

Instructional Programs

Degrees and Certificates

The college offers the Associate of Science Degrees (A.S.), Associate of Arts Degrees (A.A.) and Associate Degrees for Transfer (AA-T, AS-T), and two kinds of certificates:

Certificates of Achievement (CA) are awarded for completion of programs that consist of 18 or more units, and are approved by the California Community Colleges Chancellor's Office. CAs are noted on students' official college transcripts.

Certificates of Career Preparation (CP) recognize completion of a sequence of fewer than 18 units, approved by the VVC Board of Trustees. Students are presented a paper award, but the certificate does not appear on the college transcript.

Administration of Justice, A.S., AS-T

Administration of Justice Certificate (CA)
Corrections Officer Core Course Certificate (CP)
Forensic Specialist Certificate (CP)
Law Enforcement Modulated Course Level III Certificate (CP)
PC 832 Law Enforcement Course Certificate (CP)
Campus Law Enforcement Course PC 832.3 Certificate (CP)
Fingerprint Recognition and Classification Certificate (CP)
Law Enforcement Modulated Course Level II Certificate (CP)
PC 832 Firearms Only Certificate (CP)
Police Technician Specialist Certificate (CP)

Agriculture and Natural Resources Horticulture, A.S.

Animal Science Specialist Certificate (CP)
Ecological Restoration Technician Certificate (CP)
Equine Science Specialist Certificate (CP)
Geospatial Technician Certificate (CP)
Horticulture Specialist Certificate (CA)
Landscape Specialist Certificate (CA)
Mojave Desert Master Gardener Certificate (CP)
Water Resource Management Certificate (CP)
Animal Science Technician Certificate (CP)
Environmental Field Studies Certificate (CP)
Floral Design Technician Certificate (CP)
Irrigation Design Technician Certificate (CP)
Landscape Irrigation Certificate (CP)
Natural Resource Management Technician Certificate (CP)

Allied Health*

Nursing Assistant/Home Health Aide Certificate (CP)

Automotive Technology, A.S.

4 X 4 Suspension Modifications Certificate (CP)
Automotive Detailer/Porter Certificate (CP)
Automotive Inspection and Maintenance Technician Cert. (CP)
Automotive Specialist I Certificate (CA)
Automotive Technician Certificate (CA)
Engine Machinist Specialist Certificate (CP)
Heavy Duty Truck Hydraulic Technician Certificate (CP)
Motorcycle Repair Technician (CP)
Recreational Vehicle Service and Repair Technician Cert. (CP)
Smog Inspection Technician Certificate (CP)
Automotive Brake & Suspension Specialist Certificate (CP)
Automotive Drivability Specialist Certificate (CP)
Automotive Repair Shop Manager Certificate (CP)
Automotive Specialist II Certificate (CA)
Automotive Transmission Specialist Certificate (CP)
Heavy Duty Diesel Truck Lubrication and Inspection Specialist Certificate (CP)
Heavy Duty Truck Brake Repair Specialist Certificate (CP)
New Model Technology Repair Technician Certificate (CP)
Small Engine Repair Specialist Certificate (CP)

Aviation, A.S.

Aviation Airframe Technician Certificate (CA)
General Aviation Technician Certificate (CP)
Aviation Power Plant Technician Certificate (CA)

Business, A.S.

Business Administration, A.S.

Bookkeeping I Certificate (CP)
Management Certificate (CA)

Business Education Technologies, A.S.

Administrative Assistant Certificate **(CA)**
Computer Systems II Certificate **(CA)**
Legal Office Certificate **(CA)**
Office Services Certificate **(CP)**
Word Processor Certificate **(CP)**

Computer Systems I Certificate **(CP)**
Data Typist Certificate **(CP)**
Medical Office Certificate **(CA)**
Spreadsheet Processor Certificate **(CP)**

Business Real Estate and Escrow, A.S.

Basic Business Real Estate Certificate **(CA)**

Business Real Estate Apprentice Certificate **(CP)**

Child Development, A.S.

Early Childhood Education, **AS-T**
Level II: Teacher (Pre-school) **(CA)**

Level I: Associate Teacher (Pre-school) **(CA)**
Level III: Site Supervisor **(CA)**

Communication Studies, AA-T

Computer Information Science, A.S.

Database Administration Certificate **(CA)**
Network Specialist Certificate **(CP)**
Programming II Certificate **(CA)**
UNIX Administrator Certificate **(CP)**
Web Authoring Certificate **(CP)**

MySQL Database Developer Certificate **(CP)**
Programming I Certificate **(CA)**
Productivity Software Specialist Certificate **(CA)**

Computer Integrated Design and Graphics A.S.

Architectural CADD Technician I Certificate **(CP)**
Digital Animation Technician I-Maya Certificate **(CP)**
Drafting Technician I Certificate **(CP)**
Expanded Animation Technician Maya Certificate **(CP)**
Geographic Information Systems for Emergency Response and Management Certificate **(CP)**

CADD Technician I Certificate **(CP)**
Digital Animation Artist Certificate **(CP)**
Digital Animation Technician I-3ds Max Certificate **(CP)**
Expanded Animation Technician 3ds Max Certificate **(CP)**
Visual Communications Graphic Design Certificate **(CP)**
Visual Communications Print Production Certificate **(CP)**

Construction and Manufacturing Technology, A.S.

Basic Electrical Technician Certificate **(CP)**
Basic Residential Maintenance Technician Certificate **(CP)**
Building Construction Certificate **(CA)**
Construction Management Certificate **(CA)**
Plumbing Technician Certificate **(CP)**
Renewable Energy Certificate **(CP)**

Basic HVAC/R Certificate **(CP)**
Basic Woodworking Certificate **(CP)**
Building Inspection Certificate **(CA)**
Construction Technology Certificate **(CA)**
Public Works Certificate **(CA)**

Education Technology*

Collegial Education I/II Certificates **(CP)**

Education Technology Certificate **(CP)**

Electronics Engineering Technology, A.S.

Electronics and Computer Technology, A.S.

Associate Degree Electronics Engineering Technology Certificate **(CA)**
A+ Certification Examination Preparation Certificate **(CP)**
Computer Technology Certificate **(CA)**
Electronic Technology Certificate **(CA)**
N+ Certification Examination Preparation Certificate **(CP)**

MSCSE Examination Preparation Certificate Level I, II **(CP)**
CISCO Networking Academy I, II, III, IV, V, VI, VII Certificates **(CP)**
Digital Electronics Certificate **(CA)**
Fiber Optic Cabling Technician Certificate **(CP)**
Network Cabling Technician Certificate **(CP)**
Wireless Communication Technology Certificate **(CA)**

Emergency Medical Technician*

Emergency Medical Technician **(Refresher)** Certificate **(CP)**

English, AA-T

Fine Arts, A.A.

This major is recommended for students interested in areas such as the following: Art, Music, Photography, Theatre Arts

Fire Technology, A.S.

Fire Company Officer Certificate (CA)
Fire Prevention Officer Certificate (CA)

Fire Fighter Certificate (CA)

Geography, AA-T**History, AA-T****Liberal Arts, A.A.**

This is usually the major for students who are undecided but who wish to transfer to a university, and/or for those who are interested in areas such as the following: Anthropology, Economics, English, French, Geography, History, Journalism, Liberal Studies, Philosophy, Political Science, Psychology, Religious Studies, Sociology, Spanish

Mathematics, AS-T**Math/Science, A.S.**

This is usually the major for students interested in areas such as the following: Anatomy, Astronomy, Biology, Chemistry, Geography, Geology, Mathematics, Microbiology, Oceanography, Physical Education, Physical Science, Physiology, Physics

Media Arts*

Digital Animation Artist Certificate (CP)
Digital Animation Technician I - 3DS Max Certificate (CP)
Expanded Animation Technician MAYA Certificate (CP)

Digital Animation Technician I - MAYA Certificate (CP)
Expanded Animation Technician 3DS Max Certificate (CP)
Digital Filmmaker (CP)

Medical Assistant, A.S.

Medical Assistant Certificate (CA)

Nursing, A.S.

Associate Degree Nursing Certificate (CA)

Nursing Licensure Certificate (CA)

Paralegal*

Paralegal Studies Certificate (CA)

Paramedic, A.S.

Paramedic Certificate (CA)

Photography*

Photography Certificate (CP)

Psychology, AA-T**Political Science***

International Studies Certificate (CP)

Respiratory Therapy, A.S.

Respiratory Therapy Certificate (CA)

Restaurant Management, A.S.

Restaurant Management Certificate (CA)

Sociology, AA-T**Welding, A.S.**

Welding Certificate (CA)

**No Associate Degree is awarded in this field.*

Administration of Justice

All areas of Administration of Justice require that individuals possess the personal and physical qualities essential to effective peace officers. Many employment opportunities currently exist for individuals desiring entrance into law enforcement or related fields at various governmental levels. Security and corrections are fast-growing professions. Individuals interested in these professions should understand that the work is demanding, requiring a combination of training, education, and experience, along with mental and physical stamina.

The Administration of Justice program is designed to develop a student's understanding of the various operational functions within the criminal justice system. The educational emphasis will be the examination of crime causation, functions of law enforcement, criminal court system, and corrections. Students majoring in this subject area can prepare themselves for careers in law enforcement, corrections, and security at both the operational and administrative levels.

Careers in the criminal justice field are found at the federal, state, county, and city levels.

Careers at the state, county, or city level usually require a high school diploma, but an associate's degree is preferable. Careers in law enforcement usually start with Police Academy Training. The modular format provides the opportunity to become a reserve officer while completing Module II and III of training. A Module I graduate may elect to become a reserve officer or may apply for a full-time position with a law enforcement agency in California.

Careers in Forensics - the application of science and technology to the analysis of physical evidence - may be entered through the Crime Scene Investigation course (AJ 67) and the Fingerprint Recognition and Classification course (AJ 31). CSULA offers a M.A. degree in Criminalistics.

Career Opportunities

Communication Technician, Correctional Officer, Criminalist, Criminologist, Deputy Sheriff, Forensic Technician, Juvenile Correctional Officer, Police Officer, Probation Officer, Security Manager, Security Officer, Special Agent/Investigator

Faculty

Ron Fields - Emeritus

Michael Visser

Degrees and Certificates Awarded

Associate in Science, Administration of Justice

Associate in Science for Transfer, Administration of Justice

Campus Law Enforcement Course PC 832.3 Certificate

Fingerprint Recognition and Classification Certificate

Modular Course Level II Certificate

PC 832 Firearms Only Certificate

Police Technician Specialist Certificate

Administration of Justice Certificate

Corrections Officer Core Course Certificate

Forensic Specialist Certificate

Modular Course Level III Certificate

PC 832 Law Enforcement Course Certificate

School Police Course: PC 832.3 Certificate

A student receiving a degree or certificate in this field will be able to:

- Critically analyze and evaluate behaviors and situations for violations of law; evaluate the lawful admissibility of evidence; and assess legal defenses.
- Communicate effectively, orally and in written formats, to the various professional role players within the Criminal Justice system.
- Critically evaluate Vehicle Code violations to determine the cause for an accident.
- Perform the fundamentals of firearm safety, shooting accurately, and cleaning a pistol.
- Critically analyze and assess various sample fingerprints and accurately classify each fingerprint.
- Critically evaluate the search and/or seizure of evidence and determine the admissibility of evidence based on current Federal Supreme Court Decisions.
- Critically analyze and evaluate the procedures in the preliminary investigation of specific crimes.
- Critically examine and evaluate the types of evidence, admissibility of evidence given fourth and fifth amendment restrictions; analyze exceptions to the exclusionary rule.
- Critically evaluate the processes involved in recognizing evidence and investigating any specific crime scene; recognize the barriers to an effective interviews and/or interrogations

Administration of Justice

- Critically analyze and describe the criminal trial processes from pre-arrest to sentencing.
- Critically analyze and evaluate the proper procedures in conducting a criminal investigation involving crimes against persons, property, sex crimes, crimes against children, bombs and explosions, and vice and narcotics.
- Critically evaluate and analyze the development of the role players, training and education, and present day challenges of the criminal justice system to include police, courts, and corrections.
- Perform the duties and responsibilities of a Level II Reserve.
- Critically appraise the legal restraints imposed on a peace officer by the US Constitution; critically evaluate the duties and responsibilities of a Level III Reserve.
- Explain the sociological theories of criminology that relate specifically to juvenile delinquency.
- Recognize and explain the development of the Juvenile court system
- Recognize and explain the role of *parens patriae* and its role in the social development of the juvenile offender.
- Perform the duties, role, and function of a state certified correctional officer in a county jail or private prison.

Autopsy Assistant Trainee Exam

Students who wish to take the Autopsy Assistant Trainee exam to seek positions as trainees or interns should take **AJ 67, 133, 145; ALDH 139; BIOL 211** (prerequisite: **BIOL 100 or 107**); and **PHOT 101**.

Associate Degree

To earn an Associate in Science degree with a major in Administration of Justice, complete a minimum of 18 units from any of the degree applicable certificate requirements or from any Administration of Justice courses (numbered 50 and above) and meet all Victor Valley College graduation requirements. AJ 138 (Cooperative Education) may be used as elective credit but may not be used to fulfill major requirements

To earn an Associate in Science degree for Transfer with a major in Administration of Justice, complete the required major courses and all other requirements specified on the following pages (i.e, 60 CSU transferable units, CSU GE or IGETC, etc). For more information on the AA-T/AS-T degrees, meet with a counselor or go to www.adegreewithaguarantee.com

Transfer

For the most up-to-date information on these programs and others, visit www.assist.org. Please stop by the Transfer Center in Building 55 or make an appointment with a counselor if you have questions.

- **California State University, San Bernardino:** *Criminal Justice major*

Local Bachelors Programs

For information on the following programs located in the High Desert, please visit www.vvc.edu/offices/guidanceandcounseling/ and select "Counseling Information Sheets":

- **Brandman University, Victor Valley Campus:** *Criminal Justice major*
- **University of La Verne, High Desert Campus:** *Criminal Justice major (Online)*

ASSOCIATE IN SCIENCE FOR TRANSFER IN ADMINISTRATION OF JUSTICE - Cont

Administration of Justice, AS-T		
<p>The program leading to the Associate in Science for Transfer in Administration of Justice is designed to acquaint pre-service and in-service students with the principles and practices of criminal justice systems in America.</p> <p>Students will be prepared to work in a variety of fields, including: public law enforcement agencies such as municipal police, probation officers, county deputy sheriffs, correctional officers, game wardens, state parks, and private security.</p> <p>Students completing the AS-T in Administration of Justice will be able to transfer to the California State University system and be prepared to study in the following areas: Administration of Justice, Law Enforcement, Correctional Science, Social Science/Criminology, Forensics, and Pre-Law.</p>		
Major Requirements: 18-19 units		
Required Courses (6 units total):		
AJ 101	Introduction to Administration of Justice	3.0
AJ 103	Criminal Law	3.0
Additional Courses		
List A – Select any TWO of the following courses (6 units total)		
AJ 102	Criminal Procedures	3.0
AJ 104	Legal Aspects of Evidence	3.0
AJ 132	Introductions to Corrections	3.0
AJ 135	Juvenile Law and Procedures	3.0
AJ 145	Introduction to Criminal Investigation	3.0
AJ 150	Introduction to Forensic Science	3.0
AJ 201	Community and the Justice System	3.0
List B – Select any TWO of the following courses (6 units total)		
PSYC 101	Introductory to Psychology	3.0
PSYC 101H	Honors to Introductory Psychology	3.0
SOC 101	Introduction to Sociology	3.0
MATH 120	Introduction to Statistics	4.0
MATH 120H	Honors Introduction to Statistics	4.0
GEOG 101	Physical Geography	3.0
GEOG 101L	Geography Lab	1.0
GEOG 102	Introduction to Cultural Geography	3.0
POLS 130	Introduction to Paralegal Studies	3.0
BADM 101	Financial Accounting	4.0
BADM 103	Financial Accounting Fundamentals	3.0
BIOL 211	Human Anatomy	4.0
CIS 101	Computer Literacy	4.0
<p>OR, any CSU transferable Administration of Justice lower division course, OR, courses outside of the Administration of Justice discipline that are articulated as lower division major preparation for the Criminal Justice/ Criminology major at any CSU.</p>		
<p>A student wishing to pursue an AA-T/AS-T degree in the major listed on this page must ensure the CSU of their choice is accepting that similar major. Students completing an AA-T/AS-T degree are guaranteed admissions into a CSU campus given that a student fulfills the following:</p> <ol style="list-style-type: none"> 1) 60 CSU transferable units; 2) Completes the CSU General Education (GE) or IGETC General Education pattern; 3) Completes the major requirements for the AA-T/AS-T; 4) Maintains a transferable cumulative GPA of at least 2.0 (C or better); 5) Completes the basic/Golden 4 GE requirements. <p>For more information on the AA-T/AS-T degrees, meet with a counselor or visit www.sb1440.org and www.adegreewithaguarantee.com</p>		

Administration of Justice

Administration of Justice Certificate

Prepares the student for a variety of employment opportunities within the Criminal Justice System. Employment opportunities include Corrections, Law Enforcement, Traffic Enforcement, Probation, Parole, Security, Prevention Loss officer, and related Social Worker positions.

Units Required: 24.0 *All of the following must be completed:*

AJ 92	Writing for Criminal Justice	3.0
AJ 93	Traffic Enforcement and Investigation	3.0
AJ 101	Introduction to Administration of Justice	3.0
AJ 102	Criminal Procedures	3.0
AJ 103	Criminal Law	3.0
AJ 104	Legal Aspects of Evidence	3.0
AJ 127	Introduction to Criminology	3.0
AJ 201	Community and the Justice System	3.0

Campus Law Enforcement Course: PC 832.3 Certificate

Units Required: 2.0

AJ 8	PC 832.3 Campus Law Enforcement	2.0
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Corrections Officer Core Course Certificate

Prepares the student to meet the legal requirements established by Standards and Training for Corrections (STC), in order to be employed as a city or county correctional officer.

Units Required: 8.0

AJ 64	Basic Corrections Officer Academy	8.0
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Fingerprint Recognition and Classification Certificate

Units Required: 2.5

AJ 31	Fingerprint Recognition and Classification	2.5
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Forensic Specialist Certificate

This certificate meets the standards required of a Forensic Specialist whose duties include processing evidence at crime scenes, packaging and transporting evidence to a crime lab, and testifying in court. The certificate requirements meet the standards set by the Commission on Peace Officer Standards and Training and the College Advisory Committee.

Units Required: 3.5

AJ 67	Crime Scene Investigation	3.5
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Law Enforcement Module III Basic Course Certificate

This certificate will be awarded to students who have successfully completed the Level III Modulated Course. This course is certified by the Commission on Peace Officer Standards and Training.

Units Required: 6.5

AJ 80	Level III Modulated Basic Course	6.5
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Law Enforcement Module II Basic Course Certificate

This certificate will be awarded to students who have successfully completed the Level II Modulated Course. This course is certified by the Commission on Peace Officer Standards and Training.

Units Required: 15.5

AJ 80	Level III Modulated Basic Course	6.5
AJ 81	Level II Modulated Basic Course	9.0

PC 832 Firearms Only Certificate

Units Required: 0.5

AJ 30	Firearms Training	0.5
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PC 832 Laws of Arrest Course Certificate

Prepares the student to meet the minimum requirements as a non-designated Level III Reserve Peace Officer, or, as a designated limited-duty peace officer. This certificate program complies with the Commission on Peace Officer Standards and Training.

Units Required: 3.0

AJ 58	PC 832 Laws of Arrest	3.0
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Police Technician Specialist Certificate

Prepares the student for a variety of employment opportunities with any Law Enforcement Agency, in a civilian capacity, as a Forensic Specialist or as an Evidence Technician.

Units Required: 15.5

AJ 92	Writing for Criminal Justice	3.0
AJ 93	Traffic Enforcement and Investigation	3.0
AJ 103	Criminal Law	3.0
AJ 140	Communication Skills for Interviewing and Interrogation	3.0
AJ 67	Crime Scene Investigation	3.5

Administration of Justice Courses

AJ 8.0 PC 832.3 CAMPUS LAW ENFORCEMENT

Units: 2.0

32-36 hours lecture

(No Prerequisite. Pass/No Pass) This course does not apply to the Associate Degree.

This course complies with the state requirements for K-12 and Community College peace officer training per Penal Code 832.3g, certified by the State Commission on Peace Officer Standards and Training. This course includes the role and responsibilities of campus police, search and seizure, student discipline and records, crimes against persons and property, mandatory reporting of child abuse, and disaster preparedness.

AJ 25 PUBLIC SAFETY DISPATCHER

Units: 5.5

80-90 hours lecture and 24-27 hours laboratory

(No Prerequisite. Pass/No Pass) This course does not apply to the Associate Degree.

This course complies with the Commission on Peace Officer Standards and Training (POST) requirements for Public Safety Dispatchers. This course includes the criminal justice system, criminal law, communication technology, telephone and radio procedures, missing persons, domestic violence, cultural diversity, sexual harassment, gang awareness, emergency medical services and stress management.

AJ 30 PC 832 FIREARMS

Units: 0.5

24-27 hours laboratory

(Prerequisite. All students must have a DOJ criminal record clearance, in writing through NLETS, CLETS and FBI databases. Pass/No Pass) This course does not apply to the Associate Degree.

This course satisfies the Commission on Peace Officer Standards and Training (POST) firearms certification for the Level III reserve and PC 832. Additionally, this course exceeds the State of California firearms safe handling and use certification required from any person purchasing a firearm in California.

AJ 31 FINGERPRINT RECOGNITION AND CLASSIFICATION

Units: 2.5

40-45 hours lecture

(No Prerequisite. Pass/No Pass) This course does not apply to the Associate Degree.

This course is designed to give instruction and training to a person without any prior knowledge in fingerprint classification. Every person who successfully completes this course will be able to recognize and identify a known fingerprint and have the skills to recognize and identify an unknown fingerprint to known fingerprint.

AJ 58 PC 832 LAWS OF ARREST

Units: 3.0

40-45 hours lecture

(No Prerequisite. Pass/No Pass)

This course complies with the requirements of the Commission on Peace Officers Standards and Training (POST) for certification in PC 832. This course includes professionalism, law, evidence, investigation, arrest methods and control, community relations, and communication skills for interviewing and interrogation.

AJ 64 BASIC CORRECTIONS OFFICER ACADEMY

Units: 8.0

112-126 hours lecture and 48-54 hours laboratory

(No Prerequisite. Pass/No Pass)

This course satisfactorily meets the requirements of section 1020 of the California Administrative Code, Minimum Jail Standards and the Basic Jail/Adult Institution requirements of the STC program.

AJ 67 CRIME SCENE INVESTIGATION

Units: 3.5

48-54 hours lecture and 24-27 hours laboratory

(No prerequisite)

This course concentrates on the technical aspects of evidence collection, crime scene reconstruction, crime scene photography, evidence packaging, and court room testimony. The student is prepared to distinguish between trace, stain, and impression evidence and the role of these types of evidence in criminal investigations.

AJ 80 MODULE III LAW ENFORCEMENT BASIC COURSE**Units: 6.5****80-90 hours lecture and 72-81 hours laboratory***(Prerequisite: Department of Justice criminal record clearance for firearms (State Mandated). Pass/No Pass)*

This course complies with the Commission on Peace Officers Standards and Training (POST) requirements for the Module III Law Enforcement Basic Course. This course includes professionalism and ethics; criminal law; laws of arrest and search and seizure; report writing, vehicle operations; use of force and force options; chemical agents; and firearms training.

AJ 81 MODULE II LAW ENFORCEMENT BASIC COURSE**Units: 9.0****120-135 hours lecture and 96-108 hours laboratory***(Prerequisites: AJ 80 and Department of Justice criminal record clearance for firearms. Must have completed Module III within three years and passed the End of Course Final Exam within one year. Pass/No Pass.)*

This course includes community relations; victimology; crimes against property and persons; crimes against children; specific sex crimes; search and seizure law; investigative report writing; crimes in progress and patrol tactics; use of force; defensive tactics; and firearms training.

AJ 92 WRITING FOR CRIMINAL JUSTICE (Formerly AJ 133)**Units: 3.0****48-54 hours lecture***(No prerequisites)*

Techniques of communicating facts, information, and ideas effectively in a simple, clear and logical manner in the various types of criminal justice system reports: letters, memoranda, directives, and administrative reports with an emphasis on criminal justice terminology in note taking and report writing.

AJ 93 TRAFFIC ENFORCEMENT AND INVESTIGATION (Formerly AJ 126)**Units: 3.0****48-54 hours lecture***(No prerequisites)*

A study of the fundamentals of accident investigation and reconstruction employing the principles of crime scene initial survey, evidence collection, skid mark analysis, and interviewing techniques. Includes the study and application of the California Vehicle code and CHP traffic collision manual.

AJ 101 INTRODUCTION TO THE ADMINISTRATION OF JUSTICE**Units: 3.0****CSU, UC | 48-54 hours lecture***(No prerequisites)*

This course introduces students to the characteristics of the criminal justice system in the US. Focus is placed on examining crime measurement, theoretical explanations of crime, responses to crime, components of the system, and current challenges to the system. This course will examine the evolution and practices of the police, courts, corrections and their respective role players. This course will examine the ethics, education and training requirements for the respective role players in the criminal justice system.

AJ 102 CRIMINAL PROCEDURES**Units: 3.0****CSU | 48-54 hours lecture***(No prerequisites)*

Legal processes from pre-arrest through trial, sentencing and correctional procedures. An analysis of ethical decisions made by police, prosecutors, defense attorney, and the judiciary; conceptual interpretations of criminal trial procedural law as reflected in court decisions. A study of case law methodology and case research as the decisions impact upon the procedures of the justice system.

AJ 103 CRIMINAL LAW**Units: 3.0** *CSU, UC* | **48-54 hours lecture***(No prerequisites)*

This course offers an analysis of the doctrines of criminal liability in the United States and the classification of crimes against persons, property, morals, and public welfare. Special emphasis is placed on the classification of crime, general elements of crime, the definitions of common and statutory law, and the nature of acceptable evidence. This course utilizes case law and case studies to introduce students to criminal law. The completion of this course offers a foundation upon which upper-division criminal justice course will build. This course also includes criminal culpability and defenses to crimes.

AJ 104 LEGAL ASPECTS OF EVIDENCE**Units: 3.0** *CSU* | **48-54 hours lecture***(No prerequisites)*

Origin, development, philosophy, and constitutional basis of evidence; constitutional and procedural considerations affecting arrest, search, and seizure; kinds and degrees of evidence and rules governing admissibility and exclusion; judicial decisions interpreting individual rights and case studies viewed from a conceptual level.

AJ 127 INTRODUCTION TO CRIMINOLOGY**Units: 3.0** *CSU, UC* | **48-54 hours lecture***(No prerequisites)*

An introduction to major types of criminal behavior, characteristics of offenders, factors which contribute to crime and delinquency. An examination of the criminal justice process; the function of law enforcement, the courts, probation, parole and institutions. Explore the changes in crime control and treatment processes, the role of society.

AJ 130 DEATH INVESTIGATION**Units: 3.0** *CSU* | **48-54 hours lecture***(No prerequisites)*

A course designed to prepare the law enforcement officer with the appropriate knowledge and techniques for handling homicide investigations.

AJ 132 INTRODUCTION TO CORRECTIONS**Units: 3.0** *CSU* | **48-54 hours lecture***(No prerequisites)*

A survey of the field of correctional science. Historical development, current concepts and practice; explanations of criminal behavior; functions and objectives of the criminal justice system concerned with institutional, probation, and parole processes as they modify the offender's behavior; survey of professional career opportunities in public and private institutions.

AJ 135 JUVENILE LAW AND PROCEDURES**Units: 3.0** *CSU* | **48-54 hours lecture***(No prerequisites)*

An overview and history of the Juvenile Justice System that evolved in the American Justice System. This course examines the sociological theories of delinquency, constitutional rights of juveniles, investigative procedures regarding juveniles, and the judicial proceedings of juveniles from intake to custodial resolutions.

AJ 138 COOPERATIVE EDUCATIONSee Cooperative Education listing (1-8 units) *CSU*

AJ 140 COMMUNICATION SKILLS FOR INTERVIEWING AND INTERROGATION

Units: 3.0 **CSU** | 48-54 hours lecture

(No prerequisites)

The course will focus on the technical and legal aspects of interview and interrogation within the Administration of Justice system. It will provide the student with the communication skills required to elicit reliable and admissible information from witnesses and suspects. Constitutional and Legislative law will be emphasized.

AJ 145 INTRODUCTION TO CRIMINAL INVESTIGATIONS

Units: 3.0 **CSU** | 48-54 hours lecture

(No prerequisites)

This course explores the techniques, procedures, and ethical issues in the investigation of crime, including organization of the investigative process, crime scene searches, interviewing and interrogating, surveillance, source of information, utility of evidence, scientific analysis of evidence and the role of the investigator in the trial process.

AJ 148 SPECIAL TOPICS

See Special Topics listing (Variable units) **CSU**

AJ 149 INDEPENDENT STUDY

See Independent Study listing (1-3 units) **CSU**

AJ 150 INTRODUCTION TO FORENSIC SCIENCE

Units: 3.0 **CSU** | 48-54 hours lecture

(No prerequisites)

This course introduces the role of forensics in the criminal justice system. The course includes: crime scene processes and analysis; interpretation of patterns for reconstruction; physical pattern evidence; fingerprint identification and patterns; questioned document examination; tool marks and firearms examination; biological evidence and DNA; arson and explosives evidence, and drug analysis.

AJ 201 COMMUNITY AND THE JUSTICE SYSTEM

Units: 3.0 **CSU** | 48-54 hours lecture

(No prerequisites)

This course examines the complex, dynamic relationship between communities and the justice system in addressing crime and social conflict with an emphasis on the challenges and prospects of administering justice within a diverse multicultural population. Topics may include ethics, consensus and conflicting values in culture, religion, and law. CSU.

Agriculture and Natural Resources

The Agriculture and Natural Resource (AGNR) Department prepares students with the workforce skills to enter the rapidly evolving career fields in Agriculture and Natural Resource Management. The AGNR also provides educational pathways to assist students to move on to higher education.

The rapid evolution in the scope and type of these career opportunities are driven by some of the most stringent environmental laws and policy in the world. The implementation of these laws requires innovative thinking, long term planning and sustainable best practice. A new kind of educational approach is needed to prepare applicants with the necessary science, understanding of social/political frameworks, technical expertise and soft skills. It is essential that our society be taught a greater awareness of the need to conserve and wisely manage these resources. Careers in the public and private entities that manage and use these resources are expanding rapidly as the critical nature of these issues becomes more apparent.

Individuals that are trained in agricultural and natural sciences (a High School through University Educational Pathway is being designed in the area), technologies, practices, principles and issues are well positioned to take advantage of these exciting opportunities.

The department has designed its educational programs on the following premises:

1. A focus on the applied sciences (Animal, Soil, Plant and Environmental) that support the disciplines of agriculture and natural resource management.
2. Application of evolving technologies that are essential to manage the complex agriculture and natural resource issues that society faces today. Examples include: natural building, organic gardening, water and soils testing, drip irrigation, ecological restoration, plant propagation, animal ultrasound and artificial insemination, Geographic Information Systems (GIS) and Global Positioning Systems (GPS).
3. Students will become aware of the importance of political and other social sciences that support sustainable development, so that communities can seek an appropriate balance of the environmental, social and economic needs of their region.
4. Increased "hands-on" learning and field experiences. The skills needed to be successful in these areas are best taught through actual experience via laboratories, investigative field experiences, internships, field trips and local case studies.

The department currently focuses on training students in fields of Environmental Horticulture, Plant Science, Habitat Restoration, Landscape Irrigation, Floral Design, Natural Resource Management, Geographic Information Science, Water Resource Management, Equine and Animal Science, and Animal Health.

Career Opportunities

Agribusiness Managers, Economists, Statisticians, Analysts, Journalists Agriculture and Conservation Extension Officer, Agricultural and Food Inspectors, Agriculture and Natural Resource Educators, Air Quality Monitoring Technicians, Arborists and Tree Pruning Technicians, Environmental and Natural Resource Planner, Farm, Ranch Hands and Managers, Field Biologists, Floral Design Technicians and Floral Shop Managers, Geographic Information System Technicians and Analysts, Golf Course and Turf Grass Managers, Horticulture, Irrigation and Fertilizer Industry Sales, Representatives, Irrigation Consultants and Specialists, Landscape Architects and Designers, Landscape Construction/Installation Contractors, Landscape Maintenance Technicians, Natural Resource Research Technicians, Nursery Technicians and Managers, Organic Practices Advisor, Park and Wildlife Managers, Pest Advisors, Plant Breeders, Propagators and Growers, Solid Waste and Recycling Technicians, Waste Water Technicians, Water Conservation Officers, Water Distribution Technicians, Water, Soils and Biotechnology Lab Technicians, Water Use, Education and Conservation Technicians, Wildlife, Fish and Conservation Biologist, Zoo, City, Country Club and Botanic Garden Horticulturists

Faculty

Neville Slade

Degrees and Certificates Awarded

Associate in Science, Environmental Horticulture
Animal Science Specialist Certificate
Floral Design Technician Certificate
Horticulture Specialist Certificate
Landscape Specialist Certificate
Plant Science Technician Certificate

Agriculture and Natural Resources Career Exploration Certificate
Equine Science Specialist Certificate
Geospatial Technology Technician Certificate
Irrigation Design Technician Certificate
Natural Resource Management Technician Certificate
Water Resource Management Technician Certificate

A student receiving a degree or certificate in this field will be able to:

- Evaluate and communicate analytically including synthesis, and research on the relationship between natural social and economic systems; principles and values that enhance leadership, personal/social responsibility, community involvement and respect for others and the practices that support sustainability.
- Apply complex problem-solving skills and critical thinking using technology, the scientific method, natural resource policy, sustainable practices to current/real-world Agriculture and Natural Resource Management issues.

Associate Degree

To earn an Associate in Science degree with a major in Environmental Horticulture, complete 18 units from any landscape certificates or horticulture coursework, and meet all Victor Valley College graduation requirements. **AGNR 138** (Cooperative Education) may be used as elective credit, but may not be used to fulfill major requirements.

Transfer

For the most up-to-date information on these programs and others, visit www.assist.org. Please stop by the Transfer Center in Building 55 or make an appointment with a counselor if you have questions.

- **University of California, Riverside:**

Agriculture and Plant Sciences major

- **University of California, Davis**

College of Agriculture and Environmental Science - Plant Sciences, Animal Sciences and Management majors

- **California State University**

CSU campuses that offer majors or concentrations in Agricultural Science, Agriculture Business and Management, Environmental Horticulture, Plant Science, Natural Resource Management, Environmental Science, Animal Science include: CSU-Chico, Fresno, Humboldt, Cal Poly Pomona and San Luis Obispo, San Bernardino, Stanislaus.

Agriculture and Natural Resources (cont.)

AGRICULTURE AND NATURAL RESOURCES CAREER EXPLORATION CERTIFICATE

Students explore careers in natural resource management and related fields. An introduction to these emerging “Green” careers in: Conservation, Natural Resource Management, Environmental Horticulture, Renewable Energy, Alternative Fuel Systems, Geographical Information Systems, Sustainable Agriculture and Water Management.

Units Required: 12.0

Group I – All of the following must be completed

AGNR 170	Environmental Science and Sustainability	4.0
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Group II – Minimum of 5 units required

AGNR 100	General Animal Science	3.0
AGNR 105	Equine Health	3.0
AGNR 120	Integrated Pest Management	3.0
AGNR 106	Veterinary Terminology and Technology	3.0
AGNR 141	Plant Materials and Usage II	3.0
AGNR 152	Introduction to Irrigation	3.0
AGNR 138	Cooperative Education	2 or 3
AGNR 171	Introduction to GIS in Natural Resources	4.0
AGNR 172	Natural Resource Remote Sensing and GIS	3.0
AGNR 173	Watershed Management and Restoration	3.0
AGNR 175	<i>Sustainable Agriculture, Environment and Society</i>	3.0
AGNR 177	Principles of Wildlife Management	3.0
AGNR 178	Agriculture Economics	3.0
CHEM 100	Introductory Chemistry	4.0
GUID 100	Career and Life Planning	2.0
MATH 120	Introduction to Statistics, or	4.0
MATH 120 H	Honors Introduction to Statistics	4.0

ANIMAL SCIENCE SPECIALIST CERTIFICATE

Animal production is being asked to be sustainable, more economically, environmentally and socially responsible. In California, rapid housing development and new policies, such as Proposition 2 (the humane treatment of livestock) are encouraging new practices and technologies in all aspects of the industry, from managing animal waste to confined animal housing. A new breed of managers and technicians must adapt to these changes and have the skills to apply these new practices and technologies.

Units Required: 14.0 or 16.0

Group I – All of the following must be completed

AGNR 100	General Animal Science	3.0
AGNR 101L	Livestock Feeding and Nutrition	3.0
AGNR 106	Veterinary Terminology and Technology	3.0
AGNR 107	Livestock Selection and Evaluation	3.0

Group II – One of the following must be completed:

AGNR 102	Equine Science	4.0
AGNR 105	Equine Health	3.0
AGNR 123	Introduction to Plant Science	3.0
AGNR 131	Introduction to Soil Science	4.0
AGNR 138	Cooperative Education	2 or 3
AGNR 170	Environmental Science	4.0
AGNR 175	Sustainable Agriculture, Environment and Society	3.0
AGNR 177	Principles of Wildlife Management	3.0
AGNR 178	Agriculture Economics	3.0
CHEM 100	Introductory Chemistry	4.0
GUID 100	Career and Life Planning	2.0
MATH 120	Introduction to Statistics	4.0
MATH 120H	Honors Introduction to Statistics	4.0

EQUINE SCIENCE SPECIALIST CERTIFICATE

This certificate focuses on basic husbandry, preventative care and veterinary technology in horses. The anatomy and physiology of the horse is studied in comparison to other farm animals to give the student a picture of the need for specialized animal husbandry in the horse.

Units Required: 12.0 or 13.0

Group I – All of the following must be completed

AGNR 102	Equine Science	4.0
AGNR 105	Equine Health	3.0
AGNR 106	Veterinary Terminology and Technology	3.0

Group II – One of the following must be completed:

AGNR 100	General Animal Science	3.0
AGNR 101L	Livestock feeding and Nutrition	3.0
AGNR 107	Livestock Selection and Evaluation	3.0
AGNR 138	Cooperative Education	2 or 3
AGNR 175	Sustainable Agriculture, Environment and Society	3.0
AGNR 177	Principles of Wildlife Management	3.0
AGNR 178	Agriculture Economics	3.0

FLORAL DESIGN TECHNICIAN CERTIFICATE

This specialized certificate prepares the student for employment in a commercial flower shop as a designer or assistant to the manager. These classes are taught by professionals in the industry and opportunities for success as a florist are unlimited. Whether for fun or profit, floral design is rapidly becoming a growing industry.

Units Required: 11.0 or 12.0

Group I – All of the following must be completed

AGNR 121	Fundamentals of Environmental Horticulture	3.0
AGNR 160	Beginning Floral Design	3.0
AGNR 161	Advanced Floral Design	3.0

Group II – One of the following must be completed:

AGNR 120	Integrated Pest Management	3.0
AGNR 122	Plant Propagation and Production	3.0
AGNR 123	Introduction to Plant Science	3.0
AGNR 138	Cooperative Education	2 or 3
AGNR 140	Plant Materials & Usage I	3.0
AGNR 141	Plant Materials & Usage II	3.0
AGNR 150	Landscape Design	3.0
AGNR 152	Introduction to Irrigation	3.0
CMST 109	Public Speaking	3.0

GEOSPATIAL TECHNICIAN CERTIFICATE

Geospatial Information Science (GIS) is one of the fastest growing industries in the world today. While the rest of the technology sector has been working to recover from economic hardships, the GIS industry has grown to a \$30 billion per year enterprise. The influence and utility of GIS is creating symbiotic relationships and integration throughout industry, business, and government. This certificate is designed to introduce the students to various scientific and theoretical aspects associated with this field. Includes a "hands on" focus where students are introduced to the highly sophisticated software packages through modeling real-world conservation projects with local agencies and businesses.

Units Required: 15.0

**Any three of the six, 1-unit modules (AGNR 74A, 74B, 74C, 74D, 74E, 74F)*

Group I – All of the following must be completed

AGNR 170	Environmental Science	4.0
AGNR 171	Introduction to GIS in Natural Resources	3.0
AGNR 172	Geospatial Technology I	3.0
GEOG 101	Introduction to Physical Geography	3.0

Group II – One of the following must be completed:

AGNR 74*	Conservation & Sustainability Practices	6.0
AGNR 123	Introduction to Plant Science	3.0
AGNR 131	Soil Science	4.0
AGNR 138	Cooperative Education	2.0
AGNR 141	Plant Materials & Usage II	3.0
AGNR 173	Watershed Management and Restoration	3.0
AGNR 175	Sustainable Agriculture, Environment And Society	3.0
AGNR 176	Advanced Irrigation Technology	3.0
AGNR 177	Principles of Wildlife Management	3.0
CIS 96A	Structured Query Language A Using MySQL	2.0
CIS 280	Fundamentals of Database Management Systems	3.0
CTPW 116A	Water Distribution Systems I	3.0
GEOL 103	California Geology	3.0
POLS 206	Introduction to Environmental Policy and Natural Resource Management	3.0

LANDSCAPE SPECIALIST CERTIFICATE

The Landscape Specialist Certificate prepares the student to design, install and maintain landscapes. Focuses on the special challenges of drought tolerant and cold hard landscapes.

Units Required: 14-16 units

Group I – All of the following must be completed

AGNR 121	Fundamentals of Environmental Horticulture	3.0
AGNR 140	Plant Materials and Usage I	3.0
AGNR 150	Landscape Design	3.0
AGNR 152	Introduction to Irrigation	3.0

Group II – One of the following must be completed:

AGNR 60	Horticulture Lab	4.0
AGNR 120	Integrated Pest Management	3.0
AGNR 122	Plant Propagation and Production	3.0
AGNR 131	Soil Science	4.0
AGNR 138	Cooperative Education	2 or 3
AGNR 141	Plant Materials & Usage II	3.0
AGNR 170	Environmental Science	4.0
AGNR 171	Introduction to GIS in Natural Resources	3.0
BIOL 104	General Botany	4.0
CMST 109	Public Speaking	3.0
CT 107	Technical Math	3.0
CT 131	Microcomputers in Construction	4.0

HORTICULTURE SPECIALIST CERTIFICATE

The Horticulture Specialist Certificate prepares the student with the basics of establishing and/or managing a horticulture business and a wholesale or retail nursery. This certificate serves as a good crossover for students wishing to enter a natural resource management career.

Units Required: 23 - 26

Group I – All of the following must be completed

AGNR 120	Integrated Pest Management	3.0
AGNR 121	Fundamentals of Environmental Horticulture	3.0
AGNR 122	Plant Propagation and Greenhouse Production	3.0
AGNR 140	Plant Materials and Usage I	3.0
AGNR 131	Soil Science	4.0
AGNR 141	Plant Materials Usage II	3.0

Group II – Two of the following must be completed:

AGNR 160	Basic Floral Design	3.0
AGNR 150	Landscape Design	3.0
AGNR 152	Introduction to Irrigation	3.0
AGNR 154	Landscape and Nursery Management	3.0
AGNR 129	Water Efficient Landscaping	3.0
AGNR 170	Environmental Science	4.0
AGNR 171	Introduction to GIS in Natural Resources	3.0
AGNR 60	Horticulture Lab	2, 3, or 4
AGNR 138	Cooperative Education	3.0
BIOL 104	General Botany	4.0
CMST 109	Public Speaking	3.0
CT 107	Technical Math	3.0
CT 131	Microcomputers in Construction	4.0

IRRIGATION DESIGN TECHNICIAN CERTIFICATE

This certificate prepares the student to design, install and maintain irrigation systems. In the face of water shortages in California, irrigation education has shifted to designing water conserving landscapes and the use of technologies that conserve water. The job market remains robust in the agriculture, horticulture, landscape and water conservation industries, given that outdoor water use comprises sixty to seventy-five percent of total water use in most communities.

Units Required: 11.0 - 13.0

Group I – All of the following must be completed

AGNR 121	Fundamentals of Environmental Horticulture	3.0
AGNR 152	Introduction to Irrigation	3.0
AGNR 176	Advanced Irrigation Technology	3.0

Group II – One of the following must be completed:

AGNR 60	Horticulture Lab	2.0
AGNR 61	Natural Landscape Practices	4.0
AGNR 122	Plant Propagation and Greenhouse Production	3.0
AGNR 123	Introduction to Plant Science	3.0
AGNR 131	Soil Science	4.0
AGNR 138	Cooperative Education	2.0
AGNR 140	Plant Materials & Usage I	3.0
AGNR 141	Plant Materials Usage II	3.0
AGNR 150	Landscape Design	3.0
AGNR 170	Environmental Science and Sustainability	4.0
AGNR 171	Introduction to GIS in Natural Resources	3.0
AGNR 173	Watershed Management and Restoration	3.0
AGNR 175	Sustainable Agriculture, Environment And Society	3.0
CTPW 116A	Water Distribution Systems I	3.0
CTPW 119	Wastewater Management	3.0

NATURAL RESOURCE MANAGEMENT TECHNICIAN CERTIFICATE

This certificate prepares students for the emerging “green” careers in industry and with natural resource management agencies such as: The Natural Resource Conservation Service, US Forestry Service, National Park Service, The Bureau of Land Management, and other air and water management agencies. Students will learn the scientific concepts and skills needed to become technicians in: water and soils conservation, habitat restoration, ecological field data collection and interpretation, geospatial technologies, biodiversity management, and sustainable agriculture practices.

Units Required: 13 - 15

Group I – All of the following must be completed

AGNR 170	Environmental Science and Sustainability	4.0
AGNR 172	Natural Resource Remote Sensing and GIS	3.0
AGNR 173	Watershed Management and Restoration	3.0
AGNR 170L	Environmental Science and Sustainability Laboratory	1.0

Group II – One of the following must be completed:

AGNR 74*	Conservation & Sustainability Practices	6.0
AGNR 100	General Animal Science	3.0
AGNR 122	Plant Propagation and Greenhouse Production	3.0
AGNR 123	Introduction to Plant Science	3.0
AGNR 131	Introduction to Soil Science	4.0
AGNR 138	Cooperative Education Agriculture	2 or 3
AGNR 141	Plant Materials Usage II	3.0
AGNR 171	Introduction to GIS in Natural Resources	3.0

NATURAL RESOURCE MANAGEMENT TECHNICIAN CERTIFICATE

Continued...

AGNR 173	Watershed Management and Restoration	3.0
AGNR 175	Sustainable Agriculture, Environment and Society	3.0
AGNR 176	Advanced Irrigation Technology	3.0
AGNR 177	Principles of Wildlife Management	3.0
AUTO 89.1	Introduction to Hybrid Vehicle Technology	4.0
BIOL 100	General Biology	4.0
CT 142	Renewable Energy	3.0
ELCT 87	Industrial Control Sys, Devices and Circuits	3.0
FIRE 109	Wildland Fire Control	3.0
POLS 206	Introduction to Environmental Policy and Natural Resource Management	3.0

**Any three of the six, 1-unit modules (AGNR 74A, 74B, 74C, 74D, 74E, 74F)*

PLANT SCIENCE TECHNICIAN CERTIFICATE

This certificate is intended to give students a basic understanding of the proper structure and function of plant systems that underlie healthy ecosystems and provide a sustainable food supply. Students learn the scientific concepts of plant breeding, soil science, pest management, proper irrigation methods, ecological restoration practices, sustainable agriculture practices, poly-culture, and natural fertilizers.

Units Required: 17.0

Group I – All of the following must be completed

AGNR 122	Plant Propagation and Greenhouse Production	3.0
AGNR 123	Introduction to Plant Science	3.0
AGNR 131	Soil Science	4.0
AGNR 141	Plant Materials Usage II	3.0

Group II – One of the following must be completed:

AGNR 60	Horticulture Laboratory	2.0
AGNR 61	Natural Landscape Practices	4.0
AGNR 74*	Conservation & Sustainability Practices	6.0
AGNR 100	General Animal Science	3.0
AGNR 120	Integrated Pest Management	3.0
AGNR 121	Introduction to Environmental Horticulture	3.0
AGNR 138	Cooperative Education Agriculture	2.0
AGNR 140	Plant Materials & Usage I	3.0
AGNR 150	Landscape Design	3.0
AGNR 152	Introduction to Irrigation	3.0
AGNR 170	Environmental Science and Sustainability	4.0
AGNR 171	Introduction to GIS in Natural Resources	3.0
AGNR 172	Natural Resource Remote Sensing and GIS	3.0
AGNR 175	Sustainable Agriculture, Environment And Society	3.0
AGNR 176	Advanced Irrigation Technology	3.0
AGNR 178	Agriculture Economics	3.0
BIOL 100	General Biology	4.0
CHEM 100	Introductory Chemistry	4.0
GUID 100	Career and Life Planning	2.0
MATH 120	Introduction to Statistics	4.0

**Any three of the six, 1-unit modules (AGNR 74A, 74B, 74C, 74D, 74E, 74F)*

WATER RESOURCE MANAGEMENT CERTIFICATE		
Units Required: 13.0 - 15.0		
<i>Group I – All of the following must be completed</i>		
AGNR 170	Environmental Science and Sustainability	4.0
AGNR 170L	Environmental Science and Sustainability Laboratory	1.0
AGNR 173	Watershed Management and Restoration	3.0
AGNR 178	Agriculture Economics	3.0
<i>Group II – One of the following must be completed:</i>		
AGNR 74*	Conservation and Sustainability Practices	6.0
AGNR 121	Fundamentals of Environmental Horticulture	3.0
AGNR 123	Introduction to Plant Science	3.0
AGNR 131	Introduction to Soil Science	4.0
AGNR 138	Cooperative Education	2.0
AGNR 140	Plant Materials & Usage I	3.0
AGNR 141	Plant Materials Usage II	3.0
AGNR 152	Introduction to Irrigation	3.0
AGNR 171	Introduction to GIS in Natural Resources	3.0
AGNR 175	Sustainable Agriculture, Environment And Society	3.0
AGNR 176	Advanced Irrigation Technology	3.0
CTPW 116A	Water Distribution Systems I	3.0
CTPW 119	Wastewater Management	3.0
ELCT 87	Industrial Control Systems, Devices and Circuits	3.0
GEOG 130	Introduction to Weather and Climate	3.0
POLS 206	Introduction to Environmental Policy & Natural Resource Management	3.0
<i>*Any three of the six, 1-unit modules (AGNR 74A, 74B, 74C, 74D, 74E, 74F)</i>		

Agriculture and Natural Resources Courses

AGNR 60 ENVIRONMENTAL HORTICULTURE LABORATORY

Units: 1.0 - 4.0

48-54 hours laboratory per unit, per term.

(No prerequisites)

Horticulture laboratory setting for horticulture students to practice the skills gained from experience and traditional lecture/laboratory classes. This setting will further prepare students for employment in the horticulture industry.

AGNR 61 NATURAL LANDSCAPE PRACTICES

Units: 4.0

64-72 hours lecture.

(No prerequisites)

Introduction to the basics of landscape design; plant material selection; planting and care; composting; irrigation design and maintenance organic and natural methods; soil factors; landscape redesign and renovation; integrated pest management; creating a custom landscape. Emphasis is on the use of water-conserving and resource-efficient practices in establishing functional, attractive landscapes.

AGNR 61C RECYCLING AND THE ESSENTIALS OF COMPOSTING

Units: 0.5

8-9 hours lecture

(No prerequisites)

Students learn how to make productive use of unwanted yard waste and other biomass. Topics include: benefits of composting; the biological process of composting; materials that can and cannot be composted; composting methods; vermiculture; using the finished product as a soil conditioner or mulch, and using other solid waste such as straw and concrete in the landscape.

AGNR 74 CONSERVATION AND SUSTAINABILITY PRACTICES

Units: 6.0

96-108 hours lecture

(No prerequisites)

This course introduces students to the exciting and rapidly expanding practices in the conservation and sustainable use of our natural resources. Local case studies and emerging green technology is presented. Students explore the social, economic and environmental issues that underlie this new frontier in societal development. The Mojave Desert provides a wonderful natural laboratory where many of these sustainability issues can be explored.

AGNR 74A SUSTAINABLE COMMUNITY LEADERSHIP

Units: 1.0

16-18 hours lecture

(No prerequisites)

Students learn to plan, manage and implement sustainable development practices; development that meets the needs of the present generation without compromising the ability of future generations to meeting their own needs. Focus is on the principles of sustainable development that ensure effective leadership and a balance of environmental, social, and economic issues. Extensive use is made of case studies and practical on-site experiences in the Mojave Desert.

AGNR 74B BIODIVERSITY MANAGEMENT AND TECHNOLOGY

Units: 1.0

16-18 hours lecture

(No prerequisites)

The reduction of species diversity is a major indicator of the health of a complete ecosystem. This class explores the science, tools and practice of conserving species diversity. Students learn to implement the exciting tools of Geographic Information Systems (GIS), Global Positioning Systems (GPS), Satellite Imaging and Database Management, along with an understanding of the expanding career opportunities in these fields. Extensive use is made of local Mojave Desert case studies.

AGNR 74C WASTE AND POLLUTION MANAGEMENT

Units: 1.0

16-18 hours lecture

(No prerequisites)

Students study the use of our natural resources on the environmental, social and economic health of our planet. Focus is on emerging careers and technologies for solid waste, green waste and waste water treatment. The consequences of poor management on the quality of our water and air are explored using real-world examples in the Mojave watershed

AGNR 74D HABITAT RESTORATION**Units: 1.0****16-18 hours lecture***(No prerequisites)*

Students study ecological restoration that effectively repairs the damage done by human activities to natural habitats. The methodologies appropriate to a particular situation are presented. Topics include: native seed banking, Mycorrhizal relationships, seed stratification and scarification, nutrient requirements, water requirements, transplanting protocols, watershed restoration, soil evaluation and rehabilitation. Case studies will include surface mine reclamation in the Mojave Desert.

AGNR 74E SUSTAINABLE AGRICULTURE PRACTICES**Units: 1.0****16-18 hours lecture***(No prerequisites)*

Tremendous progress has been made towards farming with nature and restoring ranches to be part of the natural ecosystem. This “farming with the wild” is not only producing more food but enhancing the environment. Students study sustainable practices such as integrated pest management, rotational grazing, organic farming, hedgerows and natural pollination.

AGNR 74F SUSTAINABLE BUILDING AND ENERGY PRACTICES**Units: 1.0****16-18 hours lecture***(No prerequisites)*

Introduction to renewable energy technology for home use and ecological design. Students study the latest technology to produce energy from the sun, wind, geothermal and biomass.

The sustainable building practices of straw-bale, Super Adobe, Cob, grey-water and solar radiant heating are explored.

AGNR 100 GENERAL ANIMAL SCIENCE**Units: 3.0** *CSU, UC***48-54 hours lecture***(No prerequisites)*

A scientific overview of livestock and poultry; highlights anatomy and physiology, reproduction, nutrition, behavior, health, and marketing pertinent environmental and social issues, to include animal welfare. Includes human opportunity to influence trait inheritance, population densities, productivity and sustainability of animal production industry. Focus on technologies that assure efficiency and viability of this industry.

AGNR 101L LIVESTOCK FEEDING AND NUTRITION**Units: 3.0** *CSU, UC***32-36 hours lecture 48-54 hours laboratory***(No prerequisites)*

The science of animal nutrition including the fundamentals of digestion and absorption in both ruminants and non-ruminants. Anatomy of large animal digestive systems will be discussed along with feed requirements. Students will formulate rations for a variety of livestock for maximum performance and growth. Laboratory required.

AGNR 102 EQUINE SCIENCE**Units: 4.0** *CSU, UC***48-54 hours lecture***(No prerequisites)*

Survey of the equine industry, encompassing the evolution and role of the equine species throughout history, breed selection and development, nutrition, disease, preventative health, reproductive management, basic horsemanship, stabling alternatives and career opportunities. Laboratory required.

AGNR 105 EQUINE HEALTH (Formerly AGNR 50)**Units: 3.0** *CSU***48-54 hours lecture***(No prerequisites. Grade Option)*

Students learn the basics of proper veterinary care of the horse, including what to do before the veterinarian is called. Course introduces the diseases and lameness associated with the musculoskeletal system, as well as diseases of the respiratory, digestive, neurological, and reproductive systems. Emphasis is on preventive maintenance and managerial practices needed to keep the equine athlete, broodmare or family horse in good health in the High Desert Region of California.

AGNR 106 VETERINARY TERMINOLOGY AND TECHNOLOGY (Formerly AGNR 51)**Units: 3.0** CSU | 48-54 hours lecture*(No prerequisites)*

An introduction to the terminology for drugs, disease and dissection in dogs, cats, horses, ruminants, swine and birds. Basic terminology and function of the skeletal, muscular, digestive, urinary, cardiovascular, respiratory, endocrine, reproductive and nervous systems. Overview of the available technology for animal testing and diagnostic evaluation.

AGNR 107 LIVESTOCK SELECTION AND EVALUATION (Formerly AGNR 55)**Units: 3.0** CSU | 48-54 hours lecture*(No prerequisites)*

Detailed analysis of various visual and physical methods of appraising beef, sheep, swine and horses concerning functional and economic value. Written and oral summaries of evaluation will be learned. Specific reference will be made to performance data, preparing animals for market and show.

AGNR 120 INTEGRATED PEST MANAGEMENT**Units: 3.0** CSU | 32-36 hours lecture 48-54 hours laboratory*(No prerequisites)*

Students will learn to employ the principles and concepts of managing insects, diseases and weeds in the landscape and nursery industry. The class will focus on pest identification and the emerging practices of Integrated Pest Management. Effective use of pesticides and weedicides under the existing laws and regulations will be emphasized.

AGNR 121 INTRODUCTION TO ENVIRONMENTAL HORTICULTURE**Units: 3.0** CSU | 32-36 hours lecture and 48-54 hours laboratory*(No prerequisites)*

Introduction to environmental horticulture with an emphasis on nursery operations, landscaping, turf management, floral design and ecological restoration. Topics include basic plant structure, cultural practices, propagation, landscape structures and layout, seed management, soil analysis, pest management, plant identification, turf grass care and survey of career opportunities.

AGNR 122 PLANT PROPAGATION AND GREENHOUSE PRODUCTION**Units: 3.0** CSU | 32-36 hours lecture and 48-54 hours laboratory*(No prerequisites)*

Students will explore the challenges of propagation and production of native and drought tolerant plants that are adapted to the extreme climate of the High Desert using techniques commonly used in a professional greenhouse environment. Topics include sexual and asexual propagation techniques. The nursery operations of growing structures, site layout, and preparation of planting media are emphasized.

AGNR 123 INTRODUCTION TO PLANT SCIENCE**Units: 3.0** CSU | 32-36 hours lecture and 48-54 hours laboratory*(No prerequisites)*

This course provides an introduction to plant science with topics in plant structure and function and the environmental factors involved in plant growth and development. Students will learn: plant physiology, plant reproduction and propagation, effects of soil, water, and climate, use of plants to meet human needs, sustainable horticultural practices, integrated pest management, the role of new technologies in contemporary plant science.

AGNR 131 INTRODUCTION TO SOIL SCIENCE**Units: 4.0** CSU, UC | 48-54 hours lecture and 48-54 hours laboratory*(No prerequisites)*

The study of soil derivation, classification and characteristics. Soil use and management including erosion, moisture retention, structure, cultivation, organic matter and microbiology. Laboratory topics include soil type, classification, soil reaction, soil fertility and physical properties of soil.

AGNR 138 COOPERATIVE EDUCATION

See Cooperative Education listing (1-8 units). [CSU](#)

AGNR 140 PLANT MATERIALS AND USAGE I

Units: 3.0 [CSU](#) | 32-36 hours lecture and 48-54 hours laboratory

(No prerequisites)

Students will learn how to identify and use the fascinating array of plants that are appropriate to desert landscapes. Includes identification, growth habits, and cultural requirements of plants common to the California landscape. Trees, shrubs, vines, ground covers, annuals, perennials, and tropical foliage will be covered. Drought tolerant plants will be stressed.

AGNR 141 PLANT MATERIALS AND USAGE II

Units: 3.0 [CSU, UC](#) | 32-36 hours lecture and 48-54 hours laboratory

(No prerequisites)

Identification, growth habits, culture and ornamental use of landscape and indoor plants adapted to climates of California. Plants emphasized will come from the current California Association of Nurseries & Garden Centers (CANGC) and Professional Land care Network (PLANET) Certification Tests Plant Lists. Covers those plants best observed and studied in the fall of the year. Plant materials from local regions will also be included. Laboratory required.

AGNR 150 LANDSCAPE DESIGN

Units: 3.0 [CSU](#) | 32-36 hours lecture and 48-54 hours laboratory

(No prerequisites)

Fundamentals and history of landscape design. Studies of color, texture, form and use of landscape material. Consideration will also be given to proper site layout with regard to existing elevations and conservation management. Emphasis will be on selection and placement of plant material, walks, patios, decks, and other structures for landscape use. Students design and draft actual landscape projects.

AGNR 152 IRRIGATION AND WATER MANAGEMENT

Units: 3.0 [CSU](#) | 32-36 hours lecture and 48-54 hours laboratory

(No prerequisites)

Prepares students to design, install and maintain a water efficient landscape irrigation system. Topics include water supply, basic hydraulics, component identification and terminology, system layout, pipe sizing; types of heads, valves, controllers. Students will gain appreciation for water conservation and quality issues. Students will also learn to troubleshoot irrigation design and electrical problems.

AGNR 160 BEGINNING FLORAL DESIGN

Units: 3.0 [CSU](#) | 32-36 hours lecture and 48-54 hours laboratory

(No prerequisites)

An introduction to the fundamental theories, techniques and skills currently practiced in the floral industry. Includes applied art principles, cut flower care, handling practices, proper use of florist tools and materials, pricing of floral products and use of current floral business technology. Students construct corsages, floral arrangements, and foliage plant items which meet floral industry standards.

AGNR 161 ADVANCED FLORAL DESIGN

Units: 3.0 [CSU](#) | 32-36 hours lecture and 48-54 hours laboratory

(No prerequisites)

Contemporary design theory emphasizing creativity, self-expression, and professional design situations. Students learn the skills and techniques of the floral industry, including wedding, sympathy, party, holiday, high style and advanced floral designs and displays. Other techniques include working with the customers, consultations, pricing and the use of computers.

AGNR 170 ENVIRONMENTAL SCIENCE AND SUSTAINABILITY**Units: 4.0** *CSU, UC* | **64-72 hours lecture***(No prerequisites)*

A study of the applied natural sciences that support the sustainable use and conservation of the world's natural resources including: soil, water, forests, minerals, plant and animal life. Focused on implementing sustainability principles to balance environmental policy, economic stability and social equity to manage modern problems in resource use and global environmental issues. Emphasis on the citizen's role in conservation with particular attention to California conditions.

AGNR 170L ENVIRONMENTAL SCIENCE AND SUSTAINABILITY LABORATORY**Units: 1.0-4.0** *CSU, UC* | **48 -54 hours laboratory per unit***(No prerequisites)*

Students gain hands-on experience with the concepts and technology that supports environmental science and conservation. Students will learn about the diverse agencies that manage our resources along with their history and philosophies. Each of the major natural resources such as water, air, sustainable building, renewable energy, forests, wildlife, agriculture, and soils will be covered and the environmental policies that govern the use of these resources.

AGNR 171 INTRODUCTION TO GIS IN NATURAL RESOURCES**Units: 3.0** *CSU* | **32-36 hours lecture and 48-54 hours laboratory***(No prerequisites)*

Focus on electronic methods of cartography following a presentation of mapping concepts and methods in agriculture and natural resources applications. This course covers the history, structure and uses of the basic operations of Geographic Information Systems (GIS), including hardware and software requirements used in agriculture and natural resources. Examination of the role of other spatial technologies: aerial photography, remote sensing, and Global Positioning Systems (GPS).

AGNR 172 NATURAL RESOURCE REMOTE SENSING AND GEOGRAPHIC INFORMATION SYSTEMS (GIS) (Formerly AGNR 72)**Units: 3.0** *CSU* | **32-36 hours lecture and 48-54 hours laboratory***(No prerequisites)*

This course examines geographic information systems (GIS) in an interdisciplinary approach for analysis and decision making in diverse natural resource industries. Aerial photographs, global positioning systems (GPS) and satellite imagery will be used to interpret, recognize and delineate vegetation types, land management practices, wildlife habitat, water resource management and other significant environmental parameters.

AGNR 173 WATERSHED MANAGEMENT AND RESTORATION (Formerly AGNR 73)**Units: 3.0** *CSU* | **48-54 hours lecture***(No prerequisites)*

An introduction to the methods, techniques, and tools used to restore and enhance watershed health. This class focuses on water resource management in the West Mojave Desert and makes appropriate linkages to the critical nature of water management in California and around the world. Students explore the economic, political, social, and environmental pressures that must be balanced in providing sustainable water supplies. Students learn the scientific principles that support habitat restoration, groundwater management, soil erosion prevention, and water quality.

AGNR 175 SUSTAINABLE AGRICULTURE, ENVIRONMENT, AND SOCIETY**Units: 3.0** *CSU, UC* | **48-54 hours lecture***(No prerequisites)*

This course explores how society is moving away from an industrialized to a sustainable agricultural model. Emphasis on sustainable agriculture's use of technology and the corresponding improvement of the health of the environment, economy, and society.

AGNR 176 ADVANCED IRRIGATION TECHNOLOGY (Formerly AGNR 76)**Units: 3.0** *CSU* | **48-54 hours lecture***(No prerequisites)*

Students will be introduced to the proper steps to design an irrigation system. They will learn about equipment, water management techniques and water quality technology that supports better management of our limited water supply. Exciting new technology in domestic water conservation and water quality will be introduced.

Agriculture and Natural Resources Courses (cont.)

AGNR 177 PRINCIPLES OF WILDLIFE MANAGEMENT

Units: 3.0 *CSU* 48-54 hours lecture

(No prerequisites)

The study of plant and animal ecology in relation to principles of wildlife management with an emphasis on identification, sexing and aging criteria, wildlife population dynamics, wildlife habitat, and a review of trapping and marking techniques. Students will be introduced to the principles of biodiversity management and the emerging technology of geographic information systems to monitor wildlife populations.

AGNR 178 AGRICULTURE ECONOMICS

Units: 3.0 *CSU* 48-54 hours lecture

(No prerequisites)

Economic principles of resource allocation, production, cost analysis, and market price equilibrium with primary application to the agricultural sector; supply and demand in commodity pricing under perfect and imperfect competition; survey of agricultural credit, marketing and policy issues.

Alcohol and Drug Studies

Programs in Alcohol and Drug Studies offered at community colleges explore various aspects of alcohol and drug abuse, and teach techniques for counseling those who have a substance abuse problem.

At this time, VVC does not offer a certificate in Alcohol and Drug Studies, but the following courses may fulfill some requirements for the Alcohol/Drug Studies Certificate at San Bernardino Valley College: **ALDH** 125, **ENGL** 101, **PSYC** 101, 108, 125, 133, **SOC** 101, **CMST** 109.

For more information about the Alcohol/Drug Studies program at SBVCC, visit: <https://www.valleycollege.edu/academic-career-programs/degrees-certificates/human-services/alcohol-drug-studies-cert.php>

Allied Health

The Allied Health department offers a variety of independent, non-program classes in health interest areas. Some may enable students to work by completing only one class, such as Medical Insurance, Certified Nursing Assistant, EMT, or Basic Arrhythmias. Others support various medical and secretarial programs or meet general interest needs.

The Paramedic and Medical Assistant programs are administered by the Allied Health Department, but are described in their respective sections found alphabetically in this Catalog.

Career Opportunities

Insurance Biller, Monitor Technician, Nursing Assistant, Phlebotomist

Faculty

John Doyle

Degrees and Certificates Awarded

Nursing Assistant/Home Health Aide Certificate

Associate Degree

No associate degree is awarded with a major in Allied Health. Some Allied Health courses fulfill requirements for certificates and majors in Business Education Technologies, Medical Assistant, and Paramedic. See specific programs for certificate and degree requirements. **ALDH 138** (Cooperative Education) may be used as elective credit but may not be used to fulfill major requirements

Transfer

For the most up-to-date information on these programs and others, visit www.assist.org. Please stop by the Transfer Center Not a transfer major. Some Allied Health courses transfer as electives or fulfill subject credit requirements.

NURSING ASSISTANT/HOME HEALTH AIDE CERTIFICATE		
This certificate prepares the student to take the state certification exam for nursing assistant and seek a job in a skilled nursing facility, long term care or home care.		
Units Required: 7.0		
ALDH 60	Nursing Assistant	5.5
ALDH 61	Home Health Aide	1.5
The state-approved certification program enables students to become familiar with basic principles of bedside nursing, including procedures and techniques for basic patient care. Clinical experience is provided in state-licensed, long-term care skilled nursing facilities. Students will learn to meet the patient's basic physical and psychological needs and promote a spirit of restoration and independence in a safe, efficient and competent manner. Entrance to class does not guarantee graduation or certification. Must achieve a grade of "C" or better in theory and clinical portions of the program in order to qualify to sit for the state certification exam.		
Prerequisites: Documented clearance for any crime more serious than a minor traffic ticket. Fingerprints must be obtained upon enrollment in the program and prior to patient contact. State regulations require documented proof of students' ability to speak, read, write, and comprehend the English language at the sixth grade level. A mandatory orientation is scheduled before the semester begins; please check with the department for upcoming dates and times. Class enrollment is not necessary to attend orientation meeting		
Co-requisite: Healthcare Provider CPR card must be current at the end of the program.		

ALDH 60 NURSING ASSISTANT

Units: 6.5

64-72 hours lecture and 120-135 hours laboratory - Offered Fall, Spring

(Prerequisites: Documented clearance for any crime more serious than a minor traffic ticket. Fingerprints must be obtained upon enrollment and DOJ clearance obtained. Health exam prior to clinical rotation. CPR certification from an American Heart CPR provider course.)

Enables students to become familiar with basic principles of nursing, including procedures and techniques. Clinical experience is provided in extended care facilities. Students will learn to provide and meet the patient's basic physical and psychological needs and promote a spirit of restoration and independence in a safe, efficient, and competent manner. State approved precertification program. Does not guarantee certification. Must achieve a grade of "C" or better to take state certification examination.

ALDH 61 HOME HEALTH AIDE

Units: 2.0

24-27 hours lecture and 24-27 hours laboratory.

(Prerequisites: Must have current and active California CNA certificate. Students who have completed Victor Valley ALDH 60 Nursing Assistant course this semester, but have not completed the state exam may enter the course. State Home Health Aide certification will be contingent upon passing the State CNA Certification Exam. Co-requisite: Current Healthcare Provider CPR card.)

Enable students to become familiar with basic principles of nursing care in a home style setting. Clinical experience is provided in residential care facilities. Students will learn to provide and meet the patient's basic physical and psychological needs and to promote a spirit of rehabilitation and independence in a safe, efficient and competent manner. State approved certification course. A grade of C or above must be earned to receive state certification.

ALDH 62 ACUTE CARE CNA

Units: 4.5

48-54 hours lecture and 72-81 hours laboratory

(Prerequisites: Must have a current and active State of California Certificate for Nursing Assistant (CNA). Students that have completed Victor Valley ALDH 60 Nursing Assistant course, but have not completed the state exam may enter the program. Certification of completion by Victor Valley College will be contingent upon the student also passing the State CNA Certification exam. Co-requisite: Current Healthcare Provider CPR card.)

This course will allow the Certified Nursing Assistant to expand upon basic nursing practices to include those specific for the acute care setting. Clinical experience is provided in acute care facilities. Students will learn nursing practice skills related to the medical-surgical patient and will have an understanding of physical and psychosocial changes seen in the acute setting. Also introduces the student to ancillary departments and provides an opportunity for student to learn how all departments work together to care for patients. Must achieve a grade C or better to receive Victor Valley College Certification

ALDH 80 PHARMACOLOGY

Units: 3.0

48-54 hours lecture

(No prerequisite)

Current concepts of pharmacology, its relationship to patient care, and legal and ethical considerations are covered. Basic mechanisms of drug action, administration, toxicity, side effects, and dosages are also included.

ALDH 81 MEDICAL INSURANCE

Units: 3.0

48-54 hours lecture

(No prerequisite)

This course is designed to introduce and acquaint students to the basics of medical insurance, the billing process, including insurance terminology, medical coding systems, government and private payer health care claims, industrial, managed care insurances, general insurance procedures, and basic knowledge of billing/collection procedures.

ALDH 82 MEDICAL OFFICE PROCEDURES (*Medical Assistant*)

Units: 4.0

48-54 hours lecture. 48-54 laboratory

(No prerequisite)

This course provides practice in medical office procedures, proficiency in typing medical correspondence, case histories, insurance forms, and reports. Study of telephone techniques, medical record-keeping, and filing. Verbal communication with patients, other offices, and facilities. In addition, a lab component for students to become familiar with preparation and assistance with common back office procedures.

ALDH 82C MEDICAL OFFICE PROCEDURES – CLINICAL (*Medical Assistant*)

Units: 5.0

240-270 hours laboratory

(Prerequisite: ALDH 82 with a grade of 'C' or better.)

This course is designed to provide the externship component of Allied Health 82, Medical Office Procedures. The individual students will be presented with 270 hours of practical clinical experience. This will be performed in rotation sequence in the offices and clinics of qualified physicians located throughout the High Desert.

ALDH 83 BASIC ARRHYTHMIA

Units: 3.0

48-54 hours lecture

(No prerequisite)

A review of the general anatomy and physiology of the heart and coronary system, with complications associated with acute myocardial infarction with strong electrophysiological/arrhythmogenic component. Upon successful completion, the student will receive a certificate in Basic Electrocardiography and Arrhythmia Interpretation. (This course has been approved by the Board of Registered Nursing for Continuing Education credit.)

ALDH 84 INTRAVENOUS THERAPY

Units: 2.0

30 hours of theory/laboratory and 6 hours of clinical practice in IV therapy

(No prerequisite)

Approved by the Board of Vocational Nursing and the Board of Registered Nursing for Continuing Education. Emphasis placed on providing factual knowledge base, patient-centered psychological aspects, venipuncture techniques and materials. Legal aspects, especially as they relate to LVN's and RN's, are included.

ALDH 91 BASIC CPR (CARDIOPULMONARY RESUSCITATION)

Units: 0.5

2 hours lecture and 10 hours laboratory

(No prerequisite)

Emergency first aid procedure that consists of recognizing respiratory and cardiac arrest and starting the proper application of cardiopulmonary resuscitation to maintain life until advanced life support is available. Upon successful completion of the course, the student will receive a Basic CPR Certificate from the American Heart Association.

ALDH 125 MEDICAL ASPECTS OF DRUGS AND ALCOHOL

Units: 3.0 *CSU, UC*

48-54 hours lecture

(No prerequisite) (UC credit limitation)

This course will provide an in-depth study of the physiological effects and medical consequences of drug and alcohol use and abuse, including the effects on the central nervous system and behavior. The pharmacological aspects of drug and alcohol use will be presented including metabolism of various drugs, the meaning and implication of "half-life", tolerance, dependence, addiction process, and withdrawal. Categories of substances covered will include major and minor stimulants, alcohol, depressants, psychotropic drugs, opiates, marijuana, hallucinogens, and other prescription and over-the-counter drugs.

ALDH 138 COOPERATIVE EDUCATION

See Cooperative Education listing (1-8 units). **CSU**

ALDH 139 MEDICAL TERMINOLOGY

Units: 3.0 **CSU** | 48-54 hours lecture

(No prerequisite)

This course describes the body's anatomical systems with stress placed on medical terms, their use, spelling, and pronunciation. The use of these terms is defined in regard to anatomy, physiology, treatment, and surgery.

ALDH 141 ATHLETIC TRAINING

Units: 3.0 **CSU, UC** | 32-36 hours lecture and 48-54 hours laboratory

(No prerequisite. Recommended preparation: Interest and/or experience in athletics and sports.)

Introduction to principles of athletic training, including prevention, evaluation, treatment, and rehabilitation of common athletic injuries. See cross listing for PE /KIN 141.

ALDH 142 ATHLETIC TRAINING II

Units: 3.0 **CSU, UC** | 32-36 hours lecture and 48-54 hours laboratory

(Prerequisite: ALDH 141 or PE/KIN 141 Athletic Training I, or equivalent.)

This course will build on the students basic knowledge of human anatomy and athletic injuries. Topics will include emergency procedures, current health concerns of the athlete, protective devices, advanced taping techniques and injury management. See cross-listing for KIN 142.

ALDH 148 SPECIAL TOPICS

See Special Topics listing (Variable units). **CSU**

ALDH 149 INDEPENDENT STUDY

See Independent Study listing (1-3 units). **CSU**

ALDH 176 ATHLETIC TRAINING III

Units: 2-6.0 **CSU, UC** | 108-324 hours laboratory

(Prerequisite: ALDH 141 or PE/KIN 141 Athletic Training I, or equivalent.)

In this course, students will provide the pre-participation, on-site first aid and event maintenance for fall/winter/spring sports programs at VVC (baseball, basketball, football, golf, soccer, softball, tennis, volleyball and wrestling.) Experience will include but is not limited to, prophylactic taping and padding, immediate first aid, monitoring vital signs, completion of accident forms, proper use of universal biohazard precautions, supervision of safe playing conditions and coaching techniques, recognition of medical emergencies, assisting other medical personnel as needed, game preparation and pre-participation medical screenings. See cross-listing for KIN 176.

ALDH 177 ATHLETIC TRAINING IV

Units: 2-6.0 **CSU, UC** | 108-324 hours laboratory

(Prerequisite: ALDH 141 or PE/KIN 141, Athletic Training I, or equivalent.)

In this course, students will provide the care to athletes involved in fall/winter/spring sports programs at VVC (baseball, basketball, football, golf, soccer, softball, tennis, volleyball, and wrestling.) Experience will include but is not limited to development and implementation of rehabilitation protocols. Use of modalities including, whirlpool, ultrasound, ice, Emergency Medical Services, hydrocolator packs, Range of Motion exercises, joint mobilization, strengthening exercises (isokinetic, isotonic, isometric), cardiovascular conditioning and proprioceptive exercises. See cross-listing for KIN 177.

American Sign Language

American Sign Language Courses

ASL 121 FINGERSPELLING

Units: 1.0 **CSU** | 16-18 hours lecture

(No prerequisites)

An introductory course that teaches the student the appropriate application of fingerspelling and its production. The course will include strategies for improvement. Also included will be the articulation of loan signs and one to three digit numbers. Emphasis on both receptive and expressive fluency.

ASL 122 AMERICAN SIGN LANGUAGE I

Units: 4.0 **CSU, UC** | 64-72 hours lecture

(No prerequisites)

An introduction to American Sign Language as it is used with deaf community. Students will study the basic structure and development of the language as well as deaf culture. Emphasis is placed on both receptive and expressive skills

ASL 123 AMERICAN SIGN LANGUAGE II

Units: 4.0 **CSU, UC** | 64-72 hours lecture

(Prerequisite: ASL 122)

A continuation in the study of American Sign Language as it is used within the deaf culture. Instruction is provided in the basic structure of the language. Emphasis is placed on both receptive and expressive skills.

ASL 124 AMERICAN SIGN LANGUAGE III

Units: 4.0 **CSU, UC** | 64-72 hours lecture

(Prerequisite: ASL 123)

Continuation of development of skill in American Sign Language with emphasis on an intermediate level of comprehension and expression. Students will progress in their study of the structure and grammar of American Sign Language as well as deaf culture. Emphasis is placed on both receptive and expressive skills.

ASL 125 AMERICAN SIGN LANGUAGE IV

Units: 4.0 **CSU, UC** | 64-72 hours lecture

(Prerequisite: ASL 124)

A continuation in the study of American Sign Language and the deaf community including its history and culture. Emphasis will be on receptive and expressive skills as they relate to narrating life events. Students will learn techniques such as role-shifting, use of space and classifiers in addition to appropriate non-manual behaviors. This course will prepare the student for entrance into an interpreter training program.

ASL 126 INTRODUCTION TO INTERPRETING

Units: 4.0 **CSU** | 64-72 hours lecture

(Prerequisite: ASL 125. Grade Option)

This course introduces the field of American Sign Language interpreting and includes models of interpreting, ethical principles, and its history and development in modern times. Attention will be given to the development of necessary processing skills for consecutive interpretation.

Anthropology

Training in anthropology will prepare one for any career that involves working on the interface between cultures. Specialized preparation in this subject can lead to some of the world's most interesting work - the study of existing life ways, archaeological excavation and interpretation, primate behavior, and social research into economics, politics, law, religion, art, and music.

Career Opportunities

Careers in anthropology are diverse, specialized, and related to the various areas of concentration which are offered at four-year college and universities: Listed below are just a few examples:

Archaeologist - Federal/State/Private, Cultural Resource Management, Environmental Impact Analyst, Expedition Guide, Forensic Anthropologist, Health Researcher, Museum Curator/Exhibit Designer, Population Analyst, Urban Planner Analyst.

Faculty

Richard Cerreto

Degrees and Certificates Awarded

Associate in Arts, Liberal Arts

Associate Degree

No associate degree awarded with a major in Anthropology. Anthropology courses may be used to fulfill requirements for an Associate in Arts degree with a major in Liberal Arts. See Liberal Arts for degree requirements

Transfer

For the most up-to-date information on these programs and others, visit www.assist.org. Please stop by the Transfer Center in Building 55 or make an appointment with a counselor if you have questions.

- **California State University, San Bernardino:** *Anthropology major*
- **University of California, Riverside:** *Anthropology major*

Anthropology Courses

ANTH 101 INTRODUCTION TO PHYSICAL ANTHROPOLOGY

Units Required: 3.0 *CSU, UC* | 48-54 hours laboratory

(No prerequisite. Grade Option)

Biological anthropology explores the biological development and adaptations of humans in relation to their different natural environments through the biocultural approach. This course provides information on how and why human populations vary within and between themselves; how and why humans have changed biologically and behaviorally through time; physical and behavioral comparisons between human and non-human primates; and biological and behavioral/technological development from the earliest to modern humans.

ANTH 101L PHYSICAL ANTHROPOLOGY LABORATORY

Units Required: 1.0 *CSU, UC* | 48-54 hours laboratory

(Co-requisite: ANTH 101. Grade Option)

Coordinated with the lecture, this optional lab provides hands-on experience in human genetics, variation, and evolution; comparisons of non-human primate behavior; knowledge of the human skeleton and forensic identification methods.

ANTH 102 INTRODUCTION TO CULTURAL ANTHROPOLOGY**Units: 3.0** **CSU, UC** | **48-54 hours laboratory***(No prerequisite. Grade Option)*

Cultural anthropology explores the social aspect of being human, in context with the multicultural approach. This course provides comparisons of all aspects of culture such as societal organization, economy, marriage and family, language development, gender issues, religion, and traditions and rituals. The development and evolution of cultural groups is discussed in relation to how several of these groups successfully adapt to particular environments. Drawing from anthropology and other social sciences, the history and development of the modern World System and its effect on culture groups worldwide is outlined.

ANTH 103 INTRODUCTION TO ARCHAEOLOGY**Units: 3.0** **CSU, UC** | **48-54 hours laboratory***(No prerequisite. Grade Option)*

Archaeology is the study of human groups in the context of their historic and prehistoric past. Through excavation of archaeology sites and laboratory analysis, archaeologists investigate and reconstruct the time frame, the life activities, and technological changes of ancient cultures. This course provides information on the history and development of archaeology, the archaeological methods used to excavate sites, how archaeologists relate the artifacts and other remains found on the sites to human behavior, how the sites within a region relate to each other and the natural surroundings, and the theoretical framework that helps to explain the behavioral and technological changes through time.

ANTH 103F ARCHAEOLOGY FIELD CLASS**Units: 3.0** **CSU** | **32-36 hours lecture and 48-54 hours laboratory***(No prerequisite. Grade Option)*

This course provides the student with hands-on experience in the excavation and investigation of an archaeology site and the materials contained in archaeology sites, the archaeological methods used to excavate sites, and how archaeologists relate the artifacts and other remains found on the sites to human behavior.

ANTH 103L ARCHAEOLOGY LAB**Units: 3.0** **CSU** | **16-18 hours lecture and 96-108 hours laboratory.***(No prerequisite. Grade Option)*

This course is designed as a laboratory class that compliments the Archaeology Field Course. The class introduces the students to laboratory work in archaeology, providing hands-on experience. Students learn to process the materials collected from the field class archaeology site, from cleaning and identification to their analysis.

ANTH 106 INTRODUCTION TO LINGUISTIC ANTHROPOLOGY**Units: 3.0** **CSU, UC** | **48-54 hours lecture***(No prerequisite. Grade Option)*

This course examines human language systems and their significance in social context. Topics that will be covered include the origins and evolution of language; nonhuman primate communication systems; language classification; language structure; semantic systems; the social and cultural function of language; language acquisition; language change and the reconstruction of language at earlier stages.

ANTH 107 INTRODUCTION TO FORENSIC ANTHROPOLOGY AND ARCHAEOLOGY**Units: 3.0** **CSU** | **48-54 hours lecture***(No prerequisite. Grade Option)*

This course is designed to introduce the student to the specialty fields of forensic anthropology and forensic archaeology. Through lecture and hands-on experience, the student will become familiar with archaeological field methods and many of the basic techniques used by forensic anthropologists.

ANTH 128 SPECIAL TOPICSSee Special Topics listing (Variable units). **CSU**

Architecture

Victor Valley College does not offer an Architecture program for transfer but does however offer preparatory courses for transfer into a School of Architecture. These courses are offered through our Computer Integrated Design and Graphics (CIDG) Department. Students can obtain Architecture related certificates that will prepare them to enter into a school of Architecture at the university level with an Associate in Science degree in CIDG or go directly into the workforce.

An architect develops concepts for design projects which range from single objects such as a piece of furniture, designing homes to complex high-rise office buildings. Our Architecture program is centered on learning the necessary software programs that are used in architectural studios across the country. You will also have a design laboratory experience with students progressing toward comprehensive architectural projects, model building and rendering. Architecture is an impacted major at some universities. As a result, students need to maintain a high GPA, complete as many course requirements as possible before applying for admission, and research all additional program requirements for specific colleges to which they will be applying. A portfolio of each prospective student's work is usually required with the application. Therefore, students need to contact the college of choice early in their education to assure proper preparation and presentation of their work.

Transfer

To pursue a bachelor's degree in this field, here are some schools that have programs that might interest you. For the most up-to-date information on these programs and others, visit www.assist.org, or, for private schools, www.aiccu.edu. Please stop by the Transfer Center in Building 55 or make an appointment with a counselor if you have questions.

- UC campuses offering Architecture include Berkeley and UCLA
- CSU campuses that offer Architecture include Pomona, San Luis Obispo and Chico
- Private schools include University of Southern California (USC), New School of Architecture and Design San Diego, California College of the Arts, San Francisco, and Academy of Art University San Francisco

Degrees and Certificates Awarded

Associate in Science, CIDG

Drafting Technician I Certificate

CADD I Technician I Certificate

Architectural CADD Technician I Certificate

CAD Careers,

Architect, Architectural Drafter, CAD Management, CAD Operator, Cabinet Shop Detailer, Civil Drafter Computer Electrical Drafter, Electronics Drafter, Graphics Designer, Interior Designer, Landscape Architect, Landscape Designer, Mechanical Drafter, Public Works Technician, Steel Fabricator Drafter, Structural Drafter, Technical Illustrator

Note: Associate of Science Degree programs require completion of at least 60 units of credit, which normally will take 4 semesters. Certificate programs, many of which lead to an Associate of Science degree, vary in the number of units required. Most can be completed in 2 - 4 semesters. Each course required for a certificate must be completed with a "C" grade or better. All can be counted toward its related degree.



Art and Design

Art and design are an integral part of our daily lives as creative expression and as commercial applications. Humankind is reflected in great works of art throughout time, depicting our deeds and actualization. A study in art and design will lead to the development of a diverse range of career possibilities that span from self-expression to commercial design.

Students may choose a program leading to an AA degree, and courses in art are transferable to four-year colleges. Consult with the department chairperson for specialized areas of interest.

Career Opportunities

Advertising, Architectural Designer, Commercial Artist/Graphic Designer, Computer Graphics/Imaging/Animation, Film Maker, Interior Designer, Medical Illustrator, Photographer/Fine-Art, Commercial, Theatre Set Designer, Video Director.

Faculty

Frank Foster | Richard Ripley | Brent Wood

Degrees and Certificates Awarded

Associate in Arts, Fine Arts

Associate in Arts, Liberal Arts

Associate Degree

No associate degree awarded with a major in Art. Art courses may be used to fulfill requirements for an Associate of Arts degree with a major in Fine Arts or Liberal Arts. See Fine Arts or Liberal Arts for degree requirements for these majors. ART 138 (Cooperative Education) may be used as elective credit, but may not be used to fulfill major requirements.

Transfer

To pursue a bachelor's degree in this field, here are some schools that have programs that might interest you. For the most up-to-date information on these programs and others, visit www.assist.org. Please stop by the Transfer Center in Building 55 or make an appointment with a counselor if you have questions.

- California State University, San Bernardino: Art major
- University of California, Riverside: Art major

Art and Design Courses

ART 101 SURVEY OF ART HISTORY

Units: 3.0 **CSU, UC** | 48-54 hours lecture

(No prerequisites)

An historical survey of significant art from prehistoric times through the fourteenth century.

ART 102 SURVEY OF ART HISTORY

Units: 3.0 **CSU, UC** | 48-54 hours lecture

(No prerequisites)

An historical survey of significant art from the Renaissance through modern times.

ART 103 THE ART OF AMERICAN CINEMA

Units: 3.0 **CSU, UC** | 48-54 hours lecture

(No prerequisites)

This class traces the development of cinema in America from silent to contemporary films. The course will address the evolution of moving images as an expression of art and meaning.

Art and Design Courses (cont.)

ART 104 FILM AS AN ART FORM

Units: 3.0 **CSU, UC** | 48-54 hours lecture

(No prerequisites)

Film as a form of art and its construction as a communicative, expression of global culture, politics, literature and gender will be studied. Important films will be viewed that address these topics. Students will learn to be more critical viewers of media and its presentation of world culture.

ART 105 INTRODUCTION TO ART

Units: 3.0 **CSU, UC** | 48-54 hours lecture

(No prerequisites)

This course is a general introduction to the visual arts, its nature, vocabulary, media, and history. The course examines the historical and contemporary value of art to both the individual and society. Consideration will also be given to a study of the organization and component parts of the visual art and the various media used in the making of art.

ART 106 ART CONCEPTS

Units: 3.0 **CSU, UC** | 48-54 hours lecture

(No prerequisites)

This lecture course will introduce students to the practice, theory and history of art. The course will also investigate the impact art has upon our contemporary society.

ART 107 THE ART AND LIFE OF GREECE

Units: 3.0 **CSU, UC** | 48-54 hours lecture

(No prerequisites)

This is an illustrated lecture course focusing on art of the ancient Greek world from c. 1100 BCE to the 1st Century. Emphasis is placed upon analysis of the various styles of Greek art from the formative period of Hellenism. The art works are studied and analyzed within the cultural/historical context of the Greek world including mythology, philosophy, and social structure as these relate to the development of Greek art.

ART 108 THE ART AND LIFE OF ITALY

Units: 3.0 **CSU, UC** | 48-54 hours lecture

(No prerequisites)

This is an illustrated lecture course focusing on the arts of Ancient Rome and the influence Rome had upon the development of the Western art world. This course focuses on the role of the Etruscans in the development of the early arts of the Roman Empire including the changes brought by the influence of Christianity. The later development of the arts of Italy will also be covered.

ART 109 SURVEY OF AFRICAN AMERICAN ART

Units: 3.0 **CSU, UC** | 48-54 hours lecture

(No prerequisites)

This course will survey the arts of the African peoples in diaspora from traditional African arts to contemporary times. Focus will be on identification of artists, art styles within their historical, cultural, political framework and exploration of aesthetic preferences.

ART 112 DESIGN I

Units: 3.0 **CSU, UC** | 32-36 hours lecture and 48-54 hours laboratory

(No prerequisites)

This course will focus on the basics of design utilizing the principles and practices involved in the production of art forms.

Art and Design Courses (cont.)

ART 113 DESIGN II

Units: 3.0 **CSU, UC** | 32-36 hours lecture and 48-54 hours laboratory

(No prerequisite. Recommended preparation: ART 112)

A continuation of Art 112 utilizing the same art concepts, aesthetic elements, and principles of design expanded to three-dimensions.

ART 114 COLOR THEORY

Units: 3.0 **CSU, UC** | 32-36 hours lecture and 48-54 hours laboratory

(No prerequisite)

This course traces the development of color theory and provides exercises in color and design in a variety of media that have practical applications in the visual arts profession.

ART 115 WATER-BASED MEDIA

Units: 3.0 **CSU, UC** | 32-36 hours lecture and 48-54 hours laboratory

(No prerequisite. Recommended preparation: ART 125)

This is an introductory course in water-based painting media with an emphasis in foundational painting techniques including, process, color theory, visual perception, composition and creative skills. Students will pay for their own supplies.

ART 120 ACRYLIC PAINTING I

Units: 3.0 **CSU, UC** | 32-36 hours lecture and 48-54 hours laboratory

(No prerequisite. Recommended preparation: ART 112 or ART 113 or ART 125.)

This course is an introduction to acrylic painting with an emphasis on color mixing, modeling, composition, likeness, and application of general design principles.

ART 121 ACRYLIC PAINTING II

Units: 3.0 **CSU, UC** | 32-36 hours lecture and 48-54 hours laboratory

(No prerequisite. Recommended preparation: ART 120.)

This is an intermediate course in acrylic painting with continuing study of the theory and practice of painting.

ART 122 LIFE DRAWING I

Units: 3.0 **CSU, UC** | 32-36 hours lecture and 48-54 hours laboratory

(No prerequisite. Recommended preparation: ART 125 or ART 126)

A beginning life drawing course emphasizing the study and analysis of the human form using basic art materials and fundamental drawing concepts.

ART 123 LIFE DRAWING II

Units: 3.0 **CSU, UC** | 32-36 hours lecture and 48-54 hours laboratory

(No prerequisite. Recommended preparation: ART 125 or ART 126, or ART 122.)

An intermediate life drawing course emphasizing the continued study and analysis of the human form using drawing of the human figure from life.

ART 124 ANATOMY FOR LIFE DRAWING

Units: 3.0 **CSU, UC** | 32-36 hours lecture and 48-54 hours laboratory

(No prerequisite. Recommended preparation: ART 122 or ART 123 or ART 125 or ART 126.)

Critical dissection of anatomical and physiological studies incorporated into the fine art of life drawing.

ART 125 DRAWING I

Units: 3.0 [CSU, UC](#) | 32-36 hours lecture and 48-54 hours laboratory

(No prerequisite. Recommended preparation: ART 112)

This course is an introduction to principles and techniques in drawing. Students will gain a working knowledge of line, shape, perspective, proportion, volume, and composition. Students will learn how to look at, evaluate and present art work as well as be introduced to traditional and contemporary drawing with an emphasis on the development of observational skills and creative thinking.

ART 126 DRAWING II

Units: 3.0 [CSU, UC](#) | 32-36 hours lecture and 48-54 hours laboratory

(No prerequisite. Recommended preparation: ART 125.)

An intermediate drawing course emphasizing development of skills such as proportion, value, line, and space with an emphasis on personal expression, thematic development and the use of color. A variety of drawing media will be explored such as graphite, charcoal, color pencil, ink, pastel, and mixed media.

ART 128 SPECIAL TOPICS

See Special Topics listing (Variable units). [CSU, UC](#)

ART 129 INDEPENDENT STUDY

See Independent Study listing (1-3 units). [CSU](#)

ART 133 DIGITAL IMAGING

Units: 3.0 [CSU, UC](#) | 32-36 hours lecture and 48-54 hours laboratory

(No prerequisite. Recommended preparation: ART 112 or ART 113.)

An introductory course that explores a fine arts approach to computer generated imaging using Adobe Photoshop. See cross-listing for **CART 133**.

ART 134 THE ART OF WEB DESIGN

Units: 4.0 [CSU](#) | 48-54 hours lecture and 48-54 hours laboratory

(No prerequisite)

An overview of industry standard software used for creating web pages. This course does not focus on HTML or scripting language but is focused on the development of effective communications design. See cross-listing for **CART 134**.

ART 135 INTRODUCTION TO TIME BASED ART/COMMUNICATION

Units: 4.0 [CSU](#) | 48-54 hours lecture and 48-54 hours laboratory

(No prerequisite)

This course covers the fundamental elements of creating and editing video using computer technology. Student will be taught how to use computer software to create dynamic visual content as it relates to artistic expression.

ART 138 COOPERATIVE EDUCATION

See Cooperative Education Listing (1-8 units). [CSU](#)

Art and Design Courses (cont.)

ART 141 SCULPTURE I

Units: 3.0 **CSU, UC** | 32-36 hours lecture and 48-54 hours laboratory

(No prerequisite. Recommended preparation: ART 101 or ART 102 and ART 105 and ART 106.)

This course is an introduction to the principles, theories, and techniques of sculptural objects, and the three-dimensional format. Students explore a variety of materials and processes, including additive and subtractive methods, assemblage and construction, and relief mold-making and casting. Concepts and trends in sculpture and three-dimensional art from pre-history to the contemporary will be studied. Students will develop an understanding of personal expression through form, and learn visual and verbal analysis pertaining to three-dimensional art.

ART 150 OIL PAINTING I

Units: 3.0 **CSU, UC** | 32-36 hours lecture and 48-54 hours laboratory

(No prerequisite.)

This is an introductory course in oil painting. An emphasis in building a foundation in painting, techniques, process, color theory, visual perception, composition, and creative skills. Students will pay for their own supplies.

ART 151 INTERMEDIATE OIL PAINTING

Units: 3.0 **CSU, UC** | 32-36 hours lecture and 48-54 hours laboratory

(No prerequisite.)

There will be continuation of techniques covered in **ART 150** with an emphasis upon aesthetics, art history, critical analysis, and creativity. The student, through his own resourcefulness, is to formulate problems of compositional design, control of the medium and establish value judgments based upon fact that will be reflected in his works. Repetition of this course provides the opportunity for increased skill development.

Astronomy

Astronomy Courses

ASTR 101 DESCRIPTIVE ASTRONOMY

Units: 3.0 *CSU, UC* | 48-54 hours lecture

(No prerequisites)

A comprehensive study of astronomy. The historical development of astronomy, the structure of the solar system, modern techniques and instruments, the character of nebulae and galaxies, stellar character and theories, and the philosophical implications of astronomical discoveries.

In keeping with the philosophy of providing programs to meet the diverse needs of students so that they may continue to develop physically, mentally, and emotionally throughout their lifetime, Victor Valley College supports and encourages students to participate in its athletic programs.

To meet this philosophic commitment, Victor Valley College athletic offerings include football, softball, men's and women's tennis, women's volleyball, men's and women's basketball, wrestling, golf, men's and women's soccer, men's and women's cross country, men's and women's track and field, and baseball.

Victor Valley College is a member of the Foothill Athletic Conference and also competes with other community college conferences, California State and University junior varsity teams, private colleges, and service teams. A student must be enrolled in 12 units to participate in the intercollegiate athletic program. Student athletes are granted up to two years of eligibility per sport but must complete 24 units between seasons of competition with a "C" or better grade average in order to be eligible for the second year.

There are other factors that are essential in determining eligibility, and athletes should consult with the Eligibility Evaluator regarding eligibility matters. All varsity athletic classes meet 10 laboratory hours per week for 3 units. CSU, UC (UC credit limitation).

Mens's And Women's Sports by Season	
FALL	SPRING
Basketball (M & W)	Baseball (M)
Cross Country (M & W)	Golf (M)
Football (M)	Softball (W)
Soccer (M & W)	Tennis (M & W)
Volleyball (W)	Track and Field (M & W)
Wrestling (M)	

Athletics Courses

ATHL 120 VARSITY BASEBALL

Units: 3.0 **CSU, UC** | 144-162 hours laboratory

(UC maximum credit allowed: 4 units) (No prerequisite. ATHL 120P recommended) This course may be taken four times.

Students will learn the intermediate and advanced skills, rules, and strategies for competition in baseball.

ATHL 120P PREPARATION FOR INTERCOLLEGIATE MEN'S BASEBALL

Units: 0.5-1 **CSU** | 24-27 - 48-54 hours laboratory

(No prerequisite. Grade Option) This course may be taken four times.

This Men's Baseball course is designed to satisfy the interest, development and needs of the highly skilled student athlete. It will provide students with high level instruction and experience required for intercollegiate competition.

ATHL 121 VARSITY BASKETBALL (MEN)

Units: 1.5 **CSU, UC** | 72-81 hours laboratory

(UC maximum credit allowed: 4 units) (No prerequisite. ATHL 121P recommended) This course may be taken four times.

Students will learn the intermediate/advanced skills, rules, and strategies for competition in basketball.

ATHL121P PREPARATION FOR INTERCOLLEGIATE MEN'S BASKETBALL

Units: 0.5-1 **CSU** | 24-27 - 48-54 hours laboratory

(No prerequisite. Grade Option) This course may be taken four times.

This men's basketball course is designed to satisfy the interest, development and needs of the highly skilled student athlete. It will provide students with high level instruction and experience required for intercollegiate competition.

Athletics Courses (cont.)

ATHL 122 VARSITY BASKETBALL (WOMEN)

Units: 1.5 **CSU, UC** | 72-81 hours

(UC maximum credit allowed: 4 units) (No prerequisite. ATHL 122P recommended). This course may be taken four times
Students will learn the intermediate/advanced skills, rules, and strategies for competition in basketball.

ATHL 122P PREPARATION FOR INTERCOLLEGIATE WOMEN'S BASKETBALL

Units Required: 1.5 **CSU** | 24-27 - 48-54 hours laboratory

(No prerequisite. Grade Option) This course may be taken four times.

This women's basketball course is designed to satisfy the interest, development and needs of the highly skilled student athlete. It will provide students with high level instruction and experience required for intercollegiate competition.

ATHL 123 CROSS COUNTRY (WOMEN)

Units: 3.0 **CSU, UC** | 144-162 hours laboratory

(UC maximum credit allowed: 4 units) (No prerequisite. ATHL 123P recommended) This course may be taken four times.

A cross country course designed to develop the knowledge, skills and strategy for the serious and recreational competitive athlete in collegiate long distance running. The course is designed to emphasize competition and will help the athlete achieve a higher level of competitive ability through instruction of skills, techniques, strategy and personal evaluation during or after competition. The students will be given an opportunity to compete at a wide range of competitive levels. CSU, UC.

ATHL 123P PREPARATION FOR INTERCOLLEGIATE WOMEN'S CROSS COUNTRY

Units: 0.5-1 **CSU** |

(No prerequisite. Grade option) This course may be taken four times.

This Women's Cross Country course is designed to satisfy the interest, development and needs of the highly skilled student athlete. It will provide students with high level instruction and experience required for intercollegiate competition. CSU

ATHL 124 VARSITY FOOTBALL

Units: 3.0 **CSU, UC** | 144-162 hours laboratory

(UC maximum credit allowed: 4 units) (No prerequisite. ATHL 124P recommended) This course may be taken four times.
Students will learn the intermediate/advanced skills, rules, and strategies for competition in football.

ATHL 124P PREPARATION FOR INTERCOLLEGIATE FOOTBALL

Units: 0.5-1 **CSU** | 24-27 - 48-54 hours laboratory

(No prerequisite. Grade Option) This course may be taken four times.

This Football course is designed to satisfy the interest, development and needs of the highly skilled student athlete. It will provide students with high level instruction and experience required for intercollegiate competition.

ATHL 125 VARSITY GOLF (MEN)

Units: 3.0 **CSU, UC** | 144-162 hours laboratory

UC maximum credit allowed: 4 units) (No prerequisite. ATHL 125P recommended) This course may be taken four times.
Students will learn the intermediate/advanced skills, rules, and strategies for competition in golf.

ATHL 125P PREPARATION FOR INTERCOLLEGIATE GOLF

Units: 0.5-1 **CSU** | 24-27 - 48-54 hours laboratory

(No prerequisite) This course may be taken four times.

This Golf course is designed to satisfy the interest, development and needs of the highly skilled student athlete. It will provide students with high level instruction and experience required for intercollegiate competition.

ATHL 126 VARSITY SOCCER (WOMEN)

Units: 3.0 **CSU, UC** | 144-162 hours laboratory

(UC maximum credit allowed: 4 units) (No prerequisite. ATHL 126P recommended) This course may be taken four times.
Students will learn the intermediate/advanced skills, rules, and strategies for competition in soccer.

ATHL 126P PREPARATION FOR INTERCOLLEGIATE WOMEN'S SOCCER

Units: 0.5-1 **CSU** | 24-27 - 48-54 hours laboratory

(No prerequisite. Grade Option) This course may be taken four times.

This Women's Soccer course is designed to satisfy the interest, development and needs of the highly skilled student athlete. It will provide students with high level instruction and experience required for intercollegiate competition.

ATHL 127 VARSITY SOFTBALL

Units: 3.0 **CSU, UC** | 144-162 hours laboratory

(UC maximum credit allowed: 4 units) (No prerequisite. ATHL 127P recommended) This course may be taken four times.
Students will learn the intermediate/advanced skills, rules, and strategies for competition in softball.

ATHL 127P PREPARATION FOR INTERCOLLEGIATE WOMEN'S SOFTBALL

Units: 0.5-1 **CSU** | 24-27 - 48-54 hours laboratory

CSU (No prerequisite. Grade Option) This course may be taken four times.

This Women's Softball course is designed to satisfy the interest, development and needs of the highly skilled student athlete. It will provide students with high level instruction and experience required for intercollegiate competition.

ATHL 128 VARSITY TENNIS (WOMEN)

Units: 3.0 **CSU, UC** | 144-162 hours laboratory

(UC maximum credit allowed: 4 units) (No prerequisite. ATHL 128P recommended) This course may be taken four times.
Students will learn the intermediate/advanced skills, rules, and strategies for competition in tennis.

ATHL 128P PREPARATION FOR INTERCOLLEGIATE WOMEN'S TENNIS

Units: 0.5-1 **CSU** | 24-27 - 48-54 hours laboratory

(No prerequisite. Grade Option) This course may be taken four times.

This Women's Tennis course is designed to satisfy the interest, development and needs of the highly skilled student athlete. It will provide students with high level instruction and experience required for intercollegiate competition.

ATHL 129 VARSITY TENNIS (MEN)

Units: 3.0 **CSU, UC** | 144-162 hours laboratory

(UC maximum credit allowed: 4 units) (No prerequisite. ATHL 129P recommended) This course may be taken four times.
Students will learn the intermediate/advanced skills, rules, and strategies for competition in tennis.

ATHL 129P PREPARATION FOR INTERCOLLEGIATE MEN'S TENNIS

Units: 0.5-1 **CSU** | 24-27 - 48-54 hours laboratory

(No prerequisite. Grade Option) This course may be taken four times.

This Men's Tennis course is designed to satisfy the interest, development and needs of the highly skilled student athlete. It will provide students with high level instruction and experience required for intercollegiate competition.

ATHL 130 VARSITY VOLLEYBALL

Units: 3.0 **CSU, UC** | 144-162 hours laboratory

(UC maximum credit allowed: 4 units) (No prerequisite. ATHL 130P recommended) This course may be taken four times.
Students will learn the intermediate/advanced skills, rules, and strategies for competition in volleyball.

ATHL 130P PREPARATION FOR INTERCOLLEGIATE VOLLEYBALL

Units: 0.5-1 **CSU** | 24-27 - 48-54 hours laboratory

(No prerequisite. Grade Option) This course may be taken four times.

This Volleyball course is designed to satisfy the interest, development and needs of the highly skilled student athlete. It will provide students with high level instruction and experience required for intercollegiate competition.

ATHL 132 VARSITY WRESTLING (MEN)

Units: 3.0 **CSU, UC** | 144-162 hours laboratory

(No prerequisite. Experience in high school or club level competition recommended.) This course may be taken four times.

A wrestling course designed to develop the knowledge, wrestling skills and strategy for the serious and recreational competitive athlete in collegiate, Greco-Roman and Freestyle wrestling. The course is designed to emphasize competition and will help the athlete achieve a higher level of competitive ability through instruction of skills, techniques, strategy, and personal evaluation during or after competition. The students will be given an opportunity to compete at a wide range of competitive levels.

ATHL 132P PREPARATION FOR INTERCOLLEGIATE WRESTLING

Units: 0.5-1 **CSU** | 24-27 - 48-54 hours laboratory

(No prerequisite. Grade Option) This course may be taken four times.

This Wrestling course is designed to satisfy the interest, development and needs of the highly skilled student athlete. It will provide students with high level instruction and experience required for intercollegiate competition

ATHL 133 MEN'S CROSS COUNTRY

Units: 3.0 **CSU, UC** | 144-162 hours laboratory

(UC maximum credit allowed: 4 units) (No prerequisite) This course may be taken four times.

A cross country course designed to develop the knowledge, skills and strategy for the serious and recreational competitive athlete in collegiate long distance running. The course is designed to emphasize competition and will help the athlete achieve a higher level of competitive ability through instruction of skills, techniques, strategy and personal evaluation during or after competition. Students will be given an opportunity to compete.

ATHL 133P PREPARATION FOR INTERCOLLEGIATE MEN'S CROSS COUNTRY

Units: 0.5-1 **CSU** | 24-27 - 48-54 hours laboratory

(No prerequisite. Grade Option) This course may be taken four times.

This Men's Cross Country course is designed to satisfy the interest, development and needs of the highly skilled student athlete. It will provide students with high level instruction and experience required for intercollegiate competition.

ATHL 140 VARSITY SOCCER (MEN)

Units: 3.0 **CSU, UC** | 144-162 hours laboratory

(UC maximum credit allowed: 4 units) (No prerequisite. ATHL 140P recommended) This course may be taken four times.

Students will demonstrate knowledge of rules, intermediate/advanced skills, and offensive and defensive strategies necessary to compete at collegiate level for soccer.

ATHL 140P PREPARATION FOR INTERCOLLEGIATE MEN'S SOCCER

Units: 0.5-1 **CSU** | 24-27 - 48-54 hours laboratory

(No prerequisite. Grade Option) This course may be taken four times.

This Men's Soccer course is designed to satisfy the interest, development and needs of the highly skilled student athlete. It will provide students with high level instruction and experience required for intercollegiate competition.

ATHL 143 SPORTS PERFORMANCE TRAINING

Units: 1.0 **CSU, UC** | **48-54 hours laboratory**

(No prerequisite. Grade Option) This course may be taken four times

Sports performance training provides basic plyometric techniques which will allow students in athletics to dramatically increase their speed, strength, and stamina. Students will learn to use this training as preparation for athletic performance and winning mindsets.

ATHL 144 VARSITY SAND VOLLEYBALL WOMEN

Units: 1.0 **CSU** | **48-54 hours laboratory**

(Recommended Prep: ATHL 144P.) This course may be taken three times.

Students will learn the intermediate to advanced skills, rules and strategies for competition in intercollegiate sand volleyball.

ATHL 144P PREPARATION FOR INTERCOLLEGIATE SAND VOLLEYBALL

Units: 1.0 **CSU** | **48-54 hours laboratory**

(No prerequisite. Grade Option) This course may be taken four times

Sports performance training provides basic plyometric techniques which will allow students in athletics to dramatically increase their speed, strength, and stamina. Students will learn to use this training as preparation for athletic performance and winning mindsets.

Automotive Technology

It is the mission of the Automotive Department of Victor Valley Community College to provide quality automotive instruction to a diverse community of students; the array of courses offered shall serve the educational needs of the beginning student as well as the employed professional. Through industry input the department shall strive to create and maintain the most up to date curriculum based on current industry trends. The department will acquire and maintain the appropriate equipment that will augment the current course curriculum.

Each year the Bureau of Labor Statistics lists the need for Automotive Technicians as one of the nation's highest. This shortage of well-trained technicians has been created by the technological advances caused by the addition of the computerized engine controls and the need to control automotive pollution.

VVC's automotive program is designed to give the student a thorough and complete knowledge of the basics of the modern automobile. The program is capable of training the student to entry-level performance on the latest industry approved equipment.

Career Opportunities

Federally recognized ASE certification in eight (8) categories, Parts Salesperson, Repair Shop Owner or Operator State Certified Pollution Control Technician , Tune-up Technician

Faculty

Lee Bennett | Dan Rowland | Keith Shaner | John Sweet

Degrees and Certificates Awarded

Associate in Science, Automotive Technology	Automotive Brake and Suspension Specialist Certificate
Automotive Detailer/Porter Certificate	Automotive Drivability Specialist Certificate
Automotive Inspection and Maintenance Technician Certificate	Automotive Repair Shop Manager Certificate
Automotive Specialist I Certificate	Automotive Specialist II Certificate
Automotive Technician Certificate	Automotive Transmission Specialist Certificate
Engine Machinist Specialist Certificate	4x4 Suspension Modifications Certificate
Heavy Duty Diesel Truck Lubrication and Inspection	Specialist Certificate
Heavy Duty Truck Brake Repair Specialist Certificate	Heavy Duty Truck Hydraulic Technician Certificate
New Model Technology Repair Technician Certificate	Recreational Vehicle Service and Repair Technician Certificate
Small Engine Repair Specialist Certificate	Smog Inspection Technician Certificate

A student receiving a degree or certificate in this field will be able to:

- Properly perform automotive repairs following industry standards for safety, comfort, and driveability.
- Safely and responsibly perform automotive repairs while minimizing negative impact on the environment.

Associate Degree

To earn an Associate in Science degree with a major in Automotive Technology, complete a minimum of 18 units from any of the certificates or from any Automotive Technology courses and meet all Victor Valley College graduation requirements. AUTO 138 (Cooperative Education) may be used as Elective credit, but may not be used to fulfill major requirements.

Transfer

Not a transfer major.

Automotive Technology

AUTOMOTIVE BRAKE AND SUSPENSION SPECIALIST CERTIFICATE		
Units Required: 8.0	<i>All of the following must be completed with a grade of "C" or better:</i>	
AUTO 60	Automotive Suspension and Alignment	4.0
AUTO 61	Automotive Brakes	4.0

AUTOMOTIVE DETAILER/PORTER CERTIFICATE		
Units Required: 6.0	<i>All of the following must be completed with a grade of "C" or better:</i>	
<i>These classes should be taken in the following order.</i>		
AUTO 50	Introduction to Automotive Technology	4.0
AUTO 62	Automotive Detailing	2.0

AUTOMOTIVE DRIVEABILITY SPECIALIST CERTIFICATE		
Units Required: 8.0	<i>All of the following must be completed with a grade of "C" or better:</i>	
<i>These classes should be taken in the following order.</i>		
AUTO 79B	Ignition and Fuel Systems	4.0
AUTO 80A	Automotive Computers, Electronics, and Electrical Systems	4.0

AUTOMOTIVE INSPECTION AND MAINTENANCE TECHNICIAN CERTIFICATE		
Units Required: 6.0	<i>All of the following must be completed with a grade of "C" or better:</i>	
<i>These classes should be taken in the following order.</i>		
AUTO 79A	Basic Tune Up	2.0
AUTO 58	Automotive Lubrication Technician	2.0
AUTO 59	Automotive Tire Technician	2.0

AUTOMOTIVE REPAIR SHOP MANAGER CERTIFICATE		
Units Required: 16.0	<i>All of the following must be completed with a grade of "C" or better:</i>	
<i>These classes should be taken in the following order.</i>		
AUTO 50	Introduction to Automotive Technology	4.0
AUTO 77.0	Automotive Service Writer and Shop Management or concurrently with AUTO 50	3.0
AUTO 77L	Automotive Service Writer and Shop Management Lab	2.0
AUTO 77.1	Automotive Leadership and Team Building	3.0
AUTO 77.2	Automotive Safety Training For Managers	3.0
BET 101	Beginning Keyboarding/Typing can be taken anytime during the program or BET 104A or B or C	1.0

AUTOMOTIVE SPECIALIST I CERTIFICATE (ENGINE REPAIR, DRIVE TRAIN, CHASSIS)		
The certificate program in Engine Repair, Drive Train and Chassis will enable the student to obtain employment in any entry-level position in those related fields.		
Units Required: 24.0	<i>All of the following must be completed with a grade of "C" or better:</i>	
<i>These classes should be taken in the following order.</i>		
AUTO 51	Automotive Engines and Drive Trains	12.0
AUTO 57	Automotive Brakes, Suspension and Wheel Alignment	12.0

AUTOMOTIVE SPECIALIST II CERTIFICATE

(ENGINE PERFORMANCE, ELECTRONICS [AUTO] POLLUTION CONTROL)

The certificate program in Engine Performance, Electronics [Auto], and Pollution Control will enable the student to obtain employment in any entry-level position in those related fields.

Units Required: 24.0*All of the following must be completed with a grade of "C" or better:**These classes should be taken in the following order.*

AUTO 79	Tune-up, Pollution Control, and Fuel Systems	12.0
AUTO 80	Automotive Computers, Electronics, and Electrical Systems	12.0

AUTOMOTIVE TECHNICIAN CERTIFICATE

(ENGINE PERFORMANCE, ENGINE REPAIR, ELECTRONICS [AUTO], DRIVE TRAIN, POLLUTION CONTROL, CHASSIS)

This certificate is obtained upon successful completion of Automotive Specialist I and II and provides the student excellent entry-level skills in a wide range of automotive repair fields.

Units Required: 48.0*All of the following must be completed with a grade of "C" or better:**(Successful completion of Specialist I and II) These classes should be taken in the following order.*

AUTO 51	Automotive Engines and Drive Trains	12.0
AUTO 57	Automotive Brakes, Suspension and Wheel Alignment	12.0
AUTO 79	Tune-up, Pollution Control, and Fuel Systems	12.0
AUTO 80	Automotive Computers, Electronics, and Electrical Systems	12.0

AUTOMOTIVE TRANSMISSION SPECIALIST CERTIFICATE**Units Required: 12.0***All of the following must be completed with a grade of "C" or better:**These classes should be taken in the following order.*

AUTO 55	Standard Transmission Overhaul	5.0
AUTO 56A	Electronic Computer Transmission Controls	2.0
AUTO 56	Automatic Transmission Overhaul	5.0

ENGINE MACHINIST SPECIALIST CERTIFICATE**Units Required: 12.0***All of the following must be completed with a grade of "C" or better:**These classes should be taken in the following order.*

AUTO 52	Cylinder Head Specialist	4.0
AUTO 53	Cylinder Block Specialist	4.0
AUTO 54	Cylinder Assembly Specialist	4.0

4X4 SUSPENSION MODIFICATIONS CERTIFICATE**Units Required: 8.0***All of the following must be completed with a grade of "C" or better:**These classes should be taken in the following order.*

AUTO 50	Introduction to Automotive Technology	4.0
AUTO 86.3	Extreme on and Off Road Suspension	4.0

HEAVY DUTY DIESEL TRUCK LUBRICATION AND INSPECTION SPECIALIST CERTIFICATE**Units Required: 8.0***All of the following must be completed with a grade of "C" or better:*

AUTO 63.0	Intro to Diesel Engine Repair	4.0
AUTO 6.05	Heavy Duty Truck Lube Tech	4.0

HEAVY DUTY TRUCK BRAKE REPAIR SPECIALIST CERTIFICATE		
Units Required: 8.0	<i>All of the following must be completed with a grade of "C" or better:</i>	
AUTO 67	Service & Repair Mobile Hydraulics	4.0
AUTO 68	Heavy Duty Truck Air Brakes	4.0
HEAVY DUTY TRUCK HYDRAULIC TECHNICIAN CERTIFICATE		
Units Required: 14.0	<i>All of the following must be completed with a grade of "C" or better:</i>	
AUTO 65.2	Fundamentals of Heavy Duty Truck & Off Highway Equipment Hydraulics	4.0
AUTO 65.3	Advanced Heavy Duty Truck & Off Highway Equipment Hydraulics	6.0
AUTO 65.4	Service & Repair Mobile Hydraulics	4.0
MOTORCYCLE REPAIR TECHNICIAN CERTIFICATE		
Units Required: 17.0	<i>All of the following must be completed with a grade of "C" or better:</i>	
<i>These classes should be taken in the following order:</i>		
AUTO 71	Motorcycle Engine Repair	4.0
AUTO 73	Motorcycle Tune Up and Maintenance	4.0
AUTO 75	Motorcycle Electrical and Ignition System Repair	4.0
AUTO 74	Motorcycle Fuel and Emission System Repair	4.0
AUTO 72L	Motorcycle Laboratory	1.0
NEW MODEL TECHNOLOGY REPAIR TECHNICIAN		
Units Required: 8.0	<i>All of the following must be completed with a grade of "C" or better:</i>	
AUTO 50	Introduction to Automotive Technology	4.0
AUTO 82.1	New Model Technology	4.0
RECREATIONAL VEHICLE SERVICE AND REPAIR TECHNICIAN CERTIFICATE		
Units Required: 17.0	<i>All of the following must be completed with a grade of "C" or better:</i>	
<i>These classes should be taken in the following order:</i>		
AUTO 91A	Auto Body Repair I	4.0
AUTO 85B	Automotive Electrical/Electronic Systems	1.0
CT 122A	Heating and Air Conditioning any time after AUTO 91A	4.0
CTMF 121B	Advanced Woodworking	3.0
CTMT 122	Electrical Repair	3.0
WELD 50	Introduction to Welding any time after AUTO 91A	2.0
SMALL ENGINE REPAIR SPECIALIST CERTIFICATE		
Units Required: 8.0	<i>All of the following must be completed with a grade of "C" or better:</i>	
AUTO 50	Introduction to Automotive Technology	4.0
AUTO 70	Small Engine Repair	4.0
SMOG INSPECTION TECHNICIAN CERTIFICATE		
Units Required: 11.0	<i>All of the following must be completed with a grade of "C" or better:</i>	
AUTO 85-D	Emission Diagnostic and Repair Training	3.0
AUTO 85.6	Emission Control Training	4.0
AUTO 85.5	Engine Emission Control Training	4.0

Automotive Courses

AUTO 50 INTRODUCTION TO AUTOMOTIVE TECHNOLOGY

Units: 4.0

48-54 hours lecture and 48-54 hours laboratory

(No prerequisites)

This course provides the student with a basic knowledge of automotive systems and components. Information covered will serve as a foundation and prerequisite for advanced automotive classes. Topics covered will include safety, tool and shop equipment uses, industry practices, technician certification, theory and design of the major automotive systems.

AUTO 50.5 INTRODUCTION TO BASIC AUTOMOTIVE SERVICE AND MAINTENANCE

Units: 4.0

64-72 hours lecture

(No prerequisite)

This course covers the basic functions of all the automotive systems as well as key parts of the entire automotive industry. Topics covered will include minor preventive maintenance procedures.

AUTO 51 AUTOMOTIVE ENGINES AND DRIVE TRAINS

Units: 12.0

128-144 hours lecture and 192-216 hours laboratory

(No prerequisite)

This course covers techniques used by the Automotive Industry to diagnose and repair engine and drive train malfunctions, cylinder head, cylinder block, and drive train systems. Instruction will cover the diagnosis and repair of engine and drive train systems, cylinder heads, cylinder blocks, rotating assemblies, and basic drive train as they apply to the automobile.

AUTO 51A ENGINE REPAIR

Units: 4-6.0

48-54 hours lecture and 48-54 hours per unit of laboratory

(No prerequisite)

This course provides the student with the knowledge necessary to diagnose and repair engines. Information covered will include diagnosis and repair of cylinder head and valve train, engine block, lubrication, cooling systems and general engine assembly.

AUTO 55.0 AUTOMOTIVE STANDARD TRANSMISSION AND DIFFERENTIAL OVERHAUL

Units: 4 - 5.0

48-54 hours lecture and 48-54 hours laboratory

(Prerequisite: AUTO 50 with a grade of "C" or better.)

This course covers diagnosis and repair of the components of standard transmission systems, and differential systems, gears, synchronizers, bearings, clutches, and electronic controls. Standard trans-missions and related parts will be disassembled, inspected and determination made of the serviceability of existing parts. The need for replacement parts will be established as the components are disassembled, inspected and reassembled.

AUTO 56.0 AUTOMATIC TRANSMISSION OVERHAUL

Units: 4 - 5.0

48-54 hours lecture and 48-54 hours laboratory

(Prerequisite: AUTO 50 with a grade of "C" or better.)

This course covers diagnosis and repair of the components of automatic transmission systems: clutches, bands, servo valve bodies, hydraulic pumps, cases, governors, torque converters, and electronic controls. Automatic transmissions and related parts will be disassembled, inspected and determination made of the serviceability of existing parts. The need for replacement parts will be established as the components are disassembled, inspected and reassembled.

AUTO 56A TRANSMISSION COMPUTER SYSTEMS

Units: 2.0

24-27 hours of lecture and 24-27 hours laboratory.

(No prerequisite)

This course covers techniques used by the automotive industry to diagnose and repair transmission computer systems. Instruction will cover the diagnosis and repair of runability problems relating to electronic malfunctions of the computer controlled transmission.

AUTO 57.0 AUTOMOTIVE BRAKES, SUSPENSION, AND WHEEL ALIGNMENT

Units: 12.0 | 128-144 hours lecture and 192-216 hours laboratory

(No prerequisite)

This course covers diagnosis and repair and maintenance of the brake and suspension systems; including drum and disc brakes, brake hydraulics, power assist units, front and rear suspension systems, shocks and struts, steering linkages and power steering systems. All aspects of alignments will be covered including two and four wheel and struts on different alignment apparatuses. Maintenance of all parts of the brake and suspension systems will be covered.

AUTO 57.1 AUTOMOTIVE BRAKES, THEORY AND FUNCTION

Units: 3.0 | 48-54 hours lecture

(No prerequisite)

This course covers safety practices, theory, applications, braking systems, and antilock brakes.

AUTO 58 AUTOMOTIVE LUBRICATION TECHNICIAN

Units: 2.0 | 24-27 hours lecture and 24-27 hours laboratory

(No prerequisite)

This course covers techniques used by the Automotive Industry to perform routine preventative maintenance. Instruction will cover changing automotive fluids, lubrication, safety inspections, installing filters and ignition components.

AUTO 59.0 AUTOMOTIVE TIRE TECHNICIAN

Units: 2.0 | 24-27 hours lecture and 24-27 hours laboratory

(No prerequisite)

This course covers techniques used by the automotive industry to perform duties of a tire technician. Instruction will cover brake and suspension inspections, mounting, balancing, and repairing tires.

AUTO 60 AUTOMOTIVE SUSPENSION AND ALIGNMENT

Units: 4.0 | 48-54 hours lecture and 48-54 hours laboratory

(No prerequisite)

This course covers diagnosis and repair of the components of automotive suspension system. All related parts of the suspension and steering are inspected and determination of serviceability is made. Alignment of the front and rear of the vehicles will be covered, both manual and computer alignment.

AUTO 61.0 AUTOMOTIVE BRAKES

Units: 4.0 | 48-54 hours lecture and 48-54 hours laboratory

(No prerequisite. Recommended preparation: AUTO 57.0.)

This course covers diagnosis and repair of the components of automotive brake systems: basic hydraulics, drum brakes, disc brakes, turning drums and rotors, and related parts will be disassembled, inspected and determination made of the serviceability of existing parts. The need for replacement parts will be established as the components are disassembled inspected and reassembled.

AUTO 62 AUTOMOTIVE DETAILING

Units: 2.0 | 16-18 hours lecture and 48-54 hours laboratory

(No prerequisite)

This course provides students with the knowledge and skills necessary to correctly perform an automotive detail. Topics covered will include exterior paint polishing and treatment, interior and upholstery cleaning techniques, proper chemical and equipment usage, and dealership porter responsibilities.

Automotive Courses

AUTO 77 AUTOMOTIVE SERVICE WRITING AND SHOP MANAGEMENT

Units: 3.0 | **48-54 hours laboratory**

(No prerequisite)

This course prepares students to manage an automotive repair shop. Topics covered include work order preparation, parts and labor estimating, parts ordering, office and shop organization, writing a legal work order, sales skills, and customer relations.

AUTO 77.1 AUTOMOTIVE LEADERSHIP AND TEAM BUILDING

Units: 3.0 | **48-54 hours laboratory**

(No prerequisite)

This course provides the student with the knowledge necessary to successfully build a functional automotive team and be an effective automotive team leader. Topics covered will include automotive industry team development, recruitment and retention of team members. The course will also cover automotive industry motivation and compensation and the creation and maintenance of employee policies and procedures handbooks

AUTO 77.2 AUTOMOTIVE SAFETY TRAINING FOR MANAGERS

Units: 3.0 | **48-54 hours laboratory**

(No prerequisite)

This course provides the student with the knowledge necessary to initiate and maintain an effective automotive safety training program in an automotive repair facility. Topics covered will include employee "Right to Know" laws and training requirements, safety audits and facility assessment, hazardous communications guidelines, personal protective equipment, and material handling and storage.

AUTO 77L AUTOMOTIVE SERVICE WRITING AND SHOP MANAGER LABORATORY

Units: 2.0 | **96-108 hours laboratory**

(No prerequisite)

This course prepares students to effectively write automotive service orders and manage an automotive repair shop. Topics covered include labor guide look up and labor calculation, work order preparation, parts and labor estimating, parts ordering, office and shop organization, writing a legal work order, sales skills, and customer relations.

AUTO 79.0 AUTOMOTIVE TUNE-UP, EMISSION CONTROL, AND FUEL SYSTEM

Units: 12.0 | **128-144 hours lecture and 192-216 hours laboratory**

(Prerequisite: AUTO 50 with a grade of "C" or better.)

This course covers techniques used by the automotive industry to diagnose and repair ignition systems, fuel systems, and emission control systems. Instruction will cover the diagnosis and repair of conventional and electronic ignition systems, conventional and feedback carburetors, fuel injection, and emission control devices.

AUTO 79A BASIC TUNE-UP

Units: 2.0 | **24-27 hours lecture and 24-27 hours laboratory**

(No prerequisite)

This course covers techniques used by the Automotive Industry to diagnose and repair fuel and ignition systems. Topics will cover the diagnosis and repair of conventional and electronic ignition systems, fuel systems, and introduction to automotive computers.

AUTO 79B TROUBLE SHOOTING AND REPAIR OF IGNITION AND FUEL SYSTEMS

Units: 4.0 | **48-54 hours lecture and 48-54 hours laboratory**

(No prerequisite)

This course covers techniques used by the automotive industry to diagnose and repair ignition systems and fuel systems. Topics covered included the diagnosis and repair of conventional and electronic ignition systems, conventional and feedback carburetors, along with emission control devices.

AUTO 80.0 AUTOMOTIVE COMPUTERS, ELECTRONICS AND ELECTRICAL SYSTEMS

Units: 12.0

128-144 hours lecture and 192-216 hours laboratory

(Prerequisite: AUTO 50 with a grade of "C" or better.)

This course covers techniques used by the automotive industry to diagnose and repair electrical malfunctions, computer, fuel injection, and electronic ignition systems. Instruction will cover the diagnosis and repair of electronic ignition systems, alternators, starters, computers, and basic electrical and electronic concepts as they apply to the automobile.

AUTO 80.6 INTRODUCTION TO AUTOMOTIVE ELECTRICITY

Units: 4.0

64-72 hours lecture

(No prerequisite)

This course covers electrical theory, basic electricity, electrical safety procedures, electrical diagnostic equipment, and industry approved procedures to diagnose and repair electrical malfunctions in the automobile.

AUTO 80A AUTOMOTIVE COMPUTERS, ELECTRONICS, AND ELECTRICAL SYSTEMS

Units: 4.0

48-54 hours lecture and 48-54 hours laboratory

(No prerequisite)

This course covers techniques used by the automotive industry to diagnose and repair computer and fuel injection systems. Topics covered include the diagnosis and repair of electronic ignition systems, alternators and starters. Basic electrical and electronic concepts as they apply to the automobile.

AUTO 80F FORD DIAGNOSTIC AND REPAIR STRATEGIES

Units: 4.0

48-54 hours lecture and 48-54 hours laboratory

(No prerequisite)

This course covers late-model Ford vehicles. Current factory procedures will be introduced to diagnose and repair OBD-2 computer and emission systems.

AUTO 82.0 AUTOMOTIVE ELECTRICAL REPAIR

Units: 4.0

48-54 hours lecture and 48-54 hours laboratory

(No prerequisite)

This course provides the student with the knowledge necessary to diagnose and repair automotive malfunctions including lighting systems, electrical instruments and accessories, electrical door components, air bags, and alarm systems. Information covered will include electrical fundamentals, test equipment, electrical circuits, electrical malfunctions, wiring diagrams, and electrical diagnosis.

AUTO 85.1 INTRODUCTION TO ENGINE PERFORMANCE THEORY

Units: 3.0

64-72 hours lecture

(No prerequisite)

This course covers engine performance theory and techniques used by the automotive industry to diagnose and repair drive-ability malfunctions.

AUTO 85.5 ENGINE AND EMISSION CONTROL TRAINING

Units: 4.0

48-54 hours lecture and 48-54 hours laboratory

(No prerequisite)

Engine and Emission Control Training is intended to provide students with fundamental knowledge of engine and emission control theory, design and operation. This course satisfies the Bureau of Automotive Repair (BAR) requirements for level one training.

Automotive Courses

AUTO 85.6 EMISSION CONTROL TRAINING

Units: 4.0 | **48-54 hours lecture and 48-54 hours laboratory**

(No prerequisite)

Emission Control Training is intended to provide students with knowledge of emission control theory, design and operation. This course satisfies the Bureau of Automotive Repair (BAR) requirements for level two training

AUTO 85A.1 ADVANCED ENGINE PERFORMANCE THEORY

Units: 3.0 | **48-54 hours lecture**

(No prerequisite)

This course covers engine performance theory and techniques used by the automotive industry to diagnose and repair electrical malfunctions, computer, fuel injection, and electronic ignition systems

AUTO 85D BAR SPECIFIED DIAGNOSTIC AND REPAIR TRAINING

Units: 4.0 | **48-54 hours lecture. and 48-54 hours laboratory**

(No prerequisite)

This course covers information required by the Bureau of Automotive Repair pertaining to diagnosis and repair of emission systems. Topics covered are: safety, electrical, emissions and diagnostic strategies.

AUTO 89.1 INTRODUCTION TO HYBRID VEHICLE TECHNOLOGY

Units: 4.0 | **48-54 hours lecture and 48-54 hours laboratory**

(No prerequisite)

This course introduces hybrid vehicle technology. Topics covered will include electrical basics, batteries, types of hybrid vehicles, and preventive maintenance procedures.

AUTO 89.2 HYBRID VEHICLE MAINTENANCE AND SERVICE

Units: 4.0 | **48-54 hours lecture and 48-54 hours laboratory**

(No prerequisite)

This course addresses hybrid vehicle maintenance and service procedures. Topics covered will include safety, manufacture specific hybrids, diagnostic and repair procedures as they relate to hybrid vehicles.

AUTO 95.10L HYBRID VEHICLE MAINTENANCE AND SERVICE LABORATORY

Units: 1.0 | **48-54 hours lecture and 48-54 hours laboratory**

(No prerequisite)

This course addresses hybrid vehicle maintenance and service procedures. Topics covered will include safety, manufacture specific hybrids, diagnostic and repair procedures as they relate to hybrid vehicles.

AUTO 95A AUTOMOTIVE LABORATORY

Units: 1.0 | **48-54 hours lecture and 48-54 hours laboratory**

(No prerequisite)

A laboratory class to develop skills in engine repair, tune up, emissions, electrical, suspension, brakes, and general maintenance procedures.

AUTO 95A1-L ENGINE REPAIR LABORATORY

Units: 1.0 | **48-54 hours laboratory**

(No prerequisite)

A laboratory class to develop skills in engine rebuilding and repair procedures.

Automotive Courses

AUTO 95A2-L AUTOMATIC TRANSMISSION REPAIR LABORATORY

Units: 1.0 | 48-54 hours laboratory

(No prerequisite)

This laboratory course covers diagnosis and repair of the components of automatic transmission systems.

AUTO 95A3-L STANDARD TRANSMISSION REPAIR LABORATORY

Units: 1.0 | 48-54 hours laboratory

(No prerequisite)

This laboratory course covers diagnosis and repair of the components of standard transmission systems and differential systems.

AUTO 95A4-L AUTOMOTIVE SUSPENSION AND ALIGNMENT LABORATORY

Units: 1.0 | 48-54 hours laboratory

(No prerequisite)

This laboratory course covers diagnosis and repair of the components of the automotive suspension system

AUTO 95A5-L AUTOMOTIVE BRAKES REPAIR LABORATORY

Units: 1.0 | 48-54 hours laboratory

(No prerequisite)

This laboratory course covers diagnosis and repair of the components of the automotive suspension system

AUTO 95A6-L AUTOMOTIVE COMPUTER AND ELECTRONICS LABORATORY

Units: 1.0 | 48-54 hours laboratory

(No prerequisite)

This laboratory course covers techniques used by the automotive industry to diagnose and repair computer and fuel injection systems.

AUTO 95A7-L AUTOMOTIVE HVAC LABORATORY

Units: 1.0 | 48-54 hours laboratory

(No prerequisite)

This laboratory course covers diagnosis and repair of the components of the automotive air-conditioning and heating systems.

AUTO 95A8-L AUTOMOTIVE ENGINE PERFORMANCE LABORATORY

Units: 1.0 | 48-54 hours laboratory

(No prerequisite)

This laboratory course covers the skills needed by the automotive industry to diagnose and repair ignition, emission and fuel systems.

AUTO 95B AUTOMOTIVE LABORATORY

Units: 1.0 | 96-108 hours laboratory

(No prerequisite)

This laboratory course covers the skills needed by the automotive industry to diagnose and repair ignition, emission and fuel systems.

AUTO 95C1-L AUTOMOTIVE SERVICE CONSULTANT LABORATORY

Units: 1.0 | 48-54 hours laboratory

(No prerequisite)

This course prepares students to effectively write automotive service orders and manage an automotive repair shop.

Automotive Courses

AUTO 97.0 AUTOMOTIVE AIR CONDITIONING AND HEATING SYSTEMS

Units: 4.0

48-54 hours lecture and 48-54 hours laboratory

(No prerequisite)

This course covers diagnosis and repair of the components of the automotive air conditioning and heating systems; evaporators, compressors, control valves, condensers, blowers, heater cores, lines and hoses, mechanical and electronic temperature controls. Air conditioning and heating related parts will be disassembled, inspected and determination made of the serviceability of existing parts. The need for re-placement parts will be established as the components are reassembled. Recovery and charging of different systems will be covered from both R-12 and R-134A systems.

AUTO 97.1 AUTOMOTIVE HEATING, VENTILATION, AND AIR CONDITIONING, THEORY AND FUNCTION

Units: 3.0

48-54 hours lecture

(No prerequisite)

This course covers heating, ventilation, and air-conditioning (HVAC) theory, basic electricity, HVAC safety procedures, HVAC diagnostic equipment, and industry approved procedures to diagnose and repair HVAC malfunctions in the automobile.

AUTO 138 COOPERATIVE EDUCATION

See Cooperative Education listing (1-8 units). [CSU](#)



Aviation Maintenance Technology training is offered locally at Southern California Logistics Airport (SCLA). This program includes all classroom and practical training required to prepare for the Federal Aviation Administration (FAA) licensing exams for Airframe and Power Plant Technicians. The program includes the following:

- General Aviation;
- Aviation – Power plant; and
- Aviation – Airframe

For more information about this program including registration for the next class session, go to www.vvc.edu and select Departments, Aviation Maintenance Technology.

Aviation

AVA 50 AVIATION TECHNOLOGY SURVEY

Units: 4.0 | **48-54 hours lecture and 48-54 hours laboratory**

(No prerequisites)

This course is designed to allow interested students the ability to explore aviation maintenance career pathways. This course will focus on principles and practices of modern aircraft maintenance technology.

AVA 51 GENERAL AVIATION 1

Units: 9.5 | **120-135 hours lecture and 96-108 hours laboratory**

(No prerequisites)

This course is designed to prepare students for a career in aviation maintenance technology. Topics include math, basic electricity, basic physics, fluid lines and fittings and materials and processes.

AVA 52 GENERAL AVIATION 2

Units: 9.5 | **120-135 hours lecture and 96-108 hours laboratory**

(Prerequisite: AVA 51 with a grade of 'C' or better, or equivalent experience)

This course is designed to prepare students for a career in aviation maintenance technology. Topics include maintenance and ground operations.

AVA 61 AIRFRAME 1

Units: 9.5 | **96-108 hours lecture and 168-189 hours laboratory**

(Prerequisite: AVA 51 and AVA 52 with a grade of 'C' or better, or equivalent experience)

This course is designed to prepare students for a career in aviation maintenance technology. Topics include aircraft materials (wood, metal, nonmetallic), coverings and finishes, aircraft inspection, assembly and rigging and welding.

AVA 62 AIRFRAME 2

Units: 9.5 | **96-108 hours lecture and 168-189 hours laboratory**

(Prerequisite: AVA 51 and AVA 52 with a grade of 'C' or better, or equivalent experience)

This course is designed to prepare students for a career in aviation maintenance technology. Topics include aircraft atmosphere, communication, navigation, fuel, landing gear, hydraulic, and pneumatic power systems.

AVA 63 AIRFRAME 3

Units: 9.5 | **96-108 hours lecture and 168-189 hours laboratory**

(Prerequisite: AVA 51 and AVA 52 with a grade of 'C' or better, or equivalent experience)

This course is designed to prepare students for a career in aviation maintenance technology. Topics include aircraft electrical systems, positioning and warning systems, ice and rain control systems, and fire protection systems.

Aviation Courses

AVA 71 POWERPLANT 1

Units: 10.5

128-144 hours lecture and 120-135 hours laboratory

(Prerequisite: AVA 51 and AVA 52 with a grade of 'C' or better, or equivalent experience)

This course is designed to prepare students for a career in aviation maintenance technology. Topics include reciprocating engines, turbine engines, and engine inspection.

AVA 72 POWERPLANT 2

Units: 10.5

128-144 hours lecture and 120-135 hours laboratory

(Prerequisite: AVA 51 and AVA 52 with a grade of 'C' or better, or equivalent experience)

This course is designed to prepare students for a career in aviation maintenance technology. Topics include induction and engine airflow systems, engine exhaust and reverser systems, and propellers.

AVA 73 POWERPLANT 3

Units: 10.5

128-144 hours lecture and 120-135 hours laboratory

(Prerequisite: AVA 51 and AVA 52 with a grade of 'C' or better, or equivalent experience)

This course is designed to prepare students for a career in aviation maintenance technology. Topics include engine instrument systems, engine electrical, ignition and starting systems, and engine fuel systems.

Basic Skills

The Basic Skills program consists of several English and Math courses designed to prepare students for English 6 and Math 10 and to allow more advanced students to review core English and Math skills.

The courses offer instruction in both lecture and lab formats, which allow students to receive direct instruction in a classroom setting while also practicing essential skills at their own pace.

To prepare for English 6, students should enroll in **BSKL 3**, Essential Reading and Writing (4 units). Students who place in English 6 or English 50 and are interested in reviewing their grammar skills should enroll in **BSKL 5**, Beginning English Grammar (3 units).

To prepare for Math 10, students should enroll in **BSKL 9**, Essential Mathematics (4 units).

Basic Skills Courses

BSKL 1 READING AND WRITING ONE

Units: 2.0

16-18 hours lecture and 48-54 hours laboratory

(No prerequisite. Pass/No Pass) This course does not apply to the Associate Degree

This course is the first in a series that focuses on reading and writing skills. Students develop their vocabulary base along with grammar and sentence writing skills.

BSKL 1A READING AND WRITING ONE A

Units: 1.0

8-9 hours lecture and 24-27 hours laboratory

(No prerequisite. Pass/No Pass) This course does not apply to the Associate Degree

This course is the first half of the first course in a series that focuses on reading and writing skills. Students develop their vocabulary base along with grammar and sentence writing skills.

BSKL 1B READING AND WRITING ONE B

Units: 1.0

8-9 hours lecture and 24-27 hours laboratory

(No prerequisite. Pass/No Pass) This course does not apply to the Associate Degree

This course is the second half of the first course in a series that focuses on reading and writing skills. Students develop their vocabulary base along with grammar and sentence writing skills.

BSKL 2 READING AND WRITING TWO

Units: 2.0

16-18 hours lecture and 48-54 laboratory

(Prerequisite: BSKL 1. Pass/No Pass) This course does not apply to the Associate Degree.

This course is the second in a series that focuses on reading and writing skills. Students develop their reading comprehension and paragraph writing skills.

BSKL 2A READING AND WRITING TWO A

Units: 1.0

8-9 hours lecture and 24-27 hours laboratory

(No prerequisite. Pass/No Pass) This course does not apply to the Associate Degree

This is a first-half of the second course in a series that further develops reading and writing skills. Students continue to develop their vocabulary base along with grammar and sentence writing skills.

BSKL 2B READING AND WRITING TWO B

Units: 1.0

8-9 hours lecture and 24-27 hours laboratory

(No prerequisite. Pass/No Pass) This course does not apply to the Associate Degree

This is the second-half of the second course in a series that further develops reading and writing skills. Students continue to develop their vocabulary base along with grammar and sentence writing skills.

BSKL 3 ESSENTIAL READING AND WRITING

Units: 4.0 | **48-54 hours lecture and 48-54 hours laboratory**

(No prerequisite. Pass/No Pass) This course does not apply to the Associate Degree

The course focuses on essential reading and writing skills and prepares students to begin their academic or vocational college careers.

BSKL 5 ESSENTIAL ENGLISH GRAMMAR

Units: 4.0 | **48-54 hours lecture and 48-54 hours laboratory**

(No prerequisite. Pass/No Pass) This course does not apply to the Associate Degree

The course covers core concepts in English grammar and includes such topics as subjects and verbs, common usage errors, clauses and phrases and punctuation.

BSKL 6 MATH OPERATIONS WITH WHOLE NUMBERS

Units: 1.0 | **8-9 hours lecture and 24-27 hours laboratory**

(No prerequisite. Pass/No Pass) This course does not apply to the Associate Degree

This math course will review computations (addition, subtraction, multiplication, division) with whole numbers. The course also introduces translations of verbal problems into mathematical statements and includes instruction in rounding, approximation, and numerical estimation.

BSKL 7 MATH OPERATIONS WITH RATIONAL NUMBERS

Units: 1.0 | **8-9 hours lecture and 24-27 hours laboratory**

(Prerequisite: BSKL 6 with a minimum grade of 'C' or equivalent.) This course does not apply to the Associate Degree

This math course will review computations (addition, subtraction, multiplication, division) with fractions. The course also introduces verbal problems that involve fractions and mixed numbers.

BSKL 8 MATH OPERATIONS WITH DECIMALS

Units: 1.0 | **8-9 hours lecture and 24-27 hours laboratory**

(Prerequisite: BSKL 6 with a minimum grade of 'C' or equivalent.) This course does not apply to the Associate Degree

This math course will review computations (addition, subtraction, multiplication, division) with decimals. The course also introduces verbal problems that involve decimals. Percentages, ratios, and proportions are also introduced.

BSKL 9 ESSENTIAL MATHEMATICS

Units: 4.0 | **48-54 hours lecture and 48-54 hours laboratory**

(No prerequisite. Pass/No Pass) This course does not apply to the Associate Degree

The course focuses on essential mathematical skills in arithmetic, fractions, decimals and word problems and prepares students to begin their college careers. Percentages, ratios, and proportions are also introduced.

Biological Science

The biological science courses are designed to meet a variety of student requirements. Some courses are designed to fulfill the laboratory general education requirement.

Biology and pre-professional majors will find rigorous, comprehensive classes. Other classes, including non-laboratory, are offered for non-majors and those with special interest areas. A certificate in Biotechnology is also offered.

Career Opportunities (May require advanced degree)

Environmental Analyst, Healthcare, Life Science Education, Forensic Science, Biological Research

Faculty

David Gibbs | Hinrich Kaiser | Jessica Gibbs | Lisa Harvey | Naveen Jalota | Pam MacKay

Degrees and Certificates Awarded

Associate in Arts, Liberal Arts (Math/Science)

Associate in Science, Math/Science

A student receiving a degree or certificate in this field will be able to:

- Demonstrate a breadth of knowledge in biological concepts and principles.
- Communicate scientifically to peers and to the community.
- Apply the scientific method to discover the living world around us and recognize its value to human advancements in health and impact on the environment.

Associate Degree

No associate degree offered with a major in Biological Science. Biology courses may be used to fulfill requirements for an Associate in Science degree with a major in Math/Science. Biology courses may also be used to fulfill requirements for an Associate in Arts degree with a major in Liberal Arts. See Math/Science or Liberal Arts for degree requirements for these majors. BIOL 138 (Cooperative Education) may be used as Elective credit but may not be used to fulfill major requirements.

Transfer

For the most up-to-date information on these programs and others, visit www.assist.org. Please stop by the Transfer Center in Building 55 or make an appointment with a counselor if you have questions.

- **California State University, San Bernardino:** *Biology major*
- **University of California, Riverside:** *Biology major*

Biological Science Courses

BIOL 98 A/B COMPARATIVE NATURAL HISTORY STUDIES

Units: 3-4.0

16-18 lecture hours plus 96-108 hours laboratory for each unit

(No prerequisite. Grade Option)

This course offers students the opportunity to learn first-hand about plants, animals, ecology, geography, and conservation policies of the trip destination, which is most frequently a foreign country. Pre-trip lectures will include slide shows of organisms you may see and previews of activities and adventures you will experience on the natural history field trip. Trips vary in length from 9 days to 2.5 weeks. Biology majors who wish to participate in a CSU transferable course with more rigorous course requirements and comprehensive biodiversity studies may wish to enroll in BIOL 250A, Ecosystem Field Biology which is offered concurrently.

BIOL 100 GENERAL BIOLOGY

Units: 4.0

CSU, UC

48-54 hours lecture and 48-54 hours laboratory

(UC credit limitation) (No prerequisite)

This is an introductory course with emphasis on the scientific method, analysis of scientific data, metric system, current biological problems, cellular biology, genetics and heredity, classification and systematics, evolution, ecology, behavior and environmental issues. The laboratory will include a survey of the morphological characteristics of various organisms on this planet.

BIOL 100H GENERAL BIOLOGY HONORS**Units: 4.0** **CSU, UC** | **48-54 hours lecture and 48-54 hours laboratory***(No prerequisite)*

This is an introductory course for honors students emphasizing the scientific method, analysis of scientific data, the use of scientific units, cellular biology, genetics and heredity, classification and systematics, evolution, ecology, environmental issues, and current topics in biology. The laboratory complements the lecture topics via direct experimentation, simulations, and video, including a survey of Earth's biological diversity. Specific topics will be emphasized through the use of reading assignments and the preparation of a short research paper.

BIOL 107 INTRODUCTION TO HUMAN BIOLOGY**Units: 4.0** **CSU** | **48-54 hours lecture and 48-54 hours laboratory***(No prerequisite)*

An introduction to biological principles with a human perspective. Emphasis on cellular structure and function, organ systems, the concept of homeostasis, adaptation, cellular and population genetics, and the interaction of the human species with the ecosystem.

BIOL 110 INTRODUCTION TO HUMAN NUTRITION**Units: 3.0** **CSU** | **48-54 hours lecture***(Prerequisite: BIOL 231, and CHEM 100, CHEM 100H or CHEM 206. Recommended Preparation: ENGL 101.0 or ENGL H101.0)*

Introduction to the medical aspects of nutrition, intended for students pursuing a career in health care. Biological function and chemical classification of nutrients. Nutritional needs throughout the lifespan. Effects of nutritional deficiencies and excesses. Recommended nutrient intakes and the role of diet in the development of chronic disease.

BIOL 114 INTRODUCTION TO ECOLOGY**Units: 3.0** **CSU, UC** | **48-54 hours lecture***(No prerequisite)*

The first half of this course covers basic ecological principles about demography and population growth, species interactions and food webs, introduction to photosynthesis and metabolism, and nutrient cycling. The remainder of the course emphasizes environmental problems and how they relate to ecological principles. Topics include global biodiversity and endangered species, water and air pollution, alternate energy sources, alternative agriculture and pesticides, and other topics of local interest. Although this course has no laboratory, some outdoor activities and short-distance field trips during class time may be required.

BIOL 118 PRINCIPLES OF HEREDITY**Units: 3.0** **CSU, UC** | **48-54 hours lecture***(No prerequisite)*

A survey of Mendelian inheritance, quantitative traits, and population genetics with special emphasis on human inheritance and family pedigree analysis. Also includes sections on DNA technology, immune genetics and genetics of cancer. This course stresses development of critical thinking and problem solving skills.

BIOL 138 COOPERATIVE EDUCATIONSee Cooperative Education listing (1-8 units). **CSU****BIOL 145 FORENSIC PATHOLOGY****Units: 3.0** **CSU** | **48-54 hours lecture***(No prerequisite)*

The scientific techniques used in forensic pathology investigations of regional injuries and death including firearm, transportation and physical injuries, trauma and disease, child abuse, sexual assaults, diagnosis of rape, pregnancy, abortion and delivery, infanticide, asphyxial and drug deaths. The course will cover forensic medical evidence and records for the court.

BIOL 148 SPECIAL TOPICS: PROJECTS IN BIOLOGY**Units: 3.0** **CSU** | **96-108 Individualized Instruction***(No prerequisite. Grade Option.) May be taken three times*

Covers specialized topics of current interest to advanced undergraduates in Biological Sciences. Consult the department for details about current offerings. Instructor consent required.

BIOL 149 INDEPENDENT STUDY**Units: 1-3.0** **CSU** | **54-162 hours lecture***See Independent Study listing (1-3 units).*

BIOL 201 BIOLOGY OF CELLS**Units: 5.0** **CSU, UC** | **48-54 hours lecture and 96-108 hours laboratory***(Prerequisite: MATH 90 or higher with a grade "C" or better. Prerequisite or co-requisite: CHEM 100 or CHEM 201 with a minimum grade of 'C' or better.)*

This course will provide students with a comprehensive introduction to the biological principles at the cellular and molecular level. Emphasis will be placed on the scientific method, molecular biology, biochemistry, structure and function of cells, cellular reproduction and Mendelian and molecular genetics. This course is designed for pre-professional and biology majors but is open to all students.

BIOL 202 BIOLOGY OF ORGANISMS**Units: 5.0** **CSU, UC** | **48-54 hours lecture and 96-108 hours laboratory***(Prerequisite: MATH 90 or higher with a grade "C" or better).*

This course provides students with a comprehensive introduction to the diversity of biological organisms. Emphasis is placed on the origin of life, evolutionary relationships among groups of organisms and the basic anatomy and physiology of the major groups of living organisms and an introduction to the principles of ecology. Biology majors should also take Biology 201.

BIOL 203 POPULATION AND ENVIRONMENTAL BIOLOGY**Units: 4.0** **CSU, UC** | **48-54 hours lecture and 48-54 hours laboratory***(Prerequisite: MATH 90 minimum grade C.)*

This rigorous course is an introduction to the structure and organization of populations, communities and ecosystems. Emphasis will be on demography, population growth, life history traits, extinction, species interactions and behaviors, ecosystem dynamics and evolution, as well as selected current environmental issues. Mathematical modeling, a difficult yet important aspect of population and community ecology, will also be addressed. Students will participate in field laboratories, use statistics to analyze data and compose scientific papers. This course is designed for biological science majors, but is open to all students.

BIOL 210 BIOLOGY OF PLANTS**Units: 5.0** **CSU** | **48-54 hours lecture and 96-108 hours laboratory***(Prerequisite: BIOL 100 or BIOL H100, BIOL 201 with a grade of "C" or better.)*

This rigorous course will provide students with a comprehensive introduction to botanical principles from the cellular and molecular level to the functions of plants in ecosystems. Emphasis will be placed on plant molecular biology, biochemistry, and physiology, especially photosynthesis (C3, C4, and CAM), cell respiration, and water relations. The structure and function of plant cells, plant anatomy, plant reproduction, plant growth and development, Mendelian and molecular genetics, and plant systematics and evolution will also be covered. This course is designed for pre-professional and biology majors, but is open to all students. The course will stress the use of the scientific method, critical thinking, and problem-solving skills. Up to two field trips may be required.

BIOL 211 HUMAN ANATOMY**Units: 5.0** **CSU, UC** | **48-54 hours lecture and 96-108 hours laboratory***(UC credit limitation). (Prerequisite: BIOL 100 or BIOL H100, BIOL 107, or BIOL 201 with a grade of "C" or better.)*

An introduction to the gross and microscopic anatomy of the human body. Lab includes dissection of cat, sheep eye, kidney, heart, and larynx. Lab also includes demonstration on assorted anatomical models including demonstrations on human cadavers when available. Lecture covers cells, tissues, and the major human systems such as the integumentary, skeletal, muscular, nervous, endocrine, cardiovascular, respiratory, urinary, and reproductive.

BIOL 213 SEXUALLY TRANSMITTED DISEASES**Units: 3.0** **CSU** | **48-54 hours lecture***(No prerequisite)*

This course will provide an understanding of the history and pathogenesis of the most prominent sexually transmitted diseases. Emphasis will be placed on the biological agent, epidemiology, diagnosis and treatment of the disease. Vaccine development and current treatments will also be examined.

BIOL 214 VERTEBRATE ZOOLOGY**Units: 4.0** **CSU** **48-54 hours lecture and 48-54 hours laboratory***(Prerequisite: BIOL 100, or H100 or 201 with a grade of "C" or better)*

This rigorous course provides students with a comprehensive introduction to the vertebrates by examining comparative vertebrate morphology, development, and behavior from an evolutionary perspective. The lectures present an overview of the major vertebrate groups, including fish, amphibians, reptiles, birds, and mammals. Critical analyses of current controversies in the study of vertebrate evolution are also discussed, as well as human impacts to vertebrate species and their environments. Lab work includes examining living and preserved specimens (including dissections), providing the opportunity to examine the structure of organ systems and adaptations to the environment. Several local field trips are taken to study vertebrates in the wild and in captivity. This course, which stresses critical thinking and problem-solving skills, is designed for pre-professional and biology majors, but it is open to all students.

BIOL 215 HUMAN GROSS ANATOMY**Units: 4.0** **CSU** **48-54 hours lecture and 48-54 hours laboratory***(Prerequisite: BIOL 211 with a grade of "C" or better.)*

An advanced anatomy class that utilizes a regional approach to the study of the thorax, abdomen, pelvis, back, extremities, head and neck. Lecture will include medical/clinical applications and case studies on these regions. Laboratory includes hands on group dissection on a whole cadaver; as well as work on a high-level anatomy software program.

BIOL 221 GENERAL MICROBIOLOGY**Units: 5.0** **CSU, UC** **48-54 hours lecture and 96-108 hours laboratory***(Prerequisites: BIOL 100 or BIOL 100H, 107 or 201; CHEM 100 or CHEM 100H, or CHEM 201; all completed with a grade of "C" or better.)*

Introduction to bacteria, viruses, and parasitic forms of protozoa, helminths, and fungi. Examination of morphological, physiological, and epidemiological characteristics of these organisms and of the immune response produced by their hosts.

BIOL 231 HUMAN PHYSIOLOGY**Units: 5.0** **CSU, UC** **48-54 hours lecture and 96-108 hours laboratory***(Prerequisites: BIOL 100 or BIOL 100H, or BIOL 107, or BIOL 201; and BIOL 211; CHEM 100 or CHEM 100H, or CHEM 201; all completed with a grade of "C" or better.)*

An introduction to general physiology with emphasis on the functioning of the human body. Included in the topics to be covered are biochemical aspects of cell homeostasis. The laboratory will include demonstrations and experiments to support basic physiological concepts. Included are experiments selected specifically for instruction in the interpretation of physiological tests and diagnostic testing procedures.

BIOL 233 PATHOPHYSIOLOGY**Units: 3.0** **CSU** **48-54 hours lecture and 96-108 hours laboratory***(Prerequisite: BIOL 231 with a grade of "C" or better.)*

This course is designed to promote understanding and application of fundamental disease processes in clinical settings. General concepts of disease, including etiology, pathogenesis, morphology and clinical significance are discussed. General pathophysiology concepts include: cell injury, necrosis, inflammation, wound healing and neoplasia. These concepts are applied in a systems-oriented approach to disease processes affecting musculoskeletal, cardiopulmonary, renal, nervous, gastrointestinal, immune, hematological and endocrine systems.

BIOL 250A ECOSYSTEM FIELD BIOLOGY**Units: 3.0** **CSU** **16-18 hours lecture and 96-108 hours laboratory***(Prerequisite: BIOL 100, BIOL 100H or equivalent. Grade Option)*

This course lets students experience various ecosystems from a fieldwork and research perspective. Students will learn research techniques hands-on from basic specimen collecting, species identification, and data gathering in the field to data analysis and scientific writing and will apply these in biodiversity surveys of terrestrial or aquatic habitats or both. An emphasis will be placed on amphibians and reptiles, or plant life, or birds, or mammals, or a combination of these (depending on the specialty of the instructor) and adaptations to life in tropical or other ecosystems. Pre-trip lectures will include information about habitats and organisms of the destination country, as well as previews of activities and adventures you will experience on the field trip. Trips vary in length from 9 days to 2.5 weeks. This course is intended for biology majors but is open to all students. Non-majors who wish to participate with less rigorous course requirements may wish to enroll in BIOL 98, Comparative Natural History Studies, which is offered concurrently.

BIOL 295H UNDERGRADUATE RESEARCH I – SCIENTIFIC COMMUNICATION

Units: 3.0 **CSU** | 48-54 hours lecture

(Prerequisites: Prerequisite: BIOL 100, 100H, BIOL 107 or BIOL 201; minimum grade C.)

If the goal of science is to contribute to our understanding of the natural world, then the goal of scientific writing is to communicate that understanding with precision, accuracy, and economy. In this course, you will develop your skills as a writer of scientific research, skills that will contribute to your learning of course material and to creating your identity as a scientist. You will explore the genre of the research article and its components and develop an understanding of the material. In addition, you will develop your skills as a writer, reviser, and editor—working with your peers and your instructor—and, ultimately, develop a solid foundation for writing your future research work.

BIOL 296H UNDERGRADUATE RESEARCH II – EXPERIMENTAL DESIGN

Units: 4.0 **CSU** | 48-54 hours lecture and 48-54 hours laboratory

(Prerequisites: BIOL 100 or 100H, BIOL 107, BIOL 201, BIOL 202, BIOL 221 or BIOL 231; minimum grade C.)

This course allows students to select a research project, write a literature review and research proposal, conduct preliminary experiments, and write a research report. Research methods and experimental design will be emphasized, including the location and study of articles from the professional literature. Undergraduate research helps students develop valuable skills, and provides students with an opportunity to apply scientific knowledge in the context of “real world” problems. Participation will also open up opportunities for students to take part in analyzing data and conducting field research.

Business

Degrees and Certificates Awarded

Associate in Science, Business

Associate Degree

Students may earn an Associate in Science degree with a major in general Business by completing a minimum of 18 units from any certificate offered in the departments of Business Administration, Business Education Technologies, and Business Real Estate and Escrow or from a blend of courses from any of these departments or certificates.

The minimum 18 units for the general Business major may therefore come from any of the following:

ALDH 80, 81, 82, 139, **CIS** 101, **ECON** 101, 102, **MATH** 105, 120

Any Business Administration course except **BADM**138

Any Business Education Technology course except **BET** 138

Any Business Escrow course except **BESC** 138

Any Business Real Estate course except **BRE** 138

Students may wish to consider majoring in Business Administration, Business Education Technologies, or Business Real Estate and Escrow rather than general Business, in order to assure a stronger curriculum base.

Transfer

See *Business Administration* or *Business Education Technologies* for transfer requirements.

Business Administration

The Business Administration Department offers a variety of courses in business which allows a student to comply with the lower-division requirements for transfer to university level programs. Courses are also offered which allow the student to prepare for career entry-level positions and for upgrading of job skills for the already career-oriented student.

The department offers two certificates: a Management Certificate and Bookkeeping I Certificate. The Certificates are designed for those students interested in entering the field of business or for those who are currently working and would like to upgrade their business skills. Students completing the Management Certificate will have entry-level management knowledge and skills. Students completing the Bookkeeping I Certificate will have entry-level bookkeeping/accounting clerk skills. These certificates will also indicate that the student has completed a series of courses for skill upgrading for those already employed.

In addition to the certificates, students may also earn an Associate of Science Degree in Business Administration. Many of the Business Administration Department courses are offered Online via the Internet, allowing a student to earn the Management Certificate and/or the AS Degree through distance education. See the current Schedule of Classes for a listing of Online classes.

Those students planning to transfer to an upper-division institution should select their courses with the assistance of a counselor since each transfer institution has unique requirements.

Career Opportunities

Positions from entry-level to mid-management may be reasonable expectations upon completion of either the Degree or the Certificate programs in the fields of retailing, merchandising, service-related businesses, bookkeeping, and manufacturing firms. Some possible position titles include:

Accounting Clerk/Bookkeeper, Administrative Assistant, Department Manager, Human Resource Manager, Marketing Manager, Merchandise Buyer, Merchandise Manager, Office Manager, Purchasing Management, Salesperson, Store Manager

Faculty

Peter Allan - Emeritus | David Hollomon | O. Odell Moon | Henry Young

Degrees and Certificates Awarded

Associate in Science, Business Administration
Management Certificate

Bookkeeping I Certificate

A student receiving a degree or certificate in this field will be able to:

- Effectively use various channels of communication.
- Successfully solve business related mathematical computations.
- Apply ethical principles (behavior) in a business environment.
- Demonstrate appropriate human relation skills in a work environment.
- Describe how the nature of management varies at different organizational levels.
- Demonstrate entry-level competence in recognizing and applying accounting principles and concepts to record and interpret business transactions.
- Perform financial and microcomputer accounting activities.

Associate Degree

To earn an Associate in Science degree with a major in Business Administration, complete a minimum of 18 units from any of the certificate requirements or from any Business Administration courses and meet all Victor Valley College graduation requirements. **BADM 138** (Cooperative Education) may be used as Elective credit but may not be used to fulfill major requirements.

Business Administration

Transfer

For the most up-to-date information on these programs and others, visit www.assist.org. Please stop by the Transfer Center in Building 55 or make an appointment with a counselor if you have questions.

- **California State University, San Bernardino:** *Administration major*

Complete the following courses prior to transfer if possible: BADM 101 or 103; 102 or 104; 118; ECON 101, 102; CIS 101; MATH 105, 120. Additional classes may be required in some concentrations.

- **University of California, Riverside:** *Business Administration major*

Complete the following courses prior to transfer if possible: BADM 100; 101 or 103; CIS 101; ECON 101, 102; Math 120, 226.

Local Bachelors Programs

For information on the following programs located in the High Desert, please visit: www.vvc.edu/offices/guidance and counseling/ and select "Counseling Information Sheets":

- **Azusa Pacific University, High Desert Regional Center:**

Organizational Leadership major

- **Brandman University, Victor Valley Campus:**

Business Administration major

Organizational Leadership major

- **University of La Verne, High Desert Campus**

Business Administration major

Organizational Management major

Public Administration major

BOOKKEEPING I CERTIFICATE

The Bookkeeping I Certificate is designed to give the student entry-level skills as an accounting clerk or bookkeeper. These skills include the ability to sort, record, and file accounting data, as well as perform general accounting tasks and assist in the processes of summarizing and analyzing accounting information, both manually and using a computerized accounting program.

Units Required: 16.0 | *All of the following must be completed:*

BADM 106	Accounting Software Applications I	2.0
BADM 107	Accounting Software Applications II	2.0
BADM 100	Introduction to Business Organization	3.0
BADM 142	Business Mathematics	3.0
BADM 50	Applied Accounting A	3.0
BADM 51	Applied Accounting B	3.0

MANAGEMENT CERTIFICATE

The Management Certificate will give the student basic skills and education to become an entry-level manager in retailing, merchandising, service-related businesses, and manufacturing firms.

Note: English 101 is strongly recommended for success in the required classes.

Units Required: 31.0 | *All of the following must be completed:*

Group I - All of the following must be completed:

BADM 101	Financial Accounting (or BADM 103 Financial Accounting Fundamentals)	4.0
BADM 110	Principles of Management	3.0
BADM 117	Legal Environment of Business	3.0
BADM 100	Introduction to Business Organizations	3.0
BADM 142	Business Mathematics	3.0
BADM 144	Business Communications	3.0
CIS 101	Computer Literacy	4.0

Group II - One of the following must be completed:

BADM 112	Introduction to Marketing	3.0
BADM 122	Small Business Management	3.0

*Group III - One of the following must be completed: **Note:** Math 90 is a prerequisite*

ECON 101	Principles of Economics : Macro	3.0
ECON 102	Principles of Economics : Micro	3.0

Group IV - One of the following must be completed:

BADM 109	Human Resource Management	3.0
BADM 116	Human Relations in Business	3.0
BADM 52	Elements of Supervision	3.0

Business Administration Courses

BADM 50 APPLIED ACCOUNTING I

Units: 3.0 | 48-54 hours lecture

(No prerequisites)

Introduction to the bookkeeping problems of a small business enterprise for both merchandising and service-type organization. Emphasis on the development of skills for both cash and accrual methods of recording, including procedures for completion of an accounting cycle. Attention is given to special journals, subsidiary ledgers, and payroll and control systems.

BADM 51 APPLIED ACCOUNTING II

Units: 3.0 | 48-54 hours lecture

(No prerequisites)

Continuation of bookkeeping procedures with special emphasis on the development of skills in the valuation of assets, business taxes, accruals and deferrals, preparation of financial statements, and payroll tax analysis.

BADM 52 ELEMENTS OF SUPERVISION

Units: 3.0 | 48-54 hours lecture

(No prerequisites)

This course is designed to introduce the student to the concepts of effectively supervising employees. Students will be introduced to the elements of directing the work of others and the specific skills required for goal setting, budgeting, scheduling, delegating, interviewing, negotiation, handling grievances, counseling employees, and performance evaluations.

BADM 100 INTRODUCTION TO BUSINESS ORGANIZATIONS

Units: 3.0 | **CSU, UC** 48-54 hours lecture

(No prerequisites)

A survey course designed to introduce the student to contemporary issues and principles of business, as well as the different business disciplines a student may be interested in pursuing as a career. These areas include management, marketing, accounting, finance, human resource management, and entrepreneurship. In addition, other topics include the global dimension of business, the various forms of business ownership, teamwork, securities, ethics and social responsibility, and economic challenges facing the 21st century. 48-54 hours lecture.

BADM 101 FINANCIAL ACCOUNTING

Units: 4.0 | **CSU, UC** 48-54 hours lecture

(UC credit limitation). (No prerequisite)

This introductory financial accounting course provides instruction in the theory and practice of accounting applicable to recording, summarizing, and reporting of business transactions for external uses. Topics include coverage of asset valuation, revenue and expense recognition, and appropriate accounting methods for long term assets, liability, and capital accounts. Additional areas of coverage include financial statement and ratio analysis. The course includes application of general ledger software as well as Microsoft Excel programs. This course is required for business majors preparing for and planning to transfer to a four year college or university.

BADM 102 MANAGERIAL ACCOUNTING

Units: 4.0 | **CSU, UC** 64-72 hours lecture

(UC credit limitation). (No prerequisite)

This course is the study of theory and practices of managerial accounting and organizational quantitative analysis with decision making. Special emphasis is placed on product and process costing, responsibility accounting, break even analysis and master budgeting.

BADM 103 FINANCIAL ACCOUNTING FUNDAMENTALS

Units: 3.0 | **CSU, UC** 48-54 hours lecture

(UC credit limitation). (No prerequisite)

This course is the study of accounting as an information system, examining why it is important and how it is used by investors, creditors, and others to make decisions. The course covers the accounting information system, including recording and reporting of business transactions with a focus on the accounting cycle, the application of generally accepted accounting principles, the financial statements, and statement analysis. Includes issues relating to asset, liability, and equity valuation, revenue and expense recognition, cash flow, internal controls, and ethics.

BADM 104 PRINCIPLES OF ACCOUNTING**Units: 3.0** CSU, UC | 48-54 hours lecture*(UC credit limitation). (No prerequisite)*

This is the study of how managers use accounting information in decision-making, planning, directing and controlling operations. Focuses on cost terms and concepts, cost behavior, cost structure and cost-volume-profit analysis. Includes issues related to absorption and activity based costing systems. Additional coverage on performance analysis of manufacturing and service organizations.

BADM 106 ACCOUNTING SOFTWARE APPLICATIONS PART A**Units: 2.0** CSU | 24-27 hours lecture and 24-27 hours laboratory*(No prerequisite)*

Students will learn the concepts of applying accounting software designed for small businesses. This includes entering data, processing data, creating and interpreting financial reports / statements.

BADM 107 ACCOUNTING SOFTWARE APPLICATIONS PART B**Units: 2.0** CSU | 24-27 hours lecture and 24-27 hours laboratory*(No prerequisite)*

This course is intended to be a continuation and expansion on accounting procedures covered in BADM 106. Topics covered include setting up a business accounting system including customers, vendors, and accounts, payroll, cash and accrual systems, inventory control, banking, budgeting, taxation, financing and investing. Students will be using small business accounting software.

BADM 109 HUMAN RESOURCE MANAGEMENT**Units: 3.0** CSU | 48-54 hours lecture*(No prerequisite)*

This introductory course is designed to acquaint the student with the important functions performed by the human resource department in a business organization. These functions include recruiting, staffing, training and development, compensation, strategic human resource planning, personnel evaluation, and management-labor relations. Other topics include global issues, the legal environment, EEO, sexual harassment, and design of work. This course is for the managerial candidate, for those who have not had formal management training, or for the individual who is currently or interested in working in a human resource department.

BADM 110 PRINCIPLES OF MANAGEMENT**Units: 3.0** CSU | 48-54 hours lecture*(No prerequisite)*

This is an introductory course to the management functions of planning, organizing, leading and controlling. The concepts of corporate culture, the impact of the external environment, business ethics and social responsibility, motivation, communication and teamwork, globalization, and quality control are a few of the topics covered. This course is designed for the managerial candidate or for the individual who has worked but not had formal training in business management.

BADM 112 INTRODUCTION TO MARKETING**Units: 3.0** CSU | 48-54 hours lecture*(No prerequisite)*

This course is an introduction to contemporary marketing principles. Included in this course will be relationship marketing, the global dimension of marketing, e-commerce, marketing plan development, research, market segmentation, product strategy, distribution, promotional, and pricing strategies.

BADM 116 HUMAN RELATIONS IN BUSINESS**Units: 3.0** **CSU** | 48-54 hours lecture*(No prerequisite)*

Human relation skills mean interactions among people and represent the single biggest reason for career success and failure. This course provides a clear understanding of human relation concepts, the application of human relation concepts for critical thinking in the business world, and the ability to increase the student's development of human relation skills.

BADM 117 LEGAL ENVIRONMENT OF BUSINESS**Units: 3.0** **CSU, UC** | 48-54 hours lecture*(UC credit limitation) (No prerequisite)*

The study of the American legal system and principles of law as applies to business. Course content includes the legal environment of business, nature and source of law, court systems, dispute resolution, common and statutory law, Constitutional law, administrative agencies, torts and business torts, contract law, and the Uniform Commercial Code as it relates to the sale of goods. Additionally, the legal forms of business will be addressed as to the formation, operation, and termination of proprietorships, partnerships, and corporations.

BADM 118 BUSINESS LAW**Units: 3.0** **CSU, UC** | 48-54 hours lecture*(UC credit limitation) (No prerequisite)*

The study of business law, both case and statutory, as it applies to the Uniform Commercial Code dealing with negotiable instruments; secured transactions and bankruptcy; employment law and agency; property, real and personal, to include bailments; and governmental agencies' regulation of business to include antitrust and fair business practices.

BADM 122 SMALL BUSINESS MANAGEMENT**Units: 3.0** **CSU** | 48-54 hours lecture*(No prerequisite)*

An introduction to contemporary management techniques used by small businesses in the free enterprise system. The course focuses on entrepreneurial opportunities, developing a business plan for a planned or existing small business, small business marketing, operations, and financial management.

BADM 138 COOPERATIVE EDUCATIONSee Cooperative Education listing (1-8 units) **CSU****BADM 142 BUSINESS MATHEMATICS****Units: 3.0** **CSU** | 48-54 hours lecture*(No prerequisite)*

An introduction to a variety of business computations and applications such as percents, payroll, markup/markdown, cash and trade discounts, simple and compound interest, annuities, credit, mortgages, financial statements and analysis, inventory, depreciation, taxes and securities.

BADM 144 BUSINESS COMMUNICATIONS**Units: 3.0** **CSU** | 48-54 hours lecture*(No prerequisite. Grade Option)*

This course studies the principles and role of business communication and the need for proficient, legal, and ethical communication skills within current, professional, diverse, technological, and global environments. Emphasis is placed on verbal, nonverbal, and written communication to include persuasive, analytical, business letters, memorandums, and reports. The course also covers resumes and other employment-related correspondence. Students will develop planning, organizing, and outlining skills, as well as editing proficiency. Evaluates grammar skills and improves writing style.

BADM 148 SPECIAL TOPICSSee Special Topics listing (Variable units) **CSU****BADM 149 INDEPENDENT STUDY**See Independent Study listing (1-3 units) **CSU**

Business Education Technologies

The study of Business Education Technologies is designed to prepare students for a variety of careers in high-tech business offices. Transfer level courses are available for students preparing for a bachelor's degree. The Associate in Science degree and Certificates of Achievement and Career Preparation are awarded.

Career Opportunities

Administrative Assistant, Data Entry, Desktop Publishing, Executive Secretary, General Clerk, Office Manager, Receptionist, Stenographer, Teacher, Typist, Transcription Machine Operator

Faculty

Barbara Becker | Becky Palmer - Emeritus

Degrees and Certificates Awarded

Associate in Science, Business Education Technologies
Computer Systems I Certificate
Data Typist Certificate
Medical Office Certificate
Spreadsheet Processor Certificate

Administrative Assistant Certificate
Computer Systems II Certificate
Legal Office Certificate
Office Services Certificate
Word Processor Certificate

A student receiving a degree or certificate in this field will be able to:

- Demonstrate the ability to use software, and peripheral components at their own direction in a business environment.
- Implement and relate skills to communicate and produce professional business documents in an office environment.
- Demonstrate the ability to competently use a wide variety of office equipment.
- Demonstrate general research standards to analyze Online documentation to produce and integrate material.
- Demonstrate proper techniques to complete tasks thoroughly and precisely.

Associate Degree

To earn an Associate in Science degree with a major in Business Education Technologies, complete 18 units from any of the certificate requirements or from any Business Education Technologies courses, and meet all Victor Valley College graduation requirements. BET 138 (Cooperative Education) may be used as Elective credit but may not be used to fulfill major requirements.

Transfer

Not usually a transfer major. Some Business Education Technologies courses fulfill subject credit requirements, but most transfer as electives. (Students pursuing a bachelor's degree in Business Administration should note that Business Education Technologies courses will typically not fulfill major requirements for transfer. See Business Administration for transfer requirements for that degree.)

The following CSU campuses offer a B.S. degree in Business Education for students who plan to teach business in grades 7-12:

- California State University

Los Angeles | Northridge

For further transferable courses, it is recommended to meet with your Counselor, and visit www.assist.org.

Business Education Technologies

ADMINISTRATIVE ASSISTANT CERTIFICATE

This curriculum is designed to prepare students for employment in business/industry/government for higher-level executives. Duties include office supervision, word processing, maintaining office records and accounts.

Units Required: 34.0

All of the following must be completed:

Group I - All of the following must be completed (28 units):

BET 100	Introduction to Computers	2.0
BET 104	Beginning Word Processing/Typing: Word for Windows A/B/C	3.0
BET 107	Internet Level I	1.0
BET 124	Records Management	2.0
BET 136	Career Applications for Word Processing	3.0
BET 141A	Operating System: Windows	1.0
BET 142	Office Technologies and Procedures	3.0
BET 74	Office Machine Calculations	2.0
BET 112	Spreadsheet: Excel for Windows	3.0
BADM 106	Accounting on Microcomputers	2.0
BET 65	Speedwriting	3.0
<i>3 units must be chosen from one of the following:</i>		
BET 143	Business English	3.0
BET 68	Proofreading A/B/C	3.0
<i>Group II - 6 units of the following must be completed:</i>		
ECON 101	Principles of Economics: Macro	3.0
BADM 110	Business Management	3.0
BET 141B/C	Operating System: Windows	1-2
BET 77	Speed and Accuracy Development	2.0
BET 131	Powerpoint A/B/C	3.0
BET 137	Desktop Publishing: Microsoft Publisher A/B/C	3.0
BET 123T	Machine Transcription	1.0
BET 145	Communications for Business	3.0
BET 134	Condensed Word Processing	1.0
BET 122	Intermediate Keyboarding/Typing A/B/C	3.0
BET 118	Database: Access A/B/C	3.0

COMPUTER SYSTEMS I CERTIFICATE		
This curriculum is designed to prepare students for entry-level word processing or data entry positions.		
Units Required: 10.0	<i>All of the following must be completed:</i>	
<i>Group I - 3 units</i>		
BET 104	Beginning Word Processing/Typing: Word for Windows A/B/C	3.0
<i>Group II - 7 units of the following must be completed:</i>		
BET 107	Internet Level I	1.0
BET 123T	Machine Transcription	1.0
BET 112	Spreadsheet: Excel for Windows A/B/C	3.0
BET 136	Career Applications for Word Processing	3.0
BET 143	Business English	3.0
BET 68	Proofreading A/B/C	3.0
BET 131	Powerpoint A/B/C	3.0
BET 100	Introduction to Computers	2.0
BET 137	Desktop Publishing: Microsoft Publisher A/B/C	3.0
COMPUTER SYSTEMS II CERTIFICATE		
This curriculum is designed to prepare students for the modern computer office. It includes instruction in the most popular business software		
Units Required: 21.0	<i>All of the following must be completed:</i>	
<i>All of the following must be completed:</i>		
BET 104	Beginning Word Processing/Typing: Word for Windows A/B/C	3.0
BET 107	Internet Level I	3.0
BET 112	Spreadsheet: Excel for Windows A/B/C	3.0
BET 136	Career Applications for Word Processing	3.0
BET 141	Operating System: Windows A/B/C	3.0
BET 143	Business English	3.0
<i>One of the following must be completed:</i>		
BET 118	Database: Access A/B/C	3.0
CIS 280	Fundamentals of Database Management Systems	3.0
BET 131	Powerpoint A/B/C	3.0
BET 100	Introduction to Computers	3.0
BET 137	Desktop Publishing: Microsoft Publisher A/B/C	3.0
SPREADSHEET PROCESSOR CERTIFICATE		
This curriculum is designed to prepare students for entry-level office/bookkeeping positions.		
Units Required: 3.0		
BET 112	Spreadsheet: Excel for Windows A/B/C	3.0
WORD PROCESSOR CERTIFICATE		
This curriculum is designed to prepare students for entry-level secretarial positions.		
Units Required: 3.0		
<i>All of the following must be completed:</i>		
BET 104	Beginning Word Processing/Typing: Word for Windows A/B/C	3.0

Business Education Technologies

DATA TYPIST CERTIFICATE

This curriculum is designed to prepare students for entry-level positions as a data entry operator. Duties for this position include general clerical tasks, data entry, and word processing.

Units Required: 16.0

Group I - All of the following must be completed:

BET 104	Beginning Word Processing/Typing: Word for Windows A/B/C	3.0
BET 136	Career Applications for Word Processing	3.0
BET 68	Proofreading	3.0
BET 74	Office Machine Calculations	3.0

Group II - 7 units of the following must be completed:

BET 107	Internet Level I	1.0
BET 123T	Machine Transcription	1.0
BET 134	Condensed Word Processing	1.0
BET 135	Desktop Publishing: PageMaker	2.0
BET 137	Desktop Publishing: Microsoft Publisher A/B/C	3.0
BET 141A	Operating System: Windows	1.0
BET 77	Speed and Accuracy Development	2.0
BET 112A	Spreadsheet: Excel for Windows	1.0
BET 145	Communications for Business	3.0
BET 143	Business English	3.0
BET 68	Proofreading A/B/C	3.0
BET 118	DataBase: Access A/B/C	3.0
BET 122	Intermediate Keyboarding/Typing A/B/C	3.0
CIS 280	Fundamentals of Database Management Systems	3.0

MEDICAL OFFICE CERTIFICATE

This curriculum is designed to prepare students to effectively carry out front medical office functions. Administrative duties include scheduling and receiving patients, maintaining medical records, office accounts, insurance forms, and transcription. See Medical Assistant for a program which includes both front and back office preparation and a clinical component.

Units Required: 30.0

All of the following must be completed:

BET 104	Beginning Word Processing/Typing: Word for Windows A/B/C	3.0
BET 123M	Machine Transcription-Medical	3.0
BET 124	Records Management	3.0
BET 136	Career Applications for Word Processing	3.0
BET 142	Office Technologies and Procedures	3.0
ALDH 80	Pharmacology	3.0
ALDH 81	Medical Insurance	3.0
ALDH 82	Medical Office Procedures	4.0
ALDH 139	Medical Terminology	3.0

One of the following must be completed:

BET 143	Operating System: Windows A/B/C	3.0
BET 118	DataBase: Access A/B/C	3.0
BET 131	Powerpoint A/B/C	3.0
BET 100	Introduction to Computers	3.0
BET 112	Spreadsheet: Excel for Windows A/B/C	3.0

OFFICE SERVICES CERTIFICATE		
This curriculum is designed to prepare students for entry-level positions in the clerical field and as a receptionist. Entry-level duties include general clerical tasks, filing, and word processing.		
Units Required: 11.0		
<i>Group I - 5 units of the following must be completed:</i>		
BET 104	Beginning Word Processing/Typing: Word for Windows A/B/C	3.0
<i>2 units may be chosen from:</i>		
BET 124	Records Management	3.0
BET 136	Career Applications for Word Processing	3.0
<i>Group II - 6 units of the following must be completed:</i>		
BET 123T	Machine Transcription	1.0
BET 142	Office Technologies and Procedures	3.0
BET 74	Office Machine Calculations	2.0
BET 131	Powerpoint A/B/C	3.0
BET 137	Desktop Publishing: Microsoft Publisher A/B/C	3.0
BET 112	Spreadsheet: Excel for Windows A/B/C	3.0
BET 118	DataBase: Access A/B/C	3.0
BET 122	Intermediate Keyboarding/Typing A/B/C	3.0
BET 65	Speedwriting	3.0
<i>3 units may be chosen from one of the following:</i>		
BET 143	Business English	3.0
BET 68	Proofreading A/B/C	3.0
LEGAL OFFICE CERTIFICATE		
This curriculum is designed to prepare students to become a productive secretary in a modern legal office. Duties include maintaining records, word processing, transcription, and general legal office tasks.		
Units Required: 16.0		
<i>Group I - All of the following must be completed:</i>		
BET 104	Beginning Word Processing/Typing: Word for Windows A/B/C	3.0
BADM 117	Legal Environment of Business	3.0
BET 123L	Machine Transcription-Legal	3.0
BET 124	Records Management	2.0
BET 136	Career Applications for Word Processing	3.0
BET 142	Office Technologies and Procedures	3.0
BET 74	Office Machine Calculations	2.0
BET 65	Speedwriting	3.0
<i>Group II - 3 units of the following must be completed:</i>		
BET 143	Business English	3.0
BET 68	Proofreading A/B/C	3.0
<i>3 units must be chosen from one of the following:</i>		
BET 145	Communications for Business	3.0
BET 141A	Operating System: Windows	1.0
BET 118	DataBase: Access A/B/C	3.0
BET 131	Powerpoint A/B/C	3.0
BET 100	Introduction to Computers	3.0
BET 112	Spreadsheet: Excel for Windows A/B/C	3.0

Business Education Technologies Courses

BET 68 PROOFREADING

Units: 3.0 | 144-162 hours laboratory

(No prerequisite. Recommended preparation: BET 104, 104A, 104B or 104C)

Students develop proofreading skills necessary to meet high levels of accuracy and review basic business English skills: punctuation, word usage, sentence and paragraph structure. Practice/exercises are done on the microcomputer for Modules B and C.

BET 74 OFFICE MACHINE CALCULATIONS

Units: 3.0 | 32-36 hours lecture and 48-54 hours laboratory.

(No prerequisite)

Provides practice on ten-key calculating machine with applications of actual business problems and forms.

BET 77 SPEED AND ACCURACY DEVELOPMENT

Units: 2.0 | 32-36 hours lecture or 64-72 hours individualized instruction

(No prerequisite)

This course is designed to fit the needs of each student and develops keyboarding/typing speed for continuing to higher level courses or developing job skills by intensive training and practices.

BET 100 INTRODUCTION TO COMPUTERS

Units: 3.0 | **CSU** 32-36 hours lecture and 48-54 hours laboratory

(No prerequisite)

This course is directed to those with little or no computer experience. It will introduce basic essential elements of computers such as: power up, hardware components, evolution of computers, types of personal computers, the input-process-output cycle, desktop components, email, and the World Wide Web. Introduction to use of office software including Word, Excel and Powerpoint.

BET 101 BEGINNING KEYBOARDING/TYPING

Units: 1.0 | **CSU** 8-9 hours lecture and 24-27 hours laboratory or 32-36 hours individualized instruction

(No prerequisite)

This course is individualized to fit the needs of each student and develop basic alpha/numeric keyboarding skills and basic mouse operation on the computer. Emphasis is on achieving a straight-copy speed of 20 gross words a minute with a predetermined error limit.

BET 104 BEGINNING WORD PROCESSING/TYPING: WORD FOR WINDOWS A/B/C

Units: 3.0 | **CSU** 48-54 hours lecture or 96-108 hours individualized instruction

(No prerequisite. Grade Option)

This course introduces students to Word for Windows. Students will develop a working knowledge of this current software package to prepare documents.

BET 107 INTERNET A/B/C

Units: 3.0 | **CSU** 48-54 hours lecture or 96-108 hours individualized instruction

(No prerequisite. Grade Option.)

This course is designed to teach students concepts and business skills of the Internet including creating an e-mail account; creating, editing, and printing effective web pages; and understanding Internet technologies and security.

BET 112 SPREADSHEET: EXCEL FOR WINDOWS A/B/C

Units: 3.0 | **CSU** 48-54 hours lecture or 144-162 hours laboratory or 96-108 hours individualized instruction

(No prerequisite. Grade Option.)

This course offers spreadsheet operations for creating, editing, formatting and enhancing charts in worksheets. Students learn to manage workbooks and prepare them for the web. Students plan, create, and then filter lists using Excel's database.

BET 118 DATABASE: ACCESS A/B/C

Units: 3.0 | **CSU** 48-54 hours lecture, or 96-108 hours individualized instruction

(No prerequisite. Grade Option.)

Familiarity with computers is recommended. Introduces database concepts through advanced skill levels including advanced queries, briefcase replication, macros and use of Visual Basic for applications code.

BET 122 INTERMEDIATE KEYBOARD/TYPING**Units: 3.0** CSU | 48-54 hours lecture*(No prerequisite)*

This course is designed to build speed and skills learned in Beginning Typing/Keyboarding, using the current version of Microsoft Word and Keyboarding Pro with an emphasis on attaining straight copy rate of 45-60 gross wpm with a predetermined error limit. Additionally, students will develop skills needed to effectively format a variety of business documents.

BET 123L MACHINE TRANSCRIPTION – LEGAL**Units: 3.0** CSU | 48-54 hours lecture. May also be offered as 96-108 hours individualized instruction*(No prerequisite. Recommended preparation: BET 104)*

Students develop machine transcription skills used in a typical law firm and learn to prepare legal documents and correspondence.

BET 123M MACHINE TRANSCRIPTION – MEDICAL**Units: 3.0** CSU | 48-54 hours lecture. May also be offered as 96-108 hours individualized instruction*(No prerequisite. Recommended preparation: BET 104)*

Students develop machine transcription skills for a medical transcriber and learn the use and meaning of medical terminology used in the Allied Health field.

BET 123T MACHINE TRANSCRIPTION**Units: 3.0** CSU | 48-54 hours lecture*(No prerequisite)*

Principles and procedures of establishing and maintaining current record systems with detailed instruction and practice in the use of alphabetic, geographic, numeric, and subject filing systems as defined by the current Association of Records Managers and Administrator standards.

BET 124 RECORDS MANAGEMENT**Units: 3.0** CSU | 48-54 hours lecture*(No prerequisite)*

This course is designed to teach students concepts and business skills of PowerPoint including creating, editing, and printing effective presentations. Students learn advanced PowerPoint features such as creating graphs and tables, and customizing, and inserting artwork, WordArt, and slide show effects. Students learn concepts and business skills of PowerPoint. The concepts and skills include working with embedded and linked objects, hyperlinks, and delivering and publishing presentations.

BET 131 PRESENTATION SOFTWARE: POWERPOINT ABC**Units: 3.0** CSU | 48-54 hours lecture or 144-162 hours laboratory or 96-108 hours individualized instruction*(No prerequisite. Grade Option)*

This course is designed to teach students concepts and business skills of PowerPoint including creating, editing, and printing effective presentations. Students learn advanced PowerPoint features such as creating graphs and tables, and customizing, and inserting artwork, WordArt, and slide show effects. Students learn concepts and business skills of PowerPoint. The concepts and skills include working with embedded and linked objects, hyperlinks, and delivering and publishing presentations.

BET 133 MICROSOFT OFFICE**Units: 3.0** CSU | 48-54 hours lecture*(No prerequisite. Grade Option)*

This class is designed to introduce students to the basic functions of Microsoft Office Word, Excel, PowerPoint, and Access, as well as a brief overview of operating systems and the Internet.

BET 136 CAREER APPLICATIONS FOR WORD PROCESSING**Units: 3.0** CSU | 48-54 hours lecture*(No prerequisite. Recommended preparation: Successful completion of BET 104 or BET 103. Ability to use word processing functions to create, format and edit advanced business documents. Grade Option)*

This course is designed for the student who is familiar with word processing functions and formatting principles. Topics will include terminology and methodology used in a variety of business careers by applying formatting and keyboarding skills to complex professional documents including letters, memos, forms, tables and reports.

Business Education Technologies Courses

BET 137 DESKTOP PUBLISHING: MICROSOFT PUBLISHER

Units: 3.0 **CSU** | 48-54 hours lecture

(No prerequisite)

This class is designed to teach students practical, professional quality publications using the current version of Microsoft Publisher.

BET 138 COOPERATIVE EDUCATION

See Cooperative Education listing (1-8 units). **CSU**

BET 141 OPERATING SYSTEM: WINDOWS A/B/C

Units: 3.0 **CSU** | 96-108 hours individualized instruction

(No prerequisite. Grade Option)

Introduction to Windows operating system and features through extensive hands-on exercises.

BET 142 OFFICE TECHNOLOGIES AND PROCEDURES

Units: 3.0 **CSU** | 48-54 hours lecture

(No prerequisite. Grade Option)

Students will learn practical application of current automated office procedures, duties, and human relations. Specific topics include telephone, electronic mail, Internet activities, data entry, reference resources, job seeking, mail and shipping services and procedures, office relations, office etiquette and dress, time management, travel arrangements, meetings, minutes, and office equipment. Development of critical thinking skills and decision-making skills throughout the course.

BET 143 BUSINESS ENGLISH

Units: 3.0 **CSU** | 48-54 hours lecture

(No prerequisite. Grade Option)

This is a technical course to develop a proficiency in written business communication. A comprehensive review of proofreading, grammar, punctuation, sentence structure, and letter and memo formats emphasizing the function of business English in various types of business communications.

BET 145 COMMUNICATIONS FOR BUSINESS

Units: 3.0 **CSU** | 48-54 hours lecture

(No prerequisite. Recommended preparation: BET 104 It is recommended that students have basic computer/Internet skills, including the ability to download documents; use basic word processing to create, open, and save documents in either RTF or Word format; send and receive emails; and navigate the Internet and various websites. Grade Option)

This course is designed for Business Education Technologies to create proficiency in the mechanics of writing, reading, and critically analyzing various types of business correspondence. Principles of communication psychology as they apply to human relations are employed to solve business communications problems, and writing styles in business correspondence and report format are analyzed. Grammar, proofreading, and editing are reviewed.

BET 148 SPECIAL TOPICS

See Special Topics listing (Variable units), **CSU**

BET 149 INDEPENDENT STUDY

See Independent Study listing (1-3 units). **CSU**

Business Real Estate and Escrow

This program is designed to provide the student with the comprehensive knowledge needed to enter or invest in the real estate industry. A progressively challenging course curriculum starts with the Principles class, learning the language of real estate. This is a state-mandated course for those testing for a real estate salesperson's license. From there an "investor" student might pursue the more difficult Finance, Law, or Appraisal courses. The certificate program provides a structured approach to the course work. The Business Real Estate Apprentice Certificate includes the courses and electives necessary to take the state's Real Estate Salesperson's examination.

The single largest business transaction entered into by most people is the sale or purchase of a home or other real estate. Consequently, people often seek the professional opinions and assistance of real estate salespersons, brokers, and appraisers. These professionals are familiar with the various forms of financing available in any given market. They keep abreast of actions taken by their county or city planners and become familiar with the zoning laws, tax laws, and real estate and contract law in order to better serve their clients. Real estate agents and brokers are not limited to selling real estate for they can also manage or develop property.

Career Opportunities

Banking Developer, Escrow Officer, Escrow Secretary, Loan Broker/Salesman, Property Manager, Real Estate Appraiser, Real Estate Broker, Real Estate Lawyer, Real Estate Salesperson, Real Estate Secretary, Securities Broker, Title Insurance Representative

Faculty

Chris Grover

Degrees and Certificates Awarded

Associate in Science, Business Real Estate and Escrow

Basic Business Real Estate Certificate

Business Real Estate Apprentice Certificate

A student receiving a degree or certificate in this field will be able to:

- Demonstrate the ability to use software, and peripheral components at their own direction in a business environment.
- Demonstrate the ability to competently use a wide variety of office equipment.
- Demonstrate general research standards to analyze Online documentation to produce and integrate material.
- Demonstrate proper techniques to complete tasks thoroughly and precisely

Associate Degree

To earn an Associate in Science degree with a major in Business Real Estate and Escrow, complete a minimum of 18 units from any of the certificate requirements or from any Business Escrow or Business Real Estate courses, and meet all Victor Valley College graduation requirements. **BRE 138** (Cooperative Education) may be used as Elective credit but may not be used to fulfill major requirements.

Transfer

Not usually a transfer major. Many Business Escrow and Business Real Estate courses transfer as Electives or fulfill subject credit requirements. Students in this program often choose to pursue a bachelor's degree in Business Administration. See Business Administration for transfer requirements.

Business Real Estate and Escrow

BUSINESS REAL ESTATE APPRENTICE CERTIFICATE

To sit for the real estate salesperson's exam, California Real Estate Law requires that prospective real estate licensees complete college level courses in Real Estate Principles, Real Estate Practices and one additional elective from the Group II list. This certificate program provides students with courses they need to comply with that law. This certificate, along with the successful completion of the California Real Estate Salesperson's exam, enables students to obtain employment as a real estate licensee within the state of California

Units Required: 9.0

Group I - The following must be completed with a grade of "C" or better:

BRE 100	Real Estate Principles	3.0
BRE 101	Real Estate Practices	3.0

Group II- Any one of the following must be completed with a grade of "C" or better:

BRE 110	Legal Aspects of Real Estate I	3.0
BRE 120	Real Estate Appraisal	3.0
BRE 126	Real Estate Finance	3.0
BRE 127	Real Estate Office Management	3.0
BRE 139	Real Estate Economics	3.0
BRE 140	Real Property Management	3.0

BASIC BUSINESS REAL ESTATE CERTIFICATE

This Certificate program thoroughly prepares the student to become a professional real estate sales-person in the state of California.

Units Required: 18.0

Group I - All of the following must be completed:

BRE 100	Real Estate Principles	3.0
BRE 110	Legal Aspects of Real Estate I	3.0
BRE 120	Real Estate Appraisal	3.0
BRE 126	Real Estate Finance	3.0
BRE 142	Real Estate Marketing	3.0

Group II - Either one of the following must be completed:

BRE 101	Real Estate Practices	3.0
BADM 103	Financial Accounting	3.0

Business Escrow Courses

BESC 138 COOPERATIVE EDUCATION

See Cooperative Education listing (1-8 units). [CSU](#)

BESC 148 SPECIAL TOPICS

See Special Topics listing (Variable units). [CSU](#)

BESC 149 INDEPENDENT STUDY

See Independent Study listing (1-3 units). [CSU](#)

Business Real Estate Courses

These classes are open to all students with an interest in Real Estate. They are not just for Licensees.

BRE 60 ADVANCED REAL ESTATE APPRAISAL: COMPLIANCE AND REVIEW PROCEDURES

Units: 3.0

48-54 hours lecture

(No prerequisite)

This course draws on the disciplines of real estate brokerage, finance, banking and appraisal with special attention to loss reduction due to underwriting and appraisal errors. Students with prior experience in the banking, mortgage, or appraisal industries will appreciate this course, however all are welcome. This course enhances the student's ability to analyze, understand and correct errors in real estate appraisals on federally required underwriting forms, narrative reports and electronic data exchanges. Discussion topics include appraisal analysis, valuation trends, demographic and census interpolation, reporting, communication and review. Uniform Standards of Professional Appraisal Practice will be discussed in relation to the forms reviewed. An advanced appraisal course acts as an elective for California Real Estate Broker's license.

BRE 61 ADVANCED REAL ESTATE APPRAISAL: LAND VALUATIONS

Units: 3.0

48-54 hours lecture

(No prerequisite)

This course offers investigative techniques used to analyze and evaluate data leading to land valuation reports. Topics include discussion of soils analysis, topographic study, market analysis, environmentally affected properties, subdivisions and more. This is an advanced appraisal course and acts as an elective for the California Real Estate Broker's license.

BRE 62 ADVANCED REAL ESTATE APPRAISAL: THE NARRATIVE REPORT

Units: 1.0

16-18 hours lecture

(No prerequisite)

This course offers and demonstrates the techniques designed to assist appraisers in effectively communicating the results of their valuation processes. Special emphasis is placed on the narrative portion of the form and/or complete self-contained type reports.

BRE 100 REAL ESTATE PRINCIPLES

Units: 3.0

CSU

48-54 hours lecture

(No prerequisite)

Introductory course stressing the study of basic information in fundamental subjects in the field of real estate. Topics include legal aspects, legal descriptions, encumbrances, financing, escrow, contracts, taxation, subdivisions and zoning, appraisal, landlord/tenant relations, and arithmetic. Successful completion of this course makes you eligible to test for the California Department of Real Estate Salesperson's license. Elective for the Real Estate Broker's license.

BRE 101 REAL ESTATE PRACTICES

Units: 3.0

CSU

48-54 hours lecture

(No prerequisite)

Working practices in office listings and sales methods leading to competence. General basic course leading toward professionalism in real estate practice. Advanced topics involve prospecting and listing techniques, real estate agency and disclosure, selling and marketing techniques, advertising, office operations, finance, property management and real estate investment. The course meets the educational requirements and is required by the California Department of Real Estate before testing for both the California Real Estate Salesperson's license and the California Real Estate Broker's license.

BRE 110 LEGAL ASPECTS OF REAL ESTATE I

Units: 3.0

CSU

48-54 hours lecture

(No prerequisite)

A practical, applied study of California Real Estate law which will explore difficulties arising from real estate transactions, instruments, zoning, and planning. This class is required for the California Real Estate Broker's license and meets an elective educational requirement for the California Real Estate Salesperson's license

BRE 120 REAL ESTATE APPRAISALUnits: 3.0 **CSU** | 48-54 hours lecture*(No prerequisite)*

This course examines narrative appraisal reports, theories of valuation, studies in specific properties, neighborhood data, market research, cost analysis, causes of depreciation, and how to treat the misplaced valuation of residential properties. Course also covers how to start an effective "appraisal plan" and sources of information. Required course for Real Estate Broker's license. Meets the educational requirements as an elective for the California Real Estate Salesperson's license.

BRE 121 ADVANCED REAL ESTATE APPRAISAL: INCOME PROPERTYUnits: 3.0 **CSU** | 48-54 hours lecture*Elective for Broker's License. (No prerequisite)*

Special emphasis given to income properties, how to obtain significant data and relate to the subject property, the importance of thorough research, and the introduction of capitalization methods. This class is an elective for California Real Estate Broker's license.

BRE 125 TAXES AND REAL ESTATE INVESTMENTUnits: 3.0 **CSU** | 48-54 hours lecture*Advanced Finance course for Real Estate Broker License (No prerequisite)*

This real estate investment course discusses ownership interests, sources of financing, tax aspects of real estate ownership, market and cash flow analysis for income property, land investing, creative financing, and the laws dealing with foreclosure property investing.

BRE 126 REAL ESTATE FINANCEUnits: 3.0 **CSU** | 48-54 hours lecture*Advanced Finance course for Real Estate Broker License (No prerequisite)*

This course offers a practical applied study and analysis of money markets, interest rates, and real estate financing with actual case illustrations. Cases demonstrate lending policies, problems, and rules involved in financing commercial and special purpose properties. This course is required for the Real Estate Broker's license and meets the educational requirements as an elective for the California Real Estate Salesperson's license.

BRE 127 REAL ESTATE OFFICE ADMINISTRATIONUnits: 3.0 **CSU** | 48-54 hours lecture*(No prerequisite)*

Designed for practicing real estate brokers, managers, or salespersons who plan to open their own office. This course emphasizes factors for success in real estate brokerage. Topics discussed include office location, organization, marketing, accounting, finance, property management, development and professional relations. elective for the Real Estate Broker's and Real Estate Salesperson's license.

BRE 139 REAL ESTATE ECONOMICSUnits: 3.0 **CSU** | 48-54 hours lecture*(No prerequisite)*

This course offers a study of the economic aspects that impact real estate values and land use. Included is the government's role in the economy, money and credit, community growth patterns, land use controls, and the economic principles of capitalism. This class is required for the California Real Estate Broker's license and meets the educational requirements as an elective for the California Real Estate Salesperson's license.

BRE 138 COOPERATIVE EDUCATIONSee Cooperative Education listing (1-8 units) **CSU****BRE 140 REAL PROPERTY MANAGEMENT**Units: 3.0 **CSU** | 48-54 hours lecture*(No prerequisite)*

Professional approach to the principles and practices of managing income properties. Topics include leases, rent schedules, collections, evictions, budgets, purchasing, market economics, taxation, maintenance, and record keeping. Elective for the Real Estate Broker's license. Meets the educational requirements as an elective for the California Real Estate Salesperson's license.

BRE 142 REAL ESTATE MARKETING

Units: 3.0 [CSU](#) | 48-54 hours lecture

(No prerequisite)

A study of the principles and processes involved in professionally marketing real estate. Course content includes: communication and marketing skills as practiced within the real estate industry, real estate advertising, target marketing, development of a marketing plan, product knowledge, people knowledge, qualifying both the buyer and the seller, negotiating and financing skills, and closing the escrow. Development of marketing tools including signs, maps, mail-outs, brochures, referrals, forms and media campaigns will also be covered.

BRE 148 SPECIAL TOPICS

See Special Topics listing (Variable units)., [CSU](#)

BRE 149 INDEPENDENT STUDY

See Independent Study listing (1-3 units)., [CSU](#)

Chemistry

Chemistry is a central science. It is an integral part of biological, geological, medical and environmental sciences. Every sight, sound, touch, smell, taste, and even thought is a result of chemical processes. An understanding of chemistry helps to make sound decisions in our increasingly technological society.

Courses for non-majors are offered in addition to the rigorous sequence designed for majors and transfer students.

Career Opportunities

Agricultural Technician, Analytical Chemist, Biochemist, Synthetic Organic Chemist, Environmental Chemist and Attorney
Geochemist, Chemical Engineer, Materials Scientist, Pharmaceutical Technician, Laboratory Technician, Science Teacher
Technical Salesperson

Faculty

Thomas Basiri - Emeritus | Thomas Kennedy

Degrees and Certificates Awarded

Associate in Arts, Liberal Arts, Mathematics/Science Emphasis

Associate in Science, Math/Science

Associate Degree

No associate degree is offered with a major in Chemistry. Chemistry courses may be used to fulfill requirements for an Associate in Science degree with a major in Math/Science. See Math/Science for degree requirements for this major. Chemistry courses may also be used to fulfill requirements for an Associate in Arts degree with a major in Liberal Arts, *Mathematics/Science Emphasis*. See Liberal Arts for degree requirements for this major. CHEM 138 (Cooperative Education) may be used as Elective credit, but may not be used to fulfill major requirements.

Transfer

For the most up-to-date information on these programs and others, visit www.assist.org. Please stop by the Transfer Center in Building 55 or make an appointment with a counselor if you have questions.

- **California State University, San Bernardino:** *Chemistry major* | *Biochemistry major*
- **University of California, Riverside:** *Chemistry major* | *Biochemistry major*

Chemistry Courses

CHEM 100 INTRODUCTORY CHEMISTRY

Units: 4.0 [CSU, UC](#) 48-54 hours lecture and 48-54 hours laboratory

(Prerequisite: MATH 42 with a grade of "C" or better.) (UC credit limitation)

An introductory course in general, organic, and biological chemistry. This course is specifically designed for students preparing for careers in allied health, such as nursing and various fields of therapy. The course satisfies general education requirements for non-majors and assumes no background in chemistry. Basic math skills are highly recommended.

CHEM 128 SPECIAL TOPICS

See Special Topics listing (Variable units). [CSU](#),

CHEM 138 COOPERATIVE EDUCATION

See Cooperative Education listing (1-8 units). [CSU](#)

CHEM 150 FORENSIC CHEMISTRY

Units: 4.0 [CSU](#) 48-54 hours lecture and 48-54 hours laboratory

(No prerequisite)

This course is designed to provide an introduction to forensic chemistry and criminalistics. The course introduces chemical and scientific techniques used in modern forensic laboratories to analyze physical evidence commonly encountered at a crime scene. Topics include a basic survey of the principles of general and organic chemistry as applied to forensic examination, forensic documentation, chemical screening, microcrystal, and extraction techniques, an introduction to chromatography, mass spectrometry, and infrared spectroscopy, analysis of various drugs and controlled substances, and the investigation and processing of clandestine laboratory operations. A close relationship between theoretical lecture principles and field and laboratory techniques is emphasized.

CHEM 201 GENERAL CHEMISTRY

Units: 5.0 **CSU, UC** | 48-54 hours lecture and 96-108 hours laboratory

(Prerequisite: CHEM 100 with a grade of 'C' or better, and MATH 90 or higher)

Theories of atomic structure and the application of these theories to an understanding of bonding, solution processes, state of matter, gas laws, general properties of matter, and principles of stoichiometric calculations.

Laboratory emphasis on the development of experimental skills, the calculations and significance of experimental data.

CHEM 202 GENERAL CHEMISTRY

Units: 5.0 **CSU, UC** | 48-54 hours lecture and 96-108 hours laboratory

(Prerequisite: CHEM 201 with a grade of "C" or better, and MATH 90 or higher with a grade of "C" or better)

Use of atomic theory developed in Chemistry 201 to examine the principles of periodic classification of the elements, thermodynamics, acids and bases, chemical equilibrium, reaction kinetics, coordination compounds. A basic survey of nuclear, organic, and biochemistry is included. Laboratory emphasis is on the development of technical skills.

CHEM 206 INTRODUCTORY CHEMISTRY II: ORGANIC CHEMISTRY

Units: 4.0 **CSU, UC** | 48-54 hours lecture and 48-54 hours laboratory

(UC credit limitation) (Prerequisite: CHEM 100 with a grade of "C" or better.)

An introduction to fundamental concepts of Organic Chemistry for students entering professional careers in allied health. Emphasis is on the structure, reactivity and mechanisms, chemical properties and nomenclature of major organic functional groups and their relationship to biological systems.

CHEM 207 INTRODUCTORY CHEMISTRY III: BIOCHEMISTRY

Units: 4.0 **CSU, UC** | 48-54 hours lecture and 48-54 hours laboratory

(Prerequisite: CHEM 206 with a grade of "C" or better. Recent completion of CHEM 206 or equivalent is recommended.)

A one semester survey course in the fundamental principles of biochemistry for students entering professional careers in allied health. Emphasis is on the structure, function and physiological role of carbohydrates, lipids, proteins and nucleic acids.

CHEM 281 ORGANIC CHEMISTRY I

Units: 4.0 **CSU, UC** | 48-54 hours lecture and 48-54 hours laboratory

(Prerequisite: CHEM 202 with a grade of "C" or better.)

An introduction to general principles of organic chemistry covering the structures, properties and reactivity of organic compounds. Emphasis is on molecular orbital theory, functional group reactivity, nomenclature, substitution and elimination mechanisms, stereochemistry, chemical equilibria and spectroscopy. Laboratory techniques include isolation, purification, synthetic procedures and spectroscopy. This is the first semester of a two semester sequence.

CHEM 282 ORGANIC CHEMISTRY II

Units: 4.0 **CSU, UC** | 48-54 hours lecture and 48-54 hours laboratory

(Prerequisite: CHEM 281 with a "C" or better.)

Principles and experimental techniques developed in CHEM 281 are extended to include synthesis and identification, nomenclature, derivatives, spectroscopy, and reactions of functional groups, heterocycles, and aromatic compounds. Biochemistry of carbohydrates, lipids, proteins, nucleic acids, and other biologically significant compounds is also examined.

Child Development

The Child Development program provides courses that prepare students to enter the field of early childhood education. Courses are designed to give students fundamental skills in working with children in a variety of settings, as well as a strong theoretical understanding of children's development.

Career Opportunities

Infant/Toddler Caregiver, Early Childhood Teacher, Early Childhood Program Administrator, Family Child Care Provider
Child Life Specialist, Elementary School Teacher, Early Intervention Teacher, Nanny, Social Worker, Therapist

Faculty

Marsha (Dee Dee) Cole | Sandy Visser-Jones

Degrees and Certificates Awarded

Associate in Science, Child Development

Associate in Science for Transfer in Early Childhood Education (AS-T)

Level I: Associate Teacher Certificate of Achievement

Level II: Teacher (preschool) Certificate of Achievement

Level III: Site Supervisor (preschool) Certificate of Achievement

A student receiving a degree or certificate in this field will be able to:

- Integrate knowledge of the needs, the characteristics, and multiple influences on development of children birth to age eight as related to high quality care and education of young children.
- Design, implement, and evaluate environments and activities that support positive, developmental play and learning outcomes for all young children.
- Apply effective guidance and interaction strategies that support all children's social learning, identity, and self-confidence.
- Develop and implement strategies that promote partnerships between programs, teachers, families, and their communities.
- Apply ethical standards and professional behaviors that demonstrate understanding and knowledge, deepening the commitment to the early care and education profession.

Associate Degree

To earn an Associate in Science degree with a major in Child Development, complete **CHDV** 100, 106, 110, 142, 150, 160, 200, 210, and meet all other Victor Valley College Associate Degree graduation requirements.

21 General Education Units as required for the AS Degree (**CHDV** 100 and 106 cannot be used to satisfy the Social and Behavioral Science requirement).

Transfer

For the most up-to-date information on these programs and others, visit www.assist.org. Please stop by the Transfer Center in Building 55 or make an appointment with a counselor if you have questions.

- **California State University, San Bernardino:** *Human Development major*

For information, you may wish to contact CSUSB's Human Development department at (909) 537-5570.

- **University of California, Riverside:** *Human Development major*

Child Development

Local Bachelors Programs - For information on the following programs located in the High Desert, please visit: www.vvc.edu/offices/guidance_and_counseling/ and select "Counseling Information Sheets":

- Azusa Pacific University, High Desert Regional Center: *Human Development major*
- Brandman University, Victor Valley Campus: *Early Childhood Development major*
- University of La Verne, High Desert Campus: *Child Development major*

Early Childhood Education, AS-T		
<p>To earn an Associate in Science for Transfer Degree in Early Childhood Education (AS-T), students must complete a minimum of 60 semester units (or 90 quarter units) that are eligible for transfer to the California State University, which include the following: The Intersegmental General Education Transfer Curriculum (IGETC) or the California State University General Education-Breadth requirements; Complete CHDV 100, 106, 110, 142, 150, 160, 200, 210 with a grade of C or better in each course (total of 25 semester units); Obtain a minimum grade point average of 2.0</p> <p>This degree is in full alignment with our existing AS in Child Development degree and provides an additional option for those students desiring to transfer to a CSU.</p>		
Program Requirements: 25 units		
Required Courses (25 units total)		
CHDV 100	Child Growth and Development	3.0
CHDV 106	Child, Family and Community	3.0
CHDV 110	Principles and Practices of Teaching Young Children	3.0
CHDV 142	Health, Safety and Nutrition	3.0
CHDV 150	Introduction to Curriculum	3.0
CHDV 160	Observation and Assessment	3.0
CHDV 200	Teaching in a Diverse Society	3.0
CHDV 210	Practicum – Field Experience	4.0
<p>*Students are allowed to double count one of these courses (CHDV 100 or 106) for their General Education requirements so that they stay within the 60 units for the TMC.</p> <p>A student wishing to pursue an AA-T/AS-T degree in the major listed on this page must ensure the CSU of their choice is accepting that similar major. Students completing an AA-T/AS-T degree are guaranteed admissions into a CSU campus given that a student fulfills the following:</p> <ol style="list-style-type: none"> 1) 60 CSU transferable units; 2) Completes the CSU General Education (GE) or IGETC General Education pattern; 3) Completes the major requirements for the AA-T/AS-T; 4) Maintains a transferable cumulative GPA of at least 2.0 (C or better); 5) Completes the basic/Golden 4 GE requirements. <p>For more information on the AA-T/AS-T degrees, meet with a counselor or visit www.sb1440.org and www.adegreewithaguarantee.com</p>		

LEVEL I: ASSOCIATE TEACHER (PRE SCHOOL) CERTIFICATE OF ACHIEVEMENT

State and Federally Funded programs such as Head Start and State Preschool: This certificate satisfies all educational requirements for the Associate Teacher Permit, issued by the State of California. Students must also show evidence of meeting the Experience Requirement before applying for the Permit (see below). Permit applications can be obtained through the Child Development Department.

Private (Title 22) programs: This certificate satisfies all educational requirements to be a fully qualified preschool teacher in such programs.

Units Required: 22.0

All of the following must be completed with a grade of "C" or better:

ENGL 50	Writing Fundamentals <i>or</i>	4.0
ENGL 101	<i>English Composition</i>	4.0
CHDV 100	Child Growth and Development	3.0
CHDV 106	Child, Family, and Community	3.0
CHDV 110	Principles and Practices	3.0
CHDV 142	Health, Safety and Nutrition	3.0
CHDV 150	Introduction to Curriculum	3.0
CHDV 160	Observation and Assessment	3.0

All course work must be completed with a "C" or better.

Experience Requirement necessary to apply for Child Development Permit. Students must complete 50 days of experience, of 3 or more hours per day, within the last two years. (THIS IS NOT NECESSARY FOR OBTAINING CERTIFICATE) Choose A or B:

Option A – For students already working in the field.

A Verification of Experience Form must be completed and submitted with Permit Application.

Option B – For students with no work experience in the field.

CHDV 210 Practicum 2 units of **CHDV 138** (Work Experience) spread over two terms, completed within the last two years.

Please note: Returning students may substitute CHDV 127A for CHDV 110 Principles and Practices. Submit the "Course Substitution for Certificate Requirements" form, which can be obtained in the Admission and Records and Counseling Departments.

LEVEL II: TEACHER (PRE SCHOOL) CERTIFICATE OF ACHIEVEMENT

This certificate satisfies all requirements for the Teacher Permit, issued by the State of California. The permit qualifies one to hold positions at the teacher level in State and Federally Funded programs such as Head Start and State Preschool. Choose either Option A or Option B. (Permit applications can be obtained through the Child Development Department.)

Units Required: 45.0

Option A – For students already working in the field.

All of the courses required for the Associate Teacher Certificate. PLUS:

CHDV 200	Teaching in a Diverse Society	3.0
CHDV 210	Practicum	4.0

21 General Education Units (Must be Associate Degree Applicable), including one in each of the following categories.

English (in addition to Eng 50) | Humanities | Social Science (Cannot be CHDV 106 or 106) | Math or Science

All course work must be completed with a "C" or better.

Experience Requirement necessary to apply for the Child Development Permit: Evidence of working in an early childhood program for 175 days of 3+ hours per day within the past 4 years. Use the Verification of Experience Form, which is included in the Permit Application, to document this experience. (THIS IS NOT NECESSARY FOR OBTAINING CERTIFICATE)

Option B – For students with no work experience in the field.

All of the courses required for the Associate Teacher Certificate, plus completion of all other requirements for the A.S. degree in Child Development.

(See a counselor to identify specific courses which will facilitate transfer to a university.)

LEVEL III: SITE SUPERVISOR (PRE SCHOOL) CERTIFICATE OF ACHIEVEMENT

This certificate satisfies all EDUCATIONAL requirements for the Site Supervisor Permit, issued by the State of California. This permit qualifies one to hold positions at the Site Supervisor level in State and Federally Funded programs such as Head Start and State Preschool. (See note below for information on how to obtain the EXPERIENCE requirements.)

Units Required: 60.0

Certificate Requirements Include:

ALL of the courses required for the Associate of Science Degree in Child Development including:

Child Development Courses: **CHDV** 100, 106, 110, 142, 150, 160, 200, 210 | **CHDV** 220, 239, and 240

All coursework must be completed with a grade of "C" or better.

PLEASE NOTE: Prior to applying for the Site Supervisor Permit, student must complete a Verification of Experience, documenting 350 days of work in an early childhood program of 3+ hours per day within 4 years including at least 100 days of supervising adults. (Permit applications can be obtained through the Child Development Department.)

Child Development Courses

CHDV 50 WORKING WITH YOUNG CHILDREN

Units: 3.0 | 48-54 hours lecture

(No prerequisite. Pass/No pass)

This survey course provides an introduction to early childhood education. Classroom instruction and practical experiences will include child development, child guidance, health and safety issues and curriculum exploration. This course will provide a foundation for continued course work in the field.

CHDV 100 CHILD GROWTH AND DEVELOPMENT

Units: 3.0 | **CSU, UC** | 48-54 hours lecture

(No prerequisite. Recommended preparation: Successful completion of ENGL 50 or eligibility for ENGL 101.0 is strongly advised)

The course examines the major physical, psychosocial, and cognitive/language developmental milestones for children, both typical and atypical, from conception through adolescence. There will be an emphasis on interactions between maturational processes and environmental factors. While studying developmental theory and investigative research methodologies, students will observe children, evaluate individual differences and analyze characteristics of development at various stages.

CHDV 106 CHILD, FAMILY AND COMMUNITY

Units: 3.0 | **CSU, UC** | 48-54 hours lecture

(No prerequisite. Recommended preparation: Successful completion of ENGL 50 or eligibility for ENGL 101.0 is strongly advised)

The scientific study of societal institutions which socialize the child, such as the family, school, peer group, community and media within the context of culture, religion, economics, politics and change. Major theoretical perspectives will be examined.

CHDV 110 PRINCIPLES AND PRACTICES OF TEACHING YOUNG CHILDREN

Units: 3.0 | **CSU** | 48-54 hours lecture

(No prerequisite. Recommended preparation: Successful completion of ENGL 50 or eligibility for ENGL 101.0 is strongly advised).

This course provides an introduction to the critical principles and practices of the field of early childhood education. Emphasis is placed on introducing students to interaction strategies that build meaningful relationships, provide for guidance and discipline, and support play and exploration. Students will consider developmental theory and its implications on interaction through play and relationships. The course will provide a brief overview of the field of early childhood education, and introduce students to developmentally appropriate practices of observation, assessment and curriculum planning.

CHDV 111 INFANT AND TODDLER CAREGIVING

Units: 3.0 | **CSU** | 48-54 hours lecture

(No prerequisite)

A study of the physical, perceptual, socio-emotional, cognitive development and behavior of the young child from birth to age three. Emphasis will be on the translation of theories of development to appropriate practices in the care giving environment.

CHDV 115 FAMILY CHILD CARE PROVIDER

Units: 3.0 | **CSU** | 48-54 hours lecture

(No prerequisite. Grade Option)

This course will address the many factors involved in providing quality child care in one's home. This course will cover how to set up a safe, healthy and stimulating environment that meets the developmental needs of the diverse ages served in family day care homes. Providers will develop or refine their business policies and procedures, parent contracts, and personal philosophy and goals. Additionally, training in preventive health practices will enable providers to partially fulfill AB 243 requirements.

CHDV 133 ART EXPERIENCES FOR YOUNG CHILDREN

Units: 3.0 **CSU** | 48-54 hours lecture

(No prerequisite)

This curriculum course prepares students to support the young child's creative development. Students will select, develop, and present art materials and activities for young children. An understanding of appropriate developmental art experiences and the creative process will be stressed. Emphasis is placed on developing a classroom environment that promotes creative expression.

CHDV 134 LANGUAGE AND EARLY LITERACY DEVELOPMENT

Units: 3.0 **CSU** | 48-54 hours lecture

(No prerequisite)

This course will focus on the young child's language acquisition and early literacy development. Emphasis will be on introducing students to developmentally appropriate activities and practices, which will foster language and early literacy. The course will allow students to develop curriculum materials. It will satisfy the program/curriculum requirement for licensing and credentialing.

CHDV 137 THE CHILD WITH SPECIAL NEEDS

Units: 3.0 **CSU** | 48-54 hours lecture

(No prerequisite)

This course will provide the history of special education in the early childhood setting including an overview of legislation, assessment, curriculum development, and environmental issues. Students will identify the interrelationships of family, communities, and the early childhood educators.

CHDV 138 COOPERATIVE EDUCATION

See Cooperative Education listing (1-8 units). **CSU**

CHDV 139 INTRODUCTION TO EARLY INTERVENTION

Units: 3.0 **CSU** | 48-54 hours lecture

(Prerequisites: CHDV 100, CHDV 106, CHDV 110, CHDV 150, minimum grade C.)

This course will provide students with current research, theories and teaching strategies in the inclusive early intervention setting, child care setting and home setting. Topics covered in this course will include typical and atypical development of infants, toddlers and young children, lesson planning strategies, collaborative teaching, overview of Federal and State laws/legislation that support early intervention, and methods for working with families of infants, toddlers and young children with special needs.

CHDV 141 BASICS OF SCHOOL-AGE CHILD CARE

Units: 3.0 **CSU** | 48-54 hours lecture

(No prerequisite)

An introduction to appropriate practices in school-aged programs and curriculum based upon knowledge of the social, emotional, physical, and cognitive development of the child ages six to twelve. Exploration of curriculum units that include creative art, music, and literature.

CHDV 142 CHILD HEALTH, SAFETY, AND NUTRITION

Units: 3.0 **CSU** | 48-54 hours lecture

(No prerequisite. Recommended preparation: Successful completion of ENGL 50 or eligibility for ENGL 101.0 is strongly advised).

This course introduces the law, regulations, standards, policies and procedures of health, safety and nutrition which promote optimal health and positive attitudes toward wellness in the growing child at home and at school. Included will be identification and prevention of health problems; practical aspects of developing safe and healthy environments; and promoting good nutrition and food habits.

CHDV 143 INTRODUCTION TO THE HIGH/SCOPE CURRICULUM**Units: 3.0** [CSU](#) | 48-54 hours lecture*(No prerequisite)*

This course provides students with a working knowledge of the High/Scope curriculum model. This model stresses an active learning classroom based upon Jean Piaget's theories of child development. Course will cover origins of model, classroom arrangement, curriculum, adult/child interaction and observation techniques.

CHDV 144 MATH AND SCIENCE EXPERIENCES FOR YOUNG CHILDREN**Units: 2.0** [CSU](#) | 32-36 hours lecture*(No prerequisite)*

This class will focus on the preschool child's acquisition of science and mathematical concepts. Emphasis will be on introducing students to developmentally appropriate activities and practices which will foster development in these areas. This course will also focus on the teacher's (adult) role in establishing an environment rich in opportunities for self-directed activities and will assist teachers in developing science and math materials and activities.

CHDV 145 MUSIC AND MOVEMENT EXPERIENCES FOR YOUNG CHILDREN**Units: 2.0** [CSU](#) | 32-36 hours lecture*(No prerequisite)*

This course will introduce students to gross motor development in the early years and provide instruction on how to facilitate this development with movement activities. This course will also focus on musical activities and experiences through which children develop appropriate skills, concepts and attitudes. Students will select, develop and present music/movement activities leading to a comprehensive file of classroom activities to be implemented in one's own early childhood setting.

CHDV 148 SPECIAL TOPICSSee Special Topics listing (Variable units) [CSU](#)**CHDV 149 INDEPENDENT STUDY**See Independent Study listing (1-3 units) [CSU](#)**CHDV 150 INTRODUCTION TO CURRICULUM****Units: 3.0** [CSU](#) | 48-54 hours lecture*(No prerequisite. Recommended preparation: CHDV 100 and CHDV 110; successful completion of ENGL 50 or eligibility for ENGL 101 is strongly advised).*

The study and application of curriculum design principles for early childhood educational programs. Course includes planning and evaluating developmentally appropriate activities and experiences that promote physical cognitive, creative, social and emotional growth in children. Planning a comprehensive unit of study is also included.

CHDV 160 OBSERVATION AND ASSESSMENT**Units: 3.0** [CSU](#) | 48-54 hours lecture*(Prerequisites: CHDV 100, CHDV 106, CHDV 110 and CHDV 150, minimum grade C.)*

This course offers an in-depth study of current observation and assessment approaches to understand and articulate development in children birth through age 8. Guided by developmental theory, students will learn how observation and assessment influence the design of early childhood settings, understanding and guiding child behavior, curricular plans, communication with families, and support program quality. Student must be aware that homework for this course involves observing children in a variety of settings. TB clearance advisory.

CHDV 200 TEACHING IN A DIVERSE SOCIETY

Units: 3.0 **CSU** | 48-54 hours lecture

(Prerequisites: CHDV 100, CHDV 106, CHDV 110, CHDV 150, minimum grade C.)

This course is designed to help students become teachers who can explore and address diversity in ways that enhance the development of children in early childhood settings. It will address attitudes and behaviors toward others in the areas of culture, race, gender, age and abilities; the development of an anti-bias curriculum; the analysis of the classroom environment for culturally relevant and diverse materials and resources; as well as highlighting developmental issues and advocacy.

CHDV 210 PRACTICUM

Units: 4.0 **CSU** | 32-36 hours lecture and 96-108 hours laboratory

Prerequisites: CHDV 100, CHDV 106, CHDV 110, CHDV 150 minimum grade C. Recommended preparation: Successful completion of ENGL 50 or eligibility for ENGL 101.0

This course focuses on the integration and application of child development theory to facilitate learning among young children. Students will complete 108 lab hours of supervised field experience at the campus Child Development Center or with an approved mentor teacher in the community. Emphasis is placed on developing effective teaching strategies, play-oriented curriculum planning based upon observation and assessment, discipline and guidance techniques, cooperative relationships with staff and families, professional ethics and assessment of one's own professional competence. Current (within a year) medical verification of absence of tuberculosis (TB).

CHDV 211 EARLY INTERVENTION PRACTICUM/FIELDWORK EXPERIENCE

Units: 4.0 **CSU** | 32-36 hours lecture and 96-108 hours laboratory

(Prerequisites: CHDV 100, CHDV 106, CHDV 110, CHDV 150, CHDV 111; minimum grade C. Recommended preparation: CHDV 137, 139, 160, ENGL 50 or ENGL 101.0.)

This course will provide students with a supervised practicum as an assistant in an early intervention/special education setting with infants, toddlers and/or young children with special needs from birth through eight years. Students will be placed in early intervention/special education setting, in least restricted environment, where they will be exposed to the unique development of young children with special needs. Adaptation of curriculum, natural environments, identification and assessment will be observed. Current (within a year) medical verification of absence of tuberculosis (TB). CSU

CHDV 220 THE MENTOR TEACHER/ADULT SUPERVISION

Units: 2.0 **CSU** | 32-36 hours lecture

(Prerequisites: CHDV 100, CHDV 106, CHDV 110, CHDV 142, CHDV 150, CHDV 160, CHDV 200 and CHDV 210, minimum grade C.)

A study of the methods and principles of supervising adults in early childhood programs. Emphasis is placed on the role of experienced classroom teachers/supervisors who function as Mentors to teachers while simultaneously addressing the needs of children, parents and other staff.

CHDV 239 ADMINISTRATION OF CHILDREN'S PROGRAMS I

Units: 3.0 **CSU** | 48-54 hours lecture

[Prerequisite: Completion of the State Department of Health required core courses (CHDV 106 and CHDV 100 or equivalent.) Currently working in the field recommended.]

This course focuses on funding, licensing, planning, organizing, and managing a variety of programs for young children. The administrator's role, site development, on-going organization, and working with the parents and volunteers explored. This course is designed to fulfill three of the six semester units of administration required for the site supervisor permit.

CHDV 240 ADMINISTRATION OF CHILDREN'S PROGRAMS II

Units: 3.0 **CSU** | 48-54 hours lecture

[Prerequisite: Completion of the State Department of Health required core courses (CHDV 106 and CHDV 100 or equivalent.) Currently working in the field recommended.]

This course explores the human relations aspect of administering children's programs. The emphasis will be placed on leadership styles, communication strategies, and promoting a positive climate for staff and children. This course is designed to fulfill three of the six semester units of administration required for the Site Supervisor Permit.

Commercial Art

Faculty

Shuron Taylor

Commercial Art Courses

CART 71 SURVEY OF COMPUTER GRAPHICS STUDIO

Units: 4.0

48-54 hours lecture and 48-54 hours laboratory

(No prerequisites)

This course will introduce students to industry standard software packages used in visual communications. Students will be instructed on the basic use of draw, paint/photo, layout, multimedia, web and digital video applications. Topics covered include: Operating systems basics, drawing and painting on the computer, digitizing and editing sound and video and designing for interactivity.

CART 72 ADOBE ILLUSTRATOR

Units: 3.0

32-36 hours lecture and 48-54 hours laboratory

(No prerequisites)

This course covers the fundamental elements of Adobe Illustrator including, design, color theory, typography and appropriateness for specified uses in the graphics industry.

CART 133 DIGITAL IMAGING

Units: 3.0

CSU,UC 32-36 hours lecture and 48-54 hours laboratory

(No prerequisite. Recommended preparation ART 112 or ART 113).

This course covers the fundamental elements of Adobe Illustrator including, design, color theory, typography and appropriateness for specified uses in the graphics industry.

CART 134 THE ART OF WEB DESIGN

Units: 4.0

CSU 48-54 hours lecture and 48-54 hours laboratory

(No prerequisite)

An overview of most current industry standard software used for creating web pages. This course does not focus on HTML or scripting language but is focused on the development effective communications design. See cross-listing for **ART 134**.

Communication Studies

Communication Studies is an expansive field which aims to:

- (1) analyze, understand, and facilitate effective expression of organized thought, and
- (2) facilitate successful interaction with self, others, society and the world. Skills developed within this field are readily applicable in daily life. A bachelor's degree in Communication Studies offers pathways to careers in law, education, government, public relations and advertising, arts and entertainment, social and human services, international relations and negotiations. The Communication Studies Program features an advanced Communication Center, located on the 2nd floor of the Performing Arts Center, Room 54-213. The center is available to help with the development and delivery of oral presentations from research, outlining and delivery, to visual aids including PowerPoint presentations.

Career Opportunities

Administrator, Advertising, Counselor, Lobbyist, Marketing Specialist, Ministry, News Anchor, Public Information Officer
Publicity Manager, Speech Writer, Teacher

Faculty

Jacqueline Augustine-Carreira | Jennifer Fowlie | Gregory Jones
Theresa Mirci-Smith | John Rude - Emeritus | Marjorie Milroy - Emeritus

Associate Degree

To earn an Associate in Science degree for Transfer with a major in Communication Studies, complete the required major courses and all other requirements specified on the following pages (i.e. 60 CSU transferable units, CSU GE or IGETC, etc.). For more information on the AA-T/AS-T degrees, meet with a counselor or www.adegreewithaguarantee.com

Degrees and Certificates Awarded

A student receiving a degree or certificate in this field will be able to:

- Communicate ethically, responsibly, and effectively as local, national, international, and global citizens and leaders.
- Communicate competently in dyads, groups and organizations demonstrating an understanding of communication theories and principles.
- Monitor and model interpersonal communication competence demonstrating an ability to construct effective messages both oral and written in various formats, including the ability to interpret and evaluate feedback, for a variety of audiences.
- Possess skills to effectively compose and deliver formal and informal oral presentations to a variety of audiences in multiple contexts.

Transfer

For the most up-to-date information on these programs and others, visit www.assist.org. Please stop by the Transfer Center in Building 55 or make an appointment with a counselor if you have questions.

- **California State University, San Bernardino:** *Communication major*

A new transfer option has been added in this major.

Communication Studies, AA-T

The Associate in Arts for Transfer Degree in Communication Studies provides an overview of the knowledge and skills students will demonstrate upon completion and conveys what students can expect as an outcome. The degree (1) encourages students to analyze, understand, and facilitate effective expression of organized thought, and (2) facilitates successful interaction with self, others, society and the world. Students are given the opportunity to transfer to a CSU with junior standing.

This degree is in full alignment with our existing Communication Studies Program and provides an additional option for those students desiring to transfer to a CSU Communication Studies Major.

Program Requirements: 18 units

Required Courses (3 units total)

CMST 109	Public Speaking	3.0
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Additional Courses

List A – (6 units total)

CMST 106	Interpersonal Communication	3.0
CMST 108	Group Discussion	3.0

List B – (6 units total)

CMST 105	Intercultural Communication	3.0
JOUR 108	Fundamentals of Journalism	4.0

List C – Select any ONE of the following courses (3 units total)

ANTH 102	Introduction to Cultural Anthropology	3.0
PSYC 101	Introduction to Psychology	3.0
PSYC H101	Honors Introduction to Psychology	3.0
SOC 101	Introduction to Sociology	3.0
ENGL 102	Composition and Literature	3.0
ENGL H102	Honors Composition and Literature	3.0

A student wishing to pursue an AA-T/AS-T degree in the major listed on this page must ensure the CSU of their choice is accepting that similar major. Students completing an AA-T/AS-T degree are guaranteed admissions into a CSU campus given that a student fulfills the following:

- 1) 60 CSU transferable units;
 - 2) Completes the CSU General Education (GE) or IGETC General Education pattern;
 - 3) Completes the major requirements for the AA-T/AS-T;
 - 4) Maintains a transferable cumulative GPA of at least 2.0 (C or better);
 - 5) Completes the basic/Golden 4 GE requirements.
- For more information on the AA-T/AS-T degrees, meet with a counselor or visit www.sb1440.org and www.adegreewithaguarantee.com

Communication Studies Courses

CMST 105 INTERCULTURAL COMMUNICATION

Units Required: 3.0 [CSU, UC](#) | 48-54 hours lecture

(No prerequisites)

A course designed for the student to learn relevant intercultural communication elements, factors, and theories. Students will learn and be evaluated on: describing their cultural roots, creating an identity collage, defining worldview and cultural values, analyzing an intercultural encounter, describing an intercultural communication context, and exploring a specific intercultural topic. Students will demonstrate proficiency in the above through exams, individual and group presentations, and essays.

CMST 106 INTERPERSONAL COMMUNICATION

Units Required: 3.0 [CSU, UC](#) | 48-54 hours lecture

(UC credit limitation) (No prerequisite)

A course which examines human communication theory and principles across a variety of contexts. The course emphasizes analysis of communication variables as well as skill development and application.

CMST 107 FAMILY COMMUNICATION

Units Required: 3.0 [CSU](#) | 48-54 hours lecture

(UC credit limitation) (No prerequisite)

An introduction to human communication in the setting of the family. The goal is to help the student understand how, through communication, people develop, maintain, enhance, or destroy family relationships. Students will study variables and the process of communication as they affect the interaction of their families and develop insight that will make it possible to apply this knowledge.

CMST 108 GROUP DISCUSSION

Units Required: 3.0 [CSU, UC](#) | 48-54 hours lecture

(UC credit limitation) (No prerequisite)

Practical application of the processes involved in group discussion with an emphasis on problem solving and decision making from structured to unstructured situations. Principles are applicable to groups as those found in schools, businesses, professions, and the family. This course is designed to develop interpersonal skills for thoughtful participation in a democratic society.

CMST 109 PUBLIC SPEAKING

Units Required: 3.0 [CSU, UC](#) | 48-54 hours lecture

(UC credit limitation) (No prerequisite)

A course designed for the student to learn how to prepare, organize, and deliver public speeches. Students will learn and be evaluated on: constructing a speaking outline, analyzing an audience, adapting to the occasion, and using effective speaking delivery techniques. Students will demonstrate proficiency in the above through the delivery of speeches in the classroom.

CMST 128 SPECIAL TOPICS

See Special Topics listing (Variable units). [CSU](#)

CMST 129 INDEPENDENT STUDY

See Independent Study listing (1-3 units). [CSU](#)

Computers

VVC has four departments that offer Associate degrees and certificate programs for students interested in computers. See the specific listing for more information:

BUSINESS EDUCATION TECHNOLOGIES (BET) Programs in this department prepare students with professional office skills and procedures to function in high-tech business offices. Instruction is offered in most of the major software programs currently in use, such as Microsoft Word, Excel, PowerPoint, Access, etc. Certificates include Administrative Assistant, Medical Office Management, Legal Office Management, among others.

COMPUTER INFORMATION SCIENCE (CIS) CIS represents computing within both the Computer Science and Business disciplines. The computer science areas are oriented toward computer programming as used in writing programs and applications, and web authoring. The business areas include developing and managing database applications, networking, and operating systems. Transfer units, vocational (employment), and industry certification tracks are available.

COMPUTER INTEGRATED DESIGN AND GRAPHICS (CIDG) and (MERT) Computer Integrated Design Graphics and Media Arts consist of a three-pronged approach for fields within 3D Animation, Architecture & Engineering and GIS.

Digital Animation has become one of the fastest growing careers within the computer graphics industry, and prepares students to create video games, television commercials, architectural visualizations, animated logos, 3D website graphics or film-based special effects.

Computer Aided Design (CAD) prepares students to work in the fields of Architecture and Engineering as CAD drafters, architectural drafters, civil drafters, product designers, and more...

Geographic Information Systems (GIS) prepares students to work with all forms of county, state, federal and local government agencies related to emergency response and management of resources. Fire, police, sheriff, military and homeland security are just a few job areas for GIS technicians. GIS integrates hardware, software, link data (such as word processing documents, excel spreadsheets, drawings, photographs, maps, etc...) for displaying, analyzing and managing information and resources.

ELECTRONICS AND COMPUTER TECHNOLOGY (ELCT) Prepares students for high-tech careers in engineering and technology, computer technology, tele-communication, CISCO networking, cabling, PC Microsoft Certified Systems Engineer (MCSE), etc.

Students can transfer from VVC to a university and study the computing field in more depth, earning a Bachelor of Arts (B.A.) or a Bachelor of Science (B.S.) degree. Programs range from:

- "Pure" computing in such university departments as Computer Information Science and Computer Science (lots of math and science required), to
- Game Design, Web Programming, and Graphics Programming (math through calculus required), to
- Management Information Systems (MIS) within a Business major.

Visit www.assist.org to explore which universities offer programs in these fields, and to learn about what courses you can take at VVC before transferring.

Computer Information Science

The Computer Information Science (CIS) department provides training for those persons who plan to work within a technical, computer-centered environment. Because of the widespread use of computers in our society, employment opportunities are found in a multitude of different environments such as general business, communications industries, manufacturing, environmental engineering, education, medical technology, and banking and finance as well as computer information science. The program is specifically designed to provide the student with practical training which would be valuable and useful in the computer programming workplace.

Career Opportunities

Computer Operator, Computer Operations Management, Computer Training Specialist, Data Administrator
Data Control Clerk, Data Entry Operator, Documentation Clerk, Education Specialist, Electronic Graphics Artist
Information Center Specialist, Management Technical Assistant, Microcomputer Technical Support, Multimedia Specialist
Network Administrator, Network Specialist, Network Support Specialist, Production Control Clerk, Programmer
Programmer/Analyst, Programming Librarian, Quality Control Specialist, Systems Analyst, Technical Research Assistant
Technical Support Specialist, Technical Writer, User Support Specialist, Web Master, Web Page Development

Faculty

Ed Burg | Reiji Cass | Shane Thomas | Paul Toning

Degrees and Certificates Awarded

Associate in Science, Computer Information Science
MySQL Database Developer Certificate
Programming I Certificate
Productivity Software Specialist Certificate
Visual Basic Programming Certificate

Database Administration Certificate
Network Specialist Certificate
Programming II Certificate
UNIX Administrator Certificate
Web Authoring Certificate

A student receiving a degree or certificate in this field will be able to:

- Evaluate information technology systems.
- Communicate information technology concepts effectively with technical and non-technical audiences.
- Analyze and discuss technical problems related to environments where information technology is utilized.
- Implement logical computational solutions including documentation for an identified use case.
- Synthesize technology with environments that satisfy business, security, fault tolerance, legal, sustainability and other requirements.

Associate Degree

To earn an Associate in Science degree with a major in Computer Information Science, complete a minimum of 18 units from any of the certificate requirements or from any Computer Information Science courses and meet all Victor Valley College graduation requirements. CIS 138 (Cooperative Education) may be used as Elective credit, but may not be used to fulfill major requirements.

Transfer

For the most up-to-date information on these programs and others, visit www.assist.org. Please stop by the Transfer Center in Building 55 or make an appointment with a counselor if you have questions.

Note: Typically, majors in Computer Science require the following courses taken prior to transfer: CHEM 201, CIS 201, 202; ECON 102; MATH 226, 227, 228, 231; PHYS 201, 203, 202, H204. An alternative to the CIS transfer major that appeals to many students is Administration, with an emphasis in CIS. See Business Administration.

- **California State University, San Bernardino:** *Computer Science major*
Computer Systems major
Computer Engineering major
- **University of California, Riverside:** *Computer Science major*
Computer Engineering major

DATABASE ADMINISTRATION CERTIFICATE

The Database Administration Certificate prepares the student with a foundation for database administration using the Oracle® database software.

Units Required: 18.0

All of the following must be completed:

CIS 105	Introduction to Systems Analysis	3.0
CIS 280	Fundamentals of Database Management Systems	3.0
CIS 281	Database Management	4.0
CIS 287A	Structured Query Language A (SQL A)	2.0
CIS 287B	Structured Query Language B (SQL B)	2.0
CIS 288A	Oracle® A	2.0
CIS 288B	Oracle® B	2.0

MYSQL DATABASE DEVELOPER CERTIFICATE

The MySQL Database Developer Certificate is a high quality certification process that will provide evidence that a qualifying individual has skill in developing production relational MySQL database applications. By being certified, clients, customer, and employers are ensured that the database developer is competent and professional.

Units Required: 11.0

All of the following must be completed with a grade of "C" or better:

CIS 280	Fundamentals of Database Management Systems	3.0
CIS 96A	Structured Query Language A Using MySQL	2.0
CIS 96B	Structured Query Language B Using MySQL	2.0
CIS 91A	MySQL Administration A	2.0
CIS 91B	MySQL Administration B	2.0

NETWORK SPECIALIST CERTIFICATE

This certificate program prepares the student to begin a career in the computer networking field and working and administering a variety of popular network platforms including UNIX, Microsoft and Novell.

Units Required: 16.5

All of the following must be completed:

CIS 123	Introduction to Operating Systems: UNIX	3.0
CIS 124	Fundamentals of Data	2.0
CIS 50	Fundamentals of Data Communication	2.0
CIS 67	Fundamentals of Networking	2.0

Choose one of these two options:

CIS 139	Windows XP For Power Users or	4.0
CIS 240A	Windows 2000 Professional	4.0

Choose one of these three options:

CIS 240B	Windows 2003 Server Administration or	4.0
CIS 72	Novell NetWare 6 Basic Administration	1.5
CIS 252	NetWare 6 Advanced Administration or	2.0
CIS 261	UNIX System Administration A and	2.0
CIS 262	UNIX System Administration B	2.0

PROGRAMMING I CERTIFICATE

This certificate trains the student to become a programmer with some of the most popular programming such as C and Visual BASIC.

Units Required: 27.0

All of the following must be completed:

CIS 50	Computer Ethics	2.0
CIS 64	Computer Mathematics	3.0
BADM 144	Business Communications	3.0
CIS 101	Computer Literacy or	4.0
<i>CIS 103</i>	<i>Foundations of Computer Technology</i>	4.0
CIS 105	Introduction to Systems Analysis	3.0
CIS 201	C++ Module A	4.0
CIS 202	C++ Module B	4.0
CIS 210	Visual BASIC Programming or	4.0
<i>CIS 206A</i>	<i>Java A and</i>	2.0
<i>CIS 206B</i>	<i>Java B</i>	2.0

PROGRAMMING II CERTIFICATE

Completion of this certificate makes the student well versed in most popular programming languages and ready for business and highly technical software development.

Units Required: 22.0

All of the following must be completed:

CIS 104	Object-oriented Software Design	3.0
CIS 108	Assembly Language Programming	3.0
CIS 203	C++ Module C	4.0
CIS 50	Computer Ethics	2.0
<i>CIS 64</i>	<i>Computer Mathematics</i>	3.0
BADM 144	Business Communications	3.0
CIS 211	Advanced VB Programming A or B or C or	4.0
<i>CIS 206A</i>	<i>Java A and</i>	2.0
<i>CIS 206B</i>	<i>Java B</i>	2.0

PRODUCTIVITY SOFTWARE SPECIALIST CERTIFICATE

This certificate trains the student to become a well-rounded microcomputer user skilled in all the software that is common in business offices.

Units Required: 25.0

Group I - All of the following must be completed:

CIS 101	Computer Literacy <i>or</i>	4.0
CIS 103	Foundations of Computer Technology	4.0
CIS 280	Fundamentals of Database Management Systems	3.0
CIS 111	Multimedia Presentations	4.0
CIS 136	Introduction to Internet/WWW	2.0
CIS 139	Windows XP For Power Users	4.0
BET 112	Spreadsheet: Excel for Windows A/B/C	3.0
BADM 144	Business Communications	3.0

Group II - 3 units of the following must be completed:

BET 104	Beginning Word Processing/Typing: Word for Windows A/B/C	3.0
BADM 106	Accounting on Microcomputers	2.0
BADM 107	Accounting on Microcomputers	2.0

UNIX ADMINISTRATOR CERTIFICATE

The UNIX Administrator Certificate is a high quality certification process that will provide evidence that a qualifying individual has skill in designing, implementing and maintaining UNIX and Linux based networks. By being certified, clients, customers, and employers are ensured that the UNIX administrator is well equipped to handle the day-to-day operations associated with a UNIX based network as well as the unforeseen problems that tend to arise in any network.

Units Required: 14.0

All of the following must be completed with a grade of "C" or better:

CIS 50	Computer Ethics	2.0
CIS 90	Introduction to UNIX Operating System	4.0
CIS 93	PERL	4.0
CIS 261	UNIX System Administration A	2.0
CIS 262	UNIX System Administration B	2.0

WEB AUTHORING CERTIFICATE

This certificate provides the student solid training in developing web pages.

Units Required: 14.0

All of the following must be completed:

CIS 121	Introduction to Flash <i>or</i>	4.0
CIS 111	Multimedia Presentations	4.0
CIS 136	Introduction to Internet/WWW	2.0
CIS 137	Introduction to HTML	3.0
CIS 205	Javascript	4.0
CIS 50	Computer Ethics	2.0

Computer Information Science Courses

CIS 50 COMPUTER ETHICS

Units Required: 2.0 | **32-36 hours lecture**

(Recommended Preparation: Know how to use a personal computer: functions of mouse buttons and control of mouse movement (right click, left click, single click, double click, drag-and-drop, etc.), create, open and save files, install and run applications. Type about 30 WPM to keep up with class assignments.)

This course is an introduction to the theories and issues of ethical behavior as applied to the exigencies of a rapidly changing, information-oriented, computer-driven society. Topics include ethical history, philosophies, and issues at the responsibility level of both corporate business and the individual. Various ethical theories are introduced and discussed. Numerous current and past case histories are presented.

CIS 56 PROJECT MANAGEMENT

Units Required: 3.0 | **32-36 hours lecture and 48-54 hours laboratory**

(No prerequisites)

This course will provide the student with the skills necessary to manage projects using Microsoft Project. The student will be introduced to Gantt and PERT charts, the concept of a critical path, resource scheduling and leveling, and other concepts used in managing large projects. Efficient use of resources, people and equipment, will be emphasized.

CIS 67 FUNDAMENTALS OF NETWORKING

Units Required: 3.0 | **32-36 hours lecture and 48-54 hours laboratory OR 96-108 hours individualized instruction**

(No prerequisite. Recommended preparation: CIS 101)

This course presents a broad overview of the fundamentals of networking computers. It discusses in some detail the various network topologies, architectures, industrial standard, standards-defining organization, and the practical use of networks. This course is designed to prepare students to take the Network+ certification exam from CompTIA.

CIS 75 INTRODUCTION TO NETWORK SECURITY: NETWORK+

Units Required: 3.0 | **32-36 hours lecture and 48-54 hours laboratory OR 96-108 hours individualized instruction**

(No prerequisite)

Presents security topics covering general security concepts, communications security, infrastructure security, basics of cryptography, operational and organizational security. Topics include hacking, viruses, cryptography, detection and prevention on both wired and wireless LANs.

CIS 80 OPERATING SYSTEMS: MAC OS X

Units Required: 3.0 | **32-36 hours lecture and 48-54 hours laboratory**

(No Prerequisite. Recommended preparation: Basic ability to use mouse and keyboard to navigate around a computer. Grade Option)

This course introduces the Mac OS X operating system and the applications and utilities that are included with the operating system. Topics include but are not limited to: the graphical user interface, OS X preferences, account management, spotlight searches, disk management, printing, networking, program installation and removal, system security, email, Internet access, display management, address book, calendar, instant messaging, QuickTime, music management, and support.

CIS 83 PROGRAMMING IN PYTHON

Units Required: 4.0 | **48-54 hours lecture and 48-54 hours laboratory**

(No Prerequisite)

Python is a popular programming language that has taken a primary role in many companies including NASA, Google, Industrial Lights and Magic. Python uses an elegant syntax, making the programs easier to write and read, which also makes it an ideal language for beginning programmers. The foundation that students achieve can be applied to digital animation programs and game programming. No prior programming experience is assumed.

CIS 90 INTRODUCTION TO THE UNIX OPERATING SYSTEM

Units Required: 4.0 | 48-54 hours lecture and 48-54 hours laboratory

(No Prerequisite)

This course introduces the Unix and Linux operating systems. Topics include the history of Unix, commands and utilities, file system structure, shells, graphical user interfaces, networking, text editing and shell programming.

CIS 91A MYSQL ADMIN A

Units Required: 2.0 | 24-27 hours lecture and 24-27 hours laboratory

(No Prerequisite)

This course is designed to provide students with an introduction to the MySQL relational database management system. Students will learn how to design, install, configure and secure MySQL databases. The student should have prior experience with the fundamentals of databases.

CIS 91B MY SQL ADMIN B

Units Required: 2.0 | 24-27 hours lecture and 24-27 hours laboratory

(No Prerequisite)

This second course in MySQL database administration is designed to provide students with an advanced approach to current database administration issues in enterprise level databases. Topics include: transactions, multiple servers, replication, locking and administration interfaces.

CIS 94 PHP PROGRAMMING

Units Required: 4.0 | 48-54 hours lecture and 48-54 hours laboratory

(No Prerequisite. Recommended preparation: MATH 90)

This course is designed to provide students with an introduction to programming web-based applications using PHP. Students will learn how to design, code and implement dynamic web sites. This course will move the student from an understanding of XHTML to the development of powerful web applications that can be deployed over the Internet.

CIS 96A STRUCTURED QUERY LANGUAGE

Units Required: 2.0 | 24-27 hours lecture and 24-27 hours laboratory

(No Prerequisite)

This is the first of two courses in Structured Query Language using the MySQL database management system. Topics include concepts of relational databases and SQL, creating and using databases and performing queries.

CIS 96B STRUCTURED QUERY LANGUAGE

Units Required: 2.0 | 24-27 hours lecture and 24-27 hours laboratory

(No Prerequisite)

This is the second course in Structured Query Language using the MySQL relational database management system. Topics include: Joins, IF/Case statements, indexing, batch operations and locking strategies.

CIS 101 COMPUTER LITERACY

Units Required: 4.0 *CSU, UC* | 48-54 hours lecture and 48-54 hours laboratory

(No prerequisite. Recommended preparation: Mouse skills: know difference between, be able to perform, and know when to utilize: left click, right click, single click, double click, and drag and drop motion. Keyboarding skills: nominal typing speeds of about 30 words per minute (WPM))

This is a survey course which provides an overview of computer technology for multi-disciplinary majors. Using laboratory projects supported by the lecture, the student gains "hands-on" familiarity with different operating systems, word processors, spreadsheets, database management systems, programming, networks and the use of the Internet

CIS 104 OBJECT-ORIENTED ANALYSIS AND DESIGN

Units Required: 3.0 **CSU** | **32-36 hours lecture and 48-54 hours laboratory**

(No prerequisite, Grade Option)

This is a first course in the object-oriented modeling and design, a new way of thinking about problems using models organized around real-world concepts. The fundamental object-oriented construct is the object, which combines both data structure and behavior in a single entity. Object-oriented models are useful for understanding complex problems, communicating with application experts, modeling enterprises, preparing documentation, and designing programs and databases. This course is a prerequisite to all object-oriented programming language courses for it provides a requisite baseline working knowledge of unique object-oriented concepts and structure such as classes, objects and methods, encapsulation, inheritance, polymorphism and message abstraction, and static virtual methods.

CIS 105 INTRODUCTION TO SYSTEMS ANALYSIS

Units Required: 3.0 **CSU** | **48-54 hours lecture**

Offered Spring. (No prerequisite)

Introduces the three major skills required to perform effectively as a beginner in a systems analysis environment. Defines the specific steps in the determination of new systems' requirements, system design, and the creative process used to select and make recommendations as to one or more solutions to system development.

CIS 111 MULTIMEDIA PRESENTATIONS

Units Required: 4.0 **CSU** | **4.0 - 48-54 hours lecture and 48-54 hours laboratory**

(No prerequisite)

Students gain experience in developing multimedia presentations while gaining an understanding of multimedia technologies. In acquiring "hands-on" experience in producing and presenting multimedia presentations, the student will also actively create audio files, full-motion, video clips, graphics, animation sequences, and the text used in the final production. Additional subjects which will be covered include the basic principles for effective communications, scripting, logical control of peripheral devices, and runtime packaging.

CIS 121 INTRODUCTION TO WEB ANIMATION

Units Required: 4.0 **CSU** | **4.0 - 48-54 hours lecture and 48-54 hours laboratory**

(No prerequisite. Recommended Preparation: Basic computer operational skills)

Captivating web user-interfaces and contents including animations are created using multiple tools. This is a beginning course on web animation. A number of modern tools will be introduced, such as Adobe Animate and Adobe Edge, etc.

CIS 136 INTRODUCTION TO THE INTERNET

Units Required: 2.0 **CSU** | **24-27 hours lecture and 24-27 hours laboratory**

(No prerequisite)

This course of instruction is designed for the student or savvy business person who wants to acquire the skills needed to effectively interact and utilize the resources of the Internet and its newer component, the World Wide Web (WWW). By completing this course, a student will become well versed in the understanding and using of browsers and viewers, FTP (File Transfer Protocol), news groups, e-mail, and chat/conversation utilities. They will also be made aware of some of the other concerns relating to using the Internet, such as privacy and security issues.

CIS 137 INTRODUCTION TO HTML

Units Required: 3.0 **CSU** | **32-36 hours lecture and 48-54 hours laboratory**

(No prerequisite)

This course is designed for the student or business person who wants to acquire the skills needed to create a presence on the WWW (World Wide Web) in the form of a Web Page. The student will become conversant with HTML (Hypertext Mark-up Language) and CSS (Cascading Style Sheets) and be able to use HTML and CSS authoring (designing, implementing, and maintaining). The course will cover the creation of HTML and CSS documents.

CIS 138 COOPEATIVE EDUCATION

See Cooperative Education listing (1-8 units). **CSU**

CIS 139B WINDOWS FOR POWER USERS

Units Required: 4.0 **CSU** | **48-54 hours lecture and 48-54 hours laboratory**

(No prerequisite. Recommended preparation: CIS 101)

Students will gain experience in installing, navigating, configuring, optimizing, troubleshooting, and customizing the current version of Windows. Additional subjects which will be covered include networking, disk management, diagnostics, using the Internet, and upcoming releases of Windows.

CIS 164 COMPUTER MATHEMATICS (Formerly CIS 64)**Units Required: 3.0** CSU | **48-54 hours lecture and 48-54 hours laboratory***(Prerequisite: MATH 90 minimum grade C)*

Computer mathematics for the computer major. Introduction to number bases, set theory, Venn diagrams, logic, Boolean algebra, algebraic expressions, exponents, linear and quadratic equations, matrices, mathematical sequences and series, linear programming and logarithmic functions.

CIS 201 PROGRAMMING CONCEPTS AND METHODS I**Units Required: 4.0** CSU, UC | **48-54 hours lecture and 48-54 hours laboratory***(No Prerequisite. CIS 101 recommended)*

An introduction to programming using the C++ language. This course is appropriate for those wishing to learn the principles of computer programming and to gain some initial experience with C++.

CIS 202 PROGRAMMING CONCEPTS AND METHODS II**Units Required: 4.0** CSU, UC | **48-54 hours lecture and 48-54 hours laboratory***(Prerequisites: CIS 201 minimum grade C)*

The second in the C++ series, this course teaches the student who is familiar with the language how to use its object-oriented features in depth. Subject matter includes: designing and implementing classes, abstract data types, overloading operators, inheritance, and polymorphism.

CIS 205 JAVASCRIPT**Units Required: 4.0** CSU | **48-54 hours lecture and 48-54 hours laboratory***(Prerequisites: CIS 201 minimum grade C)*

JavaScript is the only client-side programming language for web pages on virtually all browsers. By incorporating JavaScript into HTML documents, web page contents become dynamic, customized, and interactive. When developing websites, JavaScript is a must in addition to server-side scripting, since many features are not supported on the server-side programming, such as mouseover and the likes. This course teaches students how to program the web pages using JavaScript including the Javascript language itself, the DOM (Document Object Model which is the structure upon which all web pages are based), the object based programming, and the browser event model as well as event driven programming; it also prepares students for further server-side web development. ented features in depth. Subject matter includes: designing and implementing classes, abstract data types, overloading operators, inheritance, and polymorphism.

CIS 206 PROGRAMMING JAVA**Units Required: 4.0** CSU | **48-54 hours lecture and 48-54 hours laboratory***(No prerequisite)*

This is a course for programming in Java. The course will cover the basics of the Java programming language and object oriented programming method. Some of the more advanced topics such as applets programming data structure implementation in Java will also be covered.

CIS 208 COMPUTER ARCHITECTURE AND ORGANIZATION**Units Required: 3.0** CSU, UC | **32-36 hours lecture and 48-54 hours laboratory***(No prerequisite)*

Designed to train students to understand microcomputer systems low level (hardware) organizations and architecture through assembly language programming. (Formerly CIS 108)

CIS 210 PROGRAMMING IN VISUAL BASIC**Units Required: 4.0** CSU | **48-54 hours lecture and 48-54 hours laboratory***(No prerequisite)*

Visual Basic is the world's most popular programming language used for application development. This course is based on the latest VB.NET. VB is an object-oriented programming language suitable not only for Windows applications, but also for Web applications. While retaining its advantages in ease of learning, efficiency at developing sophisticated applications, VB.NET has now added an array of powerful features such as Web forms, mobile controls, support for XML, full compatibility with other languages (such as C#, Visual C++, Cobol, NET), etc. Students will learn all the programming basics using VB.NET, as well as being exposed to topics such as Object-Oriented programming, Database programming, and Web programming.

CIS 240A WINDOWS ENTERPRISE ADMINISTRATION

Units Required: 4.0 **CSU** 48-54 hours lecture and 48-54 hours laboratory

(Prerequisite: CIS 101 or equivalent)

An introduction to operating system design and operation using Windows Enterprise version in a client/server environment. Topics include: the design and philosophy of the Windows operating system, the differences between various Windows versions, user issues in Windows such as using Windows command prompt vs. the Graphical User Interface, and basic installation issues. Emphasis will be given to comparing the differences in administering Windows enterprise to Windows Professional. Hands-on experience will be stressed.

CIS 241 MICROSOFT WINDOWS SERVER ADMINISTRATION (Formerly CIS 240B)

Units Required: 4.0 **CSU** 48-54 hours lecture and 48-54 hours laboratory

(Prerequisites: CIS 139 or 240A or equivalent and CIS 101 and CIS 67; minimum grade C)

Covers administration of the current version of Windows Server on a network. Topics include: installation, user management, security, performance issues, Active Directory, Group Policies, network printing, the system registry, backups, and setting up applications.

CIS 261 UNIX SYSTEM ADMINISTRATION

Units Required: 4.0 **CSU** 48-54 hours lecture and 48-54 hours laboratory

(Prerequisite: CIS 90 with a grade of 'C' or better)

UNIX system administrators are responsible for the operation of UNIX systems—the most common server platform on the Internet. Learn how to setup, manage, and maintain UNIX systems. Topics include: the role of the system administrator in an organization, UNIX variants, installation, booting and shutting down, backups, managing users.

CIS 262 UNIX SYSTEM ADMINISTRATION B

Units Required: 2.0 **CSU** 16-18 hours lecture and 48-54 hours laboratory

(No prerequisite)

This second UNIX system administration course covers advanced UNIX administration topics, including system security, setting up and managing Internet services such as Hypertext Transfer Protocol, File Transfer Protocol, and e-mail.

CIS 264 DISCRETE STRUCTURES

Units Required: 3.0 **CSU, UC** 48-54 hours lecture

(Prerequisite: MATH 90)

This course will cover logic in computer science as a tool to establish truth through various techniques of proof. The goal of this course is for us to learn formal logic as a theoretical foundation and its application to topics in discrete mathematics and computer science..

CIS 280 FUNDAMENTALS OF DATABASE MANAGEMENT SYSTEMS

Units Required: 3.0 **CSU** 32-36 hours lecture and 48-54 hours laboratory

(No prerequisite)

This course provides an in-depth knowledge of several different database management systems (DBMS) and an understanding of the basic relational, network, or hierarchical database structures which they use. Issues of privacy, security, protection, integrity, redundancy, distributed database concepts, data manipulation and query languages are covered. Students will learn how these concepts and facilities are implemented on common microcomputer-based DBMS products and will learn "hands-on" how these common features are implemented in a variety of such products.

CIS 281 DATABASE MANAGEMENT

Units Required: 4.0 **CSU** 48-54 hours lecture and 48-54 hours laboratory

(Prerequisite: CIS 280 or equivalent)

This course teaches students the concepts and implementation of a relational database model and object-oriented database model. This course covers the common languages used for data manipulation and information retrieval. The course is a practical approach to train students to analyze design and create databases for businesses and organizations.

CIS 288A ORACLE A

Units Required: 2.0 **CSU** 16-18 hours lecture and 48-54 hours laboratory

(Prerequisite: CIS 280; Recommended preparation: CIS 281)

An introduction to using the Oracle relational database management system. This is the first of two modules. Topics include the structure, nature, and use of databases, working with database projects, dealing with the various data types, and querying databases.

Computer Integrated Design and Graphics

The Computer Integrated Design and Graphics (CIDG) at Victor Valley College is growing to keep pace with our High Desert community. We have many new and exciting courses, programs, and certificates to meet the needs of our students. Our focus is on designing courses and certificate programs that will provide students with the knowledge and skills to secure a job in a career field that has unlimited potential.

The cornerstone of the department remains our Computer Aided Drafting & Design (CADD) program. There are five new certificates that have been designed to meet the needs of students new to the field of CADD and those experienced professionals looking to upgrade their software knowledge. A core certificate is offered for students with a limited knowledge of drafting, mathematics and blueprint reading. (Drafting Technician I) Two entry-level certificates are offered in the areas of CADD and Computer Animation. We have also included two specialized certificates in the areas of Architectural CADD.

The Computer Animation Program offers several certificates that help prepare students for entry-level positions in the 3D Animation industry. Our Animation Program covers such topics as creating life-like models with realistic textures, using lighting and cameras, character animation, special effects and incorporating sound. The primary software package taught is Autodesk's 3ds Max, with additional software such as Adobe Photoshop used to supplement course curriculum. Animation classes are also offered through the Media Arts Department.

Career Opportunities

CAD Careers: Architect, Architectural Drafter, CAD Management, CAD Operator, Cabinet Shop Detailer, Civil Drafter, Computer Animator, Community College Instructor, Construction Technician, Desk-Top Publisher, Electrical Drafter, Electronics Drafter, GIS Technician, Graphics Designer, Interior Designer, Landscape Architect, Landscape Designer, Mapping Specialist, Mechanical Drafter, Public Works Technician, Rendering Specialist, Steel Fabricator Drafter, Structural Drafter, Technical Illustrator

3D Animation Careers: Modeler, Texture Artist/Painter, Lighting Specialist, Character Designer, Character Animator, Special F/X Animator, Environment Designer, Game Level Designer, Architectural Animator, Mechanical Design Animator, Medical Visualization Artist, Courtroom Visualization Artist, Web Graphics Animator, Storyboard Artist, Layout Artist, Graphic Designer, Composer

Faculty

Claude Oliver | Steve Nelle

Degrees and Certificates Awarded

Associate in Science, CIDG

CADD I Technician

Digital Animation Technician I Certificate 3ds Max

Digital Animation Technician Softimage Certificate

Digital Animation Artist Certificate

Geographic Information Systems for Emergency

Visual Communications Graphic Design Certificate

Response and Management Certificate

Drafting Technician I Certificate

Architectural CADD Technician I Certificate

Expanded Animation Technician 3ds Max Certificate

Expanded Animation Technician Softimage Certificate

Digital Filmmaker

Response and Management Certificate

Visual Communications Print Production Certificate

Associate Degree

To earn an Associate in Science degree with a major in CIDG, complete a minimum of 18 units from any of the certificate requirements or from any CIDG courses, and meet all Victor Valley College graduation requirements. CIDG 138 may be used as Elective credit but may not be used to fulfill major requirements.

Transfer

Not a transfer major. Most CIDG courses transfer as Electives or fulfill subject credit requirements. Some CIDG courses fulfill lower division requirements for a related major. Students in this program sometimes choose to pursue a bachelor's degree in Architecture or Engineering. See Architecture and Engineering for transfer requirements for these majors.

For Additional Animation classes see Media Arts

Computer Integrated Design and Graphics

DRAFTING TECHNICIAN I CERTIFICATE		
The Drafting Technician I certificate prepares students to work in the fields of architecture, engineering, and drafting as a drafter. Students will have a working knowledge of mechanical and architectural drawing. Students will understand the concepts of lineweights, lettering, orthographic projection, and sketching.		
Units Required: 15-17.00		
CIDG 101	Introduction to Drafting	3.0
CIDG 103	Blueprint Reading for Construction	3.0
CT 105	Technical Sketching	3.0
CT 107	Technical Mathematics <i>or</i>	3.0
MATH 90	Intermediate Algebra	4.0
CT 108	Advanced Technical Math <i>or</i>	3.0
MATH 104	Trigonometry	4.0
ARCHITECTURAL CADD (COMPUTER AIDED DESIGN AND DRAFTING) TECHNICIAN I CERTIFICATE		
The Architectural CADD (Computer-Aided-Drafting and Design) Technician I certificate prepares students to work in the field of Architecture as a CADD drafter. Students will be knowledgeable in Revit and AutoCAD software and understand the basics of producing construction documents using both Revit and AutoCAD. Students will have a conceptual knowledge of 3-D modeling and rendering. Students will also be able to perform print reading tasks as they relate to commercial and residential architecture.		
Units Required: 12.0		
<i>All of the following must be completed.</i>		
CIDG 103	Blueprint Reading for Construction	3.0
CIDG 108	Architectural Computer Aided Design II	3.0
CIDG 110	Two-dimensional Autocad	3.0
CIDG 250	Architectural Computer Aided Design	3.0
CADD (COMPUTER AIDED DESIGN AND DRAFTING) TECHNICIAN I CERTIFICATE		
The Drafting Technician I certificate prepares students to work in the fields of Architecture, Engineering, and Drafting as a drafter. Students will have a working knowledge of mechanical and architectural drawing.		
Units Required: 9.0		
<i>All of the following must be completed.</i>		
CIDG 110	Two Dimensional AutoCAD	3.0
CIDG 210	Advanced Two Dimensional AutoCAD	3.0
CIDG 120	Solids Modeling and Three Dimension CADD	3.0
DIGITAL ANIMATION TECHNICIAN I 3DS MAX CERTIFICATE		
The 3ds Max certificate is designed to offer students a detailed look at one of the Animation industry's premier 3D packages. The courses taken to complete the certificate provide students an opportunity to learn a variety of topics, including how to model 3D objects, how to create realistic textures and materials, the art of camera and lighting techniques, and a variety of keyframing solutions to bring their ideas to life. In addition to completing both individual and group projects, students also delve into the traditional principles of animation that serve to heighten the level of realism and believability of an individual's work.		
Units Required: 9.0		
<i>All of the following must be completed.</i>		
CIDG 160	3ds Max Fundamentals	3.0
CIDG 260	3ds Max Advanced Modeling and Materials	3.0
CIDG 261	3ds Max Character Animation and Advanced Keyframing Techniques	3.0

DIGITAL ANIMATION ARTIST

The Digital Animation Artist certificate is designed to expand an individual's expertise in 3D Animation by requiring additional training in traditional art principles and techniques. Employers many times view an animator who possesses the ability to both draw and more thoroughly understand concepts and practices specific to traditional art painting as more well-rounded and work-ready. By earning the Digital Animation Artist certificate, students will better position themselves for employment opportunities in this fast-paced and competitive field. An Adobe Photoshop course specific to 3D Animation applications is also required to earn a certificate.

Units Required: 15.0

Complete the requirements listed in both Group I and Group II

GROUP I - Animation Track

All of the following must be completed with a grade of "C" or better.

Option 1: 3ds Max

CIDG 160	3ds Max Fundamentals	3.0
CIDG 260	3ds Max Advanced Modeling and Materials	3.0
CIDG 261	3ds Max Character Animation and Advanced Keyframing Techniques	3.0
MERT 56	Photoshop for Animators	3.0

Option 2: Softimage

MERT 50	Principles of Animation	
MERT 51	Intermediate Modeling and Animation with SoftImage	
MERT 52	Digital Character Animation	
MERT 56	Photoshop for Animators	

GROUP II - Art Track

Choose any ONE of the following courses. Must be completed with a grade of "C" or better.

ART 101	Survey of Art History	3.0
ART 104	Film as an Art Form	3.0
ART 112	Design I	3.0
ART 113	Design II	3.0
ART 122	Introduction to Life Drawing	3.0
ART 124	Anatomy for Life Drawing	3.0
ART 125	Drawing I	3.0
ART 141	Sculpture I	3.0

DIGITAL FILMMAKER CERTIFICATE

The Digital Filmmaker certificate is designed to teach students to look at films as an art form, rather than as entertainment. The courses taken to complete the certificate provide students invites to explore the expressive and communicative nature of film while also examining the process by which films are made. The courses cover topics such as camera operation, lighting, composition, script-writing, storyboarding, audio, editing, compositing, and practical film making techniques. Individual projects will give students the opportunity to hone their personal skillset, while large group and class projects will teach students to work collaboratively, a necessary skill in this demanding industry.

Units Required: 6.0

All of the following must be completed with a grade of "C" or better.

ART 104	Film as an Art Form	3.0
MERT 74	Digital Video Production	3.0

EXPANDED ANIMATION TECHNICIAN 3DS MAX CERTIFICATE

This certificate crosses over all the software taught under the CIDG and MERT programs, any student who achieves this certificate has gone through the program and successfully completed the demo reel project, they have learned to work in a large complex environment and complete assigned tasks on an individual and group level. The student has learned the functions required to work on a large structured project in which their skill sets in a CG environment are tested and judged by peers in the class and the instructor when the project is finalized.

Units Required: 12.0

All of the following must be completed with a grade of "C" or better.

CIDG 160	3ds Max Fundamentals	3.0
CIDG 260	3ds Max Advanced Modeling and Materials	3.0
CIDG 261	3ds Max Character Animation and Advanced Keyframing Techniques	3.0
MERT 53	Advanced Animation/Demo Reels	3.0

EXPANDED ANIMATION TECHNICIAN SOFTIMAGE CERTIFICATE

This certificate crosses over all the software taught under the MERT program, any student who achieves this certificate has gone through the program and successfully completed the demo reel project, they have learned to work in a large complex environment and complete assigned tasks on an individual and group level. The student has learned the functions required to work on a large structured project in which their skill sets in a CG environment are tested and judged by peers in the class and the instructor when the project is finalized.

Units Required: 12.0

All of the following must be completed with a grade of "C" or better.

MERT 50	Principles of Animation	3.0
MERT 51	Intermediate Modeling and Animation with SoftImage	3.0
MERT 52	Digital Character Animation	3.0
MERT 53	Advanced Animation/Demo Reels	3.0

GEOGRAPHIC INFORMATION SYSTEMS FOR EMERGENCY RESPONSE AND MANAGEMENT CERTIFICATE OF CAREER PREPARTION

Every emergency occurs within a geographic boundary. Using GIS helps support the decision making process that requires the geographic distribution of resources. This certificate is designed to prepare students for the field of GIS support for emergency management, including mitigation, preparation, response, and recovery.

Units Required: 13.0

GIS FOR EMERGENCY MANAGEMENT & GOVERNMENT SERVICES

CIDG 80	Geographical Information Systems for Emergency Management and Government Services I	3.0
CIDG 81	Geographical Information Systems for Emergency Management and Government Services II	3.0
CIDG 110	Two-Dimensional AutoCAD	3.0
FIRE 58	Intro to Emergency Management	4.0

VISUAL COMMUNICATIONS CERTIFICATE GRAPHIC DESIGN

Units Required: 17.0

All of the following must be completed with a grade of "C" or better:

CIDG 70	Design for Graphic Artists	3.0
CIDG 71	Survey of Computer Graphic Studio	4.0
CIDG 72	Computer Illustration	3.0
CIDG 73	Typography and Layout	3.0
CIDG 79	Multimedia and Web Design	4.0

VISUAL COMMUNICATIONS CERTIFICATE PRINT PRODUCTION

Units Required: 16.0

All of the following must be completed with a grade of "C" or better:

CIDG 70	Design for Graphic Artists	3.0
CIDG 71	Survey of Computer Graphic Studio	4.0
CIDG 73	Typography and Layout	3.0
CIDG 75	Page Layout and Design	3.0
CIDG 77	Print Production Processes	3.0

Computer Integrated Design and Graphics Courses

CIDG 50 DRAFTING LABORATORY

Units Required: 1-4.0

48-54 hours of laboratory required for each unit

(No prerequisite.)

Drafting laboratory provides the additional time, equipment, and instruction necessary to develop problem solving, board or AutoCAD skills at each individual's own pace.

CIDG 65 3DS MAX ADVANCED EFFECTS AND COMPOSITING

Units Required: 3.0

32-36 hours lecture and 48-54 hours laboratory

(Prerequisite: CIDG 160. Grade Option)

Students will learn advanced concepts and procedures required for creating high quality 3D special effects. Topics will include particle systems, Space Warps, and MassFX. Rendering techniques incorporating depth of field, motion blur, and anti-aliasing filters will also be discussed. Alpha channel compositing techniques will be addressed in detail. Students will also explore and analyze relevant issues pertaining to the computer animation industry.

CIDG 70 DESIGN FOR GRAPHIC ARTISTS

Units Required: 3.0

48-54 hours lecture

(No prerequisite)

This course covers the fundamental elements and principles of design. This course uses demonstration of the fundamentals and reinforces them through assignments and projects. Emphasis will be placed on developing techniques and vocabulary that will enable the student to problem solve and communicate ideas, concepts and solutions. Students will also learn how to properly critique design.

CIDG 72 COMPUTER ILLUSTRATION

Units Required: 3.0

32-36 hours lecture and 48-54 hours laboratory

(No prerequisite)

This course covers the fundamental elements of illustration including history, design, color theory and appropriateness for specified use in the graphics industry. Students will create a series of illustrations using software techniques and skills developed through lectures, demonstration and assigned projects.

CIDG 73 TYPOGRAPHY AND LAYOUT

Units Required: 3.0

32-36 hours lecture and 48-54 hours laboratory

(No prerequisite)

In this course students will learn how to use type as a graphic design element using industry standard techniques and tools. Students will strengthen their use of type as a design element through a variety of projects ranging from elementary exercise to intermediate presentations. In addition, students will examine the history of type and typesetting, modern methodologies, principles and aesthetics of good typographic design.

CIDG 75 PAGE LAYOUT AND DESIGN

Units Required: 3.0

32-36 hours lecture and 48-54 hours laboratory

(No prerequisite)

This course introduces students to the computer as a page layout and design tool. Emphasis will be on using industry standard software to simplify the paste-up and pagination process when producing multi-page printed materials. Students will learn the terminology and techniques of page layout so that they may communicate within the industry. Class projects will develop the ability to work as a team to produce printed materials within time and technical constraints.

CIDG 77 PRINT PRODUCTION PROCESSES

Units Required: 3.0

32-36 hours lecture and 48-54 hours laboratory

(No prerequisite)

A study of the processes used in the printing industry. Emphasis will be placed on terminology, practices, and techniques for effective communication with printing professionals. Class projects will develop the students' ability to design within the necessary parameters.

CIDG 79 MULTIMEDIA AND WEB DESIGN**Units Required: 4.0** | **48-54 hours lecture and 48-54 hours laboratory***(No prerequisite. Grade Option)*

This course teaches graphic artist the tools and procedures for designing graphics for the computer screen. This course will give an overview of standard industry software used for creating multimedia presentation and web pages. This course does not focus on HTML or scripting language but is focused on the development of the visual content.

CIDG 80 GEOGRAPHICAL INFORMATION SYSTEMS FOR EMERGENCY MANAGEMENT AND GOVERNMENT SERVICES I**Units Required: 3.0** | **32-36 hours lecture and 48-54 hours laboratory***(No prerequisite)*

This course provides an in depth introduction to: (a) why GIS matters and (b) the role of Geographic Information Systems (GIS) in the modern economy. This course combines three learning methods aimed at helping students to master the use of the software: (a) Class lecture that reinforces the conceptual understanding of theory behind various tasks performed in ArcGIS. (b) Detailed step-by-step instructor lead exercise that exposes students to various workflows and specific ArcGIS Tools, (c) Exercise assignment designed for students to perform specific GIS tasks. Specific topics taught will include an understanding of GIS terminology, raster and vector data structures, data sources and accuracy, methods of data acquisition, conversion and input, requirements for metadata, working with spatial data databases (map features and attribute tables), and spatial analysis (map overlays, buffers, networks).

CIDG 81 GEOGRAPHICAL INFORMATION SYSTEMS FOR EMERGENCY MANAGEMENT AND GOVERNMENT SERVICES II**Units Required: 3.0** | **32-36 hours lecture and 48-54 hours laboratory***(Prerequisite: CIDG 80)*

This course introduces students to the current roles of GIS in support of emergency management activities at both local and federal levels. These roles are considered at each of the four stages of crisis management namely mitigation, preparation, response, and recovery. The course will introduce students to the some of the basic maps requested during emergency including Incident Action Plan maps (IAP), Briefing maps, damage prediction maps, basic census demographics, transportation maps, aerial operation maps, situational plan maps and progression maps. This course introduces students to the various GIS techniques deployed to help government and businesses to operate in the constantly changing environment. The course will consist of two parts: lecture/discussion and a lab. The lecture/discussion period will cover methodology, theory, concepts, and application of GIS in emergency management and governments (local and federal).

CIDG 90 FUNDAMENTALS OF ARCHITECTURE AND STRUCTURAL ENGINEERING**Units Required: 3.0** | **48-54 hours lecture***(No prerequisite. Recommended preparation: Students will need to have working knowledge of AutoCAD [preferably two semesters]. Grade Option)*

This course covers the fundamentals of architecture design and structural engineering with an emphasis on structural calculations. These fundamentals include the requirements for building plans and the most recent Title 24 Energy code and the names and explanations of construction hardware. Structural calculations are performed using the MaxQuake and the MaxBeam software programs.

CIDG 95 INTRODUCTION TO SOLIDWORKS**Units Required: 3.0** | **CSU** | **32-36 hours lecture and 48-54 hours laboratory***(No prerequisite)*

This course is designed to introduce the student to three-dimensional parametric solid modeling with SolidWorks. Students will begin with basic parametric solid modeling techniques and advance into complex assemblies requiring animation. CIDG 101

CIDG 101 INTRODUCTION TO DRAFTING**Units Required: 3.0** | **CSU** | **32-36 hours lecture and 48-54 hours laboratory***(No prerequisite)*

This survey course will explore the basic techniques used in the drafting industry. The course will emphasize proper use of instruments, lettering, and line quality. Course includes work in the fields of architectural, mechanical, and computer aided drafting.

CIDG 103 BLUEPRINT READING FOR CONSTRUCTION

Units Required: 3.0 [CSU](#) | 48-54 hours lecture

(No prerequisite)

A course designed to develop skills necessary to interpret both residential and commercial construction drawings and blueprints.

CIDG 108 ARCHITECTURAL PRESENTATION

Units Required: 3.0 [CSU](#) | 32-36 hours lecture and 48-54 hours laboratory

(No prerequisite. Grade Option)

A study of two common architectural presentation techniques: model making and illustration. Students will develop skill in creating architectural models using paper, mat board, wood, plastic, and styrene foam. The illustration portion of this course will include work with perspectives in pencil, watercolor, and airbrush.

CIDG 110 TWO DIMENSIONAL AUTOCAD

Units Required: 3.0 [CSU](#) | 32-36 hours lecture and 48-54 hours laboratory

(No prerequisite. Grade Option)

An introduction to the AutoCAD program including all necessary basic commands required for computer aided drafting. Students will master drawing setup, common draw, edit and viewing commands and plotting. Lectures and exercises are designed to provide a comprehensive knowledge of all basic computer drafting functions.

CIDG 120 3-D CADD USING INVENTOR

Units Required: 3.0 [CSU](#) | 32-36 hours lecture and 48-54 hours laboratory

(No prerequisite)

Solid Modeling and Three Dimensional CADD will introduce students to a new auto desk software package entitled INVENTOR. Students will understand the concepts involved in Parametric Modeling. Students will begin by constructing basic shapes and proceed to building intelligent solid models and create multi-view drawings. Assembly drawings, section views, auxiliary views, sheet metal drawings, and details will also be produced. Students will develop their drafting and computer skills through drawings and projects that emphasize teamwork and the design process. Students will also learn various hardware, software and peripheral components related to operating a CADD station.

CIDG 138 COOPERATIVE EDUCATION

See Cooperative Education listing (1-8 units). [CSU](#)

CIDG 160 3DS MAX FUNDAMENTALS

Units Required: 3.0 [CSU](#) | 32-36 hours lecture and 48-54 hours laboratory

(No prerequisite. Grade Option)

Students will learn the basics of 3D modeling, how to create and apply realistic textures, lighting principles and techniques, camera types and their appropriate usage, and fundamental keyframing procedures. Other topics to be covered include storyboards, the traditional principles of animation, current industry trends and issues pertaining to rendering output for different mediums (film, video, Internet, etc.).

CIDG 210 ADVANCED TWO DIMENSIONAL AUTOCAD

Units Required: 3.0 [CSU](#) | 32-36 hours lecture and 48-54 hours laboratory

(No prerequisite)

Recommended Preparation: CIDG 110. A working knowledge of AutoCAD is necessary. This course will explore the more advanced two-dimensional features of the AutoCAD program including entity filters, at-tributes, external reference files, paper space, and slide presentations. Projects include sectional description of compound shapes and developments.

CIDG 250 USING REVIT FOR ARCHITECTURAL CAD

Units Required: 3.0 **CSU** | 32-36 hours lecture and 48-54 hours laboratory

(No prerequisite. Grade Option)

This course is designed to develop computer drafting skills necessary to produce residential working and presentation drawings using the REVIT software. Design principles will be explored through the use of the AutoCAD/AutoDESK Architectural Desktop program.

CIDG 251 ARCHITECTURAL COMPUTER AIDED DESIGN II

Units Required: 3.0 **CSU** | 32-36 hours lecture and 48-54 hours laboratory

(Prerequisite: CIDG 250)

This course will cover more advanced computer skills necessary to produce commercial and institutional working and presentation drawings. Basic and advanced design principles will be explored and implemented through the use of the AutoCAD program.

CIDG 260 3DS MAX ADVANCED MODELING AND MATERIALS

Units Required: 3.0 **CSU** | 32-36 hours lecture and 48-54 hours laboratory

(Prerequisite: CIDG 160)

Students will learn the more advanced modeling features of 3ds Max. Complex aspects of building materials and textures will be covered in depth. The course will culminate with students being introduced to the video game environment, having the opportunity create their own game level. The course will prepare students for work in the entertainment, commercial, and computer gaming industries.

CIDG 261 3DS MAX CHARACTER ANIMATION AND ADVANCED KEYFRAMING TECHNIQUES

Units Required: 3.0 **CSU** | 32-36 hours lecture and 48-54 hours laboratory

(Prerequisite: CIDG 160. Grade Option)

Students will learn advanced animation techniques including editing keyframes through Track View, animating with controllers and constraints, wiring parameters, and using hierarchies. Character animation will be addressed in depth. Character Studio and Bones will be utilized to build skeletal systems for both characters and creatures. The course will prepare students for work in the entertainment, commercial, and computer gaming industries.

Construction and Manufacturing Technology

The Construction Technology program provides preparation for a wide variety of positions in the construction field as a contractor, supervisor, building inspector or tradesperson. The program offers the opportunity to be self-employed and the pride and satisfaction of creating and building with your own hands.

Certificates of achievement can be earned in Construction Management, Building Construction, Building Inspection, Public Works, HVAC/R, Plumbing and Electrical & Residential Maintenance. The Associate in Science degree is awarded upon completion of 18 semester units in Construction Technology courses and the required general education and Elective courses. Transfer to the CSU system for a bachelor's degree in Industrial Technology is available.

Career Opportunities

Building Inspector, Cabinetmaker, Construction Accountant, Construction Estimator, Construction Insurance Agent
Construction Law Specialist, Construction Salesperson, Construction Supervisor, Contractor, Cement Mason, Civil Engineer
Electrician, Environmental Construction Specialist, Financial Specialist, Framer, Grader, Hazardous Materials Specialist
Heating and Air Conditioning, Engineer, Job Foreman, Materials Engineer, Millwright, Metal Building Specialist, Painter
Plumber, Plasterer, Project Supervisor, Public Works Technician, Purchasing Agent, Safety Specialist, Soils Engineer
Surveyor, Tinsmith, Waste Water Specialist, Water Distribution System Specialist, Workers Comp Specialist

Associate Degree

To earn an Associate in Science degree with a major in Construction Technology a minimum of 22.5 units must be completed as specified on the following page. and the student must meet all Victor Valley College graduation requirements.

Transfer

Some Construction Technology courses transfer to CSU as electives or may fulfill subject credit requirements. Some students in this program choose to pursue a bachelor's degree in Architecture or Engineering. See Architecture and Engineering for transfer requirements for these majors.

CSU Stanislaus, located in the Central Valley not far from the San Francisco Bay area, offers a B.S. degree in Applied Studies (telephone: 209 667-3597), to which up to 30 units of VVC's Construction and Manufacturing Technology courses can be applied. Prerequisites: BADM 101, CIS 101, ECON 102, and MATH 120, plus complete the remaining CSU General Education-Breadth requirements (you can use ECON 102 and MATH 120 for both). Visit www.assist.org for the most up-to-date information.

Degrees and Certificates Awarded

Associate in Science, Construction Technology

Construction Technology Certificate

Basic Heating, Ventilation and Air Conditioning/Refrigeration Certificate

Basic Residential Maintenance Technician

Basic Woodworking Certificate

Building Inspector Certificate

Construction Management Certificate

Basic Electrical Technician

Building Construction Certificate

Certificate Plumbing Technician

Renewable Energy Certificate

Public Works Certificate

A student receiving a degree or certificate in this field will be able to:

- Identify procedures and strategies to minimize safety hazards and environmental impact associated with construction and manufacturing projects.
- Properly perform construction and manufacturing trade work following standard industry practice.
- Describe building code and legal requirements associated with construction and manufacturing projects.

Construction and Manufacturing Technology

Associate Degree

To earn an Associate in Science degree with a major in Construction Technology a minimum of 22.5 units must be completed from the following list of departmental classes and the student must meet all Victor Valley College graduation requirements.

Units Required: 22.5

Group I - All of the following must be completed:

CT 101	Careers in Construction and Manufacturing	1.5
CT 103	Construction Management	3.0
CT 104	Construction Law	3.0
CT 106	Materials of Construction	3.0
CT 110	Building Codes and Zoning	3.0
CT 116	Construction Safety	2.0
CT 131	Microcomputers in Construction	4.0

Group II - One of the following must be completed:

CT 105	Technical Sketching	3.0
CT 107	Technical Math	3.0
CT 108	Advanced Technical Math	3.0
CIDG 103	Blueprint Reading for Construction	3.0

CONSTRUCTION TECHNOLOGY CERTIFICATE

Provides the core knowledge and skills that are common and fundamental to success in a wide variety of construction trades.

Units Required: 19.5

All of the following must be completed:

CT 101	Careers in Construction and Manufacturing	1.5
CT 105	Technical Sketching	3.0
CT 106	Materials of Construction	3.0
CT 107	Technical Math <i>or</i>	3.0
CT 108	Advanced Technical Math	3.0
CT 116	Construction Safety	2.0
CT 131	Microcomputers in Construction	4.0
CIDG 103	Blueprint Reading for Construction	3.0

BUILDING CONSTRUCTION CERTIFICATE

Provides the basic knowledge and skills necessary for job opportunities in a wide variety of specific construction trades including masonry, finish carpentry, framing, construction sales, drywall, painting, plumbing, electrical, roofing, heating, ventilation and air conditioning, and surveying.

Units Required: 18.0 *Students must complete their Construction Technology Certificate plus all of the following:*

Group I - All of the following must be completed:

CT 132	Construction Estimation	3.0
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Group II - Two of the following must be completed:

CT 120A	Electrical Wiring	4.0
CT 120B	Commercial Wiring	4.0
CT 121	Finish Carpentry	4.0
CT 122A	Heating and Air Conditioning	4.0
CT 122B	Commercial Refrigeration	4.0
CT 123	Surveying	4.0
CT 124	Plumbing	4.0
CT 125	Concrete and Masonry Construction	4.0
CT 127	Framing	4.0

Group III - 7 units of the following must be completed:

CT 138	Cooperative Education	1-6
CT 140	Construction Internship	4.0
CT 141	Construction Internship Laboratory	2-12
CT 148	Special Topics	1-6
CT 60A-D	Construction Laboratory	1-4

BUILDING INSPECTION CERTIFICATE

Provides a thorough background and skill level for employment in the building inspection field. This certificate prepares the student for employment in City and County Building and Safety departments as a private industry or corporate job site inspector.

Units Required: 21.0 *Students must complete their Construction Technology Certificate plus all of the following:*

CT 110	Building Codes and Zoning	3.0
CT 111A	Uniform Building Code 1	3.0
CT 111B	Uniform Building Code 2	3.0
CT 112	Uniform Mechanical Code	3.0
CT 113	Uniform Plumbing Code	3.0
CT 114	National Electrical Code	3.0
CT 115	Technical Office Procedures and Field Inspection	3.0

CONSTRUCTION MANAGEMENT CERTIFICATE

Provides the skills and background necessary for employment as a contractor, construction business manager, construction supervisor, or foreman when linked with appropriate, trade-specific knowledge.

Units Required: 18-19

Students must complete their Construction Technology Certificate plus all of the following:

All of the following must be completed:

CT 103	Construction Management	3.0
CT 104	Construction Law	3.0
CT 109	Construction Financing	3.0
CT 110	Building Codes and Zoning	3.0
CT 132	Construction Estimation	3.0
BADM 101	Elementary Accounting <i>or</i>	4.0
BADM 103	Financial Accounting	3.0

BASIC ELECTRICAL TECHNICIAN CERTIFICATE

This certificate provides the necessary knowledge and skill level required for employment in the electrical industry.

Units Required: 16.0

Students must complete their Construction Technology Certificate plus all of the following:

All of the following must be completed:

CT 107	Technical Math <i>or</i>	3.0
CT 108	Advanced Technical Math	3.0
CT 114	National Electrical Code	3.0
CT 116	Construction Safety	2.0
CT 120A	Electrical Wiring	4.0
CT 120B	Commercial Wiring	4.0

BASIC HEATING, VENTILATION, AIR CONDITIONING AND REFRIGERATION (HVAC/R) SERVICE TECHNICIAN CERTIFICATE

This certificate provides the basic knowledge and skills necessary for job opportunities in heating, ventilation and air conditioning.

Units Required: 17.0

All of the following must be completed:

CT 107	Technical Math <i>or</i>	3.0
CT 108	Advanced Technical Math	3.0
CT 116	Construction Safety	2.0
CT 122A	Heating and Air Conditioning	4.0
CT 122B	Commercial Refrigeration	4.0
CT 136	HVAC Circuits and Controls	4.0

PLUMBING TECHNICIAN CERTIFICATE

This certificate provides the necessary knowledge and skill level required for employment in the plumbing industry.

Units Required: 15.0

All of the following must be completed:

CT 107	Technical Math <i>or</i>	3.0
CT 108	Advanced Technical Math	3.0
CT 113	Plumbing Code	3.0
CT 116	Construction Safety	2.0
CT 124	Plumbing	4.0
CTMT 121	Plumbing Repair	3.0

PUBLIC WORKS CERTIFICATE

This certificate provides the necessary skill level for employment on public works projects. Public works includes construction of streets and highways, water distribution systems, and waste water systems.

Units Required: 18.0 *Students must complete their Construction Technology Certificate plus the following:*

Group I - All of the following must be completed:

CTPW 111	Introduction to Public Works	3.0
CTPW 112	Plan Reading for Public Works	3.0
CTPW 113	Public Works Inspection	3.0
CTPW 114	Public Works Administration	3.0

Group II - Two of the following must be completed:

CT 123	Surveying	4.0
CTPW 115	Street and Highway Construction	3.0
CTPW 116A	Water Distribution Systems	3.0
CTPW 117	Portland Cement Concrete	3.0
CTPW 118	Solid Waste Management	3.0
CTPW 119	Wastewater Management	3.0

BASIC RESIDENTIAL MAINTENANCE TECHNICIAN CERTIFICATE

This certificate provides the necessary knowledge and skill level required for employment in the residential maintenance and repair industry.

Units Required: 15.0 *All of the following must be completed:*

CT 107	Technical Math or	3.0
CT 108	Advanced Technical Math	3.0
CT 116	Construction Safety	2.0
CTMT 120	Residential Maintenance and Repair	4.0
CTMT 121	Plumbing Repair	3.0
CTMT 122	Electrical Repair	3.0

BASIC WOODWORKING CERTIFICATE

This certificate demonstrates a basic understanding of wood, joinery and woodworking skills and the ability to safely and appropriately use common hand tools, power tools and equipment to perform common woodworking tasks. This certificate can lead to employment in a wide variety of woodworking trades.

Units Required: 17.0 *All of the following must be completed:*

CTMF 120A	Woodworking Tools and Equipment	2.0
CTMF 121A	Woodworking	3.0
CTMF 121B	Advanced Woodworking	3.0
CTMF 122	Advanced Wood Topics	3.0
CTMF 129A	Woodturning	3.0
CTMF 129B	Advanced Woodturning	3.0

RENEWABLE ENERGY CERTIFICATE

This certificate demonstrates an understanding of renewable generation and the effects of fossil fuel use on our environment, economy and society. This certificate can lead to employment in the renewable energy field.

Units Required: 17.0

Group I - All of the following must be completed:

CT 105	Technical Sketching	3.0
CT 107	Technical Math <i>or</i>	3.0
CT 108	Advanced Technical Math	3.0
CT 142	Renewable Energy	3.0
CT 143	Renewable Energy Laboratory	5.0
CTMT 122	Electrical Repair	3.0

Construction and Manufacturing Technology Courses

CT 60A/B/C/D CONSTRUCTION LABORATORY

Units: 1-4.0 | 48-54 hours laboratory per unit

(No prerequisites)

A variable unit laboratory class to provide intermediate skill development in the following areas: electrical wiring, finish carpentry, heating and air conditioning, framing, plumbing and concrete and masonry construction. Students will complete contract projects.

CT 101 CAREERS IN CONSTRUCTION AND MANUFACTURING

Units: 1.5 | **CSU** | 24-27 hours lecture

(No prerequisites)

This course is designed to provide the construction, manufacturing and drafting technology student with information and skills necessary to understand current job market needs and prepare a successful educational plan to obtain their desired goals. Students will develop an awareness of occupations and develop skills for seeking employment and completing job applications, resumes and interviews.

CT 103 CONSTRUCTION MANAGEMENT

Units: 3.0 | **CSU** | 48-54 hours lecture

(No prerequisites)

Principles of management as they specifically relate to the construction industry. This course explores the relationship and importance of proper planning, estimating, contracting, financing and building. Also covered are leadership and supervisory skills, employer/employee relationships and safety.

CT 104 CONSTRUCTION LAW

Units: 3.0 | **CSU** | 48-54 hours lecture

(No prerequisites)

Principles of contracting, real estate and construction law. Course includes legal aspects of building codes, contractors' licenses, worker's compensation, social security, state safety regulations and lien laws as they apply to the construction trade.

CT 105 TECHNICAL SKETCHING

Units: 3.0 | **CSU** | 32-36 hours lecture and 48-54 hours laboratory

(No prerequisites)

A course designed to develop sketching skills and introduce sketching techniques currently used in the industrial and architectural fields. Course will include principles of oblique, isometric and perspective sketching, including shading and shadows.

CT 106 MATERIALS OF CONSTRUCTION

Units: 3.0 | **CSU** | 48-54 hours lecture

(No prerequisites)

A study of common materials used in residential and commercial construction. Course includes use and limitations of soil, paving materials, concrete, lumber, wall materials, roofing, insulation, siding, sheet material, electrical and plumbing materials and fixtures. This course will also explore the use of steel, aluminum and plastics in modern construction.

CT 107 TECHNICAL MATHEMATICS

Units: 3.0 | **CSU** | 48-54 hours lecture

(No prerequisites)

A review of basic arithmetic, fractions, decimals and percentages. Introduction to basic algebra and trigonometry as they apply to the manufacturing and construction trades.

CT 108 ADVANCED TECHNICAL MATH**Units: 3.0** **CSU** | **48-54 hours lecture***(No prerequisites)*

This course will include the practical applications of algebra, geometry and trigonometry. Class emphasis will be on the solution of technical problems commonly found in the fields of engineering, drafting, manufacturing and construction.

CT 109 CONSTRUCTION FINANCING**Units: 3.0** **CSU** | **48-54 hours lecture***(No prerequisites)*

This course introduces the basic issues and concepts of construction finance. Course examines the procedures for evaluation of all types of real estate credit and is designed to enable borrowers to utilize their resources to obtain financing.

CT 110 BUILDING CODES AND ZONING**Units: 3.0** **CSU** | **48-54 hours lecture***(No prerequisites)*

Use of the International Building Code and the various related state and local ordinances for plan checking and building compliance. Course includes a basic understanding of building codes and zoning as they apply to the construction and inspection of residential and light commercial buildings.

CT 111A INTERNATIONAL BUILDING CODE I**Units: 3.0** **CSU** | **48-54 hours lecture***(No prerequisites)*

The first of a two part, in-depth study of the contents and applications of the International Building Code and California amendments with emphasis on residential construction. This course includes building classifications by occupancy and type, engineering regulations and design requirements applicable to plan checking and structural building inspection.

CT 111B INTERNATIONAL BUILDING CODE II**Units: 3.0** **CSU** | **48-54 hours lecture***(No prerequisite. Grade Option.)*

A continuing in-depth study of the International Building Code and California amendments with emphasis on commercial applications. Course includes energy conservation standards, specialized commercial structures, public safety and standards for handicapped accessibility.

CT 112 UNIFORM MECHANICAL CODE**Units: 3.0** **CSU** | **48-54 hours lecture***(No prerequisite)*

This class is an in-depth study of the contents and applications of the Uniform Mechanical Code. Course covers the use of this code for plan checks and inspection of residential and commercial structures.

CT 113 UNIFORM PLUMBING CODE**Units: 3.0** **CSU** | **48-54 hours lecture***(No prerequisite)*

This class is an in-depth study of the contents and applications of the Uniform Plumbing Code. Course includes underground and above ground water, gas and air pipe installations for residential and commercial structures.

CT 114 NATIONAL ELECTRICAL CODE**Units: 3.0** **CSU** | **48-54 hours lecture***(No prerequisite)*

This class is an in-depth study of the contents and applications of the National Electrical Code. Course covers the use of the code for plan checks and inspection of residential and commercial structures. Plan reading, electrical theory, wiring methods and installation of electrical components and fixtures are also included.

CT 115 TECHNICAL OFFICE PROCEDURES AND FIELD INSPECTION

Units: 3.0 CSU | 48-54 hours lecture

(No prerequisite)

Office organization, procedures and necessary paper-work pertinent to building and safety office management and inspection. Field inspection for completed building, zoning, health and safety ordinance applications. Course includes several field trips.

CT 116 CONSTRUCTION SAFETY

Units: 2.0 CSU | 32-36 hours lecture

(No prerequisite)

Covers OSHA policies, procedures, and standards, as well as safety for general industry and health principles. Topics include scope and application of the OSHA general industry standards. Special emphasis is placed on those areas that are the most hazardous, using OSHA standards as a guide. Upon successful course completion, the student will receive either an OSHA 10 or 30 hour general industry or construction industry training completion card. 36 hours lecture.

CT 119 LOAD CALCULATIONS AND CIRCUIT DESIGN

Units: 3.0 CSU | 32-36 hours lecture and 48-54 hours laboratory

(No prerequisite)

This course is designed to develop the skills necessary to visualize and correctly interpret drawings, diagrams, blueprints, and schematics common to the electrical industry. Course includes branch and feeder circuit design and load calculations as they apply to residential, multi-family, commercial and industrial applications.

CT 120A ELECTRICAL WIRING

Units: 4.0 CSU | 32-36 hours lecture and 96-108 hours laboratory

(No prerequisite)

Theory, procedure and techniques for electrical wiring of residential and light commercial construction. Topic areas include blueprint reading, power panels, wire sizing, conduit bending and installation, pulling and installation of wires, lighting and plug circuitry, designated circuits, underground and swimming pool wiring.

CT 120B COMMERCIAL WIRING

Units: 4.0 CSU | 32-36 hours lecture and 96-108 hours laboratory

(Prerequisite: CT 120A)

Learn the techniques necessary for commercial wiring. Size conductors for motor, intermittent and continuous loads. Wire for single and three phase services. Course includes wiring techniques common to commercial applications, running circuits with flex, electrical metallic tubing, rigid and liquid tight conduits and use of common conductors, cables, boxes and raceways. Also included are transformers and motor load calculations, starters and over current protection devices.

CT 121 FINISH CARPENTRY

Units: 4.0 CSU | 32-36 hours lecture and 96-108 hours laboratory

(No prerequisite)

Course covers use of hand and machine woodworking tools and techniques common to finish carpentry and cabinet making. Students will develop skill in safe and efficient operation of common tools, layout, cutting, assembly and finish of woodworking projects.

CT 122A HEATING AND AIR CONDITIONING

Units: 4.0 CSU | 32-36 hours lecture and 96-108 hours laboratory

(No prerequisite)

This course provides instruction for layout, installation and repair of common residential and light commercial heating and air conditioning systems. Heating and air conditioning theory and energy calculations will be treated in depth. Course also includes use of solar energy for heating and cooling.

CT 122B COMMERCIAL REFRIGERATION**Units: 4.0** **CSU** | **32-36 hours lecture and 96-108 hours laboratory***(Prerequisite: CT 122A)*

Explore the more complex commercial and industrial uses of refrigeration, heating and air conditioning. Course covers installation and repair of the most common commercial refrigeration systems found in the food industry and industrial and manufacturing environments. Also included are computer controlled and central plant environmental systems, high and low pressure chillers, cooling towers and air handlers.

CT 122C HEAT PUMP FUNDAMENTALS AND CONTROLS**Units: 4.0** **CSU** | **48-54 hours lecture and 48-54 hours laboratory***(No prerequisite)*

This course explores electrical and mechanical circuitry fundamentals, along with theory, operation and application of heat pump systems used in residential and light commercial heating installations including the heat pump refrigeration cycle, reversing valves, defrost methods of supplemental heat, balance point, air flow, and heat pump thermostats.

CT 123 SURVEYING**Units: 4.0** **CSU** | **32-36 hours lecture and 96-108 hours laboratory***(No prerequisite)*

A course designed to explore the principles and applications of surveying. Students will develop skill in the operation of surveying equipment used for measuring, leveling and locating of points. Course includes surveying techniques common to building and highway construction, general land surveying, hydrographic surveys and photogrammetric mapping.

CT 124 PLUMBING**Units: 4.0** **CSU** | **32-36 hours lecture and 96-108 hours laboratory***(No prerequisite)*

This course provides instruction for layout and installation of residential and light commercial plumbing systems and fixtures. Rough and finish stages of plumbing will be introduced and students will become familiar with reading plans and calculating and constructing the plumbing system.

CT 125 CONCRETE AND MASONRY CONSTRUCTION**Units: 4.0** **CSU** | **32-36 hours lecture and 96-108 hours laboratory***(No prerequisite)*

Course covers use of hand and machine tools and techniques common to residential and light commercial concrete and masonry construction. Plan reading, layout, forming, pouring of concrete, tilt-up and various finishing techniques will be introduced. Course also includes construction with brick, stone, concrete block, and other masonry shapes.

CT 126 EXPLORING BRICK AND BLOCK**Units: 1.5** **CSU** | **16-18 hours lecture and 24-27 hours laboratory***(No prerequisite. Grade Option)*

This course includes techniques used for construction of brick and block walls, decorative brick patios, planter edging and concrete slabs, curbs and walks. Class covers information on concrete and mortar mixes and proper forming, pouring and finishing of concrete slab and wall footings.

CT 127 FRAMING**Units: 4.0** **CSU** | **32-36 hours lecture and 96-108 hours laboratory***(No prerequisite)*

Course covers use of hand and machine tools and techniques common to rough carpentry and residential and light commercial framing. Students will develop skill in safe and efficient operation of common tools, layout techniques, cutting and assembly of wall, ceiling and roof framing, and installing sheathing and insulation.

CT 129 INDEPENDENT STUDY

See Independent Study listing (1-4 units). [CSU](#)

CT 130 RESIDENTIAL REMODELING

Units: 3.0 [CSU](#) | 32-36 hours lecture and 48-54 hours laboratory

(No prerequisite. Grade Option)

Learn the skills and techniques necessary for remodeling of residential structures. Course includes project planning, estimation and layout. Gain experience in framing, plumbing, electrical drywall, floor and wall finishing and concrete with projects that include patio and deck construction, room additions and kitchen and bathroom remodeling.

CT 131 MICROCOMPUTERS IN CONSTRUCTION

Units: 4.0 [CSU](#) | 48-54 hours lecture and 48-54 hours laboratory

(No prerequisite)

This course is designed to introduce the student to the potentials of the computer as it directly applies to the construction industry. Course includes instruction and practice in the following common program types: operating system, word processing, presentation, spreadsheet, email, web-page design, publishing estimation, and introductory computer-aided drafting.

CT 132 CONSTRUCTION ESTIMATION

Units: 3.0 [CSU](#) | 48-54 hours lecture

(No prerequisite)

Learn how to bid accurately and profitably. Course will teach you how to account for materials, labor, taxes, insurance, overhead, and profits across various trades in preparing winning estimates. Speed up your estimating process and increase your accuracy using today's leading construction estimation software. Estimating software allows take-offs using quick, single and assembly methods to meet your particular estimating needs.

CT 133 PRECISION ESTIMATION

Units: 3.0 [CSU](#) | 32-36 hours lecture and 32-36 hours by arrangement

(No prerequisite)

Learn how to speed up your estimating process and increase your accuracy using today's leading construction estimating software. Estimating software allows take-off using quick, single and assembly methods. Course includes development and maintenance of your database. Create your own crews, add-ons, formulas and assemblies to meet your particular estimating needs.

CT 136 HVAC CIRCUITS AND CONTROLS

Units: 4.0 [CSU](#) | 48-54 hours lecture and 48-54 hours laboratory

(No prerequisite)

This course explores electrical fundamentals common to the heating, ventilation, air conditioning and refrigeration fields. Course includes electrical theory, control circuitry and electronics, system supply circuitry and alternating and direct current troubleshooting.

CT 137 SHEET METAL FABRICATION

Units: 3.0 [CSU](#) | 32-36 hours lecture and 48-54 hours laboratory

(No prerequisite)

This course will introduce the student to the fundamental elements, methods and principals of sheet metal design, fabrication and installation. Course includes air handling systems, gutters, flashings, coping, tanks and exhaust systems. Students will gain valuable hands-on skills in the proper use of metal working hand and machine tools through the completion of multiple projects.

CT 138 COOPERATIVE EDUCATION

See Cooperative Education listing (1-8 units) [CSU](#)

CT 140 CONSTRUCTION INTERNSHIP**Units: 4.0** **CSU** | 64-72 hours lecture*(No prerequisite. Grade Option)*

Gain valuable hands-on construction skills by participating in the creation and operation of a small construction business. Students will research the market, design the project, estimate the costs, develop a business plan, secure a construction loan, prepare a schedule and analyze the projects progress and perform customer service and sales.

CT 141 CONSTRUCTION INTERNSHIP LABORATORY**Units: 2-12.0** **CSU** | 6 hours weekly by arrangement per unit*(No prerequisite. Co-requisite: CT 140. Grade Option)*

This course is the laboratory component for CT 140 Construction Internship. Students will research, develop, construct and market a construction project using computers and common construction tools and equipment.

CT 142 RENEWABLE ENERGY**Units: 3.0** **CSU** | 48-54 hours lecture*(No prerequisite. Grade Option)*

This course explores methods of generation and use of renewable energy. Topics include renewable fuel based generators, fuel cells, wave and tidal generation, geothermal, wind turbines, photovoltaic, barometric pressure, and hydro-electric generation. Course also covers active and passive solar heating and cooling, alternate fuel vehicles and electric transportation.

CT 143A RENEWABLE ENERGY LAB A: PHOTOVOLTAIC**Units: 2-5.0** **CSU** | 16-18 hours lecture and 48-54 hours per unit of laboratory per term*(Prerequisite/Co-requisite: CT 142)*

This course explores using photovoltaic technology to generate electricity for various applications: residential, remote, portable, auxiliary, or mobile.

CT 143B RENEWABLE ENERGY LAB B: SOLAR THERMAL**Units: 2-5.0** **CSU** | 16-18 hours lecture and 48-54 hours per unit of laboratory per term*(Prerequisite/Co-requisite: CT 142)*

This course explores using solar thermal technology for various applications including passive/active heating/cooling and generating electricity.

CT 143C RENEWABLE ENERGY LAB C: WIND**Units: 2-5.0** **CSU** | 16-18 hours lecture and 48-54 hours per unit of laboratory per term*(Prerequisite/Co-requisite: CT 142)*

This course explores renewable energy with a focus on wind electrical generation through the completion of actual projects.

CT 143D RENEWABLE ENERGY LAB D: ALTERNATIVE FUELS**Units: 2-5.0** **CSU** | 16-18 hours lecture and 48-54 hours per unit of laboratory per term*(Prerequisite/Co-requisite: CT 142)*

This course explores using alternative fuels for transportation, heating systems, and generating electricity through the construction of an actual project.

CT 144 PHOTOVOLTAIC SYSTEMS AND INSTALLATION

Units: 6.0 **CSU** | 64-72 hours lecture and 96-108 hours laboratory

(No prerequisite)

This course will prepare students for a career in the Residential Solar Industry. At the conclusion of the course, students may take the national entry-level NABCEP Certification Exam. Students will explore photovoltaic energy and systems, and the methods used to install residential systems. System components, building code requirements, system sizing and design, and solar energy principles will be examined extensively. During lab hours, students will conduct experiments that demonstrate the principles of photovoltaic and electrical systems. Students will design, safely install, and trouble-shoot systems on actual buildings and ground mounts.

CT 144 PHOTOVOLTAIC SYSTEMS AND INSTALLATION

Units: 6.0 **CSU** | 64-72 hours lecture and 96-108 hours laboratory

(No prerequisite)

This course will prepare students for a career in the Residential Solar Industry. At the conclusion of the course, students may take the national entry-level NABCEP Certification Exam. Students will explore photovoltaic energy and systems, and the methods used to install residential systems. System components, building code requirements, system sizing and design, and solar energy principles will be examined extensively. During lab hours, students will conduct experiments that demonstrate the principles of photovoltaic and electrical systems. Students will design, safely install, and trouble-shoot systems on actual buildings and ground mounts.

CT 148 SPECIAL TOPICS

See Special Topics listing (Variable units) **CSU**

Construction Technology Manufacturing Courses

CTMF 120A WOODWORKING TOOLS AND EQUIPMENT

Units: 2.0 **CSU** | 32-36 hours lecture

(No prerequisite)

This course is designed to give the woodworking student an in-depth knowledge of common woodworking tools and equipment. Students will explore the safety, use and maintenance of saws, lathes, routers, planers, jointers, sanders and common power and hand tools used for basic woodworking projects.

CTMF 120B ADVANCED WOODWORKING TOOLS AND EQUIPMENT

Units: 2.0 **CSU** | 32-36 hours lecture

(Prerequisite: CTMF 120A.)

This course is designed to give the woodworking student an in-depth knowledge of the more advanced woodworking tools, equipment and operations. Students will explore the safety, setup, use and maintenance of saws, lathes, routers, planers, jointers, sanders and common power and hand tools as used in advanced woodworking projects. Course also includes extensive coverage of tool sharpening.

CTMF 121A WOODWORKING

Units: 3.0 **CSU** | 32-36 hours lecture and 48-54 hours laboratory

(No prerequisite)

This is a beginning woodworking class. Topics covered include safety, tools, the composition of wood and its characteristics, beginning design and sketching, project planning, measuring and cutting, use of large and small power tools, and general woodworking techniques. Students will be expected to complete multiple projects as part of their grade.

CTMF 121B INTERMEDIATE WOODWORKING**Units: 3.0** **CSU** | **32-36 hours lecture and 48-54 hours laboratory***(Prerequisite: CTMF 121A)*

This is an intermediate woodworking class. Topics include safety, tools, the composition of wood and its characteristics, finishing, intermediate design and sketching, and project planning. Students will generate shop drawings adequate to build the project. Students will measure, cut, and use power tools and general woodworking techniques.

CTMF 122 ADVANCED WOOD TOPICS**Units: 3.0** **CSU** | **32-36 hours lecture and 48-54 hours laboratory***(Prerequisite: CTMF 121A Basic Woodworking. Grade Option)*

Come develop your skills and learn the methods and procedures necessary for completing an advanced woodworking project. One specific advanced woodworking project is selected as the focus for each semester. Check with the Construction Technology Department for the current project. Course may also include specialized techniques of turning, marquetry, parquetry, carving and intarsia.

CTMF 127 PRODUCTION WOODWORKING**Units: 3.0** **CSU** | **32-36 hours lecture and 48-54 hours laboratory***Prerequisite: CTMF 121A)*

This course covers techniques common to production woodworking and includes design and construction of custom jigs, fixtures and templates for drill presses, routers, saws and lathes. Students will gain experience with computer numerical controlled routers, surfacing sanders, airbag sanders and production fastening techniques and wood finishes while creating several commercial woodworking projects.

CTMF 129A WOODTURNING**Units: 3.0** **CSU** | **32-36 hours lecture and 48-54 hours laboratory***CSU (Prerequisite: CTMF 120A)*

This introductory course will provide the woodworking student with information and skills necessary to successfully design, turn and finish typical woodturning projects. Course includes lathe, spindle, faceplate and drive chuck turning. Students will complete a variety of projects that can include pens and pencils, games and toy pieces, decorations, lamps, spindles, bowls and boxes.

CTMF 129B ADVANCED WOODTURNING**Units: 3.0** **CSU** | **32-36 hours lecture and 48-54 hours laboratory***(Prerequisite: CTMF 129A. Grade Option)*

This advanced woodturning course includes green, seasoned and laminated wood and acrylic projects. Students will explore turning of large bowls and platters, maintaining natural edges, turning burls, proper box and lid construction, off center turning, chatter finishes and construction of turning fixtures, centers and drives.

CTMF 130A MECHANICAL DESKTOP**Units: 3.0** **CSU** | **32-36 hours lecture and 32-36 hours by arrangement***(No prerequisite. Grade Option.)*

Develop your skill in creating accurate three-dimensional parametric models using Mechanical Desktop. Explore the exciting features of this program which includes parametric modeling, surfacing, model analysis, interference checking and assemblies. Learn how to export surface and design information to computer controlled mills and routers. This is an introductory class in Mechanical Desktop.

CTMF 130B MECHANICAL DESKTOP ADVANCED**Units: 3.0** **CSU** | **32-36 hours lecture and 32-36 hours by arrangement***(Prerequisite: CTMF 130A)*

This advanced course in Mechanical Desktop includes a focused exploration of detailed models and complex assembly models. Students will explore the full features of the Mechanical Desktop package including fasteners, shaft and gear generation and creation of motion based, skin and derived surfaces. Both localized and externalized assemblies will be created and analyzed for interference and engineering characteristics.

CTMF 131A COMPUTER AIDED MANUFACTURING (CAM) SOFTWARE

Units: 3.0 CSU | 16-18 hours lecture and 96-108 hours laboratory

(No prerequisite)

Learn the techniques of numerical controlled programming using Computer-Aided Manufacturing (CAM) software. Generate three-dimensional models and learn how to create parts, molds, and fixtures using integrated solids, surfaces and wireframes. Unite the software with the machine and create milled or routed three-dimensional parts.

CTMF 131B COMPUTER AIDED MANUFACTURING (CAM) SOFTWARE ADVANCED

Units: 3.0 CSU | 16-18 hours lecture and 96-108 hours laboratory

(Prerequisite: CTMF 131A.)

This advanced course includes an in-depth study of the more complex features of Computer-Aided Manufacturing (CAM) software. Students will create geometry and toolpaths for complex three-dimensional and surface models for mills, routers, lathes and engraving machines. Programming of multi-axis and mill-turn machines will be explored.

CTMF 140 MANUFACTURING INTERNSHIP

Units: 3.0 CSU | 64-72 hours lecture

(No prerequisite. Grade Option)

This course will provide the construction, drafting and manufacturing technology student with hands-on job skills and experience common to the manufacturing industry.

CTMF 141 MANUFACTURING INTERNSHIP LABORATORY

Units: 2-12.0 CSU | 6 weekly hours by arrangement per unit

(No prerequisite. Grade Option)

This course is the laboratory component for CTMF 140 Manufacturing Internship. Students will research, design, manufacture and market a project using computers and common manufacturing equipment. CTMF 140 must be taken concurrently.

Construction Technology Maintenance Courses

CTMT 120 RESIDENTIAL MAINTENANCE AND REPAIR

Units: 4.0 CSU | 48-54 hours lecture and 48-54 hours laboratory

(No prerequisite. Grade Option)

This class covers all major aspects of preventative maintenance and repair for residential and light commercial buildings. Topics covered include but are not limited to repairing roofing, plumbing, electrical framing, insulation, drywall, painting, concrete, flooring, safety, tools, heating and cooling, etc. as they apply to the maintenance and repair industry.

CTMT 121 PLUMBING REPAIR

Units: 3.0 CSU | 32-36 hours lecture and 48-54 hours laboratory

(No prerequisite. Grade Option)

This class covers most aspects of residential and light commercial plumbing repair. Topics covered include but are not limited to plumbing tools, water supply systems, drainage systems, drainage problems, faucets and valves, piping, soldering and threading, water heating systems, plumbing fixtures, pricing, billing, and inventory management, as they apply to the plumbing repair business.

CTMT 122 ELECTRICAL REPAIR

Units: 3.0 CSU | 32-36 hours lecture and 48-54 hours laboratory

(No prerequisite. Grade Option)

This class covers most aspects of residential and light commercial electrical repair. Topics covered included but are not limited to electrical tools, electrical theory, wiring systems electrical materials, electrical services, troubleshooting electric circuits, low voltage circuits, appliances and motors, and mathematics for electricians.

CTMT 123 CUSTODIAL MAINTENANCE

Units: 4.0 **CSU** 48-54 hours lecture and 48-54 hours laboratory

(No prerequisite. Grade Option)

This course covers the major aspects of custodial and janitorial work. Course includes general cleaning techniques, cleaning equipment use and maintenance, cleaning chemicals, window care, maintaining hard floors, carpet and upholstery care, chemical hazards, Cal OSHA regulations, and handling of infectious waste as they apply to the janitorial industry.

CTMT 123 CUSTODIAL MAINTENANCE

Units: 4.0 **CSU** 48-54 hours lecture and 48-54 hours laboratory

(No prerequisite. Grade Option)

This course covers the major aspects of custodial and janitorial work. Course includes general cleaning techniques, cleaning equipment use and maintenance, cleaning chemicals, window care, maintaining hard floors, carpet and upholstery care, chemical hazards, Cal OSHA regulations, and handling of infectious waste as they apply to the janitorial industry.

Construction Technology Public Works Courses

CTPW 111 INTRODUCTION TO PUBLIC WORKS

Units: 3.0 **CSU** 48-54 hours lecture

(No prerequisite)

Introduction to techniques, materials and equipment used in Public Works maintenance and construction. Meets the standards of the American Public Works Association, Street Superintendents' Association and Inspectors' Association.

CTPW 112 PLAN READING FOR PUBLIC WORKS

Units: 3.0 **CSU** 48-54 hours lecture

(No prerequisite)

Reading and interpreting plans related to public works, water, storm drain, and sewage facility projects. Basic survey methods, symbols, mathematical conversions, and determination of slope and grade.

CTPW 113 PUBLIC WORKS INSPECTION

Units: 3.0 **CSU** 48-54 hours lecture

(No prerequisite)

General public works inspection techniques. Includes Portland Cement and asphalt concretes, soils, base and subgrade, safety, contracts, and specifications. Responsibilities of the contractor, engineer, agency, and inspector.

CTPW 114 PUBLIC WORKS ADMINISTRATION

Units: 3.0 **CSU** 48-54 hours lecture

(No prerequisite)

An introduction to the organizational concepts used by the Public Works department. Includes typical organization, management concepts, political considerations, planning, budget management and public relations.

CTPW 115 STREET AND HIGHWAY CONSTRUCTION

Units: 3.0 **CSU** 48-54 hours lecture

(No prerequisite)

Equipment, materials, and methods employed in the construction, inspection, and maintenance of streets and highways. Includes Portland Cement concrete; surface drainage; traffic signs; safety and safe practices, highway design; laws, codes and ordinances; management principles; budget preparations; equipment maintenance records; underground utilities; surveying and staking.

CTPW 116A WATER DISTRIBUTION SYSTEMS I

Units: 3.0 **CSU** | 48-54 hours lecture

(No prerequisite)

Water distribution systems operation. Fundamentals of water production, quality, and system operation. Includes piping, services, pumps, reservoirs, mathematics, and basic hydraulics. Preparation for Grades I and II Water Distribution Operator Certification.

CTPW 117 PORTLAND CEMENT CONCRETE

Units: 3.0 **CSU** | 48-54 hours lecture

(No prerequisite)

Portland Cement concrete design and uses. Covers transporting, placing, curing, and testing Portland Cement concrete. Applications and construction methods employed.

CTPW 118 SOLID WASTE MANAGEMENT

Units: 3.0 **CSU** | 48-54 hours lecture

(No prerequisite)

Methods used in collection of solid waste materials. Includes equipment, scheduling, and customer relations. Ultimate disposal of solid waste matter as well as projections concerning future collection and disposal operations. Special emphasis on municipal resource recovery, salvaging, and recycling.

CTPW 119 WASTEWATER OPERATIONS

Units: 3.0 **CSU** | 48-54 hours lecture

(No prerequisite)

Comprehensive examination of wastewater operations, impact of waste contributions from home and industry, effects of wastewater treatment, water reclamation and by-product disposal.

Cooperative Work Experience Education

Cooperative Education is a key element of Victor Valley College's comprehensive approach to career development. Co-op is a 16-, 12-, or 8-week course that enables the student to receive college credit for on-the-job training that will make him/her a more efficient and valuable employee while providing a practical education that supplements and enhances classroom theory. It relates education to real work environments through learning while earning. It also provides the opportunity for work improvement by improving skills. Victor Valley College recognizes job experience as a valuable learning resource. It has the uniqueness of turning community business, industry, and public agencies into an expanded educational training laboratory. Co-op also allows credit for volunteer or unpaid training. Credit is awarded on the basis of learning objectives completed and the number of hours the student trains. Students must create/complete new learning objectives each semester they enroll. Students may utilize their present worksites. More details are available in the Co-op Office, (760) 245-4271, ext. 2281. The office, located in the Academic Commons, is open Monday-Friday, 8:30 a.m.-1:00 p.m., 2:00-5:00 p.m., and by appointment.

Co-op is a course designed for students who are cross-training at their current worksite for upward mobility or possible career changes as well as those looking for entry-level occupational training through work-based learning experiences such as through an internship.

Are you looking for occupational skills training for employment? We can offer you:

- Practical experience
- An opportunity to apply classroom learning on the job
- College credit
- Career guidance in a realistic setting
- A chance to learn what you do well and what you enjoy doing
- A reason for staying in college
- Up-to-date laboratory experience
- Orientation to changing job conditions
- New ways of getting ahead
- Opportunity to experience socialization in the work place
- Transferable college elective units

Credit is awarded on the basis of objectives completed and the number of hours worked. You will need a minimum of 75 hours of paid work for each unit of credit or 60 hours of unpaid work for each unit of credit.

PAID

<i>75 hrs per unit/per semester</i>		Total semester hours
05 hrs/wk	1.0 unit	75
10 hrs/wk	2.0 units	150
15 hrs/wk	3.0 units	225
20 hrs/wk	4.0 units	300
25 hrs/wk	5.0 units	375
30 hrs/wk	6.0 units	450
35 hrs/wk	7.0 units	525
40 hrs/wk	8.0 units	600

UNPAID

<i>60 hrs per unit/per semester</i>		Total semester hours
04 hrs/wk	1.0 unit	60
08 hrs/wk	2.0 units	120
12 hrs/wk	3.0 units	180
16 hrs/wk	4.0 units	240
20 hrs/wk	5.0 units	300
24 hrs/wk	6.0 units	360
27 hrs/wk	7.0 units	420
32 hrs/wk	8.0 units	480

Eligibility

Students must utilize their present work site, as we do not place students at work sites. Students do not need a declared major and do not need to be working in a major to enroll in Cooperative Work Experience Education.

To be eligible for Cooperative Education, students must:

- Be enrolled as a Victor Valley Community College student.
- Spend at least five (5) hours a week at a work site.
- Pursue a planned program of Cooperative Education that includes new or expanded responsibilities or learning opportunities beyond those of previous employment and training.

Cooperative Work Experience Education

Credit

Students may earn between 1 and 8 units of Co-op credit per semester, depending on the number of hours completed. Students may enroll again in Occupational Work Experience classes but may not exceed 16 units total. A maximum of 16 units of Co-Op credit may be used towards the AA/AS degree as elective credits only. Units cannot be applied towards major or general education degree requirements. These units also transfer to the CSU system as elective credits only. General Work Experience does not transfer. Students may repeat a failed Co-op class and both grades will be listed on the student's transcript.

Cooperative Education Work Experience is offered in the following areas:

Administration of Justice, Agriculture and Natural Resources, Allied Health, Art, Automotive, Biology
Business Administration, Business Education Technologies, Business Escrow, Business Real Estate, Chemistry
Child Development, Computer Information Science, Computer Integrated Design & Graphics (Drafting)
Construction & Manufacturing Technology, Education, Electronics and Computer Technology, English, Fire Technology
General Work Experience, Journalism, Mathematics, Music, Nursing, Photography, Physical Science, Physics,
Political Science, Psychology, Respiratory Therapy, Restaurant Management, Sociology, Theater Arts, Welding

For further information and individual guidance, contact the Cooperative Education Office at 245-4271, ext. 2281, or visit www.vvc.edu/offices/coopedu

Developmental Studies

Developmental Studies courses offer language analysis curriculum specifically designed for students with language based disabilities. The curriculum is a multisensory, sequential, and cognitive approach which includes both perceptual and neurological deficit therapy.

DVST 1 LANGUAGE ANALYSIS DEVELOPMENT 1

Units: 3.0

48-54 hours lecture

(No prerequisites) This course does not apply to the Associate Degree.

This course is designed for students who would like to learn how to read and spell phonetically. The sounds and rules governing the sounds are introduced to the students. The students are then given opportunity to encode and decode words using this phonetic instruction.

DVST 2 LANGUAGE ANALYSIS DEVELOPMENT 2

Units: 3.0

48-54 hours lecture

(No prerequisite. Pass/No Pass) This course does not apply to the Associate Degree.

Language Analysis 2 uses a multisensory sequential approach to teaching the encoding and decoding of multisyllabic words according to the phonetic structure of the words. Students will also learn how to apply the rules governing the phonetic structure in order to enhance both reading and spelling.

DVST 3 LANGUAGE ANALYSIS DEVELOPMENT 3

Units: 3.0

48-54 hours lecture

(No prerequisite. Pass/No Pass) This course does not apply to the Associate Degree.

Language Analysis 3 is a multisensory and structured approach to understanding the skills and techniques that can enhance comprehension of college level text book reading assignments. Specifically, the key words and organizational patterns of the text will be identified and methods for grasping the main idea of the text will be presented.

DVST 4A BASIC MATH REASONING

Units: 3.0

48-54 hours lecture

(No prerequisite. Pass/No Pass) This course does not apply to the Associate Degree.

Basic Mathematics Reasoning addresses the perceptual and language deficits that can interfere with the understanding of mathematical concepts and operations. Instruction is based on assessment of students' needs and includes performing in the four arithmetic operations, with whole numbers, fractions, decimals, and percent. Students will be given hands-on experience to increase their visual perception and to comprehend the language used in mathematics.

DVST 4B DEVELOPMENTAL ALGEBRA

Units: 3.0

48-54 hours lecture

(Prerequisite. DVST 4A. Pass/No Pass) This course does not apply to the Associate Degree.

This course is a continuation of DVST-4A. The course includes the following topics in algebraic context: mathematical methods, techniques, ways of thinking, and problem-solving. Students will be given hands-on experience to increase their visual perception. Graphing is introduced, and geometric applications are stressed. The course develops skills in operations with algebraic expressions, polynomials, algebraic fractions, and solving linear equations.

Economists study how society can best use resources such as land, raw materials, capital, and labor. They analyze the relationship between the supply of goods and services and the demand as well as how these goods and services are produced, distributed, and consumed. Some economists work on public issues such as the control of inflation, business cycles, unemployment, wage, tax, and tariff policies. Others collect, analyze, and interpret data on a wide variety of economic problems, develop theories to explain causes of these problems, and identify possible solutions.

Economics provides both a general academic experience and professional preparation. The program emphasizes economic analysis, institutions, and policy in America, regional, and urban settings. Economics is designed to facilitate the students' matriculation to the four-year college or to provide an understanding of the economic world in which we live. Key concepts and methodology for analysis are emphasized.

Career Opportunities

Budget Analyst, Business Analyst, Business Forecaster, Commodity Economist, Commodity Price Forecaster
Economic Analyst, Economic Forecaster, Economist, Industrial Relations Specialist, Investment Analyst

Faculty

Peter Allan - Emeritus | Henry Young

Degrees and Certificates Awarded

Associate in Arts, Liberal Arts

Associate Degree

No Associate degree is offered with a major in Economics. Economics courses may be used to fulfill requirements for an Associate in Arts degree with a major in Liberal Arts. See Liberal Arts for degree requirements for this major.

Transfer

For the most up-to-date information on these programs and others, visit www.assist.org. Please stop by the Transfer Center in Building 55 or make an appointment with a counselor if you have questions.

- **California State University, San Bernardino:** *Economics major*
- **University of California, Riverside:** *Economics major*

Economics Courses

ECON 101 PRINCIPLES OF ECONOMICS: MACRO

Units: 3.0 **CSU, UC** | 48-54 hours lecture

(Prerequisite: Math 90 or higher with a grade "C" or better).

Introduction to economic theory and analysis with emphasis on fiscal and monetary policy, capitalism, national income, employment, money, economic stability, economic growth and achievements emphasizing the macro-economic approach. The purpose is to provide students with an introduction into major issues facing the world economies, exposing students to the methods that economists use to study and solve those issues and economic policy problems of the 21st century.

ECON 102 PRINCIPLES OF ECONOMICS: MICRO

Units: 3.0 **CSU, UC** | 48-54 hours lecture

(Prerequisite: Math 90 or higher with a grade "C" or better).

This is an introductory course in economics focusing on choices of individual decision-makers. Topics include scarcity, specialization and trade, supply and demand market equilibrium, taxation, elasticity, consumer choice, production and cost theory and market structure profit maximization models.

ECON 128 SPECIAL TOPICS

See Special Topics listing (Variable units) **CSU**

ECON 129 INDEPENDENT STUDY

See Independent Study listing (1-3 units) **CSU**

Education

The Department of Education and Educational Technology at Victor Valley College offers certificate programs for transfer into teaching credential programs offered at accredited four-year colleges. These preparatory courses may transfer to Education and Educational Technology majors when and where articulation agreements exist. Education is the career field for those individuals who desire to teach in elementary and secondary schools, as well as in colleges and professional education. This field of study prepares students to participate as teachers and learning facilitators. Graduates in this field—bachelor's degree and postgraduate study required—qualify for a variety of positions including teaching at the elementary, secondary, and college levels. Education remains on the national list of growing occupations.

To obtain a California teaching credential, students must follow a five-year program by first pursuing a four-year bachelor's degree and then completing a fifth year teaching credential program in which they complete mostly education courses, including student teaching.

Credentials - California Commission on Teacher Credentialing is responsible for setting standards for licensure of teachers and for accreditation of institutions that prepare teachers. The Commission is working toward meeting the standards set by the Senate Bill 2042. Some institutions may still be in the process of making changes to comply with the Commission's new standards. If you are thinking of a career in teaching, you should see a counselor for the latest information.

Also, spend some time at <http://www.ctc.ca.gov/credentials/teach.html> and <http://www.teachcalifornia.org/> for important, up-to-the-minute information about the teaching profession in California.

A minimum 2.6-3.0 GPA is required for acceptance into most credential programs. Minimum GPA accepted varies according to the major and the university the student chooses.

CBEST - Students will usually student teach during the last two quarters of their credential program. Before student teaching, all students must take the California Basic Educational Skills Test (CBEST). Most students take the CBEST during their junior year, a quarter or two after transfer to a university.

CSET - All Multiple Subject (K-6) candidates are required to pass the California Subject Examinations for Teachers (CSET); there are no longer waiver programs for this requirement.

Career Opportunities

Administrative Services, Elementary Teacher, ESL Teacher, High School Teacher, College Instructor, Education Consultant Training Facilitator, Instructional Designer, Distance Learning Specialist, MGM Teacher, Physically Handicapped Teacher Pupil Personnel Services, Reading Teacher, Special Education Teacher, Vocational Teacher

Faculty

Mike Smith

Associate Degree

No associate degree is offered with a major in Education. Courses in the Liberal Studies major may be used to fulfill requirements for an Associate in Arts degree with a major in Liberal Arts. See Liberal Arts for degree requirements for this major.

Degrees and Certificates Awarded

Associate in Arts, Liberal Arts
Degree will vary with major.
Educational Technology Certificate
Collegial Education Certificate Level I
Collegial Education Certificate, Level II:
Curriculum Specialization

Teaching and Learning Specialization
Collegial Education Certificate, Level II:
Technology Specialization

Transfer

For the most up-to-date information on these programs and others, visit www.assist.org. Please stop by the Transfer Center in Building 55 or make an appointment with a counselor if you have questions.

MULTIPLE-SUBJECT (K-6) TEACHING CREDENTIAL

California State University, San Bernardino - CSUSB offers multiple-subject programs in the Liberal Studies and Human Development/Child Development (Track II) majors

University of California, Riverside - UCR offers multiple-subject programs in the following majors: English, Ethnic Studies, History, Human Development, Liberal Studies, Political Science, Sociology

Local Bachelors Programs offering preparation for Multiple Subjects credentials

Azusa Pacific University, High Desert Regional Center: Human Development major

Brandman University, Victor Valley Campus: Social Sciences major

University of La Verne, High Desert Campus: Liberal Studies major

Single Subject Teaching Credential

Students pursuing a Single Subject Teaching Credential to teach a specific subject in Grades 7-12 should follow the bachelor's degree major requirements for that specific subject waiver program and complete the appropriate general education requirements. For example, a student who plans to teach English in high school should complete the transfer requirements for an English major or an English waiver and all general education transfer requirements for the specific university.

California State University, San Bernardino: Art, English, English with a concentration in Communication Studies, English with a concentration in Theatre Arts, French, Health Sciences, History, Mathematics, Music, Physical Education, Political Science, Social Sciences, Spanish, any of the sciences

University of California, Riverside: Biological Sciences, English, History, Mathematics, Political Science, Physical Sciences (Physics), Social Sciences

Vocational Subjects

The following California State University (CSU) campuses offer Bachelor's Degrees in Vocational Ed./Occupational Studies. Contact them for admissions requirements:

Long Beach | San Diego | Los Angeles | San Francisco | San Bernardino | San Luis Obispo

EDUCATIONAL TECHNOLOGY CERTIFICATE		
The Educational Technology Certificate Program significantly enhances transfer readiness for students who intend to pursue a career in public education (K-12 teacher, community college teacher, school administration, academic counseling, special education, etc.) or a career in professional education (instructional designer, business/corporate trainer, educational software engineer, educational consultant.) Additionally, the program (1) certifies teachers of all types in the use and integration of computer technology in their practice, and (2) certifies students for work as paraprofessionals or para-educators in technology-enhanced school settings, such as computer labs and networked classrooms. The Educational Technology Certificate Program exceeds the rigorous standards set by version two of the California Technology Assessment Profile.		
Units Required: 17.0		<i>All of the following must be completed:</i>
EDUC 101	Introduction to Teaching	3.0
ETEC 106	Introduction to Computer Tech for Educators	4.0
ETEC 107	Introduction to the Internet for Educators	2.0
ETEC 51	Introduction to Educational Technology	3.0
ETEC 70	Leadership in Educational Technology	3.0
ETEC 90	Educational Technology Internship	2.0

Education

COLLEGIAL EDUCATION LEVEL I CERTIFICATE

This certificate will serve the needs of parents who home school their children or are actively involved in the education of their children at school. It is intended to assist parents developing their understanding of how children think and learn, and how different educational styles and approaches influences learning. The certificate will initially be offered to parents of students at the Lewis Center in Apple Valley and has been developed in collaboration with the administration of the Lewis Center.

Units Required: 6.0

All of the following must be completed with a grade of "C" or better:

EDUC 101	Introduction to Teaching	3.0
CHDV 100	Child Growth and Development	3.0

COLLEGIAL EDUCATION CERTIFICATE - LEVEL II CURRICULUM SPECIALIZATION

Complete the Collegial Education Certificate - Level I first.

Units Required: 6.0

Choose 6 units from any of the following:

CHDV 134	Language Experiences for Young Children	3.0
CHDV 144	Math and Science for Young Children	2.0
ENGL 235	Children's Literature	3.0
MATH 70	Building Mathematical Experiences for Children K-8	3.0
MATH 71	Guided Discoveries Practicum	2.0

COLLEGIAL EDUCATION CERTIFICATE - LEVEL II TEACHING AND LEARNING SPECIALIZATION

Complete the Collegial Education Certificate - Level I first.

Units Required: 6.0

Choose 6 units from any of the following:

GUID 107	Learning Strategies and Study Skills	3.0
GUID 105	Personal and Career Success	3.0

COLLEGIAL EDUCATION - LEVEL II: TECHNOLOGY SPECIALIZATION

Complete the Collegial Education Certificate - Level I first.

Units Required: 6.0

Choose 6 units from any of the following:

ETEC 106	Introduction to Computer Tech for Educators	4.0
ETEC 107	Introduction to the Internet for Educators	2.0
ETEC 51	Introduction to Educational Technology	3.0
MATH 70	Building Mathematical Experiences for Children K-8	3.0
BET 131A	Presentation Software: PowerPoint I	1.0
BET 131B	Presentation Software: PowerPoint II	1.0
BET 131C	Presentation Software: PowerPoint III	1.0
BET 135	Desktop Publishing: PageMaker	2.0

EDUC 101 INTRODUCTION TO TEACHING

Units: 3.0 **CSU, UC** | 48-54 hours lecture

(No prerequisites)

Introduction to teaching as a career and education as a social institution. Crucial issues facing schools in American democratic society are considered, especially K-12 goals, curriculum, and methods. Opportunities, challenges, and requirements of the profession are presented. This course is not designed to be a course in professional education. A minimum 30 hours of observation/participation in public schools grades K-8 by arrangement with the instructor.

EDUC 138 COOPERATIVE EDUCATION

See Cooperative Education (1 - 8 units). **CSU**

Education Technology Courses

ETEC 51 INTRODUCTION TO EDUCATIONAL TECHNOLOGY

Units: 3.0 | 48-54 hours lecture

(No prerequisite)

This course examines technology from three integrated perspectives: technology as a tool, a medium, and a setting for learning. Students will extensively use Internet tools as they survey a variety of strategies for integrating technology into the classroom. The course will also instruct students on the basic methods and strategies for creating Web-based learning activities. Students will have the opportunity to create projects relevant to their educational setting.

ETEC 70 LEADERSHIP IN EDUCATIONAL TECHNOLOGY

Units: 3.0 | 48-54 hours lecture

(No prerequisite)

This course defines and details constructivist leadership, framing that leadership in terms of educational technology. Students will apply these concepts to their own settings through introductory understandings of knowledge management and virtual learning. Students will have the opportunity to formulate technology rollout and training plans specific to their educational organizations or fields.

ETEC 90 EDUCATIONAL TECHNOLOGY INTERNSHIP

Units: 2.0 | 16-18 hours lecture and 48-54 hours laboratory

(No prerequisite, Pass/No Pass)

This course provides students with valuable experience in educational settings by partnering them with teachers or other professional educators to assess needs, collaborate on possible solutions, support implementations, and evaluate outcomes. Students will also benefit from working within a community of practice during their internships.

ETEC 106 INTRODUCTION TO COMPUTER TECHNOLOGY FOR EDUCATORS

Units: 4.0 **CSU** | 48-54 hours lecture and 48-54 hours laboratory

(No prerequisite)

A survey course which provides an overview of computer technology for multi-disciplinary majors, but with emphasis on its role in educational settings. The course provides instruction in a variety of topics supported by hands-on laboratory work with operating systems, word processing, spreadsheets, presentations, social media, and the Internet. Application and evaluation of computer technology in learning environments serves as the overall framework

ETEC 107 INTRODUCTION TO THE INTERNET FOR EDUCATORS

Units: 2.0 **CSU** | 48-54 hours lecture and 48-54 hours laboratory

(No prerequisite)

A course for education students or current teachers to acquire the skills needed to effectively utilize the Internet in the classroom. Emphasis will be placed on computer-mediated communication with the World Wide Web. Students will become well versed in the use of Web browsers, FTP, newsgroups/asynchronous discussion, e-mail, and chat synchronous discussion. See cross listing for CIS 107.

Electronics and Computer Technology

The Electronics and Computer Technology Department offers several concentrations in electronics and computer technology that are designed to prepare students for a variety of high-tech job/career opportunities in the fields of engineering and technology; electronics technology; computer technology; telecommunication technology; and related technologies.

The Electronics and Computer Technology Department offers an associate degree program in engineering technology with an emphasis in electronics, computers, and telecommunications. Technology certificates offered in areas of specialization include: electronics technology, computer technology, telecommunication technology, networking technology, electronic communication technology, and industrial electronics technology. Certificates/certifications offered in specific areas of electronics, computers, and related technology include: Certified Electronics Technician (Associate CET), A+ Certified Computer Service Technician, N+ Certified Networking Technician, CISCO Certified Network Associate (CCNA), CISCO Certified Network Professional (CCNP), Microsoft Certified Systems Engineer (MCSE), Certified Fiber Optics Installer, (FOIC), Electronics Communications (WCM, FCC license) and Digital and Microprocessor Electronics.

Career Opportunities

Electronics Engineering Technologist, Computer Engineering Technologist, Network Engineering Technologist, Telecommunications Engineering Technologist, Certified Electronics Technician - CET, A+ Certified Computer Technician, N+ Certified Network Technician, Certified Telecommunication Technician, CISCO Certified Network Associate (CCNA) CISCO Certified Network Professional (CCNP), Microsoft Certified Professional (MCP), Microsoft Certified Systems Engineer (MCSE), Networking Cable Installer, Fiber Optics Installer, Microwave/Radar Technician, Laser/Optical Technician Industrial Electronics Technician, Consumer Electronics Technician, Biomedical Instrument Technician Audio/Visual Systems Technician, Broadcast Radio and Television, Research and Development Sales Representative, electronics and computer equipment, Quality Control Technician

Faculty

Khalid Rubayi

Degrees and Certificates Awarded

Associate in Science, Electronics and Computer Technology
Associate in Science, Electronics Engineering Technology
Associate Degree Electronics Engineering Technology Certificate
A+ Certification Examination Preparation Certificate
CISCO Networking Academy I, II, III, IV, V, VI, VII Certificate
Computer Technology Certificate
Digital Electronics Certificate

Electronics Technology Certificate
Fiber Optic Cabling Technician Certificate
N+ Certification Examination Preparation Certificate
Network Cabling Technician Certificate
Microsoft Certified Systems Engineer Examination Preparation Certificate Level I, II
Wireless Communication Technology Certificate

A student receiving a degree or certificate in this field will be able to:

- Apply principles of mathematics and applied science, to perform technical calculations and solve technical problems of the types commonly encountered in electronics and computer technology careers.
- Function competently in a laboratory setting, making measurements, operating technical equipment, critically examining experimental results, and properly reporting on experimental results, including their potential for improvement.
- Use modern computational tools for technical problem solving, including scientific calculators, computers, and appropriate software.
- Recognize the need for life-long learning and possess the skills to maintain and improve technical and non-technical abilities.
- Demonstrate an ability to communicate and function effectively with members of multidisciplinary teams from a variety of backgrounds.
- Demonstrate an ability to utilize computer software applications used in electronics and computer technology such as but not limited to: MultiSim, MathCad, Packet Tracer, LabView and basic programming.

Electronics and Computer Technology

Associate Degree

To earn an Associate in Science degree with a major in Electronics and Computer Technology, complete a minimum of 18 units from any of the certificate requirements or from any Electronics and Computer Technology courses and meet all Victor Valley College graduation requirements. ELCT 138 (Cooperative Education) may be used as elective credit, but may not be used to fulfill major requirements.

To earn an Associate in Science degree with a major in Electronics Engineering Technology complete the requirements specified and all other Victor Valley College graduation requirements.

Transfer

Most Electronics and Computer Technology courses transfer as Electives or fulfill subject credit requirements. Students in this field sometimes choose to pursue a bachelor's degree in technology fields such as Industrial Technology at California State Polytechnic University, San Luis Obispo, or Engineering Technology at California State Polytechnic University, Pomona. Other students choose to pursue an Engineering degree which requires a more intense curriculum in mathematics, chemistry, and physics. See Engineering for transfer requirements.

Campuses that offer Electronics and Computer Technology majors include: CSU - Chico, Fullerton, Long Beach, Pomona and Sacramento. Visit www.assist.org for major preparation requirements.

Special Programs

FEDERAL COMMUNICATIONS COMMISSION (FCC) COMMERCIAL RADIO OPERATOR LICENSE

FCC licenses are required by law to operate and maintain many types of communications equipment. The broadcasting, aviation, and maritime industries are the primary employers of commercial license holders. Many other fields now require FCC licenses. New technologies are evolving which must have qualified technicians and operators to comply with the procedures and rules needed to bring order to the international communications maze.

Under the auspices of the Electronics Technician Association and the International (ETA), FCC license examinations are administered at the Electronics and Computer Technology Department by an official ETA examiner. An examination fee is required.

The following FCC commercial licenses and endorsements are obtained by successfully passing a series of examinations:

- *General Radiotelephone (Examination elements 1 and 3)*
- *Radar Endorsement (Element 8)*
- *GMDSS, Radio Operator (Elements 1 and 7)*
- *GMDSS, Radio Maintainer (Elements 1, 3, and 9)*

Examination schedules can be obtained by contacting the Electronics and Computer Technology Department.

An FCC license preparation course also is offered (see course offerings in the Electronics and Computer Technology Department in the Victor Valley College Catalog).

Note: (1) Global Maritime Distress and Safety System

Special Programs

CERTIFIED ELECTRONICS TECHNICIAN (CET) CERTIFICATION

CET examinations thoroughly assess an individual's (a) general knowledge of electronics and computer technology, and (b) specific knowledge in fourteen separate specialty areas. Upon successful completion of the selected examination, the technician is registered and receives the CET certificate from the Electronics Technician Association, International. This certificate identifies the technician as having attained a high level of competence in the profession.

Under the auspices of the Electronics Technician Association, International (ETA), CET examinations are administered at the Electronics and Computer Technology Department by an official ETA examiner. An examination fee is required.

The following Electronic Technician Certifications and endorsements are obtained by successfully passing a series of examinations:

Associate: For students and entry level technicians with less than four years of experience. This examination pertains to basic Electronics and computer technology.

Journeyman: For technicians with four or more years of combined education and experience. This examination consists of the associate examination plus one of the following options:

- *Telecommunications Electronics Technician - TCM*
- *Certified Network Systems Technician - CNST*
- *Certified Web Specialist - CSW*
- *Registered Small-Dish Installer - RSDI*
- *Certified Satellite Installer - CSI*
- *Certified Fiber Optics Installer Technician - FOIC*
- *Wireless Communications Electronics Technician – WCM*
- *Radar Electronics Technician - RAD*
- *Biomedical Electronics Technician - CMP*
- *Certified Computer Electronics Technician - CMP*
- *Consumer Electronics Technician - CSM*
- *Video Electronics Technician - VID*
- *Certified Industrial Electronics Technician - IND*
- *Certified Network Computer Technician - CNCT*

Examination schedules can be obtained by contacting the Electronics and Computer Technology Department.

A CET certification preparation course also is offered (see course offerings in the Electronics and Computer Technology Department in the Victor Valley College catalog).

ASSOCIATE DEGREE AND CERTIFICATE IN ELECTRONICS ENGINEERING TECHNOLOGY		
Professional Preparation		
Units Required: : 64.5-68.5		
<i>All of the following must be completed:</i>		
ELCT 131	DC Circuit Theory and Analysis	4.0
ELCT 132	AC Circuit Theory and Analysis	4.0
ELCT 133	Solid State Devices and Circuits	4.0
ELCT 134	Solid State Circuit Analysis	4.0
ELCT 50	A+ Operating Systems Technologies	4.0
ELCT 51	C++ Programming for Electronics and Computer Technology	4.0
ELCT 71	Principles of Digital Logic and Circuits	4.0
ELCT 73	Microprocessor Principles	4.0
<i>One of the following two groups must be completed:</i>		
Electronics Emphasis		
ELCT 53	Electronic Communication Principles	4.0
ELCT 54	Electronic Communication Systems	4.0
Computer Emphasis		
ELCT 61	Basic Maintenance of Personal Computers	4.0
ELCT 77A	Networking Technology and Practices I	4.0
Individualized instruction courses require 108 hours of supervised laboratory activities.		
<i>All of the following must be completed:</i>		
ELCT 57	Technical Mathematics for Electronics I	3.0
ELCT 58	Technical Mathematics for Electronics II	3.0
ELCT 59	Technical Calculus for Electronics I	3.0
ELCT 60	Technical Calculus for Electronics II	3.0
<i>Students planning to transfer to an Electrical engineering program should take the following mathematics courses (instead of ELCT 57, 58, 59, and 60)</i>		
MATH 105	College Algebra	4.0
MATH 104	Trigonometry	4.0
MATH 226	Analytic Geometry and Calculus	5.0
MATH 227	Analytic Geometry and Calculus	5.0
<i>Complete all other General Education, proficiency and graduation requirements for the A.S. degree</i>		

COMPUTER TECHNOLOGY CERTIFICATE

Professional Preparation

Units Required: : 44.0

All of the following must be completed:

ELCT 131	DC Circuit Theory and Analysis	4.0
ELCT 132	AC Circuit Theory and Analysis	4.0
ELCT 133	Solid State Devices and Circuits	4.0
ELCT 134	Solid State Circuit Analysis	4.0
ELCT 50	A+ Operating Systems Technologies	4.0
ELCT 57	Technical Mathematics for Electronics I	3.0
ELCT 58	Technical Mathematics for Electronics II	3.0
ELCT 61	Basic Maintenance of Personal Computers	4.0
ELCT 71	Principles of Digital Logic and Circuits	4.0
ELCT 73	Microprocessor Principles	4.0

Career Option - 6 Units

Career specialty options include individualized instruction courses that are designed to provide the student with skills and/or knowledge in a specific area of digital/microprocessor technology. Supervised time will be spent with computers, audiovisual material, and laboratory equipment to meet specific objectives. Each specialty course requires 108 hours to complete, or an average of 6 hours per week.

One of the following career options must be completed:

Option 1: Microprocessor Systems

ELCT 91	Microprocessor Interfacing	3.0
ELCT 92	Microprocessor Applications	3.0

Option 2: Computer Systems

ELCT 62	PC Servicing	3.0
ELCT 63	PC Troubleshooting	3.0

CISCO NETWORKING ACADEMY CERTIFICATE LEVEL I

Units Required: : 17.0

All of the following must be completed:

ELCT 50	A+ Operating Systems Technologies	4.0
ELCT 61	Basic Maintenance of Personal Computers	4.0
ELCT 69	Network Topologies and Cabling	2.0
ELCT 80	Fiber Optics Cabling	3.0
ELCT 78A	Network Fundamentals	4.0

CISCO NETWORKING ACADEMY CERTIFICATE LEVEL II

Units Required: : 17.0

All of the following must be completed:

ELCT 50	A+ Operating Systems Technologies	4.0
ELCT 61	Basic Maintenance of Personal Computers	4.0
ELCT 69	Network Topologies and Cabling	2.0
ELCT 80	Fiber Optics Cabling	3.0
ELCT 78B	Routing Protocols and Concepts	4.0

CISCO NETWORKING ACADEMY CERTIFICATE LEVEL III		
Units Required: : 17.0		
<i>All of the following must be completed:</i>		
ELCT 50	A+ Operating Systems Technologies	4.0
ELCT 61	Basic Maintenance of Personal Computers	4.0
ELCT 69	Network Topologies and Cabling	2.0
ELCT 80	Fiber Optics Cabling	3.0
ELCT 78C	LAN Switching and Wireless	4.0
CISCO NETWORKING ACADEMY CERTIFICATE LEVEL IV		
Units Required: : 17.0		
<i>All of the following must be completed:</i>		
ELCT 50	A+ Operating Systems Technologies	4.0
ELCT 61	Basic Maintenance of Personal Computers	4.0
ELCT 69	Network Topologies and Cabling	2.0
ELCT 80	Fiber Optics Cabling	3.0
ELCT 78D	Accessing the WAN	4.0
CISCO NETWORKING ACADEMY CERTIFICATE LEVEL V		
Units Required: : 17.0		
<i>All of the following must be completed:</i>		
ELCT 50	A+ Operating Systems Technologies	4.0
ELCT 61	Basic Maintenance of Personal Computers	4.0
ELCT 69	Network Topologies and Cabling	2.0
ELCT 80	Fiber Optics Cabling	3.0
ELCT 78E	Advanced Network Routing	4.0
CISCO NETWORKING ACADEMY CERTIFICATE LEVEL VI		
Units Required: : 17.0		
<i>All of the following must be completed:</i>		
ELCT 50	A+ Operating Systems Technologies	4.0
ELCT 61	Basic Maintenance of Personal Computers	4.0
ELCT 69	Network Topologies and Cabling	2.0
ELCT 80	Fiber Optics Cabling	3.0
ELCT 78F	Implementing Secure Converged Wide-Area Networks	4.0
CISCO NETWORKING ACADEMY CERTIFICATE LEVEL VII		
Units Required: : 17.0		
<i>All of the following must be completed:</i>		
ELCT 50	A+ Operating Systems Technologies	4.0
ELCT 61	Basic Maintenance of Personal Computers	4.0
ELCT 69	Network Topologies and Cabling	2.0
ELCT 80	Fiber Optics Cabling	3.0
ELCT 78G	Building Multilayer Switched Networks	4.0

DIGITAL ELECTRONICS CERTIFICATE

Units Required: : 30.0

All of the following must be completed:

ELCT 131	DC Circuit Theory and Analysis	4.0
ELCT 132	AC Circuit Theory and Analysis	4.0
ELCT 133	Solid State Devices and Circuits	4.0
ELCT 134	Solid State Circuit Analysis	4.0
ELCT 57	Technical Mathematics for Electronics I	3.0
ELCT 58	Technical Mathematics for Electronics II	3.0
ELCT 71	Principles of Digital Logic and Circuits	4.0
ELCT 73	Microprocessor Principles	4.0

ELECTRONICS TECHNOLOGY CERTIFICATE

Units Required: : 36.0

Career Preparation

All of the following must be completed:

ELCT 131	DC Circuit Theory and Analysis	4.0
ELCT 132	AC Circuit Theory and Analysis	4.0
ELCT 133	Solid State Devices and Circuits	4.0
ELCT 134	Solid State Circuit Analysis	4.0
ELCT 57	Technical Mathematics for Electronics I	3.0
ELCT 58	Technical Mathematics for Electronics II	3.0
ELCT 71	Principles of Digital Logic and Circuits	4.0
ELCT 73	Microprocessor Principles	4.0

Career Option - 6 Units

Career specialty options are individualized instruction courses and are designed to provide the student with skills and/or knowledge in a specific area of Electronics technology. Supervised time will be spent with computers, audiovisual material, and laboratory equipment to meet specific objectives. Each specialty option requires 108 hours to complete, or an average of 6 hours per week.

One of the following career options must be completed:

Option 1: Optoelectronics

ELCT 85	Fiber Optics	3.0
ELCT 86	Lasers	3.0

Option 2: Telecommunications

ELCT 97	Digital Communications	3.0
ELCT 99	Microwave Communications	3.0

Option 3: Television and Video Systems

ELCT 93	TV Servicing	3.0
ELCT 94	VCR/Camcorder Servicing	3.0

Option 4: Industrial Electronics

ELCT 87	Industrial Control Systems	3.0
ELCT 88	Industrial Process Control Applications	3.0

Option 5: Biomedical Electronics

ELCT 89	Biomedical Instrumentation	3.0
ELCT 90	Advanced Biomedical Instrumentation	3.0

MICROSOFT CERTIFIED SYSTEMS ENGINEER (MCSE) EXAMINATION PREPARATION CERTIFICATE LEVEL I

Units Required: 14.0

All of the following must be completed:

ELCT 50	A+ Operating Systems Technologies	4.0
ELCT 61	Basic Maintenance of Personal Computers	4.0
ELCT 69	Network Topologies and Cabling	2.0
ELCT 79A	Microsoft Certified Systems Engineer	4.0

MICROSOFT CERTIFIED SYSTEMS ENGINEER (MCSE) EXAMINATION PREPARATION CERTIFICATE LEVEL II

Units Required: 14.0

All of the following must be completed:

ELCT 50	A+ Operating Systems Technologies	4.0
ELCT 61	Basic Maintenance of Personal Computers	4.0
ELCT 69	Network Topologies and Cabling	2.0
ELCT 79B	Microsoft Certified Systems Engineer II	4.0

NETWORK CABLING TECHNICIAN CERTIFICATE

Units Required: 16.0

All of the following must be completed:

ELCT 131	DC Circuit Theory and Analysis	4.0
ELCT 57	Technical Mathematics for Electronics I	3.0
ELCT 132	AC Circuit Theory and Analysis	4.0
ELCT 58	Technical Mathematics for Electronics II	3.0
ELCT 69	Network Topologies and Cabling	2.0

FIBER OPTIC CABLING TECHNICIAN CERTIFICATE

Units Required: 17.0

All of the following must be completed:

ELCT 131	DC Circuit Theory and Analysis	4.0
ELCT 57	Technical Mathematics for Electronics I	3.0
ELCT 132	AC Circuit Theory and Analysis	4.0
ELCT 58	Technical Mathematics for Electronics II	3.0
ELCT 80	Fiber Optics Cabling	3.0

A+ CERTIFICATION EXAMINATION PREPARATION CERTIFICATE

Units Required: 15.0

All of the following must be completed:

ELCT 50	A+ Operating Systems Technologies	4.0
ELCT 61	Basic Maintenance of Personal Computers	4.0
ELCT 65	PC Monitors	3.0
ELCT 69	Network Topologies and Cabling	2.0
ELCT 7	A+ Certification Exam Preparation	2.0

N+ CERTIFICATION EXAMINATION PREPARATION CERTIFICATE
Units Required: 17.0
All of the following must be completed:

ELCT 50	A+ Operating Systems Technologies	4.0
ELCT 61	Basic Maintenance of Personal Computers	4.0
ELCT 77A	Networking Technology and Practices I	4.0
ELCT 69	Network Topologies and Cabling	2.0
ELCT 80	Fiber Optics Cabling	3.0

WIRELESS COMMUNICATION TECHNOLOGY CERTIFICATE
Units Required: 38.0
All of the following must be completed:

ELCT 131	DC Circuit Theory and Analysis	4.0
ELCT 132	AC Circuit Theory and Analysis	4.0
ELCT 133	Solid State Devices and Circuits	4.0
ELCT 134	Solid State Circuit Analysis	4.0
ELCT 53	Electronic Communication Principles	4.0
ELCT 54	Electronic Communication Systems	4.0
ELCT 57	Technical Mathematics for Electronics I	3.0
ELCT 58	Technical Mathematics for Electronics II	3.0
ELCT 71	Principles of Digital Logic and Circuits	4.0
ELCT 73	Microprocessor Principles	4.0

Electronics and Computer Technology Courses

ELCT 5 CET EXAM PREPARATION

Units: 2.0

32-36 hours lecture

(No prerequisite) This course does not apply to the Associate Degree.

Covers all electronic circuits required by the Electronics Technicians Assn. International for successful completion of the Certified Electronic Technician examination. Includes DC and AC circuits, filters, thyristors, transistors, diodes, power supplies, and voltage regulators; also covers test equipment used in electronics including voltmeters, ammeters, oscilloscope frequency meters, and VTVM's's.

ELCT 6 FCC LICENSE PREPARATION

Units: 2.0

32-36 hours lecture

(No prerequisite) This course does not apply to the Associate Degree.

Designed for students enrolled in Electronics Communications Systems. Topics include Element 3 Examination (General Radio Telephone) - provisions of laws, treaties and regulations, radio operating procedures and practices; technical matters including fundamentals of electronics technology and maintenance techniques.

ELCT 7 A+ CERTIFICATION EXAMINATION PREPARATION

Units: 2.0

64-72 hours individualized instruction

(No prerequisite) This course does not apply to the Associate Degree.

The A+ Certification examination preparation course is designed to test student knowledge with an extensive set of questions, discussions and simulations to further enhance and sharpen student technical skills prior to taking the CompTIA A+ exam. The course thoroughly tests student knowledge based on the A+ outlined exam objectives which include: Personal Computer (PC) hardware, operating systems, PC troubleshooting, networking, printers, and other important and related topics such as safety and customer service.

ELCT 50 A+ OPERATING SYSTEMS TECHNOLOGIES

Units: 4.0

48-54 hours lecture and 48-54 hours laboratory

(No prerequisite)

This course is designed to prepare students to take the A+ Operating Systems Technologies Examination. Topics include operating system fundamentals; Windows 2000, Windows XP and Windows XP Media Edition; installing, configuring and upgrading windows; diagnosing, troubleshooting common problems; dual booting, registry editing, command line troubleshooting; network capabilities, configuring and connecting to resources and networks on the client side.

ELCT 51 C++ PROGRAMMING FOR ELECTRONICS AND COMPUTER TECHNOLOGY

Units: 4.0

48-54 hours lecture and 48-54 hours laboratory

(No prerequisite. Grade Option).

This course is designed to introduce students to C++ programming for scientific applications in engineering technology through lecture and lab. Topics will include writing C++ routines for analysis of electrical and electronics circuits, real time data acquisition and analysis, modeling of electronics components, interfacing with LabView for data collection and processing, interfacing with MathCAD and Workbench.

ELCT 53 ELECTRONIC COMMUNICATION PRINCIPLES

Units: 4.0

48-54 hours lecture and 48-54 hours laboratory

(No prerequisite)

Study of all relevant aspects of modern communication principles. Topics include amplitude modulation transmission and reception, single-side band communications, frequency modulation transmission and reception, television, and communications techniques.

ELCT 54 ELECTRONIC COMMUNICATION SYSTEMS

Units: 4.0

48-54 hours lecture and 48-54 hours laboratory

(No prerequisite)

A study of modern communication systems. Topics include digital and data communications, transmission lines, wave propagation, antennas, wave guides and radar, microwave and lasers, and fiber optics.

ELCT 57 TECHNICAL MATHEMATICS FOR ELECTRONICS I

Units: 3.0

48-54 hours lecture

(No prerequisite)

This course is designed to provide a basis for a clear mathematical understanding of the principles of DC electricity and electronics and their analysis. Covered are algebra, equations, power of 10, units and dimensions, special products and factoring, algebraic fractions, fractional equations, graphs, simultaneous equations, determinants and matrices, exponents and radicals, and quadratic equations.

ELCT 58 TECHNICAL MATHEMATICS FOR ELECTRONICS II

Units: 3.0

48-54 hours lecture or 96-108 hours Individualized Instruction

(No prerequisite)

This course is designed to provide a basis for a clear mathematical understanding of the principles of AC electricity and electronics and their analysis. Covered are inequalities, series, angles, trig functions, solution of right triangles, trig identities and equations, plane vectors, periodic functions, phasor algebra, and logarithms.

ELCT 59 TECHNICAL CALCULUS FOR ELECTRONICS I

Units: 3.0

48-54 hours lecture or 96-108 hours Individualized Instruction

(No prerequisite)

This course is designed for students who are preparing for careers in electronics, electricity, computers, and related technical fields. Topics include: Introduction to Calculus for Electronics, Functions, Rates, Limits, Derivatives, Graphical Application of the Derivative, Differentiation, Trigonometric, Logarithmic and Exponential Functions, First-Order Linear Differential Equation, Maximum, Minimum, and Inflection Points.

ELCT 60 TECHNICAL CALCULUS FOR ELECTRONICS II

Units: 3.0

48-54 hours lecture or 96-108 hours Individualized Instruction

(No prerequisite)

This course in technical calculus for electronics continues the study of functions and further operations. Topics includes trig functions, logarithmic and exponential functions, hyperbolic functions, partial derivatives, integration techniques, double integrals, infinite series, MacLaurin series, Taylor series, Fourier series, and introduction to differential equations.

ELCT 61 BASIC MAINTENANCE OF PERSONAL COMPUTERS

Units: 4.0

48-54 hours lecture and 48-54 hours laboratory

(No prerequisite)

This hands-on course is designed to provide non-technical personal computer (PC) users with the skills necessary to service and upgrade PCs. Activities include: computer assembly and disassembly, disk drive removal and installation, and memory expansion with integrated circuit (IC) chips. Installation and check out of special functions boards, such as FAX/modem, also will be demonstrated. Lectures describing the PC and its components are augmented with computer-aided individualized instruction modules covering selected electronic principles related to the PC. Satisfies computer industries A+ certification requirements.

ELCT 62 PERSONAL COMPUTER (PC): SERVICING**Units: 3.0****96-108 hours individualized instruction***(No prerequisite)*

This hands-on course is designed to provide non-technical personal computer (PC) users with the skills necessary to service and upgrade PCs. Activities include computer assembly and disassembly, disk drive removal and installation memory, installation and upgrade. Demonstration of installation and check out of special function boards, such as FAX/modem, network interface card (NIC), video card and sound card. Lectures describing the PC and its components are augmented with computer-aided individualized instruction modules covering selected electronic principles related to the PC. Satisfies computer industries' A+ certification requirements.

ELCT 63 PERSONAL COMPUTER (PC): TROUBLESHOOTING**Units: 3.0****96-108 hours individualized instruction***(No prerequisite)*

This course is a continuation of ELCT 62, Personal Computing Servicing. This hands-on course is designed to provide comprehensive troubleshooting down to the component level. Topics include computer circuits, central processing unit (CPU) and support circuits, system monitors, input/output (I/O), system and secondary cache memory, video, disk drives and their control, and troubleshooting techniques.

ELCT 65 PC MONITORS**Units: 3.0****96-108 hours individualized instruction***(No prerequisite)*

This hands-on course covers the fundamentals of troubleshooting and repairing PC monitors. Major topics include signal inputs, external adjustments, components and circuit identification, power supply, video, vertical, and horizontal drive circuits, and troubleshooting. The student will utilize multimeters, signal generators, and oscilloscopes to troubleshoot various monitor faults. This course meets the objectives of the PC monitor section of the A+ certification examination.

ELCT 69 NETWORK TOPOLOGIES AND CABLING**Units: 2.0****64-72 hours individualized instruction***(No prerequisite)*

This course provides both the technical instruction and the practical maintenance skills required to identify and layout common network topologies, and the type of cabling required for each. The course also includes hands-on projects configuring both a bus and star network, constructing the appropriate cables, installing the proper connectors, and testing the system using standard testing equipment.

ELCT 70 PC OPERATING SYSTEMS**Units: 3.0****96-108 hours individualized instruction***(No prerequisite)*

This course provides the student with the necessary background working with MS DOS 6.22 and MS Windows 3.11 for Workgroups to successfully pursue the A+ certification program. This is a self-paced program that utilizes computer aided instruction (CAI) as the principal instruction tool.

ELCT 71 PRINCIPLES OF DIGITAL LOGIC AND CIRCUITS**Units: 4.0****48-54 hours lecture and 48-54 hours laboratory***(No prerequisite)*

This course will introduce students to digital logic circuits. Students will cover basic concepts in digital electronics, and discrete digital components. Hands-on lab will cover steps to build, verify and troubleshoot digital circuits with emphasis on practical applications and proper use of test equipment. Topics include binary systems, logic gates, combinational logic, synchronous sequential logic. Flip-Flops, asynchronous sequential logic, register, counters, memory, and digital integrated circuits.

ELCT 73 MICROPROCESSOR PRINCIPLES**Units: 4.0****48-54 hours lecture and 48-54 hours laboratory***(No prerequisite)*

Introduction to the principles of microprocessor design, topics include microprocessor architecture, bus architecture, memory (R/W Memory, ROM, EPROM, and EEPROM) maps, I/Os, interfacing devices, introduction to the instruction set of the microprocessor, assembly language programming techniques, introduction to various I/O techniques such as parallel I/O, serial I/O and interrupts. Laboratory projects include emphasis on designing and building microprocessor-based systems and hardware interfacing.

ELCT 76 MICROPROCESSOR INTERFACING AND APPLICATIONS**Units: 4.0****48-54 hours lecture and 48-54 hours laboratory***(No prerequisite)*

Development of microprocessor based systems for embedded applications. Topics include Interfacing to input/output peripherals such as displays, keypads, sensors, digital-to-analog and analog-to-digital converters, and communication devices among others. Laboratory component is an integral part of this course emphasizing a hands-on approach for students to design, build, and test embedded micro-controller systems.

ELCT 78A NETWORK FUNDAMENTALS**Units: 4.0****48-54 hours lecture and 48-54 hours laboratory***(No prerequisite)*

The goal of this course is to introduce students to fundamental networking concepts and technologies. It will assist students in developing the skills necessary to plan implement small networks across a range of applications. Topics include OSI and TCP/IP models, different network topologies, IP addressing and sub-netting. Satisfies Cisco Certified Network Associate (CCNA) certification exam requirements.

ELCT 78B ROUTING PROTOCOLS AND CONCEPTS**Units: 4.0****48-54 hours lecture and 48-54 hours laboratory***(No prerequisite)*

This course describes the architecture, components, and operation of routers, and explains the principles of routing and routing protocols. Students with hands-on approach will be able to analyze, configure, verify and troubleshoot routing protocols RIPv1, RIPv2, EIGRP, and OSPF. Satisfies Cisco Certified Network Associate (CCNA) certification exam requirements.

ELCT 78C LAN SWITCHING AND WIRELESS**Units: 4.0****48-54 hours lecture and 48-54 hours laboratory***(No prerequisite)*

This course provides a comprehensive and practical approach to learning the technologies and protocols needed to design and implement a converged switched network. Students will learn how to select network devices for each layer. The course explains how to configure a switch and how to implement Virtual LANs, VTP, Inter-VLAN routing. It also discusses the implementations of Spanning Tree Protocol. Students will develop the skills necessary to implement a Wireless LAN in a small to medium network. Satisfies Cisco Certified Network Associate (CCNA) certification exam requirements.

ELCT 78D ACCESSING THE WAN**Units: 4.0****48-54 hours lecture and 48-54 hours laboratory***(No prerequisite)*

This course discusses the Wide Area Network (WAN) technologies and network services required to gain access outside the Local Area Network (LAN). Students learn in a hands-on approach how to implement and configure different technologies to access the WAN. Topics include Point-to-Point Protocol (PPP), Frame Relay, Network Security, Access Control Lists (ACLs), Virtual Private Networks (VPN), Network Address Translation (NAT) DHCP and IPv6. Satisfies Cisco Certified Network Associates (CCNA) certification exam requirements.

ELCT 78E ADVANCED NETWORK ROUTING**Units: 4.0****48-54 hours lecture and 48-54 hours laboratory***(No prerequisite)*

This course is the first of a four course series designed to prepare students towards the Cisco Certified Network Professional (CCNP) certification. It introduces students to advanced IP address management, scaling IP networks, IP addressing using VLSM, private addressing, and NAT to optimize address utilization. Majority of the course deals with advanced topics in configuring routing protocols (RIPv2, EIGRP, ISIS, multi-area OSPF, and BGP), also covers important topics and techniques for route filtering, route optimization and route redistribution.

ELCT 78F IMPLEMENTING SECURE CONVERGED WIDE-AREA NETWORKS**Units: 4.0****48-54 hours lecture and 48-54 hours laboratory***(No prerequisite)*

This is the second course of a four course series designed to prepare students for Cisco's (CCNP) certification. This course will cover advanced topics in Wide Area Network (WAN). Students learn with hands-on approach how to configure and implement different WAN technologies with focus on VPN configuration and securing network access. Topics include teleworker configuration and access, frame-mode MPLS, site-to-site IPSEC VPN, Cisco EZVPN, strategies used to mitigate network attacks, Cisco device hardening and IOS firewall features.

ELCT 78G BUILDING MULTILAYER SWITCHED NETWORKS**Units: 4.0****48-54 hours lecture and 48-54 hours laboratory***(No prerequisite)*

This is the third of a four course series designed to prepare students for Cisco's (CCNP) certification. This course will cover advanced topics in building Multilayer Switched Networks. Students learn with hands-on approach how to deploy state-of-the-art campus LANs. Topics include VLANs, Spanning Tree Protocol (STP), VTP, Inter-VLAN Routing, Layer three Switches, Wireless Client Access, Voice over IP (VoIP) Switch Configuration, Redundancy and Fault Tolerance.

ELCT 78H OPTIMIZING AND TROUBLESHOOTING NETWORKS**Units: 4.0****48-54 hours lecture and 48-54 hours laboratory***(No prerequisite)*

This is the fourth and last course of a four course series designed to prepare students for Cisco's CCNP certification. This course will cover advanced topics in optimizing and troubleshooting converged networks. Students learn with hands-on approach how to implement, optimize and troubleshoot networks operating voice, wireless and security applications. Topics include implementing a Voice over IP (VoIP) network, implementing Quality of Services (QoS) on converged networks, specific IP QoS mechanisms for implementing the DiffServ QoS model, AutoQoS, wireless security and basic wireless management.

ELCT 78I FUNDAMENTALS OF NETWORKING SECURITY**Units: 4.0****48 hours lecture and 48 hours laboratory***(No prerequisite)*

The curriculum provides an introduction to the core security concepts and skills needed for the installation, troubleshooting, and monitoring of network devices to maintain the integrity, confidentiality, and availability of data and devices. It provides students with both the technical knowledge and skill experience through extensive hands-on experience needed to prepare for entry-level security specialist careers. The curriculum aims to provide students with hands-on experience with Cisco routers, switches, PIX, ASA security appliance and to develop in-depth understanding of network security principles and tools such as: protocol sniffers/analyzers, Cisco IOS Software, and Cisco VPN client. The curriculum is designed to prepare students for the CCNA Security Certification, which is recognized, by the National Security Agency (NSA) and the Committee on National Security Systems (CNSS) to meet CNSS 4011 training standard.

ELCT 78J FUNDAMENTALS OF WIRELESS LANS**Units: 4.0****48-54 hours lecture and 48-54 hours laboratory***(No prerequisite)*

This course focuses on the design, installation, configuration, operation and troubleshooting of 802.11a, 802.11b, 802.11g, 802.11n wireless LANs. It delivers a comprehensive overview in a hands-on lab environment of wireless technologies, security, design, and best practices with emphasis on real world applications and case studies. Topics include wireless radio technology, wireless topologies, antennas, access points, bridges, wireless security, Guest VLAN, site survey, installation, management, diagnostic tools, monitoring, and discussions on wireless emerging technologies. It also prepares students towards obtaining Cisco Wireless LAN Support Specialist certificate.

ELCT 78K VOICE OVER IP (VoIP) FOUNDATIONS**Units: 4.0****48-54 hours lecture and 48-54 hours laboratory***(No prerequisite)*

This course provides a practical hands-on approach to Voice over IP (VoIP) implementation. Topics include Internet Protocol carries a VoIP packet, configuring DHCP and DNS for supporting IP telephony, Real-Time Transport Protocol, Session Initiation Protocol, call set up, Instant Messaging, Presence, Session Description Protocol, and the H.323 protocol suite, gatekeepers, gateways, Media Gateway Control Protocol and architecture, comparing H.323, SIP, and MGCP, implementing QoS for the highest possible voice quality over IP networks, and how jitter, latency, and packet loss impact VoIP networks, troubleshooting RTP, MGCP, SIP, and H.323 call flows, and softphones, and security considerations for VoIP setups. Lab is an important and integral part of this course; student will train on Cisco routers and switches to implement VoIP and CallManager.

ELCT 79A MICROSOFT CERTIFIED SYSTEMS ENGINEER**Units: 4.0****48-54 hours lecture and 48-54 hours laboratory***(No prerequisite. Grade Option)*

This is the first of a series of courses required for Microsoft MCSE certification. Topics will include installing Windows 2000 Professional, installing Windows 2000 by using Windows 2000 Server Remote Installation Services (RIS), deploy service packs, manage and troubleshoot access to shared folders, manage shared printers, configure Advance Power Management (APD), encrypt data by using Encrypting Files System (EFS), manage hardware profiles, and configure and troubleshoot TCP/IP protocol.

ELCT 79B MICROSOFT CERTIFIED SYSTEMS ENGINEER II**Units: 4.0****48-54 hours lecture and 48-54 hours laboratory***(No prerequisite. Recommended preparation: ELCT 79A. Grade Option)*

The second in a series of courses required for Microsoft MCSE certification. Topics include: installing and configuring Microsoft Windows 2000 server; unattended installation of Windows 2000 server; Microsoft Windows 2000 file systems and advanced file systems; active directory services; administering Microsoft Windows 2000 server; administering print services; network protocols and services; routing and remote access services; Microsoft Windows 2000 security; monitoring and optimization; Microsoft Windows 2000 application servers.

ELCT 80 FIBER OPTICS CABLING

Units: 3.0

96-108 hours individualized instruction

(Prerequisite: ELCT 69)

This course is designed to introduce students to fiber optic communications, transfer equipment and cabling. Students will explore fiber optics theory, operation of transfer equipment, assembly and repair of fiber optic cabling.

ELCT 81 SOLDERING THEORY AND TECHNIQUES

Units: 1.0

32-36 hours individualized instruction

(No prerequisite)

This hands-on course is designed to provide the student basic soldering theory and techniques. Topics include: soldering theory, types of soldering irons, soldering iron tips, soldering guns, solder connections, and unsoldering techniques. Course includes construction project.

ELCT 83 SMALL OFFICE/HOME OFFICE (SOHO) NETWORKING

Units: 4.0

48-54 hours lecture and 48-54 hours laboratory

(No prerequisite. Grade Option)

Small Office/Home Office (SOHO) course is designed for persons with little or no background in networking technologies to setup, operate, maintain and troubleshoot office/home Local Area Network (LAN). Topics include: Networking Components Identification and Installation, Installing, Configuring and Troubleshooting Basic Local Area Networks, Wireless Networking, Internet Access and Sharing, SOHO Network Security and Virus Protection, Microsoft Windows 2000/XP Network configuration and Resource Sharing, Video Conferencing for Telecommuters, and VoIP Networking.

ELCT 84 COMPUTER NETWORKING

Units: 3.0

96-108 hours individualized instruction

(No prerequisite)

Students learn how to formulate network specifications, install, and maintain local area computer networks (LAN). Topics and activities include: fundamentals and protocols of data communications and communication architectures, selection, preparation, and installation of LAN cabling, network operating systems, and troubleshooting. Students will install and configure modems, connect telephone lines, operate modems, and transfer files. Satisfies computer industries A+ certification requirements.

ELCT 85 OPTOELECTRONICS: FIBER OPTICS

Units: 3.0

144-162 hours laboratory or 96-108 hours individualized instruction

(No prerequisite)

This hands-on self-paced course will provide students with the fundamentals of optical fiber, connectors, couplers, and other components and their application within a fiber optic system. Through hands-on LABs, students will learn key characteristics and principals of operation for critical electro-optic components such as LED's, lasers and detectors. In addition students will cover the operation of transmitters, receivers, and fiber optic communication systems with special emphasis on digital data links and fiber video links. In the LAB students will acquire skills to inspect, install and test connectors using the epoxy polish method, identify damage to cables and associated causes, Test fiber optic cable for losses, fiber cable splicing, optical performance, communications and systems.

ELCT 86 OPTOELECTRONICS: LASERS

Units: 3.0

96-108 hours individualized instruction

(No prerequisite)

Continuation of ELCT 85. This high technology laboratory course emphasizes the principles and applications of lasers as used in telecommunications, consumer electronics, biomedical electronics, and industry. Topics include: Principles of lasers, laser optics, drive and modulation circuits, lasers and fiber optics links, and audio video subcarrier modulation.

ELCT 87 INDUSTRIAL ELECTRONICS: INDUSTRIAL CONTROL SYSTEMS, DEVICES AND CIRCUITS**Units: 3.0****96-108 hours individualized instruction***(No prerequisite)*

This course is designed to provide the student an opportunity to study a wide range of applications of electronics found in industrial automation and robotics. Topics include: operational amplifiers, linear integrated circuits, generators and motors, control devices and circuits, transducers, programmable logic controllers (PLCs), PLC functions, ladder logic, programming and applications.

ELCT 88 INDUSTRIAL ELECTRONICS: INDUSTRIAL PROCESS CONTROL APPLICATIONS**Units: 3.0****96-108 hours individualized instruction***(No prerequisite).*

This course is designed to demonstrate a wide variety of electronic control systems and circuits which are controlled both manually and by use of the programmable logic controller (PLC). Topics include: motors and generators, control devices, timing control, motor control, counting, position control, servomechanisms, and applications and troubleshooting.

ELCT 91 MICROPROCESSOR INTERFACING**Units: 3.0****96-108 hours individualized instruction***(No prerequisite)*

This course is designed to give the student a practical working knowledge of interfacing a microprocessor with external sensing and activator systems. Topics include microprocessor basics, buses, address decoding, 68HC11 chip structure and internal features, instruction timing, switch decoding, interfacing with displays and adapters, I/O control techniques, data communications, serial/parallel conversion, interfacing to RAM, EPROMs, analog-to-digital and digital-to-analog devices.

ELCT 92 MICROPROCESSOR APPLICATIONS**Units: 3.0****96-108 hours individualized instruction***(No prerequisite)*

Continuation of Microprocessor Interfacing. This course concentrates on specific applications related to instrumentation and physical measurement. Activities include constructing a microprocessor-controlled digital multimeter (DMM), thermometer, light meter, and photometer. The student will analyze how strain gauges are used to measure force. The student will design and construct a microprocessor/step motor interface and control circuit.

ELCT 97 TELECOMMUNICATIONS: DIGITAL COMMUNICATIONS**Units: 3.0****96-108 hours individualized instruction***(No prerequisite)*

This high technology laboratory course is designed to provide a broad background in the use of digital devices used in telephony, as well as in general digital communications. Emphasis is placed on the telephone industry, both wireless and fiber optics telecommunications, and synthetic speech. Topics include: digital communications, the subscriber telephone, the central office, and digitized speech.

ELCT 99 TELECOMMUNICATIONS: MICROWAVE COMMUNICATIONS**Units: 3.0****96-108 hours individualized instruction***(No prerequisite)*

This high technology laboratory course is designed to provide a broad background in the use of microwave transmitters, receivers, microwave components, and horn antennas. Emphasis is placed on microwave communication links. Topics include: voice, narrow band, audio wideband, television, video, fiber optics interfaces, pulse code modulation, and multiplexing signals.

ELCT 110 ELECTRONICS AND COMPUTER TECHNOLOGY**Units: 3.0** **CSU** | 48-54 hours lecture*(No prerequisite)*

This course is designed to expose students to a wide range of electronics and computer technologies in a simplified, practical and non-mathematical hands-on approach. Topics will include electronics and computers applied to automotive and medical fields, global positioning satellites (GPS), home entertainment systems, surround sound and digital flat panel TVs, digital music compression and recording, Internet, wireless and wired networking in the house, computer hardware setup and operation, how to use personal computer (PC) applications, basic PC diagnostics, upgrade and troubleshooting.

ELCT 131 D.C. CIRCUIT THEORY AND ANALYSIS**Units: 4.0** **CSU** | 48-54 hours lecture and 48-54 hours laboratory*(No prerequisite)*

Introduction to DC circuits analysis, a theoretical and practical hands-on approach to DC fundamentals. Topics include Ohm's Law, Series, Parallel and Series-Parallel Circuits, Network Theorems, Methods of Analysis, Equivalent Circuits, Capacitive and Inductive Circuits, Timing Circuits, Measuring Instruments, Magnetism and Magnetic Circuits. A laboratory component is an integral part of this course emphasizing a hands-on approach for students to use different test instruments and software tools to design, build, test, and analyze DC circuits.

ELCT 132 A.C. CIRCUIT THEORY AND ANALYSIS**Units: 4.0** **CSU** | 48-54 hours lecture and 48-54 hours laboratory*(No prerequisite)*

Introduction to AC circuits analysis, a theoretical and practical hands-on approach to AC fundamentals. Topics include AC waveform analysis, Inductive and Capacitive Circuits, Impedance, Power in AC Circuits, AC Series-Parallel Circuits Design, Methods of AC Analysis, AC Network Theorems, Resonance, and Filters. A laboratory component is an integral part of this course emphasizing a hands-on approach for students to use different test instruments and software applications to design, build, test, and analyze AC circuits.

ELCT 133 SOLID STATE DEVICES AND CIRCUITS**Units: 4.0** **CSU** | 48-54 hours lecture and 48-54 hours laboratory*(No prerequisite)*

This course is an introduction to Solid State Devices and circuit analysis, a theoretical and practical hands-on approach to Solid State fundamentals. Topics include Semiconductor Diodes, Bipolar Transistor Theory, DC Biasing of Bipolar Junction Transistors (BJTs), Field-Effect Transistor (FETs) Theory, FET Biasing, Circuit Design with BJT and FET Transistors, BJT and FET Small Signal Analysis, Large Signal Amplifiers, Introduction to Operational Amplifiers (OP-Amps), Linear Integrated Circuits (ICs) Regulators, Feedback Amplifiers and Oscillator Circuits. A laboratory component is an integral part of this course emphasizing a hands-on approach for students to use different test instruments and software tools to design, build, test, and analyze Solid State circuits.

ELCT 134 SOLID STATE CIRCUIT ANALYSIS**Units: 4.0** **CSU** | 48-54 hours lecture and 48-54 hours laboratory*(No prerequisite)*

This course is an introduction to Operational Amplifiers, a theoretical and practical hands-on approach to Op-Amps and Linear Integrated Circuit design and analysis. Topics include Differential Amplifiers, Operational Amplifiers, Op-Amp with Negative Feedback, Frequency Response of an OP-Amp, Active Filters and Oscillators, Comparators, General Linear Applications, and Specialized Applications. Laboratory component is an integral part of this course emphasizing a hands-on approach for students to use different test instruments and software tools to design, build, test, and analyze various Op-Amps and Linear Integrated circuits.

ELCT 138 COOPERATIVE EDUCATION*See Cooperative Education. Units: 1 - 8 units* **CSU**

ELCT 148 SPECIAL TOPICS

See *Special Topics listing*. Variable units **CSU**

ELCT 202 COMPUTER METHODS FOR ENGINEERS

Units: 4.0 **CSU** | 48-54 hours lecture and 48-54 hours laboratory

(Prerequisite: MATH 227 or MATH H227 minimum grade C.)

This course is an introduction to methods and techniques for solving engineering problems using numerical-analysis computer-application programs, technical computing and visualization using MATLAB software. The course is structured to allow students to have a thorough hands-on experience with examples and exercises applied to a wide variety of practical engineering problems.

ELCT 210 ENGINEERING CIRCUIT ANALYSIS I

Units: 4.0 **CSU** | 48-54 hours lecture and 48-54 hours laboratory

(Prerequisite: PHYS 203 and MATH 226 or MATH H226 minimum grade C.)

Introduction to engineering circuit analysis, topics include Ohm's Law, Series, Parallel and Series-Parallel Circuits, Network Theorems, Methods of Analysis, Mesh Equations, Equivalent Circuits, Capacitive and Inductive Circuits, First-Order Circuits, Timing Circuits, Measuring Instruments, Magnetism and Magnetic Circuits, Introduction to Electromagnetic radiation and Electric Machinery. Laboratory experiments and the use of Computer Aided Circuit Analysis software (MultiSim and MATLAB) is an integral part of the course to supplement classroom lectures.

ELCT 211 ENGINEERING CIRCUIT ANALYSIS II

Units: 4.0 **CSU** | 48-54 hours lecture and 48-54 hours laboratory

(Prerequisite: ELCT 210 minimum grade C)

Introduction to engineering circuit analysis II, topics include analysis of RLC passive networks in response to single and multiple sinusoidal, ramp, and pulse sources, Network Theorems, Impedance, Power in AC circuits, Methods of AC analysis, Second-Order circuits, Sinusoidal Steady-State, The Laplace Transform, Fourier analysis, Two-Port Networks, Resonance and Filters. Laboratory experiments and the use of Computer Aided Circuit Analysis software (MultiSim and MATLAB) is an integral part of the course to supplement classroom lectures.

Emergency Medical Services

Victor Valley College offers two programs that enable students to enter careers in Emergency Medical Services. The first is the Emergency Medical Technician (EMT), after which students may continue to the Paramedic Program. Classes in this area meet California State EMS authority and ICEMA regulations.

Faculty

Brian Hendrickson | Scott Jones | Dave Oleson

Degrees and Certificates Awarded

Associate in Science, Paramedic

Emergency Medical Technician Certificate (Refresher)

Paramedic Certificate

A student receiving a degree or certificate in this field will be able to:

- Demonstrate the ability to integrate the knowledge of injury / illness pathophysiology for all patients into a high quality of treatment and patient care.
- Apply effective leadership and communication strategies to effectively manage an emergency situation.
- Demonstrate the ability to evaluate various patient conditions and implement appropriate advanced skills based upon necessity.
- Perform at a minimum, as a competent, safe practitioner in caring for the community and the critically sick and injured.

Associate Degree

To earn an A.S. degree with a major in Paramedic, complete all of the Paramedic Certificate requirements and meet all Victor Valley College graduation requirements.

Transfer

Not a transfer major. Some students pursue bachelor's degrees in related fields such as B.S. in Emergency Medical Care at Loma Linda University, B.S. in Public Safety and Emergency Management at Grand Canyon University, or B.S. In Health Administration with a concentration in Emergency Management at the University of Phoenix.

Emergency Medical Services

EMERGENCY MEDICAL TECHNICIAN CERTIFICATE

The EMT I is the beginning level for emergency response personnel. It is the minimum preparation required to staff an ambulance.

Units Required: 9.0

EMT I can be completed in one class: EMS 60

Recommended preparation for EMT - Although there is currently no prerequisite for the EMT course, students might wish to consider taking EMS 50 as an introduction. This Emergency Medical Responder course is designed for those individuals desiring to achieve a higher level of personal preparedness for situations such as natural disasters, emergencies in the home, and/or industrial emergency response teams.

EMS 60

Emergency Medical Technician

9.0

EMERGENCY MEDICAL TECHNICIAN CERTIFICATE (Refresher)

The EMT I is the beginning level for emergency response personnel. It is the minimum preparation required to staff an ambulance.

Units Required: 1.0

All of the following must be completed with a grade of "C" or better:

EMS 61

(Ambulance) Refresher Course

1.0

PARAMEDIC CERTIFICATE

The Victor Valley College Paramedic Program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP).

Commission on Accreditation of Allied Health Education Programs
1361 Park Street, Clearwater, FL 33756
727-210-2350 | www.caahep.org

To contact CoAEMSP:
8301 Lakeview Parkway Suite 111-312, Rowlett, TX 75088
214-703-8445 FAX 214-703-8992 | www.coaemsp.org

Units Required: 40.5

This certificate prepares students to take the state examination to practice as a paramedic.

All of the following must be completed with a grade of "C" or better:

EMS 80

Paramedic Anatomy & Physiology

3.5

EMS 81

Paramedic Introduction to Emergency Medical Services

3.5

EMS 82

Paramedic Cardiology

4.5

EMS 83

Paramedic Pharmacology

3.5

EMS 84

Emergency Medical Services

10.0

EMS 85

Paramedic Clinical

4.0

EMS 86

Paramedic Field Internship

11.5

Emergency Medical Services Courses

EMS 50 EMERGENCY MEDICAL RESPONDER

Units: 2.5 | **32-36 hours lecture 24-27 hours laboratory**

(No prerequisites) This course does not apply to the Associate Degree.

This course provides training in basic emergency care skills, including patient assessment, CPR, automated external defibrillation, use of definitive airway adjuncts, splinting, and control of bleeding.

EMS 60 EMERGENCY MEDICAL TECHNICIAN

Units: 9.5 | **120-135 hours lecture 96-108 hours laboratory**

(Prerequisite: 18 years of age before first day of class. CPR equivalent to 2010 AHA BLS for Healthcare providers. State mandated.)

This course provides training in basic emergency care skills, including CPR, automated external defibrillation, use of definitive airway adjuncts, and assisting patients with certain medications. Approved by the Inland Counties Emergency Medical Agency. All students must be eighteen years of age and have CPR (Cardio-Pulmonary Resuscitation) training equivalent to the American Heart Association Healthcare Provider Level (Title 22, Div. 9, Ch. 2, Sect. 100066 b2 California Code of Regulations) prior to the first day of class due to current clinical/field internship affiliation agreements. (Formerly ALDH 71)

EMS 61 EMERGENCY MEDICAL TECHNICIAN REFRESHER

Units: 1.0 | **8-9 hours lecture 24-27 hours laboratory**

(Prerequisite: Current EMT license.)

Thirty hour refresher course required for renewal of Emergency Medical Technician I Certificate. New Certificate of Completion awarded. Course approved by the Inland County Emergency Medical Agency and adheres to California Code of Regulations, Title 22, Division 9, Chapter 4.

EMS 80 PARAMEDIC ANATOMY AND PHYSIOLOGY

Units: 3.5 | **48-58 hours lecture and 24-27 hours laboratory**

(Prerequisite: Application and acceptance into the Paramedic Academy and successful completion EMS 60 with a grade of "B" or better or an EMT card equivalent).

This is the introductory course of the Paramedic program. This course includes basic anatomy, physiology, and medical terminology for the paramedic.

EMS 81 PARAMEDIC INTRODUCTION TO EMERGENCY MEDICAL SERVICES

Units: 3.5 | **48-58 hours lecture and 24-27 hours laboratory**

(Prerequisite: Application and acceptance into the Paramedic Academy and successful completion of EMS 60 with a "B" grade or better or an EMT card equivalent).

This course covers the roles and responsibilities of the EMT-P. It also includes the Emergency Medical Services System and EMS communication and leadership as it relates to the EMT-P.

EMS 82 PARAMEDIC CARDIOLOGY

Units: 4.5 | **56-63 hours lecture and 48-54 hours laboratory**

(Prerequisite: Application and acceptance into the Paramedic Academy and successful completion of EMS 80 and 81.)

This course covers the cardiovascular system and includes anatomy and physiology of the heart, and application and interpretation of EKG's.

EMS 83 PARAMEDIC PHARMACOLOGY

Units: 3.5 | **48-54 hours lecture and 24-27 hours laboratory**

(Prerequisite: Application and acceptance into the Paramedic Academy and successful completion of EMS 80 and 81.)

This course will cover the general principles of Pharmacology including calculations and administration of various medications.

EMS 84 EMERGENCY MEDICAL SERVICES**Units: 10.0****128-144 hours lecture and 96-108 hours laboratory**

(Prerequisite: Application and acceptance into the Paramedic Program is required before registering for this course. Successful completion of EMS 80, 81, 82, 83.)

This course covers the theoretical and scientific background of emergency medical care in the pre-hospital setting to include patient assessment, trauma and medical emergencies, and skills practice in the lab.

EMS 85 PARAMEDIC CLINICAL**Units: 4.0****192-216 hours laboratory**

(Prerequisite: Application and acceptance into the Paramedic Academy and successful completion of EMS 84.)

This course is the first part of the student's internship as part of the Paramedic Program. This includes lab hours at an acute care facility performing Inland Counties Emergency Medical Agency Skills.

EMS 86 PARAMEDIC FIELD INTERNSHIP**Units: 11.5****552-621 hours laboratory**

(Prerequisite: Application and acceptance into the Paramedic Academy and successful completion of EMS 85.)

This course is the field internship portion of the Paramedic program. Students will spend 600 hours in the field with a transport service performing Emergency Medical Technician skills.

Engineering

Victor Valley College does not offer an Engineering program for transfer, but does however offer preparatory courses needed for transfer for transfer into a School of Engineering. These course our offered through our Computer Integrated Design and Graphics (CIDG) Department. Students can obtain Engineering related certificates that will assist in preparing them to enter into a school of Engineering at the university level. An ADT Associate of Science degree in Mathematics is highly recommended for those students wanting to transfer into a School of Engineering. Students seeking an Associate of Science degree in CIDG are positioned to enter straight into the workforce.

Engineers seek to understand and solve a broad range of technical problems faced by our society. Engineers are responsible for such projects as converting raw materials and power sources into useful products, developing scientific equipment, and designing and planning the construction of buildings, highways, and rapid transit systems. As society becomes more technologically complex, so do the ever-emerging branches of engineering. The rigorous curriculum of engineering programs is for high achieving students who have developed good study habits and possess a strong math and science background. No associate degree is offered with a major in Engineering from Victor Valley College. Because the math and science requirements are so extensive, students usually pursue an associate degree with a major in either Math or Science.

Transfer

Engineering is a highly competitive transfer degree which is impacted at many universities. There are over 200 different career fields in the Engineering area. The following courses are minimal requirements for most engineering majors: CHEM 100, 201, 202; MATH 226, 227; PHYS 100, 201, 202, 203.

IGETC or CSU General Education-Breadth Requirements are not always appropriate for an engineering major; for the most current information, visit www.assist.org.

- UC campuses offering Engineering majors include: Berkeley, Davis, Irvine, Santa Barbara, San Diego, Santa Cruz, Riverside and Los Angeles (UCLA)
- CSU Campuses offering Engineering majors include: Dominguez Hills, Chico, Fresno, Long Beach, Los Angeles, Northridge, Pomona, Sacramento, San Diego, San Francisco, San Jose, San Luis Obispo, Sonoma, and Maritime Academy.
- Private schools offering Engineering majors include: University of Southern California (USC), Stanford, CalTech, and Harvey Mudd College

Degrees and Certificates Awarded

Associate of Science for Transfer, ADT Mathematics
Drafting Technician I Certificate
Architectural CADD Technician I Certificate

Associate in Science, CIDG
CADD I Technician I Certificate

Engineering Careers

Mechanical Engineer
Chemical Engineer
Computer Engineer
Electrical Drafter
Mechanical Drafter
Steel Fabricator Drafter

Structural Engineer
Electrical Engineer
CAD Operator
Electronics Drafter
Public Works Technician
Structural Drafter

Note: Associate of Science Degree programs require completion of at least 60 units of credit, which normally will take 4 semesters. Certificate programs, many of which lead to an Associate of Science degree, vary in the number of units required. Most can be completed in 2 - 4 semesters. Each course required for a certificate must be completed with a "C" grade or better. All can be counted toward its related degree.

English

The study of English offers students an opportunity to develop writing and critical thinking skills necessary for success in both the academic and professional worlds. It also nurtures an appreciation of the literary arts. Reading, thinking, and writing about the human experience provide a vital foundation for further education and professional success.

Since English composition courses are designed to help students write the kinds of papers commonly required in college courses, students should take English as early as possible. Follow the course sequence shown in your placement test results.

Career Opportunities

Advertising/Marketing, Analyst, Archivist, Business, Copywriter, Creative Writer, Editor, Educator, Journalist, Lobbyist
Law Clerk, Lawyer, Librarian, Management, Magazine Writer, Mixed Media, Politician/Diplomat, Professor, Proofreader
Public Relations, Researcher, Social Media, Teacher, Technical Writer, Writer

Faculty

Tim Adell | Claudia Basha - Emeritus | Bryce Campbell | Fran Ferrance - Emeritus
Peter Francev | Andrea Glebe | Patricia Golder | Carol Golliver - Emeritus
Joe Pendleton | Judy Solis | Karen Tomlin | Patricia Wagner

Degrees and Certificates Awarded

Associate in Arts, Liberal Arts

Associate in Arts in English for Transfer (AA-T)

Associate Degree

To earn an Associate in Science degree for Transfer with a major in English, complete the required major courses and all other requirements specified on the following pages (i.e. 60 CSU transferable units, CSU GE or IGETC, etc.). For more information on the AA-T/AS-T degrees, meet with a counselor or www.adegreewithaguarantee.com

Transfer

For the most up-to-date information on these programs and others, visit www.assist.org. Please stop by the Transfer Center in Building 55 or make an appointment with a counselor if you have questions.

California State University, San Bernardino: English major

University of California, Riverside: English major

A new transfer option has been added in this major. Check this out:

English, AA-T

Students completing an Associate in Arts in English for Transfer degree will be prepared to transfer into the CSU system to complete a baccalaureate degree in English or similar major. Upon completion of this degree, students will be able to read critically and analyze a variety of college level texts (such as non-fiction, fiction, drama, and poetry) within the conventions of language, genre, and rhetoric; analyze, evaluate, synthesize and document a variety of sources to support written arguments; draft, revise, and submit an effective essay, project, or oral presentation with attention to purpose, coherence, voice, language, and mechanical conventions.

Program Requirements: 18-20 units

Required Courses (3 units total)

ENGL 102/H102	Composition and Literature	3.0
ENGL 104/H104	Critical Thinking and Writing	3.0

Additional Courses

List A – Select TWO of the following courses (6 units total)

ENGL 230	Survey of American Literature (1600-1865)	3.0
ENGL 231	Survey of American Literature (1865-Present)	3.0
ENGL 240	World Literature Ancients – Early Renaissance	3.0
ENGL 241	World Literature Renaissance - Modern	3.0
ENGL 245	Survey of British Literature – Early Medieval Neo-Classics	3.0
ENGL 246	Survey of British Literature – Romantics – 20th Century	3.0

List B – Select ONE (3 units)

ENGL 220	Modern Fiction	3.0
ENGL 225	Poetry	3.0
ENGL 232	Chicano/a Latino/a Literature	3.0
ENGL 233	African American Literature	4.0
ENGL 234	Native American Literature	4.0
ENGL 235	Children’s Literature	3.0
ENGL 247	Shakespeare	1.0

List C – Select ONE (3-5 units)

ENGL 210	Fiction Writing	3.0
ENGL 211	Poetry Writing	3.0
ASL 122	American Sign-Language I	4.0
ASL 123	American Sign-Language II	4.0
ASL 124	American Sign-Language III	4.0
ASL 125	American Sign-Language IV	4.0
FREN 101	Elementary French	5.0
FREN 102	Elementary French	5.0
FREN 103	Intermediate French	3.0
FREN 104	Intermediate French	3.0
SPAN 101	Elementary Spanish	5.0
SPAN 101A	Fundamentals of Spanish 101A	3.0
SPAN 101B	Fundamentals of Spanish 101B	3.0
SPAN 102	Elementary Spanish	5.0
SPAN 103	Intermediate Spanish	3.0
SPAN 104	Intermediate Spanish	3.0

A student wishing to pursue an AA-T/AS-T degree in the major listed on this page must ensure the CSU of their choice is accepting that similar major. Students completing an AA-T/AS-T degree are guaranteed admissions into a CSU campus given that a student fulfills the following:

- 1) 60 CSU transferable units;
- 2) Completes the CSU General Education (GE) or IGETC General Education pattern;
- 3) Completes the major requirements for the AA-T/AS-T;
- 4) Maintains a transferable cumulative GPA of at least 2.0 (C or better);
- 5) Completes the basic/Golden 4 GE requirements.

For more information on the AA-T/AS-T degrees, meet with a counselor or visit www.sb1440.org and www.adegreewithaguarantee.com

English Courses

ENGL 6 BASIC READING AND WRITING

Units: 5.0

80-90 hours lecture

(Prerequisite: BSKL 3 or eligibility as determined by the VVC assessment.) This course does not apply to the associate degree.

This is a basic writing and reading course designed to build proficiency in the basics of writing expository prose and to build reading comprehension at both literal and inferential levels.

ENGL 8 READING IMPROVEMENT

Units: 3.0

48-54 hours lecture

(No prerequisite) This course does not apply to the Associate Degree.

The course emphasizes the improvement of vocabulary and reading comprehension skills. Course work focuses on comprehension, analysis and evaluation of textbooks and other pre-college level reading materials. Assignments develop study strategies such as textbook marking, test taking and concentration.

ENGL 10.0 LABORATORY IN WRITING

Units: 1.0

48-54 hours laboratory

(No prerequisite. Pass/No Pass) This course does not apply to the Associate Degree

This lab in the Writing Center is recommended for students taking any writing-intensive course at VVC. Emphasis is on the one-to-one tutorial approach, computer-assisted instruction, and word composing/processing.

ENGL 50 WRITING FUNDAMENTALS

Units: 4.0

64-72 hours lecture

(Prerequisite: ENGL 6 minimum grade C, or eligibility as determined by VVC assessment.)

A practical writing course emphasizing expository writing, including planning, organizing, composing short essays, reading a variety of college preparatory texts, and editing for punctuation, diction, usage and sentence structure.

ENGL 50L LABORATORY-ENHANCED STUDY FOR ENGLISH 50

Units: 1.0

48-54 hours laboratory

(Prerequisite: ENGL 6 or eligibility as determined by VVC assessment.)

A Laboratory enhanced study concurrent with English 50 for students participating in the Student Support Services program. A practical course supplementing the process and function of expository writing, including a review of spelling, punctuation, diction, usage, and sentence structure.

ENGL 59 EFFECTIVE READING AND STUDY SKILLS

Units: 3.0

48-54 hours lecture

(No Prerequisite)

This course is designed for students reading just below college level and preparing to take transfer level courses. Assignments focus on comprehension, analysis and evaluation of textbooks and other college level reading materials. Emphasis is placed on reading skills including study methods, vocabulary development and critical thinking. The strategies apply to a wide range of fields including drama, history, natural science and psychology.

ENGL 61 TUTORING WRITING

Units: 3.0

48-54 hours lecture

(Prerequisite: ENGL 101.0 or ENGL 101H with a grade of 'C' or better)

This course will expose students to the theoretical concepts and practical issues involved in tutoring various levels of writing. Students will develop an understanding of the issues and practices relevant to the role of tutoring writing through observing, reading, and discussing the relationship between the writer, his/her writing, the tutor, the classroom teacher, and the classroom environment.

ENGL 61 TUTORING WRITING

Units: 3.0 | 48-54 hours lecture

(Prerequisite: ENGL 101.0 or ENGL 101H with a grade of 'C' or better)

This course will expose students to the theoretical concepts and practical issues involved in tutoring various levels of writing. Students will develop an understanding of the issues and practices relevant to the role of tutoring writing through observing, reading, and discussing the relationship between the writer, his/her writing, the tutor, the classroom teacher, and the classroom environment.

ENGL 62 WRITING TUTOR WORKSHOP

Units: 1.0 | 16-18 hours lecture

(Prerequisite: ENGL 101 or ENGL 101H with a grade of 'C' or better. Pass/No Pass)

This is an interactive course that analyzes the techniques of tutoring writing. Students will examine the role of writing tutors in one-on-one conferences, discuss tutoring theory, and observe tutors in the Writing Center and/or composition instructors in the classroom. Though this class is meant to prepare students to tutor writing, any student wishing to improve his/her writing skills will benefit from this course.

ENGL 65 COLLEGE GRAMMAR

Units: 2.0 | 32-36 hours lecture

(Prerequisite: ENGL 6. Grade Option)

This course provides intensive college-level work on grammar, punctuation, and sentence mechanics.

ENGL 101.0 ENGLISH COMPOSITION AND READING

Units: 4.0 | [CSU,UC](#) | 64-72 hours lecture

(Prerequisite: Completion of ENGL 50 with a grade of 'C' or better or eligibility as determined by VVC assessment.)

Principles and methods of research and expository writing. Analytical reading of source materials and writing of expository essays.

ENGL H101 HONORS ENGLISH COMPOSITION AND READING

Units: 4.0 | [CSU,UC](#) | 64-72 hours lecture

(Prerequisite: ENGL 50 minimum grade C.)

Principles and methods of expository writing. Analytical reading of source materials and writing of expository essays. Honors seminar will require more advanced resources and more complex assignments than ENGL 101.0.

ENGL 102.0 COMPOSITION AND LITERATURE

Units: 3.0 | [CSU,UC](#) | 48-54 hours lecture

(Prerequisite: Completion of ENGL 101.0 or ENGL H101 with a grade of 'C' or better.)

An introduction to the genres of literature including short story, poetry, drama, and novel. Further training in writing, especially about literature.

ENGL H102 HONORS COMPOSITION AND LITERATURE

Units: 3.0 | [CSU,UC](#) | 48-54 hours lecture

(Prerequisite: ENGL 101.0 or ENGL H101 minimum grade C.)

Further training in writing and introduction to the short story, novel, poetry, and drama. This course takes the methods of English 102 and promotes more comprehensive analysis, research, discussion and writing assignments. (UC credit limitation)

ENGL 104 CRITICAL THINKING AND COMPOSITION

Units: 3.0 **CSU,UC** | 48-54 hours lecture

(Prerequisite: ENGL 101.0 or ENGL H101 with a grade of 'C' or better.)

This course is designed to develop the student's critical thinking, reading and writing skills beyond the level achieved in ENGL 101.0 or ENGL 101H. It will focus primarily on the analysis and evaluation of expository and argumentative discourse, and on writing analytical and argumentative essays.

ENGL H104 HONORS CRITICAL THINKING AND COMPOSITION

Units: 3.0 **CSU,UC** | 48-54 hours lecture

(Prerequisite: ENGL 101.0 or ENGL H101 minimum grade C.)

This course is designed to develop the students' critical thinking, reading and writing skills beyond the level achieved in ENGL 101.0 or ENGL 101H. It will focus primarily on the analysis and evaluation of expository and argumentative essays. Honors seminar will deepen students' insights.

ENGL 109 CREATIVE WRITING

Units: 3.0 **CSU** | 48-54 hours lecture

(No prerequisite. Recommendation preparation: ENGL 101.0 or ENGL 101H. Grade Option)

Principles of creative expression. Topics may cover fiction, poetry, creative nonfiction, and/or drama.

ENGL 112 TECHNICAL WRITING

Units: 3.0 **CSU** | 48-54 hours lecture

(Prerequisite: ENGL 101 or ENGL 101H minimum grade C.)

Principles of effective writing in a variety of formats to suit specific technical audiences. Clarity and accuracy in written communication situations are stressed. Topics include formal and informal reports, special business letters, instructions, and proposals. Designed to simulate the technical writer's job.

ENGL 116 AUTHORS OF THE THEATRE

Units: 3.0 **CSU,UC** | 48-54 hours lecture

(No prerequisite. Recommended preparation: ENGL 101.0 or ENGL 101H)

A survey of playwrights from the Greeks to the present. The selected plays are read, discussed, and analyzed. It is both AA and BA applicable. See cross listing for TA 116.

ENGL 128 SPECIAL TOPICS

See Special Topics listing. Units: Variable units **CSU**

ENGL 129 INDEPENDENT STUDY

See Independent Study. Units: 1-3 **CSU**

ENGL 138 COOPERATIVE EDUCATION

See Cooperative Education listing. Units: 1-8 **CSU**

ENGL 149 CRITICAL READING AND COLLEGE STUDY SKILLS

Units: 3.0 **CSU** | 48-54 hours lecture

(Prerequisite: ENGL 59 with a grade of 'C' or better or eligibility as determined by VVC assessment)

A college reading course emphasizing interpretive, analytical, and evaluative abilities required for academic reading; college vocabulary, research, and study skills.

ENGL 210A FICTION WRITING I

Units: 3.0 **CSU** | 48-54 hours lecture

(No prerequisite)

Beginning principles of writing fiction, focusing on the short story and the novel.

ENGL 210B FICTION WRITING II

Units: 3.0 **CSU** | 48-54 hours lecture

(No prerequisite. Grade Option.)

This workshop-style course addresses intermediate principles of writing fiction, focusing on the short story and the novel.

ENGL 211A POETRY WRITING I

Units: 3.0 **CSU** | 48-54 hours lecture

(No prerequisite. Grade Option.)

A beginning workshop-style course which includes a review of poetic forms, techniques, and revision strategies.

ENGL 211B POETRY WRITING II

Units: 3.0 **CSU** | 48-54 hours lecture

(No prerequisite. Grade Option.)

This workshop-style course addresses intermediate principles of writing poetry, focusing on poetic forms, techniques, and revision strategies.

ENGL 220 MODERN FICTION

Units: 3.0 **CSU,UC** | 48-54 hours lecture

(Prerequisite: ENGL 101.0 or ENGL H101 with a minimum grade of 'C'.)

Twentieth century literature, both English language and translated sources, emphasizing novels and short stories.

ENGL 225 POETRY

Units: 3.0 **CSU,UC** | 48-54 hours lecture

(Prerequisite: ENGL 101.0 or ENGL H101 minimum grade C.)

Study of poetry with consideration of versification, structure, imagery, diction, themes, and genres.

ENGL 230 SURVEY OF AMERICAN LITERATURE 1600-1865

Units: 3.0 **CSU,UC** | 48-54 hours lecture

(Prerequisite: ENGL 101.0 or ENGL H101 minimum grade C.)

A survey of exemplary items in the origin and development of American thought and culture from 1600 to 1865. Designed to provide an understanding and appreciation of American literary achievements through study of the works of writers including Bradford and Bradstreet, Edwards and Wheatley, Franklin, Irving, Poe, Stowe and Emerson. Also includes a study of Native-American folk tales and slave narratives.

ENGL 231 SURVEY OF AMERICAN LITERATURE 1865 TO PRESENT

Units: 3.0 **CSU,UC** | 48-54 hours lecture

(Prerequisite: ENGL 101.0 or ENGL H101 minimum grade C.)

A survey of exemplary items in the origin and development of American thought to the present. Designed to provide an understanding and appreciation of American literary achievements through study of the works of great writers including Whitman, Dickinson, Twain, Frost, Welty, Thurber, Tan and others.

ENGL 232 CHICANO/A AND LATINO/A LITERATURE

Units: 3.0 **CSU,UC** | 48-54 hours lecture

(Prerequisite: ENGL 101.0 or ENGL H101 minimum grade C.)

Introduction to the Mexican/American/Latino/a cultural experience through literary analysis of fiction, poetry, drama, and the essay. Studies literature in the context of literary/historical-political growth of Mexican/American/Latino/a identity and of current theories of analyzing multicultural writings.

ENGL 233 AFRICAN-AMERICAN LITERATURE

Units: 3.0 **CSU,UC** | 48-54 hours lecture

(Prerequisite: ENGL 101.0 or ENGL H101 minimum grade C.)

An introductory survey course of African-American oral and written literary traditions with consideration of historical and cultural roots.

ENGL 234 NATIVE AMERICAN LITERATURE (Formerly ENGL 162)

Units: 3.0 **CSU,UC** | 48-54 hours lecture

(Prerequisite: ENGL 101.0 or ENGL H101 minimum grade C.)

An introduction to Native American literature from the oral tradition to contemporary writing. Study of myths and legends, traditional oral narratives and songs, transitional forms such as oration and autobiography, and written genres (poem, short story, novel).

ENGL 235 CHILDREN'S LITERATURE

Units: 3.0 **CSU** | 48-54 hours lecture

(Prerequisite: ENGL 101.0 or ENGL H101 minimum grade C.)

A survey of children's literature, emphasizing folktales, narrative fiction, poetry and some non-fiction works. Also includes the history and development of literature and illustration for children, the selection of materials for various age groups, and literature and the media.

ENGL 236 YOUNG ADULT LITERATURE

Units: 3.0 **CSU** | 48-54 hours lecture

(Prerequisite: ENGL 101.0 or ENGL H101 minimum grade C.)

A survey of young adult literature, including classics, realistic fiction, fantasy, genre fiction, graphic novels, poetry, film, and current trends and issues pertaining to young adult literature.

ENGL 240 WORLD LITERATURE ANCIENT-EARLY RENAISSANCE

Units: 3.0 **CSU,UC** | 48-54 hours lecture

(Prerequisite: ENGL 101.0 or ENGL H101 minimum grade C.)

Masterpieces of world literature and their cultural contexts from ancient times through the early Renaissance.

ENGL 241 WORLD LITERATURE RENAISSANCE-MODERN

Units: 3.0 **CSU,UC** | 48-54 hours lecture

(Prerequisite: ENGL 101.0 or ENGL H101 minimum grade C.)

Masterpieces of world literature and their cultural contexts from late Renaissance until the present.

ENGL 245 SURVEY OF BRITISH LITERATURE EARLY MEDIEVAL-NEOCLASSICS

Units: 3.0 **CSU,UC** | 48-54 hours lecture

(Prerequisite: ENGL 101.0 or ENGL H101 minimum grade C.)

A survey of major British writers from the Middle Ages through the Eighteenth Century, including an examination of language development, historic and cultural backgrounds, and literary trends; special consideration of major authors such as Chaucer, Spenser, Marlowe, Shakespeare, Bacon, Donne, Milton, Dryden, and Pope.

ENGL 246 SURVEY OF BRITISH LITERATURE ROMANTICS- 20th CENTURY

Units: 3.0 **CSU,UC** | 48-54 hours lecture

(Prerequisite: ENGL 101.0 or ENGL H101 minimum grade C.)

A survey of major British writers from the Romantics and their contemporaries through the 20th century, including an examination of historic and cultural and literary trends. Special consideration of major authors such as Blake, Wordsworth, Byron, Browning, Wilde, Conrad, Yeats, Eliot, Woolf, Auden.

ENGL 247 SHAKESPEARE

Units: 3.0 *CSU,UC* 48-54 hours lecture

(Prerequisite: ENGL 101.0 or ENGL H101 minimum grade C.)

An introduction to Shakespeare's work through a study of his principal plays and the sonnets.

English As A Second Language

The Credit and Non Credit program of ESL is for Non-Native Speakers of English who wish to improve their English skills. The program is designed for students who want to pursue a career or a college degree or seek career advancement but who lack the English skills to be successful. Areas of interest to may include

- Vocational education
- Certificate program
- Associate's degree
- Transfer to a four year university

It is an intensive English language program for beginners of English and for those in the higher levels of English as a Second Language. The topics also include citizenship classes, computer and workplace literacy classes. These courses are offered for credit and non-credit.

There are 6 levels in the English as a Second Language Program. Each level is comprised of two or three core classes of Reading and Vocabulary, Writing and Grammar. Students who successfully complete Level 6 are eligible to advance into ENGL 6 and Certificate Courses at VVC

ESL Level 1 – Beginning (Non-Credit Only)

- AENG 10.1, AENG 10.2, AENG 10.1C, AENG1

ESL Level 2 - High Beginning (Non-Credit Only)

- AENG 10.3, AENG 10.4, AENG10.4A, AENG 2

ESL Level 2.5 Pre – Intermediate (Credit and Non- Credit)

- AENG 10.6, AENG 10.5, ESL 23, ESL 25, ESL 27A, ESL 27B, ESL12A

ESL Level 3 – Low Intermediate (Credit and Non-Credit)

- AENG 10.7, AENG 10.8, ESL33A, ESL35A, ESL30B, ESL 37A

ESL Level 4 – High Intermediate (Credit and Non-Credit)

- AENG 10.9 , ESL35B, ESL37B, ESL38, ESL 33B, ESL34

ESL Level 5- Low Advanced (Credit Only)

- ESL43, ESL45, ESL40,

ESL Level 6- High Advanced:

- ESL49A, ESL49B (Credit Only)

New students must take an ESL Assessment test to determine appropriate course level placement. The TOEFL score is not required.

Career Opportunities

Although ESL is not recognized as a separate major, it is a necessary component for success in any field for the non-native student.

Faculty

Laird Eklund | Maria Ruiz

INGLÉS COMO SEGUNDO IDIOMA (ESL)

ESL es el estudio de Inglés Como Segundo Idioma. El programa está diseñado para las personas en que el primer idioma no es inglés. California es un estado que es muy diverso en cultura e idiomas, donde la necesidad de aprender inglés es importantísimo para sobrevivir en la vida cotidiana estadounidense. Además el estudiante de ESL tiene que desarrollar destrezas en inglés para tener éxito en el colegio y la universidad. El programa de ESL tiene el fin asistirlas en alcanzar sus metas personales y educativas.

ENGLISH AS A SECOND LANGUAGE (ESL) COURSES

VVC offers a wide variety of noncredit ESL classes at lower levels, from low beginning to advanced level. Please consult the Class Schedule for a description of these classes, along with times and locations

English As A Second Language Courses

ESL 3 LOW BEGINNING READING AND WRITING

Units: 4.0

4.0 - 48-54 hours lecture and 48-54 hours laboratory hours

(No prerequisite. Pass/No Pass) This course does not apply to the Associate Degree.

Students at this level demonstrate little or no competence in communicating through writing and little or no control of vocabulary, grammar and sentence structure. Course is designed to teach students basic alphabet and phonics, and to read and write simple stories. Students will copy text and/or generate words or simple phrases; develop awareness of appropriate word choice or correct form; write simple sentences in thematic units.

ESL 5 BEGINNING LISTENING AND SPEAKING

Units: 3.0

32-36 hours lecture and 48-54 hours laboratory

(No prerequisite. Pass/No Pass) This course does not apply to the Associate Degree.

This course is designed for the non-native speaker of English who has no ability or very little competence in speaking and listening. Emphasis is on developing students' ability to listen and understand basic English. Nonverbal social customs are taught; nonverbal behavior and cross-cultural communication are taught implicitly through modeling, interaction and demonstration.

ESL 12A BASIC COMPUTER LITERACY

Units: 3.0

48-54 hours lecture

(No prerequisite. Pass/No Pass) This course does not apply to the Associate Degree.

This is a three part course in ESL Computer Literacy for non-native speakers of English. The focus of the course is to develop language skills related to computer usage. Students will learn computer uses for ESL courses and educational purposes.

ESL 12B BASIC COMPUTER LITERACY

Units: 3.0

48-54 hours lecture

(No prerequisite. Recommended preparation: Completion of ESL 12A is strongly recommended. Pass/No Pass) This course does not apply to the Associate Degree.

This course is designed for non-native speakers of English. The focus of the course is to expand and develop basic computer knowledge using the most current Microsoft OS for ESL educational purposes.

ESL 12C BASIC INTERNET

Units: 3.0

48-54 hours lecture

(No prerequisite. Recommended preparation: Completion of ESL 12A or ESL 33A is strongly recommended. Pass/No Pass) This course does not apply to the Associate Degree.

This course is designed for ESL students wishing to learn basic Internet skills for success in academic and job settings or for personal enrichment.

ESL 13 HIGH BEGINNING READING AND VOCABULARY

Units: 3.0

48-54 hours lecture

(No prerequisite. Pass/No Pass) This course does not apply to the Associate Degree.

This course is designed for the non-native speakers of English with some competence in reading and vocabulary. The course focuses on reading abilities through the enhancement of vocabulary skills and cultural awareness. Emphasis is placed on developing a life-long ability to read for pleasure. American culture is introduced through newspapers, folk tales, short stories and cross-cultural readers.

ESL 23 PRE-INTERMEDIATE READING AND VOCABULARY

Units: 3.0

48-54 hours lecture

(No prerequisite. Pass/No Pass) This course does not apply to the Associate Degree.

This course is designed for non-native speakers of English. Focus is on development and practice of fundamental reading and vocabulary skills needed to academic and workplace settings. Reading skills include comprehension, understanding new vocabulary in context and scanning for specific information. Students read simplified texts on academic and vocational subjects.

ESL 25 PRE-INTERMEDIATE LISTENING AND SPEAKING**Units: 3.0****48-54 hours lecture***(No prerequisite. Pass/No Pass.) This course does not apply to the Associate Degree.*

Course is designed for non-native speakers of English. This course focuses on fundamental speaking and listening skills for ESL students who have a basic knowledge of common English words and phrases. Students learn to understand short spoken passages, including questions and warnings. Speaking skills include describing familiar situations and events, such as giving basic information on the telephone.

ESL 27A PRE-INTERMEDIATE WRITING AND GRAMMAR**Units: 3.0****48-54 hours lecture***(No prerequisite. Pass/No Pass) This course does not apply to the Associate Degree.*

This course is designed for non-native speakers of English. Course focus is on fundamental writing and grammar skills for ESL students who have a basic knowledge of common English words, phrases, and structure. Students write at the sentence and paragraph level, learn to organize ideas, and edit for grammar, spelling and punctuation.

ESL 27B PRE-INTERMEDIATE WRITING AND GRAMMAR II**Units: 3.0****48-54 hours lecture***(No prerequisite. Recommended preparation: ESL 12A, ESL 23A, ESL 27A or basic knowledge of keyboarding and grammar. Pass/No Pass) This course does not apply to the Associate Degree.*

This class is the second of a two-part series of pre-intermediate grammar and writing classes. This course is designed for non-native speakers of English who want to develop grammar and writing skills. The focus is on reviewing verb tenses and introducing modals, adjectives, count and non-count articles, adverbs and adjectives. Students will practice writing and editing simple paragraphs.

ESL 30A INTERMEDIATE PRONUNCIATION I**Units: 3.0****48-54 hours lecture***(No prerequisite. Recommended preparation: Completion of ESL 12A is strongly recommended. Pass/No Pass) This course does not apply to the Associate Degree.*

This course is designed for non-native speakers of English who require further practice and instruction in pronunciation. Class will help improve communication skills and achieving clear speech for success in everyday situations, workplace and school settings. This class will focus on introducing sounds of vowels and consonants and their combinations. It will introduce the basic features of English stress, rhythm and intonation.

ESL 30B INTERMEDIATE PRONUNCIATION II**Units: 3.0****48-54 hours lecture***(No prerequisite. Pass/No Pass) This course does not apply to the Associate Degree.*

This course is designed for non-native speakers of English at the high intermediate and/or advanced level of ESL. Designed for students whose speech is continuing to cause communication difficulties at work, school, or in social situations. Students practice listening, rhythm, intonation and pronunciation.

ESL 33 READING AND VOCABULARY**Units: 3.0****32-36 hours lecture and 48-54 hours laboratory***(No prerequisite. It is recommendation that students should already have basic skills in decoding information and understanding at a literal level. They should be able to read and understand short, authentic texts such as letters and instructions. Pass/No Pass) This course does not apply to the Associate Degree.*

A reading course for low intermediate ESL students emphasizing main ideas, outlining, and vocabulary in context.

ESL 33A LOW INTERMEDIATE READING AND VOCABULARY REVIEW**Units: 3.0****48-54 hours lecture**

(No prerequisite. Recommended Preparation: Students should already have basic skills in decoding information and understanding at a literal level. They should be able to read and understand short, authentic texts such as letters and instructions. Pass/No Pass) This course does not apply to the Associate Degree.

Designed for Low Intermediate ESL students who wish to improve reading skills. Course emphasizes reading skills, such as main ideas, comprehension, outlining, and developing vocabulary skills. Students will read short authentic texts and abridged readers and respond to reading passages. Students should understand at a literal level.

ESL 33B HIGH INTERMEDIATE READING**Units: 4.0****64-72 hours lecture**

(No prerequisite. Recommended preparation: ESL 33. Pass/No Pass) This course does not apply to the Associate Degree.

This course is designed for non-native speakers of English who have intermediate proficiency in reading and writing English. Students will learn a variety of reading and vocabulary developmental strategies for college success. Students will learn to access a variety of technology based reading resources to further develop their reading skills.

ESL 34 HIGH INTERMEDIATE ENGLISH SKILLS AT THE WORKPLACE**Units: 3.0****48-54 hours lecture**

(No prerequisite. Pass/No Pass) This course does not apply to the Associate Degree.

This course is designed for non-native speakers of English who wish to strengthen business communication skills. Course focus is on cultural differences, social etiquette, business idioms, and some business writing. Emphasis on developing fluency and comprehension.

ESL 35A LOW INTERMEDIATE LISTENING AND SPEAKING**Units: 3.0****48-54 hours lecture**

(No prerequisite. Pass/No Pass) This course does not apply to the Associate Degree.

This course is designed for non-native speakers of English. Course focus is on casual and formal dialogues in commonplace situations, everyday language functions and conversation skills. Students learn common courtesy expressions, clarification strategies, idiomatic expressions and grammatical patterns in English.

ESL 35B HIGH INTERMEDIATE LISTENING AND SPEAKING**Units: 3.0****48-54 hours lecture**

(No Prerequisite. Recommended preparation: ESL 35A or appropriate score on ESL assessment.. Pass/No Pass) This course does not apply to the Associate Degree.

This course is designed for non-native speakers of English who wish to continue developing listening and speaking skills in English. Students practice a variety of listening and speaking activities designed to develop critical thinking skills. Students engage in activities such as role play, simulation exercises, and conversational activities. Students learn how to express opinions and reach agreements.

ESL 37 INTERMEDIATE GRAMMAR**Units: 3.0****48-54 hours lecture**

(No prerequisite. Recommended preparation: Minimum score of 31 on the ESL assessment or satisfactory completion of ESL 23, ESL 25 and ESL 27A and ESL 27B. Grade Option) This course does not apply to the Associate Degree.

Students at this level learn and apply rules of English grammar and structure for use in oral and written communication. This course provides practice in areas such as common verb tenses, question forms, and expressions of ability, permission and advice.

ESL 37A LOW INTERMEDIATE WRITING AND GRAMMAR**Units: 3.0****32-36 hours lecture and 48-54 hours laboratory**

(No prerequisite. Recommended preparation: ESL 27B or appropriate ESL assessment test score or instructor recommendation. Pass/No Pass) This course does not apply to the Associate Degree.

This course helps students at low intermediate level develop writing and grammar skills appropriate for educational and personal success. Students write short compositions on familiar topics. They learn to apply principles of grammar as they write.

ESL 37B HIGH INTERMEDIATE WRITING AND GRAMMAR**Units: 3.0****48-54 hours laboratory**

(No prerequisite. Recommended preparation: ESL 37A or appropriate ESL assessment test score or instructor. Pass/No Pass) This course does not apply to the Associate Degree.

This course helps students at high intermediate level develop writing and grammar skills appropriate for educational and personal success. Students write short compositions on a variety of topics. They learn to apply principles of grammar as they write.

ESL 38 HIGH INTERMEDIATE GRAMMAR**Units: 3.0****48-54 hours lecture**

(No prerequisite. Recommended preparation: Successful completion of ESL 12A, ESL 37, or ESL 37A, or qualifying placement score. Grade Option) This course does not apply to the Associate Degree.

Students at high intermediate level learn and apply rules of English grammar and structure for use in oral and written communication. This course provides practice in areas such as description using adjectives and adverbs, use of gerund and infinitive forms of verbs, certain models, and nouns and articles.

ESL 40 ADVANCED PRONUNCIATION**Units: 3.0****32-36 hours lecture and 48-54 hours laboratory**

(No prerequisite. Recommended preparation: completion of ESL 12A and ESL 30B and some internet skills advised. Grade Option) This course does not apply to the Associate Degree.

This course is the first in a series of two classes for non-native speakers of English wanting to improve their pronunciation skills in English. Students will learn to effectively improve pronunciation for clear and effective communication in social, academic, or job settings. Through structured activities, direct instruction, and lab work, students will be able to improve their skills in those areas that comprise pronunciation, rhythm patterns, and stress.

ESL 43 LOW ADVANCED READING AND VOCABULARY**Units: 3.0****48-54 hours lecture**

(No prerequisite. Pass/No Pass) This course does not apply to the Associate Degree.

This is the first of two courses designed for non-native speakers of English who are approaching advanced level of proficiency in reading English. Emphasis is on further developing reading and vocabulary skills. Students are introduced to a variety of reading genres, word structure, vocabulary, and reading strategies.

ESL 43B HIGH ADVANCED READING AND VOCABULARY**Units: 4.0****64-72 hours lecture**

(No prerequisite. Grade Option) This course does not apply to the Associate Degree.

This course is designed for non-native speakers of English. Skills include developing essays from longer reading passages. Students will respond to reading passages, reinforce vocabulary building and comprehension.

ESL 45 PUBLIC SPEAKING FOR ESL

Units: 3.0

64-72 hours lecture

(No prerequisite. Grade Option) This course does not apply to the Associate Degree.

This class is for non-native speakers of English at the advanced level of listening and speaking who wish to develop practical public speaking skills. The class is designed to help build confidence in speaking. Students will learn to use visual and audio aids to enhance presentation skills and to listen critically and objectively. Students will recite, develop, present, and evaluate speeches for a variety of situations.

ESL 45A CROSS CULTURAL COMMUNICATION SKILLS

Units: 3.0

48-54 hours lecture

(No prerequisite. Grade Option) This course does not apply to the Associate Degree.

This course is designed for non-native speakers of English who wish to understand cultural differences of North American society. Course focus is on broadening intercultural understanding for students living and working in the USA. Topics focus on different aspects of mainstream North American cultures encountered in a work or social setting.

ESL 46A LOW ADVANCED ACADEMIC VOCABULARY

Units: 3.0

48-54 hours lecture

(Pass/No Pass) This course does not apply to the Associate Degree.

Designed for non-native speakers of English who are at the advanced level of ESL. Course covers academic vocabulary skills needed in professional and academic settings. Course covers the principles and techniques of learning vocabulary using context clues, word parts, a dictionary, and word families.

ESL 47 ADVANCED GRAMMAR

Units: 3.0

48-54 hours lecture

(No prerequisite. Grade Option) This course does not apply to the Associate Degree.

Students at advanced level learn and apply rules of English grammar and structure for use in oral and written communication. This course provides review practice and expanded study of verb tenses, gerunds and infinitives, and phrasal verbs, and introduces adjective clauses.

ESL 48 HIGH ADVANCED GRAMMAR

Units: 3.0

48-54 hours lecture

(No prerequisite. Grade Option) This course does not apply to the Associate Degree.

Students at high advanced level learn and apply rules of English grammar and structure for use in oral and written communication. This course provides review practice and expanded study of phrasal verbs and introduces passive forms, conditional statements, adjective clauses, and indirect speech.

Environmental Studies

A number of disciplines on campus offer classes and vocational certificates focusing on different aspects of Environmental Studies. See listings under the following departments: Agriculture and Natural Resources, Biology, Chemistry, Construction Technology, Computer Integrated Design and Graphics, Electronics, Fire Technology, Geography, and Political Science.

Promoting an understanding of the interaction of human beings with their environment is the focus of Environmental Studies. Career opportunities cover a wide range of positions in public agencies, business, industry and nonprofit organizations which need individuals who can provide up-to-date environmental information and assist in compliance with environmental regulations. This transfer major combines courses from the biological sciences, physical sciences, and social sciences. The college now boasts a Green Technology Educational Pathway Initiative (GTPI) to help prepare students for success in this ever-evolving world. The GTPI is a collaborative among education, business, and the community that has spent several years developing programs promoting sustainability practices and training students in the skills needed to fill the emerging “green jobs.”

Transfer

For the most up-to-date information on these programs and others, visit www.assist.org. Please stop by the Transfer Center in Building 55 or make an appointment with a counselor if you have questions.

- California State University, San Bernardino:** Environmental Studies major
- University of California, Riverside:** Environmental Sciences major

Degrees and Certificates Awarded

Associate in Arts, Fine Arts

Associate Degree

To earn an Associate in Arts degree with a major in Fine Arts, complete a minimum of 18 units from any of the following courses:

ANTHROPOLOGY

ANTH 151

ART

ART 101, 102, 103, 104, 105, 106, 107, 108, 109, 112, 113, 114, 115, 120, 121, 122, 123, 124, 125, 126, 128, 129, 131, 132, 133*, 134, 135, 141, 142, 150, 151; CART 133*

MUSIC

MUSC 100, 101, 102, 103, 104, 105, 110, 111, 116, 117, 118, 120A-J, 122, 123, 124, 125, 126, 128, 129, 130, 131, 132, 134A, 135, 136, 139, 140, 141, 143, 144, 145, 147, 202, 203, 204, 205, 210, 211, 220A/B, 222, 223

KINESIOLOGY/DANCE

KIN 103; KIND 152, 160ABC, 161ABC, 162ABC, 163ABC, 166ABC, 167ABC, 169ABC, 170ABC, 171ABC, 174 ABCD, 175ABCD, 176ABCD, 180, 182, 183

PHOTOGRAPHY

PHOT 52, 53, 54, 100, 101, 103, 105, 106, 129

THEATRE ARTS

ENGL 116*, TA 101, 102, 104, 106, 107, 109, 110, 111, 113, 115.1, 115.2, 115.3, 115.4, 116*, 117, 120, 128, 129, 160ABC, 161ABC, 162ABC, 163ABC, 166ABC, 167ABC, 169ABC, 170ABC, 171ABC, 174 ABCD, 175ABCD, 176ABCD, 180, 182, 183

**ENGL 116 and TA 116 are the same class.*

Transfer

For the most up-to-date information on these programs and others, visit www.assist.org. Please stop by the Transfer Center in Building 55 or make an appointment with a counselor if you have questions.

Fire Technology

Fire protection is a highly specialized professional field requiring extensive knowledge and use of scientific principles. Successful application of the fundamental principles of fire protection, including suppression and extinguishment of fires, rescue, emergency medical services, prevention techniques and practices, preplanning for fire protection, and disaster control, requires technical knowledge and the ability to work within an organized system at the fire ground or other emergency scene. These actions require trained, professional people to accomplish the goals and objectives of today's public and/or private organizations in meeting their commitment to the public and employees they serve. Fire Technology provides the student the opportunity to prepare for a rewarding career in the public fire service or in private industry.

For the most current information about VVC's Fire Technology programs, application deadlines, costs, and other requirements, please visit http://www.vvc.edu/academic/fire_technology/.

Fire Technology

This program provides vocational and technical in-service training for interested students. Each student who completes a program of courses that meets the specified requirements is entitled to a Certificate of Completion in that field. Certificates are awarded as evidence that well defined levels of proficiency have been attained and they are recognized as such by employers.

In order to be awarded the certificate, the student must have completed the prescribed program with at least a 2.0 grade point average in the prescribed course work. The number of courses prescribed for each certificate varies according to the area of training.

Career Opportunities

Apparatus Operator, Disaster Preparedness, Fire Administrative Analyst, Fire Chief, Fire Division Chief, Fire Fighter I, Fire Officer I, Fire Prevention Specialist, Fire Protection Engineer, Industrial Fire Safety Specialist

Faculty

Heath Cohen

Degrees and Certificates Awarded

Associate in Science, Fire Technology
Fire Fighter Certificate

Fire Prevention Officer Certificate
Fire Company Officer Certificate

Associate Degree

To earn an Associate in Science degree with a major in Fire Technology complete 18 units from any of the degree applicable certificate requirements or from any Fire Technology courses (numbered 50 and above) and meet all Victor Valley College graduation requirements. FIRE 138 (Cooperative Education) may be used as Elective credit, but may not be used to fulfill major requirements.

Business Administration is also a highly recommended bachelor's degree major for people in this field who are seeking advancement. See Business Administration for transfer requirements.

Recommended preparation: It is highly recommended that students complete the following courses prior to applying for the Fire Academy:

FIRE 11B*	Confined Space Awareness	0.5
FIRE 66	Introduction to Incident Command	1.0
FIRE 105	Building Construction for Fire Protection	3.0
FIRE 82A	Hazardous Materials First Responder	1.5
EMS 50	Emergency Medical Responder	2.5
EMS 60	Emergency Medical Technician	9.0

*Courses numbered below 50 do not apply to the Associate Degree.

Transfer

Not usually a transfer major. Some Fire Technology courses do transfer as Electives or fulfill subject credit requirements. California State University, Los Angeles offers a B.S. degree in Fire Protection Administration and Technology which requires a minimum of 15 major units to be completed in Fire Technology at a community college. Cal Poly San Luis Obispo also offers a B.S. degree in Fire Tech. Visit www.assist.org for community college courses which will transfer as requirements toward the bachelor's degree. Students planning to pursue this bachelor's degree should also complete the CSU General Education-Breadth Requirements before transfer if possible.

A student receiving a degree or certificate in this field will be able to:

- *Demonstrate knowledge and skills required to respond appropriately to fire and environmental emergency situations at the private, city, state and federal levels with emphasis in one or more of the following areas: wildland firefighting; hazardous materials response; structural fire suppression, prevention, and investigation, disaster response, first responder; emergency medical technician; or leadership responsibilities.*
- *Demonstrate the ability to analyze, appraise and evaluate fire and emergency incidents and identify components of emergency management and fire fighter safety including: Size-up, report on condition, Incident Command System; RECEO; 10 Standard Firefighting Orders; and 18 Situations that "Shout Watch Out".*
- *Identify and comprehend laws, regulations, codes and standards that influence fire department operations, and identify regulatory and advisory organizations that create and mandate them, especially in the areas of fire prevention, building codes and ordinances, and firefighter health and safety.*
- *Identify minimum qualifications and entry level skills for fire fighter hiring. The student will be able to describe the following elements: application process; written exam process; physical agility exam, oral interview, chief's interview; background investigation; and fire fighter probationary process.*
- *Identify and describe common types of building construction and conditions associated with structural collapse and firefighter safety.*
- *Analyze the causes of fire, determine extinguishing agents and methods, differentiate the stages of the fire and fire development, and compare methods of heat transfer.*

FIRE FIGHTER CERTIFICATE

Awarded to the student who successfully completes the following course of study to meet the minimum qualifications and competencies as required by National Fire Protection Association and California State Fire Marshal's Fire Fighter I certification program.

Units Required: 32.0

All of the following must be completed with a grade of "C" or better:

FIRE 100	Fire Protection Organization	3.0
FIRE 101	Fundamentals of Fire Service Operations	3.0
FIRE 102	Fire Prevention Technology	3.0
FIRE 103	Fire Protection Equipment and Systems	3.0
FIRE 104	Fire Behavior and Combustion	3.0
FIRE 82A	Hazardous Materials First Responder	1.5
EMS 60	Emergency Medical Technician I (Ambulance)	9.0
FIRE 95	Basic Fire Academy	12.5

FIRE COMPANY OFFICER CERTIFICATE

Awarded to the individual who has successfully completed all requirements for certification by the State Fire Marshal's Office for Fire Officer. Meets entry requirements for firefighters to the middle and upper level management positions within the agency.

Units Required: 68.0

All of the following must be completed with a grade of "C" or better:

FIRE 100	Fire Protection Organization	3.0
FIRE 101	Fundamentals of Fire Service Operations	3.0
FIRE 102	Fire Prevention Technology	3.0
FIRE 103	Fire Protection Equipment and Systems	3.0
FIRE 104	Fire Behavior and Combustion	3.0
FIRE 105	Fire Apparatus and Equipment	3.0
FIRE 106	Fire Company Organization and Management	3.0
FIRE 108	Fire Hydraulics	3.0
FIRE 70	Fire Instructor Training 1A	2.5
FIRE 71	Fire Instructor Training 1B	2.5
FIRE 72	Fire Command 1A	2.0
FIRE 73	Fire Command 1B	2.0
FIRE 76	Fire Management 1	2.5
FIRE 82A	Hazardous Materials First Responder	1.5
EMS 60	Emergency Medical Technician I (Ambulance)	9.0
FIRE 95	Basic Fire Academy	12.5
CIS 101	Computer Literacy	4.0
<i>All course work must be completed with a "C" or better. Three of the following must be completed.</i>		
FIRE 107	Fire Investigation	3.0
FIRE 109	Wildland Fire Control	3.0
FIRE 61	Rescue Practices	3.0
FIRE 74	Fire Prevention 1A	2.0
FIRE 75	Fire Prevention 1B	2.0
FIRE 77	Investigation 1A	2.0

FIRE PREVENTION OFFICER CERTIFICATE

Describes an individual who has successfully completed the competencies as required for a certified fire prevention officer by the California State Fire Marshal's Office. Meets entry requirements for fire prevention specialist and/or fire prevention officer.

Units Required: 30.0

All of the following must be completed with a grade of "C" or better:

FIRE 100	Fire Protection Organization	3.0
FIRE 101	Fundamentals of Fire Service Operations	3.0
FIRE 102	Fire Prevention Technology	3.0
FIRE 103	Fire Protection Equipment and Systems	3.0
FIRE 104	Fire Behavior and Combustion	3.0
FIRE 107	Fire Investigation (or FIRE 77 & 79)	3.0
FIRE 77 & 79	Investigation 1A and 1B	4.0
FIRE 70	Fire Instructor Training 1A	2.0
FIRE 71	Fire Instructor Training 1B	2.5
FIRE 74,75, & 78	Fire Prevention 1A, 1B, 1C	6.0
FIRE 76	Fire Management 1	2.5

Fire Technology Courses

FIRE 3A CERTIFIED VOLUNTEER FIRE FIGHTER

Units: 3.0

32-36 hours lecture and 64-72 hours laboratory

(Prerequisite: Must pass sport participation examination prior to entrance into class. State mandated. Grade Option) This course does not apply to the Associate Degree.

The course, the first of two courses, is designed to prepare the student with information and skill development necessary to perform the tasks of a certified volunteer fire fighter within California. Provides a foundation of information and skill development necessary to enter college level courses in fire technology and/or a career in the fire service. Students must complete FIRE 3A and FIRE 3B to qualify for state certificate.

FIRE 3B CERTIFIED VOLUNTEER FIRE FIGHTER

Units: 3.0

32-36 hours lecture and 64-72 hours laboratory

(Prerequisite: Must pass sport participation examination prior to entrance into class. State mandated. Grade Option) This course does not apply to the Associate Degree.

The second of two courses, is designed to prepare the student with information and skill development necessary to perform the tasks of a certified volunteer fire fighter within California. Provides a foundation of information and skill development necessary to enter college level courses in fire technology and/or a career in the fire service. Students must complete FIRE 3A and FIRE 3B to qualify for state certificate.

FIRE 4A FIRE FIGHTER II ACADEMY

Units: 1.5

16-18 hours lecture and 32-36 hours laboratory

(Prerequisite: FFI status, or completion of FFI Academy [FIRE 95], or recommendation of training officer from a fire protection organization. Pass/No Pass) This course does not apply to the Associate Degree.

This is a series of lectures and manipulative drills designed to enhance and improve the fire fighter student's skills in fire behavior, forcible entry, vehicle firefighting, flammable gases and liquids firefighting techniques, handling massive casualty incidents and performance testing techniques. Designed for today's paid call and career fire fighter seeking full-time employment and/or advancement within a public or private fire protection organization.

FIRE 4B FIRST RESPONDER OPERATIONAL WEAPONS OF MASS DESTRUCTION

Units: 0.5

8-9 hours lecture

Prerequisite: FIRE 82A or CSTI Has-Mat First Responder Operational Certification. Pass/No Pass) This course does not apply to the Associate Degree.

This course introduces the student to the basic concepts for first responder operational procedures at the scene of a potential or actual terrorist incident and discusses safety and survival tactics.

FIRE 5E STRIKE TEAM LEADERS, DOZERS (S-335)

Units: 1.0

16-18 hours lecture

(Prerequisites: ICS-100, 200, 300/State mandated. Pass/No Pass) This course does not apply to the Associate Degree.

This course prepares the fire fighter student to work as a strike team leader in charge of a task force or strike team of dozers for wild land fire control within the incident command system. This fire fighter course discusses duties, responsibilities, procedures and materials involved in the operation of the dozer strike team and the function of the strike team leader. National Wild Land Coordinating Group certified. Certification fee \$5. This course will not apply to the Associate degree.

FIRE 5F INMATE FIRE CREW SUPERVISOR

Units: 3.0

32-36 hours lecture and 32-36 hours laboratory

(Prerequisites: FIRE 66, FIRE 86, ICS-100, 200, 300/State Mandated. Pass/No Pass) This course does not apply to the Associate Degree.

This course prepares the fire fighter student with the skills and information necessary to work within the Incident Command System (ICS) as an inmate fire crew supervisor. Responsibilities, duties and materials required to operate and manage an inmate fire crew are presented. Wild land fire tactics and strategies for hand crews and hand crew fire safety are feature. National Wild Land Coordinating Group certified. \$5.00 certification fee.

FIRE 5G S-356 SUPPLY UNIT LEADER**Units: 1.0****16-18 hours lecture**

(Prerequisites: I- 300, S-301. State Mandated. Pass/No Pass) This course does not apply to the Associate Degree.

This course provides the fire fighter student with information to perform the tasks of the Supply Unit Leader within the Incident Command system (ICS). CDF certified. Northwest Coordinating Group approved.

FIRE 5H FOOD UNIT LEADER**Units: 1.5****16-18 hours lecture and 12 hours laboratory**

(Prerequisite: FIRE 66, FIRE 86, ICS-100, 200, 300/State mandated. Pass/No Pass) This course does not apply to the Associate Degree.

This course prepares the fire fighter student with the skills and information necessary to work within the Incident Command System (ICS) as a food unit leader. Responsibilities, duties and materials required to operate and manage a food unit are presented. National Wild Land Coordinating Group certified.

FIRE 5.1J VOLUNTEER FIRE OFFICER'S ACADEMY**Units: 2.0****32-36 hours lecture**

(No prerequisite) This course does not apply to the Associate Degree.

This course is designed to provide the information and skills necessary for the fire fighter/and or driver operator who desire to promote to the rank of company officer; for company officers who desire to remain current with innovative management, leadership and human relations techniques; and for training officers who are responsible for teaching and developing officers and future officer candidates. This course is designed for the fire fighter student with essential fire fighter skills.

FIRE 6A BASIC FIRE ENGINE OPERATION ACADEMY, CDF**Units: 3.0****48-54 hours lecture and 64-72 hours laboratory**

(Prerequisites: Successful completion of Basic Forest Firefighter course, valid class B (commercial or firefighter) California Driver's license with Tank and Air Brake Endorsements; successful completion of Hazardous Materials First Responder, Operational. State mandated. Pass/No Pass.) This course does not apply to the Associate Degree.

This course provides the student with the information and skills to safely drive and operate fire apparatus and fire pumps and provide initial attack incident control capabilities according to California Department of Forestry standards and policies.

FIRE 6B FIRE ATTACK I: SET STANDARD FOR EXCELLENCE ON THE FIRE GROUND**Units: 1.0****16-18 hours lecture**

(Prerequisites: Employment with a recognized fire protection agency in a position of company officer or acting company officer, or enrollment within the fire officer certification program accredited by California Fire Services Training and Education System (CFSTES) or National Fire Protection Association (NFPA) Standard 1021, Fire Officer Professional Standards. Grade Option) This course does not apply to the Associate Degree.

Fire Attack I is designed to provide the fire fighter with the latest information, tactics and strategies for combating structural fire incidents. Focus is on the decisions and responsibilities the first arriving company officer must consider to successfully mitigate the incident.

FIRE 6C LEADERSHIP FUNDAMENTALS**Units: 2.0****32-36 hours lecture**

(No prerequisite. Pass/No Pass) This course does not apply to the Associate Degree.

This course is designed to prepare the fire fighter student within the California Department of Forestry to take a new position of company officer by providing skills in supervision and management. Topics include motivation, communication, discipline, leadership, time management and team building.

FIRE 7A FIRST RESPONDER MEDICAL, REFRESHER**Units: 1.0****16-18 hours lecture and 8-9 hours laboratory**

(No Prerequisite. Pass/No Pass) This course does not apply to the Associate Degree.

A 24-hour refresher course approved by the State Board of Fire Services and California State Fire Training for Recertification of first responders to medical emergencies.

FIRE 9 FIRE CONTROL III, STRUCTURAL FIRE FIGHTING, INSTRUCTOR

Units: 2.0

32-36 hours lecture

(No prerequisite. Pass/No Pass) This course does not apply to the Associate Degree.

This 32-hour course prepares the fire fighter student to manage and conduct a state certified Fire Control III training exercise. Designed for fire department training officers and training staff, this course assumes a basic knowledge of firefighting skills and organizational concepts.

FIRE 9A FIRE CONTROL IV, OIL AND GAS FIRE FIGHTING TECHNIQUES

Units: 0.5

8-9 hours lecture

(No prerequisite. Pass/No Pass) This course does not apply to the Associate Degree.

This course provides the fire fighter student with live fire situations to gain skills and experience in combating fires involving liquefied petroleum gas and flammable liquids. Subjects include flammable liquid fire behavior, safety on the fire ground, extinguishing agents, flammable liquid/gas transportation vehicles, water-flow requirements and actual fire extinguishing exercises. A basic knowledge of firefighting skills and knowledge plus access to appropriate safety equipment and clothing is presumed.

FIRE 10 FIRE FIGHTER SKILLS MAINTENANCE

Units: 4.0

16-18 hours lecture and 144-162 hours laboratory

(No prerequisite: Recommended preparation: Employment as a fire fighter with a recognized fire protection agency (State mandated). Employment as a career fire fighter or paid call fire fighter. Pass/No Pass.) This course does not apply to the Associate Degree.

A series of lectures and manipulative drills designed to provide maintenance of skills learned, including updates in technology relating to fire department organization, hoses, ladders, tools and equipment, salvage, fire chemistry, extinguishers and agents, fire control, prevention, arson, crowd and traffic control, mutual aid, communications, fire safety and emergency rescue techniques.

FIRE 10C COMPANY OFFICER'S SKILLS MAINTENANCE

Units: 1.5

16-18 hours lecture and 24-27 hours laboratory

(Prerequisites: Employment as a wildland fire fighter or fire fighter serving a community with wildland or interface fire conditions. State mandated. Pass/No Pass.) This course does not apply to the Associate Degree.

This course provides the fire fighter company officer student with new information and skill development to maintain efficiency and effectiveness as a company officer and fire fighter. New policies, procedures and equipment are presented and student demonstrates proficiency in using tools, tactics and strategies for managing personnel, budgets and legal responsibilities in today's fire service.

FIRE 10D HAND CREW FIRE FIGHTER SKILLS MAINTENANCE

Units: 1.5

16-18 hours lecture and 24-27 hours laboratory

(Prerequisites: Employment as a hand crew fire fighter with a modern fire service agency. State mandated. Pass/No Pass.) This course does not apply to the Associate Degree.

This course provides the fire fighter student with new information and skill development to maintain efficiency and effectiveness as a wild land hand crew fire fighter. New policies, procedures and equipment are presented and student demonstrates proficiency in using tools, tactics and strategies for constructing and maintaining a fire line and other related fire control tactics and operations. CDF certified.

FIRE 11 LOW ANGLE ROPE RESCUE OPERATIONAL

Units: 0.5

24-27 hours laboratory

(No prerequisite. Recommended preparation: FIRE 11B, FIRE 66 AND FIRE 95. Pass/No Pass) This course does not apply to the Associate Degree.

This course is designed to equip the student with the information, techniques and methods for utilizing rope, webbing, hardware friction devices, and litters in low angle rescue situations. Topics include rope and related equipment, anchor systems, safety lines, stretcher lashing and rigging, mechanical advantage, single line and two line rescue systems. This course is designed for the fire fighter student with essential firefighting skills.

FIRE 11A RESCUE SYSTEMS I**Units: 1.5****16-18 hours lecture and 24-27 hours laboratory***(Prerequisite: FIRE 11. Pass/No Pass) This course does not apply to the Associate Degree.*

The 40-hour State Fire Rescue Systems I course is designed to provide the student with the ability to apply basic search and rescue skills, under the California Urban Search and Rescue Operational levels. Students learn to approach rescue situations safely and understand the organizational concerns at an All-Risk technical rescue incident. Upon completion of the course, the student will receive a California State Fire Marshals Certificate, which is the foundation requirement for other urban search and rescue classes.

FIRE 11B CONFINED SPACE RESCUE AWARENESS**Units: 0.5****8-9 hours lecture***(No prerequisite. Pass/No Pass) This course does not apply to the Associate Degree.*

Designed for all fire service personnel. This course provides instruction in identifying a permit and non-permit required confined space, the hazards associated with confined spaces, target industries and hazards, state regulations, communications, and equipment requirements. This course does not qualify participants to make permit required entries. OSFM-SFT certification. Material and FSTEP Certification Fee.

FIRE 11C RESCUE SYSTEMS 2**Units: 1.5****16-18 hours lecture and 24-27 hours laboratory***(Prerequisite: FIRE 11A. Pass/No Pass) This course does not apply to the Associate Degree.*

This course is designed for personnel who in the discharge of rescue duties will engage in missions that encompass numerous hazards such as those involving confined spaces, energized electrical services, hazardous materials, adverse weather, unstable structures, high technology rescue tools, emergency building shoring, breaking, breaching, burning and cutting, and lifting and moving heavy objects.

FIRE 11D CONFINED SPACE RESCUE OPERATIONAL**Units: 1.5****16-18 hours lecture and 24-27 hours laboratory***(Prerequisite: FIRE 11 and FIRE 11B. Pass/No Pass) This course does not apply to the Associate Degree.*

This course is designed for personnel who in the discharge of rescue duties find themselves working in "immediately dangerous to life and health environments". This is the 40 hour California State Fire Marshal course required for USAR Team members.

FIRE 11E RAPID INTERVENTION CREW TACTICS**Units: 1.5****16-18 hours lecture and 24-27 hours laboratory***(Prerequisite: Fire Fighter I or equivalent experience, per Office of the State Fire Marshal. Pass/No Pass) This course does not apply to the Associate Degree.*

This course is designed to meet OSHA respiratory protection standards for two in/two out and provides students with self survival and basic firefighter rescue skills.

FIRE 11G AUTO EXTRICATION TECHNIQUES**Units: 1.0****8-9 hours lecture and 24-27 hours laboratory***(Prerequisite: Fire Fighter I or equivalent experience, per Office of the State Fire Marshal. Pass/No Pass) This course does not apply to the Associate Degree.*

This course is a certified California State Fire Marshal course that provides students with hands-on experience in the procedures and systems utilized during an automobile extrication. Subjects covered include: Auto extrication, types of hand and power tools, removing windows, opening doors, removing roofs, pulling steering wheels, moving foot pedals, raising dashboards, pulling seats, stabilization of vehicles, and simulated rescues of trapped victims.

FIRE 18 CLASS A FOAM OPERATIONS**Units: 1.0****16-18 hours lecture***(Prerequisites: FIRE 80. State mandated. Pass/No Pass) This course does not apply to the Associate Degree.*

This course is an introduction to Class A firefighting foams used on wild land fires. Classroom principles and field application techniques are featured. CDF certified.

FIRE 20 I-333 STRIKE TEAM LEADER, CREW**Units: 1.0****16-18 hours lecture***(No prerequisite.) This course does not apply to the Associate Degree.*

This course will provide the fire fighter student with the information necessary to perform as a strike team leader in charge of a hand crew at wild land fire suppression operations.

FIRE 40 FIRE FIGHTER ENTRANCE EXAMINATION TECHNIQUES**Units: 3.0****48-54 hours lecture***(No prerequisite. Grade Option) This course does not apply to the Associate Degree.*

This course is designed to prepare the student to take and successfully pass the entrance level fire fighter examination process. Topics discussed include: seeking employment opportunities, the application process, the various examinations given to applicants, oral inter-views, and other aspects of the examination process.

FIRE 40A FIRE FIGHTER PHYSICAL AGILITY ENTRANCE EXAMINATION TECHNIQUES**Units: 1.0****48-54 hours laboratory***(Prerequisite/Co-requisite: FIRE 95. Pass/No Pass) This course does not apply to the Associate Degree.*

This course is designed to prepare the student to take the entrance level firefighter physical agility examination through physical conditioning and specificity training. Students are shown varying entrance exam events often used in the physical agility portions and basic ergonomic techniques. General lecture on health and the importance of firefighter physical fitness. Emphasis on physical conditioning and exercise.

FIRE 53 HAZARDOUS MATERIALS FIRST RESPONDER OPERATIONAL DECONTAMINATION**Units: 0.5****8-9 hours lecture***(Prerequisite: FIRE 82A. Pass/No Pass)*

This course provides the student with the information and skills to safely and competently decontaminate people and equipment at a hazardous materials (haz mat) incident. California Specialized Training Institute (CSTI) certified. Meets federal and state requirements as listed in 29 CFR 1910.120 (q), CCR 5192 (q), NFPA472. \$10.00 fee for CSTI certificate.

FIRE 53A FIRE APPARATUS DRIVER/OPERATOR 1A: EMERGENCY VEHICLE OPERATIONS**Units: 1.5****16-18 hours lecture and 24-27 hours laboratory***(No prerequisite.)*

This course provides the student with information on driver responsibilities, recognized standards, and related laws for fire apparatus. Topics include basic inspections, documentation, maintenance, and troubleshooting fire apparatus, and techniques on driving and positioning fire apparatus. Each student also has the opportunity to increase his or her driving skills during simulated driving conditions. Designed for fire service emergency response personnel. (Former course number FIRE 63)

FIRE 54 FIRE COMMAND 2E**Units: 2.0****32-36 hours lecture***(No prerequisite. Pass/No Pass)*

This course prepares the fire fighter student to manage the large wildland fire incident. Topics of discussion include: California's wildland fire problem, fire safety, weather effects, wildland fuel behavior, attack methods, using support equipment, strategy and tactics, air attack operations, and using maps. Simulation is featured. Chief Officer certified.

FIRE 55 FIRE INSTRUCTOR 2A**Units: 2.5****40-45 hours lecture***(Prerequisite: FIRE 70 and FIRE 71. State mandated. Grade Option)*

This course is designed to provide the fire technology student the skills to evaluate students. Topics include: construction of written (technical knowledge) and performance (manipulative skills) tests, as well as test planning, test analysis, test security, and evaluation of test results to determine instructor and student effectiveness. Essential course for writing valid, objective tests.

FIRE 55C COMMAND AND CONTROL OF THE RAPID INTERVENTION CREW DEPLOYMENT**Units: 0.5** | **24-27 hours lecture***(No prerequisite. Pass/No Pass)*

This command level awareness course provides students with the terminology and methodology that is employed during a rapid intervention crew (RIC) deployment. Classroom simulations based on case studies allow students to participate in simulated RIC deployments. Students who wish to progress to the operational level may initiate a task book for additional experience.

FIRE 56 FIRE INSTRUCTOR 2B**Units: 2.5** | **40-45 hours lecture***(No prerequisite. Grade Option)*

This course is designed for the fire technology student who require skills leading groups of people in staff meetings, group discussions, and training sessions to solve problems, determine objectives, generate new ideas and provide instruction to subordinates.

FIRE 58 INTRODUCTION TO EMERGENCY MANAGEMENT**Units: 4.0** | **64-72 hours lecture***(No Prerequisite.)*

This course provides the history, terminology, goals and mission of the Emergency Management occupation and profession. The roles, responsibilities, lines of authority and characteristics of effective program managers are presented. Professional associations, federal support programs, model state practices and functional activities are also discussed.

FIRE 58A COMMUNITY DISASTER PLANNING**Units: 4.0** | **64-72 hours lecture***(No Prerequisite. Grade Option)*

This course provides the student with the information and details of coordinating and operating a community emergency operations center (EOC). How to coordinate the resources of a community or company, identify specific threats, and the operational requirements of an EOC are presented. Students will also receive certificate of completion from the Federal Emergency Management Agency (FEMA): IS-275, The Role of the EOC in Community Preparedness, Response and Recovery; IS-271, Anticipation of Weather and Community Risk; IS-301, Radiological Emergency Response; Q-534, Emergency Response to Terrorism; IS-288, Managing Volunteer Resources.

FIRE 58C EMERGENCY MANAGEMENT RECOVERY**Units: 4.0** | **64-72 hours lecture***(No Prerequisite. Grade Option)*

This course provides the student with the information and details of making the transition from response to recovery to a company disaster. Case studies examine mass fatality management, earthquakes, flooding and terrorism incidents. Students receive certificates of completion from the Federal Emergency Management Agency (FEMA): IS-7, Citizens Guide to Disaster Assistance; IS-208, State Disaster Management; IS-600, Special Considerations for FEMA Public Assistance Projects; IS-630, Introduction to the Public Awareness Process.

FIRE 58D INTRODUCTION TO MITIGATION FOR DISASTERS**Units: 4.0** | **64-72 hours lecture***(No Prerequisite. Grade Option)*

This course provides the student with the information and details to plan and implement mitigation strategies for a community or business. Mitigation includes all activities that improve a community or business's survivability from an identified threat. Identifying needs, obtaining funding and executing mitigation programs are the objectives of this course. Students also will receive certificates of completion from the Federal Emergency Management Agency (FEMA): IS-393, Introduction to Mitigation; IS-394, Mitigation for the Homeowner; IS-8, Building for the Earthquake of Tomorrow; IS-9, Managing Floodplain Development.

FIRE 59 BASIC WILDLAND FIRE FIGHTER ACADEMY**Units: 3.5****48-54 hours lecture and 24-27 hours laboratory**

(No prerequisite. Recommended preparation: FIRE 11B Must have/obtain Title 8-Confined Space Awareness certificate; FIRE 82A must have/obtain CSTI Haz-Mat First Responder Operational Certificate; must have/obtain CAL FIRE - EEO/Sexual Harassment Prevention certification; must have/obtain Title 22 - EMS -Public Safety First Aid, or Emergency Medical Responder, or Emergency Medical Technician Basic certification; must have/obtain Title 22 - EMS-CPR/AED Public Safety certification; must have/obtain CAL FIRE - Wildland Firefighter Safety & Survival Level 1 certification; must have/obtain FEMA-EMI Online - IS-100, ICS 100, an introduction to the incident command system certification; must have/obtain NWCG - S-190, Introduction to wildland fire behavior (classroom only) certification; must have/obtain FEMA-EMI Online - IS-700, NIMS National Response Plan certification; must have/obtain SFT - Firefighter Survival certification.)

This course presents information and skill development to students seeking employment and a career with a wildland fire agency. Several requisites/entrance skills required for CAL FIRE certification. This course provides 80 hours of the 179 hours of wildland firefighter training required for employment with the California Department of Forestry and Fire Protection (CALFIRE) and includes the basic requirements for the US Forest Service. Upon completion, students will receive National Wildland Coordinating Group (NWCG) certification in I-100, S-110, S-130, S-190, and L-180. Students must have a good attitude and a willingness to work hard.

FIRE 59B WILDLAND FIRE FIGHTER'S SKILLS MAINTENANCE**Units: 1.5****16-18 hours lecture and 24-27 hours laboratory**

This course provides the fire fighter student with new information and skill development to maintain efficiency and effectiveness as a wildland fire fighter. New protocols, procedures and equipment are presented and student demonstrates proficiency in using tools, tactics and strategies for fire control. (Previously FIRE 10B)

FIRE 60B ADVANCED INCIDENT COMMAND SYSTEM, I-400**Units: 1.0****32-36 hours lecture and 48-54 hours laboratory**

(No prerequisite. Pass/No Pass. Recommended preparation: Good attitude and willingness to work hard.)

This course will emphasize large scale organization development, roles and relationships of the primary command staff; the planning, operational, logistical and fiscal considerations related to command of a large and complex incident. Fire Service Training and Education Program (FSTEP) certified. There is a \$5.00 fee for certificate.

FIRE 60E DIVISION/GROUP SUPERVISOR, S-339**Units: 1.0****16-18 hours lecture**

(Prerequisites: FIRE 60G, FIRE 66, FIRE 86. State Mandated. Pass/No Pass).

This course will provide the information necessary to support the specific tasks of the Division/Group Supervisor position within the Incident Command System. North West Coordinating Group certified.

FIRE 60F ICS-334 STRIKE TEAM LEADER-ENGINE**Units: 1.0****16-18 hours lecture**

(No prerequisite, Pass/No Pass)

This course describes and explains the basic responsibilities of an Engine Strike Team Leader. Topics of discussion include: the strike team concept; types of strike teams; pre-incident responsibilities; assembly and travel; incident arrival; check-in; assigned/available status; out-of-service status; demobilization/release.

FIRE 61 RESCUE PRACTICES**Units: 3.0****32-36 hours lecture and 48-54 hours laboratory**

Rescue practices will provide training for emergency service personnel in reaching victims injured in collisions, cave-ins, collapse, or inaccessible areas such as mountainous terrain. Course includes training in both light and heavy auto extrication and packaging victims for transport; recovery of victims of earth collapse such as trench rescue; basic repelling techniques and use of the basket stretcher.

FIRE 61C HELISPOT MANAGER, S-272**Units: 0.5** | **8-9 hours lecture***(Prerequisite: FIRE 60G. State Mandated. Pass/No Pass)*

This course will provide the fire fighter student with an overview and the information about responsibilities, procedures and materials required to function as a Helispot Manager within the Incident Command System. North West Coordinating Group certified.

FIRE 61D RESOURCE UNIT LEADER/DEMobilIZATION UNIT LEADER**Units: 2.0** | **32-36 hours lecture***(Prerequisites: FIRE 61E and FIRE 66.1. State mandated. Pass/No Pass)*

This course prepares the fire fighter student to work as a resource unit leader/demobilization unit leader within the Incident Command System. The responsibilities, duties and materials required to function in this position are discussed. North West Coordinating Group certified.

FIRE 61E CHECK IN/STATUS RECORDER, S-248**Units: 0.5** | **32-36 hours lecture***(Prerequisites: FIRE 61E and FIRE 66.1. State mandated. Pass/No Pass)*

This course will provide the fire fighter student with the information required to function in the position of Check In/Status Recorder within the Resources Unit of the Incident Management System (ICS). North West Coordinating Group certified.

FIRE 61F STAGING AREA MANAGER**Units: 0.5** | **8-9 hours lecture***(Prerequisite: FIRE 60G, S-200. Pass/No Pass)*

This course will provide the fire fighter student with information about the duties, responsibilities and materials required to function as a staging area manager. Fire Service Training Education Program (FSTEP) certified.

FIRE 61G FIRE LINE EMERGENCY MEDICAL TECHNICIAN (EMT)**Units: 0.5** | **8-9 hours lecture***(Prerequisites: FIRE 81, current EMT--I certification (state mandated per CFSTES policy), employment as a fire fighter in a public or private fire service organization. Pass/No Pass)*

This eight hour course is designed to prepare the fire fighter, Emergency Medical Technician to safely operate at a major wildland fire incident at the fire line location. Course covers duties and responsibilities of the Fire Line EMT; equipment needs, helicopter safety, the Incident Command System (ICS) organization, review of treatments for common fire line injuries, and use of makeshift aids.

FIRE 61K RESCUE SYSTEMS 3: STRUCTURE COLLAPSE TECHNICIAN**Units: 0.5** | **24-27 hours laboratory***(No prerequisite. Pass/No Pass)*

Bridges the training gap between the California State Fire Training Rescue Systems 2 Advanced Rescue Skills course and the Federal Emergency Management Agency Structural Collapse Technician course. Key topics include: power actuated tools, pneumatic shores, additional tools and techniques for breaking and breaching, cutting a tensioned cable, the "O" course, rigging, and crane operations.

FIRE 61L ROPE RESCUE TECHNICIAN**Units: 1.0** | **8-9 hours lecture and 24-27 hours laboratory***(No prerequisite. Pass/No Pass)*

This course will prepare participants to undergo competency testing for high angle rescue. The scope of the program is to familiarize participants with the high angle environment and experience; and for them to safely participate in the engineering and operation of simple to complex rescue systems.

FIRE 63A AUTO EXTRICATION**Units: 0.5****24-27 hours laboratory***(No prerequisite. Pass/No Pass)*

Provides hands-on experience in the procedures and systems utilized during an automobile extrication. Subjects covered include: Auto Extrication, types of hand and power tools, removing windows, opening doors, removing windows, opening doors, removing roofs, pulling steering wheels, moving foot pedals, raising dashboards, pulling seats, stabilization of vehicles, and simulated rescues of trapped victims.

FIRE 64 FIRE APARATUS DRIVER/OPERATOR IB: PUMP OPERATIONS**Units: 1.5****16-18 hours lecture and 24-27 hours laboratory***(No prerequisite. Recommended preparation: FIRE 95. Pass/No Pass)*

The course provides the student with information on pump construction and theory of pump operations. Topics include: methods for performing basic hydraulics and techniques on basic inspections, documentation, maintenance, and troubleshooting fire pumps. Each student also has the opportunity to increase his or her pumping skills during simulated pumping conditions. Designed for fire service emergency response personnel.

FIRE 65 BASIC WILDLAND FIRE CONTROL**Units: 2.0****28 hours lecture, and 16-18 hours laboratory***Offered Spring. (No prerequisite)*

Basic wildland hand-crew training. The course covers fire suppression organizations, fire behavior, meteorology, suppression techniques, and safety. Meets federal fire agencies requirements for employees and mutual aid cooperators.

FIRE 650 CAMPBELL PREDICTION SYSTEM**Units: 1.0****16-18 hours lecture***(No prerequisite. Pass/No Pass)*

This course is designed for the fire fighter and fire officer who want to know why, when and where wildland fire behavior will change, and how to make these predictions to apply safe and effective tactics or evacuate a dangerous area and learn a system to effectively communicate these predictions to others. California Department of Forestry certified.

FIRE 66 BASIC INCIDENT COMMAND**Units: 1.0****16-18 hours lecture***(No prerequisite. Recommended preparation: Federal Emergency Management Institute's ICS-100. Pass/No Pass)*

This course introduces students to the principles of the Incident Command System (ICS) associated with incident-related performance. Topics include: leadership and management, delegation of authority and management by objectives, functional areas and positions, briefings, organizational flexibility, transitions and transfers. CSFM FSTEP Certification.

FIRE 67 TRENCH RESCUE**Units: 0.5****24-27 hours laboratory***(Prerequisite: FIRE 95 with a grade of 'C' or better. Pass/No Pass)*

This course is designed to provide hands on techniques for fire service personnel to effect a rescue at an excavation or trench cave-in. Topics include: critical considerations while responding to trenching emergencies; evaluation of cave-in scenes; basic life support procedures and temporary protection for victims; specialized tool usage; shoring techniques; and below grade rescue safety procedures.

FIRE 70 INSTRUCTOR IA – INSTRUCTIONAL TECHNIQUES PART I**Units: 2.5****40-45 hours lecture***(No prerequisite)*

This is the first of a three-course series. Topics include methods and techniques for training in accordance with the latest concepts in career education; selecting, adapting, organizing, and using instructional materials appropriate for teaching cognitive lessons; criteria and methods to evaluate teaching and learning efficiency; and an opportunity to apply major principles of learning through teaching demonstrations. Two (2) student instructor teaching demonstrations are required of all. Designed for personnel preparing for company officer, SFT registered instructor or training officer position.

FIRE 70C TRAINING INSTRUCTOR 1C: INSTRUCTIONAL DEVELOPMENT TECHNIQUES**Units: 2.5****40-45 hours lecture**

(Prerequisite: FIRE 70 and FIRE 71 completed with a grade of "B" or better, or Training Instructor 1A and 1B certification taken from another school.)

This is the third of a three-course series. Topics include methods and techniques for developing lesson plans, ancillary components, and tests in accordance with the latest concepts in career education. The course offers the opportunity to develop, receive feedback, and finalize instructional materials and deliver a teaching demonstration. Two (2) student instructor teaching demonstrations are required of all.

FIRE 71 TRAINING INSTRUCTOR 1B – PSYCHOMOTOR LESSON DELIVERY**Units: 2.5****40-45 hours lecture**

(Prerequisite: FIRE 70 with a grade of C or better.)

This is the second of a three-course series. Topics include methods and techniques for training in accordance with the latest concepts in career education; selecting, adapting, organizing, and using instructional materials appropriate for teaching psychomotor lessons; criteria and methods to evaluate teaching and learning efficiency; and an opportunity to apply major principles of learning through teaching demonstrations. Two student instructor teaching demonstrations are required of all. Designed for personnel preparing for a Company Officer, SFT Registered Instructor, or Training Officer position.

FIRE 72 COMMAND IA – STRUCTURE FIRE COMMAND OPERATIONS FOR COMPANY OFFICERS**Units: 2.0****32-36 hours lecture**

(Prerequisite: FIRE 66 minimum grade B or valid ICS 200 certificate or equivalent. Pass/No Pass.)

This State Fire Marshal course offers an introduction to command principles, command safety and risk management principles. Company officer initial actions at an incident including the development of incident priorities, strategy, and tactics. Information on the roles and responsibilities of a Company Officer for post-incident actions and the opportunity to gain experience in a controlled environment through structure fire incident simulations.

FIRE 72C FIRE COMMAND 1C I-ZONE FIREFIGHTING FOR COMPANY OFFICERS**Units: 2.0****32-36 hours lecture**

(No prerequisite)

This course is designed around the responsibilities of the Company Officer at a wildland/urban interface incident. It will bring the structural Company Officer out of the city and into the urban/interface incident. In other words, from his or her comfort zone into an area that could very well be quite unfamiliar. This course is required for Fire Officer Certification by the Office of the State Fire Marshal.

FIRE 73 FIRE COMMAND IB – INCIDENT MANAGEMENT FOR COMPANY OFFICERS (1998)**Units: 2.0****32-36 hours lecture**

(Prerequisite: SFT Command 1A and ICS 200 certification.)

Designed for first-in incident commander and company officers. This course provides the student with information on tactics, strategies, and scene management for multi-casualty incidents, hazardous materials incidents, and wildland fires. Each student also has the opportunity to increase his or her knowledge and skills by handling initial operations at these types of incidents through simulation and class activities. This course applies to Fire Officer Certification.

FIRE 74 FIRE PREVENTION IA**Units: 2.0****32-36 hours lecture**

(No prerequisite. Recommended preparation: FIRE 102.)

Designed for the entry-level fire inspector. Upon completion of this course, the student will have a basic knowledge of the certification and capstone task book process; the role of the fire inspector including; the inspection process; how to investigate, document, and resolve complaints; the legal process as it relates to the role of the fire inspector; permit types and processes; plan review; and public education including its purpose and how to evaluate needs and select a delivery model.

FIRE 74C FIRE PREVENTION 2A**Units: 2.5** | **40-45 hours lecture***(No prerequisite)*

This course provides the most up-to-date information on laws and regulations pertaining to systems, description, installations and problems relating to fire protection systems. This course is specifically designed for in-service fire department personnel wishing to complete their Prevention Officer II certification.

FIRE 74D FIRE PREVENTION 2B**Units: 2.5** | **40-45 hours lecture***(Prerequisite: Completion of State Fire Training (SFT) Fire Prevention Officer Certification Track)*

This course provides the participants with extensive, in depth information about the fire and life safety standards of buildings as they relate to Titles 19 and 24. Topics for discussion include: Types of construction, construction methods and materials, interior finishes, roof coverings, occupancy and more.

FIRE 74E FIRE PREVENTION 2C**Units: 2.5** | **40-45 hours lecture***(Prerequisite: Completion of State Fire Training (SFT) Fire Prevention Officer Certification Track)*

This course introduces the participants to unique and unusual prevention challenges. Topics include: Industrial ovens, cleaning and finishing processes, welding, refrigeration systems, medical gases, fireworks, and special extinguishing systems.

FIRE 75 FIRE PREVENTION 1B**Units: 2.0** | **32-36 hours lecture***(No prerequisite)*

This course provides the most up-to-date information on laws and regulations pertaining to systems, description, installations and problems relating to fire protection systems. This course is specifically designed for in-service fire department personnel wishing to complete their SFT Prevention Officer I Certification.

FIRE 76 MANAGEMENT 1-SUPERVISION FOR COMPANY OFFICERS**Units: 2.5** | **40-45 hours lecture***(No prerequisite)*

This course is designed to prepare or enhance the first line supervisor's ability to supervise subordinates. It introduces key management concepts and practices utilized in the California Fire Service. The course includes discussions about decision making, time management, leadership styles, personnel evaluations, and counseling guidelines. This course applies to Fire Officer certification.

FIRE 77 INVESTIGATION 1A**Units: 2.5** | **40-45 hours lecture***(Recommended Preparation: FIRE 102)*

This course provides the student with an introduction and basic overview of fire scene investigation. Provides information on fire scene indicators, and introduces fire service personnel to the concepts of fire investigation. Applies to Fire Officer and Fire Investigator I certification.

FIRE 78 FIRE PREVENTION 1C**Units: 2.0** | **32-36 hours lecture***(No prerequisite)*

This course provides the student with information on how to safely store, handle, dispense and transport flammable liquids and gases. Topics of discussion include: bulk handling and storage requirements, transportation of flammable and combustible liquids and gases, fire code requirements for storage outdoors, indoors, inside special rooms and portable container requirements. Applies towards Fire Prevention Officer I certification.

FIRE 79 FIRE INVESTIGATION IB**Units: 2.0****32-36 hours lecture***(No prerequisite)*

This course provides the participants with information to achieve a deeper understanding of fire investigation. This course builds on FIRE 77 Investigation IA and adds topics of discussion including the juvenile fire setter, report writing, evidence collection and preservation procedures.

FIRE 80A INTERMEDIATE WILDLAND FIRE BEHAVIOR, S-290**Units: 2.0****32-36 hours lecture and 8-9 hours laboratory**

(Prerequisites: FIRE 80. State mandated by California Fire Service Training and Education (CFSTES) and Incident Command System by North West Coordinating Group, or experience as a fire fighter working within the ICS. Pass/No Pass)

This course will present to firefighting students the skills and information necessary to prepare them for safe and effective operations at wildland fires. Meets the training requirements to work in the Incident Command System (ICS) Operations Section, as a Single Resource or Strike Team Leader. North West Coordinating Group (NWCG) certified. Coordinating Group, or experience as a fire fighter working within the ICS. Credit No/Credit)

FIRE 80B WILDLAND FIRE SUPPRESSION TACTICS, S-336**Units: 2.0****32-36 hours lecture***(Prerequisites: FIRE 80A, FIRE 66. State mandated. Pass/No Pass)*

This course will provide the fire fighter student the information necessary to operate within the Operations Section of the Incident Command System. North West Coordinating Group certified.

FIRE 81B EMT-I, CONTINUING EDUCATION RECERTIFICATION**Units: 0.5****4 hours lecture and 12 hours laboratory***(Prerequisite: EMT-1. State and county mandated. Pass/No Pass)*

This course provides the student with the information skills development and testing requirements for recertification qualification for Emergency Medical Technician 1 and qualifies for Continuing Education credit.

FIRE 82 HAZARDOUS MATERIALS FIRST RESPONDER AWARENESS**Units: 0.5****8-9 hours lecture***(No prerequisites)*

This course is designed to provide the student with information essential to those people who are likely to be first responders at hazardous materials incidents. Designed to meet federal and state requirements for awareness training for employees handling and using hazardous materials.

FIRE 82A HAZARDOUS MATERIALS FIRST RESPONDER OPERATIONAL**Units: 1.5****24-27 hours lecture***(No prerequisite. Pass/No Pass)*

This course provides the students with a fundamental knowledge of the factors affecting operating procedures at a Hazardous Material Incident. This course will improve the capabilities of the first responder to respond to a Haz Mat event in a safe and competent manner, within the typical resource and capability limits at the "operational" level. This course meets the First Responder Operational Haz Mat Emergency Response certified course requirements of California Code of Regulations (CCR) Title 19, Division 2, Chapter 1, Subchapter 2, Sections 2510-2560.

FIRE 83 FIRE MANAGEMENT 2C, LABOR AND PERSONNEL MANAGEMENT**Units: 2.0****32-36 hours lecture***(No prerequisites)*

This course provides the fire fighter student with knowledge and insight into firefighting personnel, human resources, and diversity management. Legal mandates, labor relations, and related areas are explored with a focus on human resource management and individual employee development strategies.

FIRE 84 FIRE COMMAND 2A-COMMAND TACTICS AT MAJOR FIRES**Units: 2.0****32-36 hours lecture***(No prerequisite)*

This course is designed to provide the student with the management techniques and use of the Incident Command System (ICS) necessary for the efficient and safe command of large fires, multiple alarms and emergencies requiring large numbers of personnel and apparatus. Features simulation and case studies to develop management and command skills. Applies to Chief Officer Certification. California Fire Service Training and Education System (CFSTES) approved.

FIRE 85 FIRE MANAGEMENT 2A-ORGANIZATIONAL DEVELOPMENT AND HUMAN RELATIONS**Units: 2.0****32-36 hours lecture***(No prerequisite)*

This course provides the student with information on how to make the transition from supervisor to manager. Topics of discussion include internal and external influences; personality traits of fire fighters; managing human relations; group dynamics; conflict solution and more. This course applies to Chief Officer Certification. California Fire Service Training and Education System (CFSTES) approved.

FIRE 86 INTERMEDIATE INCIDENT COMMAND SYSTEM (ICS)**Units: 1.5****24-27 hours lecture***(Prerequisite: FIRE 66 or experience as an Emergency Responder using the ICS system. Pass/No Pass)*

This course provides training on resources for personnel who require advanced application of the Incident Command System (ICS). The target audience for this course is for individuals who may assume a supervisory role in expanding incidents or Type 3 incidents. These incidents may extend into multiple operational periods. This course expands upon information covered in the ICS-100 and ICS-200 courses. This course will include but not be limited to: unified command, incident/event assessment and objective development, the ICS planning process, incident/event resource management, transfer of command and demobilization.

FIRE 87 FIRE MANAGEMENT 2E**Units: 2.0****32-36 hours lecture***(No prerequisite)*

Designed for Fire Chief Officers, Company Officers and functional managers, this course provides an overview of current issues and concepts of today's modern fire service. Topics include: governmental relations, changing "settings/policy formation," program management, personnel/labor relations, and the legal environment.

FIRE 91 FIRE CONTROL 5**Units: 1.5****24-27 hours lecture and 16-18 hours laboratory***(No prerequisite. Pass/No Pass)*

This course provides the fire fighter student with the information, methods and techniques necessary for providing crash fire rescue services (CFR) at airports. Subjects include: Utilizing conventional fire and specialized apparatus, CFR extinguishing agents, types of aircraft, standby procedures and operations at airports. Actual firefighting and simulation is featured.

FIRE 93 FIRE MANAGEMENT 2D, MASTER PLANNING**Units: 2.0****32-36 hours lecture***(No prerequisite)*

This course provides participants with information and discussion centering around program planning, master planning, forecasting, system analysis, system design, policy analysis, and other topics. Applies to Chief Officer certification. State Fire Marshal accredited.

FIRE 94 FIRE COMMAND 2D, PLANNING FOR LARGE SCALE DISASTERS**Units: 2.0****32-36 hours lecture***(No prerequisite)*

The principles of disaster planning and the role of the fire department are discussed. Emergency Operation Centers (EOC), the role of Federal Emergency Management Administration (FEMA), mutual aid, legal considerations, and mitigation techniques are topics covered. Case studies are examined and simulation exercises are featured.

FIRE 95 BASIC FIRE ACADEMY**Units: 12.5** | **120-135 hours lecture and 240-270 hours laboratory**

(No prerequisite. Recommended preparation: Students will complete a physical exam to demonstrate physical stamina and ability to safely operate and control fire service tools, equipment and apparatus; FIRE 11B or State Fire Marshall Confined Space Awareness Cert.; FIRE 82A or CSTI HazMat FRO; FIRE 66 or I200 Cert.; EMS 60 or ALDH 71 or EMT certification.)

Basic Fire Academy provides basic training for individuals interested in becoming a career firefighter. Comprehensive introduction to basic firefighting theory and skills required in modern firefighting, including: study of characteristics and behavior of fire; practice in fundamental fire suppression activities with special attention on safety; practice in basic rescue techniques; study of public service principles and fire service etiquette. Students must attend a mandatory orientation.

FIRE 100 FIRE PROTECTION ORGANIZATION**Units: 3.0** | **CSU** | **48-54 hours lecture***(No prerequisite)*

This course provides an overview to fire protection and emergency services; career opportunities in fire protection and related fields; culture and history of emergency services; fire loss analysis; organization and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; fire service nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fire protection systems; introduction to fire strategy and tactics; life safety initiatives.

FIRE 101 FUNDAMENTALS OF FIRE SERVICE OPERATIONS**Units: 3.0** | **CSU** | **48-54 hours lecture***(No prerequisite)*

Provides the student with the fundamentals of fire department organization, management, and resources, and emphasizes the use of those resources to control various emergencies.

FIRE 102 FIRE PREVENTION TECHNOLOGY**Units: 3.0** | **CSU** | **48-54 hours lecture***(No prerequisite)*

This course provides fundamental information regarding the history and philosophy of fire prevention, organization and operation of a fire prevention bureau, use of fire codes, identification and correction of fire hazards, and the relationship of fire prevention with fire safety education and detection and suppression systems.

FIRE 103 FIRE PROTECTION SYSTEMS**Units: 3.0** | **CSU** | **48-54 hours lecture***(No prerequisite. Recommended preparation: FIRE 100)*

This course provides information relating to the features of design and operation of fire detection and alarm systems, heat and smoke control systems, special protection and sprinkler systems, water supply for fire protection and portable fire extinguishers.

FIRE 104 FIRE BEHAVIOR AND COMBUSTION**Units: 3.0** | **CSU** | **48-54 hours lecture***(No prerequisite)*

This course will study the theory and fundamentals of how and why fires start, spread, and are controlled; an in-depth study of fire chemistry and physics, fire characteristics of materials, extinguishing agents, and fire control techniques.

FIRE 105 BUILDING CONSTRUCTION FOR FIRE PROTECTION (Formerly FIRE 69)**Units: 3.0** | **CSU** | **48-54 hours lecture***(No prerequisite)*

This course provides the components of building construction that relate to fire and life safety. The focus of this course is on firefighter safety. The elements of construction and design of structures are shown to be key factors when inspecting buildings, pre-planning fire operations, and operating at emergencies. Development and evolution of building and fire codes will be studied in relationship to past fires, in residential, commercial, and industrial occupancies.

FIRE 106 FIRE COMPANY ORGANIZATION AND MANAGEMENT**Units: 3.0** **CSU** | **48-54 hours lecture***(No prerequisite)*

Review of fire department organization, fire company organization, study of leadership and supervision with emphasis on communications, training, fire prevention, records and reports, and problem solving.

FIRE 107 FIRE INVESTIGATION**Units: 3.0** **CSU** | **48-54 hours lecture***(No prerequisite)*

A study of the origin of any and all types of fires (accidental, incendiary, and suspicious); and law relating to fire investigation. Recognizing, collecting, and preserving evidence, interviewing witnesses and suspects, arrest and detention procedures, court procedures and giving a testimony.

FIRE 108 FIRE HYDRAULICS**Units: 3.0** **CSU** | **48-54 hours lecture***(No prerequisite)*

Review of applied mathematics; hydraulics laws as applied to the fire service; application of formulas and mental calculation to hydraulics and water supply problems.

FIRE 109 WILDLAND FIRE CONTROL**Units: 3.0** **CSU** | **48-54 hours lecture***(No prerequisite)*

A course designed to provide employed firemen or fire science majors with a fundamental knowledge of the factors affecting wildland fire prevention, fire behavior, and control techniques.

FIRE 110 PRINCIPLES OF FIRE AND EMERGENCY SERVICES SAFETY AND SURVIVAL (Formerly FIRE 68)**Units: 3.0** **CSU** | **48-54 hours lecture***(No prerequisite)*

This course introduces the basic principles and history related to the national firefighter life safety initiatives, focusing on the need for cultural and behavioral change throughout the emergency services.

FIRE 121 FIRE MANAGEMENT 2B**Units: 2.0** **CSU** | **32-36 hours lecture***(No prerequisite)*

This course is designed to provide information and insight into the cyclical nature of budgeting and financial management. As a management course, the student will be presented with the essential elements of financial planning, budget preparation, budget justification, and budget controls. This course applies to Chief Officer Certification.

FIRE 138 COOPERATIVE EDUCATION*See Cooperative Education listing. Units: 1-8* **CSU****FIRE 148 SPECIAL TOPICS***See Special Topics listing. Units: Variable units* **CSU****FIRE 149 INDEPENDENT STUDY***See Independent Study listing. Units: 1-3 units* **CSU**

The study of French concentrates on explaining and communicating ideas and concepts by means of reading, writing, and verbal processes through creative use of words and study of culture, literature, and civilization, with classroom emphasis on the spoken language. This study affords insight into foreign attitudes and methods and encourages free communication, written and oral, among people.

Career Opportunities

Advertising, Education, Government, Health Services, International Business, Journalism, Law Enforcement, Publishing
Social Work, Writing

Degrees and Certificates Awarded

Associate in Arts, Liberal Arts

Associate Degree

No associate degree offered with a major in French. French courses may be used to fulfill requirements for an Associate in Arts degree with a major in Liberal Arts. See Liberal Arts for degree requirements for this major.

Transfer

For the most up-to-date information on these programs and others, visit www.assist.org. Please stop by the Transfer Center in Building 55 or make an appointment with a counselor if you have questions.

-California State University, San Bernardino: French major

-University of California, Riverside: French major

French Courses

FREN 101 ELEMENTARY FRENCH

Units: 5.0 **CSU,UC** | 80-90 hours lecture

(No prerequisite)

Basic structures of French language, inductive presentation of grammar, simple composition. Emphasis placed on the spoken language.

FREN 102 ELEMENTARY FRENCH

Units: 5.0 **CSU,UC** | 80-90 hours lecture

(Prerequisite: FREN 101)

Continuation of FREN 101 stressing review of basic structures, more advanced grammar, spoken and written communication.

FREN 103 INTERMEDIATE FRENCH

Units: 3.0 **CSU,UC** | 48-54 hours lecture

(Prerequisite: FREN 102)

Continuation of FREN 102 with grammar review and expansion, introduction to simple literary texts, spoken and written communication.

FREN 104 INTERMEDIATE FRENCH

Units: 3.0 **CSU,UC** | 48-54 hours lecture

(Prerequisite: FREN 103)

Continuation of FREN 103 with further grammar review and expansion, reading of simple literary texts, spoken and written communication.

FREN 125 CONVERSATIONAL FRENCH

Units: 3.0 **CSU** | 48-54 hours lecture

(No prerequisite. Grade Option)

An introduction to the French language using situations the visitor will commonly encounter. Introduction to simple French structures and grammar with emphasis on the spoken language.

FREN 128 SPECIAL TOPICS

See *Special Topics listing*. Units: Variable units

FREN 129 INDEPENDENT STUDY

See *Independent Study listing*. Units: 1-3 units

Geography

Geography is a spatial science that explains and describes the Earth in terms of location. All Geographers ask questions about the earth focusing on the location of a place and how that location contributes to the attributes of that place. Place names serve as the framework for this exploration. The primary tools used by geographers are maps, which show the locations, patterns and distribution of the earth features being examined. All geographers compare and contrast this locational information in order to explain the similarities and differences of the physical and cultural environments of the earth and its inhabitants. As a result, geographers are also called spatial analysts. The discipline of Geography is considered a Social and Global Science

There are two broad categories of Geography: Physical and Cultural. Physical geographers look at the earth's physical characteristics. Included are such topics that relate to the earth's natural environment such as earth-sun relationships, weather and climate, flora and fauna, rocks and minerals, earthquakes, volcanoes, mountain building, gradational forces and land form distribution.

Cultural Geographers examine the present-day earth in terms of its people, their organizations, languages, religions, economic systems, population and settlement patterns.

Geography courses are transferable to CSU, UC, and may be used to fulfill requirements for an Associate of Arts in Geography Degree for Transfer (AA-T) and/or Liberal Arts AA and /or various certificates.

Career Opportunities

Computer analysis of data through the use of Geographic Information Systems is a rapidly growing field which can be applicable to many employment settings. The following list is a general guideline. Most of the following career paths require at least a bachelor's degree.

Aerial Photographer/Interpreter, Bio geographer, Cartographer, City Planner, Climatologist, County Planner
Demographer, Educator, Environmental Analyst, Economic Geographer, Foreign Correspondent
Foreign Correspondent Educator, GIS Specialist, Government Analyst, Hydrologist, Industrial Location Specialist
International Trade Relations, Marketing Analyst, Meteorologist, Paleo climatologist, Population Specialist
Resource Planner, Soil Scientist, Transportation Specialist, Travel Specialist

Faculty

Carol A. DeLong - Emeritus

Degrees and Certificates Awarded

Associate in Arts, Liberal Arts

Associate in Arts in Geography for Transfer (AA-T)

Associate Degree

To earn an Associate in Science degree for Transfer with a major in Geography, complete the required major courses and all other requirements specified on the following pages (i.e. 60 CSU transferable units, CSU GE or IGETC, etc.). For more information on the AA-T/AS-T degrees, meet with a counselor or www.adegreewithaguarantee.com

Transfer

For the most up-to-date information on these programs and others, visit www.assist.org. Please stop by the Transfer Center in Building 55 or make an appointment with a counselor if you have questions.

-California State University, San Bernardino:

Geography – Geography Option B.A.

Geography – Global Studies Option B.A.

-University of California, Riverside: Geography major

Global Studies B.A.

A new transfer option has been added in this major. Check this out:

Geography, AA-T		
Students who complete an Associate in Arts in Geography for Transfer Degree will be prepared to transfer into the CSU system and continue toward a BA in Geography. This Bachelor's degree prepares students for many career paths that deal with both the physical and /or cultural attributes of our globe. Courses in Geography offer students a unique perspective on global issues and problems dealing with the earth's physical environment and its inhabitants. Included are concepts that allow students to learn the geographer's special skill of analyzing spatial relationships using tools such as maps, GIS (Geography Information Systems), GPS (GeoPosition Satellites) remote sensing, spatial data and quantitative statistics. An Associate in Arts in Geography for Transfer Degree from Victor Valley College offers a wide overview and foundation for future study in not only geography but other social and physical sciences. Geographers make significant contributions in many professions and work in all areas of the public and private sector. Anyone with a degree in Geography, can continue their academic career with confidence knowing that they are prepared to proceed in any field that deals with our globe and its people.		
Program Requirements: 20 units		
Required Courses (7 units total)		
GEOG 101	Introduction to Physical Geography	3.0
GEOG 101L	Geography Lab	1.0
GEOG 102	Introduction to Cultural Geography	3.0
Additional Courses		
List A –Select TWO of the following courses (6 units total)		
GEOG 103	Geography of California	3.0
GEOG 104	World Regional Geography	3.0
List B – Select TWO (7 units)		
ANTH 102	Introduction to Cultural Anthropology	3.0
GEOG 130	Introduction to Weather and Climate	4.0
A student wishing to pursue an AA-T/AS-T degree in the major listed on this page must ensure the CSU of their choice is accepting that similar major. Students completing an AA-T/AS-T degree are guaranteed admissions into a CSU campus given that a student fulfills the following:		
<ol style="list-style-type: none"> 1) 60 CSU transferable units; 2) Completes the CSU General Education (GE) or IGETC General Education pattern; 3) Completes the major requirements for the AA-T/AS-T; 4) Maintains a transferable cumulative GPA of at least 2.0 (C or better); 5) Completes the basic/Golden 4 GE requirements. 		
For more information on the AA-T/AS-T degrees, meet with a counselor or visit www.sb1440.org and www.adegreewithaguarantee.com		

GEOG 101 PHYSICAL GEOGRAPHY

Units: 3.0 *CSU, UC* 48-54 hours lecture

(No prerequisite.)

An introduction to the fundamental concepts of geography with emphasis on the physical world, its components and interrelationships. Topics include earth/sun relationships, atmospheric elements and weather, climate and seasons, earthquakes and volcanoes, rocks and minerals, oceans and coastlines, glaciers, and landform distribution. Also included are introductory methods of map reading and interpretation. Current environmental issues relating to these topics are emphasized.

GEOG 101L GEOGRAPHY LABORATORY

Units: 1.0 *CSU, UC* 48-54 hours laboratory

(No Prerequisite: Co-requisite: GEOG 101)

An interactive exploration of earth's weather and climate, vegetation and soils, rocks and minerals, earthquakes and volcanoes. Tectonic forces are studied as relating to landform destruction and creation. Gradational forces are studied as relating to the processes of water, wind and ice.

GEOG 102 INTRODUCTION TO CULTURAL GEOGRAPHY

Units: 3.0 *CSU, UC* 48-54 hours lecture

(No prerequisite)

An examination of human activities on the surface of the earth as exhibited by various cultures. Global variations in land-use systems, settlement patterns, economic activities, political and religious institutions, languages, and the numbers and movement of human populations are explored.

GEOG 103 GEOGRAPHY OF CALIFORNIA

Units: 3.0 *CSU, UC* 48-54 hours lecture

(No prerequisite)

Study of California's physical and cultural characteristics. Physical topics covered include earthquakes, fires, landslides, floods and volcanoes. Cultural topics include diversity, immigration, urbanization, agriculture and economics.

GEOG 104 WORLD REGIONAL GEOGRAPHY

Units: 3.0 *CSU* 48-54 hours lecture

(No prerequisite)

An examination of the world's countries within their global regions with emphasis on their physical and cultural attributes. Variations within and among these global regions are explored.

GEOG 106 MAP INTERPRETATION AND ANALYSIS

Units: 3.0 *CSU, UC* 48-54 hours lecture

(No prerequisite)

Introduction to maps, images and geographic techniques. Technologies include map and aerial photograph interpretation, tabular data, spatial statistics, cartography, Global Positioning Systems (GPS), Internet mapping, remote sensing and Geographic Information Systems (GIS) that aid in data collection, analysis and presentation.

GEOG 110 INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS (GIS)

Units: 3.0 *CSU, UC* 48-54 hours lecture

(No prerequisite)

GIS basics and applications are explored, including terminology, mapping and problem solving. Current GIS software applications and GPS navigational systems are utilized.

GEOG 128 SPECIAL TOPICS

See Special Topics listing. Units: Variable units *CSU*

GEOG 130 INTRODUCTION TO WEATHER AND CLIMATE

Units: 4.0 *CSU* 48-54 hours lecture and 48-54 hours laboratory

(No prerequisite)

An examination of Earth's weather and climate systems including seasonal changes in solar radiation, temperature, barometric pressure, wind, atmospheric moisture, condensation, precipitation, air masses, fronts and mid-latitude cyclones. Tornadoes and hurricanes, weather forecasting, climate and climate change also included.

Geological Sciences

Geology is the study of the rocks and minerals of the earth and the external and internal processes that create earth's landforms. Geologists work to describe and explain how our planet evolved and how each particular environment is unique as to its formation. The discipline of Geology takes from other disciplines such as chemistry, biology, geography, mineralogy, meteorology, paleontology, oceanography and astronomy in order to explain earth's physical processes. Coursework in those disciplines, integrated within a geological framework, provides students with a broad, marketable understanding of earth's processes. Fieldwork is often included in geological study, especially at the universities. This fieldwork helps students understand how to assess geological processes within a local environment.

Geologists go on to work for environmental and mining companies as well as planning organizations and building companies. A bachelor's degree is recommended for students planning to become professional geologists employed by environmental and geo-technical firms, governmental agencies, and oil and mining companies and for students planning to pursue a graduate degree in geology.

At VVC the geological sciences are offered as an undergraduate part of the two-year Associate in Science degree and prepares the student for advanced study at the University

Career Opportunities

Mining Geologist, Environmental Planner, Ground Water Quality Manager, Petroleum Engineer, Paleontologist, Geoarchaeologist, Geological Engineer, Soil Conservationist, Metallurgist, Exogeologist (Astrogeologist), Geomorphologist

Degrees and Certificates Awarded

Associate in Arts, Liberal Arts

Associate in Science, Math/Science

Associate Degree

No associate degree offered with a major in Geological Sciences. Courses in Geological Sciences may be used to fulfill requirements for an Associate in Science degree with a major in Math/Science. See Math/Science for degree requirements for this major. Courses may also be used to fulfill requirements for an Associate in Arts degree with a major in Liberal Arts. See Liberal Arts for degree requirements for this major.

Transfer

For the most up-to-date information on these programs and others, visit www.assist.org. Please stop by the Transfer Center in Building 55 or make an appointment with a counselor if you have questions.

- California State University, San Bernardino:** Geology major
- University of California, Riverside:** Geology major, and Geophysics major

Geological Sciences Courses

GEOL 101 PHYSICAL GEOLOGY

Units: 4.0 **CSU, UC** | 48-54 hours lecture and 48-54 hours laboratory

(No prerequisite)

The study of geology is explored, including theories, principles and applications. Exploration includes, but is not limited to, minerals, rocks, weathering processes, seismic activity, and tools used by geologists. Field trips are scheduled to areas of representative local geology.

GEOL 102 HISTORICAL GEOLOGY

Units: 4.0 **CSU, UC** | 48-54 hours lecture and 48-54 hours laboratory

(No prerequisite)

A study of the chronological development of the surface of the earth and of the corresponding evolution of life. Of vital importance to the course is a thorough understanding of the concepts of geologic time, biological classification, and evolution. Emphasis is placed on historical development of North America.

GEOL 103 GEOLOGY OF CALIFORNIA

Units: 3.0 **CSU, UC** | 48-54 hours lecture

(No prerequisite)

A survey of the physical and historical geology of the 12 distinct geologic provinces of the state. Greatest emphasis is placed on the most important structural, scenic, and economic details of each region, and upon the provinces of Southern California.

GEOL 128 SPECIAL TOPICS

See Special Topics listing. Units: Variable units **CSU**

GEOL 129 INDEPENDENT STUDY

See Independent Study listing. Units: 1-3 units **CSU**

Guidance

Guidance classes offered at Victor Valley College are designed to assist students in becoming goal directed and successful. Students needing help in identifying career and educational goals or help in applying successful learning and studying techniques are encouraged to sign up for these classes.

Guidance Courses

GUID 50 COLLEGE SUCCESS

Units: 1.0 | **16-18 hours lecture**

(No prerequisite. Grade Option)

This survey course is designed to introduce personal management and study techniques that are commonly applied among successful college students, with an emphasis on concepts such as the learning process, time management, note taking, efficient textbook reading, memory development and effective test-taking. It also serves as an orientation to college procedures and available campus resources.

GUID 51 ORIENTATION TO COLLEGE

Units: 0.5 | **8-9 hours lecture**

(No prerequisite. Grade Option)

This class is designed to provide students with a well-rounded knowledge and orientation to the policies, procedures, and academic and support services available at Victor Valley College. Students will develop an educational plan relevant to their educational/career goals. It will introduce and help students understand major and general education, certificate, AA, and transfer requirements; identify the four-year college system (CSU, UC, and private); understand the financial aid process, and will allow students to develop and identify academic/career goals.

GUID 55 BUILDING MATH CONFIDENCE

Units: 1.5 | **24-27 hours lecture**

(No prerequisite Grade Option)

A group guidance program designed for those who fear math and/or are unable to deal with math successfully. Emphasis will be on how one approaches math by examining attitudes and dispelling faulty notions which erode confidence in one's ability to do math.

GUID 56 SELF ESTEEM

Units: 1.5 | **24-27 hours lecture**

(No prerequisite. Grade Option)

This personal development course focuses on specific ideas and techniques to overcome negative feelings such as loneliness, guilt, depression, and inferiority. Students will develop a personal value system that leads to greater happiness and productivity.

GUID 59 SPECIAL ISSUES IN PERSONAL DEVELOPMENT

Units: 1.0 | **16-18 hours lecture**

(No prerequisite. Grade Option)

Opportunities for an examination of the elements associated with particular issues of personal development and various topics of student concern.

GUID 64 ORIENTATION (EOPS)

Units: 0.5 | **8-9 hours lecture**

(No prerequisite. Pass/No Pass)

This class is designed to orient EOPS students to the college's functions, programs, services, procedures, campus facilities, transfer and career information. Additionally, it will acquaint students with performance expectations.

GUID 66 PEER ADVISING TECHNIQUES

Units: 3.0 | 48-54 hours lecture

(No prerequisite. Pass/No Pass)

This course is designed to provide peer advising techniques, familiarize students with campus policies and procedures, student rights and responsibilities, and campus resources, and to develop helping skills that will prepare peer advisors to assist other students.

GUID 75 CAREER PLANNING FOR THE DISABLED

Units: 1.0 | 16-18 hours lecture

(No prerequisite. Pass/No Pass)

This course is designed to offer students with disabilities a practical orientation in career selection and development of skills in job placement.

GUID 100 CAREER AND LIFE PLANNING

Units: 2.0 | **CSU** | 32-36 hours lecture

(No prerequisite. Grade Option)

This group guidance course is designed to assist students in the career and life planning process through consideration of individual needs, personality, interests, abilities and values. Emphasis will be placed on personal growth through assessment, career research, goal setting, and decision making.

GUID 101 FIRST YEAR EXPERIENCE

Units: 3.0 | **CSU, UC** | 48-54 hours lecture

(No prerequisite. Grade Option)

This comprehensive course integrates personal growth, academic and career success with problem solving, critical and creative thinking. The course focuses on the following topics: life management, goal setting, career decision making, educational planning, college requirements and expectations, instructor-student interaction, cultural diversity, health maintenance, stress management, campus resources, learning styles, and strategies including lecture note-taking, test taking, and concentration.

GUID 105 PERSONAL AND CAREER SUCCESS

Units: 3.0 | **CSU, UC** | 48-54 hours lecture

(No prerequisite. Recommended Preparation: ENGL 50 with a grade of "C" or better or eligibility for ENGL 101.0. Grade Option)

This intensive course is designed to assist students in obtaining the skills and knowledge necessary to identify and reach their personal goals and achieve college and career success. Topics covered include: self-awareness, goal-setting, motivation and discipline, memory development, time management, oral and written communication skills, study skills, diversity, financial planning, and an orientation to college life.

GUID 107 LEARNING STRATEGIES AND STUDY SKILLS

Units: 3.0 | **CSU** | 48-54 hours lecture

(No prerequisite. Grade Option)

This survey course assists students in assessing attitude, motivation, learning styles, and personality attributes that are necessary to the successful transition into college. Students will integrate this self-awareness with theories and strategies that focus on the attainment of life long success in academic, professional and personal development. Topics include time management, study skills, test preparation, educational goal setting and planning, maintaining a healthy life style, and critical thinking skills.

Health

HLTH 102 CONTEMPORARY PROBLEMS IN PERSONAL AND COMMUNITY HEALTH

Units: 3.0 *CSU, UC* | 48-54 hours lecture

(No prerequisite, Grade Option)

An introductory course emphasizing the scientific basis for making rational decisions on contemporary health problems of personal and social significance. Course includes personal nutrition, fitness, reproduction, and disease control. The course also includes a review of other current issues of community health.

Health 102 satisfies VVC's P.E. requirement in addition to any other requirements it may fulfill.

HLTH 202 NUTRITION FOR FITNESS

Units: 3.0 *CSU, UC* | 48-54 hours lecture

(No prerequisite, Grade Option)

Nutrition is an integral part of fitness. Explore the effects of proteins, fats, carbohydrates, water, minerals and vitamins on fitness and health.

History examines the processes that have made today's realities. History is an evolving record of emotion, aspiration, frustration, and success. Historians deal with the goals, fears, interests, opinions, and prejudices of people in the past. What made people the way they were? What is the impact of their thought and action on people today and what is their impact on people tomorrow? As a study of people, history offers both a necessary understanding of one's place in the human experience and the conceptual framework for a lifelong avocation.

A student receiving a degree or certificate in this field will be able to:

- Identify and analyze key historical terms, including historiographical contexts.
- Discuss significant people, institutions and events, using primary and secondary source materials.
- Demonstrate analytical skills in interpreting historical documents and source materials to construct logical arguments about past events and their impact on the future.

Career Opportunities

Careers usually require bachelor's or advanced degrees.

Advertising/Marketing Research, Archivist/Museum Curator, Educator, Genealogist, Historian, Journalist/Writer/Editor
Lobbyist/Law Clerk/Lawyer, Management Trainee, Politician/Diplomat, Pollster, Professor, Reference Librarian
Risk Analyst, Researcher, Teacher, Writer

Faculty

Tracy Davis | Lisa Ellis | Eric Mayer

Degrees and Certificates Awarded

Associate in Arts, Liberal Arts

Associate in Arts in History for Transfer (AA-T)

Associate Degree

History courses may be used to fulfill requirements for an Associate in Arts degree with a major in Liberal Arts. See Liberal Arts for degree requirements for this major.

To earn an Associate in Science degree for Transfer with a major in History, complete the required major courses and all other requirements specified on the following pages (i.e. 60 CSU transferable units, CSU GE or IGETC, etc.). For more information on the AA-T/AS-T degrees, meet with a counselor or www.adegreewithaguarantee.com

Transfer

For the most up-to-date information on these programs and others, visit www.assist.org. Please stop by the Transfer Center in Building 55 or make an appointment with a counselor if you have questions.

- California State University, San Bernardino:** History major
- University of California, Riverside:** History major

A new transfer option has been added in this major. Check this out:

History, AA-T		
<p>Students completing an Associate in Arts for Transfer in History Transfer will be prepared to transfer into the CSU system to continue toward a BA in History or a combined Social Sciences Degree, as well as a general Liberal Arts Degree. The degree is for students who seek to understand the past and strive to develop a historical sense. With course offerings covering much of the past from all parts of the globe, from the ancient world to the present, the program offers the foundation for a broad education. Such a foundation has been preparing students since the founding of the school in 1961 for careers in education, politics, the law, public administration, librarianship, and many other disciplines. This program offers students an in-depth and diverse framework of traditional humanistic skills, the chief being critical reading, good writing, and the analyses of historical texts. We offer expertise in such areas as the history of the Latin America, Native American, and Women in US History, as well as the traditional survey courses in U.S. and World History.</p>		
Program Requirements: 18 units		
Required Courses (6 units total)		
HIST 117/H117	History of the U.S. to 1876	3.0
HIST 118/H118	History of the U.S. from 1876	3.0
Additional Courses		
List A – (6 units total)		
HIST 103	World History to 1500	3.0
HIST 104	World History Since 1500	3.0
List B – Group 1 Select any ONE of the following courses (3 units total)		
HIST 130	Latin American History	3.0
HIST 131	Latin American History	3.0
HIST 155	Women in History	3.0
HIST 157	Native American History	3.0
List B – Group 2 Select any ONE of the following courses (3 units total)		
ANTH 102	Introduction to Cultural Anthropology	3.0
ECON 101	Principles of Economics: Macro	3.0
ECON 102	Principles of Economics: Micro	3.0
SOC 101	Introduction to Sociology	3.0
SOC 107	Ethnic Experience in American Society	3.0
GEOG 102	Introduction to Cultural Geography	3.0
POLS 102	American Government	3.0
PSYC 101/H101	Introductory Psychology	3.0
<p>A student wishing to pursue an AA-T/AS-T degree in the major listed on this page must ensure the CSU of their choice is accepting that similar major. Students completing an AA-T/AS-T degree are guaranteed admissions into a CSU campus given that a student fulfills the following:</p> <ol style="list-style-type: none"> 1) 60 CSU transferable units; 2) Completes the CSU General Education (GE) or IGETC General Education pattern; 3) Completes the major requirements for the AA-T/AS-T; 4) Maintains a transferable cumulative GPA of at least 2.0 (C or better); 5) Completes the basic/Golden 4 GE requirements. <p>For more information on the AA-T/AS-T degrees, meet with a counselor or visit www.sb1440.org and www.adegreewithaguarantee.com</p>		

HIST 103 WORLD HISTORY TO 1500**Units: 3.0** CSU, UC | 48-54 hours lecture*(No prerequisite)*

Course will focus on the beginnings of civilization some five to seven thousand years ago in Mesopotamia, Asia, the Americas, Classical Civilizations and the Axis Age with an understanding of the world in 1500. Social, cultural, geographical, political and economic history of the various world civilizations will be stressed. The course is designed to challenge erroneous assumptions about world history and contemporary realities.

HIST 104 WORLD HISTORY SINCE 1500**Units: 3.0** CSU, UC | 48-54 hours lecture*(No prerequisite)*

Course will cover the period of 1600 to the 1980's and will focus on the making of the modern world. Inter-locking themes will include the discovery of the New World and the rise of Capitalism, the resistance to this new economic system by the non-white world, the spread of Imperialism and the division of the world in the "core" (industrial) and "peripheral" (non-industrial) nations of the First and Third World. National revolution and rebellion especially in the 20th century will be examined as well as the "end of the Third World" and the rise of the Pacific Rim as a model of national and economic development.

HIST 115 HISTORY OF CALIFORNIA**Units: 3.0** CSU, UC | 48-54 hours lecture*(No prerequisite)*

A survey of the history and geography of California. The course will cover all aspects of the development of what is today known as California, including those contributions made by Indians, Spanish, Mexican, and early Anglo inhabitants. Special emphasis will be laid upon critical issues of the present. This course satisfies in part the California history requirement for teachers in the primary grades.

HIST H115 HONORS HISTORY OF CALIFORNIA**Units: 3.0** CSU | 48-54 hours lecture*(Prerequisite: Eligibility for ENGL 101.0/H101. Recommended preparation: HIST 50.)*

A comprehensive study of California history, including native culture, the Mission era, the Ranchos, the Mexican War and the US conquest, and the era of US control. Economic, environmental and social issues are identified and discussed.

HIST 117 HISTORY OF THE UNITED STATES TO 1876**Units: 3.0** CSU, UC | 48-54 hours lecture*(UC credit limitation). (No prerequisite.)*

American Civilization through the Civil War era. Native American and European antecedents will be studied. Colonial and revolutionary periods will be analyzed as well as the formation of a new nation. Gender and race issues will be examined in the light of nation building.

HIST H117 HONORS HISTORY OF THE UNITED STATES TO 1876**Units: 3.0** CSU, UC | 48-54 hours lecture*(No prerequisite. Recommended preparation: HIST 50)*

American civilization, primarily focusing on the British colonies and the US, through the Civil War era. Native American, African and European antecedents will form part of the class. Students will analyze the colonial and revolutionary periods, as well as the Declaration of Independence and the Constitution in the formation of a new nation. The class examines gender and race issues in light of nation building and American culture. Honors classes will take students further into the course material with additional reading, in-class debates and graded roundtable discussion, and a term paper which involved both primary and secondary sources.

HIST 118 HISTORY OF THE UNITED STATES FROM 1876

Units: 3.0 **CSU, UC** | 48-54 hours lecture

(No prerequisite) (UC credit limitation)

A survey of the history of the United States from 1876 to the present. The course will focus on economic, political and social history in order to understand the casual factors that created the United States. Gender and ethnic history will be examined in light of the development of the United States and how diverse groups contributed to the historical reality of the United States.

HIST H118 HONORS HISTORY OF THE UNITED STATES FROM 1876

Units: 3.0 **CSU, UC** | 48-54 hours lecture

(No prerequisite. Recommended preparation: ENGL 101.0 or ENGL 101H) (UC credit limitation)

A survey of American history since Reconstruction with emphasis on social, political, diplomatic, intellectual and economic factors which shaped modern America. As an Honors designated course, students should be aware that additional reading and discussion, in addition to various supplement materials, could be required. Particular attention will be focused on the varying viewpoints and interpretations of the important historic questions.

HIST 128 SPECIAL TOPICS

See special Topics listing. Units: Variable units **CSU**

HIST 129 INDEPENDENT STUDY

See Independent Study. Units: 1-3 units **CSU**

HIST 130 LATIN AMERICAN HISTORY

Units: 3.0 **CSU, UC** | 48-54 hours lecture

(No prerequisite)

This course is designed to give students a chronological overview of Latin American History beginning with pre-Colombian societies and concluding with Latin American Independence. Focuses on the impact of the conquest of the "New World", the role of the Catholic Church, Spanish mercantilism, and the economienda system, on the indigenous population and the development of Latin American society.

HIST 131 LATIN AMERICAN HISTORY

Units: 3.0 **CSU, UC** | 48-54 hours lecture

(No prerequisite)

This course is designed to give students a chronological overview of Latin American History beginning with Latin American Independence and concluding with present events and problems in Latin America. Students will gain an understanding of the social, economic, political, and diplomatic elements that have been the basis for post-Independence Latin American development. Special emphasis will be placed on US-Latin American relations.

HIST 155 WOMEN IN U.S. HISTORY

Units: 3.0 **CSU, UC** | 48-54 hours lecture

(No prerequisite)

History of women in the United States from early colonial era to the present. This course must assume some understanding of the formative events in U.S. history and will focus on the changing roles women have played in society, family, and work.

HIST 157 NATIVE AMERICAN HISTORY

Units: 3.0 **CSU, UC** | 48-54 hours lecture

(No prerequisite. Recommended preparation: HIST 117, HIST 118, and ENGL 101.0)

This is an overview of Native cultures from Mexico to the Arctic, and a history of Native peoples since European contact. It deals with native societies, the Indian Wars, and contemporary issues. This course begins with an overview of methodological issues and proceeds through ethnographic information on the major regions of the North American supercontinent to a discussion of the era of European contact and contemporary issues.

The honors program offers enriching experiences to improve the quality of education for academically talented students who are striving for advanced academic achievement. Honors courses are more extensive and intensive in terms of research, depth of discussion and material covered. They are designed to promote a deeper, more comprehensive understanding of the material and the connectedness of disciplines while preparing students to excel later in advanced degree preparation. They offer additional opportunities for independent and focused study, and more individualized interdisciplinary, experimental, enhanced and collaborative learning experiences. Students participate in advanced seminars and intensive research and course work. Students should be self-motivated and must have demonstrated superior academic achievement in either high school or college.

Victor Valley College is a member of the Honors Transfer Council of California. This membership can provide students with numerous scholarship and financial aid opportunities, as well as possible transfer advantages to participating universities, such as UCLA, UCR, UCI, Whitman College and many others.

For enrollment criteria or any other information contact the Honors Coordinator at (760) 245-4271, ext. 2691.

Honors Courses

BIOL H100 HONORS GENERAL BIOLOGY

Units: 4.0 **CSU,UC** | 48-54 hours lecture and 48-54 hours laboratory

(No prerequisite)

This is an introductory course for honors students emphasizing the scientific method, analysis of scientific data, the use of scientific units, cellular biology, genetics and heredity, classification and systematics, evolution, ecology, environmental issues, and current topics in biology. The laboratory complements the lecture topics via direct experimentation, simulations, and video, including a survey of Earth's biological diversity.

Specific topics will be emphasized through the use of reading assignments and the preparation of a short research paper.

BIOL H295 UNDERGRADUATE RESEARCH I – SCIENTIFIC COMMUNICATION

Units: 3.0 **CSU** | 48-54 hours lecture

(Prerequisites: Prerequisite: BIOL 100, H100, BIOL 107 or BIOL 201; minimum grade C.)

If the goal of science is to contribute to our understanding of the natural world, then the goal of scientific writing is to communicate that understanding with precision, accuracy, and economy. In this course, you will develop your skills as a writer of scientific research, skills that will contribute to your learning of course material and to creating your identity as a scientist. You will explore the genre of the research article and its components and develop an understanding of the material. In addition, you will develop your skills as a writer, reviser, and editor—working with your peers and your instructor—and, ultimately, develop a solid foundation for writing your future research work.

BIOL H296 UNDERGRADUATE RESEARCH II – EXPERIMENTAL DESIGN

Units: 4.0 **CSU** | 48-54 hours lecture and 48-54 hours laboratory

(Prerequisites: Prerequisite: BIOL 100 or H100, BIOL 107, BIOL 201, BIOL 202, BIOL 221 or BIOL 231; minimum grade C.)

This course allows students to select a research project, write a literature review and research proposal, conduct preliminary experiments, and write a research report. Research methods and experimental design will be emphasized, including the location and study of articles from the professional literature. Undergraduate research helps students develop valuable skills, and provides students with an opportunity to apply scientific knowledge in the context of “real world” problems. Participation will also open up opportunities for students to take part in analyzing data and conducting field research.

ENGL H101 HONORS ENGLISH COMPOSITION AND READING

Units: 4.0 **CSU, UC** | 64-72 hours lecture

(Prerequisite: ENGL 50 minimum grade C.)

Principles and methods of expository writing. Analytical reading of source materials and writing of expository essays. Honors seminar will require more advanced resources and more complex assignments than ENGL 101.0.

ENGL H102 HONORS COMPOSITION AND LITERATURE

Units: 3.0 **CSU, UC** | 48-54 hours lecture

(Prerequisite: ENGL 101.0 or ENGL 101H minimum grade C.) (UC credit limitation)

Further training in writing and introduction to the short story, novel, poetry, and drama. This course takes the methods of English 102 and promotes more comprehensive analysis, research, discussion and writing assignments.

ENGL H104 HONORS CRITICAL THINKING AND COMPOSITION

Units: 3.0 **CSU, UC** | 48-54 hours lecture

(Prerequisite: ENGL 101.0 or ENGL 101H minimum grade C.)

This course is designed to develop the students' critical thinking, reading and writing skills beyond the level achieved in ENGL 101.0 or ENGL 101H. It will focus primarily on the analysis and evaluation of expository and argumentative essays. Honors seminar will deepen students' insights.

HIST H115 HONORS HISTORY OF CALIFORNIA

Units: 3.0 **CSU** | 48-54 hours lecture

(Prerequisite: Eligibility for ENGL 101.0 or ENGL 101H. Recommended preparation: HIST 50.)

A comprehensive study of California history, including native culture, the Mission era, the Ranchos, the Mexican War and the US conquest, and the era of US control. Economic, environmental and social issues are identified and discussed.

HIST H117 HONORS HISTORY OF THE UNITED STATES TO 1876

Units: 3.0 **CSU, UC** | 48-54 hours lecture

(No prerequisite. Recommended preparation: HIST 50.) (UC credit limitation.)

American civilization, primarily focusing on the British colonies and the US, through the Civil War era. Native American, African and European antecedents will form part of the class. Students will analyze the colonial and revolutionary periods, as well as the Declaration of Independence and the Constitution in the formation of a new nation. The class examines gender and race issues in light of nation building and American culture. Honors classes will take students further into the course material with additional reading, in-class debates and graded roundtable discussion, and a term paper which involved both primary and secondary sources.

HIST H118 HONORS HISTORY OF THE UNITED STATES FROM 1876

Units: 3.0 **CSU, UC** | 48-54 hours lecture

(No prerequisite. Recommended preparation: ENGL 101.0 or ENGL 101H) (UC credit limitation)

A survey of American history since Reconstruction with emphasis on social, political, diplomatic, intellectual and economic factors which shaped modern America. As an Honors designated course, students should be aware that additional reading and discussion, in addition to various supplement materials, could be required. Particular attention will be focused on the varying viewpoints and interpretations of the important historic questions.

MATH H105 HONORS COLLEGE ALGEBRA

Units: 4.0 **CSU, UC** | 64-72 hours lecture

(No prerequisite) (UC credit limitation)

A math course for the well-prepared student. Honors MATH 105 will include the study of exponents and radicals, theory of quadratic equations, simultaneous quadratic equations, complex numbers, equations of higher degree, inequalities, logarithmic and exponential equations, binomial theorem, matrices and determinants, partial fractions, sequences and series.

MATH H120 HONORS INTRODUCTION TO STATISTICS

Units: 4.0 **CSU, UC** | 64-72 hours lecture

(Prerequisite: MATH 90 minimum grade C.)

Basic statistical techniques, design and analysis for both parametric and non-parametric data are included. Descriptive statistics are included. Graphing techniques of illustrating the data are covered. Probability is covered. Inferential statistics included are estimation and hypothesis testing, chi-square, analysis of variance, and regression. Applications are drawn from a variety of fields. In addition, the Honors component will include the design of surveys, probability testing, and a research project.

MATH H226 HONORS ANALYTIC GEOMETRY AND CALCULUS

Units: 5.0 **CSU, UC** | 80-90 hours lecture

(Prerequisite: MATH 104 and 105 minimum grade C.) (UC Credit Limitation)

As an introduction to the calculus of single variables, students will develop the concept of limit, apply limits to functions to determine if they are continuous, and find the derivative and determine integrals. Students will study the properties of the derivative and integral, their relationship to each other given by the Fundamental Theorem of Calculus and some applications to the real world. In addition, the honors component will include reading proofs and writing proofs.

MATH H227 HONORS ANALYTIC GEOMETRY AND CALCULUS

Units: 5.0 **CSU, UC** | 80-90 hours lecture

(Prerequisite: MATH 226 minimum grade C.)

The calculus of logarithmic, exponential, trigonometric and hyperbolic functions, integration techniques, L'Hopital's Rule, improper integrals, infinite series, conic sections, parametric equations, and polar coordinates. In addition, the honors component will include reading proofs, writing complete proofs from sketches of proofs and applying techniques learned to real-life problems.

MATH H228 HONORS ANALYTIC GEOMETRY AND CALCULUS

Units: 5.0 **CSU, UC** | 80-90 hours lecture

(Prerequisite: Enrollment in Honors course requires acceptance into the Honors Program or prior approval from the instructor; MATH 227 minimum grade C.)

Vectors and the geometry of space, vector-valued functions, the calculus of functions of several variables, multiple integration, Green's Theorem, divergence theorem, Stoke's Theorem, and applications. In addition, the honors component will include reading proofs, writing complete proofs from sketches of proofs and apply techniques learned to real-life problems.

MATH H129A INDEPENDENT STUDY HONORS - FIRST SEMESTER

Units: 1.0 **CSU** | 54 hours independent study

(No prerequisite)

Independent study provides individual students challenging and in-depth study on approved topics within any subject area. Independent study proposals must have the approval of the instructor and appropriate administrator. It is expected that the study will not duplicate existing curriculum; rather, it will be of an advanced nature and extend approved courses or series of courses. This first semester honors independent study course is intended to begin the study of advanced topics at an honors level.

MATH H129B INDEPENDENT STUDY HONORS - SECOND SEMESTER

Units: 1.0 **CSU** | 54 hours independent study

(Prerequisite: MATH 129AH)

Independent study provides individual students challenging and in-depth study on approved topics within any subject area. Independent study proposals must have the approval of the instructor and appropriate administrator. It is expected that the study will not duplicate existing curriculum; rather, it will be of an advanced nature and extend approved courses or series of courses. This second semester honors independent study course is intended to provide students who have completed a first semester of independent study with the opportunity to deepen their understanding of their chosen advanced topic of mathematics at an honors level.

MATH H129C INDEPENDENT STUDY HONORS - THIRD SEMESTER

Units: 1.0 **CSU** | 54 hours independent study

(Prerequisite: MATH 129BH)

Independent study provides individual students challenging and in-depth study on approved topics within any subject area. Independent study proposals must have the approval of the instructor and appropriate administrator. It is expected that the study will not duplicate existing curriculum; rather, it will be of an advanced nature and extend approved courses or series of courses. This third semester honors independent study course is intended to provide students who have completed two semesters of independent study with the opportunity to further deepen their understanding of their chosen advanced topic of mathematics at an honors level with the goal of public presentation or publication.

PHYS H204 HONORS ENGINEERING PHYSICS (*LIGHT AND MODERN PHYSICS*)

Units: 4.0 **CSU, UC** | 48-54 hours lecture and 48-54 hours laboratory

(Prerequisite: PHYS 203) (UC credit limitation)

The nature and propagation of light, reflection and refraction, interference, diffraction, gratings and spectra, polarization, elements of quantum physics, waves and particles.

POLS H102 HONORS AMERICAN GOVERNMENT AND POLITICS

Units: 3.0 **CSU, UC** | 48-54 hours lecture

(No prerequisite) (UC credit limitation)

Enhanced for honors students. This course is an introductory survey of American governing institutions, federal and state, and other elements of the political system. The course is issue-oriented, inviting students to analyze critically competing theories and arguments relating to the founding of the Republic (especially the development of the Constitution), federalism, individual rights and liberties, interest groups, political parties, voting behavior and elections, campaign finance reform, public policy options, and the operational relations among the executive, legislative, and judicial branches. Course curriculum recognizes the roles and contributions of racial and ethnic groups and women in American politics. On each of these topics comparisons will be made to the governing units and politics of California, as well as local government.

PSYC H101 HONORS INTRODUCTORY PSYCHOLOGY

Units: 3.0 **CSU, UC** | 48-54 hours lecture

(No prerequisite. Recommended preparation: Eligibility for ENGL 101.0 or ENGL 101H.)

This course provides instruction in the nature of human behavior and a consideration of theories and principles pertaining to the topics of research design and experimentation, perception, emotions and motivation, personality, social psychology, psychopathology, human development, learning, cognition and memory. It includes essential features of the biological and neurological basis of behavior.

PSYC H110 HONORS DEVELOPMENT PSYCHOLOGY

Units: 4.0 **CSU, UC** | 64-72 hours lecture

(No prerequisite. Recommended preparation: Eligibility for ENGL 101.0 or ENGL 101H; satisfactory completion of PSYC 101.) CSU Offered Fall, Spring, Summer

This course includes the theories, methods, and research findings regarding biosocial, cognitive, and psychosocial development of the individual from conception through adulthood, including death, dying, and bereavement.

Independent Study

IND STUDY 129-149-99 INDEPENDENT STUDY

Units: 1.0-3.0 - (Prerequisite: Formulation of a written statement of purpose acceptable to the instructor and demonstration of sufficient background and skill to undertake the project)

Independent Study has been designed to provide students with an opportunity for Individual study, research, or other projects under instructor guidance. Written reports and periodic conferences required. Content and unit credit to be determined by student/instructor conferences and/or departmental recommendation. Designed to provide an opportunity for qualified students to do individual study in a selected area of a subject field. The student may take up to a maximum of six units of Independent Study course work in a particular discipline. The Instructor is responsible for providing advice and guidance as required, and for evaluating student performance. Instructors providing Independent Study opportunities do so, on a voluntary basis.

Units are awarded according to the following formula of time committed to the course:

1 unit	54 hours per semester
2 units	108 hours per semester
3 units	162 hours per semester

CSU may limit the number of Independent Study units accepted.

UC maximum credit allowed: three and one-third semester credits per term, six units total, in any or all appropriate subject areas combined. Granting of course credit contingent upon an evaluation of the course outline by a UC campus.

CHECKLIST AND PROCEDURE:

- Proposed Independent Study Course has an approved course outline that is in compliance with Title V regulations.
- Discuss proposed Independent Study with Instructor. (Instructor must approve).
- Complete Independent Study contract and summary form for the course. (Available at the Division Dean's office).
- Attach a course syllabus to contract, obtain instructor signature and forward to appropriate Dean for signature.
- Dean's office will forward completed application package to the VP of Instruction for approval.
- Office of Instruction will provide a section number upon VPI approval of completed application and syllabus.
- If the contract is cancelled, the student must drop the class following standard drop procedures and dates.
- A copy of the contract must remain in the Instructor's files with all materials justifying the award of grade and completion of units for audit purposes.

Journalism

Journalism offers the interest and challenges of investigating and reporting current events and topics of interest. The discipline touches on every aspect of human affairs with the opportunity to specialize in areas such as politics, sports, economics, and international affairs. Journalistic skills demand good writing ability, creativity, curiosity, and commitment to exacting professional standards. While one typically thinks of journalists working for a newspaper, many excellent employment opportunities are offered with popular magazines, professional journals, business and industry newsletters, government agencies, and publishing houses.

Career Opportunities

Advertising Agency Executive, Community Relations Specialist, Copy Writer, Journalism, Promotions Manager
Public Information Officer, Publicity Director, Reporter, Television News Producer

Journalism Courses

JOUR 106 INTRODUCTION TO PHOTO JOURNALISM

Units: 2.0 CSU | 96-108 hours laboratory

(No prerequisite)

This lab class is an introduction to the basics of photojournalism including basic photography skills, digital imaging, processing, composition, and production of written news stories.

JOUR 108 FUNDAMENTALS OF JOURNALISM

Units: 3.0 CSU | 48-54 hours lecture

(Prerequisite: ENGL 50 minimum grade C. Co-requisite: JOUR 108LA.)

This course covers the basics of news and feature reporting and writing, including interviewing techniques, legal/ethical issues, writing strategies, and desk-top publishing. Students produce the campus newspaper and learn about career opportunities.

JOUR 108LA JOURNALISM 108 LAB A

Units: 1.0-3.0 CSU | 48-54 hours laboratory per unit

(Prerequisite: ENGL 50 minimum grade C. Co-requisite: JOUR 108.)

This is a laboratory class that requires JOUR 108 as a co-requisite. The students will improve their writing skills; learn techniques for copy editing, design, and layout; and learn the fundamentals of advertising, photo-journalism, business, and desk-top publishing as they apply to newspaper production and distribution.

JOUR 108LB JOURNALISM 108 LAB B

Units: 1.0-3.0 CSU | 48-54 hours laboratory per unit

(Prerequisite: JOUR 108 AND JOUR 108LA minimum grade C.)

This laboratory-only course focuses on intermediate writing and producing the school newspaper, RamPage, and its Online version. Students will research, write, and edit articles for both publications. Students will also take photographs, design and/or layout pages, create graphic illustrations, and develop multimedia stories. Throughout this course, students will also apply media ethics and learn the fundamentals of media law. Leadership and management skills are also covered.

JOUR 108LC JOURNALISM 108 LAB C

Units: 1.0-3.0 CSU | 48-54 hours laboratory per unit

(Prerequisite: JOUR 108 AND JOUR 108LB minimum grade C.)

This laboratory-only course focuses on intermediate writing and producing the school newspaper, RamPage, and its Online version. Students will research, write, and edit articles for both publications. Students will also take photographs, design and/or layout pages, create graphic illustrations, and develop multimedia stories. Throughout this course, students will also apply media ethics and learn the fundamentals of media law. Leadership and management skills are also covered.

JOUR 108LD JOURNALISM 108 LAB D

Units: 1.0-3.0 **CSU** | 48-54 hours laboratory per unit

(Prerequisite: JOUR 108 AND JOUR 108LC minimum grade C.)

This laboratory-only course focuses on intermediate writing and producing the school newspaper, RamPage, and its Online version. Students will research, write, and edit articles for both publications. Students will also take photographs, design and/or layout pages, create graphic illustrations, develop multimedia stories and edit advanced investigative and in-depth articles for the two publications. Throughout this course, students will also apply media ethics and learn the fundamentals of media law. Leadership and management skills are also covered.

JOUR 138 COOPERATIVE EDUCATION

Units: 1-8 units **CSU** |

See Cooperative Education listing

JOUR 128 SPECIAL TOPICS

Units: Variable units **CSU** |

See Special Topics listing

JOUR 129 INDEPENDENT STUDY

Units: 1-3 units **CSU** |

See Independent Study listing

Kinesiology (Formerly Physical Education)

Kinesiology as an academic science emphasizes knowledge of the body through the study of movement and exercise physiology. Kinesiology also contributes to the intellectual, social, emotional, spiritual and physical growth and development of each student. Other areas of study in Kinesiology include: nutrition, healthy lifestyles, stress management as well as psychological aspects of physical activity and injury care and prevention. Additional specialties within the discipline of Kinesiology which are more fully addressed in the curriculum at Victor Valley College are Dance and Adapted Physical Education. A variety of activities are offered, encouraging students to develop lifelong fitness activities and patterns for recreation.

With the exception of the Adapted courses, all Kinesiology activity classes are intended for normal, healthy, individuals. It is highly recommended that anyone 35 years or older have a physical checkup before enrolling. A Kinesiology course is required for the Associate degree.

UC maximum credit allowed for KIN courses combined: 4 units.

Career Opportunities

Adapted Physical Activity Instructor, Aquatics Director, Athletic Administration in School or College, Athletic Trainer, Biomechanist, Cardiac Rehabilitation Specialist, Coaching at School or College, Dance Choreographer, Dance Instructor, Director of Youth Camps/ Sport Programs, Epidemiologist – Physical Activity, Exercise Physiologist, Fitness Instructor or Program Director at Commercial, Fitness Center - Program Director of Corporate Fitness Center - Sports Director at Resort, Massage Therapist, Medical Doctor, Occupational Therapist, Personal Trainer, Physical Education Teacher at School or College, Physical Therapist, Physician's Assistant, Professor of Kinesiology, Physical Education, Recreational Therapist, Registered Nurse, Respiration Therapist, Sport Management, Sport Psychologist for Performance Enhancement, Sports Information Director, Sports Journalist, Sports Marketing, Sports Officiating, Strength and Conditioning Coach

Faculty

Debra Blanchard | Lynn Guardado | David Hoover
Bruce Victor | Christa White

Degrees and Certificates Awarded

Associate in Arts, Liberal Arts

Associate Degree

No associate degree offered with a major in Kinesiology at the date of this catalog, however, a Kinesiology transfer degree has been submitted for approval. Kinesiology courses may be used to fulfill requirements for an Associate in Arts degree with a major in Liberal Arts. See Liberal Arts for degree requirements.

Transfer

CSUSB has a popular program in this area:

-California State University, San Bernardino: Kinesiology major

Different concentrations within the Kinesiology major include Exercise Science, Pedagogy, and pre-physical therapy. For information about these options, see CSUSB's catalog (available in the Transfer Center), visit the website at www.csusb.edu, or visit www.assist.org.

Specialties in Exercise Physiology, Exercise Science, Fitness Training, and Sports Medicine are usually under the departments of Physical Education or Kinesiology at the four-year colleges. A major in Kinesiology may also lead to graduate programs in Physical Therapy at other institutions. See Sports Medicine under Medical and Health Professions for further information on these specific fields.

KIN 101 INTRODUCTION TO EXERCISE SCIENCE AND KINESIOLOGY (Formerly PE 101)

Units: 3.0 **CSU** | 48-54 hours lecture

(No prerequisite. Grade Option.)

This course is an introduction to the interdisciplinary approach to the study of human movement. An overview of the importance of the sub-disciplines in kinesiology will be discussed along with career opportunities in the areas of teaching, coaching, allied health, and fitness professions.

KIN 102 FIRST AID, AED AND CPR

Units: 3.0 **CSU** | 48-54 hours lecture

(No prerequisite. Grade Option.)

This course involves the theory and detailed demonstration of the first aid care of the injured. The student will learn to assess a victim's condition and incorporate proper treatment. Upon successful completion of this course and testing, students receive an American Red Cross or American Heart Association First Aid, CPR, AED Course Completion Card that is valid for two years.

KIN 103 HISTORY AND APPRECIATION OF DANCE (Formerly PE 103)

Units: 3.0 **CSU, UC** | 48-54 hours lecture

(No prerequisite. Recommended preparation ENGL 101.0 or ENGL 101H. Grade Option.)

The origin, growth, and development of dance (theatrical, social and ritualistic forms) will be researched. A study of dances originating in many areas of the world will be covered. The class will research who, when, where, and how each dance originated. The class will trace dance from its origin to modern times.

KIN 104 PSYCHOLOGY OF PHYSICAL PERFORMANCE (Formerly PE 104)

Units: 3.0 **CSU** | 48-54 hours lecture

(No prerequisite. Grade Option)

An introduction to the discipline of sports psychology for students with no previous background in the field. Topics include: orientation to sports psychology, motivational techniques, individual differences and sport behavior, social-environmental influences and sports behavior, and intervention techniques and sports behavior.

KIN 105 DEVELOPMENTAL MOVEMENT OF CHILDREN (Formerly PE 105)

Units: 3.0 **CSU** | 48-54 hours lecture

(No prerequisite)

This course provides a comprehensive overview of theories and methods relating to the development of a physical education program for children ages 0-11 years including children with special needs and abilities. Emphasis is on the application of principles of physical growth and development to the teaching and acquisition of specific physical skills. The course curriculum is consistent with the California State Department of Education Physical Education Framework.

KIN 141 ATHLETIC TRAINING I (Formerly PE 141)

Units: 3.0 **CSU, UC** | 32-36 hours lecture and 48-54 hours laboratory

(No prerequisite. Interest and/or experience in athletics and sports recommended.)

Introduction to principles of athletic training, including prevention, evaluation, treatment and rehabilitation of common athletic injuries. See cross listing for ALDH 141.

KIN 142 ATHLETIC TRAINING II (Formerly PE 142)

Units: 3.0 **CSU, UC** | 32-36 hours lecture and 48-54 hours laboratory

(Prerequisite: KIN/PE 141 or ALDH 141.)

This course will build on the student's basic knowledge of human anatomy and athletic injuries. Topics will include emergency procedures, current health concerns of the athlete, protective devices, advanced taping techniques and injury management. See cross listing for ALDH 142.

KIN 150 LIFETIME PHYSICAL FITNESS CONCEPTS (Formerly PE 150)**Units: 2.0** **CSU** | 16-18 hours lecture and 48-54 hours laboratory*(No prerequisite. Grade Option)*

Designed to help the students understand the role of physical fitness in daily living. Students analyze and integrate individual fitness components into a personal fitness program level and participate in activities designed to improve overall fitness.

KIN 160 PHYSICAL FITNESS (Formerly PE 160)**Units: 1.0** **CSU, UC** | 48-54 hours laboratory*(No prerequisite. Grade Option)*

Physical Fitness is an exercise course designed to emphasize fitness by offering the student a variety of exercises to include hand weights, exercise ball, aerobics and step aerobics which can be used to maintain fitness throughout life.

KIN 161 BODY BUILDING AND CONDITIONING**Units: 1.0** **CSU, UC** | 48-54 hours laboratory*(No prerequisite. Grade Option)*

Evaluation of total body fitness and study of body mechanics in everyday activities. Establishing fitness goals and developing appropriate exercise fitness routines to build body proportions, strength, endurance, and flexibility.

KIN 162 WEIGHT TRAINING I (Formerly PE 162)**Units: 1.0** **CSU** | 48-54 hours laboratory*(No prerequisite. Grade Option)*

Introduction to the basic techniques of weight training. The principles of strength development, the role of proper nutrition, the anatomy and physiology of muscles, and safety will be covered in class. Various weight lifting programs covering strength development, endurance, and body building will also be introduced.

KIN 163 WEIGHT LIFTING II (Formerly PE 163)**Units: 1.0** **CSU** | 48-54 hours laboratory*(No prerequisite. Grade Option)*

A weight lifting course for those students who have been consistently participating in a weight lifting program for 6-12 months for at least three hours per week. This course is designed to emphasize continued individual growth in the areas of body building, body sculpturing and strength at an intermediate level.

KIN 164 AEROBIC WEIGHT TRAINING (Formerly PE 164)**Units: 1.0** **CSU** | 48-54 hours laborator*(No prerequisite. Grade Option)*

Aerobic weight training combines strength and cardiovascular fitness training into a comprehensive weight training program that has as its major objective the development of all-around fitness. It offers measurable benefits to muscular strength, muscular endurance, body composition, flexibility, and cardiovascular/ aerobic fitness.

KIN 165 INTRODUCTION TO BASKETBALL (Formerly PE 165)**Units: 1.0** **CSU, UC** | 48-54 hours laboratory*(No prerequisite. Grade Option) (UC credit limitation)*

An introduction to the basic skills, rules, and strategies of basketball including: catching, passing, shooting, and dribbling.

KIN 166 BEGINNING VOLLEYBALL (Formerly PE 166)**Units: 1.0** **CSU** | 48-54 hours laboratory*(No prerequisite. Recommended preparation: KIN 166. Grade Option)*

Reviews basic volleyball skills and begins work on more advanced skills and playing strategies.

KIN 166C INTERMEDIATE/ADVANCED VOLLEYBALL

Units: 1.0 **CSU** | 48-54 hours laboratory

(No prerequisite. Recommended preparation: KIN 166. Grade Option)

This course is designed to introduce advanced techniques of volleyball skills. Individual skill work, along with various team offensive systems and team defensive patterns, will be taught and analyzed.

KIN 168 INTRODUCTION TO SELF DEFENSE (Formerly PE 168)

Units: 1.0 **CSU, UC** | 48-54 hours laboratory

(No prerequisite. Grade Option) (UC credit limitation)

Introduction to basic self-defense. Defensive strategies to protect oneself from attack.

KIN 176 ATHLETIC TRAINING III (Formerly PE 176)

Units: 2.0-6.0 **CSU, UC** | 96-108 hours laboratory per unit

(Prerequisite: KIN/PE 141 or ALDH 141, or equivalent.)

In this course, students will provide the pre-participation, on-site first aid and event maintenance for fall/winter/spring sports programs at VVC (baseball, basketball, football, golf, soccer, softball, tennis, volleyball, track/field and wrestling). Experience will include, but is not limited to, prophylactic taping and padding, immediate first aid, monitoring vital signs, completion of accident forms, proper use of universal biohazard precautions, supervision of safe playing conditions and coaching techniques, recognition of medical emergencies, assisting other medical personnel as needed, game preparation and pre-participation medical screenings. See cross listing for ALDH 176.

KIN 177 ATHLETIC TRAINING IV (Formerly PE 177)

Units: 2.0-6.0 **CSU, UC** | 96-108 hours laboratory per unit

Prerequisite: KIN/PE 141 or ALDH 141, or equivalent.)

In this course, students will provide the care to athletes involved in fall/winter/spring sports programs at VVC (baseball, basketball, football, golf, soccer, softball, tennis, volleyball, track/field and wrestling). Experience will include but is not limited to development and implementation of rehabilitation protocols. Use of modalities including, whirlpool, ultrasound, ice, Emergency Medical Services, hydrocolator packs, Range of Motion exercises, joint mobilization, strengthening exercises (isokinetic, isotonic, isometric), cardiovascular conditioning and proprioceptive exercises. See cross listing for ALDH 177.

KIN 180A TENNIS (Formerly PE 180)

Units: 1.0 **CSU** | 48-54 hours laboratory

(No prerequisite. Grade Option)

The course offers logical sequences of learning experiences that include: basic tennis strokes; rules that govern play; understanding of game strategies; individual practice drills, and learning the equipment and safety involved.

KIN 180B TENNIS DOUBLES

Units: 1.0 **CSU** | 48-54 hours laboratory

(No prerequisite. Grade Option)

Students are instructed in the basic skills of doubles for the sport of tennis. Rules of play, strategies, and skill development for doubles are emphasized.

KIN 181 INTRODUCTION TO GOLF (Formerly PE 181)

Units: 1.0 **CSU, UC** | 48-54 hours laboratory

(No prerequisite. Grade Option) (UC credit limitation)

Covers the introduction of the use and skill development of equipment including woods, irons and putters. Includes the reading of greens, distance and selection of clubs, etiquette and rules of golf.

KIN185 FOOTBALL TECHNIQUES AND CONDITIONING (Formerly PE 185)

Units: 2.0 **CSU** | 96-108 hours laboratory

(No prerequisite. Grade Option)

Course will include drills and exercises to develop the skills, techniques, and conditioning essential for participation in intercollegiate football.

KIN185B OFFENSIVE FOOTBALL TECHNIQUES AND CONDITIONING

Units: 1.0 **CSU** | 48-54 hours laboratory

(No prerequisite. Grade Option)

Through football field activities, this course will provide students an opportunity to learn correct offensive football techniques, flexibility, injury prevention through proper warm-up and football skills. Applicable skill development will be the primary goal of this course. Other areas such as movement skills, knowledge of body movement, self-image, and personal and social growth will also be promoted.

KIN 185C DEFENSIVE FOOTBALL TECHNIQUES

Units: 0.5-1.0 **CSU,UC** | 24-27 - 48-54 hours laboratory

(No prerequisite. Grade Option)

Through football field activities, this course will provide students an opportunity to learn correct defensive football techniques, flexibility, injury prevention through proper warm-up and football skills. Although applicable skill development will be the primary goal of this course; other areas such as movement skills, knowledge of body movement, self-image, and personal and social growth will be promoted.

KIN 186A INTRODUCTION TO AQUA AEROBICS

Units: 1.0 **CSU** | 48-54 hours laboratory

(No prerequisite. Grade Option)

Aqua aerobics is designed to improve cardiovascular endurance, muscular strength/endurance, and flexibility, without the negative effects of gravity, aerobic activities, calisthenics, and stretching movements are set to music and performed in a swimming pool. Students do not have to be able to swim.

KIN 186B AQUA JOGGING

Units: 1.0 **CSU,UC** | 48-54 hours laboratory

(No prerequisite. Grade Option)

A conditioning program in the deep water of a pool with a variety of low impact movements centered on jogging. A buoyancy belt will be used. Students do not need to swim but should be comfortable in deep water.

KIN 188A INTRODUCTION TO INDOOR CYCLING (SPIN)

Units: 1.0 **CSU,UC** | 48-54 hours laboratory

(No prerequisite. Grade Option)

Use of an indoor cycling bike for improving overall physical fitness and health. Course focuses on endurance, strength, intervals, high intensity and recovery.

KIN 210 MOVEMENT ANATOMY

Units: 3.0 **CSU** | 48-54 hours laboratory

(Prerequisites: BIOL 211 or BIOL 215)

Exploration of the muscular-skeletal system and its function during human movement. Study movement and the muscles involved during sport skill performance.

Kinesiology-Dance Courses

KIND 152 DANCE CHOREOGRAPHY I (Formerly PE 152)

Units: 3.0 **CSU, UC** | 32-36 hours lecture and 48-54 hours laboratory

(No prerequisite. Grade option)

This course is designed to introduce students to the basic elements of dance choreography. Choreography students will work in solo and small groups by using concepts of space, time, and energy to investigate and explore the basic elements of dance.

KIND 160A TAP DANCE IA (Formerly PED A 160)

Units: 1.0 **CSU** | 48-54 hours laboratory

(No prerequisite. Grade Option)

Students who would like to explore tap dancing for the first time will experience basic tap dancing techniques with the foundational sense of musicality. During this course, many essential elements will be stressed: style, proper counting techniques, rhythm, interpretation of music and basic choreographic elements. See cross listing for TA 160A.

KIND 160B TAP DANCE IB

Units: 1.0 **CSU, UC** | 48-54 hours laboratory

(No prerequisite. Grade Option)

Students who would like to further explore tap dancing after having some tap experience will expand on their basic tap dance techniques with the foundational sense of musicality. During this course, many essential elements will be stressed: style, proper counting techniques, rhythm, interpretation of music and basic choreographic elements. Emphasis will be placed on enhancing musical and rhythmic phrasing and performance clarity in movement combinations. See cross listing for TA 160B.

KIND 160C TAP DANCE IC

Units: 1.0 **CSU, UC** | 48-54 hours laboratory

(No prerequisite. Grade Option)

Students who would like to further explore tap dancing after having some tap experience and preparing for Tap IIA will expand on their tap dance techniques with the foundational sense of musicality. During this course, many essential elements will be stressed: style, proper counting techniques, rhythm, interpretation of music and basic choreographic elements. Emphasis will be placed on enhancing musical and rhythmic phrasing and performance clarity in complex movement combinations, and the refinement of performance style. See cross listing for TA 160C.

KIND 161A TAP DANCE IIA (Formerly PED A 161)

Units: 1.0 **CSU, UC** | 48-54 hours laboratory

(No prerequisite. Grade Option)

Students who would like to explore tap dancing at an intermediate level for the first time after having had some tap dance will experience intermediate tap dancing techniques with the foundational sense of musicality. During this course, many essential elements will be stressed: style, proper counting techniques, rhythm, interpretation of music and basic choreographic elements. See cross listing for TA 161A.

KIND 161B TAP DANCE IIB

Units: 1.0 **CSU, UC** | 48-54 hours laboratory

(No prerequisite. Grade Option)

Students who would like to further explore tap dance at an intermediate level after having had some tap dance will experience intermediate tap dance techniques with a fundamental sense of musicality. During this intermediate course a number of elements will be stressed: style, proper counting techniques, rhythm, interpretation of music and basic choreographic elements. Emphasis will be placed on enhancing musical and rhythmic phrasing, efficient alignment, and performance clarity in movement combinations. See cross listing for TA 161B.

KIND 161C TAP DANCE IIC**Units: 1.0** **CSU,UC** | **48-54 hours laboratory***(No prerequisite. Grade Option)*

Students who would like to further explore tap dance at an intermediate level, working towards Tap III, after having some tap dance will experience intermediate tap dance techniques with a fundamental sense of musicality. During this course a number of elements will be stressed: style, proper counting techniques, rhythm, interpretation of music and basic choreographic elements. Emphasis is placed on enhancing musical and rhythmic phrasing, efficient alignment, performance clarity in complex movement combinations, and the refinement of performance style. See cross listing for TA 161C.

KIND 162A INTRODUCTION TO BALLROOM DANCE (Formerly PEDA 162)**Units: 1.0** **CSU,UC** | **48-54 hours laboratory***(No prerequisite. Grade Option)*

Introduction to Ballroom Dance encompasses dance techniques, styles and rhythms of beginning level ballroom dance, both traditional and Latin dances will be included. Emphasis is on exploring the movement characteristics of the dances.

KIND 162B AMERICAN RHYTHM BALLROOM DANCE**Units: 1.0** **CSU,UC** | **48-54 hours laboratory***(No prerequisite. Grade Option)*

Techniques and stylization in the following ballroom dances. Dances may include the Swing, Mambo, Bolero, Cha Cha, and Rumba.

KIND 163A LATIN BALLROOM DANCE (Formerly PEDA 163)**Units: 1.0** **CSU** | **48-54 hours laboratory***(No prerequisite. Grade Option)*

Techniques, styles and rhythms of the basic level of Latin ballroom dance. May include at least the following dances: Samba, Cha Cha, Rumba, Paso Doble, Jive and Tango.

KIND 163B STANDARD BALLROOM DANCE**Units: 1.0** **CSU,UC** | **48-54 hours laboratory***(No prerequisite. Grade Option)*

Techniques and stylization in the following ballroom dance. Dances may include the Waltz, Tango, Foxtrot, Quickstep, Viennese Waltz.

KIND 166A INTRODUCTION TO BALLET DANCE IA (Formerly PEDA 166)**Units: 1.0** **CSU,UC** | **48-54 hours laboratory***(No prerequisite. Grade Option)*

Student with no previous training or experience in ballet will explore introductory level ballet technique, style, and movement characteristics through dancing. See cross listing for TA 166A.

KIND 166B BUILDING BALLET BASICS IB**Units: 1.0** **CSU,UC** | **48-54 hours laboratory***(No prerequisite. Grade Option)*

Students with introductory level ballet training will build and expand basic ballet technique, style, and movement characteristics. See cross listing for TA 166B.

KIND 166C BALLET FUNDAMENTALS IC**Units: 1.0** **CSU,UC** | **48-54 hours laboratory***(No prerequisite. Grade Option)*

Students who have previous training in introductory Ballet IA and Building Ballet Basics IB will further explore and perfect their training in ballet fundamentals. See cross listing for TA 166C.

KIND 167A INTRODUCTION TO INTERMEDIATE BALLET IIA (Formerly PEDA 167)**Units: 1.0** CSU,UC | 48-54 hours laboratory*(No prerequisite. Grade Option)*

An introduction to the technique and style of beginning intermediate level Ballet IIA dance. This course is for the student who has taken Ballet I level courses. Emphasis on exploring the movement characteristics of beginning intermediate level Ballet IIA dance through dancing. See cross listing for TA 167A.

KIND 167B INTERMEDIATE BALLET DANCE IIB**Units: 1.0** CSU,UC | 48-54 hours laboratory*(No prerequisite. Grade Option)*

Students who have been introduced to intermediate Ballet IIA will build and explore intermediate ballet IIB skills and concepts. See cross listing for TA 167B.

KIND 167C INTERMEDIATE BALLET IIC**Units: 1.0** CSU,UC | 48-54 hours laboratory*(No prerequisite. Grade Option)*

Students who have training in Intermediate Ballet IIA and Intermediate Ballet IIB will explore and build advanced intermediate ballet skills. See cross listing for TA 167C.

KIND 169A INTRODUCTION TO YOGALATES (Formerly PEDA 169)**Units: 1.0** CSU | 48-54 hours laboratory*(No prerequisite. Grade Option)*

Yogalates is an introduction of Pilates concepts developed by Joseph Pilates. The course will introduce core mat work and yoga-type exercises. It will also introduce improved body alignment, strength, flexibility and control.

KIND 169B BASIC YOGALATES**Units: 1.0** CSU | 48-54 hours laboratory*(No prerequisite. Grade Option)*

Basic Yogalates is a class encompassing Pilate's concepts developed by Joseph Pilates and Yoga. The course will introduce basic core mat work and yoga-type exercises. It will also introduce improved body alignment, strength, flexibility and control.

KIND 169C YOGALATES CORE STABILITY AND STRETCH II**Units: 1.0** CSU,UC | 48-54 hours laboratory*(No prerequisite. Grade Option)*

Yogalates Core Stability and Stretch introduces physical conditioning techniques focusing on core muscle strengthening, balance, coordination and flexibility through Pilates mat work and basic yoga exercises. This class uses exercise ball, yoga mat, hand weights to strengthen the core, improve balance, coordination and flexibility.

KIND 169D YOGALATES CORE STABILITY AND STRETCH**Units: 1.0** CSU,UC | 48-54 hours laboratory*(No prerequisite. Grade Option)*

Yogalates Core Stability and Stretch II is a physical conditioning class that focuses on an intermediate level core muscle strengthening, balance, coordination and flexibility. This class uses intermediate level Pilates mat work and yoga exercises and enhances posture, body awareness and muscular conditioning. This class also uses exercise ball, yoga mat, and hand weights.

KIND 170A JAZZ DANCE IA (Formerly PEDA 170)**Units: 1.0** CSU,UC | 48-54 hours laboratory*(No prerequisite. Grade Option)*

Students who would like to explore jazz dance for the first time will experience basic jazz dance techniques with a fundamental sense of musicality. During this beginning course a number of elements will be stressed: style, proper counting techniques, rhythm, interpretation of music and basic choreographic elements. See cross listing for TA 170A.

KIND 170B JAZZ DANCE IB**Units: 1.0** **CSU,UC** | **48-54 hours laboratory***(No prerequisite. Grade Option)*

Students who would like to further explore jazz dance after having some jazz dance experience will expand on their basic jazz dance techniques and fundamental sense of musicality. During this course a number of elements will be stressed: style, proper counting techniques, rhythm, interpretation of music and basic choreographic elements. Emphasis will be placed on enhancing musical and rhythmic phrasing, efficient alignment, and performance clarity in movement combinations. Other styles such as theater jazz may be incorporated. See cross listing for TA 170B.

KIND 170C JAZZ DANCE IC**Units: 1.0** **CSU,UC** | **48-54 hours laboratory***(No prerequisite. Grade Option)*

Students who would like to further explore jazz dance after having some jazz dance experience, will expand on their jazz dance techniques and fundamental sense of musicality. During this course a number of elements will be stressed: style, proper counting techniques, rhythm, interpretation of music and basic choreographic elements. Emphasis is placed on enhancing musical and rhythmic phrasing, efficient alignment, performance clarity in complex movement combinations, and the refinement of performance style. See cross listing for TA 170C.

KIND 171A JAZZ DANCE IIA (Formerly PEDA 171)**Units: 1.0** **CSU,UC** | **48-54 hours laboratory***(No prerequisite. Grade Option)*

Students who would like to explore jazz dance at an intermediate level for the first time after having had some jazz dance will experience intermediate jazz dance techniques with a fundamental sense of musicality. During this intermediate course a number of elements will be stressed: style, proper counting techniques, rhythm, interpretation of music and basic choreographic elements. See cross listing for TA 171A.

KIND 171B JAZZ DANCE IIB**Units: 1.0** **CSU,UC** | **48-54 hours laboratory***(No prerequisite. Grade Option)*

Students who would like to further explore jazz dance at an intermediate level after having had some jazz dance will experience intermediate jazz dance techniques with a fundamental sense of musicality. During this intermediate course a number of elements will be stressed: style, proper counting techniques, rhythm, interpretation of music and basic choreographic elements. Emphasis will be placed on enhancing musical and rhythmic phrasing, efficient alignment, and performance clarity in movement combinations. See cross listing for TA 171B.

KIND 171C JAZZ DANCE IIC**Units: 1.0** **CSU,UC** | **48-54 hours laboratory***(No prerequisite. Grade Option)*

Students who would like to further explore jazz dance at an intermediate level, working towards Jazz III, after having some jazz dance will experience intermediate jazz dance techniques with a fundamental sense of musicality. During this course a number of elements will be stressed: style, proper counting techniques, rhythm, interpretation of music and basic choreographic elements. Emphasis is placed on enhancing musical and rhythmic phrasing, efficient alignment, performance clarity in complex movement combinations, and the refinement of performance style. See cross listing for TA 171C.

KIND 174A INTRODUCTION TO MODERN DANCE (Formerly PEDA 174)**Units: 1.0** **CSU,UC** | **48-54 hours laboratory***(No prerequisite. Grade Option)*

Introduction to technique and stylization of modern dance. For the student who has never had modern dance or who is new to the beginning level of modern dance. Emphasis on exploring the movement characteristics of introductory level modern dance through dancing. See cross listing for TA 174A.

KIND 174B BASIC MODERN DANCE I

Units: 1.0 **CSU** | **48-54 hours laboratory**

(No prerequisite. Grade Option)

Basic technique and stylization of modern dance. For the student who has never had modern dance or who is new to the beginning level of modern dance. Emphasis on exploring the movement characteristics of introductory level modern dance through dancing. See cross listing for TA 174B.

KIND 174C BEGINNING MODERN DANCE I

Units: 1.0 **CSU,UC** | **48-54 hours laboratory**

(No prerequisite. Grade Option)

Beginning level technique and stylization of modern dance. For the student who has never had modern dance or who is new to the beginning level of modern dance. Emphasis on exploring the movement characteristics of beginning level modern dance through dancing. See cross listing for TA 174C.

KIND 174D INTERMEDIATE MODERN DANCE I

Units: 1.0 **CSU,UC** | **48-54 hours laboratory**

(No prerequisite. Grade Option)

Level I technique and stylization of modern dance. For the student who has had introduction to Modern Dance, Basic Modern Dance I, Beginning Modern Dance I or who is new to modern dance. Emphasis on exploring the movement characteristics of level I modern dance through dancing. See cross listing for TA 174D.

KIND 175A INTRODUCTION TO MODERN DANCE II (Formerly PEDA 175)

Units: 1.0 **CSU,UC** | **48-54 hours laboratory**

(No prerequisite. Grade Option)

Technique and stylization of introductory level modern dance II. This course is for the student who has taken Modern Dance I level classes. Emphasis on exploring the movement characteristics of introductory level modern dance II through dancing. See cross listing for TA 175A.

KIND 175B BASIC MODERN DANCE II

Units: 1.0 **CSU,UC** | **48-54 hours laboratory**

(No prerequisite. Grade Option)

Technique and stylization of basic modern dance II. This course is for the student who has taken Modern Dance I level classes and/or Introduction to Modern Dance II. Emphasis on exploring the movement characteristics of basic level modern dance II focusing on improving Modern II level technique. See cross listing for TA 175B.

KIND 175C MODERN DANCE II

Units: 1.0 **CSU** | **48-54 hours laboratory**

(No prerequisite. Grade Option)

Technique and stylization of Modern Dance level II. This course is for the student who has taken Modern Dance I and Basic Modern Dance II levels of dance. Students will prepare their bodies as an instrument for dance.

KIND 175D INTERMEDIATE MODERN DANCE II

Units: 1.0 **CSU** | **48-54 hours laboratory**

(No prerequisite. Grade Option)

Technique and stylization of Intermediate Modern Dance II. This course is for the student who has taken Modern Dance I, Basic Modern Dance II levels with the emphasis of the class on exploring Intermediate Modern Dance II level movement technique by progressing to longer, faster-paced, more difficult modern dance movement phrases.

KIND 176A INTRODUCTION TO DANCE REHEARSAL AND PERFORMANCE I (Formerly PEDA 176)**Units: 1.0-3.0** **CSU** | 48-54 hours laboratory per unit*(No prerequisite. Grade Option)*

This course is designed to introduce students to the methods used for introductory level I dance rehearsal and performance. This class is for the student who has never taken dance performance before but has taken some form of dance technique. Students will learn the etiquette of introductory level I dance rehearsal and performance, develop skills needed for quick pick up in dance choreography, and performance skills needed for dance production purposes.

KIND 176B PERFORMANCE DANCE ENSEMBLE**Units: 1.0-3.0** **CSU** | 48-54 hours laboratory per unit*(No prerequisite. Grade Option)*

This course is designed to introduce students to the methods used for dance performance and to provide students with an opportunity for public dance performance onstage.

KIND 176C DANCE PRODUCTION**Units: 1.0-3.0** **CSU,UC** | 48-54 hours laboratory per unit*(No prerequisite. Grade Option)*

This course is specifically designed for the student to learn and perform dance choreography of multiple dance disciplines. It includes learning, rehearsing and performing one or more choreographed dance pieces.

KIND 176D DANCE PERFORMANCE**Units: 1.0-3.0** **CSU** | 48-54 hours laboratory per unit*(No prerequisite. Grade Option)*

This course is designed to provide students with the opportunity for intensive preparation for public performance of choreographed works.

KIND 180 INTRODUCTION TO CLASSICAL MUSICAL THEATRE DANCE (Formerly PEDA 180)**Units: 1.0** **CSU,UC** | 48-54 hours laboratory*(No prerequisite. Grade Option)*

This course is an in-depth performance experience focusing on styles of body movement indicative of Classical Musical Theatre stage productions (1943 – 1965). The fundamentals of Classical musical theatre dance will be introduced, including Classical Broadway jazz and tap style genres. Concepts of the history of dance in Classical musical theatre will also be introduced. See cross listing for TA 180.

KIND 181 INTRODUCTION TO CONTEMPORARY MUSICAL THEATRE DANCE**Units: 1.0** **CSU** | 48-54 hours laboratory*(No prerequisite. Grade Option)*

This course is an in-depth performance experience focusing on styles of body movement indicative of Contemporary Musical Theatre stage productions (1966 – Present). The fundamentals of Contemporary musical theatre dance will be introduced, including Contemporary Broadway jazz and tap style genres. Concepts of the history of dance in Contemporary musical theatre dance will also be introduced. See cross listing for TA 181.

KIND 182 BEGINNING CLASSICAL MUSICAL THEATRE DANCE**Units: 1.0** **CSU,UC** | 48-54 hours laboratory*(No prerequisite. Grade Option)*

Technique and style of beginning Classical theatre dance (1943 - 1965) will be explored. This course is an in-depth performance experience focusing on styles of body movement for Classical Musical Theatre stage productions. The fundamentals of Broadway style dance will be reviewed, including basic Classical jazz and tap. Classical Musical theatre dance genres will be introduced by category, including more sophisticated character stylization of Classical musical staging. Concepts of the history of classical musical theatre dance will be further explored. See cross listing for TA 182.

Adaptive Physical Education Courses

KIND 183 BEGINNING CONTEMPORARY MUSICAL THEATRE DANCE

Units: 1.0 **CSU,UC** | 48-54 hours laboratory

(No prerequisite. Grade Option)

Technique and style of beginning Contemporary theatre dance (1966 - Present) will be explored. This course is an in-depth performance experience focusing on styles of body movement for Contemporary Musical Theatre stage productions. The fundamentals of Contemporary Broadway style dance will be reviewed, including basic Contemporary jazz and tap. Contemporary Musical theatre dance genres will be introduced by category, including more sophisticated character stylizations of Contemporary musical staging. Concepts of the history of Contemporary musical theatre dance will be further explored. See cross listing for TA 183.

KIND 186A INTRODUCTION TO HIP HOP DANCE

Units: 1.0 **CSU, UC** | 48-54 hours laboratory

(No prerequisite. Grade Option)

Basic techniques and styles of Hip Hop dance both historical and current emphasizing musicality, rhythms, basic and complex movements required to develop performance and choreographic skills, and critical viewing and analysis of Hip Hop dance choreography.

APE 160A INTRODUCTION TO ADAPTED PHYSICAL EXERCISE (Formerly APE 160)

Units: 1.0 **CSU, UC** | 48-54 hours laboratory

(Prerequisite: Physical condition limiting participation in regular physical education courses. Medical release applicable. Grade Option) (UC credit limitation)

An introductory individualized fitness program designed to maintain or increase current fitness level. Activities include postural skills, elements of fitness, relaxation and body concepts.

APE 160B INTERMEDIATE ADAPTED PHYSICAL EXERCISE

Units: 1.0 **CSU,UC** | 48-54 hours laboratory

(Prerequisite: Physical condition limiting participation in regular physical education courses. Medical release applicable. Grade Option)

An individualized fitness program designed to maintain or increase current fitness level. Activities include postural skills, elements of fitness, relaxation and body concepts. Medical release required.

APE 160C ADVANCED ADAPTED PHYSICAL EXERCISE

Units: 1.0 **CSU,UC** | 48-54 hours laboratory

(Prerequisite: Physical condition limiting participation in regular physical education courses. Medical release applicable. Grade Option)

An advanced individualized fitness program designed to maintain or increase current fitness level. Activities include postural skills, elements of fitness, relaxation and body concepts.

APE 166A INTRODUCTION TO ADAPTED CARDIOVASCULAR TRAINING (Formerly APE 166)

Units: 1.0 **CSU,UC** | 48-54 hours laboratory

(Prerequisite: Physical condition limiting participation in regular physical education courses. Medical release applicable. Grade Option)

This introductory course is designed to meet the needs of students who require restricted or modified activities. Individualized cardiovascular exercise programs will be performed by students with instruction covering the elements of physical fitness. Emphasis will be placed on cardiovascular training principles and techniques.

APE 166B INTERMEDIATE ADAPTED CARDIOVASCULAR TRAINING**Units: 1.0** CSU,UC | 48-54 hours laboratory*(Prerequisite: Physical condition limiting participation in regular physical education courses. Medical release applicable. Grade Option)*

This introductory course is designed to meet the needs of students who require restricted or modified activities. Individualized cardiovascular exercise programs will be performed by students with instruction covering the elements of physical fitness. Emphasis will be placed on cardiovascular training principles and techniques.

APE 166C ADVANCED ADAPTED CARDIOVASCULAR TRAINING**Units: 1.0** CSU,UC | 48-54 hours laboratory*(Prerequisite: Physical condition limiting participation in regular physical education courses. Medical release applicable. Grade Option)*

This advanced course is designed to meet the needs of students who require restricted or modified activities. Individualized cardiovascular exercise programs will be performed by students with instruction covering the elements of physical fitness. Emphasis will be placed on cardiovascular training principles and techniques.

APE 167A INTRODUCTION TO ADAPTED WEIGHT TRAINING (Formerly APE 167)**Units: 1.0** CSU | 48-54 hours laboratory*(Prerequisite: Physical condition limiting participation in regular physical education courses. Medical release applicable. Grade Option)*

This introductory course is designed to meet the needs of students with disabilities who require restricted or modified activities. Individualized exercise programs will be performed by students with instruction covering the elements of physical fitness through weight training. Emphasis will be placed on principles and techniques.

APE 167B INTERMEDIATE ADAPTED WEIGHT TRAINING**Units: 1.0** CSU,UC | 48-54 hours laboratory*(Prerequisite: Physical condition limiting participation in regular physical education courses. Medical release applicable. Grade Option)*

This intermediate course is designed to meet the needs of students with disabilities who require restricted or modified activities. Individualized exercise programs will be performed by students with instruction covering the elements of physical fitness through weight training. Emphasis will be placed on principles and techniques.

APE 167C ADVANCED ADAPTED WEIGHT TRAINING**Units: 1.0** CSU,UC | 48-54 hours laboratory*(Prerequisite: Physical condition limiting participation in regular physical education courses. Medical release applicable. Grade Option)*

This advanced course is designed to meet the needs of students with disabilities who require restricted or modified activities. Individualized exercise programs will be performed by students with instruction covering the elements of physical fitness through weight training. Emphasis will be placed on principles and techniques.

APE 169A INTRODUCTION TO ADAPTED CARDIAC REHABILITATION (Formerly APE 169)**Units: 1.0** CSU | 48-54 hours laboratory*(Prerequisite: Physical condition limiting participation in regular physical education courses. Medical release applicable. Grade Option)*

This introductory course is designed to meet the needs of students with disabilities/special needs who require restricted or modified activities pertaining to the heart. Individualized exercise programs for cardiac rehab students will be performed with instruction covering the elements of cardiovascular fitness. Emphasis will be placed on the special needs of this population.

APE 169B INTERMEDIATE ADAPTED CARDIAC REHABILITATION

Units: 1.0 **CSU,UC** | **48-54 hours laboratory**

(Prerequisite: Physical condition limiting participation in regular physical education courses. Medical release applicable. Grade Option)

This intermediate course is designed to meet the needs of students with disabilities/special needs who require restricted or modified activities pertaining to the heart. Individualized exercise programs for cardiac rehab students will be performed with instruction covering the elements of cardiovascular fitness. Emphasis will be placed on the special needs of this population.

APE 169C ADVANCED ADAPTED CARDIAC REHABILITATION

Units: 1.0 **CSU,UC** | **48-54 hours laboratory**

(Prerequisite: Physical condition limiting participation in regular physical education courses. Medical release applicable. Grade Option)

This advanced course is designed to meet the needs of students with disabilities/special needs who require restricted or modified activities pertaining to the heart. Individualized exercise programs for cardiac rehab students will be performed with instruction covering the elements of cardiovascular fitness. Emphasis will be placed on the special needs of this population.

APE 183A INTRODUCTION TO ADAPTED WALKING FOR FUN FITNESS (Formerly APE 183)

Units: 1.0 **CSU,UC** | **48-54 hours laboratory**

(Prerequisite: Physical condition limiting participation in regular physical education courses. Medical release applicable. Grade Option)

This introductory course is designed to meet the needs of students who require restricted or modified activities. Individualized cardiovascular exercise programs will be performed by students with instruction covering the elements of physical fitness. Emphasis will be placed on cardiovascular training principles and techniques through walking.

APE 183B INTERMEDIATE ADAPTED WALKING FOR FUN FITNESS

Units: 1.0 **CSU,UC** | **48-54 hours laboratory**

(Prerequisite: Physical condition limiting participation in regular physical education courses. Medical release applicable. Grade Option)

This intermediate course is designed to meet the needs of students who require restricted or modified activities. Individualized cardiovascular exercise programs will be performed by students with instruction covering the elements of physical fitness. Emphasis will be placed on cardiovascular training principles and techniques through walking.

APE 183C ADVANCED ADAPTED WALKING FOR FUN FITNESS

Units: 1.0 **CSU,UC** | **48-54 hours laboratory**

(Prerequisite: Physical condition limiting participation in regular physical education courses. Medical release applicable. Grade Option)

This advanced course is designed to meet the needs of students who require restricted or modified activities. Individualized cardiovascular exercise programs will be performed by students with instruction covering the elements of physical fitness. Emphasis will be placed on cardiovascular training principles and techniques through walking.

Law

There is no single “prelaw” major. Research has revealed that success in law school is based more on one’s ability to grasp and solve difficult intellectual problems and to employ disciplined work habits. In choosing a major, one should choose a course of study that will give broad cultural background and include intensive research. Most law students major in Business Administration, Economics, English, Liberal Studies, History, Philosophy, Political Science, or Sociology, although law schools accept any major.

Most American Bar Association (ABA) accredited law schools require a bachelor’s degree and certain scores on the Law School Admission Test (LSAT) for entrance into an intensive three-year program. Students who complete law school earn the Juris Doctor (J.D.) degree and can practice law in the state of California upon passage of the California bar exam. Some law schools require only an associate degree for admission and often require completion of a four-year program.

The following sampling of ABA-accredited law schools in California require a bachelor’s degree and a high score on the LSAT:

- Pepperdine University
- Stanford University
- University of California UBerkeley, Davis, Los Angeles
- University of La Verne
- University of Southern California

Liberal Arts Major

Associate in Arts Degree

The Associate degree in Liberal Arts is designed for students who wish to have a broad knowledge of the liberal arts and sciences plus additional coursework in an Area of Emphasis. Within this major, students who plan on transferring to a university can typically satisfy both their general education requirements as well as many pre-major requirements for transfer. Consult with a counselor for information regarding your intended major and the specific college or university of your choice. Visit www.assist.org for more information.

Requirements:

- **Choose one General Education option:**

AA degree only; California State University (CSU) GE; or IGETC (for either CSU or UC).

- **Choose an Area Of Emphasis:**

Complete a minimum of 18 units from ONE of these three areas of emphasis below.

Mathematics/Science Emphasis

These courses emphasize the natural sciences which examine the physical universe, its life forms and its natural phenomena. Courses in Math emphasize the development of mathematical and quantitative reasoning skills beyond the level of intermediate algebra. Students will be able to demonstrate an understanding of the methodologies of science as investigative tools. Students will also examine the influence that the acquisition of scientific knowledge has on the development of the world's civilization.

Complete at least 18 units from the following, with at least one course in math AND one in science, with at least TWO courses in any ONE subject.

AGNR 123, 170; ANTH 101, 101L; ASTR 101; BIOL 100/H100, 107, 114, 118, 201, 202, 203, 210, 211, 214, 221, 231; CHEM 100, 201, 202, 206, 207, 281, 282; GEOG 101, 101L, 130; GEOL 101, 102, 103; MATH 104, 105/H105, 116, 119, 120/H120, 132, 226/H226, 227/H227, 228/H228, 231, 270; OCEA 101; PSCI 101; PHYS 100, 201, 202, 203, 204/H204, 221, 222; PSYC 109

Arts and Humanities Emphasis

These courses emphasize the study of cultural, literary, and humanistic activities and artistic expression. Students will evaluate and interpret the ways in which people through the ages in different cultures have responded to themselves and to the world around them in artistic and cultural creation. Students will also learn to value aesthetic understanding and incorporate these concepts when constructing value judgments.

Complete at least 18 units from the following, with at least TWO courses in any ONE subject.

ANTH 106; ART 101, 102, 103, 104, 105, 106, 107, 108, 109, 112, 113, 114, 120, 122, 125, 133*, 150; CART 133*; CMST 105 (Intercultural); ENGL 102/102H, 109, 116*, 220, 225, 230, 231, 232, 234, 235, 240, 241, 245, 246, 247; HIST 103, 104, 115/115H, 117/H117, 118/H118, 130, 131, 155, 157; KIN 103 (History of Dance); MUSC 100, 101, 102, 103, 116, 117, 118, 131, 202, 204; PHIL 101, 108, 114*, 117*, 120, 121; POLS 114*; RLST 101, 105, 106, 110, 111, 115, 117*; TA 101, 102, 104, 107, 110, 116*, 117

Languages: ASL 122, 123, 124, 125; FREN 101, 102, 103, 104; SPAN 101, 101A, 101B, 102, 103, 104

Social/Behavioral Science Emphasis

These courses emphasize the perspectives, concepts, theories and methodologies of the social and behavioral sciences. Students will learn about themselves and others as members of a larger society. Topics and discussion to stimulate critical thinking about ways people have acted in response to their societies will allow students to evaluate how societies and social subgroups operate.

Complete at least 18 units from the following, with at least TWO courses in any ONE subject

AGNR 175, 178; AJ 101; ANTH 101, 102, 103, 105, 106; CHDV 100, 106; CMST 105 (Intercultural); ECON 101, 102; GEOG 101, 102, 103, 104; GUID 101, 105, 107; HIST 103, 104, 115/H115, 117/H117, 118/H118, 130, 131, 155, 157; KIN 104; PHIL 114*; POLS 101, 102/H102, 103, 104, 110/H110, 111, 112, 113, 114*, 206, 211; PSYC 101/H101, 103, 110/H110, 111, 121, 125, 133, 204, 213; RLST 105, 106, 110, 113, 115; SOC 101, 102, 103, 107

Note: All courses shown transfer to CSU: courses in bold transfer to both CSU and UC

*Cross-listed courses are the same course listed under different departments

ART 133 = CART 133; ENGL 116 = TA 116;

PHIL 114 = POLS 114; PHIL 117 = RLST 117

Underlined courses fulfill the VVC Global Citizenship competency.

Thinking of Transferring to a University

How Transfer Works

Generally, if you start at a community college, where you complete your lower division general education (GE) and any required pre-major preparation, you can then transfer to a university as a junior, with an associate's degree in hand - and about half of your bachelor's degree already completed.

Universities You Could Transfer To

California has two public university systems: the University of California (UC) and the California State University (CSU). There are many private universities as well – not to mention all the schools that are out-of-state. How do you choose where to apply? It takes some research, and there are many sources that can help you.

VVC's Transfer Center – www.vvc.edu/transfer - 760 245-4271, x 2139

Your most important resource is the VVC Transfer Center, located in Building 55, over the lake. In it you will find lots of information about universities, and you can make an appointment to see a transfer counselor as well as representatives of several universities that visit us regularly. You'll also find catalogs from campuses all over the state and many from out-of-state as well.

For more information about transferring, visit these websites:

- www.assist.org – The ASSIST site helps you explore majors at all 33 UC and CSU campuses. We have formal, course-to-course equivalency agreements with many of the UC and CSU campuses, and ASSIST shows you VVC courses required for various majors.
- www.californiacolleges.edu/ - CaliforniaColleges.edu covers UC, CSU and independent colleges, and provides virtual campus tours, student-campus matching assistance, information on financial aid, and admissions planners for first-year and transfer students.
- uctransfer.universityofcalifornia.edu - This site explains what you'll need to do to transfer and how you can make smart course choices now that will maximize your chances of being admitted to UC.
- www.universityofcalifornia.edu – The University of California, Office of the President, offers this site for information about UC. It also provides links to each of the ten UC campuses.
- www.calstate.edu – Provides information about California State University's educational programs, systemwide policies and initiatives, historical and general information, admission requirements and procedures. Here you'll also find links to all 23 CSU campuses.
- www.csumentor.edu – Provides outreach, financial aid, and admission information about the CSU system. Here, you can take virtual campus tours, develop a comparative view of different campuses, establish email connections with campus personnel, and apply electronically.
- www.aiccu.edu – This is the official website of the Association of Independent California Colleges and Universities. Visit this site for information on independent (non-UC or CSU) schools.

Bachelor's Degrees in the High Desert

And don't forget – there are some well-regarded private universities that offer bachelors and other programs right here in the High Desert. Ask in the Transfer Center for the "Local Bachelor's Degree Opportunities" sheet, also available on the college's website at www.vvc.edu/offices/guidance_and_counseling/Local_Bachelors_Programs.pdf. You can meet with their representatives in the Transfer Center to learn about your options and requirements.

Be Careful of Unaccredited Schools

There are many outfits that purport to run a college or university – typically but not exclusively online. Don't be fooled if they tell you they are "accredited." The question to ask is, WHO accredits them? You want an institution that is *regionally* (not nationally) accredited. See a counselor for more details.

Degrees and Certificates Awarded

Associate in Science, Math/Science

Associate Degree

To earn an Associate in Science degree with a major in Math/Science, complete a minimum of 18 units from any of the following courses:

MATHEMATICS

ELCT 57, 58, 59, 60

MATH 104, 105/H105, 116, 120/H120, 129, 132, 226/H226, 227/H227, 228/H228, 231, 270

LIFE SCIENCES

ANTH 101, 101L

BIOL 100, 107, 114, 118, 201, 202, 203, 210, 211, 214, 215, 221, 231

HLTH 102

PHYSICAL SCIENCES

AGNR 123, 170

ASTR 101

CHEM 100, 128, 201, 202, 206, 207, 281, 282

GEOG 101, 101L, 103, 130

GEOL 101, 102, 103, 128, 129

OCEA 101

PSCI 101, 128

PHYS 100, 128, 129, 201, 202, 203, 204/H204, 221, 222

RMGT 120

Transfer

The Associate in Science degree in Math/Science is often a degree earned by students who are pursuing a bachelor's degree in transfer majors such as Biology, Chemistry, Engineering, Environmental Studies, Geology, Mathematics, and Physics. To explore a bachelor's degree in these fields, visit www.assist.org. Please stop by the Transfer Center in Building 55 or make an appointment with a counselor if you have questions.

Mathematics

Mathematics is a rapidly expanding, dynamic discipline which has contributed to recent advances in astronomy, biology, chemistry, engineering, medicine and physics. Mathematics is truly becoming the necessary language of a wide spectrum of knowledge.

The mathematics program is designed to accept students at many levels of mathematical maturity and enable them to gain the mathematical knowledge necessary for them to achieve their goals.

Career Opportunities

An undergraduate degree in mathematics can lead to a variety of jobs in business, industry, government, and teaching. Mathematicians are employed by companies in communication, computers, energy and finance.

Faculty

Bob Carlson | Nichole Carver | Joe Estephan | Patrick Malone
Pat Mauch | Arda Melkonian | Said Ngobi | Jeff Redona | Jeff Ridge
Mary Lynn Stough | Stephen Toner | Anh Weis

Degrees and Certificates Awarded

Associate in Arts, Liberal Arts

Associate in Science in Mathematics for Transfer (AS-T)

Associate in Science, Math/Science

Associate Degree

Mathematics courses may be used to fulfill requirements for an Associate in Science degree with a major in Math/Science; see Math/Science for degree requirements for this major. Courses may also be used to fulfill requirements for an Associate in Arts degree with a major in Liberal Arts. See Liberal Arts for degree requirements for this major. MATH 138 (Cooperative Education) may be used for elective credit, but may not be used to fulfill major requirements.

To earn an Associate in Science degree for Transfer with a major in Mathematics, complete the required major courses and all other requirements specified on the following pages (i.e. 60 CSU transferable units, CSU GE or IGETC, etc.). For more information on the AA-T/AS-T degrees, meet with a counselor or www.adegreewithaguarantee.com

Transfer

To pursue a bachelor's degree in this field, here are some schools that have programs that might interest you. For the most up-to-date information on these programs and others, visit www.assist.org. Please stop by the Transfer Center in Building 55 or make an appointment with a counselor if you have questions.

- California State University, San Bernardino:** Mathematics major
- University of California, Riverside:** Mathematics major

A new transfer option has been added in this major. Check this out:

The Associate in Science Mathematics for Transfer degree is designed for students who wish to transfer to a California State University to complete a bachelor's degree in Mathematics or a related field.

A student receiving a degree or certificate in this field will be able to:

- Calculate arithmetic, algebraic, geometric, spatial, and statistical quantities using appropriate technology.
- Estimate arithmetic, algebraic, geometric, spatial, and statistical solutions.
- Solve arithmetic, algebraic, geometric, spatial, and statistical expressions, equations, functions, and problems using appropriate technology.
- Represent mathematical information numerically, symbolically, graphically, verbally, and visually using appropriate technology.
- Interpret mathematical and statistical models such as formulas, functions, graphs, tables, and schematics, drawing conclusions and making inferences based on those models.
- Develop mathematical and statistical models such as formulas, functions, graphs, tables, and schematics using appropriate technology.
- Communicate mathematical theories and ideas clearly and concisely to others in the oral and written form.

Mathematics, AS-T

The role of mathematics is vital and growing, providing solutions to problems in a wide range of sciences: social, biological, physical, behavioral, and management. As a whole, mathematics is necessary for understanding and expressing ideas in science, engineering, and human affairs. Mathematics is integrally related to computer science and statistics, which have proven invaluable to advancing research and modern industrial technology. The Mathematics curriculum academically prepares the student to transfer to a 4-year university to complete a Baccalaureate degree in a similar major.

The major requirements for the AS-T degree align with the intersegmental Transfer Model Curriculum (TMC) for Mathematics. Students should consult with a counselor to determine whether this degree is the best option for their transfer goals.

Program Requirements: 21 units

Required Courses (15 units total)

MATH 226/H226	Analytic Geometry & Calculus	5.0
MATH 227/H227	Analytic Geometry & Calculus	5.0
MATH 228/228H	Analytic Geometry & Calculus	5.0

Additional Courses

List A – (3 units total)

MATH 270	Differential Equations	3.0
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List B – (3 units total)

MATH 231	Linear Algebra	3.0
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A student wishing to pursue an AA-T/AS-T degree in the major listed on this page must ensure the CSU of their choice is accepting that similar major. Students completing an AA-T/AS-T degree are guaranteed admissions into a CSU campus given that a student fulfills the following:

- 1) 60 CSU transferable units;
- 2) Completes the CSU General Education (GE) or IGETC General Education pattern;
- 3) Completes the major requirements for the AA-T/AS-T;
- 4) Maintains a transferable cumulative GPA of at least 2.0 (C or better);
- 5) Completes the basic/Golden 4 GE requirements.

For more information on the AA-T/AS-T degrees, meet with a counselor or visit www.sb1440.org and www.adegreewithaguarantee.com

Mathematics Courses

MATH 6 MATH OPERATIONS

Units: 1.0

16-18 hours lecture

(No prerequisite.) This course does not apply to the Associate Degree.

This math course will review computations (addition, subtraction, multiplication, division) with whole numbers. The course also introduces students to operations with rational numbers and decimals.

MATH 10 BASIC MATHEMATICS SKILLS

Units: 3.0

48-54 hours lecture

(No prerequisite.) This course does not apply to the Associate Degree.

This course covers the basic operations applied to whole numbers, fractions (including mixed numbers) and decimals. Prime factorization, least common multiple, ratio and proportion, similar triangles, averages; graphs and tables, square roots, the Pythagorean theorem, measurement, operations on signed-numbers and solutions of simple linear equations are also covered.

MATH 12 PRE-ALGEBRA

Units: 3.0

48-54 hours lecture

(Prerequisite: MATH 10 minimum grade C, or eligibility as determined by VVC assessment.) This course does not apply to the Associate Degree.

This course reviews fractions, decimals and integers with a strong emphasis on solving equations and problem solving in order to prepare students for Introductory Algebra. Ratios and proportions are also covered, as well as an introduction to graphing linear equations, working with polynomials, and factoring.

MATH 30 MATHEMATICS FOR HEALTH SCIENCES

Units: 4.0

64-72 hours lecture

(No prerequisite.) This course does not apply to the Associate Degree.

Review of fractions, decimals, whole numbers and percentages. Introduction to the apothecary, metric and household systems of measurement; applications involving oral, intravenous and intramuscular medication administration; system conversions; respiratory care calculations.

MATH 42 ELEMENTARY ALGEBRA (Formerly MATH 50)

Units: 4.0

64-72 hours lecture

(Prerequisite: MATH 12 minimum grade C, or eligibility as determined by VVC assessment. Corequisite: MATH 42S) This course does not apply to the Associate Degree.

To be taken with MATH 42S. This course covers a review of arithmetic operations with whole, decimal, fractional and signed numbers, exponential notations, percentages, and order of operations. Algebraic expressions, solving and graphing linear equations and inequalities, polynomial operations and polynomial factoring, rational and radical expressions and equations, quadratic equations and solutions to quadratic equations are also covered.

MATH 42S ELEMENTARY ALGEBRA

Units: 1.0

16-18 hours lecture

(Corequisite: MATH 42) This course does not apply to the Associate Degree

This course provides additional support and review of key concepts in Elementary Algebra. This course is a co-requisite to Math 42.

MATH 60 GEOMETRY

Units: 4.0

64-72 hours lecture

(Prerequisite: MATH 50 and ENGL 50 with a grade of 'C' or better, or eligibility as determined by VVC assessment. Grade Option)

This course covers Euclidean plane geometry and the development of logical thinking; it also develops visualization skills including congruence, similarity, parallel lines, circle properties, and constructions.

MATH 63 PRE-STATISTICS MATHEMATICS**Units: 5.0****80-90 hours lecture***(Prerequisite: MATH 12 OR MATH 42 with a grade of 'C' or better, or eligibility as determined by VVC assessment.)*

This non-STEM course covers core algebra skills needed to understand the concepts, formulas, and graphs used in transfer-level statistics. Integrates numeracy, proportional reasoning, algebraic reasoning, and functions. Develops conceptual and procedural tools that support the use of key mathematical concepts in a variety of contexts. Throughout the course, college success content will be integrated with mathematical topics. This course is NOT intended for math, science, computer science, business, or engineering majors.

MATH 66 PRE-COLLEGE MATHEMATICS**Units: 6.0****96-108 hours lecture***(Prerequisite: MATH 42 with a grade of 'C' or better or eligibility as determined by VVC assessment.)*

This course is designed to serve as preparation for the study of College Algebra, Statistics, Trigonometry and other college mathematics courses. Topics include a review of the real number system, an introduction to imaginary and complex numbers, the solution of first degree, quadratic and systems of equations, polynomials, rational expressions, rational exponents and radicals, graphs of functions (both linear and nonlinear) and of relations, and exponential and logarithmic functions and their applications.

MATH 70 MATH EXPERIENCES FOR CHILDREN K-8**Units: 3.0****32-36 hours lecture and 48-54 hours laboratory***(No prerequisite)*

This course emphasizes the development of explorations in mathematics appropriate for the school-age child. The course covers the sequence of topic acquisition, motivating concepts, disguising repetition, project development, group appropriate activities, evaluation techniques and the building of mathematical materials that support discovery.

MATH 71 GUIDED DISCOVERIES PRACTICUM**Units: 2.0****96-108 hours laboratory***(No prerequisite. Grade Option)*

This course is a laboratory course that provides opportunity to those interested in teaching elementary school, or being a teacher's aide in mathematics, to gain experience preparing and presenting guided experiences for students of elementary age.

MATH 90 INTERMEDIATE ALGEBRA**Units: 4.0****64-72 hours lecture***(Prerequisite: MATH 42 (formerly MATH 50 or both MATH 50A and MATH 50B) or MATH 63 with a grade of 'C' or better or eligibility as determined by VVC assessment.)*

This course is designed to serve as a preparation for the study of College Algebra, Statistics, Trigonometry and other college mathematics courses. Topics include a review of the real number system, an introduction to imaginary and complex numbers, the solution of first degree, quadratic and systems of equations, polynomials, rational expressions, exponents and radicals, graphs of functions (both linear and nonlinear) and of relations, and exponential and logarithmic functions.

MATH 104 TRIGONOMETRY**Units: 4.0****CSU****64-72 hours lecture***(Prerequisite: MATH 90 or MATH 66 with a grade of 'C' or better.)*

Topics for this preparatory course for calculus include trigonometric functions and equations, solutions of both right and oblique triangles, trigonometric forms of complex numbers and De Moivre's Theorem. Course content also includes verification of trigonometric identities, inverse trigonometric functions, half and multiple angles, vectors and their applications, parametric equations, polar coordinates and polar equations.

MATH 105 COLLEGE ALGEBRA

Units: 4.0 CSU, UC | 64-72 hours lecture

(Prerequisite: MATH 90 or MATH 66 with a grade of 'C' or better or eligibility as determined by VVC assessment.) (UC credit limitation)

The course offers a review of real numbers, real number exponents, and factoring polynomials. The course also covers equations and inequalities, solutions to systems of equations and inequalities, solutions to equations and inequalities involving absolute value, graphing relations and functions, matrices, determinants of matrices, and matrix algebra. Complex numbers, the real and complex zeros of polynomials, the zeros of exponential, rational and radical functions, the conic sections, sequences, mathematical induction and the binomial theorem are also covered.

MATH H105 HONORS COLLEGE ALGEBRA

Units: 4.0 CSU, UC | 64-72 hours lecture

(Prerequisite: MATH 90 or MATH 66 with a grade of 'C' or better.) (UC credit limitation)

This course covers all the topics of the regular MATH 105 course, but the topics are covered in greater depth. Exponents and radicals, theory of quadratic equations, simultaneous quadratic equations, complex numbers, equations of higher degree, inequalities, logarithmic and exponential equations, binomial theorem, matrices and determinants, partial fractions, sequences and series.

MATH 116 PREPARATION FOR CALCULUS

Units: 3.0 CSU, UC | 48-54 hours lecture

(Prerequisite: Math 104 and Math 105 or H105, minimum grade C, or eligibility as determined by the VVC assessment test. Co-requisite: MATH 104 or MATH 105 or MATH 105H.)

Function, theory, techniques for graphing functions (polynomials, rational functions, trig functions, exponential functions, log functions, and compositions of these such as trig polynomials), conic sections, solutions of systems of linear and non-linear equations, inequalities, introduction to limits.

MATH 119 FINITE MATHEMATICS

Units: 3.0 CSU, UC | 48-54 hours lecture

(Prerequisite: MATH 90 or MATH 66 with a grade of "C" or better.)

This course covers linear functions and modeling, matrix operations (addition, subtraction, multiplication and inverses), systems of linear equations and inequalities, introductory linear programming, sets and counting techniques, probability theory, Markov chains, game theory and logic.

MATH 120 INTRODUCTION TO STATISTICS

Units: 4.0 CSU, UC | 64-72 hours lecture

(Prerequisite: MATH 90, MATH 63 or MATH 66 with a grade of 'C' or better, or eligibility as determined by VVC assessment.)

This course covers basic statistical techniques including design and analysis for both parametric and non-parametric data. Descriptive statistics are measures of central tendency and measures of dispersion. Graphical techniques of illustrating the data are covered. Probability and its application to inferential procedures are covered. Inferential statistics included are estimation and hypothesis testing, chi-square, analysis of variance and regression. Applications are drawn from a variety of fields.

MATH H120 HONORS INTRODUCTION TO STATISTICS

Units: 4.0 CSU, UC | 64-72 hours lecture

(Prerequisite: MATH 90, MATH 63 or MATH 66 with a grade of 'C' or better.)

Basic statistical techniques, design and analysis for both parametric and non-parametric data are included. Descriptive statistics are included. Graphing techniques of illustrating the data are covered. Probability is covered. Inferential statistics included are estimation and hypothesis testing, chi-square, analysis of variance, and regression. Applications are drawn from a variety of fields. In addition, the Honors component will include the design of surveys, probability testing, and a research project.

MATH 129 INDEPENDENT STUDY

Units: 1-3 units CSU

See Independent Study listing

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MATH 129AH INDEPENDENT STUDY HONORS - FIRST SEMESTER**Units: 1.0** **CSU** | **54 hours independent study***(No prerequisite)*

Independent study provides individual students challenging and in-depth study on approved topics within any subject area. Independent study proposals must have the approval of the instructor and appropriate administrator. It is expected that the study will not duplicate existing curriculum; rather, it will be of an advanced nature and extend approved courses or series of courses. This first semester honors independent study course is intended to begin the study of advanced topics at an honors level.

MATH 129BH INDEPENDENT STUDY HONORS - SECOND SEMESTER**Units: 1.0** **CSU** | **54 hours independent study***(Prerequisite: MATH 129AH)*

Independent study provides individual students challenging and in-depth study on approved topics within any subject area. Independent study proposals must have the approval of the instructor and appropriate administrator. It is expected that the study will not duplicate existing curriculum; rather, it will be of an advanced nature and extend approved courses or series of courses. This second semester honors independent study course is intended to provide students who have completed a first semester of independent study with the opportunity to deepen their understanding of their chosen advanced topic of mathematics at an honors level.

MATH 129CH INDEPENDENT STUDY HONORS - THIRD SEMESTER**Units: 1.0** **CSU** | **54 hours independent study***(Prerequisite: MATH 129BH)*

Independent study provides individual students challenging and in-depth study on approved topics within any subject area. Independent study proposals must have the approval of the instructor and appropriate administrator. It is expected that the study will not duplicate existing curriculum; rather, it will be of an advanced nature and extend approved courses or series of courses. This third semester honors independent study course is intended to provide students who have completed two semesters of independent study with the opportunity to further deepen their understanding of their chosen advanced topic of mathematics at an honors level with the goal of public presentation or publication.

MATH 132 THE IDEAS OF MATH**Units: 3.0** **CSU, UC** | **48-54 hours lecture***(Prerequisite: MATH 90 or MATH 66 with a grade of 'C' or better or eligibility as determined by VVC assessment.)*

Sets and their application to permutations, combinations, binomial theorem, correspondence, countability, finite probability measures, and expectation; linear, exponential and geometric modeling with applications.

MATH 138 COOPERATIVE EDUCATION**Units: 1-8 units** **CSU** |*See Cooperative Education listing***MATH 216 BUSINESS CALCULUS****Units: 4.0** **CSU** | **64-72 hours lecture***(Prerequisite: MATH 105 or MATH 105H or MATH 119.)*

This course is designed for students majoring in Business and Economics. Topics covered include functions and relations, limits and continuity, differentiation, applications of differentiation, integration, and applications of integration. NOTE: MATH 216 - Business Calculus and MATH 226 - Analytic Geometry and Calculus are not the same class.

MATH 226 ANALYTIC GEOMETRY AND CALCULUS**Units: 5.0** **CSU, UC** | **80-90 hours lecture***(Prerequisites: MATH 104 and MATH 105 or MATH 105H with a grade of C or better, or placement by VVC assessment.)*

This class offers an introduction to the calculus of single variables. Topics covered include limits, using limits of functions to determine continuity, finding derivatives and integrals of functions, basic properties of derivatives and integrals, the relationship between derivatives and integrals as given by the Fundamental Theorem of Calculus, and applications.

MATH 226H HONORS ANALYTIC GEOMETRY AND CALCULUS

Units: 5.0 **CSU, UC** | 80-90 hours lecture

(Prerequisite: MATH 104 and MATH 105 or MATH 105H with a grade of C or better, or placement by VVC assessment.) (UC Credit Limitation)

As an introduction to the calculus of single variables, students will develop the concept of limit, apply limits to functions to determine if they are continuous, find the derivative and determine integrals. Students will study the properties of the derivative and integral, their relationship to each other given by the Fundamental Theorem of Calculus. In addition, the honors component will include reading proofs and writing simple proofs.

MATH 227 ANALYTIC GEOMETRY AND CALCULUS

Units: 5.0 **CSU, UC** | 80-90 hours lecture

(Prerequisite: MATH 226 or MATH 226H with a grade of 'C' or better.)

This class covers the calculus of logarithmic, exponential trigonometric and hyperbolic functions, integration techniques, L'Hopital's Rule, improper integrals, infinite series, conic sections, parametric equations and polar coordinates.

MATH 227H HONORS ANALYTIC GEOMETRY AND CALCULUS

Units: 5.0 **CSU, UC** | 80-90 hours lecture

(Prerequisite: MATH 226 or MATH 226H with a grade of 'C' or better.) (UC credit limitation)

The calculus of logarithmic, exponential, trigonometric and hyperbolic functions, integration techniques, L'Hopital's Rule, improper integrals, infinite series, conic sections, parametric equations, and polar coordinates. In addition, the honors component will include reading proofs, writing complete proofs from sketches of proofs and applying techniques learned to real-life problems.

MATH 228 ANALYTIC GEOMETRY AND CALCULUS

Units: 5.0 **CSU, UC** | 80-90 hours lecture

(Prerequisite: MATH 227 or MATH 227H with a grade of 'C' or better.)

This course covers vectors and the geometry of space, vector-valued functions, the calculus of functions as several variables, multiple integration, Green's Theorem, divergence theorem, Stoke's Theorem and applications.

MATH 228H HONORS ANALYTIC GEOMETRY AND CALCULUS

Units: 5.0 **CSU, UC** | 80-90 hours lecture

(Prerequisite: MATH 227 or MATH 227H with a grade of "C" or better.)

Vectors and the geometry of space, vector-valued functions, the calculus of functions of several variables, multiple integration, Green's Theorem, divergence theorem, Stoke's Theorem, and applications. In addition, the honors component will include reading proofs, writing complete proofs from sketches of proofs and apply techniques learned to real-life problems.

MATH 231 LINEAR ALGEBRA

Units: 3.0 **CSU, UC** | 48-54 hours lecture

(Prerequisite: MATH 226 or MATH 226H with a grade of 'C' or better or concurrent enrollment in MATH 226.)

An introduction to linear algebra that compliments advanced courses in calculus. Topics include systems of linear equations, matrix operations, determinants, vectors and vector spaces, eigenvalues and eigenvectors and linear transformations. With orthogonality, inner product spaces and numerical methods if time permits.

MATH 270 DIFFERENTIAL EQUATIONS

Units: 3.0 **CSU, UC** | 48-54 hours lecture

(Prerequisite: MATH 227 or MATH 227H with a grade of 'C' or better)

This course covers elementary differential equations, solutions of first order equations, linear equations with constant coefficients, simultaneous linear systems, series solutions, the Laplace transform, and applications to physics and engineering.

Digital Animation has rapidly become one of the fastest growing careers within the computer graphics industry. Victor Valley College's Media Arts courses are designed for individuals seeking training in advanced techniques and procedures currently used in today's workplace. Designed for both beginning and advanced students, program curriculum is geared toward individuals interested in creating video games, television commercials, product or architectural visualizations, animated logos, 3D website graphics or film-based special effects. Learning essential principles and techniques for creating professional quality work, students are immersed in simulated problem-solving situations similar to those encountered in real world production environments. Students successfully completing the program courses will possess entry-level skills that apply to a wide variety of exciting career opportunities. Six different program certificates are currently offered. The primary software package used in all Media Arts Computer Animation classes is Autodesk Maya. Animation classes are also offered through the Computer Integrated Design and Graphics Department.

Career Opportunities

3D Modeler, Texture Artist/Painter, Lighting Specialist, Character Designer, Character Animator, Special F/X Animator, Environment Designer, Game Level Designer, Architectural Animator, Mechanical Design Animator, Medical Visualization Artist, Courtroom Visualization Artist, Web Graphics Animator, Storyboard Artist, Layout Artist, Graphic Designer, Compositor

Degrees and Certificates Awarded

Digital Animation Technician I -Maya Certificate	Expanded Animation Technician Maya Certificate
Digital Animation Technician I - 3ds Max Certificate	Expanded Animation Technician 3ds Max Certificate
Digital Animation Artist Certificate	Digital Filmmaker

Note: Associate of Science Degree programs require completion of at least 60 units of credit, which normally will take 4 semesters. Certificate programs, many of which lead to an Associate of Science degree, vary in the number of units required. Most can be completed in 2 - 4 semesters. Each course required for a certificate must be completed with a "C" grade or better. All can be counted toward its related degree.

Transfer

To pursue a bachelor's degree in this field, here are some schools that have programs that might interest you. For the most up-to-date information on these programs and others, visit www.assist.org, or, for private schools, www.aiccu.edu. Please stop by the Transfer Center in Building 55 or make an appointment with a counselor if you have questions.

UC campuses offering Animation include Berkeley and UCLA

CSU campuses that offer Animation include Long BeachChico, Fullerton, Los Angeles, and San Jose

Private schools include University of Southern California (USC), Biola University, Loyola Marymount University, Chapman Univeristy and Academy of Arts San Francisco

For more animation classes see CIDG

Media Arts

DIGITAL ANIMATION TECHNICIAN I SOFTIMAGE CERTIFICATE

The Maya certificate is designed to offer students a detailed look at one of the Animation industry's premiere 3D packages. Students will study a variety of topics, including how to model 3D objects, creation of a realistic material, the art of camera and lighting techniques, and an introduction to advanced keyframing. In addition to completing several animation projects, students learn about both the history of Animation and the traditional principles involved in making an individual's work look both realistic and believable.

Units Required: 9.0

All of the following must be completed with a grade of "C" or better:

MERT 50	Principles of Animation	3.0
MERT 51	Advanced Materials, Lighting and Rendering with Softimage	3.0
MERT 52	Digital Character Animation	3.0

EXPANDED ANIMATION TECHNICIAN MAYA CERTIFICATE

This certificate crosses over all the software taught under the MERT program, any student who achieves this certificate has gone through the program and successfully completed the demo reel project, they have learned to work in a large complex environment and complete assigned tasks on an individual and group level. The student has learned the functions required to work on a large structured project in which their skill sets in a CG environment are tested and judged by peers in the class and the Instructor when the project is finalized.

Units Required: 12.0

All of the following must be completed with a grade of "C" or better:

MERT 50	Principles of Animation	3.0
MERT 51	Advanced Materials, Lighting and Rendering with Maya	3.0
MERT 52	Digital Character Animation With Maya	3.0
MERT 53	Advanced Animation/Demo Reels	3.0

DIGITAL ANIMATION TECHNICIAN I 3DS MAX CERTIFICATE

The 3ds Max certificate is designed to offer students a detailed look at one of the Animation industry's premiere 3D packages. The courses taken to complete the certificate provide students an opportunity to learn a variety of topics, including how to model 3D objects, how to create realistic textures and materials, the art of camera and lighting techniques, and a variety of keyframing solutions to bring their ideas to life. In addition to completing both individual and group projects, students also delve into the traditional principles of animation that serve to heighten the level of realism and believability of an individual's work.

Units Required: 9.0

All of the following must be completed with a grade of "C" or better:

CIDG 160	3ds Max Fundamentals	3.0
CIDG 260	3ds Max Advanced Modeling and Materials	3.0
CIDG 261	3ds Max Character Animation and Advanced Keyframing Techniques	3.0

EXPANDED ANIMATION TECHNICIAN 3DS MAX CERTIFICATE

This certificate crosses over all the software taught under the CIDG and MERT programs, any student who achieves this certificate has gone through the program and successfully completed the demo reel project, they have learned to work in a large complex environment and complete assigned tasks on an individual and group level. The student has learned the functions required to work on a large structured project in which their skill sets in a CG environment are tested and judged by peers in the class and the Instructor when the project is finalized.

Units Required: 12.0

All of the following must be completed with a grade of "C" or better:

CIDG 160	3ds Max Fundamentals	3.0
CIDG 260	3ds Max Advanced Modeling and Materials	3.0
CIDG 261	3ds Max Character Animation and Advanced Keyframing Techniques	3.0
MERT 53	Advanced Animation/Demo Reels	3.0

DIGITAL ANIMATION ARTIST CERTIFICATE

The Digital Animation Artist certificate is designed to expand an individual's expertise in 3D Animation by requiring additional training in traditional art principles and techniques. Employers many times view an animator who possesses the ability to both draw and more thoroughly understand concepts and practices specific to traditional art painting as more well-rounded and work-ready. By earning the Digital Animation Artist certificate, students will better position themselves for employment opportunities in this fast-paced and competitive field. An Adobe Photoshop course specific to 3D Animation applications is also required to earn a certificate.

Units Required: 15.0

Complete the requirements listed in both Group I and Group II

GROUP I - Animation Track choose between software package options 1 or 2. All of the following must be completed with a grade of "C" or better:

Option 1: 3ds Max

CIDG 160	3ds Max Fundamentals	3.0
CIDG 260	3ds Max Advanced Modeling and Materials	3.0
CIDG 261	3ds Max Character Animation and Advanced Keyframing Techniques	3.0
MERT 56	Photoshop for Animators	3.0

Option 2: Maya

MERT 50	Principles of Animation	3.0
MERT 51	Advanced Materials, Lighting, and Rendering with Softimage	3.0
MERT 52	Digital Character Animation	3.0
MERT 56	Photoshop for Animators	3.0

GROUP II - Art Track choose any ONE of the following courses. All of the following must be completed with a grade of "C" or better:

ART 101	Survey of Art History	3.0
ART 104	Film as an Art Form	3.0
ART 112	Design I	3.0
ART 113	Design II	3.0
ART 122	Introduction to Life Drawing	3.0
ART 124	Anatomy for Life Drawing	3.0
ART 125	Drawing I	3.0
ART 141	Sculpture I	3.0

DIGITAL FILMMAKER CERTIFICATE

The Digital Filmmaker certificate is designed to teach students to look at films as an art form, rather than as entertainment. The courses taken to complete the certificate provide students invites to explore the expressive and communicative nature of film while also examining the process by which films are made. The courses cover topics such as camera operation, lighting, composition, script-writing, storyboarding, audio, editing, compositing, and practical film making techniques. Individual projects will give students the opportunity to hone their personal skill set, while large group and class projects will teach students to work collaboratively, a necessary skill in this demanding industry.

Units Required: 6.0

All of the following must be completed with a grade of "C" or better:

ART 104	Film as an Art Form	3.0
MERT 74	Digital Video Production	3.0

Media Arts Courses

MERT 50 PRINCIPLES OF ANIMATION IN MAYA

Units: 3.0

32-36 hours lecture and 48-54 hours laboratory

(No prerequisite. Grade Option)

Students will learn the basics of 3D modeling in Maya, how to create and apply realistic textures, lighting principles and techniques, camera types and their appropriate usage, and fundamental keyframing procedures. Other topics to be covered include storyboards, the traditional principles of animation, current industry trends and issues pertaining to rendering output for different mediums (film, video, Internet, etc.)

MERT 51 ADVANCED MATERIALS, LIGHTING AND RENDERING WITH MAYA

Units: 3.0

32-36 hours lecture and 48-54 hours laboratory

(Recommended Preparation: MERT 50. Grade Option)

This course covers advanced material techniques using Hypershade, rendering with Mental Ray and advanced lighting techniques. Students will complete a combination of exercises, individual and group projects.

MERT 52 DIGITAL CHARACTER ANIMATION WITH MAYA

Units: 3.0

32-36 hours lecture and 48-54 hours laboratory

(Recommended Preparation: MERT 50, MERT 51, or familiarity with a current 3D application, preferably MAYA. Grade Option)

This course is an advanced study in digital character animation and feature-length digital media production. This course explores the relationships between anatomy, motion, weight, and timing through a balanced combination of exercises, individual and group projects.

MERT 53 ADVANCED ANIMATION/ DEMO REELS

Units: 3.0

32-36 hours lecture and 48-54 hours laboratory

(Prerequisite: MERT 50 or CIDG 160. Grade Option)

This course is an in depth look at creating an animation production with a final reel being the goal of the class. The course covers camera techniques, staging, modeling, texturing, character development, story development, plot development, storyboarding, titling, and final production using industry standards as guidelines from start to finish.

MERT 56 PHOTOSHOP FOR ANIMATORS

Units: 3.0

32-36 hours lecture and 48-54 hours laboratory

(Recommended Preparation: CIDG 160 or MERT 50. Grade Option)

Students will learn the concepts and procedures required for creating high quality texture maps and imagery for use in 3D computer animation. Topics will include basic and advanced editing techniques, managing tone and color, layer management, optimization strategies and the use of filters. Compositing techniques will be addressed in detail. Relevant issues dealing with the pre-production process, and industry trends and analysis will also be discussed.

MERT 74 DIGITAL VIDEO PRODUCTION

Units: 3.0

32-36 hours lecture and 48-54 hours laboratory

(Recommended preparation: ART 133, CIS 101. Grade Option)

This course introduces digital video production techniques. Course topics include the operation of digital camcorders, lighting, sound equipment and post production digital editing suites, and the principles and aesthetics of film and video editing.

MERT 80 ZBRUSH FUNDAMENTALS

Units: 3.0

32-36 hours lecture and 48-54 hours laboratory

(Recommended preparation: MERT 50, CIDG 160. Grade Option)

Students will learn the concepts and procedures required for creating high quality texture maps and Zbrush models for use in 3D computer animation. Topics will include basic and advanced editing techniques with Hard Surface modeling, ZSpheres, detailing models with various brushes and masks, layer management and optimization strategies for high resolution models. Relevant issues dealing with ZBrush models and other 3D packages and industry trends and analysis will also be discussed. Grade Option.

Medical and Health Professions

The programs of study in the following medical and health professions are not offered at Victor Valley College, but preparatory courses needed for transfer into these majors are offered as outlined below.

Athletic Training

Athletic training is a growing profession that involves evaluation, management, and rehabilitation of athletic injuries. It is also the organization and administration of athletic training programs, as well as the education and counseling of the athlete. This program of study was recently endorsed by the American Medical Association as an allied health profession.

Athletic Training programs may also be offered as an option under Kinesiology, Exercise Science, or Physical Education majors at most universities. The average GPA for students enrolling in these programs is a 3.0 GPA or better.

Common lower division courses students should complete prior to transferring to a university as an Athletic Training, Kinesiology, Exercise Science, or Physical Education major:

BIOL 211, 231; CHEM 201; PHYS 221; MATH 120; PSYC 101

For more information on athletic training or kinesiology programs, visit: www.assist.org or meet with a counselor.

Pre-Chiropractic (D.C.)

Chiropractic Medicine places the emphasis on spinal manipulation and neuromuscular treatments as the means of restoration and preservation of health. Chiropractors diagnose health problems, provide care and consult with other health care providers. Prior to enrolling, applicants must have completed a minimum of 90 semester units, applicable to a bachelor's degree, with a minimum cumulative GPA of a 2.5 on a 4.0 scale.

Common lower division course requirements for chiropractic medicine:

BIOL 201, 202; CHEM 201, 202, 281, 282; PHYS 221, 222; ENGL 101, 102 or 104; PSY 101

Highly recommended courses: BIOL 221, 231; PHYS 201; CMST 109; MATH 105

15 additional semester units from Social Sciences and/or Humanities

The following four schools are the only California colleges accredited by American Chiropractic Association:

Cleveland Chiropractic College, Los Angeles	www.clevelandchiropractic.edu
Life Chiropractic College-West, Hayward	www.lifewest.edu
Southern California University of Health Sciences	www.scuhs.edu (formerly: Los Angeles College of Chiropractic)
Palmer College of Chiropractic, San Jose	www.palmer.edu

For more information on chiropractic colleges, visit: www.chiropractic.org

Dental Hygiene (R.D.H.)

Dental hygienists provide educational and clinical services for patients, including dental health education and disease prevention procedures, obtaining and recording patients' medical and dental histories, scaling and polishing teeth, recording conditions of patients' mouths and teeth, exposing and processing dental x-ray films, nutritional counseling, and applying fluoride and pit and fissure sealants for prevention of decay. Dental Hygiene is a rapidly growing profession and is emerging as a vital, highly respected component of dental health.

Before admission into the Dental Hygiene program students must have graduated from an accredited secondary school, have a minimum of 60 semester units of transferable course work, rate sufficiently high on the Dental Hygiene Aptitude Test (DHAT), and complete prerequisite coursework with a cumulative GPA of 3.0 or better.

There are multiple California community colleges that offer an Associate of Science or Arts degree in Dental Hygiene. For more information on accredited Dental Hygiene community college programs, visit: www.cdha.org/.

Common lower division course requirements for most Dental Hygiene programs:

BIOL 201, 211, 221, 231; CHEM 100, 201, 202; ENGL 101, 102 or 104; PSY 101; SOC 101; CMST 109

Other courses recommended to complete 60 required units: CHEM 120, 281; Math 120.

The following four California universities offer a bachelor's degree in Dental Hygiene and are accredited by the Commission on Dental Accreditation (CODA):

Loma Linda University	www.llu.edu/dentistry/admissions/index.page
University of Southern California	dentistry.usc.edu/education.aspx
University of the Pacific	www.pacific.edu/
West Coast University	www.westcoastuniversity.edu/
West L.A. College	www.wlac.edu

A handout with all transfer requirements for a B.S. degree in Dental Hygiene from Loma Linda University is available in Counseling or can be obtained from the website above.

For more information on Dental Hygiene programs, visit: www.adha.org

Health Care Management, Health Information Management

Health Care Managers are involved with policy formulation, finance, administrative functions, roles of medical staff, federal and state regulation, planning and marketing, human resources and other health care management functions. Positions are typically found in hospitals, clinics, managed care organizations, long-term care facilities, and medical offices. Management and staff opportunities for graduates in this field include consulting firms, durable medical equipment companies, pharmaceutical companies, and health care information systems vendors.

Health Information Managers provide leadership in managing medical information systems that serve patients, health care providers, and administrative staff. It is an excellent career choice for the person who is seeking a health care profession that combines interests in computer science, business, management, legal procedures, and research. This unique background provides the health information administrator with a wide variety of employment opportunities. These include positions in acute care, outpatient care, long-term care, mental health facilities, insurance companies, governmental agencies, legal offices, and with computer system vendors.

The health information manager will have opportunities to develop health information systems for quality patient care, financial reimbursement, medical research, health care planning, and security of patient information. Many health information managers also have responsibilities that include planning organizing the medical records department, budgeting department resources, determining department policies and procedures, and evaluating and motivating employees. Because information is vital to quality patient care, the health information manager interacts daily with medical, financial, and administrative staff.

Recommended preparation for Health Care Management and Health Information Management programs varies greatly from school to school, but may include: BADM 101 or BADM 103; BADM 102 or BADM 104; ECON 102; BIOL 211; BIOL 221; CHEM 100; PSYC 101; and many more, depending on the institution.

For UC and CSU campuses that have these majors, please visit www.assist.org for more information about specific requirements by campus.

For Loma Linda University, please visit www.llu.edu and search under Allied Health Professions.

Pre-Dentistry (DDS/DMD)

Dentists provide comprehensive dental treatment to patients including oral and maxillofacial surgery, endodontics, orthodontics, and restorative processes.

Because most of the applicants being admitted to dental schools possess a bachelor's degree, students are advised to integrate the dental school requirements into a program that will lead to a bachelor's degree in a major of their choice. While many successful applicants major in one of the natural sciences, a science major is NOT required for admission to dental school. There are Dental Schools which consider 90 semester units (60 units lower division and 30 units of upper division coursework) with a very competitive grade point average (GPA). The average GPA for accepted students to U.S. dental schools is a 3.5. In addition a score sufficiently high on the Dental Admission Test (DAT) (www.adea.org) is required along with course prerequisites. Extracurricular activities (community/campus), research, and clinical experience are highly encouraged to become a competitive applicant.

Common lower division course requirements for dentistry schools:

BIOL 201, 202, 211, 221, 231; CHEM 201, 202, 206+207 or 281+282 (recommended); ENGL 101, 102 or 104; MATH 226; PHYS 221, 222; PSYC 101; CMST 109

11 units in Social Sciences/Humanities/Foreign Language. Courses from the following are highly recommended: Algebra/Calculus/Statistics, Accounting/Economics, Technical Writing, Sociology/Anthropology, Business Management, and Ceramics/Sculpture.

The following six California schools offer a Doctor of Dental Surgery (DDS) and are the only California universities accredited by the Commission on Dental Accreditation (CODA):

Loma Linda University	www.llu.edu/llu/dentistry
University of California, Los Angeles (UCLA)	www.uclasod.dent.ucla.edu/
University of the Pacific	www.dental.pacific.edu/
University of California, San Francisco (UCSF)	www.dentistry.ucsf.edu/
University of Southern California (USC)	www.usc.edu/hsc/dental
Western University of Health Sciences	www.prospective.westernu.edu/dentistry

A handout with all transfer requirements for a D.D.S. degree in Dentistry from Loma Linda University is available in counseling.

For more information on dentistry schools, visit: www.ada.org.

Pre-Medicine (MD) and Pre-Osteopathic Medicine (DO)

Doctors of Medicine manage the diagnosis, treatment, and prevention of disease and injuries of individuals to restore them back to optimal health. Treatment may include surgery, various treatment methods, conferring with other specialists, and prescribing appropriate drugs. Physicians also research the causes, transmission, and control of diseases and other ailments.

Medicine is a highly competitive field and acceptance into medical school is based on a combination of preparatory courses completed, letters of recommendation, sufficiently high scores on the Medical College Admissions Test (MCAT), and GPA. Most students who are admitted into medical school have a bachelor's degree; therefore, a bachelor's degree is highly recommended. Since requirements for medical school places emphasis on biology and chemistry, most students choose to pursue a bachelor's degree in biology or chemistry. While many successful applicants major in one of the natural sciences, a science major is NOT required for admission to medical schools. The average GPA for accepted students to U.S. medical schools is a 3.6. Extracurricular activities (community/campus), research, and clinical experience are highly encouraged to become a competitive applicant.

A handout entitled "Premedical Course Preparation for California Medical School Programs" is available from the VVC Counseling department. Students should also consult school catalogs, websites, and the Medical School Admission Requirements: U.S. and Canada, (MSAR) published by the Association of American Medical Colleges (AAMC) for specific requirements. A copy of the MSAR is available for purchase at www.aamc.org

Common lower division course requirements for most medical schools:
BIOL 201, 202; CHEM 201, 202, 281, 282; ENGL 101, 102 or 104; MATH 226, 227; PHYS 221, 222

Highly recommended courses: CHEM 206, 207; CIS 101; SPAN 101,102; PSY 101 or SOC 101; CMST 106 or 109

A minimum of 90 semester units, at least 20 of which must be upper division from a four-year university.

The following eight medical schools in California offer a Doctor of Medicine (MD) degree and are accredited by the Liaison Committee on Medical Education (LCME) of the American Medical Association (AMA):

Loma Linda University	www.llu.edu/llu/medicine
Stanford University	www.med.stanford.edu
University of California	
Davis:	www.ucdmc.ucdavis.edu/medschool/
Irvine:	www.med.uci.edu
Los Angeles:	www.medstudent.ucla.edu
Riverside:	www.medstudent.ucr.edu
San Diego:	medicine.ucsd.edu
San Francisco:	www.medschool.ucsf.edu
University of Southern California	www.usc.edu/schools/medicine
Western University of Health Sciences	www.westernu.edu/osteopathic
For more information on medical schools, visit: www.aamc.org	

Nursing – see separate section on Nursing

Occupational Therapy (O.T.)

Occupational Therapists (OT) look at the psychological and social concerns, as well as physical factors, to assist physically disabled people relearn and adapt basic motor skills. Occupational Therapists use every day (occupational) activities as a means of helping those people achieve independence, focusing on critical daily tasks ranging from dressing to employment tasks. Most OT programs require the Graduate Record Examination (GRE) and a minimum cumulative GPA of a 3.0 or better. A minimum of 80 volunteer/experience hours are required with at least 60 hours being under supervision of an Occupational Therapist

Because the entrance requirements, prerequisites, and program components vary from college to college, students should consult school catalogs and websites for specific information about the programs from each college to which they plan to apply.

Common lower division course requirements for most Occupational Therapy programs:

BIOL 201, 202, 211, 231; PSYC 101, 110, 213; MATH 120, ENGL 101, 102, or 104; SOC 101 or ANTH 102; CMST 109, PHYS 221, 222

Additional courses in Humanities/Social Sciences may be required.

The following California schools award a Master's degree in Occupational Therapy:

CSU Dominguez Hills	www.csudh.edu/OT
Loma Linda University	www.llu.edu
San Jose State University	www.sjsu.edu/occupationaltherapy
University of Southern California	ot.usc.edu/admissions/bs-to-ma
Dominican University of California	www.dominican.edu
Samuel Merritt University	www.samuelmerritt.edu
Stanbridge College	www.stanbridge.edu
University of St. Augustine for Health Sciences-California	www.usa.edu

A handout with all transfer requirements for a B.S. degree in Occupational Therapy from Loma Linda University is available in the counseling department.

For more information on Occupational Therapy programs, visit: www.aota.org

Occupational Therapy Assistant (O.T.A.)

Occupational Therapy Assistants (COTA) work under the guidance of occupational therapists to carry out treatment programs for many different kinds of patients. The COTA enjoys a job that uses creative, personal, and technical skills; works with people of all ages with many kinds of health problems; uses specialized job skills developed in classroom and clinical experiences; benefits from a career with excellent employment opportunities; and shares a respected position as an important member of the health care team. All colleges require a minimum GPA of 2.0 or better to apply to their COTA programs. Competitive applicants have cumulative GPAs of 2.5 or better.

Common lower division course requirements for most Occupational Therapy Assistant programs:

BIOL 211, 231; ENGL 101; PSYC 101; CMST 109; MATH 120

The following California Community colleges offer Associate degrees in Occupational Therapy Assistant:

Santa Ana Community College	www.sac.edu
Grossmont Community College	www.grossmont.edu
Sacramento City College	www.scc.losrios.edu
Monterey Peninsula College	www.mpc.edu

Pre-Optometry (O.D.)

Optometry is a health care profession that focuses on the prevention and remediation of disorders of the vision system. Optometrists examine, diagnose and treat eye diseases, determine appropriate prescriptions for glasses and contacts, and handle the overall eye care of a patient.

Entrance into the Doctor of Optometry degree completion of a minimum of 90 units of which 20 must be from a four-year university.

Because admission has become increasingly more difficult, having completed the equivalent of a bachelor's degree is now imperative for the three California Schools of Optometry. While many successful applicants major in one of the natural sciences, a science major is NOT required for admission to optometry schools. Besides the bachelor's degree being important, a high score on the Optometry Admission Test (OAT) and a high GPA is recommended for preliminary screening. The average cumulative GPA for accepted students to U.S. optometry schools ranges from a 3.0 to 3.7. It is highly recommended that you obtain experience with an optometrist prior to applying.

Common lower division course requirements for most schools of optometry:

BIOL 201, 202, 221; CHEM 201, 202, 281, 282; ENGL 101, 102 or 104; MATH 120, 226, 227; PHYS 221, 222; PSYC 101, 110 or PSYC 204 or PSYC 213

University of California, Berkeley also requires the additional courses: ENGL 245 or ENGL 246

The following California schools offer programs leading to a Doctor of Optometry (O.D.) degree:

Southern California College of Optometry, Fullerton	www.scco.edu
University of California, Berkeley	optometry.berkeley.edu/
Western University of Health Sciences	www.western.edu/optometry/

For more information on schools of optometry, visit: www.opted.org

Pre-Osteopathic Medicine (D.O.) (also see Medicine)

A Doctor of Osteopathic Medicine (D.O.) diagnoses and treats diseases and injuries of the human body, relying upon accepted medical and surgical modalities. The emphasis of osteopathic medicine is holistic medicine.

While many successful applicants major in one of the natural sciences, a science major is NOT required for admission to osteopathic medical school. Entrance into the intense four-year program is based on a minimum requirement of 90 semester units or 3/4 toward a bachelor's degree, a high score on the Medical College Admissions Test (MCAT), and a high GPA. The average GPA for accepted students to U.S. osteopathic medical schools is a 3.45. Extracurricular activities (community/campus), research, and clinical experience are highly encouraged to become a competitive applicant.

Common lower division course requirements for most osteopathic medical schools:

BIOL 201, 202; CHEM 201, 202, 281, 282; ENGL 101, 102 or 104; PHYS 221, 222; MATH 226, 227

Highly recommended courses: BIOL 221; MATH 120.

Courses in the Social Sciences, Humanities, Languages, and computer skills are also recommended: PSYC 101 or SOC 101 or ANTH 102; SPAN 101, 102; CIS 101; PHIL 101.

The following California schools offer programs leading to a Doctor of Osteopathic Medicine (D.O.) degree:

Western University of Health Science	www.westernu.edu
Tuoro University College of Osteopathic Medicine California	www.tu.edu/

For more information on osteopathic medical programs, visit: www.aacom.org.

Pre-Pharmacy (Pharm. D.)

A pharmacist compounds and dispenses prescribed medications, drugs, and other pharmaceuticals for patient care, closely following professional standards and state and federal legal requirements.

Admission to schools of pharmacy is highly competitive. Schools of Pharmacy offering the Doctor of Pharmacy generally require the completion of a minimum of 60 semester units of pre-pharmacy coursework. Most students who are admitted into pharmacy schools have a bachelor's degree; therefore, a bachelor's degree is highly recommended. Since requirements for pharmacy school places emphasis on biology and chemistry, most students choose to pursue a bachelor's degree in biology or chemistry. While many successful applicants major in one of the natural sciences, a science major is NOT required for admission to medical school. The average GPA for accepted students to U.S. pharmacy schools ranges from 3.2 to 3.7. Volunteer/work experience in the field of pharmacy is highly encouraged. Two to three letters of recommendation are required by pharmacy schools. California schools do not require the Pharmacy College Admission Test (PCAT), but more than half of out-of-state pharmacy schools do. Chapman University is the only California school that requires the PCAT

Common lower division course requirements for most pharmacy schools:

BIOL 201, 202, 211, 231; CHEM 201, 202, 281, 282; ECON 101 or 102; ENGL 101, 102 or 104; MATH 226, 227; PHYS 221, 222; PSYC 101 or SOC 101 or ANTH 102; CMST 109

Highly recommended courses: BIO 221; CIS 101, Foreign Language.

Depending on the school, additional courses in Humanities/Fine Arts (6-12 units) and Social/Behavioral Sciences (6-12 units) are required.

The following California colleges offer Doctor of Pharmacy (Pharm.D.) degrees:

University of the Pacific	www.pacific.edu/pharmacy
University of Southern California (USC)	www.usc.edu/schools/pharmacy/pharmd/
University of California, San Diego	pharmacy.ucsd.edu/index.shtml
University of California, San Francisco	pharmacy.ucsf.edu
Loma Linda University	www.llu.edu/pharmacy/
Western University of Health Sciences	www.westernu.edu/pharmacy/
Tuoro University	cop.tu.edu
California Northstate College of Pharmacy	pharmacy.cnsu.edu
Chapman University	www.chapman.edu

For more information on schools of pharmacy, visit: www.aacp.org

Pre-Physical Therapy (P.T.)

Physical Therapists evaluate neuromuscular, musculoskeletal, sensory-motor, and related cardiovascular and respiratory functions of the patient. They perform and interpret tests and measurements of these functions and abilities as an aid in the treatment of the patient.

Physical Therapy is a highly competitive program. All accredited entry level physical therapy programs are at the master's level (MS or MPT) or doctorate level (DPT). The DPT is the new educational standard for entry-level work in the field. Most universities offer the Doctorate of Physical Therapy (DPT) degree. Most programs require a student to have at least a 3.0 cumulative and prerequisite GPA, although the average GPA for accepted students may be higher. A bachelor's degree in a related field such as Biology, Kinesiology, and Athletic Training is strongly recommended. In addition, sufficiently high scores on the Graduate Record Examination (GRE), strong letters of recommendation, and paid or volunteer experience in a physical therapy setting are important in the selection process.

Common lower division course requirements for most Physical Therapy programs:

BIOL 201, 202, 211, 231; CHEM 201, 202; ENGL 101, 102 or 104; MATH 120, 226 (Most require Math 120); PHYS 221, 222; PSYC 101, 110, 213

Highly recommended course: CHEM 281

The following California colleges offer DPT programs accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE):

California State University

Fresno:	www.fresnostate.edu/chhs/physical-therapy/
Northridge:	www.csun.edu/hhd/pt/
Sacramento:	www.csus.edu/hhs/pt/
Azusa Pacific University	www.apu.edu
Chapman University	www.chapman.edu/CS/pt/
Loma Linda University	www.llu.edu
Mount St. Mary's College	www.msmc.la.edu/
Samuel Merritt University	www.samuelmerritt.edu/physical-therapy
University of California, San Francisco	www.ucsf.edu/
University of the Pacific	www.pacific.edu
University of Southern California (USC)	pt.usc.edu/
Western University of Health Sciences	www.westernu.edu
University of St. Augustine for Health Sciences	www.usa.edu

The following California college offers M.S./MPT programs accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE):

California State University Long Beach: www.csulb.edu

A handout with all transfer requirements for a Master of Physical Therapy degree from Loma Linda is available in the Counseling Department. For more information on physical therapy, visit: www.apta.org.

Physical Therapist Assistant (P.T.A.)

The physical therapist assistant is a skilled technical health worker who, under the supervision of a physical therapist, assists in the patients' treatment program. The extent to which the physical therapist assistant is involved in treatment depends upon the policies of the health facility, the supervising therapist, and the patient. Most colleges require a GPA of 2.5 or better.

Common lower division course requirements for most Physical Therapy Assistant programs:

BIOL 211, 231; ENGL 101; MATH 90

Additional general education and major courses are required. Please check each college's catalog or website for specific course requirements.

The following California colleges offer associate degrees in Physical Therapist Assistant:

Loma Linda University	www.llu.edu/pages/sahp/transfer/documents/vvc.pdf
Cerritos Community College	www.cerritos.edu/pta
San Diego Mesa Community College	www.sdmesa.edu
Sacramento City College	www.scc.losrios.edu
Ohlone Community College	www.ohlone.edu
College of the Sequoias	www.cos.edu

A handout with all transfer requirements for an associate degree from Loma Linda University is available in the VVC Counseling Department.

Pre-Physician Assistant (P.A.)

A physician assistant (PA) is a skilled health care professional who, under the supervision of a physician, performs a variety of medical, diagnostic and therapeutic services. Most physician assistants routinely elicit complete medical histories and perform comprehensive physical examinations. They treat patients with common acute problems such as infections and injuries, perform minor surgical procedures, and provide ongoing care for common chronic problems such as arthritis, hypertension and diabetes.

The usual program requires 24 months to complete. Most PA students earn a bachelor's degree, although an increasing number of PA programs award master's degrees upon completion of the program.

Upon graduation from an accredited PA program, students take an examination given by the National Commission on Certification of Physician Assistants (NCCPA) and achieve national certification by passing the exam. Certified Physician Assistants (PA-C) must be retested every six years. Admission into the PA programs requires a minimum of 60 semester units and most require a GPA of 3.0 or better. Universities may require completion of the Medical College Admissions Test (MCAT) or the Graduate Record Examination (GRE). Most PA programs will require a minimum of 1000 hours of related direct patient contact.

Common lower division course requirements for most Physician Assistant programs:

BIOL 211, 221, 231; CHEM 100, 201+202 or 281+282; ENGL 101, 102 or 104; MATH 105; PSYC 101; SOC 101 or ANTH 102; 9-12 units from humanities.

Highly recommended courses: BIOL 201, 202; MATH 120; ALDH 139; CIS 101; SPAN 101, 102; CMST 109

The following California universities offer master's programs in Physician Assistant (PA):

Loma Linda University	www.alliedhealth.edu/academics/physician-assistant
Samuel Merritt	amuelmerritt.edu/physician-assistant
Stanford University	pcap.stanford.edu/
Tuoro University-California	www.tu.edu
University of California, Davis	www.ucdmc.ucdavis.edu/
University of Southern California	www.usc.edu
Western University of Health Sciences	prospective.westernu.edu/
Marshall B. Ketchum University	www.ketchum.edu

Because the requirements for each program vary slightly, students who are serious about pursuing a career as a physician assistant should consult with the catalog or website of each college/university for which they plan to apply.

For more information on Physician Assistant programs, visit: www.aapa.org

Pre-Podiatry (D.P.M.)

Podiatry is a specialty in medicine and surgery. A podiatrist is concerned with the prevention, diagnosis, and treatment of diseases and disorders which affect the human foot and contiguous structures.

Students must complete a minimum of 60-90 units before transfer with a GPA of 3.0 or better, take the Medical College Admissions Test (MCAT), and meet the following lower division course requirements for transfer.

Lower-division course requirements for California College of Podiatric Medicine, San Francisco Doctor of Podiatric Medicine program.

BIOL 201, 202; CHEM 201, 202, 281, 282; ENGL 101, 102 or 104; PHYS 221, 222, MATH 226

Highly recommended courses: BIOL 206, 211, 221, 231; MATH 227; CMST 109 12 elective units in Humanities/Social Sciences.

The following California universities offer Doctor of Podiatry Medicine (DPM) programs.

Samuel Merritt College	www.samuelmerritt.edu/podiatric_medicine
Western University of Health Sciences	www.western.edu/podiatry/podiatry-about/

For more information on Podiatry programs, visit: calpma.org and www.aacpm.org

Radiologic Technology

The radiologic technologist (x-ray technician) is responsible for the accurate demonstration of body structures on a radiograph or other receptor. The technologist determines proper exposure factors, manipulates medical imaging equipment, evaluates the radiographic quality, and provides for patient protection and comfort.

Most radiologic technology programs are two-year programs with students earning an associate degree upon completion of the program.

Radiologic technologists may choose to train further in the areas of medical sonography, nuclear medicine technology, radiation therapy technology, and special imaging technology.

Entrance requirements vary slightly from college to college. Students should send off for requirements for each college to which they plan to apply. Students are highly encouraged to complete the following courses before transfer into the below college/university:

Chaffey College

www.chaffey.edu

A.S. Radiologic Technology

ALDH 139, BIOL 211, CHEM 100 or PHYS 100, ENGL 101 and MATH 90. Meet with Chaffey College counselor for additional requirements. A cumulative 2.8 GPA or higher is required for application for the program.

Loma Linda University

www.llu.edu

A.S. Medical Radiography

ALDH 139, BIOL 211, BIOL 231, CHEM 100 or PHYS 100, ENGL 101 AND ENGL 102, MATH 90, PSYC 101 or SOC 101, CMST 109, CIS 101 or High School Computer, and Foreign Language. Elective units to complete course requirements may be necessary. Applicants must have a 3.0 cumulative GPA to be considered.

A handout with all transfer requirements for an A.S. degree in Medical Radiography and a B.S. degree in Radiation Technology from Loma Linda University is available in counseling.

For more information on Radiologic Technology, visit: www.asrt.org.

Speech-Language Pathology and Audiology/ Communicative Disorders

Speech-language pathologists are concerned with evaluating and treating children and adults with communication disorders. Difficulties in the areas of speech, language, fluency, and voice are associated with a variety of disorders, including developmental delay, hearing impairment, cleft palate, cerebral palsy, stroke, and head injury. Audiologists are concerned with prevention, identification, assessment, and rehabilitation of hearing disorders. For both professions, it is important that the student have an interest in working with people.

The following California colleges offer bachelor's degrees or master's degrees in Speech Pathology and/or Audiology:

Biola University

www.biola.edu

California State University (several campuses)

www.assist.org

Loma Linda University

www.llu.edu

University of Redlands

www.redlands.edu

Check universities' catalogs or websites for specific course requirements.

Sports Medicine

The field of Sports Medicine deals with understanding the role of science in exercise and health promotion. Programs in Sports Medicine provide a sound knowledge of the scientific principles of maintaining, enhancing, and rehabilitating the body through the medium of exercise and sport.

Only a few universities offer a major in Sports Medicine or even a Sports Medicine option within a physical education or health-related degree. To pursue a bachelor's degree, specific courses should be completed prior to transfer. The average entrance GPA is usually above 3.0.

Common lower division course requirements for most Sports Medicine programs:

BIOL 211, 231; CHEM 201, 202; ENGL 101, 102; MATH 226; PHYS 221, 222, PSYC 101; KIN 101

Complete general education requirements of specific university including social sciences and humanities.

The following California colleges offer a bachelor's or master's degree in Sports Medicine:

Pepperdine University

www.pepperdine.edu

California Lutheran University

www.callutheran.edu

Vanguard University

www.vanguard.edu

Pre-Veterinary Medicine (D.V.M.)

Veterinary medicine is the health profession that deals with the scientific knowledge and decision-making process that culminate in the diagnosis, treatment and prevention of animal diseases. The profession is concerned with enhancing the health, welfare, productivity and utility of animals as well as with the safety of animal products used by people.

Students completing a veterinary medicine program approved by the Board of Examiners in Veterinary Medicine earn a Doctorate of Veterinary Medicine (DVM).

Veterinary medicine is a highly competitive program. Acceptance to this program is based on GPA, scores on the Graduate Record Examination (GRE) or Medical College Admissions Test (MCAT) and any additional examinations, and completion of a minimum of 72 semester units from an accredited college. The average required GPA for U.S. veterinary schools varies by school, from a low 2.5 to a high 3.5. Those who receive offers for admission often have a GPA of 3.5 or better, and have between 500 to 2000 hours of clinical veterinary experience.

As with many specialized medical programs, applicants who have earned a bachelor's degree are highly desirable and more competitive in the admission process. While many successful applicants major in one of the natural sciences, a science major is NOT required for admission to veterinary school.

Common lower division course requirements for most veterinary schools:

BIOL 201, 202, 221; CHEM 201, 202, 206, 281, 282; ENGL 101, 102 or 104; MATH 120; PHYS 221, 222

Highly recommended courses: CHEM 207; PSYC 101; SOC 101 or ANTH 102, 9 units of Humanities courses

The following California Universities offer programs leading to a Doctor of Veterinary Medicine (D.V.M.)

University of California, Davis

www.vetmed.ucdavis.edu/studentprograms

Western University of Health Sciences

www.westernu.edu

For more information on veterinary schools, visit: www.aavmc.org

Important note about programs in the health professions:

In addition to a competitive GPA and a competitive score on specialized entrance examinations, programs in the health professions also seek the following from competitive applicants: strong letters of recommendation, volunteer or paid experience in your specialty of interest, involvement in extracurricular activities, and research (lab) experience.

For assistance, counselors are available at Victor Valley College to help students fulfill some of the requirements to health professions schools.

Medical Assistant

The Medical Assistant is a professional, multi-skilled person dedicated to assisting in patient care management. The practitioner performs administrative and clinical duties and may manage emergency situations, facilities, and/or personnel. Competence in the field also requires that a medical assistant display professionalism, communicate effectively, and provide instructions to patients.

The medical assistant program is a one-year program that is designed to prepare students to work effectively in a physician's office, medical records or business office of a clinic or a hospital. Upon completion of the required courses, the student will demonstrate proficiency in both front and back office procedures. Successful completion of the program leads to a Certificate of Achievement.

While students are encouraged to complete the entire certificate, they are employable in the Medical Assisting field upon successful completion of ALDH 82 and 82C.

NOTE: Upon successful completion of ALDH 82 the student may enroll in ALDH 82-C (Clinical). On the first day of ALDH 82-C the student is required to bring to class the following:

1. Students must demonstrate physical health as determined by a history and physical examination.
2. The students must submit a current physical and meet required immunizations, titers, and have a chest X-ray and/or PPD. Also, a current American Heart Association Health Care Provider CPR Certificate, or equivalent, must be obtained and current. Criminal background checks are required in order to comply with the program and clinical agencies' contractual requirements. Per individual facility requirements, random drug testing may also be required.

Career Opportunities

Medical Assistant, Patient Account Representative, Receptionist, Medical Secretary, Medical Records Technician

Faculty

Diego Garcia

Degrees and Certificates Awarded

Associate in Science, Medical Assistant

Medical Assistant Certificate

Associate Degree

To earn an Associate in Science degree with a major in Medical Assistant, complete the certificate requirements, three additional units in Allied Health, and meet all remaining Victor Valley College graduation requirements.

Transfer

Not a transfer major. Some Allied Health courses transfer as Electives or fulfill subject credit requirements.

Medical Assistant

MEDICAL ASSISTANT CERTIFICATE		
This certificate prepares students for an entry-level position in a physician's office, clinic, or medical records.		
Units Required: 23.5	<i>Most course descriptions may be found under Allied Health.</i>	
<i>All of the following must be completed with a grade of "C" or better:</i>		
ALDH 80	Pharmacology	3.0
ALDH 81	Medical Insurance	3.0
ALDH 82	Medical Office Procedures	3.0
ALDH 82C	Medical Office Procedures/Clinical	5.0
ALDH 91	Basic CPR (or current health care card)	0.5
ALDH 139	Medical Terminology	3.0
BET 104	Beginning Word Processing/Typing-Word for Windows A/B/C	3.0
PSYC 110	Developmental Psychology*	3.0

*PSYC 110 simultaneously satisfies VVC's General Education requirement in Category IIA, Social and Behavioral Sciences.

Music

Music is the study of the language of sound and its effect on the minds and souls of creator, performer and listener. It is one of the few academic disciplines to deal extensively with the development of the creative side of personhood; in that sense it is one of the most wholly “human” of the humanities. The creative problem-solving skills and discipline of music studies prepare students for a wide range of life’s activities and pursuits. The Music Department offers a wide range of classes, providing opportunities for transfer music majors, music for general studies students, and the opportunity for student and community musicians of all skill levels to participate in a wide variety of performance ensembles.

Career Opportunities

Accompanist, Announcer, Composer/Arranger, Educator, Instrumentalist, Music Publisher, Music Sales Business Musician, Private Music Teacher, Studio Engineer, Vocalist

Faculty

David Graham | Thomas E. Miller

Degrees and Certificates Awarded

Associate in Arts, Fine Arts

Associate in Arts, Liberal Arts

Associate Degree

No associate degree offered with a major in Music. Music courses may be used to fulfill requirements for an Associate in Arts degree with a major in Fine Arts. See Fine Arts for degree requirements for this major. Courses may also be used to fulfill requirements for an Associate in Arts with a major in Liberal Arts. See Liberal Arts for degree requirements for this major. MUSC 138 (Cooperative Education) may be used as Elective credit, but may not be used to fulfill major requirements.

Transfer

Transfer music majors are required to begin major courses at the freshman level. Music majors will take the following music courses in preparation for transfer to a four-year institution: MUSC 102, 103, 104, 105, 106, 110, 111, 202, 203, 204, 205, 206, 210, 211, 120A and 120B. In addition, music majors must be enrolled in the appropriate performance ensemble each semester. The Music Department offers periodic workshops for transfer majors to insure that students are aware of the curriculum requirements of transfer institutions and such additional concerns as concert attendance, juries, entrance proficiency exams and scholarship and performance auditions.

For the most up-to-date information on these programs and others, visit www.assist.org. Please stop by the Transfer Center in Building 55 or make an appointment with a counselor if you have questions.

-California State University, San Bernardino: Music major

-University of California, Riverside: Music major

MUSC 100 INTRODUCTION TO MUSIC

Units: 3.0 **CSU, UC** | 48-54 hours lecture

(No prerequisite)

This course is a general introduction to the art of music, its nature, history, materials and vocabulary. The course examines the historical and contemporary value of music to the individual and society. Consideration will also be given to structural organizations of music composition and the characteristic styles of historical periods and important individuals.

MUSC 101 FUNDAMENTALS OF MUSIC

Units: 3.0 **CSU, UC** | 48-54 hours laboratory

(No prerequisite)

A beginning study of the basic elements of music, including pitch and rhythm recognition, key signatures, intervals, time signatures, and major and minor scales and simple triads. Useful to those wishing to learn to sight read or play an instrument, and for those who wish to write music.

MUSC 102 MUSIC THEORY I

Units: 3.0 **CSU, UC** | 32-36 hours lecture and 48-54 hours laboratory

(Prerequisite: MUSC 101 or equivalent information as demonstrated by pretest.)

Comprehensive theory musicianship study centering on basic four part diatonic harmonic practices. Use of triads in root position in all major and minor modes, principles of voice leading including doubling, spacing, voice ranges, part crossings, basic harmonic progression, and melodic construction. Emphasis on written and aural analysis, and creative application of concepts to musical composition. Stresses programmed instruction supported by computer and electronic teaching aids in an interactive classroom environment. Required for those majoring in music and useful to those desiring to write or arrange music for any purpose.

MUSC 103 MUSIC THEORY II

Units: 3.0 **CSU, UC** | 32-36 hours lecture and 48-54 hours laboratory

(Prerequisite: MUSC 102)

Continuation of MUSC 102, comprehensive theory musician-ship study centering on basic four-part diatonic harmonic practices. Use of triads in all positions, principles of voice leading, harmonic progression, non-harmonic tones, and melodic construction. Emphasis on written and aural analysis, and creative application of concepts in a technology supported interactive classroom/lab environment. Required for those majoring in music and useful to those desiring to write or arrange music for any purpose.

MUSC 104 BASIC MUSICIANSHIP, LEVEL I

Units: 1.0 **CSU, UC** | 48-54 hours laboratory

(Prerequisite: MUSC 101 minimum grade C. Co-requisite: MUSC 102)

This course utilizes in class and computer based modalities to apply and develop the rhythmic, melodic, and harmonic materials of Music Theory I through ear training, sight singing, analysis, and dictation.

MUSC 105 BASIC MUSICIANSHIP, LEVEL II

Units: 1.0 **CSU, UC** | 48-54 hours laboratory

(Prerequisite: MUSC 104. Co-requisite: MUSC 103.)

This course uses in-classroom and computer based modalities to develop the rhythmic, melodic and harmonic materials of music theory II through ear training, sight singing, analysis and dictation.

MUSC 110 ELEMENTARY PIANO I

Units: 1.0 **CSU, UC** | 48-54 hours laboratory

(No prerequisite) (UC credit limitation)

This course offers practical keyboard facility, sight reading, elementary improvisation and harmonization of folk melodies, and performance of simple piano selections. Useful to those desiring to learn to play the piano, organ or electronic keyboards.

MUSC 111 ELEMENTARY PIANO II

Units: 1.0 CSU, UC | 48-54 hours laboratory

(Prerequisite: MUSC 110)

This course is a continuation of MUSC 110 and offers practical keyboard facility, sight reading, elementary improvisation and harmonization of folk melodies, and performance of simple piano selections. Useful to those desiring to learn to play the piano, organ or electronic keyboards.

MUSC 116 MUSIC IN AMERICA

Units: 3.0 CSU, UC | 48-54 hours lecture

(No prerequisite)

A survey of music in American life and culture from colonial times to the present, including both popular and art music styles.

MUSC 117 HISTORY OF JAZZ

Units: 3.0 CSU, UC | 48-54 hours lecture

(No prerequisite)

A survey of jazz from 1900 to the present, including definitions of jazz, African and European heritage, blues, Dixieland, ragtime, boogie woogie, swing, bop, cool, funky, gospel, third stream, free form and fusion. Lecture and structured listening and viewing.

MUSIC 118 SURVEY OF ROCK AND ROLL

Units: 3.0 CSU, UC | 48-54 hours lecture

(No prerequisite)

This course will discuss the unfolding of rock and roll as a modern musical genre. It will also discuss societal influence on its development as well as its impact on modern society. Other styles of contemporary commercial music will be discussed and analyzed within the general historical scope of this survey.

MUSC 120A APPLIED MUSIC STUDIES I

Units: 1.0 CSU, UC | 48-54 hours laboratory

(Prerequisite: Placement audition.)

Coordinates the development of the music major's performance proficiency in their primary instrument. Student will take a minimum of fifteen half-hour lessons per semester with a teacher approved by the Music Department and a minimum of three hours of on campus practice each week. All applied students will perform on faculty/student recitals and juried exams.

MUSC 120B APPLIED MUSIC STUDIES II

Units: 1.0 CSU, UC | 48-54 hours laboratory

(Prerequisite: MUSC 120A)

Coordinates the development of the music major's performance proficiency in the second level of their primary instrument. Student will take a minimum of fifteen half-hour lessons per semester with a teacher approved by the Music Department and a minimum of three hours of on campus practice each week. All applied students will perform on faculty/student recitals and juried exams.

MUSC 122 BEGINNING VOICE PRODUCTION I

Units: 1.0 CSU, UC | 48-54 hours laboratory

(No prerequisite)

Fundamental techniques of proper voice production including healthy use of the voice for speaking and singing. Teaches proper relaxation and support techniques, speech intensification, vocal freedom and resonance, and emotional support for the singing and speaking process. Designed to meet the needs of those who use their voices for solo and/or ensemble singing or in such vocally intense activities as teaching, group leading, sales, coaching, or for those taking courses in speech communication and acting.

MUSC 123 BEGINNING VOICE PRODUCTION II

Units: 1.0 CSU, UC | 48-54 hours laboratory

(Prerequisite: MUSC 122.)

Continued study of the techniques of proper voice production to develop healthy use of the voice for speaking and singing. Habituation of optimal techniques for relaxation, support, speech intensification, resonance, vocal freedom and developing an expressive performance persona. Will include the study of basic English and Italian diction, including use of the International Phonetics Alphabet to teach accurate and efficient diction and tone.

MUSC 124 BEGINNING GUITAR I

Units: 1.0 CSU, UC | 48-54 hours laboratory

(No prerequisite)

The study and performance of music for the beginning guitarist, teaching basic guitar technique and music reading skills through simple guitar pieces. Some in-class performance required.

MUSC 125 BEGINNING GUITAR II

Units: 1.0 CSU, UC | 48-54 hours laboratory

(No prerequisite)

This course offers further study and performance of music for the beginning guitarist. It gives the student with minimal knowledge of guitar performance the opportunity to learn basic reading skills through simple guitar pieces. Some public performance will be required.

MUSC 126 GUITAR ENSEMBLE

Units: 1.0 CSU, UC | 48-54 hours laboratory

(Prerequisite: MUSC 124 or MUSC 125 or equivalent.) This course may be taken four times.

This course offers the study and performance of music for guitar ensemble. It gives the student with basic knowledge of guitar performance skill the opportunity to perform in an ensemble setting. Some public performance will be required.

MUSC 128 SPECIAL TOPICS

Units: Variable units CSU

See Special Topics listing

MUSC 129 INDEPENDENT STUDY

Units: 1-3 units CSU

See Independent Study listing

MUSC 130 WOMEN'S CHOIR

Units: 1.0 CSU, UC | 48-54 hours laboratory

(No prerequisite. Pass/No Pass) This course may be taken four times. (UC credit pending)

A treble choir of female voices to perform repertoire from all styles and periods of music written or arranged for treble choir. Some songs may be sung in languages other than English. Emphasis on the development of the total choral musicianship skills of each singer within the group context. Choir will perform at various college and community functions.

MUSC 131 THE COLLEGE SINGERS

Units: 2.0 CSU, UC | 96-108 hours laboratory

(Prerequisite: Solo audition. Applicant should possess strong basic choral/vocal skills and experience in choral singing i.e. ability to sing on pitch with a well-supported, clear choral tone; strong ear able to retain and accurately recall parts learned; basic sight reading skills; team player willing to take direction. Number of singers accepted in any section may be limited by the requirements of part balance and the repertoire planned for that semester.) (Grade option) This course may be taken four times.

A select chamber choral ensemble of mixed voices to perform at various college and community functions. Repertoire includes significant choral music from all periods of music history, including motets and madrigals, part songs, masses and cantatas with orchestra, 20th century choral songs, and spirituals, vocal jazz and Broadway arrangements. Music is most often performed in the original languages. Emphasis on development of the total choral musicianship skills of each singer. Group may tour out of state or to Europe.

MUSC 132 MASTER ARTS CHORALE

Units: 1.0 **CSU, UC** | 48-54 hours laboratory

(Prerequisite: Solo audition to determine ability to match pitch, sing in tune, carry a harmony part, level of music reading. Prior choral experience in a high school, college/university, community or church choir desirable.) This course may be taken four times.

A large choral ensemble dedicated to the performance of major choral works from all musical periods, often with orchestra. Group may tour from time to time in the United States and abroad. Membership open by audition to all students as well as to members of the community.

MUSC 134A MUSICAL THEATRE LAB I

Units: 1.0 **CSU** | 48-54 hours laboratory

(Prerequisite: Demonstrated musical and dramatic skills as evidenced by audition. Pass/No Pass.)

A course to prepare the vocal and instrumental music for the college's musical theater and opera productions. Students will play lead, supporting or ensemble roles or participate in the pit orchestra as determined by audition.

MUSC 135 COLLEGE BAND

Units: 0.5 **CSU** | 24-27 hours laboratory

(Prerequisite: Student must audition. Pass/No Pass)

The study and performance of standard band literature composed for the intermediate level wind ensemble. Proper breathing and phrasing techniques will be emphasized along with specific instrument performance technique.

MUSC 136 COLLEGE SYMPHONIC BAND

Units: 1.0 **CSU, UC** | 48-54 hours laboratory

(Prerequisite: Appropriate level of musical performance skill as demonstrated by audition.) This course may be taken four times.

The study and performance of standard college large wind ensemble literature, stressing the proper playing and performance techniques. The development of warm up skills, scale studies, rhythmic refinement, and the full range of wind ensemble techniques will be emphasized. Public performance required.

MUSC 138 COOPERATIVE EDUCATION

Units: 1-8 Units **CSU** |

See Cooperative Education listing

MUSC 139 STUDIO JAZZ BAND

Units: 1.0 **CSU, UC** | 48-54 hours laboratory

(Prerequisite: Student must audition.)

This course provides playing experience in the fields of dance, jazz, rock and popular music. Accurate execution and consistent style will be emphasized. Attention will also be given to improvisation, sight reading, ear training and performance practice skills. Public performances at the college and in the community.

MUSC 140 STUDIO SINGERS

Units: 1.0 **CSU, UC** | 48-54 hours laboratory

(Prerequisite: Student must audition.)

Study and performance of commercial music styles written and arranged for choir in jazz, rock, gospel and popular styles. Development in healthy commercial vocal techniques, sight singing skills, ear training, improvisation and ensemble performance skills will be emphasized. Public performances at college and community concerts.

MUSC 141 JAZZ ROCK COMBO

Units: 1.0 CSU, UC | 48-54 hours laboratory

(Prerequisite: Student must audition.)

A study and performance of the principles and skills needed for performing in various commercial music styles in small combos. Emphasis on ensemble skills, improvisation, ear training, music theory, stylistic interpretation and performance practices. Public performances at college and community concerts.

MUSC 143 BEGINNING STRING ENSEMBLE

Units: 0.5 CSU, UC | 24-27 hours laboratory

(Prerequisite: Students must audition for this ensemble. Alternative course is MUSC 137. Pass/No Pass) This course may be taken four times.

This course will be a beginning study and performance of standard string orchestra literature composed for the beginning string player. Proper left hand position (excluding the use of third position), beginning bow techniques, appropriate performance practices will be emphasized.

MUSC 144 PRELUDIUM STRING ENSEMBLE

Units: 0.5 CSU | 24-27 hours laboratory

(Prerequisite: Student must audition. Pass/No Pass) This course may be taken four times.

A study and performance of standard string orchestra literature. Proper left hand position, bowing techniques and appropriate performance practices will be emphasized. College and community performances.

MUSC 145 COLLEGE SYMPHONY ORCHESTRA

Units: 1.0 CSU, UC | 48-54 hours laboratory

(Prerequisite: Appropriate level of performance on instrument as demonstrated by audition.) This course may be taken four times.

A study and performance of standard full orchestral literature. Emphasis on ensemble skills, ear training and performance practices. Public performances at college and community concerts.

MUSC 147 INSTRUMENTAL ENSEMBLE

Units: 0.5 CSU, UC | 24-27 hours laboratory

(Prerequisite: Appropriate level of musical performance skill as demonstrated by audition. Pass/No Pass) This course may be taken four times.

This course will explore small ensemble literature and performance from the Renaissance to the present for small ensembles of wind and brass instruments. Specific technical skills will be addressed including breathing, phrasing, tonguing and ornamentation practices. Student should check with the music program to determine what specific instrumental groupings will be formed that semester. Public performances are required.

MUSC 202 INTERMEDIATE THEORY-- CHROMATIC PRACTICE PART I

Units: 3.0 CSU, UC | 32-36 hours lecture and 48-54 hours laboratory

(Prerequisite: MUSC 103)

The study of chromatic harmonic practices, including all types of seventh chords, dominant seventh and leading tone seventh functions, secondary dominants and secondary leading tone chords, altered non harmonic tones, modulation to closely related keys, and borrowed chords. Continued development of basic musicianship skills, including visual and aural seventh chord recognition, rhythmic reading, melodic, contrapuntal and harmonic dictation. Emphasis on individualized programmed instruction, including the use of computers, small group and other interactive teaching aids.

MUSC 203 INTERMEDIATE THEORY-- CHROMATIC PRACTICE, PART II

Units: 3.0 CSU, UC | 32-36 hours lecture and 48-54 hours laboratory

(Prerequisite: MUSC 202)

Extends the concepts in MUSC 202 through use of foreign modulations, borrowed and augmented chords, Neapolitan and other sixth chords, chromatic third relation harmony and ninth, eleventh and thirteenth chords. Continued development of basic musicianship skills, including visual and aural chord recognition, rhythmic reading, melodic, contrapuntal and harmonic dictation. Emphasis on individualized programmed instruction, and use of computers and other interactive teaching aids.

MUSC 204 INTERMEDIATE MUSCIANSHIP I

Units: 1.0 **CSU, UC** | 48-54 hours laboratory

(Prerequisite: MUSC 105)

This course uses in class and computer based applications to develop the rhythmic, melodic, and harmonic materials of Intermediate Theory I through ear training, sight singing, analysis, and dictation.

MUSC 205 INTERMEDIATE MUSCIANSHIP II

Units: 1.0 **CSU, UC** | 48-54 hours laboratory

(Prerequisite: MUSC 204)

This course applies and develops, through in class and computer aided instruction, the rhythmic, melodic, and harmonic materials of Music Theory IV through ear training, sight singing, analysis, and dictation.

MUSC 210 INTERMEDIATE PIANO I

Units: 1.0 **CSU, UC** | 48-54 hours laboratory

(Prerequisite: MUSC 111)

This course offers the continued development of keyboard facility from MUSC 111 including harmonization of given melodies using appropriate intermediate accompaniments, furthered exploration of piano repertoire and related skills, styles and technical exercises. Two octave major and minor scales, arpeggios, and harmonization skills will be explored.

MUSC 211 INTERMEDIATE PIANO II

Units: 1.0 **CSU, UC** | 48-54 hours laboratory

(Prerequisite: MUSC 210)

This course offers the continuation and development of practical keyboard facility from Music 210, including sight reading, harmonization of given melodies through the use of appropriate accompaniments, exploration of piano repertoire and related stylistic and technical exercises. Useful to those wishing to further the development of keyboard skills.

MUSC 220A APPLIED MUSIC STUDIES II

Units: 1.0 **CSU** | 48-54 hours laboratory

(Prerequisite: MUSC 120B.)

Coordinates the 3rd level of the development of the music major's performance proficiency in their primary instrument or voice. Student will take a minimum of fifteen half hour lessons per semester with a teacher approved by the Music Department and at least three hours of individual practice each week. Payment for lessons will be worked out directly between the teacher and student. All applied students will perform on faculty/student recitals and jury exams.

MUSC 220B APPLIED MUSIC STUDIES IV

Units: 1.0 **CSU** | 48-54 hours laboratory

(Prerequisite: MUSC 220A)

Coordinates the 4th level of the development of the music major's performance proficiency in their primary instrument or voice. Student will take a minimum of fifteen half hour lessons per semester with a teacher approved by the Music Department and at least three hours of practice on campus each week. All applied students will perform on faculty/student recitals and jury exams.

MUSC 222 INTERMEDIATE VOICE PRODUCTION I

Units: 1.0 **CSU, UC** | 48-54 hours laboratory

(Prerequisite: MUSC 122)

Study and refinement of the techniques of proper voice production to develop healthy use of the voice for speaking and singing. Habituation of optimal techniques for relaxation, support, speech intensification, resonance, vocal freedom and developing an expressive performance persona. Will include the study of basic German singing diction, including use of the International Phonetics Alphabet to teach accurate and efficient diction and tone.

MUSC 223 INTERMEDIATE VOICE PRODUCTION II

Units: 1.0 CSU | 48-54 hours laboratory

(Prerequisite: MUSC 122)

Further study and refinement of the techniques of proper voice production to develop healthy use of the voice for speaking and singing. Habituation of optimal techniques for relaxation, support, speech intensification, resonance, vocal freedom and developing an expressive performance persona. Will include the study of basic French singing diction, including use of the International Phonetics Alphabet to teach accurate and efficient diction and tone.

Nursing

The Associate of Science Degree in Nursing is approved by the California Board of Registered Nursing. Graduates are eligible to take the National Council for Licensure Examination for Registered Nursing (NCLEX-RN) and, upon successful completion, become eligible for licensure as a Registered Nurse in the state of California.

California law allows for the denial of Registered Nurse Licensure on the basis of any conviction or action substantially related to nursing practice. The California Board of Registered Nursing requires applicants for licensure with prior convictions to provide proof of rehabilitation before taking the NCLEX-RN that establishes fitness for performing nursing functions. For further clarification, contact the Nursing Department or the California Board of Registered Nursing.

The Associate Degree Nursing Faculty accepts and operates within the framework of the philosophy and mission of Victor Valley College. The conceptual framework is based on the systems and change theory using the Nursing Process. The components of the curriculum are arranged around the client's bio-psycho-social, and cultural/spiritual beliefs. The faculty believes that the student is an adult learner who is expected to take an active role in the learning process.

Separate application must be made into the nursing program. Several admission and progression options are available, including generic, advanced placement, transfer, non-graduate and 30 unit option. Specific information is available in the application packet, the student nurse handbook and from the program director. Please contact the Nursing Department for application dates.

Prerequisites for admission into the nursing program

1. Human Anatomy (equivalent to Victor Valley College BIOL 211), 4-5 units, completed with a grade of "C" or better.
2. Human Physiology (equivalent to Victor Valley College BIOL 231), 4-5 units, completed with a grade of "C" or better.
3. Microbiology (equivalent to Victor Valley College BIOL 221), 5 units, completed with a grade of "C" or better.
4. Program prerequisites must be completed prior to application.

Note that these prerequisites themselves have prerequisites: MATH 90; CHEM 100; and BIOL 107 (preferred) or 100.

Enrollment Process

After the prerequisites have been verified and there are still too many students for the spaces available, those accepted into the program will be based on the enrollment criteria. The enrollment process is based on the recommended Best Practice for Enrollment prepared by the Chancellor's Office of the California Community Colleges, and approved by the Chancellor's Office. Please contact the Nursing Department or Nursing Counselor for further clarification of the enrollment process.

NOTE:

1. Prior to admission to the ADN program, students must demonstrate physical health as determined by a history and physical examination.
2. To continue in the program, the students must submit a current physical and meet required immunizations, titers, and have a chest X-ray and/or PPD. Also, a current American Heart Association Health Care Provider CPR Certificate, or equivalent, must be obtained and current. Current liability insurance and criminal background checks are required in order to comply with the program and clinical agencies' contractual requirements. Per individual facility requirements, random drug testing may also be required.
3. The College does not provide transportation to and from required clinical facilities.
4. In order to continue in the ADN program students must earn a minimum grade of C in all nursing and other required courses.
5. Nursing courses have specific prerequisites. Refer to course descriptions in this catalog.

Career Opportunities

The graduate is prepared to practice nursing at any entry level in the following settings:

Medical/Surgical Nursing, Psychiatric Nursing, Maternal/Newborn Nursing, Post-Anesthesia Nursing, Perioperative Nursing, Geriatric Nursing, Critical Care Nursing, Rehabilitation Nursing, Neurosurgical Nursing, Oncology Nursing

Faculty

Diane Cline - Emeritus | Starlie Luna | Diego Garcia
Renata Longoria | Alice Ramming | Jeanine Speakman | Sally Thibeault | Terry Truelove

Degrees and Certificates Awarded

Associate in Science, Nursing

Associate Degree Nursing Certificate

Nursing Licensure Certificate

A student receiving a degree or certificate in this field will be able to:

- *Demonstrate clear, culturally sensitive communication with patients, peers, & healthcare staff; documenting clearly care plans which address cultural, developmental, bio-psychosocial and spiritual needs and how they are met.*
- *Calculate drug dosages for all age groups with 100% accuracy and use current technology according to industry standards.*
- *After completing an assessment, state appropriate nursing diagnosis, formulate a plan of care which is culturally and age sensitive; implement and evaluate outcomes for patient.*
- *Practice legally, ethically, and professionally while acting as the patient's advocate.*
- *Eighty-five percent of the graduates will demonstrate overall competence by successfully passing the NCLEX licensure exam (on the first attempt).*

Associate Degree

To earn an Associate in Science degree with a major in Nursing one must complete all certificate courses and meet all Victor Valley College graduation requirements. The Associate Degree Nursing Certificate includes all requirements for both a certificate and an Associate in Science degree in Nursing. The Nursing Licensure Certificate requires additional general education courses to complete an associate degree. The Nursing Licensure Certificate precludes receiving the Associate Degree in Science with a major in nursing.

Transfer

Acceptance into a baccalaureate of science degree in Nursing is based on completion of prerequisites and entrance requirements. To pursue a BSN, complete the following requirements prior to transfer. Visit www.assist.org for the most current information.

-California State University, Dominguez Hills: RN to BSN program

1. Minimum of 60 semester units of transferable college credit with a grade point average of at least 2.0 (C) or better in all transferable course work (non-residents: 2.4) and have satisfied any high school subject deficiency in English and mathematics by equivalent course work (the maximum transferable credit accepted from a two-year college is 70 semester units). English composition, Public Speaking, GE Math and Logic/Critical Thinking must be completed prior to admission for new applicants.
2. Current RN licensure in the United States, or an RN interim permit.
3. It is recommended that students obtain GE certification from a community college prior to admission.

-California State University, San Bernardino: BSN program

1. Completion of an application to the university and nursing program
2. Attendance at a group advising session
3. Completion of the following prerequisites:
BIOL 211, BIOL 231, BIOL 221, CHEM 100, MATH 105 or H105 or MATH 132, CMST 109, ENGL 101; PSYC 110; and complete the CSU General Education/Breadth pattern.
4. 3.5 GPA minimum
5. "C" or better on all course work

Placement Options

GENERIC STUDENTS are those who will complete the entire nursing program at Victor Valley College.

The application is submitted, and after approval, class selection is made according to the current enrollment process. Students must also pass (=>62%) the Testing of Essential Academic Skills (TEAS V) prior to program start. The TEAS V Exam tests the student's knowledge of basic Math, English, Reading and applicable science.

TRANSFER STUDENTS are those who transfer nursing units from another college.

The education code allows students to transfer only lower division units to a community college. Each student requesting transfer of Nursing units will be individually evaluated by the Nursing Program Admission, Promotion and Program Effectiveness (AEPE) Committee to determine appropriate placement in the VVC Program. Placement will be made on a space available basis and is determined by the course content and number of nursing degree units completed. A Priority Transfer List will be established according to the Policy for Nursing Program Transfer. Students will be given credit for general education courses according to the college's published policy (see College Catalog). If the student has earned a non-progression grade (D or F) in a registered nursing at another school, acceptance to Victor Valley College Nursing Program will be considered their second chance. Prospective students must score a minimum of 62% on the TEAS V.

LVN TO RN ENTRY OPTION are those documented as a Licensed Vocational Nurse (LVN) in California. Students choosing this option must apply to the program, meet the prerequisites (Completion of college-level Anatomy, Physiology and Microbiology) and take the Credit by Examination for NURS 246 (Assessment and Nursing Skills). LVN-RN Entry Option placement students must pass the Credit by Examination for NURS 246. Applications for this option are accepted in the winter and summer. Program placement for NURS 221 will be in fall and spring respectfully. Passing TEAS V is also a requirement for all entering students.

*(LVN-RN) Please note: All Victor Valley College requirements for Credit by Examination must also be met. 1) Twelve units completed at VVC. 2) Minimum overall cumulative GPA of 2.0. 3) No previous grade received for the course. 4) Currently enrolled. NOTE: Credit by Examination may only be taken once for a course.

CHALLENGE STUDENTS

Students admitted to the Nursing Program with previous documented experience may be allowed to challenge certain specified content areas (Education Code, Section 5557537), Title 5 of the California Administrative Code.) (Contact the Director of Nursing regarding this option.)

THIRTY UNIT OPTION is available to California Licensed Vocational Nurses. The Board of Registered Nursing regulation 1435.5 provides the option of completing 30 semester units in nursing and related sciences. In order to enter under this option the applicant must: 1) Have a current California LVN license; 2) Prior to starting NURS 246, have previously completed Human Physiology, 4 units with a lab, and Microbiology, 4 units with a lab; both with C or better. 3) Prior to starting NURS 223 & NUR 224, NURS 246 must be completed with a C or better. After successfully completing NURS 246, candidates will enter NURS 223 and complete NURS 223 and NURS 224. Candidates completing this option are not graduates of VVC, but are eligible to take the licensure exam. They are not eligible to wear the VVC graduate nursing pin nor graduate from the Associate Degree program. Additionally, they may not be eligible for RN licensure in any other state than California. Passing the TEAS V is also a requirement for the 30-Unit Option students.

NON-GRADUATE OPTION

Allows students to complete only those classes required to take the NCLEX exam. In the VVC Nursing Program, those classes are: BIOL 211, 221, 231; ENGL 101; SOC 101, CMST 106, 107, 108, or 109; PSYC 101, PSYC 110; NURS (5 classes) All classes must be completed with a C or better. Students choosing this option are not graduates of VVC. The TEAS V requirement applies to all entry options.

Contracts or Grants

The Nursing program reserves the right to bypass portions of the enrollment process to designate a certain number of spaces from any of the above entry options for contracts, grants, pilot programs or partnerships, and/or to meet requirements of grant-designated outcomes.

For detailed information regarding VVC's Associate Degree Nursing Program Placement/Advancement Policy, please refer to the current ADN Program Student Handbook.

ASSOCIATE DEGREE NURSING CERTIFICATE**Units Required: 80.0***Nursing Core*

NURS 220	Pharmacology and Nursing Management	2.0
NURS 221	Nursing Process 1	10.0
NURS 222	Nursing Process 2	9.0
NURS 223	Nursing Process 3	9.0
NURS 224	Nursing Process 4	9.0
NURS 246	Assessment and Nursing Skills	3.0

Group A: All of the following must be completed:

BIOL 211	Human Anatomy	5.0
BIOL 221	General Microbiology	5.0
BIOL 231	Human Physiology	5.0
ENGL 101	English Composition and Reading	4.0
PSYC 101	General Psychology	3.0
PSYC 110	Developmental Psychology	3.0
SOC 101	Introduction to Sociology	3.0

Group B: One of the following must be completed:

CMST 106	Human Communication	3.0
CMST 107	Family Communication	3.0
CMST 108	Group Discussion	3.0
CMST 109	Public Speaking	3.0

*One course which meets the VVC Mathematics general education requirement for Category V**One course which meets the VVC Humanities general education requirement for Category III**One course which meets the VVC American Institutions general education requirement for Category IIB. One unit of Physical Education. Each class must be completed with a grade of "C" or better.***NURSING LICENSURE CERTIFICATE****Units Required: 67.0***Each class must be completed with a grade of "C" or better.*

BIOL 211	Human Anatomy	5.0
BIOL 231	Human Physiology	5.0
BIOL 221	General Microbiology	5.0
SOC 101	Introduction to Sociology	3.0
PSYC 101	General Psychology	3.0
PSYC 110	Developmental Psychology	3.0

Complete one of the following:

CMST 106	Human Communication	3.0
CMST 107	Family Communication	3.0
CMST 108	Group Discussion	3.0
CMST 109	Public Speaking	3.0

Each class must be completed with a grade of "C" or better.

ENGL 101	English Composition and Reading	3.0
NURS 220	Pharmacology and Nursing Management	2.0
NURS 221	Nursing Process 1	10.0
NURS 222	Nursing Process 2	9.0
NURS 223	Nursing Process 3	9.0
NURS 224	Nursing Process 4	9.0
NURS 246	Assessment and Nursing Skills	3.0

Nursing Courses

NURS 138 COOPERATIVE EDUCATION

(See Cooperative Education 1-8 units). **CSU**

NURS 148 SPECIAL TOPICS

See Special Topics listing (Variable units). **CSU**

NURS 149 INDEPENDENT STUDY

See Independent Study listing (1-3 units). **CSU**

NURS 220 PHARMACOLOGY AND NURSING MANAGEMENT

Units: 2.0 **CSU** | 32-36 hours lecture

(Prerequisite: Admission to the Nursing Program as required by BRN.)

This course is a nursing class about the study of drug therapy to prevent, diagnose, or cure disease processes or to relieve signs and symptoms of diseases. It includes content specific to the registered nurse and utilization of the nursing process to fulfill nursing responsibility in medication management of clients.

NURS 221 NURSING PROCESS 1

Units: 10.0 **CSU** | 80-90 hours lecture and 240-270 hours laboratory

(Prerequisite: BIOL 211, BIOL 221, BIOL 231, and NURS 246 all completed with a minimum grade of C; admission to the Nursing Program; TEAS IV or earlier score 67% or better; TEAS V score 62% or better. (Corequisite: NURS 220)

An introduction to the Victor Valley College Associate Degree Nursing Program and the nursing profession. Emphasis is on the nursing process and fundamentals of nursing; including risk management, health promotion, psycho-social aspects, electrolyte and acid-base management, and the perioperative experience practiced in various clinical settings and the classroom laboratory.

NURS 222 NURSING PROCESS 2

Units: 9.0 **CSU** | 64-72 hours lecture and 240-270 hours laboratory

(Prerequisite: NURS 220 and NURS 221 completed with a grade of 'C' or better.)

The Nursing Process applied to family nursing and the childbearing family, the adaptations of nursing care for various stages of growth and development, and the nursing management required in common adult conditions; e.g., nutritional, tissue perfusion, elimination.

NURS 223 NURSING PROCESS 3

Units: 9.0 **CSU** | 64-72 hours lecture and 240-270 hours laboratory

(Prerequisite: NURS 222)

This course will synthesize and correlate nursing knowledge and skills in providing care to multiple patients who have complex, multi-system illnesses. Focus will be for the students to predict patient needs and priorities, and evaluate outcomes of care. Associated psychomotor skills will be integrated and practiced.

NURS 224 NURSING PROCESS 4

Units: 9.0 **CSU** | 64-72 hours lecture and 240-270 hours laboratory

(Prerequisite: NURS 223)

The Nursing Process applied with a holistic view to multi-system problems with a comprehensive approach in the hospital and community setting. Clinical experience demonstrates the use of legal, ethical, and leadership principles, and the ability to function with minimum supervision as a preceptor.

NURS 226 CRITICAL CARDIAC and RESPIRATORY NURSING

Units: 2.0 **CSU** | 32-36 hours lecture

(Prerequisites: NURS 222 and/or licensed as a Registered Nurse or Licensed Vocational Nurse. Grade Option)

This optional nursing course provides an introduction to critical care nursing concepts with an emphasis on clients with complex cardiac and respiratory problems, seen primarily in the critical care environment. Pathophysiology, diagnosis, treatment and nursing implication for patients in the critical care area will be discussed. This course will primarily benefit students going into their third semester of nursing.

NURS 246 ASSESSMENT AND NURSING SKILLS

Units: 3.0 **CSU** | 32-36 hours lecture and 48-54 hours laboratory

(Prerequisite: Acceptance into the VVC Nursing Program.)

Focuses on development of assessment skills including obtaining a health history, performing physical assessment of the adult, and evaluating physiologic changes related to aging and pediatric patient population. Emphasis on developing interviewing skills, assessing cultural factors, and utilization of basic assessment techniques.

Oceanography

OCEA 101 OCEANOGRAPHY

Units: 3.0 [CSU, UC](#) | 48-54 hours laboratory

(No Prerequisite)

An introduction to the marine environment. Methods and techniques of exploration, physics, and chemistry of the oceans; adaptations of organisms; significance of the marine environment to man. A general survey of the major aspects of oceanography; history, topography, geography, geology, chemistry, physics, meteorology, biology, and resource management.



Paralegal Studies

The legal profession has evolved to include more paraprofessional assistance in the delivery of legal services to the consumer. Current economic trends and technologies find paralegals filling a space in the consumer market that was once filled only by attorneys. Law firms and corporate legal departments rely on paralegals as cost saving measures forwarded to the client. The Paralegal occupation is expected to grow at a faster than average rate through 2018 according to the Department of Labor, Bureau of Labor Statistics.

The paralegal program at Victor Valley College prepares students to work in the legal industry by introducing students to legal theory which leads to employment in administrative agencies, governmental agencies, corporations, insurance companies, human resources departments, private and public law offices and other legal environments. Paralegals duties include performing factual and legal research and investigation, drafting legal documents and correspondence, interviewing clients and witnesses, trial preparation and organizing and maintaining court files. Training students in the practical application and the development of current paralegal related job skills is emphasized. Paralegals students will learn to adopt and use computer technology skills in the law setting, using electronic databases and research tools.

There are two types of legal industry paraprofessionals. California Business and Professions Codes 6400 (c) and California Business and Professions Code 6450 (a) define the duties, responsibilities and obligations that the industry and state regulate.

The primary goal of the paralegal program is to educate and prepare students for employment as paralegals where they can demonstrate competency and ethical standards demanded by and of the profession.

Students must, before entering the program, complete English 101/101H or assess at an English 101 level. The sequencing of courses has been designed to enhance student success in the field. PAL 100, 102, and 103 are the foundational classes that are prerequisite to the higher level legal specialty classes. These three classes should optimally be taken concurrently to provide that firm foundation for success. PAL 104 may be taken concurrent with PAL 100, 102 and 103, but may be taken at any time. A firm foundation in writing and grammar skills and completion of POLS 102 are recommended. This is not a four year transfer program, is not a substitute for law school, nor is it intended to be used for advanced standing in law school applications. It is not a pre-law program. It is not intended to serve as a preparation for bar examination.

At this time, VVC offers PAL 204, Wills and Trusts, and PAL 205, Bankruptcy, but have not yet been incorporated, as electives or core classes, into the certificate award.

Associate Degree

At this time, Victor Valley College does not offer an associate degree with a major in Paralegal Studies.

Transfer

For the most up-to-date information on this program and others, visit www.assist.org. Please stop by the Transfer Center in Building 55 or make an appointment with a counselor if you have questions.

-California State University, San Bernardino: Criminal Justice major, Paralegal Studies concentration

English 101/H101 → (Completion of POLS 102 is strongly recommended prior to the Paralegal classes)
 ↓

PAL 100 with → PAL 102 (first 8 weeks) → PAL 103 (second 8 weeks)
 ↓ ↓
 PAL 104 PAL 201
 ↓
 PAL 202 / PAL 203

Note: After completing PAL 201, students may take the elective courses PAL 204 and PAL 205.

PARALEGAL STUDIES CERTIFICATE		
Students must complete a minimum of 36 units, with at least 15 units taken in residence at Victor Valley College, with a minimum grade of "C" in all paralegal classes. Most Paralegal course descriptions may be found under Political Science.		
Units Required: 36.0		
<i>Group I — All of the following must be completed:</i>		
PAL 100	Introduction to Paralegal Studies	3.0
PAL 201	Fundamentals of Litigation for Paralegals	3.0
PAL 104	Legal Ethics for Paralegals	3.0
PAL 202	Family Law	3.0
PAL 203	Tort Law for Paralegals	3.0
PAL 103	Legal Writing for Paralegals	3.0
PAL 102	Beginning Legal Research for Paralegals	3.0
AJ 103	Criminal Law	3.0
BADM 117	Legal Environment of Business	3.0
<i>Group II — At least 9 units of the following must be completed:</i>		
AJ 102	Criminal Procedures	3.0
AJ 104	Legal Aspects of Evidence	3.0
BADM 101	Elementary Accounting <i>or</i>	4.0
BADM 103	Principles of Accounting	3.0
BRE 110	Legal Aspects of Real Estate I	3.0
BET 104	Beginning Word Processing/Typing Word for Windows A/B/C	1-3
ENGL 104	Critical Thinking and Composition <i>or</i>	3.0
PHIL 109	Introduction to Logic	3.0
CMST 109	Public Speaking	3.0

Paralegal Studies Courses

PAL 100 INTRODUCTION TO PARALEGAL STUDIES (Formerly POLS 130)

Units: 3.0 **CSU** | 48-54 hours laboratory

(Prerequisite: ENGL 101.0 or ENGL H101)

This is the beginning course for students pursuing a Certificate of Paralegal Studies. Students will learn the nature of the career field, the skills and knowledge required, the ethical requirements, the background in court systems, and the legal research and writing that are necessary for success in the profession. The emphasis is placed on functions of a paralegal within a private law firm, within a government agency, as a business owner, and as a litigation assistant.

PAL 102 BEGINNING LEGAL RESEARCH FOR PARALEGALS (Formerly POLS 137)

Units: 3.0 **CSU** | 48-54 hours laboratory

(Prerequisite/Co-requisite: PAL 100 (POLS 130))

This course provides the paralegal student with a beginning introduction to the sources and means of legal research. The course will focus on developing the student's ability to locate and use various types of legal authority including legal encyclopedias, constitutions, statutes, court opinions, administrative regulations, and appellate decisions. The student will be expected to learn and practice Shepardizing and citation checking skills.

PAL 103 BEGINNING LEGAL WRITING (Formerly POLS 136)

Units: 3.0 **CSU** | 48-54 hours laboratory

(Prerequisite/Co-requisite: PAL 102)

This course provides the paralegal student with the development of good legal writing skills. Critical analysis of proper legal writing forms stressing logic, clarity and format will be used to shape the paralegal student's ability to produce such legal documents as correspondence, legal briefs, memorandum of law, pleadings, and appellate briefs.

PAL 104 LEGAL ETHICS FOR PARALEGALS (Formerly POLS 133)

Units: 3.0 **CSU** | 48-54 hours laboratory

(Prerequisite: None)

This course examines the role of the paralegal in the rendering of legal services by attorneys to clients and the ethical rules that govern that relationship. The student will become familiar with the concept of the unauthorized practice of law, the criminal penalties such practices carry and the best means to avoid liability. Comprehensive study of the ABA's Model Rules of Professional Conduct will give the student a broad base from which to operate ethically and legally as a paralegal.

PAL 201 FUNDAMENTALS OF LITIGATION FOR PARALEGALS (Formerly POLS 131)

Units: 3.0 **CSU** | 48-54 hours laboratory

(Prerequisite: PAL 103 minimum grade C (POLS 136))

This course examines the intricate working of the American court system and the role of the paralegal in litigation practice. This course will focus on the process that begins with the client interview, extends through the filing, develops into the discovery state, takes final shape in the trial stage and ends with enforcement of a judgment. Critical analysis of statutory and judicial rules for the conduct of litigation will be used extensively to provide a strong foundation for operating within the legal field.

PAL 202 FAMILY LAW (Formerly POLS 134)

Units: 3.0 **CSU** | 48-54 hours laboratory

(Corequisite: PAL 201)

This course examines Family Law rules and procedures for the paralegal working in a California family law practice. Concepts covered include marital contracts, annulment, separation, dissolution, child custody and support, spousal support, property division, and tax consequences of family law procedures. Included will be current topics in family law such as demise of marriage, same-sex unions, adoptions, and practice and procedure.

PAL 203 TORT LAW FOR PARALEGALS (Formerly POLS 135)

Units: 3.0 **CSU** | **48-54 hours laboratory**

(Corequisite: PAL 201)

This course introduces the paralegal to the world of tort law; takes them through the basic concepts that are the foundation of negligence litigation (duty, breach, causation, damages), intentional torts to both persons and property, and strict liability. Introduces the student to investigative procedures in personal injury cases.

PAL 204 WILLS AND TRUSTS FOR PARALEGALS (Formerly POLS 139)

Units: 3.0 **CSU** | **48-54 hours laboratory**

(Prerequisite: PAL 201 minimum grade C.)

This course introduces the paralegal student to the laws of wills, trusts and estates, including the creation of wills, testate succession, intestate succession, trust creation and arrangements, family protection, estate planning, probate courts, and estate taxes.

PAL 205 BASIC BANKRUPTCY LAW FOR PARALEGALS

Units: 3.0 **CSU** | **48-54 hours laboratory**

(Prerequisite: PAL 201 minimum grade C.)

This course is an introduction to the Federal Bankruptcy law, with emphasis on Chapter 7 Bankruptcies, and discussions and introduction to Chapter 11 and 13 proceedings. The student will complete an entire Chapter 7 Bankruptcy petition and other documents and motions involving a bankruptcy case under the Bankruptcy Code. Included will be creditors' claims and motions for relief of automatic stay.

PAL 205 BASIC BANKRUPTCY LAW FOR PARALEGALS

Units: 3.0 **CSU** | **48-54 hours laboratory**

(Prerequisite: PAL 201 minimum grade C.)

This course is an introduction to the Federal Bankruptcy law, with emphasis on Chapter 7 Bankruptcies, and discussions and introduction to Chapter 11 and 13 proceedings. The student will complete an entire Chapter 7 Bankruptcy petition and other documents and motions involving a bankruptcy case under the Bankruptcy Code. Included will be creditors' claims and motions for relief of automatic stay.

Philosophy

The study of philosophy is dedicated to reflection on the most fundamental concerns of human life. Students examine and assess the concepts and arguments expressed in writings of influential philosophers on such enduring themes as moral value, religious knowledge, political order, truth, and ultimate reality. Philosophical study assists students in developing such valuable and transferable skills as analytical reading and writing, creative and critical thinking, and sound judgment.

Career Opportunities

(Most careers require a bachelor's or advanced degree.)

Corporate Manager, Ethics Consultant, Lawyer, Management Trainer, Public Administrator, Religious Leader
Social Worker, Teacher, Writer

Faculty

Marc Skuster | Milton Danielson - Emeritus

Degrees and Certificates Awarded

Associate in Arts, Liberal Arts

Associate Degree

No associate degree offered with a major in Philosophy. Philosophy courses may be used to fulfill requirements for an Associate in Arts degree with a major in Liberal Arts. See Liberal Arts for degree requirements for this major.

Transfer

To pursue a bachelor's degree in this field, here are some schools that have programs that might interest you. For the most up-to-date information on these programs and others, visit www.assist.org. Please stop by the Transfer Center in Building 55 or make an appointment with a counselor if you have questions.

-**California State University, San Bernardino:** Philosophy major

-**University of California, Riverside:** Philosophy major

Philosophy Courses

PHIL 101 INTRODUCTION TO PHILOSOPHY

Units: 3.0 **CSU, UC** | 48-54 hours laboratory

(No prerequisite. Recommended preparation: ENGL 50 or eligibility for ENGL 101.0/H101)

Introduction to the methods and subject matter of the discipline of philosophy through critical analysis of primary texts and discussion of enduring questions regarding reality, knowledge, and value. Topics include the sources and limits of knowledge; the nature of reality, mind, and personal identity; the existence of God and religious experience; moral value; philosophy of science; the nature of truth; distributive justice; and the meaning of life.

PHIL 108 INTRODUCTION TO ETHICS AND CONTEMPORARY MORAL ISSUES

Units: 3.0 **CSU, UC** | 48-54 hours laboratory

(No prerequisite. Recommended preparation: Eligibility for ENGL 101.0/H101)

Critical study of major ethical theories and their application to contemporary moral issues in bio-medical practice, law and violence, sexuality, social and economic justice, the environment, and business conduct.

PHIL 109 INTRODUCTION TO LOGIC

Units: 3.0 **CSU, UC** | 48-54 hours laboratory

(No prerequisite)

Introduction to the principles and practice of sound reasoning: argument analysis and evaluation, induction, deduction, fallacies, categorical logic, and propositional logic. Assignments require use of the computer.

PHIL 114 POLITICAL PHILOSOPHY

Units: 3.0 [CSU, UC](#) | 48-54 hours laboratory

(No prerequisite. Recommended preparation: Eligibility for ENGL 101.0/H101.)

Introduction to the normative discussion of social organization from a variety of philosophical perspectives. Topics include the nature of the state, rights, the role of law, liberty, distributive justice, and the common good. Emphasis on the American social experience with additional attention given to the global context. No prerequisite. ENGL 101.0 recommended See cross listing for POLS 114.

PHIL 117 PHILOSOPHY OF RELIGION

Units: 3.0 [CSU, UC](#) | 48-54 hours laboratory

(Recommended preparation: ENGL 50 or eligibility for ENGL 101.0.)

Introduction to major topics in the philosophy of religion: the existence and nature of God, religious experience and knowledge, and concepts of immortality and human destiny. Special attention is given to conflicts between religion and science, competing claims for religious truth, and the relevance of religion to social ethics. Three lecture hours per week. See cross-listing for RLST 117.

PHIL 120 HISTORY OF ANCIENT PHILOSOPHY

Units: 3.0 [CSU, UC](#) | 48-54 hours laboratory

(No prerequisite. Recommended preparation: Eligibility for ENGL 101.0/H101.)

Critical study of the major movements, figures, and influential texts in the ancient period of Western Philosophy: the Pre-Socratics, Socrates, Plato, and Aristotle. Discussion of the influence of Greek thought on Hellenistic, Roman, and Medieval philosophy.

PHIL 121 HISTORY OF MODERN PHILOSOPHY

Units: 3.0 [CSU, UC](#) | 48-54 hours laboratory

(No prerequisite. Recommended preparation: Eligibility ENGL 101.0/H101.)

Introduction to major Western philosophers and movements from the 16th through the 18th Centuries. Emphasis on primary source readings representative of Continental Rationalism, British Empiricism, and Kant, with some attention given to precursors and following developments

PHIL 128 SPECIAL TOPICS

See Special Topics listing (Variable units). [CSU](#)

PHIL 129 INDEPENDENT STUDY

See Independent Study listing (1-3 units). [CSU](#)

PHIL 207 INTRODUCTION TO CRITICAL THINKING

Units: 3.0 [CSU, UC](#) | 48-54 hours laboratory

(Prerequisite: ENGL 101.0/101H minimum grade C).

Study and practice in critical thinking and advanced English composition: analysis, evaluation, and formulation of arguments; critical study of texts; and extended argumentative writing. Application of critical thinking and writing skills to current moral, social, and religious issues. See cross listing for RLST 207

Photography

The study of photography offers a multitude of career possibilities. From fine art to commercial applications, photography is an exciting field that involves an education founded in conceptual as well as technical aspects. The development of the visual mind and a technical foundation in both traditional and digital imaging are the goals of the study of photography here at Victor Valley College.

Career Opportunities

Aerial Surveying, Advertising, Architectural Design, Art, Digital Imaging, Fashion, Film Maker, Forensic and Criminal Applications, Marine Biology, Photo Finishing, Portrait Photography, Product Photography, Photographer's Assistant Sports, Teaching

Faculty

Frank Foster | Brent Wood

Degrees and Certificates Awarded

Associate in Arts, Fine Arts
Associate in Arts, Liberal Arts
Photography Certificate

Associate Degree

No associate degree offered with a major in Photography. Photography courses may be used to fulfill requirements for an Associate in Arts degree with a major in Fine Arts. See Fine Arts for degree requirements for this major. Courses may also be used to fulfill requirements for an Associate in Arts degree with a major in Liberal Arts. See Liberal Arts for degree requirements for this major. PHOT 138 (Cooperative Education) may be used as Elective credit, but may not be used to fulfill major requirements.

Transfer

Photography is usually a concentration or option within an Art or Applied Art major at colleges within the University of California and California State University systems. Various private or independent colleges that focus specifically on the arts offer bachelor's degrees with a major in Photography or as a concentration or option within an Art or Applied Art major.

Because the major and the general education requirements vary in this major from university to university, students interested in photography should study the catalog or website of the specific university to which they plan to transfer. Also, visit www.assist.org and, for independent schools, www.aiccu.edu.

The following is a sampling of colleges which offer Photography majors or Photography concentrations within Art or Applied Art majors:

*California State University campuses at East Bay, Fullerton, Hayward, San Jose, San Luis Obispo
University of California, Santa Cruz
Art Center College of Design, Pasadena
California College of Arts and Crafts, Oakland
California Institute of the Arts, Valencia
Chapman University*

PHOTOGRAPHY CERTIFICATE

Prepares the student for a variety of employment opportunities within the photographic field. This certificate also provides an opportunity for the student to continue on toward a more advanced certificate program. The student will be exposed to portrait, industrial, commercial, and architectural photography. An emphasis will be placed on learning Adobe Photoshop, digital cameras and digital output devices. The proper use of light will also be extensively covered. All camera formats will be covered.

Units Required: 17.0

All of the following must be completed:

PHOT 100	Beginning Photography	3.0
PHOT 101	Intermediate Photography	3.0
PHOT 105	Portraiture	3.0
PHOT 52	Introduction to Photoshop	3.0
PHOT 53	Lighting Techniques	3.0
PHOT 54	Portfolio Design	2.0

Photography Courses

PHOT 50 COMMERCIAL PHOTOGRAPHIC APPLICATION

Units: 3.0 | **32-36 hours lecture and 48-54 hours laboratory**

(No prerequisite. Recommended preparation: PHOT 100 and PHOT 101)

This course will introduce the application of photo-graphic imaging to the commercial marketplace. It will stress the use of photography as it applies to the graphic design field as well as portraiture, product and editorial applications. Business principles of this field will also be covered.

PHOT 51 ENVIRONMENTAL PHOTOGRAPHY

Units: 3.0 | **32-36 hours lecture and 48-54 hours laboratory**

(No prerequisite. Recommended preparation: PHOT 100 and PHOT 101)

This course will cover basic camera exposure and composition for a variety of outdoor settings. Topics include: landscape photography, animal photography, flower photography, sports photography, macro photography and outdoor portraits. The uses and understanding of filters, flash and film. Some field trips will be required.

PHOT 52 INTRODUCTION TO PHOTOSHOP

Units: 3.0 | **32-36 hours lecture and 48-54 hours laboratory**

(No prerequisite)

This course will introduce the basics of Adobe PhotoShop and its application to digital photography utilizing the Macintosh and PC platforms.

PHOT 53 BASIC PHOTOGRAPHIC LIGHTING TECHNIQUES

Units: 3.0 | **32-36 hours lecture and 48-54 hours laboratory**

(No prerequisite. PHOT 100, PHOT 101, or equivalent experience recommended.)

This course will introduce the student to the fundamentals of lighting and its application to imaging processes. A broad range of topics will be covered that include portraiture, product and commercial applications.

PHOT 54 PORTFOLIO DESIGN

Units: 2.0 | **24-27 hours lecture and 24-27 hours laboratory**

(No prerequisite. PHOT 100 and PHOT 101 recommended.)

This course will present visual problems for the student to solve for the purpose of creating a traditional and digital portfolio.

PHOT 100 BEGINNING PHOTOGRAPHY

Units: 3.0 | **CSU, UC** | **32-36 hours lecture and 48-54 hours laboratory**

(No prerequisite. Grade Option)

This is a course that introduces the basics of black and white photography. Technical and conceptual topics will be covered. Students will furnish their own cameras with manual controls.

PHOT 101 INTERMEDIATE PHOTOGRAPHY

Units: 3.0 | **CSU, UC** | **32-36 hours lecture and 48-54 hours laboratory**

(No prerequisite. PHOT 100 is recommended. Grade Option)

This is an intermediate course designed to teach the student how to use film and digital cameras. Topics covered in this course will be intermediate techniques of photography such as an introduction to portraiture, lighting techniques, multiple light portrait photography, infrared techniques and the view camera. An introduction to Adobe Photoshop will also be covered. This course can be completed with film or digital cameras.

PHOT 103 ALTERNATIVE IMAGING PROCESS**Units: 3.0** **CSU** | **32-36 hours lecture and 48-54 hours laboratory***(No prerequisite. PHOT 100 or equivalent recommended. Grade Option)*

This course will cover a variety of alternative 19th century photographic processes such as cyanotype, Van Dyke, hand-coloring and toning using traditional techniques as well as computer generated images. Plastic cameras and their use in creative image creation will be covered. Applying creative textures and borders will also be covered. Anyone with a high interest in creative image production should take this course. Each student will supply his or her own camera.

PHOT 105 PORTRAITURE**Units: 3.0** **CSU** | **32-36 hours lecture and 48-54 hours laboratory***(No prerequisite. Recommended preparation: PHOT 100 and PHOT 101.)*

This course will cover studio and outdoor portrait techniques, flash fill techniques as well as elements of commercial photography. This course may be completed with digital or film based cameras. Student must supply a DSLR camera or a 35mm manual film based camera.

PHOT 106 INTRODUCTION TO PHOTOJOURNALISM**Units: 2.0** **CSU** | **96-108 hours laboratory***(No prerequisite.)*

This lab class is an introduction to the basics of photojournalism including basic photography skills, digital imaging, processing, composition, and production of written news stories. See cross-listing for JOUR 106.

PHOT 110 INTERMEDIATE PHOTOSHOP**Units: 3.0** **CSU** | **32-36 hours lecture and 48-54 hours laboratory***(No prerequisite.)*

This course will introduce intermediate techniques of Adobe Photoshop and its application to digital media.

PHOT 111 BEGINNING DIGITAL PHOTOGRAPHY**Units: 3.0** **CSU** | **32-36 hours lecture and 48-54 hours laboratory***(No prerequisite.)*

This beginning digital photography course will cover imaging basics such as exposure control using shutter speeds and apertures, composition and lighting. Topics include the integration of traditional design, color and compositional principles utilizing contemporary digital methods and tools. This course will also use the computer to further manipulate digital images. The controls of digital cameras, scanning, editing, output and image enhancement will be covered.

PHOT 115 HISTORY OF STILL PHOTOGRAPHY**Units: 3.0** **CSU,UC** | **48-54 hours lecture***(No prerequisite. Grade Option)*

This course surveys the history and development of photography across the globe from its inception to the present. Photographic works are investigated in relation to art history, cultural history and social history. This course ends with a consideration of photography in the digital age.

PHOT 129 INDEPENDENT STUDYSee Independent Study listing (1-3 units). **CSU****PHOT 138 COOPERATIVE EDUCATION**See Cooperative Education listing (1-8 units). **CSU**

Physical Sciences

General Physical Sciences includes a number of scientific courses which often encompass a number of related disciplines. They are intended to serve as introductory level general education courses while also providing a basis for future, more advanced study in each of their respective fields.

Career Opportunities (May require advanced degree)

Astronomer, Geologist, Meteorologist, Oceanographer

Degrees and Certificates Awarded

Associate in Arts, Liberal Arts

Associate in Science, Math/Science

Associate Degree

No associate degree offered with a major in Physical Sciences. Physical Science courses may be used to fulfill requirements for an Associate in Science degree with a major in Math/Science. See Math/Science for degree requirements for this major. PSCI 138 (Cooperative Education) may be used for Elective credit, but may not be used to fulfill major requirements.

Transfer

For the most up-to-date information on this program and others, visit www.assist.org. Please stop by the Transfer Center in Building 55 or make an appointment with a counselor if you have questions.

-University of California, Riverside: Physical Sciences major

Physical Sciences Courses

PSCI 101 PRINCIPLES OF PHYSICAL SCIENCE

Units: 3.0 **CSU, UC** | 48-54 hours lecture

(UC credit limitation) (No prerequisite)

A general education course dealing with basic concepts of the physical sciences including astronomy, geology, meteorology, and oceanography.

PSCI 128 SPECIAL TOPICS

See Special Topics listing (Variable units). **CSU**.

PSCI 138 COOPERATIVE EDUCATION

See Cooperative Education listing (1-8 units). **CSU**

Physics

The study of physics involves trying to understand, at the most fundamental level, our observations of natural phenomena. Inquiries extend from the most minute of subatomic particles, to nuclei, atoms, molecules, solids, liquids, gases and plasmas, stars and galaxies. Physics seeks to explain how, under the influence of some fundamental forces, nature behaves as it does. In a larger sense it tries to address questions about our universe, such as: Where did we come from? What will be our ultimate fate?

The sequence of physics classes fills the lower division requirements for students who plan to major in fields such as physics, engineering or medicine.

Career Opportunities (May require advanced degree)

Engineer, Physicist, Teaching at many levels

Faculty

Michael Butros

Degrees and Certificates Awarded

Associate in Arts, Liberal Arts
Associate in Science, Math/Science

Associate Degree

No associate degree offered with a major in Physics. Physics courses may be used to fulfill requirements for an Associate in Science degree with a major in Math/Science. See Math/Science for degree requirements for this major. Courses may also be used to fulfill requirements for an Associate in Arts degree with a major in Liberal Arts. See Liberal Arts for degree requirements for this major. PHYS 138 (Cooperative Education) may be used as Elective credits, but may not be used to fulfill major requirements.

Transfer

For the most up-to-date information on these programs and others, visit www.assist.org. Please stop by the Transfer Center in Building 55 or make an appointment with a counselor if you have questions.

-**California State University, San Bernardino**: Physics major

-**University of California, Riverside**: Physics major

Physics Courses

PHYS 100 INTRODUCTORY PHYSICS

Units: 4.0 **CSU, UC** | 48-54 hours lecture and 48-54 hours laboratory

(UC credit limitation) (Prerequisite: MATH 42 minimum grade C.)

An introduction to general physics for students who have not had physics, or who have not had physics recently. Fundamental principles of mechanics, waves, heat, electricity and magnetism, light, atomic and nuclear physics.

PHYS 128 SPECIAL TOPICS

See Special Topics listing (Variable units). **CSU**.

PHYS 129 INDEPENDENT STUDY

See Independent Study listing (1-3 units). **CSU**

PHYS 138 COOPERATIVE EDUCATION

See Cooperative Education listing (1-8 units). **CSU**

PHYS 201 ENGINEERING PHYSICS I - MECHANICS**Units: 4.0** **CSU, UC** | **48-54 hours lecture and 48-54 hours laboratory***(UC credit limitation) (Prerequisite/Co-requisite: MATH 226/226H minimum grade of C.)*

Course covers a study of vectors, rectilinear motion, motion in a plane, particle dynamics, work and energy, conservation laws, collisions, rotational kinematics and dynamics.

PHYS 202 ENGINEERING PHYSICS II – FLUIDS, SOUND AND THERMODYNAMICS**Units: 4.0** **CSU, UC** | **48-54 hours lecture and 48-54 hours laboratory***(UC credit limitation) (Prerequisite: PHYS 201 minimum grade C and Prerequisite/Co-requisite: MATH 227/ 227H.)*

Course covers the study of equilibrium of rigid bodies, oscillations, gravitation, fluid statics and dynamics, waves in elastic media, sound, and thermodynamics.

PHYS 203 ENGINEERING PHYSICS III - ELECTRICITY AND MAGNETISM**Units: 4.0** **CSU, UC** | **48-54 hours lecture and 48-54 hours laboratory***(UC credit limitation). (Prerequisite: PHYS 202 minimum grade C and Prerequisite/Co-requisite: MATH 228/ 228H.)*

Course covers charge and electric force, the electric field, electric potential, capacitors and dielectrics, direct current and resistance, electromotive force and circuits, the magnetic field, inductance, magnetic properties of matter, electromagnetic oscillations, alternating currents, electromagnetic waves, and the Maxwell Equations.

PHYS 204 ENGINEERING PHYSICS IV – OPTICS AND MODERN PHYSICS**Units: 4.0** **CSU, UC** | **48-54 hours lecture and 48-54 hours laboratory***(UC credit limitation) (Prerequisite: PHYS 203 minimum grade C.)*

Course covers the nature and propagation of light, reflection and refraction, interference, diffraction, gratings and spectra, relativity, elements of quantum physics, waves and particles, nuclear physics.

PHYS 204H HONORS ENGINEERING PHYSICS (LIGHT AND MODERN PHYSICS)**Units: 4.0** **CSU, UC** | **48-54 hours lecture and 48-54 hours laboratory***(UC credit limitation) (Prerequisite: PHYS 203)*

The nature and propagation of light, reflection and refraction, interference, diffraction, gratings and spectra, relativity, elements of quantum physics, waves and particles. See Honors Program listing for further information on admission to the Honors Program.

PHYS 221 GENERAL PHYSICS I**Units: 4.0** **CSU, UC** | **48-54 hours lecture and 48-54 hours laboratory***(UC credit limitation) (Prerequisite: MATH 104 minimum grade C and Prerequisite/Co-requisite: MATH 226/ 226H. Recommended preparation: PHYS 100.)*

Course covers vectors, motion in one and two dimensions, particle dynamics, work and energy, conservation laws, collisions, rotational motion and dynamics, thermodynamics.

PHYS 222 GENERAL PHYSICS II**Units: 4.0** **CSU, UC** | **48-54 hours lecture and 48-54 hours laboratory***(UC credit limitation) (Prerequisite: PHYS 221 minimum grade C and Prerequisite/Co-requisite: MATH 227/ 227H. Recommended preparation: PHYS 100.)*

Course covers electromagnetic theory, oscillations, waves, geometrical optics, interference and diffraction quantum physics, atomic and nuclear physics.

PHYS 230 STATICS**Units: 3.0** **CSU, UC** | **48-54 hours lecture***(Prerequisite: PHYS 201, and MATH 227 or 227H with a grade of "C" or better.)*

This class is concerned with the analysis of forces on physical systems in static equilibrium. Topics covered include:

- *Force and moment vectors, resultants. *Principles of statics and free-body diagrams.
- *Applications to simple trusses, frames, and machines. *Distributed loads.
- *Internal forces in beams. *Properties of areas, second moments. *Laws of friction.

Political Science

Political science is the study of political philosophies, processes, principles, and the structures of government and other political institutions. This academic discipline leads toward an understanding of the institutions of political ideologies, institutions of government, the roles of citizens and political leaders, interest groups and political parties, the electoral process, and con-temporary issues that surround our public life. This field also includes an analysis of governments around the world and of international relations.

Career Opportunities

Attorney, Budget Analyst, Campaign Consultant/Staff Member, Educator, Foreign Diplomat/International Organization Worker, Government Official/Elected Official, Intelligence Officers & Analysts, Law Enforcement Officer Legislative/Executive Staff Assistant, Lobbyist, National/International Business Position, Nonprofit Organization Staff Member, Print/Broadcast Journalist, Political Party Worker, Urban Planner/City Manager

Faculty

Dino Bozonelos | David Dupree

Degrees and Certificates Awarded

Associate in Arts, Liberal Arts

International Studies Certificate

Associate in Arts in Political Science for Transfer (AA-T)

The Political Science Department also offers a certificate in Paralegal Studies. See Paralegal Studies for further information about this program of study.

Associate Degree

Some Political Science courses may be used to fulfill requirements for an Associate in Arts degree with a major in Liberal Arts. Paralegal Courses (POLS 130, 136, PAL 102, 104, 201, 202, 203) may be used as Electives but may not be used to fulfill major requirements for any degree at this time. Also see Administration of Justice.

To earn an Associate in Science degree for Transfer with a major in Political Science, complete the required major courses and all other requirements specified on the following pages (i.e. 60 CSU transferable units, CSU GE or IGETC, etc.). For more information on the AA-T/AS-T degrees, meet with a counselor or www.adegreewithaguarantee.com

Transfer

For the most up-to-date information on these programs and others, visit www.assist.org. Please stop by the Transfer Center in Building 55 or make an appointment with a counselor if you have questions.

-**California State University, San Bernardino:** Political Science major

-**University of California, Riverside:** Political Science major

A new transfer option has been added in this major. Check this out:

Political Science, AA-T

Political science is the study of political philosophies, processes, principles, and the structures of government and other political institutions. This academic discipline leads toward an understanding of the approaches to the study in the field of political science, political ideologies, institutions of government, the roles of citizens and political leaders, interest groups and political parties, the electoral process, and contemporary issues that surround our public life. This field also includes an analysis of governments around the world and of international relations.

The Associate in Arts in Political Science for Transfer degree is aligned with the Transfer Model Curriculum (TMC) for Political Science. The goal of the degree is to prepare students for transfer to the California State University system. It is specifically designed to fulfill the lower division requirements for the Baccalaureate degree in Political Science at a California State University. Students should consult with a counselor to determine whether this degree is the best option for their transfer goals.

Program Requirements: 18-19 units

Required Courses (3 units total)

POLS 102/H102	Introduction to American Government & Politics/Honors American Government	3.0
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Additional Courses

List A – Select THREE of the following courses (9-10 units)

POLS 101	Introduction to Political Science	3.0
POLS 110	Contemporary World Affairs	3.0
POLS 112	Comparative Government	3.0
POLS 114	Political Philosophy	3.0
MATH 120/H120	Introduction to Statistics	4.0

List B – Select TWO (6 units)

POLS 103	State and Local Government	3.0
POLS 113	Politics of the Middle East and North Africa	3.0
POLS 206	Introduction to Environmental Policy and Natural Resource Management	3.0
POLS 211	Global Issues	3.0
ECON 101	Principles of Economics: Macro	3.0

A student wishing to pursue an AA-T/AS-T degree in the major listed on this page must ensure the CSU of their choice is accepting that similar major. Students completing an AA-T/AS-T degree are guaranteed admissions into a CSU campus given that a student fulfills the following:

- 1) 60 CSU transferable units;
- 2) Completes the CSU General Education (GE) or IGETC General Education pattern;
- 3) Completes the major requirements for the AA-T/AS-T;
- 4) Maintains a transferable cumulative GPA of at least 2.0 (C or better);
- 5) Completes the basic/Golden 4 GE requirements.

For more information on the AA-T/AS-T degrees, meet with a counselor or visit www.sb1440.org and www.adegreewithaguarantee.com

Political Science

INTERNATIONAL STUDIES CERTIFICATE

The International Studies Certificate program at Victor Valley College is designed for students pursuing careers in International affairs. Career Opportunities include: Foreign Diplomat, Homeland Security Analyst, Intelligence Officers & Analysts, International Organization Worker, and International Business Positions.

Units Required: 15-17.0

Group I – All of the following must be completed:

POLS 110	Contemporary World Affairs	3.0
POLS 211	Global Issues	3.0
POLS 112	Comparative Government	3.0
POLS 113	Politics of the Middle East and North Africa	3.0

Group II – One of the following must be completed:

ANTH 102	Cultural Anthropology	3.0
CMST 105	Intercultural Communication	3.0
FREN 101	Elementary French	5.0
GEOG 102	Cultural Geography	3.0
GERM 101	Elementary German	5.0
HIST 104	World History Since 1500	3.0
HIST 131	Latin American History	3.0
RLST 110	World Religions	3.0
SPAN 101	Elementary Spanish	5.0
SPAN 101A	Fundamentals of Spanish 1A	3.0
SPAN 125	Conversational Spanish	3.0

Political Science Courses

POLS 101 INTRODUCTION TO POLITICAL SCIENCE

Units: 3.0 **CSU, UC** | **48-54 hours lecture**

(No prerequisite. Recommended preparation: Eligibility for ENGL 50)

An introduction to modern politics and the scope of political science as a discipline. Presents a comprehensive survey of the study of political science, modern political ideologies and movements, participation, institutions of government, political issues and foreign affairs of nation-states around the world.

POLS 102 INTRODUCTION TO AMERICAN GOVERNMENT AND POLITICS

Units: 3.0 **CSU, UC** | **48-54 hours lecture**

(UC credit limitation) (No prerequisite. Recommended preparation: ENGL 50 or eligibility for ENGL 101.0 or ENGL 101H.)

Examines the workings of our complex system of American government, including: national, California state, and local levels (with emphasis on the national level). This survey will focus on the historical and contemporary development of our Constitution, political institutions, citizen participation, politics, and policies. Examines the causes, consequences, and possible solutions to significant problems in contemporary America.

POLS 102H HONORS AMERICAN GOVERNMENT AND POLITICS

Units: 3.0 **CSU, UC** | **48-54 hours lecture**

(UC credit limitation). (Prerequisite: ENGL 101.0 or ENGL 101H minimum grade B)

Enhanced for honors students. This course is an introductory survey of American governing institutions, federal and state, and other elements of the political system. The course is issue-oriented, inviting students to analyze critically competing theories and arguments relating to the founding of the Republic (especially the development of the Constitution), federalism, individual rights and liberties, interest groups, political parties, voting behavior and elections, campaign finance reform, public policy options, and the operational relations among the executive, legislative, and judicial branches. Course curriculum recognizes the roles and contributions of racial and ethnic groups and women in American politics. On each of these topics comparisons will be made to the governing units and politics of California, as well as local government.

POLS 103 STATE AND LOCAL GOVERNMENT

Units: 3.0 **CSU** | **48-54 hours lecture**

(No prerequisite. Recommended preparation: ENGL 50 or eligibility for ENGL 101.0 or ENGL 101H.)

An introduction to the study of the American political system at the state and local levels of government. Examines the workings of our complex system of federalism by focusing on contemporary state and local government institutions, citizen participation, political problems, politics, and policies. Emphasis is given to the analysis of California political issues, politics and government.

POLS 104 INTRODUCTION TO GLOBAL STUDIES

Units: 3.0 **CSU, UC** | **48-54 hours lecture**

(No prerequisite)

A survey of the historical and cultural processes that have made the world more interconnected. This course will canvass the "great ideas" that have connected human civilizations and the processes which have initiated and continued the process of globalization. Topics include the cultural, economic, historical, political and religious effects of globalization.

POLS 110 CONTEMPORARY WORLD AFFAIRS

Units: 3.0 **CSU, UC** | **48-54 hours lecture**

(No prerequisite)

An introduction to the analysis of the historical development and contemporary setting of political relations between and among nation-states, trans-national movements, and international organizations. Introduces the analytical approaches to the study of world affairs and theories of international conflict and cooperation. Explores the variety of governmental and non-governmental entities on the world stage today, their foreign policy goals and interests, and instruments and uses of power. Examines contemporary issues confronting the global community and the historical development and uses of international law and organizations.

POLS 112 COMPARATIVE GOVERNMENT**Units: 3.0** **CSU, UC** | **48-54 hours lecture***(No prerequisite)*

A comparative study of the development, organization and principles of a number of foreign governments. The international community will be discussed in four broad categories on a continuum from political instability to political stability. Specific focus upon the German, Russian, French, and British governments.

POLS 113 POLITICS OF THE MIDDLE EAST AND NORTH AFRICA**Units: 3.0** **CSU, UC** | **48-54 hours lecture***(No prerequisite. Grade option)*

This course will examine the Middle East and North Africa through a comparative politics perspective. This will include an examination of the following items: an overview of the region's histories, geographies, peoples, cultures, religions and languages; the fundamentals of the Islamic and Judaic belief systems; current events such as the Israeli-Palestinian conflict, the War in Iraq and other real potential geopolitical conflicts.

POLS 114 POLITICAL PHILOSOPHY**Units: 3.0** **CSU, UC** | **48-54 hours lecture***(Recommended Preparation: ENGL 101.0)*

Introduction to the normative discussion of social organization from a variety of philosophical perspectives. Topics include the nature of the state, rights, the role of law, liberty, distributive justice, and the common good. Emphasis on the American social experience with additional attention given to the global context

POLS 128 SPECIAL TOPICSSee Special Topics listing (Variable units) **CSU****POLS 129 INDEPENDENT STUDY**See Independent Study listing (1-3 units) **CSU****POLS 138 COOPERATIVE EDUCATION**See Cooperative Education listing (1-8 units) **CSU****POLS 206 INTRODUCTION TO ENVIRONMENTAL POLICY AND NATURAL RESOURCE MANAGEMENT****Units: 3.0** **CSU, UC** | **48-54 hours lecture***(No prerequisite)*

This course examines American environmental policy and how natural resources are managed. The historical, global, and ethical dimensions of how our society relates to the environment are analyzed from an interdisciplinary perspective.

POLS 211 GLOBAL ISSUES (Formerly POLS 111)**Units: 3.0** **CSU, UC** | **48-54 hours lecture***(No prerequisite. Grade Option)*

Surveys recent developments in the nature of global interdependence. Examines the major political, economic, and military conflicts of this century and recent problems of population growth, environmental decay, ethnic/national antagonism and violence, and post-Cold War politics. Course content changes based on current events.

POLS 221 MODEL UNITED NATIONS**Units: 3.0** **CSU** | **48-54 hours lecture***(No prerequisite. This course may be taken four times)*

The course introduces students to the theory and practice of international diplomacy through participation in Model United Nations simulations. The course focuses on the history, structure, and functions of the United Nations; international bargaining and diplomacy; conflict resolution; researching and writing position papers and resolutions; and public speaking. Students are not required to attend a Model United Nations Conference.

Psychology is a behavioral science which has as its goals to describe, understand, explain, predict and influence behavior and mental processes. Graduates in psychology—bachelor’s degree and post-graduate study required—are employed in a number of areas, including teaching, research, and practice. Some of the major sub-fields in psychology are clinical, counseling, developmental, educational, environmental, health, industrial/organizational, neuroscience, physiological, quantitative (math, psychometrics, statistics), school, and social psychology.

Career Opportunities

Academic Counselor, Education, Educational Psychologist, Industrial/Organizational Psychologist
Licensed Marriage and Family Therapist, Licensed Professional Clinical Counselor, Mental Health Officer, Personnel Analyst
Probation Officer, Psychologist, Rehabilitation Counselor, Social Worker

Faculty

Robert Flome | Patricia Jennings | Jim Previte - Emeritus
Bill Bachofner - Emeritus

Degrees and Certificates Awarded

Associate in Arts, Liberal Arts

Associate in Arts in Psychology for Transfer (AA-T)

Certificate Program

No certificates awarded. See Alcohol and Drug Studies for certificates offered at surrounding community colleges.

Associate Degree

Psychology courses may be used to fulfill requirements for an Associate in Arts degree with a major in Liberal Arts. See Liberal Arts for degree requirements for this major. PSYC 138 (Cooperative Education) may be used as Elective credit, but may not be used to fulfill major requirements.

To earn an Associate in Science degree for Transfer with a major in Psychology, complete the required major courses and all other requirements specified on the following pages (i.e. 60 CSU transferable units, CSU GE or IGETC, etc.). For more information on the AA-T/AS-T degrees, meet with a counselor or www.adegreewithaguarantee.com

Transfer

For the most up-to-date information on these programs and others, visit www.assist.org. Please stop by the Transfer Center in Building 55 or make an appointment with a counselor if you have questions.

-**California State University, San Bernardino:** Psychology major

-**University of California, Riverside:** Psychology major | Psychobiology major

Local Bachelors Program

For information on the following program located in the High Desert, please visit:
[www.vvc.edu/office/guidance and counseling/](http://www.vvc.edu/office/guidance%20and%20counseling/) and select “Counseling Information Sheets”:

-**Brandman University, Victor Valley Campus:** Psychology major

A new transfer option has been added in this major. Check this out:

Psychology, AA-T

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

Psychology offers much to the student who desires to study and understand the complexity of behavior and mental processes. The Associate in Arts in Psychology for Transfer program allows the student to utilize research methods, evaluate the credibility of research, theories, and applications; understand the core fields, paradigms, and theories; apply psychological concepts, theoretical perspectives, empirical findings, and historical trends to questions and issues in personal experience and contemporary society; and understand the ethical standards in academic and applied psychology. The Associate in Arts in Psychology for Transfer degree program also provides students with the opportunity to learn to describe, explain, predict, and influence behavior, in various situations, because it is one of a few disciplines with a broad and relevant scope.

Associate in Arts in Psychology for Transfer degree is to prepare students for transfer to the California State University system to complete the Baccalaureate degree in Psychology. Students should consult with a counselor to determine whether this degree is the best option for their transfer goals.

Program Requirements: 19 units

Required Courses (7 units total)

MATH 120/H120	Introduction to Statistics	4.0
PSYC 101/H101	Introduction to Psychology	3.0
PSYC 102/H102	Research Methods for Behavioral Sciences	3.0

Additional Courses

List A –(3 units total)

PSYC 109	Biopsychology	3.0
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List B – Select ONE (3 units)

PSYC 110	Developmental Psychology	3.0
PSYC 111	Introduction to Child Psychology	3.0

List C – Select ONE (3 units)

PSYC 108	Family Dynamics of Addiction and Abuse	3.0
PSYC 121	Human Sexuality	3.0
PSYC 125	Introduction to Counseling	3.0
PSYC 133	Introduction to Substance Abuse Studies	3.0
PSYC 204	Social Psychology	3.0
SOC 101	Introduction to Sociology	3.0

A student wishing to pursue an AA-T/AS-T degree in the major listed on this page must ensure the CSU of their choice is accepting that similar major. Students completing an AA-T/AS-T degree are guaranteed admissions into a CSU campus given that a student fulfills the following:

- 1) 60 CSU transferable units;
- 2) Completes the CSU General Education (GE) or IGETC General Education pattern;
- 3) Completes the major requirements for the AA-T/AS-T;
- 4) Maintains a transferable cumulative GPA of at least 2.0 (C or better);
- 5) Completes the basic/Golden 4 GE requirements.

For more information on the AA-T/AS-T degrees, meet with a counselor or visit www.sb1440.org and www.adegreewithaguarantee.com

PSYC 51 PEER TUTORING FUNDAMENTALS

Units: 1.0 | 16-18 hours lecture

(No prerequisite.)

PSYC 51 is designed to teach potential tutors to learn and practice the skills tutors need to work with students in one-on-one and group situations. The primary goal for a tutor is not to teach but to assist the student in learning course content and study skills/habits biological and neurological basis of behavior.

PSYC 101 INTRODUCTORY PSYCHOLOGY

Units: 3.0 | CSU, UC | 48-54 hours lecture

(No prerequisite. Recommended preparation: Eligibility for ENGL 101.0 or ENGL 101H)

This course provides instruction in the nature of human behavior and a consideration of theories and principles pertaining to the topics of research design and experimentation, perception, emotions and motivation, personality, social psychology, psychopathology, human development, learning, cognition and memory. It includes essential features of the biological and neurological basis of behavior.

PSYC 101H HONORS INTRODUCTORY PSYCHOLOGY

Units: 3.0 | CSU, UC | 48-54 hours lecture

(No prerequisite. Recommended preparation: Eligibility for ENGL 101.0 or ENGL 101H)

This course provides instruction in the nature of human behavior and a consideration of theories and principles pertaining to the topics of research design and experimentation, perception, emotions and motivation, personality, social psychology, psychopathology, human development, learning, cognition and memory. It includes essential features of the biological and neurological basis of behavior.

PSYC 108 FAMILY DYNAMICS OF ADDICTION AND ABUSE

Units: 3.0 | CSU | 48-54 hours lecture

(No prerequisite)

This course studies family abuse and addiction. Theories and evidence-based intervention strategies that promote behavioral change and wellness are evaluated. Chemical, child, spousal, and dependent adult abuse are defined within a social, cultural, and historical context. It also explores the correlation between chemical dependency and family dysfunction as well as the developmental impact abuse has on children and adolescents.

PSYC 109 BIOPSYCHOLOGY

Units: 3.0 | CSU, UC | 48-54 hours lecture

(Prerequisite: PSYC 101 or PSYC 101H)

Introduction to the study of behavior from a biological perspective. Neuroanatomy, neurophysiology, psychopharmacology, and the biological systems and processes underlying behavior. Emphasis will be placed on brain mechanisms underlying behavior and their relation to issues in psychology.

PSYC 110 DEVELOPMENTAL PSYCHOLOGY

Units: 3.0 | CSU, UC | 48-54 hours lecture

(UC credit limitation) (No prerequisite. Recommended preparation: Eligibility for ENGL 101.0 or ENGL 101H and satisfactory completion of PSYC 101.)

This course includes the study of the theories, methods, and research findings regarding biosocial, cognitive, and psychosocial development of the individual from conception through adulthood, including death, dying, and bereavement.

PSYC 110H HONORS DEVELOPMENTAL PSYCHOLOGY

Units: 3.0 | CSU, UC | 48-54 hours lecture

(No prerequisite. Recommended preparation: Eligibility for ENGL 101.0 or ENGL 101H and satisfactory completion of PSYC 101)

This course includes the study of the theories, methods, and research findings regarding biosocial, cognitive, and psychosocial development of the individual from conception through adulthood, including death, dying, and bereavement.

PSYC 111 INTRODUCTION TO CHILD PSYCHOLOGY**Units: 3.0** **CSU, UC** | **48-54 hours lecture***(UC credit limitation). (No prerequisite. Recommended preparation: Eligibility for ENGL 101.0 or ENGL 101H.)*

This course is a survey of the psychological growth of the normal individual from conception through adolescence. Particular emphasis is given to biopsychosocial, emotional, and cognitive development. Other topics include parenting styles and the potential problems encountered by children and adolescents.

PSYC 121 HUMAN SEXUALITY AND INTIMACY**Units: 3.0** **CSU, UC** | **48-54 hours lecture***(No prerequisite)*

This is a survey course of human sexual and intimate behaviors throughout the life cycle. It includes the physiological, psychological, sociological, and theoretical approaches of human sexuality, the cultural legacy of human sexuality, variations of sexual behaviors and intimate relationships, sexuality throughout the life cycle, sexual disorders and related social issues.

PSYC 125 INTRODUCTION TO COUNSELING**Units: 3.0** **CSU** | **48-54 hours lecture***(No prerequisite. Recommended preparation: PSYC 101)*

An introduction to principles and practices of counseling concepts will be the primary focus. A systematic consideration of the basic skills and theories essential for effective counseling and problem solving.

PSYC 128 SPECIAL TOPICSSee Special Topics listing (Variable units) **CSU****PSYC 129 INDEPENDENT STUDY**See Independent Study listing (1-3 units) **CSU****PSYC 133 INTRODUCTION TO SUBSTANCE ABUSE STUDIES****Units: 3.0** **CSU, UC** | **48-54 hours lecture***(UC credit limitation) (No prerequisite)*

This course will provide a historical perspective on drug/alcohol abuse, its impact on the individual, the family, the community and society. Definitions of use, abuse, and addiction will be presented as well as the disease concept of addiction. The effectiveness and economics of various models of treatment and rehabilitation will be explored.

PSYC 138 COOPERATIVE EDUCATION

See Cooperative Education listing (1-8 units)

PSYC 204 SOCIAL PSYCHOLOGY**Units: 3.0** **CSU, UC** | **48-54 hours lecture***(Prerequisite: PSYC 101 or PSYC H101)*

The focus of this course is the relationship between the individual and society including such topics as social identity, conformity, obedience and deviance, attitudes and attitude change, attribution theory, persuasion, prejudice and stereotyping, aggression and prosocial behavior, interpersonal relationships, group dynamics, and conflict and conflict resolution.

PSYC 213 ABNORMAL PSYCHOLOGY**Units: 3.0** **CSU, UC** | **48-54 hours lecture***(No prerequisite)*

This course explores the history and classifications of psychological disorders, symptom criteria, clinical assessment, diagnosis, and the major theoretical treatment modalities. Biopsychosocial, Psychoanalytic, Cognitive-Behavioral, Sociocultural theories are emphasized. How we define, assess, treat, and study psychological disorders is the thematic focus of the course. A variety of class exercises are used to illustrate and understand the etiology, symptoms, diagnosis, and treatment of psychological disorders.

PSYC 215 STATISTICS FOR THE BEHAVIORAL SCIENCES

Units: 4.0 CSU, UC 64-72 hours lecture

(Prerequisite: PSYC 101 and MATH 90 with a grade of "C" or better. Recommended preparation: ENGL 101.0/101H.)

This is an introduction to basic statistics methods and analysis commonly applied to health, behavioral, and social science research. Topics include: descriptive and inferential statistics including levels and types of measurement: measures of central tendency and dispersion; normal, t, and chi-square distributions; probability and hypothesis testing; measures of significance; regression and correlation; and, analysis of variance (ANOVAS) are all examined and explored using technology and traditional techniques.

PSYC 217 INTRODUCTION TO RESEARCH METHODS IN PSYCHOLOGY

Units: 4.0 CSU 48-54 hours lecture and 48-54 hours laboratory

(Prerequisite: PSYC 101/101H; PSYC 215 or MATH 120/120H, with a grade of "C" or better. Recommended preparation: ENGL 101.0/101H.)

This course surveys psychological research design and methods with an emphasis on correlational relationships, experimental procedures, descriptive methods, instrumentation, data collection, statistical analysis, and interpretation. Research design and methodology will be examined through the review of scholarly journal articles. In laboratory sessions students will conduct research in psychology and/or social science. Actual data collected from research conducted during laboratory sessions will be analyzed with statistical software.

Religious Studies

The academic study of religion is an objective, factual study of the texts, symbols, myths, rituals, ideas, and values of the world's many religious traditions. Students are encouraged to view religion multiculturally as a means of understanding more deeply the spiritual dimensions of human nature, history, and society. Study in this field prepares students for life in a multicultural society and provides practice in such valuable skills as empathetic reading and listening, critical reflection, and descriptive and analytical writing.

Career Opportunities (Most careers require a bachelor's or advanced degree.)

Chaplain, Counselor, Government Service, Nonprofit Management, Professional Religious Leader, Religious Broadcaster, Religious Business Manager, Religious Educator, Religious Journalist, Religion Publisher, Social Worker, Teacher

Faculty

Marc Skuster

Degrees and Certificates Awarded

Associate in Arts, Liberal Arts

Associate Degree

No associate degree offered with a major in Religious Studies. Religious Studies courses may be used to fulfill requirements for an Associate in Arts degree with a major in Liberal Arts. See Liberal Arts for degree requirements for this major.

Transfer

For the most up-to-date information on this program and others, visit www.assist.org. Please stop by the Transfer Center in Building 55 or make an appointment with a counselor if you have questions.

-*University of California, Riverside*: Religious Studies major

Religious Studies Courses

RLST 101 INTRODUCTION TO RELIGIOUS STUDIES

Units: 3.0 **CSU, UC** | 48-54 hours lecture

(No prerequisite. Recommended preparation: ENGL 50 or eligibility for ENGL 101.0 is recommended.)

Introduction to the primary forms of religious experience and expression and to the structure of religious worldviews. Examples from a variety of societies and time periods introduce and illustrate such topics as religious symbols, myths, ritual, and communities, as well as alternative concepts of ultimate reality, cosmogony, theodicy, and soteriology.

RLST 105 RELIGION OF THE OLD TESTAMENT, HEBREW SCRIPTURES, AND ANCIENT NEAR EAST

Units: 3.0 **CSU, UC** | 48-54 hours lecture

(No prerequisite. Recommended preparation: ENGL 50 or eligibility for ENGL 101.0.)

Introduction to the literature and religious history of Ancient Israel and related cultures in the Ancient Near East. Study of the sources, contents, interpretation, and religious and historical significance of the Hebrew Scriptures and the Old Testament.

RLST 106 INTRODUCTION TO THE NEW TESTAMENT AND EARLY CHRISTIAN LITERATURE

Units: 3.0 **CSU, UC** | 48-54 hours lecture

(No prerequisite. Recommended preparation: ENGL 50 or eligibility for ENGL 101.0 is recommended.)

Historical introduction to Mediterranean religion and culture in late classical antiquity. Comparative literary, historical, and sociological analysis of the literature of the period, with emphasis on the New Testament and early Christian literature.

RLST 110 RELIGIONS OF THE MIDDLE EAST AND THE WEST**Units: 3.0** **CSU, UC** | **48-54 hours lecture***(No prerequisite. Recommended preparation: ENGL 50 or eligibility for ENGL 101.0 or ENGL 101H.)*

Survey of the history, beliefs, and practices of the major religious traditions of the Middle East and West; prehistoric and indigenous religions, ancient Greek, Roman, Egyptian, and Mesopotamian religions, Zoroastrianism; Judaism; Christianity; Islam; and new religious movements.

RLST 111 RELIGIONS OF SOUTH AND EAST ASIA**Units: 3.0** **CSU, UC** | **48-54 hours lecture***(No prerequisite. Recommended preparation: ENGL 50 or eligibility for ENGL 101.0.)*

Survey of the history, beliefs, and practices of the major religions of East and South Asia: Hinduism, Buddhism, Jainism, Sikhism, Confucianism, Daoism, and Shinto. Discussion of modern challenges to traditional religion and the emergence of new religious movements inspired by Asian traditions..

RLST 113 RELIGION AND SOCIETY**Units: 3.0** **CSU, UC** | **48-54 hours lecture***(No prerequisite. Recommended preparation: ENGL 50 or eligibility for ENGL 101.0 is recommended.)*

Study of the interaction between social forces and religious belief and practice, with an emphasis on contemporary American social and religious life. Special topics include the social aspects of evangelical religion, the interaction of religion and politics, religious diversity, the relation between religion and gender, and the impact of globalization.

RLST 115 RELIGION IN AMERICA**Units: 3.0** **CSU, UC** | **48-54 hours lecture***(No prerequisite. Recommended preparation: ENGL 50 or eligibility for ENGL 101.0)*

Historical study of religion in America, including both its diversity and unifying factors. Major topics include Native American religion, Judaism, Roman Catholicism, Protestantism Christianity, African-American religion, American sects, metaphysical and occult religions, Asian religions, and religious dimension of public life, politics, and popular culture.

RLST 117 PHILOSOPHY OF RELIGION**Units: 3.0** **CSU, UC** | **48-54 hours lecture***(No prerequisite. Recommended preparation: ENGL 50 or eligibility for ENGL 101.0) See cross listing for PHIL 117.*

Introduction to major topics in the Philosophy of Religion: the existence and nature of God, religious experience and knowledge, and concepts of immortality and human destiny. Special attention is given to conflicts between religion and science, competing claims for religious truth, and the relevance of religion to social ethics. Three lecture hours per week.

RLST 128 SPECIAL TOPICSSee Special Topics listing (Variable units) **CSU****RLST 129 INDEPENDENT STUDY**See Independent Study listing (1-3 units) **CSU****RLST 207 INTRODUCTION TO CRITICAL THINKING****Units: 3.0** **CSU, UC** | **48-54 hours lecture***(Prerequisite: ENGL 101.0 or ENGL 101H minimum grade C.) See cross listing for PHIL 207.*

Study and practice in critical thinking and advanced English composition: analysis, evaluation, and formulation of arguments; critical study of texts; and composition of critical essays. Application of critical thinking and writing skills to topics in the areas of values and religion.

Respiratory Therapy

Respiratory therapy is an allied health profession specializing in the diagnosis, treatment, and care of patients suffering from cardiopulmonary disease.

The program provides didactic instruction and supervised clinical practice in Inland Empire hospitals. Graduates of the VVC Respiratory Therapy Program, as a result of the education and training they receive, pass the state licensing and national registry exams at a rate much greater than the national average. The Victor Valley College Respiratory Therapy Program is accredited by the Commission on Accreditation for Respiratory Care (www.coarc.com), 1248 Harwood Road, Bedford, TX 76021-4244, (817) 283-2835.

Separate application must be made to the Respiratory Therapy Program. Seating is limited to a maximum of twenty-six students per class.

Applications are available from the Program Director, Allied Health, or from the Counseling Department.

Pre-course requirement paid for by student: 1) National background check; 2) Titers demonstrating immunity to Tetanus, Diphtheria, Pertussis, Varicella, Mumps, Measles, Rubella; 3) Two Tuberculosis tests within 3 months of course start; 4) Physical examination by physician; and 5) Background check and drug testing the first week of the course. Please contact Respiratory Therapy program director for information and forms.

Career Opportunities

Respiratory Care Practitioner, Critical Care Specialist, Diagnostic Testing Specialist, Education, Home Care Neonatal/Pediatric Specialist, Pulmonary Rehabilitation, Research

Faculty

Traci Marin | Michael Haines

Degrees and Certificates Awarded

Associate in Science, Respiratory Therapy
Respiratory Therapy Certificate

A student receiving a degree or certificate in this field will be able to:

- *Demonstrate the ability to comprehend, apply, and evaluate clinical information relative to their role as an advanced-practiced therapist (Cognitive Domain)*
- *Demonstrate the technical proficiency in all skills necessary to fulfill the role of Registered Respiratory Therapist (Psychomotor Domain).*
- *Demonstrate behaviors consistent with professionalism and meet employer expectations for the Registered Respiratory Therapist (Affective Domain).*

Associate Degree

To earn an Associate in Science degree with a major in Respiratory Therapy, complete all requirements for the Respiratory Therapy Certificate. The Respiratory Therapy Certificate above includes all requirements for both a certificate and an Associate in Science degree in Respiratory Therapy.

Transfer

A handout with all transfer requirements for a B.S. degree in Health Care Services, Respiratory Therapy, and other related medical degrees from Loma Linda University is available in the Counseling Department, or visit www.llu.edu.

RESPIRATORY THERAPY (A.S. AND CERTIFICATE)		
This certificate prepares the student to take the State examination to practice as an entry level practitioner and the National Examination for Advanced level practitioner.		
Units Required: 82.0		
<i>Group A: All of the following must be completed:</i>		
RSPT 50	Polysomnography I	4.0
RSPT 230	Introduction to Respiratory Therapy	3.0
RSPT 231	Orientation to and Basic Fundamentals of Respiratory Therapy	10.0
RSPT 232	Patient Assessment and Clinical Application of Respiratory Care	10.0
RSPT 233	Intensive Respiratory Care and Advanced Pulmonary Physiology	13.0
RSPT 234	Neonatal and Pediatric Respiratory Care and Pathophysiology and Pulmonary Rehabilitation	13.0
RSPT 239	Introduction to Continuous Mechanical Ventilatory Support	2.0
BIOL 211	Human Anatomy	5.0
BIOL 221	General Microbiology	5.0
BIOL 231	Human Physiology	5.0
ENGL 101	English Composition and Reading	4.0
PSYC 101	General Psychology	3.0
<i>Group B: One of the following must be completed:</i>		
CMST 106	Interpersonal Communication	3.0
CMST 107	Family Communication	3.0
CMST 108	Group Discussion	3.0
CMST 109	Public Speaking	3.0
One course which meets the VVC Logic/Mathematical general education requirement for Category V		
One course which meets the VVC Humanities general education requirement for Category III		
One Physical Education Course and one course which meets the VVC American Institutions general education requirement for Category IIB.		

The Respiratory Therapy Faculty accepts and operates within the framework of the philosophy and objectives of Victor Valley College.

The Associate Degree in Respiratory Therapy provides a foundation for continuing personal, professional and educational development, and includes the study of the arts, sciences and humanities. The program is designed to produce a competent, self-directed respiratory therapist who, in a variety of settings, can assume leadership in planning, providing, and evaluating respiratory care of individuals and groups; who participates in the determination of the goals of the profession; and who actively searches for knowledge in respiratory therapy and related fields essential to the development and application of scientific respiratory care.

The respiratory therapy graduate receives the Associate of Science Degree and is eligible to take the National Registry Exam for Respiratory Therapists and the entry level exam for licensure in the State of California.

In order to be admitted to the Respiratory Therapy Program, separate application must be made in addition to application to the college. The annual deadline date for submitting applications to be considered for respiratory therapy is March 15. Applications can be obtained through the Allied Health Office or the Counseling Department. Prerequisites: CHEM 100, BIOL 100 or 107, and MATH 90 must be completed with a grade of "C" or higher before entry into the program.

Respiratory Therapy Courses

RSPT 50 POLYSOMNOGRAPHY I

Units: 4.0

48-54 hours lecture and 48-54 hours laboratory

(No prerequisite)

Topics include sleep terminology, sleep structure and disorders, complete patient set-up and data acquisition. Students will also learn the basics of noninvasive treatments for certain sleep disorders.

RSPT 90 ECHOCARDIOGRAPHY 1

Units: 10.0

64-72 hours lecture and 288-324 hours laboratory

(Prerequisite: Acceptance into the Respiratory Therapy Program. Recommended preparation: BIOL 211, BIOL 231 and MATH 90.)

This course is designed to prepare students for an entry level career in a hospital or clinic as an echocardiographer. Topics include physics, instrumentation, cardiac anatomy and physiology, cardiac disease specific calculations, standard exam calculations and protocol.

RSPT 91 ECHOCARDIOGRAPHY 2

Units: 10.0

64-72 hours lecture and 288-324 hours laboratory

(No prerequisite. Recommended preparation: RSPT 90.)

This course expands on echocardiography subjects presented in RSPT 90. Topics include assessment of pericardial diseases, vascular disorders, electrocardiogram (ECG) and advanced topics.

RSPT 138 COOPERATIVE EDUCATION

See Cooperative Education listing (1-8 units). [CSU](#)

RSPT 149 INDEPENDENT STUDY

See Independent Study listing (1-3 units) [CSU](#)

RSPT 230 INTRODUCTION TO RESPIRATORY THERAPY

Units: 3.0

[CSU](#)

48-54 hours laboratory

(Prerequisite: Admission to the Respiratory Therapy Program)

This course introduces the student to respiratory therapy as a health science profession, including history, professional requirements, responsibilities, professional organizations, and credentialing of the respiratory care practitioner. Provides basic anatomy and physiology, physics and math, and basic cardio-pulmonary pathology in order to give the student a foundation of theory and application.

RSPT 231 BASIC FUNDAMENTALS OF RESPIRATORY THERAPY

Units: 10.0

[CSU](#)

64-72 hours lecture and 324 hours laboratory

(Prerequisite: RSPT 230 minimum grade C.)

This course continues with a more advanced discussion of medical terminology, anatomy, physiology and cardiopulmonary pathology as it relates to the clinical applications of medial gas therapy, humidity and aerosol therapy, therapeutic and diagnostic modalities, and infection control. Students will be provided with an extensive orientation to the hospital environment and the administration of basic respiratory therapy to patients.

RSPT 232 PATIENT ASSESSMENT AND CLINICAL APPLICATION OF RESPIRATORY THERAPY

Units: 10.0

[CSU](#)

64-72 hours lecture and 288-324 hours clinical

(Prerequisite: RSPT 231 minimum grade C)

This course is a more in-depth study of the theory and application of respiratory therapy. Its content includes airway management, pulmonary assessment, advanced cardiopulmonary physiology and the pharmacology associated with pulmonary patients. The student will spend 16 hours a week in the hospital administrating respiratory modalities to patients.

RSPT 233 INTENSIVE RESPIRATORY THERAPY CARE**Units: 13.0** **CSU** | **64-72 hours lecture and 54 hours laboratory plus 432 hours clinical***(Prerequisite: RSPT 239, BIOL 211, BIOL 231, minimum grade C.)*

A more advanced study of the theory and application of respiratory care. The content will include: mechanical life support, cardiopulmonary physiology, equipment utilized in the critical care unit, microbiology, hematology, and advanced patient assessment.

RSPT 234 NEONATAL AND PEDIATRIC RESPIRATORY THERAPY CARE AND RELATED PATHOPHYSIOLOGY**Units: 13.0** **CSU** | **64-72 hours lecture. 48-54 hours laboratory and 384-432 hours clinical***(Prerequisite: RSPT 233 and BIOL 221 minimum grade C.)*

This course is a more advanced study of the theory and application of neonatal/pediatric respiratory care. The content will include: mechanical life support, respiratory pathophysiology, equipment utilized in the NICU/PICU, microbiology, umbilical line, capillary blood samples and analysis, endotracheal intubation, and principles of PALS and NRP.

RSPT 239 INTRODUCTION TO MECHANICAL VENTILATION SUPPORT**Units: 2.0** **CSU** | **16-18 hours lecture and 48-54 hours laboratory***(Prerequisite: RSPT 232 minimum grade C.)*

This course introduces the principles of mechanical ventilation, allows hands-on experience with current ventilators, and reinforces therapeutic care.

RSPT 241 BASIC PRINCIPLES OF RESPIRATORY THERAPY**Units: 5.0** **CSU** | **160 hours laboratory***(Prerequisite: Graduation from a one-year, CoARC accredited program; active CRT/RCP credential; and 1000+ hours of recent clinical experience.)*

A self-paced equivalent of RSPT 231 for students meeting the advanced placement criteria. Successful completion requires demonstration of mastery of the classroom, laboratory, and clinical objectives equivalent to RSPT 231.

RSPT 242 PATIENT ASSESSMENT AND CLINICAL APPLICATION OF RESPIRATORY CARE**Units: 5.0** **CSU** | **160 hours laboratory***(Prerequisite: Graduation from a one-year, CoARC accredited program; active CRT/RCP credential; and 1000+ hours of recent clinical experience.)*

A self-paced equivalent of RSPT 232 for students meeting the advanced standing criteria. Successful completion requires demonstration of mastery for the classroom, laboratory and clinical objectives equivalent to RSPT 232.

RSPT 243 CLINICAL SIMULATION**Units: 1.0** **CSU** | **16-18 hours lecture***(Prerequisite: RSPT 233 minimum grade C or RCP/CRT credentials with "registry eligibility" as designated by the NBRC/RCB.)*

This course will prepare individuals for the National Board of Respiratory Care's (NBRC) Written Respiratory Registry Test (WRRT) and Clinical Simulation examinations. Those already certified (Certified Respiratory Therapist) and designated registry eligible by the NBRC will be able to review, evaluate, and improve their clinical assessment, decision making, and test taking skills.

Restaurant Management

The Restaurant Management program prepares students for careers in the foodservice industry. Restaurants, hotels, clubs, colleges, retirement homes, hospitals, and industrial food service are but a few of the areas of employment options. Basic food preparation and techniques, nutrition, sanitation and safety are emphasized as the fundamentals for an education foundation of more specialized and advanced skills. Creativity, innovation, and team concepts are strongly encouraged. Skills are introduced by emphasizing hands-on, practical experience coupled with strong managerial and accounting subjects.

Locally projected casinos, hotels, and national chain restaurants in the High Desert will increase various employment opportunities to local graduates. Restaurant Management is one of the original partners with the National Restaurant Association Educational Foundation and offers students the opportunity to complete the nationally recognized ManageFirst program. This program is dedicated to the advancement of professionalism in the restaurant and food service industry through education and training. It offers students acknowledgement throughout the United States.

Career Opportunities

Assistant Manager, Banquet Manager, Catering Manager, Chef, Dietary Assistant, Dining Room Manager
Food and Beverage Director, Foodservice/Restaurant Manager, Kitchen Manager, Purchasing Agent

Faculty

Duane Buckles - Emeritus

Degrees and Certificates Awarded

Associate in Science, Restaurant Management

Restaurant Management Certificate

A student receiving a degree or certificate in this field will be able to:

- *Analyze and evaluate procedures for preventing food borne illnesses through the flow of food specifically: purchasing, receiving, storage, preparation and service.*
- *Demonstrate advanced culinary techniques for various foods and beverages in both front and back of the house.*
- *Demonstrate proficiency utilizing the five functions of management in the foodservice setting*
- *Develop measurable skill-based learning objectives in specific areas of front of the house and back of the house operations.*

Associate Degree

To earn an Associate of Science degree with a major in Restaurant Management, complete the Restaurant Management Certificate requirements and meet all Victor Valley College graduation requirements.

Transfer

Restaurant Management courses do not usually transfer toward a bachelor's degree program. Students who earn a certificate or degree in Restaurant Management may choose to pursue a bachelor's degree in Hospitality Management or Hotel and Restaurant Management. The following CSU campuses offer degrees in these areas: Cal Poly Pomona, CSU-Long Beach, San Diego State, San Francisco State, and San Jose State. Visit www.assist.org for major preparation requirements.

Students may also wish to explore programs at the California Culinary Academy in San Francisco, or The Culinary Institute of America in New York, which also has a Napa Valley campus (Greystroke) in St. Helena, and a campus in San Antonio, Texas. Another institution is Le Cordon Bleu College of Culinary Arts in Pasadena. These colleges specialize in preparing a student to become a chef.

RESTAURANT MANAGEMENT CERTIFICATE		
The Restaurant Management certificate program gives the student the basic skills and education to become an entry level manager in the food service industry.		
Units Required: 51.0		
<i>All of the following must be completed:</i>		
First Semester		
RMGT 81	Prep/Line Cook	3.0
RMGT 82*	Customer Service	3.0
RMGT 86*	Food Service Sanitation	3.0
RMGT 87	Principles of Professional Cooking	3.0
<i>RMGT 81 and 82 should be completed within the first semester. Each class is offered twice during the semester; it doesn't matter which class you start with as long as you complete both.</i>		
Second Semester:		
RMGT 83	Kitchen/Dining Room Training <i>and</i>	6.0
Two academics offered on a rotating basis. Completing two courses from the list below will bring your total units for the semester to 12		
Third Semester:		
RMGT 84	Kitchen/Dining Room Management <i>and</i>	6.0
Two academics offered on a rotating basis. Completing two courses from the list below will bring your total units for the semester to 12		
Fourth Semester:		
RMGT 85	Advanced Restaurant Management <i>and</i>	6.0
Two academics offered on a rotating basis. Completing two courses from the list below will bring your total units for the semester to 12		
Summer or Winter Session:		
RMGT 120	Nutrition	3.0
Courses offered on a rotating basis - Add two to your second, third, and fourth semesters as shown above:		
RMGT 88	Management by Menu	3.0
RMGT 89*	Purchasing for Foodservice Managers	3.0
RMGT 90*	Restaurant Marketing	3.0
RMGT 91*	Controlling Foodservice Costs	3.0
RMGT 93*	Human Resources Management in the Foodservice Industry	3.0
RMGT 94*	Hospitality and Restaurant Management	3.0
*Indicates ManageFirst curriculum. Individual certificates issued by the National Restaurant Association Education Foundation are available in these areas.		

Restaurant Management Courses

RMGT 1 FOODSERVICE TRAINING: SERVER

Units: 4.5 | **24-27 hours lecture and 144-162 hours laboratory**

(No prerequisite. Pass/No Pass.) This course does not apply to the Associate Degree.

This course will provide the student the opportunity to meet the primary role of the server in a foodservice establishment. The responsibility to meet the customer's dining needs is emphasized while maintaining the systems of the restaurant to ensure continued high quality service to all customers and maximize profit-ability for the operation. These responsibilities are carried out through five functions which are implemented through a number of tasks.

RMGT 2 FOODSERVICE TRAINING: PREP/LINE COOK

Units: 4.5 | **24-27 hours lecture and 144-162 hours laboratory**

(No prerequisite. Pass/No Pass.) This course does not apply to the Associate Degree.

This course will provide the student with the basic and essential training as a prep/line cook. This training includes understanding culinary terminology, proper use of kitchen equipment and hand tools, as well as practical experience.

RMGT 3 FOODSERVICE TRAINING: HOST/HOSTESS

Units: 4.5 | **24-27 hours lecture and 144-162 hours laboratory**

(No prerequisite. Pass/No Pass.) This course does not apply to the Associate Degree.

This course will provide the student the opportunity to develop the skills for a host/hostess position. This includes the primary role to welcome the customer and begin the service experience in a positive way, while maintaining the systems of the restaurant to ensure continued high quality service to all customers and maximize profitability for the operation.

RMGT 4 FOODSERVICE TRAINING: BUSSER

Units: 4.5 | **24-27 hours lecture and 144-162 hours laboratory**

(No prerequisite. Pass/No Pass.) This course does not apply to the Associate Degree.

This course will provide the student with the basic and essential training as a busser to ensure a clean and comfortable dining environment while maintaining the systems of the restaurant to ensure high quality service to all customers and maximize profitability for the operation.

RMGT 5 FOODSERVICE TRAINING: CASHIER

Units: 4.5 | **24-27 hours lecture and 144-162 hours laboratory**

(No prerequisite. Pass/No Pass.) This course does not apply to the Associate Degree.

This course will provide the student with the basic and essential training as a cashier in a foodservice establishment to meet the customer's dining needs, while maintaining the systems of the restaurant to ensure continued high quality service to all customers and maximize profitability for the operation.

RMGT 6 FOODSERVICE TRAINING: DISHWASHER

Units: 4.5 | **24-27 hours lecture and 144-162 hours laboratory**

(No prerequisite. Pass/No Pass.) This course does not apply to the Associate Degree.

This course will provide the student with the basic and essential training as a dishwasher to secure clean and sanitary equipment used in the foodservice establishment while maintaining the systems of the restaurant to ensure high quality service and maximize profitability for the operation.

RMGT 7 BAKERY AND PASTRY TRAINING

Units: 4.5 | **24-27 hours lecture and 144-162 hours laboratory**

(No prerequisite. Pass/No Pass.) This course does not apply to the Associate Degree.

This course will provide the student the opportunity to achieve maximum results in the development of baking skill and knowledge. The student will learn to produce breads of many types as well as a wide variety of desserts and pastries.

RMGT 8 CATERING TRAINING**Units: 4.5** | **24-27 hours lecture and 144-162 hours laboratory***(No prerequisite. Pass/No Pass.) This course does not apply to the Associate Degree.*

This course will provide the student the opportunity to understand the concepts involved in catering for banquets. This will include the objective of meeting the client's needs while maintaining the systems of the establishment to ensure continued high quality service and maximum profitability for the operation.

RMGT 9 CONCEPTS IN SANITATION**Units: 0.5** | **24-27 hours lecture***(No prerequisite. Pass/No Pass.) This course does not apply to the Associate Degree.*

This course provides the student with the safety and sanitation principles of food service. Three areas of potential risk—food safety, responsible alcohol service and employee and customer safety are discussed with a focus on a manager's role in assessing risks, establishing policies and training employees. This course is designed to meet current professional organization certification requirements and prepares the student for the National Food Certification examination (ServSafe).

RMGT 75 UNDERSTANDING FISH AND SHELLFISH**Units: 2.0** | **32-36 hours lecture***(No prerequisite)*

This course will examine the professional techniques of identifying, purchasing, handling, storing and the marketing of fish and shellfish. It also includes identifying, cutting, filleting, and preparing various fish and seafood.

RMGT 76 UNDERSTANDING MEATS AND POULTRY**Units: 2.0** | **32-36 hours lecture***(No prerequisite)*

This course will examine the professional techniques of identifying, purchasing, handling, and storing of various meats and poultry. It also includes identifying, cutting, filleting, and preparing various meats and poultry.

RMGT 80 OFF-PREMISE CATERING**Units: 3.0** | **48-54 hours lecture***(No prerequisite)*

This is a comprehensive course covering the fundamentals of catering, sales and marketing as it pertains to catering, and production of operations. Subjects covered include corporate catering, styles of service, finance, completion of necessary forms and paperwork related to catering.

RMGT 81 PREP/LINE COOK**Units: 3.0** | **32-36 hours lecture and 48-54 hours laboratory***(No prerequisite)*

This course will provide the student with basic and essential training as a prep/line cook. This training includes understanding culinary terminology, proper use experience is gained through activities performed in the lab.

RMGT 82 CUSTOMER SERVICE**Units: 3.0** | **32-36 hours lecture and 48-54 hours laboratory***(No prerequisite)*

This course will provide the student with the basic and essential training as a server. This training includes understanding customer service, interpersonal communication, identifying customer expectations, as well as payment procedures. Practical training experience is gained through activities performed in the lab.

RMGT 83 KITCHEN/DINING ROOM TRAINING**Units: 6.0** | **32-36 hours lecture and 192-216 hours laboratory***(Prerequisites: RMGT 81, RMGT 82, RMGT 86, RMGT 87.)*

This course will instruct the student in the different positions in a kitchen and dining room in the foodservice industry. Actual hands-on experience is gained as students learn by working in a foodservice operation. Students will be required to be team leaders for beginning students in the lab.

RMGT 84 KITCHEN/DINING ROOM MANAGEMENT**Units: 6.0****32-36 hours lecture and 192-216 hours laboratory***(Prerequisite: RMGT 83)*

This course will instruct the student to manage kitchen and dining room functions in a foodservice operation. While planning, organizing, coordinating, directing and controlling a foodservice operation, students will supervise teams as part of the training.

RMGT 85 ADVANCED RESTAURANT MANAGEMENT**Units: 6.0****32-36 hours lecture and 192-216 hours laboratory***(Prerequisite: RMGT 84)*

This course will instruct the student to integrate concepts of management skills learned in previous courses. It introduces a more extensive range of techniques, ingredients, and recipes that all successful managers must understand relating to culinary change and innovation.

RMGT 86 FOOD SERVICE SANITATION**Units: 3.0****48-54 hours lecture***(No prerequisite)*

This course provides students with the knowledge to assess risks, establish policies and train employees to assure a safe and sanitary food service.

RMGT 87 PRINCIPLES OF PROFESSIONAL COOKING**Units: 3.0****48-54 hours lecture***(No prerequisite)*

This course provides an understanding of cooking theory and develops a set of manual skills with the ability to apply these skills to a wide range of cooking styles and products.

RMGT 88 MANAGEMENT BY MENU**Units: 3.0****48-54 hours lecture***(No prerequisite)*

This course will provide the student with a comprehensive look at the menu and its uses in a foodservice operation. All aspects of menu planning from customer demographics to kitchen capabilities, to cost cards and menu analysis are discussed.

RMGT 89 PURCHASING FOR FOODSERVICE MANAGERS**Units: 3.0****48-54 hours lecture***(No prerequisite)*

This course will introduce the student to the purchasing function in the foodservice industry. Course content will include purchasing principles and procedures including ordering, contract administration and product specifications.

RMGT 90 RESTAURANT MARKETING**Units: 3.0****48-54 hours lecture***(No prerequisite)*

This course examines the concepts, principles and practices involved with marketing a foodservice operation. Students will gain an understanding of how to merchandise and market an establishment to meet the main objective of an operation.

RMGT 91 CONTROLLING FOODSERVICE COSTS

Units: 3.0

48-54 hours lecture

(No prerequisite)

This course will provide the student with the basic cost control standards utilized by foodservice operations to maintain profitability and success. Students will gain an understanding of food costs as well as labor costs and ways to ensure prosperity and increased sales for a foodservice operation.

RMGT 92 LEGAL ASPECTS OF FOOD SERVICE MANAGEMENT

Units: 3.0

48-54 hours lecture

(No prerequisite)

This course focuses on the fundamentals of laws relating to the hospitality industry. Basic components of hospitality law regulations and civil rights, foodservice liability, safety, security, contracts and business law topics are examined.

RMGT 93 HUMAN RESOURCES MANAGEMENT IN THE FOODSERVICE INDUSTRY

Units: 3.0

48-54 hours lecture

(No prerequisite)

This course will provide the student the opportunity to explore human resources management and supervision in a foodservice operation. All facets of supervision as it applies to a foodservice operation will be discussed including recruiting, selection, training and development, staffing, benefit programs as well as legal guidelines for all employees.

RMGT 94 HOSPITALITY AND RESTAURANT MANAGEMENT

Units: 3.0

48-54 hours lecture

(No prerequisite)

This course provides the student with a comprehensive focus on what hospitality managers actually do and the most important challenges facing industry leaders today. The topics include leadership and management, planning, organizing, communication and decision making, motivation and control.

RMGT 120 INTRODUCTION TO NUTRITION

Units: 3.0

CSU

48-54 hours lecture

(No prerequisite). See cross listing for CHEM 120.

This course focuses on the fundamentals of nutrition as related to the restaurant and food service industry. Course content will include the fundamentals of nutrients, understanding nutrition standards and guidelines, and eating in the United States

RMGT 138 COOPERATIVE EDUCATION

See Cooperative Education listing (1-8 units). **CSU**

Sociology

Sociology offers much to the student who desires to understand the web and rhythm of human behavior. From intimate, personal, and family relationships to international corporation activities; from marginality, deviance and crime to recreation, religion and medicine, few disciplines have such broad scope and relevance.

Career Opportunities (Bachelor's or advanced degree usually necessary.)

Claims Examiner, Criminologist, Educator, Employment/Personnel Specialist, Interviewer/Researcher
Law Enforcement/Probation or Corrections Officer, Public Relations Consultant, Social Worker/Counselor
Statistician/Population Analyst, Urban Planning Consultant, Youth Counselor/Recreation Specialist

Faculty

Eugene Tashima

Degrees and Certificates Awarded

Associate in Arts, Liberal Arts

Associate in Arts in Sociology for Transfer (AA-T)

A student receiving a degree or certificate in this field will be able to:

- Identify and review sociological perspectives.
- Describe and analyze social issues and social problems.
- Recognize and utilize basic concepts in statistics
- Explain and critically evaluate aspects of human social development, social interaction, and socialization in cultures, groups and society.
- Discuss and summarize concepts of ethnicity and race, deviance, social inequality, and social stratification.

Associate Degree

Sociology courses may be used to fulfill requirements for an Associate in Arts degree with a major in Liberal Arts. See Liberal Arts for degree requirements for this major. SOC 138 (Cooperative Education) may be used for Elective credit, but may not be used to fulfill major requirements.

To earn an Associate in Science degree for Transfer with a major in Sociology, complete the required major courses and all other requirements specified on the following pages (i.e. 60 CSU transferable units, CSU GE or IGETC, etc.). For more information on the AA-T/AS-T degrees, meet with a counselor or www.adegreewithaguarantee.com

Transfer

For the most up-to-date information on these programs and others, visit www.assist.org. Please stop by the Transfer Center in Building 55 or make an appointment with a counselor if you have questions.

- California State University, San Bernardino:** Sociology major | Human Services major
- University of California, Riverside:** Sociology major

Local Bachelors Program

For information on the following program located in the High Desert, please visit: www.vvc.edu/offices/guidance_and_counseling and select "Counseling Information Sheets":

- Brandman University, Victor Valley Campus:** Sociology major

A new transfer option has been added in this major. Check this out:

Sociology, AA-T

Sociology offers much to the student who desires to understand the web and rhythm of human behavior. From intimate, personal, and family relationships to international corporation activities; from marginality, deviance and crime to recreation, religion and medicine, few disciplines have such broad scope and relevance.

Associate in Arts for transfer in Sociology fulfills the lower division requirements for the Baccalaureate degree in Sociology at a California State University. Students should consult with a counselor to determine whether this degree is the best option for their transfer goals.

Program Requirements: 19 units

Required Courses (10 units total)

SOC 101	Introduction to Sociology	3.0
SOC 102	American Social Problems	3.0
MATH120/120H	Introduction to Statistics	4.0

Additional Courses

List A —Select TWO of the following courses (6 units total)

SOC 103	Marriage and Family Life	3.0
SOC 107	Ethnic Experience in American Society	3.0
AJ 127	Introduction to Criminology	3.0
PSYC 204	Social Psychology	3.0

List B – Select ONE (3 units)

ANTH 102	Introduction to Cultural Anthropology	3.0
PSYC 101/101H	Introductory Psychology	3.0

A student wishing to pursue an AA-T/AS-T degree in the major listed on this page must ensure the CSU of their choice is accepting that similar major. Students completing an AA-T/AS-T degree are guaranteed admissions into a CSU campus given that a student fulfills the following:

- 1) 60 CSU transferable units;
- 2) Completes the CSU General Education (GE) or IGETC General Education pattern;
- 3) Completes the major requirements for the AA-T/AS-T;
- 4) Maintains a transferable cumulative GPA of at least 2.0 (C or better);
- 5) Completes the basic/Golden 4 GE requirements.

For more information on the AA-T/AS-T degrees, meet with a counselor or visit www.sb1440.org and www.adegreewithaguarantee.com

Sociology Courses

SOC 101 INTRODUCTION TO SOCIOLOGY

Units: 3.0 [CSU, UC](#) | 48-54 hours lecture

(No prerequisite)

This course is a survey of the various characteristics of social life, the process of social interaction and the tools of sociological investigation. Emphasis is on culture, socialization, and basic institutions.

SOC 102 AMERICAN SOCIAL PROBLEMS

Units: 3.0 [CSU, UC](#) | 48-54 hours lecture

(No prerequisite)

This one semester survey course will focus on identification of major sociological theories, concepts, and perspectives in an analytical approach to the study of social problems in contemporary American society.

SOC 103 MARRIAGE AND FAMILY LIFE

Units: 3.0 [CSU](#) | 48-54 hours lecture

(No prerequisite)

This course is a survey of analytical and theoretical concepts involved in the sociological study of courtship, marriage and family in American society.

SOC 107 THE ETHNIC EXPERIENCE IN AMERICAN SOCIETY

Units: 3.0 [CSU, UC](#) | 48-54 hours lecture

(No prerequisite)

This is a one semester sociological survey of major racial/ethnic groups in American society. This course will focus on historical experiences and their relationship to contemporary social realities faced by these racial/ethnic groups in American society. It will also investigate their contributions and special experiences as minorities.

SOC 128 SPECIAL TOPICS

See Special Topics listing (Variable units) [CSU](#)

SOC 129 INDEPENDENT STUDY

See Independent Study listing (1-3 units) [CSU](#)

SOC 138 COOPERATIVE EDUCATION

See Cooperative Education listing (1-8 units) [CSU](#)

The study of Spanish has as its goals to explain, evaluate and communicate ideas and concepts by means of reading, writing and verbal processes through creative use of words (literature) and culture (civilization). This study affords insight into foreign attitudes and methods and encourages free communication, written and oral, among people.

Career Opportunities

Advertising, Business, Education, Government, Health Service, International Business, Journalism, Law Enforcement Publishing, Social Work, Translating, Writing and Mass Media

Faculty

Cuahtemoc Franco | Martha Vila

Degrees and Certificates Awarded

Associate in Arts, Liberal Arts

Associate Degree

No associate degree offered with a major in Spanish. Spanish courses may be used to fulfill requirements for an Associate in Arts degree with a major in Liberal Arts. See Liberal Arts for degree requirements for this major.

Transfer

For the most up-to-date information on these programs and others, visit www.assist.org. Please stop by the Transfer Center in Building 55 or make an appointment with a counselor if you have questions.

- California State University, San Bernardino: Spanish major
- University of California, Riverside: Spanish major

Spanish Courses

Spanish 101 through 104 include both classroom sessions and Internet activities.

Students may enroll in Spanish 102 if they have completed three or more years of high school Spanish, or if they are native Spanish speakers who have taken two or more years of high school Spanish.

Students may enroll in Spanish 103 if they have completed the AP exam with a score of 4 or 5, or are native Spanish speakers and have taken at least three years of high school Spanish.

SPAN 101 ELEMENTARY SPANISH

Units: 5.0 **CSU, UC** | 80-90 hours lecture

(No prerequisite)

This course provides an introduction to the Spanish language and the culture of its speakers. Fundamentals of pronunciation, structure and Hispanic culture are studied to develop the ability to use and understand basic spoken and written Spanish. Special emphasis is given to development of oral and aural skills by in classroom exercises and assignment of activities to reinforce course content on the Internet.

SPAN 101A FUNDAMENTALS OF SPANISH 101A

Units: 3.0 **CSU, UC** | 48-54 hours lecture

(No prerequisite)

This course provides an introduction to the Spanish language and culture. Fundamentals of pronunciation, structure and Hispanic culture are studied. Special emphasis is given to development of oral and aural skills. SPAN 101A and SPAN 101B are equivalent to SPAN 101. Upon completion of SPAN 101A and SPAN 101B, CSU will only accept five units for transfer.

SPAN 101B FUNDAMENTALS OF SPANISH 101B

Units: 3.0 [CSU, UC](#) | 48-54 hours lecture

(Prerequisite: SPAN 101A minimum grade C.)

This course is a continuation of SPAN 101A. It provides an introduction to Spanish language and culture. Fundamentals of pronunciation, structure and Hispanic culture are studied. Special emphasis is given to development of oral and aural skills. SPAN 101A and SPAN 101B are equivalent to SPAN 101. Upon completion of SPAN 101A and SPAN 101B, CSU will only accept five units for transfer.

SPAN 102 ELEMENTARY SPANISH

Units: 5.0 [CSU, UC](#) | 80-90 hours lecture

(Prerequisite: Completion of SPAN 101 minimum grade C or SPAN 101A and SPAN 101B.)

This course is a continuation of SPAN 101. Further study of pronunciation, structure and Hispanic culture are studied to develop the ability to use and understand basic spoken and written Spanish. Students continue the development of oral and aural skills by in classroom exercises and assignment of activities to reinforce course content on the Internet.

SPAN 103 INTERMEDIATE SPANISH

Units: 3.0 [CSU, UC](#) | 48-54 hours lecture

(Prerequisite: SPAN 102 or AP high school Spanish exam with a score of 4 or 5, or SPAN 102A and SPAN 102B.)

Provides an expanded review of key grammatical concepts and develops vocabulary with emphasis on composition, reading and discussions in Spanish. Students study Hispanic cultures based on cultural and literary materials.

SPAN 104 INTERMEDIATE SPANISH

Units: 3.0 [CSU, UC](#) | 48-54 hours lecture

(Prerequisite: Completion of SPAN 103 minimum grade C.)

A continuation of an expanded review of key grammatical concepts and develops vocabulary with emphasis on composition, reading and discussions in Spanish. Students study Hispanic cultures based on cultural and literary materials.

SPAN 125 CONVERSATIONAL SPANISH I

Units: 3.0 [CSU](#) | 48-54 hours lecture

(No prerequisite. Grade Option)

This is the first of two courses covering the essentials of Spanish conversation. It is a basic introductory course which emphasizes oral practice, pronunciation and vocabulary development. It is designed to develop a speaking and understanding knowledge of Spanish for use in everyday conversational situations. This course is designed for non-native speakers of the language.

SPAN 128 SPECIAL TOPICS

See Special Topics listing (Variable units). [CSU](#)

SPAN 129 INDEPENDENT STUDY

See Independent Study listing (1-3 units). [CSU](#)

Special Topics Courses

SPECIAL TOPICS 98-128-148

Units: 0.5-9.0

48-54 hours lecture

(Prerequisites for Special Topics courses will be in keeping with the California Administrative Code, Title V regulations on open classes, and any prerequisites will be based on terms of performance or specific knowledge necessary to successful performance in the class).

These courses are designed to permit investigation in depth of topics not covered by regular catalog offerings. Course content, hours, and unit credit to be determined by the instructor in relation to community/student interest and/or available staff. May be offered as a seminar, lecture, or laboratory class. Individual course descriptions approved by the Curriculum Committee are on file in Office of Instruction. Special Topics 128 and 148 transfer to CSU, UC. (UC maximum credit allowed: 3.3 semester units per term, 6 units total, in any or all appropriate subject areas combined. Granting of credit by a UC campus contingent on evaluation of course outline.)

Theater Arts

Theatre Arts is the essence of the humanities in that it is the only art form that incorporates all the other fine arts into its final product. Our primary goal is to educate the whole person, to emphasize comprehensive education. Everyone should experience the dynamics of theatre, and our ensemble technique teaches cooperation, teamwork, and communication. The skills learned in producing theatre are necessary in every occupational arena.

Career Opportunities

Actor/Actress, Choreographer, Costumer, Makeup Artist, Publicist, Scene Designer, Screenwriter, Sound Technician
Stage Director, Teacher, Lighting Designer, Properties, Lighting Technician, Stage Manager, Assistant State Director, Scenic Artist, Costumer Designer, Set Dresser, Assistant Stage Manager

Faculty

Ed Heaberlin | Dr. John Rude - Emeritus
Theresa Mirci-Smith - Emeritus

Degrees and Certificates Awarded

Associate in Arts, Fine Arts
Associate in Arts, Liberal Arts

Associate Degree

No associate degree offered with a major in Theatre Arts. Theatre Arts courses may be used to fulfill requirements for an Associate in Arts degree with a major in Fine Arts. See Fine Arts for degree requirements for this major. Courses may also be used to fulfill requirements for an Associate in Arts degree with a major in Liberal Arts. See Liberal Arts for degree requirements for this major. TA 138 (Cooperative Education) may be used as Elective credits, but may not be used to fulfill major requirements.

Transfer

For the most up-to-date information on these programs and others, visit www.assist.org. Please stop by the Transfer Center in Building 55 or make an appointment with a counselor if you have questions.

- California State University, San Bernardino:** Theatre Arts major
- University of California, Riverside:** Theatre Arts major

Theater Arts Courses

TA 101 INTRODUCTION TO THEATRE

Units: 3.0 CSU, UC 48-54 hours lecture

(No prerequisite)

An introductory course of the history, the performers, the purpose, and the perspective of theatre. Students will be introduced to the basic forms of theatre and disciplines involved in producing a play. Emphasis is on defining and experiencing the role of theatre in society.

TA 102 HISTORY OF THEATRE

Units: 3.0 CSU, UC 48-54 hours lecture

(No prerequisite)

A survey course designed to introduce the student to a history of the world's theatrical experiences from primitive times to the present. An examination of the physical theatre and methods of staging drama from the days of the caveman to theatre of the avant-garde.

TA 104 ORAL INTERPRETATION OF LITERATURE

Units: 3.0 CSU, UC 48-54 hours lecture

(No prerequisite)

A course designed for the student to learn to interpret literature for an audience. Students will learn and be evaluated on: doing performance analyses, developing relevant introductions, communicating a relevant theme, executing proper character placement and focus, using effective vocal skills, using effective physical involvement. Students will demonstrate proficiency in the above through solo and ensemble class presentations.

TA 106 BEGINNING ACTING**Units: 3.0** CSU, UC | **48-54 hours lecture***(No prerequisite)*

This course is designed to exercise the separate parts of the composite art of acting which include thought, emotion, and specific movement and vocal techniques. Emphasis is placed on pantomime and exercises culminating in scene work. The ultimate goal is to develop a firm foundation in basic acting techniques.

TA 107 INTERMEDIATE ACTING**Units: 3.0** CSU, UC | **48-54 hours lecture***(No prerequisite. Recommended preparation: TA 106.)*

This course provides the student an opportunity to enhance acting skills, and to develop and intensify dramatic ability by advancing the understanding of skills presented in Beginning Acting. The student will be introduced to the process of analyzing character through lecture, demonstration, exercises, and the rehearsal and presentation of scenes from published texts.

TA 109 REHEARSAL AND PERFORMANCE STUDIO**Units: 3.0** CSU, UC | **16-18 hours lecture and 96-108 hours laboratory***(Prerequisite: Qualify for cast at open auditions. TA 106 recommended)*

This course will provide study and laboratory exploration in all aspects of play production involving the actor in order to develop his/her acting capabilities, skills, and discipline. The audition, preparation, and presentational phases of the acting process will be explored under the supervision and guidance of a faculty director. Productions will be presented for public performance. Enrollment is for the duration of the preparation and presentation phases of production.

TA 110 PRINCIPLES OF DESIGN FOR THEATRE**Units: 3.0** CSU, UC | **32-36 hours lecture and 48-54 hours laboratory***(No prerequisite.)*

An introductory course in design principles as applied to the theatre in the areas of lighting, costuming, makeup, and set design. Students will apply concepts of texture, line, space, color and perspective to the various design aspects in theatre through specific 2-D and 3-D exercises.

TA 111 TECHNICAL STAGE PRODUCTION**Units: 3.0** CSU, UC | **16-18 hours lecture and 96-108 hours laboratory***(No prerequisite.)*

This course is an introduction to the tasks, responsibilities, and skills of stage technicians. Stage managing, construction techniques, stage equipment use, and function of technical stage personnel are introduced to develop the student's design capabilities, skills, and discipline in stage production. Students will serve as technical stage crew members in Theatre Arts Department productions.

TA 113 STAGE MAKE-UP**Units: 2.0** CSU | **16-18 hours lecture and 48-54 hours laboratory***(No prerequisite. Grade Option)*

A course designed to introduce the student to the basic techniques and materials of stage make-up. The student will demonstrate understanding through actual make-up, wig, and facial hair applications in the classroom.

TA 114 PLAY WRITING**Units: 3.0** CSU | **48-54 hours lecture***(No prerequisite)*

This is a practical writing, analysis and critique course designed to introduce students to the fundamentals of play writing while teaching them to constructively critique their own writing. Lecture topics include dramatic structure, dramatic action, the relationship between dialogue and action, characterization, setting, time & locale, theme, and point of view.

TA 115 STAGECRAFT**Units: 2.0-4.0** **CSU, UC** | **16-18 hours lecture and 48-54 hours laboratory per unit per term***(No prerequisite)*

An introductory course on the materials, tools, and procedures of all technical phases of scene production including construction, painting, rigging, placement and manipulation of stage scenery, the organization and management of stage activity, and stagecraft terminology. Students are introduced to the fundamentals of set design, construction, painting, and finishing. Course is designed for the beginner and may be repeated four times for a maximum of 16 units.

TA 115.1 STAGECRAFT**Units: 1.0** **CSU, UC** | **48-54 hours laboratory***(No prerequisite)*

An introductory course on the materials, tools and procedures of theatre set production including construction, painting, rigging, placement and manipulation of stage scenery, the organization and management of set pieces, and stagecraft terminology. Students are introduced to the fundamentals of set design, construction, painting and finishing.

TA 115.2 STAGECRAFT**Units: 2.0** **CSU, UC** | **96-108 hours laboratory***(No prerequisite)*

An introductory course on the materials, tools and procedures of theatre set production including construction, painting, rigging, placement and manipulation of stage scenery, the organization and management of set pieces, and stagecraft terminology. Students are introduced to the fundamentals of set design, construction, painting and finishing.

TA 115.3 STAGECRAFT**Units: 3.0** **CSU, UC** | **144-162 hours laboratory***(No prerequisite)*

An introductory course on the materials, tools and procedures of theatre set production including construction, painting, rigging, placement and manipulation of stage scenery, the organization and management of set pieces, and stagecraft terminology. Students are introduced to the fundamentals of set design, construction, painting and finishing.

TA 115.4 STAGECRAFT**Units: 4.0** **CSU, UC** | **192 - 216 hours laboratory***(No prerequisite)*

An introductory course on the materials, tools and procedures of theatre set production including construction, painting, rigging, placement and manipulation of stage scenery, the organization and management of set pieces, and stagecraft terminology. Students are introduced to the fundamentals of set design, construction, painting and finishing.

TA 116 AUTHORS OF THE THEATRE**Units: 3.0** **CSU, UC** | **48-54 hours lecture***(No prerequisite)*

A survey of playwrights from the Greeks to the present. The selected plays are read, discussed, and analyzed. It is both AA and BA applicable. See cross listing for ENGL 116.

TA 117 TECHNICAL THEATRE: LIGHTING AND SOUND**Units: 3.0** **CSU, UC** | **32-36 hours lecture and 48-54 hours laboratory***(No prerequisite)*

This course will provide the student with a theoretical and practical introduction to theatre technology. This course will cover the theatre plant, rigging, theatre personnel, electrical theory, stage lighting and design, and audio signal flow, operation and design. Emphasis is on hands-on applications.

TA 120 COSTUMING FOR THE THEATRE**Units: 2.0** **CSU, UC** | **16-18 hours lecture and 48-54 hours laboratory***(No prerequisite)*

A basic course in the skills of costuming for the stage and the art of costume design. Course will introduce creation of specialty items, stylistic interpretations, crew management and organization responsibilities.

TA 128 SPECIAL TOPICS

See Special Topics listing (Variable units). [CSU](#)

TA 129 INDEPENDENT STUDY

See Independent Study listing (1-3 units) [CSU](#).

TA 138 COOPERATIVE EDUCATION

See Cooperative Education listing (1-8 units) [CSU](#)

TA 160A TAP DANCE IA (Formerly TA 160)

Units: 1.0 [CSU, UC](#) | 48-54 hours laboratory

(No prerequisite. Grade Option)

Students who would like to explore tap dancing for the first time will experience basic tap dancing techniques with the foundational sense of musicality. During this course, many essential elements will be stressed: style, proper counting techniques, rhythm, interpretation of music and basic choreographic elements. See cross listing for KIND 160A.

TA 160B TAP DANCE IB

Units: 1.0 [CSU, UC](#) | 48-54 hours laboratory

(No prerequisite. Grade Option)

Students who would like to further explore tap dancing after having some tap experience will expand on their basic tap dance techniques with the foundational sense of musicality. During this course, many essential elements will be stressed: style, proper counting techniques, rhythm, interpretation of music and basic choreographic elements. Emphasis will be placed on enhancing musical and rhythmic phrasing and performance clarity in movement combinations. See cross listing for KIND 160B.

TA 160C TAP DANCE IC

Units: 1.0 [CSU, UC](#) | 48-54 hours laboratory

(No prerequisite. Grade Option)

Students who would like to further explore tap dancing after having some tap experience and preparing for Tap IIA will expand on their tap dance techniques with the foundational sense of musicality. During this course, many essential elements will be stressed: style, proper counting techniques, rhythm, interpretation of music and basic choreographic elements. Emphasis will be placed on enhancing musical and rhythmic phrasing and performance clarity in complex movement combinations , and the refinement of performance style. See cross listing for KIND 160C.

TA 161A TAP DANCE IIA (Formerly TA 161)

Units: 1.0 [CSU, UC](#) | 48-54 hours laboratory

(No prerequisite. Grade Option)

Students who would like to explore tap dancing at an intermediate level for the first time after having had some tap dance will experience intermediate tap dancing techniques with the foundational sense of musicality. During this course, many essential elements will be stressed: style, proper counting techniques, rhythm, interpretation of music and basic choreographic elements. See cross listing for KIND161A.

TA 161B TAP DANCE IIB

Units: 1.0 [CSU, UC](#) | 48-54 hours laboratory

(No prerequisite. Grade Option)

Students who would like to further explore tap dance at an intermediate level after having had some tap dance will experience intermediate tap dance techniques with a fundamental sense of musicality. During this intermediate course a number of elements will be stressed: style, proper counting techniques, rhythm, interpretation of music and basic choreographic elements. Emphasis will be placed on enhancing musical and rhythmic phrasing, efficient alignment, and performance clarity in movement combinations. See cross listing for KIND161B.

TA 161C TAP DANCE IIC

Units: 1.0 [CSU, UC](#) | 48-54 hours laboratory

(No prerequisite. Grade Option)

Students who would like to further explore tap dance at an intermediate level, working towards Tap III, after having some tap dance will experience intermediate tap dance techniques with a fundamental sense of musicality. During this course a number of elements will be stressed: style, proper counting techniques, rhythm, interpretation of music and basic choreographic elements. Emphasis is placed on enhancing musical and rhythmic phrasing, efficient alignment, performance clarity in complex movement combinations, and the refinement of performance style. See cross listing for KIND 161C.

TA 166A INTRODUCTION TO BALLET DANCE IA (Formerly TA 166)**Units: 1.0** CSU, UC | **48-54 hours laboratory***(No prerequisite. Grade Option)*

Student with no previous training or experience in ballet will explore introductory level ballet technique, style, and movement characteristics through dancing. See cross listing for KIND 166A.

TA 166B BUILDING BALLET BASICS IB**Units: 1.0** CSU, UC | **48-54 hours laboratory***(No prerequisite. Grade Option)*

Students with introductory level ballet training will build and expand basic ballet technique, style, and movement characteristics. See cross listing for KIND 166B.

TA 166C BALLET FUNDAMENTALS IC**Units: 1.0** CSU, UC | **48-54 hours laboratory***(No prerequisite. Grade Option)*

Students who have previous training in introductory Ballet IA and Building Ballet Basics IB will further explore and perfect their training in ballet fundamentals. See cross listing for KIND 166C.

TA 167A INTRODUCTION TO INTERMEDIATE BALLET IIA (Formerly TA 167)**Units: 1.0** CSU, UC | **48-54 hours laboratory***(No prerequisite. Grade Option)*

An introduction to the technique and style of beginning intermediate level Ballet IIA dance. This course is for the student who has taken Ballet I level courses. Emphasis on exploring the movement characteristics of beginning intermediate level Ballet IIA dance through dancing. See cross listing for KIND 167A.

TA 167B INTERMEDIATE BALLET DANCE IIB**Units: 1.0** CSU, UC | **48-54 hours laboratory***(No prerequisite. Grade Option)*

Students who have been introduced to intermediate Ballet IIA will build and explore intermediate ballet IIB skills and concepts. See cross listing for KIND 167B.

TA 167C INTERMEDIATE BALLET IIC**Units: 1.0** CSU, UC | **48-54 hours laboratory***(No prerequisite. Grade Option)*

Students who have training in Intermediate Ballet IIA and Intermediate Ballet IIB will explore and build advanced intermediate ballet skills. See cross listing for KIND 167C.

TA 170A JAZZ DANCE IA (Formerly TA 170)**Units: 1.0** CSU, UC | **48-54 hours laboratory***(No prerequisite. Grade Option)*

Students who would like to explore jazz dance for the first time will experience basic jazz dance techniques with a fundamental sense of musicality. During this beginning course a number of elements will be stressed: style, proper counting techniques, rhythm, interpretation of music and basic choreographic elements. See cross listing for KIND170A.

TA 170B JAZZ DANCE IB**Units: 1.0** CSU, UC | **48-54 hours laboratory***(No prerequisite. Grade Option)*

Students who would like to further explore jazz dance after having some jazz dance experience will expand on their basic jazz dance techniques and fundamental sense of musicality. During this course a number of elements will be stressed: style, proper counting techniques, rhythm, interpretation of music and basic choreographic elements. Emphasis will be placed on enhancing musical and rhythmic phrasing, efficient alignment, and performance clarity in movement combinations. Other styles such as theater jazz may be incorporated. See cross listing for KIND 170B.

TA 170C JAZZ DANCE IC**Units: 1.0** CSU, UC | **48-54 hours laboratory***(No prerequisite. Grade Option)*

Students who would like to further explore jazz dance after having some jazz dance experience, will expand on their jazz dance techniques and fundamental sense of musicality. During this course a number of elements will be stressed: style, proper counting techniques, rhythm, interpretation of music and basic choreographic elements. Emphasis is placed on enhancing musical and rhythmic phrasing, efficient alignment, performance clarity in complex movement combinations, and the refinement of performance style. See cross listing for KIND 170C.

TA 171A JAZZ DANCE IIA (Formerly TA 171)**Units: 1.0** CSU, UC | **48-54 hours laboratory***(No prerequisite. Grade Option)*

Students who would like to explore jazz dance at an intermediate level for the first time after having had some jazz dance will experience intermediate jazz dance techniques with a fundamental sense of musicality. During this intermediate course a number of elements will be stressed: style, proper counting techniques, rhythm, interpretation of music and basic choreographic elements. See cross listing for KIND 171A.

TA 171B JAZZ DANCE IIB**Units: 1.0** CSU, UC | **48-54 hours laboratory***(No prerequisite. Grade Option)*

Students who would like to further explore jazz dance at an intermediate level after having had some jazz dance will experience intermediate jazz dance techniques with a fundamental sense of musicality. During this intermediate course a number of elements will be stressed: style, proper counting techniques, rhythm, interpretation of music and basic choreographic elements. Emphasis will be placed on enhancing musical and rhythmic phrasing, efficient alignment, and performance clarity in movement combinations. See cross listing for KIND 171B.

TA 171C JAZZ DANCE IIC**Units: 1.0** CSU, UC | **48-54 hours laboratory***(No prerequisite. Grade Option)*

Students who would like to further explore jazz dance at an intermediate level, working towards Jazz III, after having some jazz dance will experience intermediate jazz dance techniques with a fundamental sense of musicality. During this course a number of elements will be stressed: style, proper counting techniques, rhythm, interpretation of music and basic choreographic elements. Emphasis is placed on enhancing musical and rhythmic phrasing, efficient alignment, performance clarity in complex movement combinations, and the refinement of performance style. See cross listing for KIND 171C.

TA 174A INTRODUCTION TO MODERN DANCE (Formerly TA 174)**Units: 1.0** CSU | **48-54 hours laboratory***(No prerequisite. Grade Option)*

Introduction to technique and stylization of modern dance. For the student who has never had modern dance or who is new to the beginning level of modern dance. Emphasis on exploring the movement characteristics of introductory level modern dance through dancing. See cross listing for KIND 174A.

TA 174B BASIC MODERN DANCE I**Units: 1.0** CSU | **48-54 hours laboratory***(No prerequisite. Grade Option)*

Basic technique and stylization of modern dance. For the student who has never had modern dance or who is new to the beginning level of modern dance. Emphasis on exploring the movement characteristics of introductory level modern dance through dancing. See cross listing for KIND 174B.

TA 175A INTRODUCTION TO MODERN DANCE II (Formerly TA 175)**Units: 1.0** CSU, UC | **48-54 hours laboratory***(No prerequisite. Grade Option)*

Technique and stylization of introductory level modern dance II. This course is for the student who has taken Modern Dance I level classes. Emphasis on exploring the movement characteristics of introductory level modern dance II through dancing. See cross listing for KIND175A.

TA 180 INTRODUCTION TO CLASSICAL MUSICAL THEATRE DANCE (Formerly TA 180)**Units: 1.0** **CSU, UC** | **48-54 hours laboratory***(No prerequisite. Grade Option)*

This course is an in-depth performance experience focusing on styles of body movement indicative of Classical Musical Theatre stage productions (1943 – 1965). The fundamentals of Classical musical theatre dance will be introduced, including Classical Broadway jazz and tap style genres. Concepts of the history of dance in Classical musical theatre will also be introduced. See cross listing for KIND 180.

TA 181 INTRODUCTION TO CONTEMPORARY MUSICAL THEATRE DANCE**Units: 1.0** **CSU, UC** | **48-54 hours laboratory***(No prerequisite. Grade Option)*

This course is an in-depth performance experience focusing on styles of body movement indicative of Contemporary Musical Theatre stage productions (1966 – Present). The fundamentals of Contemporary musical theatre dance will be introduced, including Contemporary Broadway jazz and tap style genres. Concepts of the history of dance in Contemporary musical theatre dance will also be introduced. See cross listing for KIND 181.

TA 182 BEGINNING CLASSICAL MUSICAL THEATRE DANCE**Units: 1.0** **CSU, UC** | **48-54 hours laboratory***(No prerequisite. Grade Option)*

Technique and style of beginning Classical theatre dance (1943 - 1965) will be explored. This course is an in-depth performance experience focusing on styles of body movement for Classical Musical Theatre stage productions. The fundamentals of Broadway style dance will be reviewed, including basic Classical jazz and tap. Classical Musical theatre dance genres will be introduced by category, including more sophisticated character stylization of Classical musical staging. Concepts of the history of classical musical theatre dance will be further explored. See cross listing for KIND 182.

TA 183 BEGINNING CONTEMPORARY MUSICAL THEATRE DANCE**Units: 1.0** **CSU, UC** | **48-54 hours laboratory***(No prerequisite. Grade Option)*

Technique and style of beginning Contemporary theatre dance (1966 - Present) will be explored. This course is an in-depth performance experience focusing on styles of body movement for Contemporary Musical Theatre stage productions. The fundamentals of Contemporary Broadway style dance will be reviewed, including basic Contemporary jazz and tap. Contemporary Musical theatre dance genres will be introduced by category, including more sophisticated character stylizations of Contemporary musical staging. Concepts of the history of Contemporary musical theatre dance will be further explored.

TA 203 SCRIPT ANALYSIS**Units: 3.0** **CSU** | **48-54 hours laboratory***(No prerequisite.)*

A script for a play contains the words of a playwright which serve as a blueprint from which directors, designers, and actors create the world of the play for an audience. Thorough analysis of the play is critical for the writer's world to be fully realized on the stage. Students will learn to closely examine the play script using various methods of analysis in order to make informed choices about performance, directing, technical elements and design elements.

TA 270 JAZZ DANCE III**Units: 1.0** **CSU** | **48-54 hours laboratory***(No prerequisite. Grade Option)*

Technique and style of intermediate level III jazz dance. Emphasis on exploring the movement characteristics of intermediate level III jazz through dancing.

TA 271 JAZZ DANCE IV**Units: 1.0** **CSU** | **48-54 hours laboratory***(No prerequisite. Grade Option)*

Technique and style of level IV jazz dance. Emphasis on exploring the movement characteristics of advanced level IV jazz through dancing.

TA 274 MODERN DANCE III

Units: 1.0 CSU 48-54 hours laboratory

(No prerequisite. Grade Option)

Technique and style of intermediate level III modern dance. Emphasis on exploring the movement characteristics of intermediate level III modern dance through dancing.

TA 275 MODERN DANCE IV

Units: 1.0 CSU 48-54 hours laboratory

(No prerequisite. Grade Option)

Technique and style of advanced level IV modern dance. Emphasis on exploring the movement characteristics of advanced level IV modern dance through dancing.

Welding

This program prepares students to enter welding-related occupations, offers retraining for those seeking a new career, and provides an opportunity for those employed in welding occupations to learn new skills and upgrade themselves in their positions.

The department is a member of the American Welding Society's Educational Institution Program for entry level welders and is entitled to all the privileges. This entry level welder program is part of the National Skills Standards Program, which is being enacted across a wide range of industries in the United States.

The program prepares students to pass the written test and welding performance test necessary to acquire a welding license from the Los Angeles Department of Building and Safety. The program offers a certificate of achievement in welding, and an associate degree may be obtained upon completion of 20 units of welding course work in addition to general education.



Educational Institution Member



**Fabricators & Manufacturers
Association, International®
MEMBER**

Career Opportunities

Boilermakers, Iron Workers, Maintenance Worker, Millwrights, Sheet Metal Workers, Welder, Welder-Fitter, Welding Estimator, Welding Inspector, Welding Instructor, Welding Operator, Welding Sales Representative, Welding Service Representative, Welding Supervisor, Welding Technician

Degrees and Certificates Awarded

Associate in Science, Welding

Welding Certificate

A student receiving a degree or certificate in this field will be able to:

- *Demonstrate acceptable safety practices daily in order to prevent injuries of any type.*
- *Practice and perform welder qualification testing at the appropriate level for the course.*
- *Interpret drawings and welding symbols in order to weld the correct weld type and size per the detailed joint design.*
- *Practice and demonstrate welding and cutting job practices in multiple processes appropriate for being a combination welder.*

Associate Degree

To earn an Associate in Science degree with a major in Welding, complete 20 units from Welding courses and meet all Victor Valley College graduation requirements. WELD 138 (Cooperative Education) may be used as Elective credit, but may not be used to fulfill major requirements.

Transfer

Not a transfer major.

WELDING CERTIFICATE		
The Welding Technology courses included in the certificate program will give the students the skills necessary to become an entry-level combination welder.		
Units Required: 20.0		
<i>All of the following must be completed:</i>		
WELD 51	Oxyacetylene Welding, Cutting, and Brazing	3.5
WELD 52	Shielded Metal Arc Welding-Basic	3.5
WELD 53	Shielded Metal Arc Welding-Advanced	4.0
WELD 57A	Gas Tungsten Arc Welding-Basic	2.0
WELD 57B	Gas Tungsten Arc Welding-Advanced	2.0
WELD 58A	Gas Metal Arc Welding-Basic	2.0
WELD 58B	Gas Metal Arc Welding-Advanced	2.0
WELD 59	Welding Symbols and Blueprint Reading	1.0

Welding Courses

WELD 50 INTRODUCTION TO WELDING

Units: 2.0 | 16-18 hours lecture and 48-54 hours laboratory

(No prerequisite)

Survey course in arc and oxyacetylene welding which covers safety practices, use of equipment, and oxyacetylene cutting and braze welding.

WELD 51 OXYACETYLENE WELDING, CUTTING AND BRAZING

Units: 3.5 | 32-36 hours lecture and 72-81 hours laboratory

(No prerequisite)

Develops entry-level skills for the welder in gas welding, braze welding, and cutting.

WELD 52 SHIELDED METAL ARC WELDING - BASIC

Units: 3.5 | 32-36 hours lecture and 72-81 hours laboratory

(No prerequisite.)

Develops entry-level shielded metal arc welding (SMAW) skills for the welder.

WELD 53 SHIELDED METAL ARC WELDING - ADVANCED

Units: 4.0 | 32-36 hours lecture and 96-108 hours laboratory

(No prerequisite)

Develops skills to produce high quality multi-pass all position groove welds with and without backing.

WELD 54 PREPARATION FOR WELDER CERTIFICATION

Units: 1.0 | 16-18 hours lecture

(No prerequisite)

This course prepares the welder to take the Los Angeles Department of Building and Safety written examination required for the L.A. City welding license.

WELD 57A GAS TUNGSTEN ARC WELDING - BASIC

Units: 2.0 | 16-18 hours lecture and 48-54 hours laboratory

(No prerequisite)

Develops entry-level gas tungsten arc welding skills; setting up and adjusting equipment, and in-position welding on mild steel, stainless steel, and aluminum.

WELD 57B GAS TUNGSTEN ARC WELDING - ADVANCED**Units: 2.0****16-18 hours lecture and 48-54 hours laboratory***(No prerequisite)*

Develops advanced gas tungsten arc welding skills in out-of-position welding on mild steel, stainless steel, and aluminum.

WELD 58A GAS METAL ARC WELDING - BASIC**Units: 2.0****16-18 hours lecture and 48-54 hours laboratory***(No prerequisite)*

Develops entry-level skills in gas metal arc welding. Specifically develops skills on all position groove and fillet welds, set-up, adjustment and equipment maintenance.

WELD 58B GAS METAL ARC WELDING - ADVANCED**Units: 2.0****16-18 hours lecture and 48-54 hours laboratory***(No prerequisite)*

Develops advanced skills in gas metal arc welding. Specifically develops skills on single-vee groove butt joints in all positions and welder qualification practice.

WELD 59 WELDING SYMBOLS AND BLUEPRINT READING**Units: 1.0****16-18 hours lecture***(No prerequisite)*

Develops a technical understanding of engineering drawings and use of information to communicate instructions from the design to the welder and fitter to achieve design objectives.

WELD 60A WELDING LABORATORY SHIELD METAL ARC WELDING**Units: 1.0-2.0****48-54 hours of laboratory for one unit of credit***(No prerequisite)*

A laboratory class to develop skills in arc welding and welder qualification preparation. Offered Fall, Spring, Winter and Summer sessions.

WELD 60B WELDING LABORATORY GAS TUNGSTEN ARC WELDING**Units: 1.0-2.0****48-54 hours of laboratory for one unit of credit***(No prerequisite)*

A laboratory class to develop skills in gas tungsten arc welding and welder performance qualification. Offered Fall, Spring, Winter and Summer sessions

WELD 60C WELDING LABORATORY GAS METAL ARC WELDING**Units: 1.0-2.0****48-54 hours of laboratory for one unit of credit***(No prerequisite)*

A laboratory class to develop skills in gas metal arc welding and welder performance qualification. Offered Fall, Spring, Winter and Summer sessions.

WELD 98 SPECIAL TOPICS

See Special Topics listing (Variable units).

WELD 99 INDEPENDENT STUDY

See Independent Study listing (1-3 units).

WELD 138 COOPERATIVE EDUCATION

See Cooperative Education listing (1-8 units). [CSU](#)

Non-Credit Courses

Basic Skills/Educational Upgrade Courses

ACOM 12 ADULT LITERACY

Units: 0.0

(No prerequisite)

An open entry/open exit class designed for persons unable to read beyond the 4th grade level. Students will receive individualized instruction.

ACOM 30 CITIZENSHIP PREPARATION

Units: 0.0

(No prerequisite)

This course is designed for immigrants eligible for the naturalization process. Topics include U.S. History and civic education. This class will focus on practicing listening and responding to the N-400 application questions, reading and responding to the 100 questions, and writing simple sentences to help pass the naturalization interview.

ACOM 35K Mathematics Tutoring

Units: 0.0

(Corequisite: Enrollment in a Credit Math Course)

This course is for students wishing to receive tutoring in the Math Success Center at VVC. Students will be allowed to receive up to 96 hours of tutoring over a two semester period of time. Tutoring topics will be based on math skills covered in the co-requisite math course.

ACOM 35G SUPERVISED TUTORING

Units: 0.0

(No prerequisite)

Open entry/open exit classes designed for students who need individualized instruction.

BSKL 8A CAHSEE PREPARATION - ENGLISH

Units: 0.0

32-36 hours lecture and 24-27 hours laboratory

(No prerequisite)

The course prepares students to take the CAHSEE in English. Students review skills in both reading comprehension and writing skills.

BSKL 8B CAHSEE PREPARATION MATH

Units: 0.0

32-36 hours lecture and 24-27 hours laboratory

(No prerequisite)

The course provides supplemental instruction in math in preparation for California High School Exit Exam (CAHSEE).

English As A Second Language Non-Credit (AENG) Courses

AENG 1 Citizenship Preparation Level 1

Units: 0.0

(No prerequisite)

This course is for very limited English speakers wishing to prepare for the Naturalization interview. The course focuses on improving spoken English language skills required to pass the Naturalization test.

AENG 2 Citizenship Preparation Level 2

Units: 0.0

(No prerequisite)

This course is designed for immigrants eligible for the naturalization process. The class will focus on practicing language skills needed to pass the written and oral naturalization interview. Students will practice responding to questions from the interview and the 100 questions as well as reading and writing basic sentences of everyday life, civics and U.S. History.

AENG 10.1 LOW BEGINNING LISTENING AND SPEAKING REVIEW

Units: 0.0

(No prerequisite)

Designed for non-native speakers with no or very limited English. It is intended to develop a basic understanding of English. Students will begin to respond to direct questions, statements, high-frequency commands and courtesies; begin to participate in conversations with peers on familiar topics with supported context.

AENG 10.1C LOW BEGINNING ESL COMPUTER SKILLS

Units: 0.0

(No prerequisite)

This class is for ESL students with very little English skills who would like to learn the basics of computers. The class will reinforce English skills using the computer as a tool to learn English. Students will learn basic computer literacy, keyboarding and internet skills for success in school and personal use.

AENG 10.2 LOW BEGINNING READING AND WRITING

Units: 0.0

(No prerequisite)

This class is for people who do not read or write any English. It will focus on basic reading and writing skills. Students will learn to read and write basic sentences. Fill out simplified forms, such as basic job applications. They will learn basic vocabulary.

AENG 10.3 HIGH BEGINNING SPEAKING AND LISTENING

Units: 0.0

(No prerequisite)

This course continues to develop English skills of non-native speakers of English. Students will expand their listening and speaking skills with lab activities, role-playing, and teacher led activities. Students will practice responding to simple questions related to basic needs, make simple statements and learn everyday expressions related to immediate needs.

AENG 10.4 HIGH BEGINNING READING AND WRITING

Units: 0.0

(No prerequisite)

This class is designed for high beginning non-native English speakers who read and write at a very limited beginning level. The course will focus on basic reading and writing skills. Students will practice reading and filling out everyday forms. They will practice reading comprehension, vocabulary, rules of spelling, and basic grammar. Students will expand their knowledge of familiar words and phrases and use strategies to predict common words and phrases. Students will be introduced to simple narrative reading passages and identify patterns such as sequencing.

AENG 10.4A REVIEW CLASS FOR ESL BEGINNERS**Units: 0.0***(No prerequisite)*

This class is for people who completed beginning level English (AENG 10.1-10.4). Students practice reading, writing, listening, and speaking skills that they have already learned. The class focuses on practical, everyday situations such as shopping and work situations.

AENG 10.5 ESL LOW INTERMEDIATE SPEAKING AND LISTENING**Units: 0.0***(Recommended Preparation: AENG 10.3 or 10.4)*

This course is for non-native English speakers wishing to continue to develop English skills. It is for people who already speak and understand English fairly well. In this course students will learn more grammar and vocabulary useful in a variety of everyday speaking and listening situations. Students will also be introduced to non-verbal communication, as well as certain idiomatic expressions. There will be a strong emphasis on simulation and role play.

AENG 10.6 ESL LOW INTERMEDIATE READING AND WRITING**Units: 0.0***(No prerequisite)*

This class continues from AENG 10.4. It is for people who already speak and understand English fairly well. Students in this class will continue to develop reading and writing skills in English. They will continue learning grammar and spelling rules, and will write at the sentence level. They will learn to read and respond to simple stories and news articles, and other common forms of written material, such as instructions and simple warranties.

AENG 10.7 ESL LEVEL 4 HIGH INTERMEDIATE LISTENING AND SPEAKING**Units: 0.0***(Recommended Preparation: AENG 10.5 or AENG 10.6)*

This class continues from AENG 10.5. It is for people who already speak and understand enough English to describe everyday situations, problems, and needs. In this class students will learn more advanced vocabulary, idiomatic expressions, sentence structure, and grammar needed in a variety of specific everyday speaking and listening situations. There will be continued emphasis on simulation and role play.

AENG 10.7A ESL INTERMEDIATE SPEAKING I**Units: 0.0***(No prerequisite)*

This class is for people who already speak and understand English enough to describe familiar situations, problems, and needs. In this class students will learn more advanced vocabulary, idiomatic expressions, sentence structure, and grammar needed in a variety of communicative situations. Students develop speaking and listening skills needed for success in work and education.

AENG 10.7B ESL INTERMEDIATE SPEAKING III**Units: 0.0***(No prerequisite)*

This class continues from AENG 10.7A. It focuses on English needed for specific formal situations at school and work such as expressing agreement/disagreement and confronting, and job interviews.

AENG 10.9 ESL LEVEL 5 BRIDGE FOR COLLEGE AND JOB SUCCESS**Units: 0.0***(Recommended Preparation: AENG 10.7 or qualifying placement scores)*

This course is designed for non-native speakers of English who wish to improve English skills for career readiness, vocational training or for students interested in transitioning to college courses. Students will practice writing, grammar, listening, and speaking as it plays naturally in the workplace or in an academic setting. Students will be learning skills, such as interviewing skills, resume writing, and speaking confidently at work or in an academic setting.

Home Economics For The Homemaker (AHOM) Courses

AHOM 10 ADVANCED CLOTHING CONSTRUCTION

Units: 0.0

(No prerequisite)

Designed for those who understand the operation of a sewing machine, fabric selection and preparation, and fundamental sewing skills such as finishing seams, grading and understitching, etc. Emphasis on quality construction techniques with options for tailoring, fitting, specialty fabrics, etc.

AHOM 20 BEGINNING CLOTHING CONSTRUCTION

Units: 0.0

(No prerequisite)

Designed to teach basic sewing skills and equipment use. Emphasis on fundamentals, including use of equipment, knowledge of fabrics, and construction techniques.

AHOM 20.1 INTERMEDIATE CLOTHING CONSTRUCTION

Units: 0.0

(No prerequisite)

A structured class teaching advanced pattern techniques for those with basic sewing knowledge. Students should have beginning sewing skills or better.

AHOM 60 NEEDLECRAFT AND DESIGN

Units: 0.0

(No prerequisite)

This class specializes in basic to advanced stitches for knitting, crochet, needle point, cross stitch, lace making and pattern interpretation. This class is for beginners as well as intermediate and advanced students.

AHOM 70 HAND CRAFTED ITEMS

Units: 0.0

(No prerequisite)

Learn how to make small craft and quilting items for home and personal use.

AHOM 75 MACHINE QUILTING I

Units: 0.0

(No prerequisite)

A beginning class designed to teach strip sewing techniques for making quilts quickly and easily by machine.

AHOM 75.1 MACHINE QUILTING II

Units: 0.0

(No prerequisite)

A continuation of Machine Quilting I for those who desire more complicated patterns of quilts by machine.

AHOM 85 SERGER TECHNIQUES

Units: 0.0

(No prerequisite)

Designed to teach basic techniques including threading and tension adjustments. Learn both construction and decorative uses in project construction. Designed for both beginner and more advanced students.

Music (AMUS) Courses

AMUS 20 COMMUNITY CHORUS

Units: 0.0

(No prerequisite)

A large choral ensemble dedicated to the performance of major choral works from all musical periods, often with orchestra. Group may tour periodically in the United States and abroad. Membership open by solo audition to determine ability to match pitch, sing in tune, carry a harmony part, level of music reading. Prior choral experience in a high school, college/university, community or church choir desirable but not required.

Adult Physical Fitness (ADPE) Courses

ADPE 41A ADVANCED PHYSICAL FITNESS

Units: 0.0

(No prerequisite)

Advanced techniques of exercise through use of a variety of controlled exercises. This class is open to both men and women.

ADPE 80 ADULT TENNIS

Units: 0.0

(No prerequisite)

Tennis for adults is fun, offers excellent exercise, and a way to make friends while enjoying tennis. Enhance your tennis skills and quality of life.

ADPE 90 HAWAIIAN DANCE FOR OLDER ADULTS

Units: 0.0

(No prerequisite)

Instruction of basic steps of Hawaiian dance, arm movements, terminology, the usage of Hawaiian implements for routines to Hawaiian music. Dance for the older adult offers excellent exercise and a way to make friends while enjoying the class. Enhances mental and physical skills and quality of life.