Course.....	1
PHED-13 A-H	Aquatics.....	1
PHED-20	Introduction to Physical Education.....	3
RECR-30	Introduction to Community Recreation.....	3
SPMD-42	Introduction to Athletic Training.....	3
		17
Plus at least three units from the following:		
PHED-03	Varsity Conditioning.....	2
PHED-14 A-D	Dance.....	3
PHED-31	Techniques of Sports Officiating.....	2
PHED-32	Techniques of Sports Officiating.....	2
HLTH-15	Drugs, Alcohol, and Tobacco.....	3

PHYSICAL SCIENCE

To earn an Associate in Arts Degree in Physical Science it is expected that a student will have completed math through a pre-calculus course (the courses at Merced College that will satisfy that requirement are MATH-02, or MATH-25 and MATH-26). The student must complete the basic graduation requirements (BIOL-01 or BIOL-04 or BIOL-04H are recommended for science breadth) and the courses listed below:

		Units
CHEM-02A	Introductory Chemistry.....	4
or		
CHEM-04A	General Chemistry.....	5
GEOL-01	Physical Geology.....	4
PHYS-02A	General Physics.....	4
And select six units from the following:		
ARCH-01	Introduction to Archaeology.....	3

PHYSICS

The following curriculum is designed for students planning to major in physics in a California State University. Students should check the specific requirements of their intended transfer school and work with his/her counselor.

For an Associate in Science Degree in Physics, students must meet the graduation requirements and complete the 32-unit curriculum listed below. The courses listed below must be in addition to the basic graduation requirements. (PHYS-04A and a life science course are recommended to satisfy science breadth.)

		Units
CPSC-01	Introduction to Management Information Systems.....	4
MATH-04A	Analytical Geometry and Calculus.....	4
MATH-04B	Analytical Geometry and Calculus.....	4
MATH-04C	Analytical Geometry and Calculus.....	4
MATH-06	Elementary Differential Equations.....	3
MATH-08	Linear Algebra.....	3
MATH-12	FORTRAN Programming.....	3
PHYS-04B	Physics.....	4
PHYS-04C	Physics.....	4
		33

PSYCHOLOGY (1/07)

The Psychology major is designed for students planning to major in psychology at a California State University. The students should work with their counselors for specific university requirements.

For an Associate in Arts Degree in Psychology, students must meet the graduation requirements and complete the 18-unit curriculum listed below. These courses must be in addition to the basic graduation requirements.

		Units
PSYC-01A	Introduction to Psychology.....	3
or		
PSYC-01AH	Honors introduction to Psychology.....	3
PSYC-01B	Introduction to Psychological Methods.....	3
		6
Add 12 units from the following electives:		
ANTH-02	Cultural Anthropology.....	3
BIOL-01	General Biology for Non-Majors.....	4
MATH-10	Elementary Statistics.....	3
PSYC-05	Introduction to Statistics for Psychology.....	3
PSYC-09	Human Development.....	3
PSYC-15	Biological Psychology.....	3
PSYC-20	Social Psychology.....	3
PSYC-22	Human Sexuality.....	3
PSYC-23	Personal and Social Adjustment.....	3
PSYC-25	Abnormal Psychology.....	3
PSYC-35	Developmental Psychology; Childhood.....	3
PSYC-36	Developmental Psychology; Adolescence.....	3
PSYC-49A-ZZ	Special Topics in Psychology.....	3
SOC-01	Introduction to Sociology.....	3
		18

REAL ESTATE

The Associate in Arts in Degree in Real Estate is in preparation for the California Real Estate Salesman's License and Broker's License.

Students must meet the graduation requirements and complete the major requirements with the following courses:

		Units
ACTG-04A	Fundamentals of Financial Accounting.....	4
or		
ACTG-51	Applied Accounting.....	4

BUS-18A	Business Law	4
CPSC-30	Computer Applications	3
REAL-42	Real Estate Principles	3
REAL-43	Real Estate Practices	3
REAL-45	Real Estate Finance	3
REAL-46	Real Estate Appraisal	3
REAL-48	Real Property Management	3
REAL-49	Escrow Procedure	3
		29

Completion of these core courses plus appropriate experience in real estate sales will qualify the student to take the broker's examination.

Suggested electives include:

BUS-10	Introduction to Business	3
BUS-43	Business Communication	3
CPSC-01	Introduction to Management Information Systems.....	4
ECON-01A	Introduction to Macroeconomics	3
or		
ECON-01B	Introduction to Microeconomics	3
MDSE-32	Salesmanship.....	3
MDSE-33	Advertising	3
AOM-50B	Keyboarding and Document Formatting	3

Certificate of Achievement:

A Certificate of Achievement will be awarded upon the satisfactory completion of the required courses for the A.A. Degree in Real Estate.

SOCIAL AND BEHAVIORAL SCIENCES (5/08)

The degree in Social and Behavioral Science offers a focus on the interrelations among individuals, families, groups, communities, societies, cultures, and historical time periods. This area of emphasis prepares students to understand people and their actions and is useful for a variety of careers that involve relating to people such as those in public service, education, law enforcement, government, and general business.

Students are strongly encouraged to consult with a counselor for specific information regarding their career planning.

For an Associate in Science Degree with an area of emphasis in Social and Behavioral Science, students must meet the basic graduation requirements and complete 18 units from the courses listed below.

Select nine units from each of the following two categories. Courses listed below may be counted as general education requirements as well as area of emphasis requirements.

Category 1

AGBS-11	Agricultural Economics.....	3
AGRI-10	Agriculture, Environment, and Society	3
ANTH-01	Physical Anthropology	3
ANTH-02	Cultural Anthropology.....	3
ANTH-10	Southeast Asian Culture: Emphasis Hmong Culture.....	3
CLDV-08	Families and Society	3
CLDV-09	Human Development	3
COMM-30	Introduction to Intercultural Communication.....	3
CRIM-01	Criminology	3
CRIM-02	Introduction to Criminal Justice	3
ECON-01A	Introduction to Macroeconomics	3
ECON-01B	Introduction to Microeconomics	3
GEOG-02	World Geography	3
PSYC-01A	Introduction to Psychology	3
PSYC-01AH	Honors Introduction to Psychology	3
PSYC-15	Biological Psychology	3
PSYC-20	Social Psychology	3
PSYC-22	Human Sexuality	3
PSYC-23	Personal and Social Adjustment	3
PSYC-25	Abnormal Psychology	3
PSYC-51	Applied Psychology	3
SOC-01	Introduction to Sociology.....	3
SOC-02	Contemporary Social Problems	3

Category 2

HIST-04A	History of Civilization: Part I.....	3
HIST-04B	History of Civilization: Part II.....	3
HIST-08A	History of the Americas: Part I.....	3
HIST-08B	History of the Americas: Part II.....	3
HIST-09A	Introduction to East Asian Civilization: China.....	3
HIST-09B	Introduction to East Asian Civilization: Japan	3
HIST-17A	United States History and United States Constitution...3	
HIST-17AH	Honors United States History and United States Constitution	3
HIST-17B	U.S. History and California State & Local Government.3	
HIST-17BH	Honors U.S. History and California State & Local Government	3
HIST-21	The History of Minorities in America – Ethnic Groups, 19th Century to Present	3
HIST-22	History of Minorities – Black Emphasis	3
HIST-23	U.S. History of Hispanic-Americans in the Southwest ..3	
HIST-24	History of the Native American.....	3
HIST-29	History of California.....	3
HIST-39ABC	Exploring California's Past: Pre-European Contact to the 20th Century.....	3
HUM-15	Comparative Cultures	3
POSC-01	Essentials of the American Political System	3
POSC-02	An Introduction to World Political Systems	3
SCSC-01	Introduction to Social Science.....	3

SONOGRAPHY, DIAGNOSTIC MEDICAL

The Diagnostic Medical Sonography Program will offer didactic and clinical training in two tracks in order to accommodate and facilitate meeting the critical shortage of general sonographers (Abdominal and OB/GYN track) and echocardiographers (Cardiac Track). The campus hands-on campus learning along with the clinical education will provide our students with job-ready skills.

OPTION NO. 1 - ABDOMINAL AND OB/GYN

This option is a full-time Certificate of Achievement program. The entire program is 18 months in length, and is composed of two summer sessions and three semesters. If you wish to enter the program, you must make a formal application, including verification of completion of prerequisites listed below. Upon submission of a COMPLETED application, the date and time received will be stamped on the application. After your records have been verified, that date and time will become your official application date. You will receive a notice in the mail, advising you of the following:

- that you "Meet All Program Requirements/Prerequisites"
- your official application date and time, and
- your number on the enrollment list.

If you do NOT meet all the application requirements, your application will be returned, nullifying any application receipt date. If you are accepted into the program but must decline, your application will be kept on file. Enrollment will be based on a first-come, first-served basis. Only one class is in session at a time.

Requirements for Application and Prerequisites

Requirements:

Completion of a two-year Allied Health program that is patient-care related, such as radiologic technology, registered nursing, respiratory therapist, physical therapy, associate degree licensed vocational nurse, or baccalaureate degree and health care experience.

Prerequisites:

BIOL-16; BIOL-18; MATH-A; ALLH-67; and PHYS-10 or RADT-40. All program prerequisites must be passed with a grade of "C" or higher with a minimum cumulative grade of 2.35 GPA

Contact the Allied Health Office for an application or visit our website at: www.mccd.edu/alliedhealth/sonohp.htm.

Upon admission to the program, you are required to have a physical examination providing evidence of good health and immunization, and must provide annual proof of a negative TB skin test or TB screening, and must

have a chest X-ray at least every four years. You must also comply with the technical standards set for working in this field. Additional information on malpractice insurance and uniforms will be provided at that time.

While enrolled in the program, you will be assigned to various clinic facilities in addition to the on-campus portions of the program. By application and enrollment into the program, you agree to accept clinical assignments in whatever clinical site you are assigned. Clinical assignments will be scheduled during the normal working day hours.

In order to continue in the program, you must complete the Diagnostic Medical Sonography courses in the specified sequence offered per session/semester with a minimum grade of "C" in each course.

If you successfully complete the Diagnostic Medical Sonography Program, you will be awarded a Certificate of Achievement in Diagnostic Medical Sonography and will be eligible to write the following qualifying examinations of the American Registry of Diagnostic Medical Sonographers (ARDMS): 1) physical principles/instrumentation, and 2) Special Examination Option in Abdomen, and 3) Special Examination Option in OB/GYN.

	Units
SONO-40 Basic Ultrasound Physics.....	1.5
SONO-41 Introduction to Sonography.....	1.5
First Semester (Fall)	
SONO-42A Abdominal Sonography.....	4
SONO-42B Beginning Clinical Experience I.....	9
Second Semester (Spring)	
SONO-43A OB/GYN Sonography.....	4
SONO-43B Beginning Clinical Experience I.....	9
Second Summer Session	
SONO-44A Advanced Ultrasound Physics	1.5
SONO-44B Advanced Clinical Experience I.....	4.5
SONO-44C Superficial Structures.....	1
Third Semester (Fall)	
SONO-45A Integrative Study in Sonography.....	2
SONO-45B Advanced Clinical Experience II.....	9
SONO-45C Basics of Vascular Sonography	2
	49

OPTION NO. 2 - CARDIAC OPTION

This option provides the didactic and clinical experience to meet the ARDMS guidelines for registry eligibility in the areas of Adult Echocardiography and Cardiovascular Physics.

Core Prerequisites

BIOL-16; BIOL-18; MATH-A: ALLH-67; and PHYS-10 or RADT-40. All option prerequisites must be passed with a grade of "C" or higher with a minimum cumulative grade of 2.35 GPA

Track 1- Prerequisites

Candidates following this track must have completed a two-year Allied Health Degree, i.e. radiologic technology, respiratory therapist, registered nursing, physical therapy, associate degree licensed vocational nurse, or baccalaureate degree and health care experience. These candidates are eligible to take their ARDMS exam immediately upon graduation.

Track 2 - Prerequisites

Candidates following this track must be an EKG technician in addition to completing the core prerequisites. These candidates will require additional one-year full time paid employment post graduation before they are eligible to write the ARDMS Echocardiography and Cardiovascular Physics exams under the ARDMS's Prerequisite No. 1 examination option.

Program Length: 24 months

If you successfully complete the Diagnostic Medical Sonography Program (Cardiac Option), you will be eligible to write the following qualifying examinations of the American Registry of Diagnostic Medical Sonographers (ARDMS): 1) Special Examination Option in Adult Echo, and 2) Special Examination Option in Cardiovascular Physics.

	Units
SONO-45C Basics of Vascular Sonography	2
SONO-46A Echocardiography	1.5
First Summer Session	
SONO-40 Basic Ultrasound Physics.....	1.5
SONO-41 Introduction to Sonography.....	1.5

Second Semester (Fall)	
SONO-36B Beginning Clinical Experience I.....	9
SONO-36C Advanced Echocardiography	4
Third Semester (Spring)	
SONO-37A Cardio Physiology and Principles.....	2
SONO-37B Beginning Clinical Experience II.....	9
Second Summer Session	
SONO-44A Advanced Ultrasound Physics	1.5
SONO-38B Advanced Clinical Experience I.....	4.5
Fourth Semester (Fall)	
SONO-45A Integrative Study in Sonography.....	2
SONO 39B Advanced Clinical Experience II.....	9
	47.5

VISUAL ARTS

The Art curriculum below is suggested for students majoring in art or planning to earn a teacher's credential from a California State University with a major or minor in Art. For specific courses, students should consult the catalog of their intended transfer school, and work with a counselor to evaluate their capabilities and preparedness.

For an Associate in Arts Degree in Visual Arts, students should meet the graduation requirements and complete the following courses:

	Units
Art History (Choice of ART-01, 02, 06).....	6
ART-12A Sculpture	3
ART-15 Fundamentals of Design in Art.....	3
ART-24A Drawing I.....	3
ART-26A Figure Drawing I.....	3
ART-25A Acrylic Painting I.....	3
or	
ART-28A Oil Painting I.....	3
Plus nine units from the following courses:	
ART-17ABC Ceramics	3-9
ART-20 A-D Printmaking I-IV.....	3-9
ART-28 A-C Oil Painting I-III.....	3
ART-29 A-D Watercolor Painting I-IV	3
ART-41 A-C Graphic Design I-III	3
PHOT-10A Basic Photography	3
	30

WELDING TECHNOLOGY

An Associate in Arts Degree in Welding Technology is available for students who complete the graduation requirements and successfully complete the courses required below for the certificate:

	Units
DRFT-59 Basic Drafting.....	3
MATH-B Applied Mathematics.....	5
WELD-06 Fundamentals of Oxy-Fuel & Shielded Metal Arc Welding	3
WELD-07 Fundamentals of T.I.G. and M.I.G. Welding	3
WELD-40A Welding Design and Construction.....	3
WELD-40B Welding Design and Construction.....	3
WELD-45 Advanced Arc Welding Procedures.....	3
WELD-48 Special Problems in Welding Technology	2
	25

Certificate of Achievement:

A Certificate of Achievement will be awarded upon successful completion of the full certificate courses listed above. For successful completion a student must complete the requirements with a minimum grade point of 2.0 in each course required for the certificate.