

## What Career and Technical Programs Does Citrus College Offer?

### Programs of Study Leading to a Certificate of Achievement

Citrus College grants certificates of achievement in a variety of subject areas. These certificates of achievement may be used to verify a student's proficiency in the skills and knowledge needed for entry-level employment or for career advancement.

To earn a certificate of achievement, a student must satisfactorily complete 12 units or more in a specific sequence of required courses. At least 50% of these required courses must be completed at Citrus College.

#### Programs of Study Leading to a Certificate of Achievement

- Administration of Justice
- Audio Recording Technology
- Automotive Technology
  - Automotive Service, Diagnosis and Repair - Master Technician
  - Automotive Service, Diagnosis and Repair - Toyota/Lexus/Scion Technician
  - Automotive Service, Diagnosis and Repair - Undercar Drivetrain Specialist
  - Automotive Service, Diagnosis and Repair - Underhood Specialist
- High Performance Institute
- Business
  - Accounting
  - Administrative Office Manager Management
  - Marketing
  - Office Occupations
  - Secretarial
  - Word Processing
- Ceramics - One Year
- Child Development Master Teacher
- Child Development Master Teacher - Early Intervention
- Child Development Teacher
- Commercial Dance
- Cosmetology
- Dental Assisting
- Drafting
  - Drafting Technology - CAD
  - Advanced Drafting Technology - CAD
  - Architectural Design
  - Architectural Drafting - CAD
  - Computer Generated Imagery
- Electronics Technician



*Citrus College Cosmetology student and client.*

- Emergency Management
- Energy Systems Technology
  - \*Building Systems Design Technology
  - \*Building Systems Maintenance and Operations Technology
- Esthetician
- Forestry
- Heating and Air Conditioning
- Information Technology
- Library Technology
- Medium and Heavy Diesel Truck Technology
  - \*Motorcycle Service, Diagnosis, and Repair Technician
- Photography
- Public Works I
- Public Works II
- Public Works/Landscape Management
- Theater
  - Emerging Theatre Technologies
- Vocational Nursing
- Water Technology
- Web Design
  - Advanced Digital and Web Design
  - Digital and Web Design

\*Pending chancellor's office approval

## ADMINISTRATION OF JUSTICE

Administration of Justice offers men and women a career of personal challenge and rewarding public service. A great need exists for intelligent, well-educated personnel with a firm commitment toward professional improvement in the justice system. Citrus College offers courses to prepare students for employment and promotion in the criminal justice system.

<b>REQUIRED COURSES:</b>		<b>Units</b>
AJ 101	Introduction to the Administration of Justice	3
AJ 102	Concepts of Criminal Law	3
AJ 103	Legal Aspects of Evidence	3
AJ 109	Criminal Procedures	3
AJ 112	Community Relations	3
ENGL 100	Fundamentals of Composition	3
<b>or</b>		
ENGL 101	Reading and Composition	3
<b>or</b>		
AJ 123	Writing for Criminal Justice Professionals	3
<b>or</b>		
AJ 133	Correctional Writing	3

<b>ELECTIVES:</b>		
One AJ course (3 units)		3

**EMPLOYMENT OPPORTUNITY:**  
Entry-level police cadet/police officer

**Total Units 21**

## AUDIO RECORDING TECHNOLOGY

This is a one year audio recording program intended to teach you the basis of how to engineer any kind of music, from hip-hop to classical to movie scenes.

<b>REQUIRED COURSES:</b>		
REC 105	Fundamentals of Audio Technology	4
REC 115	Recording Studio Workshop I	4
REC 125	Digital Audio Technology I	3
REC 135	Live Sound Reinforcement	4
REC 145	Critical Listening Skills for Engineers	3
REC 205	Advanced Audio Technology	4
REC 215	Recording Studio Workshop II	4
REC 225	Digital Audio Technology II	4
REC 235	Acoustics for Engineers	3
REC 245	Music Business/Audio Careers	3

**Total Units 36**

## AUTOMOTIVE TECHNOLOGY

### Automotive Service, Diagnosis & Repair - Master Technician

The courses listed in the Automotive Service, Diagnosis and Repair - Master Technician certificate meet the National Automotive Technicians' Education Foundation Standards and are selected to provide a comprehensive set of job skills needed in the automotive industry. In addition to improving the student's employability, the skills developed in the program will enhance their ability to become an Automotive Service Excellence (ASE) Master Technician. The certificate is designed to prepare an individual for employment or provide the skills needed for career advancement in the automotive industry.

#### Required courses within the major:

	<b>Units</b>	
AUTO 101	Fundamentals of Automotive Service, Diagnosis and Repair	5
AUTO 151	Engine Service, Diagnosis and Repair	5
AUTO 154	Chassis Service, Diagnosis, and Repair	8
AUTO 156	Automotive Electrical/Electronic Systems I	4
AUTO 162	Drivetrain Service, Diagnosis and Repair	8
AUTO 166	Automotive Electrical/Electronic Systems II	3
AUTO 167	Automotive HVAC Service, Diagnosis & Repair	3
AUTO 168	Engine Control Systems Service, Diagnosis and Repair	8

Plus four (4) units of the following:

AUTO 230	Automotive Service and Repair Work Experience	4
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#### Required courses outside the major:

Select one (1) of the following language arts courses:

ENGL 100	Fundamentals of Composition	3
ENGL 101	Reading and Composition	3
ESL 100	Fundamentals of Composition	4
ESL 101	Reading and Composition	3

Select one (1) of the following mathematics courses:

MATH 115	Business Mathematics	3
MATH 130	Elementary Algebra	4

*Students may substitute a higher level math course.*

**Total Units 54-56**

## Automotive Service, Diagnosis and Repair - Toyota/Lexus/Scion Technician

The courses listed in the Automotive Service, Diagnosis and Repair - Toyota/Lexus/Scion Technician certificate are selected to provide a comprehensive set of job skills needed by Toyota, Lexus and Scion technicians. In addition to improving the student's employability, the skills developed in each course will enhance their ability to become Automotive Service Excellence (ASE) certified in all eight ASE areas. The certificate is designed to prepare an individual for employment or provide the skills needed for career advancement.

### Required courses within the major Units

All of the following automotive courses:

AUTO 101	Fundamentals of Automotive Service, Diagnosis and Repair	5
AUTO 167	Automotive HVAC Service, Diagnosis & Repair	3
AUTO 281	Advanced Toyota Certified Technician Training	7

*Note: AUTO 281 is a capstone course and must be taken after all other major coursework is completed.*

Choose one of the following electrical options:

AUTO 146	Automotive Electrical Systems	4
<b>or</b>		
AUTO 156	Automotive Electrical/Electronic Systems I	4
<b>and</b>		
AUTO 166	Automotive Electrical/Electronic Systems II	3

Choose one (1) of the following engine repair courses:

AUTO 141	Engine Mechanical Systems	4
AUTO 151	Engine Service, Diagnosis and Repair	5

Choose one (1) of the following chassis courses:

AUTO 144	Chassis Systems	5
AUTO 154	Chassis Service, Diagnosis, and Repair	8

Choose one (1) of the following drivetrain courses:

AUTO 142	Drivetrain Systems	5
AUTO 162	Drivetrain Service, Diagnosis and Repair	8

Choose one (1) of the following engine control courses:

AUTO 148	Engine Control Systems	5
AUTO 168	Engine Control Systems Service, Diagnosis and Repair	8

Plus four (4) units of the following:

AUTO 230	Automotive Service and Repair Work Experience	4
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**Units**

### Required courses outside the major

Select one (1) of the following language arts courses:

ENGL 100	Fundamentals of Composition	3
ENGL 101	Reading and Composition	3
ESL 100	Fundamentals of Composition	4
ESL 101	Reading and Composition	3

Choose one (1) of the following mathematics courses:

MATH 115	Business Mathematics	3
MATH 130	Elementary Algebra	4

*Students may substitute a higher level math course*

**Total Units 48-63**

## Automotive Service, Diagnosis & Repair - Undercar/Drivetrain Specialist

The courses listed in the Undercar/Drivetrain Specialist certificate are selected to provide a comprehensive set of job skills needed for a technician specializing in undercar/drivetrain service, diagnosis and repair. In addition to improving the student's employability, the skills developed in each course will enhance their ability to become Automotive Service Excellence (ASE) A2, A3, A4 and A5 certified. The certificate is designed to prepare an individual for employment or provide the skills needed for career advancement in the automotive industry.

### Required Course:

AUTO 101	Fundamentals of Automotive Service, Diagnosis and Repair	5
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### Plus

Choose one (1) of the following electrical courses:

AUTO 146	Automotive Electrical Systems	4
AUTO 156	Automotive Electrical/Electronic Systems I	4

Choose one (1) of the following chassis courses:

AUTO 144	Chassis Systems	5
AUTO 154	Chassis Service, Diagnosis, and Repair	8

Choose one (1) of the following drivetrain courses:

AUTO 142	Drivetrain Systems	5
AUTO 162	Drivetrain Service, Diagnosis and Repair	8

**Total Units 19-25**

## Automotive Service, Diagnosis & Repair - Underhood Specialist

The courses listed in the Underhood Specialist certificate are selected to provide a comprehensive set of job skills needed for a technician specializing in underhood service, diagnosis and repair. In addition to improving the student's employability, the skills developed in each course will enhance their ability to become Automotive Service Excellence (ASE) A1, A6, A7 and A8 certified. The certificate is designed to prepare an individual for employment or provide the skills needed for career advancement in the automotive industry.

### REQUIRED COURSES: Units

AUTO 101	Fundamentals of Automotive Service, Diagnosis and Repair	5
AUTO 167	Automotive HVAC Service, Diagnosis & Repair	3

Plus

Choose one (1) of the following electrical courses:

AUTO 146	Automotive Electrical Systems	4
AUTO 156	Automotive Electrical/Electronic Systems I	4

Choose one (1) of the following engine repair courses:

AUTO 141	Engine Mechanical Systems	4
AUTO 151	Engine Service, Diagnosis and Repair	5

Choose one (1) of the following engine control courses:

AUTO 148	Engine Control Systems	5
AUTO 168	Engine Control Systems Service, Diagnosis and Repair	8

**Total Units 21-25**

## High Performance Institute

This program is designed to prepare students who wish to seek employment in the automotive technology industry or qualify for a more responsible position within the field.

### REQUIRED COURSES:

#### HIGH PERFORMANCE INSTITUTE

AUTO 290	Introduction to the Automotive Aftermarket	1
AUTO 295	Engine Design	4
AUTO 296	Cylinder Head Development	4
AUTO 291	Engine Performance Enhancements and Tuning	3
AUTO 292	Advanced Drivetrain Development	2
AUTO 293	Advanced Steering, Suspension Geometry, Brake Design and Analysis	3

AUTO 298	Special Projects	2
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### Plus three of the following

ENGL 100	Fundamentals of Composition	3
CSIS 130	Microcomputer Applications I	4
MATH 115	Business Mathematics	3
<b>or</b>		
MATH 130	Elementary Algebra	4
PHYS 110	Introduction to College Physics	4

### Additional required studies - minimum of two classes:

BUS 130	Introduction to Business	3
BUS 132	Ethics in Business	3
BUS 170	Small Business Management	3

### EMPLOYMENT OPPORTUNITIES:

Entry-level positions in the aftermarket industry.

**Total Units 35-37**

## BUSINESS

### Accounting

The Accounting Program encompasses an area of study which includes basic accounting, financial and managerial accounting principles, income tax accounting and accounting general ledger software. The Accounting Program within the Citrus College Business Department conducts the program with an outstanding faculty to prepare students for professional careers, transfer, and/or personal use. The program combines classroom lectures, demonstrations and a wide use of technology to ensure relevant training.

### REQUIRED COURSES:

ACCT 101	Financial Accounting	4
ACCT 102	Managerial Accounting	4
BUS 130	Introduction to Business	3
BUS 132	Ethics in Business	3
OFF 101	Introduction to Microsoft Office Applications	3
<b>or</b>		
OFF 120	Excel Spreadsheet	2

### Plus one of the following:

BUS 146	Personal Finance	3
BUS 150	Business English	3
BUS 152	Business Communications	3
BUS 160	Business Law and the Legal Environment I	3

**Total Units 19-20**

## Administrative Office Manager

### REQUIRED COURSES:

	Units
ACCT 100 Accounting	3
<b>or</b>	
ACCT 101 Financial Accounting	4
OFF 120 Excel Spreadsheet	2
BUS 130 Introduction to Business	3
BUS 132 Ethics in Business	3
BUS 150 Business English	3
<b>or</b>	
BUS 152 Business Communications	3
BUS 160 Business Law and the Legal Environment I	3
BUS 176 Management for the Office Professional	3
OFF 101 Introduction to Microsoft Office Applications	3
OFF 201 Introduction to Electronic Commerce for Business	2
OFF 291 Telecommunications for the Office	2
OFF 294 Beginning Microsoft Word	2
<b>Total Units 29-30</b>	

## Management

### REQUIRED COURSES:

ACCT 101 Financial Accounting	4
BUS 130 Introduction to Business	3
BUS 132 Ethics in Business	3
BUS 152 Business Communications	3
BUS 160 Business Law and the Legal Environment I	3
BUS 170 Small Business Management	3
BUS 175 Introduction to Management	3
<b>Total Units 22</b>	

## Marketing

### REQUIRED COURSES:

BUS 130 Introduction to Business	3
BUS 132 Ethics in Business	3
BUS 160 Business Law and the Legal Environment I	3
BUS 170 Small Business Management	3
BUS 185 Elements of Marketing	3
BUS 192 Advertising	3
OFF 101 Introduction to Microsoft Office Applications	3
<b>Total Units 22</b>	

## Office Occupations

### REQUIRED COURSES:

	Units
ACCT 100 Accounting	3
<b>or</b>	
ACCT 101 Financial Accounting	4
BUS 132 Ethics in Business	3
OFF 101 Introduction to Microsoft Office Applications	3
OFF 201 Introduction to Electronic Commerce for Business	2
OFF 215 Introduction to Microsoft Outlook	2
OFF 260 Computer Keyboarding and Document Processing	3
OFF 281 Filing and Records Management	3
OFF 291 Telecommunications for the Office	2
<b>Total Units 21-22</b>	

## Secretarial

### REQUIRED COURSES:

BUS 130 Introduction to Business	3
BUS 150 Business English	3
BUS 152 Business Communications	3
BUS 176 Management for the Office Professional	3
OFF 101 Introduction to Microsoft Office Applications	3
OFF 201 Introduction to Electronic Commerce for Business	2
OFF 260 Computer Keyboarding and Document Processing	3
OFF 281 Filing and Records Management	3
OFF 291 Introduction to Technology	2
<b>Total Units 25</b>	

## Word Processing

### REQUIRED COURSES:

OFF 120 Excel Spreadsheet	2
BUS 132 Ethics in Business	3
BUS 150 Business English	3
BUS 152 Business Communications	3
BUS 176 Management for the Office Professional	3
OFF 215 Introduction to Microsoft Outlook	2
OFF 260 Computer Keyboarding and Document Processing	3
OFF 281 Filing and Records Management	3
OFF 291 Telecommunications for the Office	2
OFF 294 Beginning Microsoft Word	2
<b>Total Units 26</b>	

## CERAMICS - ONE YEAR

### REQUIRED COURSES:

	<b>Units</b>
ART 111 Beginning Drawing	3
ART 120 Two-Dimensional Design	3
ART 140 Beginning Ceramics	3
ART 141 Intermediate Ceramics	3
ART 145 Ceramic Design and Decoration	3

Plus Two Electives:

ART 104 Art History and Appreciation-19th Century Art	3
ART 105 Art History and Appreciation - Early 20th Century Art	3
ART 106 Art History and Appreciation - Pre-Columbian	3
ART 130 Beginning Painting	3
ART 180 Beginning Clay Sculpture	3
ART 115 Figure Drawing I	3
PHTO 101 Basic Photography	3

EMPLOYMENT OPPORTUNITY:  
Studio Potter, Ceramic Shop (retail)

**Total Units 36**

## CHILD DEVELOPMENT TEACHER

### REQUIRED COURSES:

CHLD 110 Early Childhood Development	3
<b>or</b>	
PSY 206 Child Growth and Development	3
CHLD 112 Principles of Early Childhood Education I	3
CHLD 114 Home-Child-Community Relations	3
CHLD 154 Observing and Recording Behavior	3

Plus 9 units of electives:

CHLD 120 Literacy for Children	3
CHLD 121 Art for Children	2
CHLD 122 Music and Rhythms for Children	2
CHLD 123 Science Experiences for Children	1
CHLD 124 Mathematics for Children	1
CHLD 134 Parent-Child Interaction	3
CHLD 142 Parent Teacher Partnership	1
CHLD 144 Health, Safety and Nutrition for Young Children	3
CHLD 150 Multi-Culture Anti-Bias Classrooms	3
CHLD 160 Perceptual Motor and Movement Activities	2
CHLD 164 The Child with Special Needs	3

Required supervised teaching experience:

Option 1	
CHLD 156 Practicum A in Early Childhood Education	2

CHLD 156L Practicum A Lab	1
<b>or</b>	
Option 2	
CHLD 158 Practicum B in Early Childhood Education	2
CHLD 158L Practicum B Lab	1

The work experience should be a minimum of three hours per day of 175 days. Also required: 16 units of general education: one course minimum in each of the categories - English/Language Arts, Math or Science, Social Sciences, Humanities and/or Fine Arts, any general education elective excluding PE.

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EMPLOYMENT OPPORTUNITY: Upon completion of this program, student will be eligible to apply for the state's Child Development Permit: Teacher Level for teaching at the preschool level in public or private program.

**Total Units 40**

## CHILD DEVELOPMENT MASTER TEACHER

### REQUIRED COURSES:

Completion of the Child Development Teacher Certificate of Achievement	Total Units 40
and the following course work:	
CHLD 194 Personnel Issues in Early Childhood Education Programs	3
<b>or</b>	
CHLD 220 Early Childhood Education Mentor Teacher Practices	3

Six units of area specialization plus work experience requirement of 350 days within a four year period (3 hours a day minimum).

Note: The "area of specialization" units are above and beyond the child development unit requirements for the Teacher Certificate. The 6 units in your "area of specialization" may not be counted twice and should focus on one specific area of service, instruction, or curriculum.

Examples of specializations: Infant/Toddler, Teacher/Family Relations, Music/Movement Experiences, Children with Special Needs, Speech and Language Development, Health and Safety, Art and Creative Experiences, Multicultural/Bilingual Curriculum, Child Abuse/Children at Risk, Literacy/Children's Literature. Administration and core areas are not acceptable

specializations. Courses CHLD 110, 111, PSY 206, CHLD 114, 190,191 and 194 cannot be used for the "area of specialization."

**EMPLOYMENT OPPORTUNITY:** Prepares the employed child development teacher to function as a mentor teacher to students in training or other adults working in the same environment. May be eligible to participate in the Mentor Teacher Project, which includes a stipend for professional development and for supervising identified students in training.

**Total Units 49**

## CHILD DEVELOPMENT MASTER TEACHER-EARLY INTERVENTION

<b>REQUIRED COURSES:</b>		<b>Units</b>
CHLD 110	Early Childhood Development	3
	<b>or</b>	
PSY 206	Child Growth and Development	3
CHLD 112	Principles of Early Childhood Education I	3
CHLD 114	Home-Child-Community Relations	3
CHLD 120	Literacy for Children	3
CHLD 142	Parent Teacher Partnership	1
CHLD 150	Multi-Culture Anti-Bias Classrooms	3
CHLD 154	Observing and Recording Behavior	3
CHLD 156	Practicum A in Early Childhood Education	2
	<b>and</b>	
CHLD 156L	Practicum A Lab	1
	<b>or</b>	
CHLD 158	Practicum B in Early Childhood Education	2
	<b>and</b>	
CHLD 158L	Practicum B Lab	1
CHLD 160	Perceptual Motor and Movement Activities	2
CHLD 164	The Child with Special Needs	3
CHLD 166	Speech and Language Development and Disorders	2
CHLD 168	Developmental Risk: Infants and Toddlers	2
CHLD 169	Managing Challenging and Disruptive Behaviors	1
CHLD 194	Personnel Issues in Early Childhood Education Programs	3

Plus 350 days of work experience required, at least 100 days in a special education setting.

**EMPLOYMENT OPPORTUNITY:** This program prepares you for the Child Development Permit: Master Teacher Level with an emphasis on working with young children with special needs. You will be qualified to teach

at the preschool level in all programs. You will also be prepared to work under supervision in Early Intervention programs. Also, 16 diversified general education units within the areas of English, Math/Science, Social Sciences, Humanities or Fine Arts, any general education excluding PE. Please see an academic counselor or adviser.

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**Total Units 51**

## COMMERCIAL DANCE

Dance classes at Citrus prepare you for many opportunities in the world of dance. Classes are offered in jazz dance, classical ballet, tap dance and modern dance.

<b>REQUIRED COURSES:</b>		<b>Units</b>
DANC 102	History of Dance	3
DANC 130	Alignment and Correctives	2
DANC 172	Composition in Group Forms	2
DANC 259	Intermediate Tap I	1
DANC 260	Intermediate Jazz Dance I	1
DANC 262	Intermediate Ballet I	1
DANC 269	Intermediate Tap II	1
DANC 272	Intermediate Ballet II	1
DANC 289	Dance Concert Production	3

**ELECTIVES:** Plus 34 units of the following:

DANC 159	Beginning Tap	1
DANC 160	Beginning Jazz Dance	1
DANC 161	Beginning Modern Dance	1
DANC 162	Beginning Ballet	1
DANC 164	Commercial Dance Techniques	2
DANC 165	Summer Dance Conservatory	1
DANC 171	Introduction to Choreography/Improvisation	2
DANC 259	Intermediate Tap I	1
DANC 260	Intermediate Jazz Dance I	1
DANC 261	Intermediate Modern Dance I	1
DANC 262	Intermediate Ballet I	1
DANC 269	Intermediate Tap II	1
DANC 270	Intermediate Jazz Dance II	1
DANC 272	Intermediate Ballet II	1
DANC 280	Choreography - Student Project	1
DANC 288	Citrus Dance Company - Touring Ensemble	3
DANC 289	Dance Concert Production	3
MUS 214	Musical Theatre Techniques	3

The above elective classes may be taken multiple times.

**Total Units 49**

## COSMETOLOGY

The certificate is designed to provide cosmetology education to meet the requirements of the California State Board of Barbering and Cosmetology. The standard skill set for entry-level cosmetology will prepare students to successfully navigate, complete and build foundational skills necessary for employment in the cosmetology industry.

<b>REQUIRED COURSES:</b>		<b>Units</b>
COS 140	Introduction to Cosmetology	12
COS 152	Beginning Chemical Reformation of the Hair	4.5
COS 153	Advanced Chemical Reformation of the Hair	4.5
COS 154	Beginning Haircoloring	4.5
COS 155	Advanced Haircoloring	4.5
COS 156	Beginning Manicuring	4.5
COS 157	Advanced Manicuring	4.5
COS 158	Beginning Physical Restructuring of the Hair	4.5
COS 159	Advanced Physical Restructuring of the Hair	4.5
COS 163	Beginning Facial Treatment, Skin Care and Make-up	4.5
COS 164	Advanced Facial Treatments, Skin Care, and Make-up and Hair Stylist, Facialist, Nail Technician	4.5
<b>Total Units 57</b>		

## DENTAL ASSISTING

The Dental Assisting Program prepares students for the California State Registered Dental Assistant Examination. This program is accredited by the American Dental Association Commission on Accreditation and the California State Board of Dental Examiners. Upon completion, the graduate is eligible to sit for the California State Registered Dental Assistant Examination and the National Certification Examination. Must maintain a minimum grade of C in all dental courses.

DENT 100	Dental Assisting Basics	2.5
DENT 101	Chairside Assisting	3
DENT 102	Dental Materials	2.5
DENT 121	Preclinical Dental Science	2
DENT 122	Infection Control in the Dental Office	1.5
DENT 123	Preventive Dental Health	2
DENT 124	Dental Specialties	2
DENT 125	Dental Practice Management	2
DENT 201	Dental Radiology	2
DENT 202	Registered Dental Assistant	4
DENT 203	Dental Practical Experience	5.5
DENT 204	RDA Clinical Procedures	1
<b>Total Units 30</b>		

EMPLOYMENT OPPORTUNITY: Dental Assistant, Registered Dental Assistant

## DRAFTING

### Drafting Technology - CAD

This drafting program provides coursework for such majors as electronics, engineering and architecture. In addition to the transfer program, a number of certificates are available.

<b>REQUIRED COURSES:</b>		<b>Units</b>
ART 111	Beginning Drawing	3
ART 153	Digital Media Production I	3
DRAF 101	Mechanical Drawing	3
<b>or</b>		
DRAF 112	Introduction to Computer Aided Design (CAD) and Mechanical Drawing	3
DRAF 109	Intermediate Computer Aided Drafting (CAD)	2.5
<b>or</b>		
ENGR 125	Introduction to Engineering CAD	2
DRAF 102	Technical Illustration	2.5
DRAF 103	Advanced Mechanical Drawing	3
DRAF 111	Computer Aided Design and Drafting - Mechanical (CADD)	2
<b>Total Units 18.5-19</b>		

### Advanced Drafting Technology - CAD

<b>REQUIRED COURSES:</b>		<b>Units</b>
Drafting Technology - CAD certificate plus 18.5 - 19 Units		
ART 188	Multimedia Portfolio and Resume Production	3
DRAF 190	Computer Imaging Practices for Industry and Architecture	3
DRAF 198	Special Problems in Drafting	1
ENGR 130	Engineering Graphics	3
MATH 130	Elementary Algebra	4
PHYS 110	Introduction to College Physics	4
<b>Total Units 36.5-37</b>		

### Architectural Design

<b>REQUIRED COURSES:</b>		<b>Units</b>
ART 111	Beginning Drawing	3
ART 120	Two-Dimensional Design	3
ART 121	Three-Dimensional Design	3
ART 188	Multimedia Portfolio and Resume Production	3
DRAF 158	Perspective	2
DRAF161	Residential CAD	2
DRAF 190	Computer Imaging Practices for Industry and Architecture	3
<b>Total Units 19</b>		

## Architectural Drafting - CAD

### REQUIRED COURSES:

		Units
ART 153	Digital Media Production I	3
DRAF 109	Intermediate Computer Aided Drafting (CAD)	2.5
<b>or</b>		
ENGR 125	Introduction to Engineering CAD	2
DRAF 150	Introduction to Architecture	3
DRAF 151	Basic Residential Floor Plans and Functional Design	3
DRAF 152	Basic Residential Structure Design and Drafting	3
DRAF 154	Commercial and Industrial Buildings	3
DRAF 160	Introduction to Architectural CAD	2

EMPLOYMENT OPPORTUNITY: Entry level Architectural Drafter

**Total Units 19-19.5**

## Computer Generated Imagery

This drafting program provides coursework for such majors as electronics, engineering and architecture. In addition to the transfer program, a number of certificates are available.

### REQUIRED COURSES:

DRAF 102	Technical Illustration	2.5
DRAF 109	Intermediate Computer Aided Drafting (CAD)	2
DRAF 111	Advanced Computer Aided Design and Drafting - Mechanical (CADD)	2.5
DRAF 190	Computer Imaging Practices for Industry and Architecture	3
ART 120	Two-Dimensional Design	3
ART 121	Three-Dimensional Design	3
ART 115	Figure Drawing I	3

**Total Units 19**

## ELECTRONICS TECHNICIAN

Electronics technology is a two-year program which may be applied toward a four-year degree in engineering technology. Employment opportunities are available in many areas including research and development, industrial maintenance, field service, aerospace and commercial systems testing. Upon completion of the Electronics Technician Certificate the student is prepared to take the examination for a first class commercial license from the Federal Communications Commission and can be employed as an electronics technician.

### REQUIRED COURSES:

		Units
ELEC 101	Electronics Fundamentals	4
ELEC 102	Electronics Communications	4
ELEC 201	Digital Electronics	4
ELEC 202	Solid State Devices	4
ENGR 104	PC Hardware and Maintenance	4
ENGR 107	Network Technology	4

EMPLOYMENT OPPORTUNITY: Aerospace Technician, Research and Development Technician, Test Equipment Repair and Calibration Technician

**Total Units 24**

## EMERGENCY MANAGEMENT

The Certificate of Achievement in Emergency Management and Homeland Security offers the required courses and learning domains for students to apply for employment with emergency management agencies, such as the local cities and county governments in California and non-profit organizations such as the American Red Cross, and Federal agencies such as the Department of Homeland Security (FEMA).

### REQUIRED COURSES:

EMER 162	Principles of Emergency Management	3
EMER 163	Terrorism and Emergency Management	3
EMER 164	Managing Hazardous Materials Incidents	3
EMER 166	Emergency Planning and Methodology	3

Plus a minimum of 3 units selected from the following:

EMER 167	Practical Applications of Emergency Management	3
EMER 168	Emergency Operations Center (EOC) Management	3
ESCI 180	Introduction to Geographic Information Systems	3

**Total Units 15**

## \*ENERGY SYSTEMS TECHNOLOGY

### \*Building Systems Design Technology

This Certificate of Achievement is designed to prepare students for employment in the field of Building Systems Design. Courses prepare students for designing building systems with an emphasis on sustainability and energy efficiency. Employment as a Building Systems Technician is available in both the public and private sectors.

		<b>Units</b>
BUS 152	Business Communications	3
DRAF 154	Commercial and Industrial Buildings	3
ELEC 101	Electronics Fundamentals	4
ENGR 100	Principles of Technology	3
ENGR 125	Introduction to Engineering CAD	2
EST 101	Introduction to Building Systems	1
EST 150	Green Building Systems Technology	3
HEAT 170	Air Conditioning I	2
PUB 164	Plan Interpretation and Cost Estimating	3
DRAF 698A	Cooperative Education	1-4
DRAF 112	Advanced Lighting Design	3
<b>Total Units</b>		<b>28-30</b>

### \*Building Systems Maintenance and Operations Technology

This Certificate of Achievement is designed to prepare students for employment in the field of Building Systems Maintenance and Operations. Courses prepare students for the installation, maintenance, and repair of the computerized and electronic systems in modern buildings with an emphasis on energy conservation. Employment as a Building Systems Maintenance and Operations Technician is available in both the public and private sectors.

BUS 152	Business Communications	3
ENGR 100	Principles of Technology	3
EST 101	Introduction to Building Systems	1
EST 150	Green Building Systems Technology	3
ELEC 101	Electronics Fundamentals	4
<b>or</b>		
ELEC 102	Electronics Communications	4
HEAT 170	Air Conditioning I	2
HEAT 184	Electricity for Heating and Air Conditioning	2
HEAT 188	Trouble Shooting Heating and Air Conditioning	2
HEAT 186	Control Systems	2
HEAT 698A	Cooperative Education	1 - 4
<b>Total Units</b>		<b>28-30</b>

## ESTHETICIAN

This certificate is designed to provide esthetic education to meet the requirements of the California State Board of Barbering and Cosmetology. The standard skill set for esthetician will prepare students to successfully complete and build foundational skills necessary for entry-level employment in the field of esthetics.

<b>REQUIRED COURSES:</b>	<b>Units</b>
COS 165 Esthetician I	10
COS 166 Esthetician II	10
Establishing an Esthetician practice as an employee in a full service salon or as a separate and independent practice.	
<b>Total Units 20</b>	

## FORESTRY

These courses provide forestry majors with introductory coursework. Those students who do not intend to transfer as forestry majors may take the courses for either direct vocational application or for general interest.

<b>REQUIRED COURSES:</b>		<b>Units</b>
FOR 101	Introduction to Forestry	3
FOR 102	Introduction to Forest Ecology	3
FOR 103	Plant Identification	3
FOR 104	Introduction to Outdoor Recreation	3
FOR 105	Wildland Fire Management	3
FOR 106	Principles of Wildlife Management and Ecology	3
ESCI 180	Introduction to Geographic Information Systems	3

EMPLOYMENT OPPORTUNITY: Entry-level forest technician in private or public sector

**Total Units 21**

\*Pending Chancellor's Office Approval

## HEATING AND AIR CONDITIONING

This program is designed to prepare students who wish to seek employment in the heating and air conditioning industry or qualify for a more responsible position within the field. Courses prepare students for the EPA exam, which is required in this industry. Employment as a technician is available in both the public and the private sector.

<b>REQUIRED COURSES:</b>		<b>Units</b>
HEAT 170	Air Conditioning I	2
HEAT 180	Air Conditioning II	2
HEAT 182	Heating - Electrical and Gas	2
HEAT 184	Electricity for Heating and Air Conditioning	2
Plus two of the following:		
HEAT 186	Control Systems	2
HEAT 188	Trouble Shooting Heating and Air Conditioning	2
SPCH 100	Interpersonal Communication	3
		<b>Total Units 12-13</b>

## INFORMATION TECHNOLOGY

<b>REQUIRED COURSES:</b>		
ENGR 104	PC Hardware and Maintenance	4
ENGR 107	Network Technology	4
ENGR 108	Networking Operating Systems	4
ENGR 109	Network and Computer Security	4
PHYS 110	Introduction to College Physics	4
		<b>Total Units 20</b>

## LIBRARY TECHNOLOGY

The library technology program trains students for paraprofessional work in school, academic, research, public and special libraries.

<b>REQUIRED COURSES:</b>		
LIBT 101	Introduction to Library Public Services	2
LIBT 102	Information Sources and Research Methods	3
LIBT 201	Introduction to Cataloging	3
LIBT 203	Introduction to Acquisitions	2
LIBT 295	Audiovisual Services	3
CSIS 130	Microcomputer Applications I	4
Plus one elective:		
LIBT 290	Children's Library Services	2
BUS 152	Business Communications	3
OFF 285	Administrative Office Procedures	3

EMPLOYMENT OPPORTUNITY: Library Technician  
**Total Units 19-20**

## MEDIUM & HEAVY DIESEL TRUCK TECHNOLOGY

These course offerings prepare students for entry-level occupations in diesel technology, medium and heavy trucks, and provide UPGRADING within these occupations. Employment positions are available in both the public and the private sector.

<b>REQUIRED COURSES:</b>		<b>Units</b>
MTRK 130	Diesel Medium/Heavy Truck Technology I	11
MTRK 230	Diesel Medium/Heavy Truck Technology II	11

EMPLOYMENT OPPORTUNITY: Maintenance Technician, Diesel Mechanic: Heavy Equipment, Marine, Off-road, Over-the-road, Stationary  
**Total Units 22**

## \*MOTORCYCLE SERVICE, DIAGNOSIS, AND REPAIR TECHNICIAN

The courses listed in the Motorcycle Service, Diagnosis and Repair Technician certificate are selected to provide a comprehensive set of job skills needed by Motorcycle technicians. The certificate is designed to prepare an individual for employment or provide the skills needed for career advancement.

<b>REQUIRED COURSES:</b>		
MOTO 101	Fundamentals of Motorcycle Service, Diagnosis and Repair	5
<b>or</b>		
AUTO 101	Fundamentals of Automotive Service, Diagnosis and Repair	5
MOTO 141	Motorcycle Engine Mechanical Systems Service, Diagnosis & Repair	4
MOTO 142	Motorcycle Power Transmission System Service, Diagnosis & Repair	5
MOTO 144	Motorcycle Chassis System Service, Diagnosis & Repair	5
MOTO 146	Motorcycle Electrical System Service, Diagnosis & Repair	4
MOTO 148	Motorcycle Engine Management System Service, Diagnosis & Repair	5
		<b>Total Units 28</b>

\*Pending Chancellor's Office Approval

## PHOTOGRAPHY

### REQUIRED COURSES

PHTO 101	Basic Photography	3
PHTO 102	Intermediate Photography	3
PHTO 103	Advanced Photography	3
PHTO 215	Electronic Photo Imaging	3

ELECTIVES: Plus three of the following

PHTO 125	Photography as an Art Medium	3
PHTO 126	Advanced Photography as an Art Medium	3
PHTO 202	Photojournalism I	3
PHTO 205	Color Photography	3
PHTO 206	Intermediate Color Photography	3

EMPLOYMENT OPPORTUNITY: Entry-level photography technician, salesperson, self-employment

**Total Units 21**

## PUBLIC WORKS I

These course offerings prepare new personnel for public works occupations and provide upgrading within these occupations. Job opportunities exist in both the public and private sectors.

### REQUIRED COURSES:

	Units	
PUB 150	Public Works I	3
PUB 151	Street Construction and Maintenance	3
PUB 155	Public Works Inspection	3
PUB 157	Asphalt and Portland Cement	3
MATH 115	Business Mathematics	3

**or higher**

Plus one of the following:

BUS 132	Ethics in Business	3
BUS 150	Business English	3
BUS 152	Business Communications	3
CSIS 107	Fundamentals of Information Technology	4
PHIL 108	Philosophy/Ethics	3
SPCH 100	Interpersonal Communication	3
SPCH 101	Public Address	3

Any Public Works classes.

EMPLOYMENT OPPORTUNITY: Public Works Employees

**Total Units 18-19**

## PUBLIC WORKS II

The following courses are required for a Public Works - Level II certificate

Completion of Level I Certificate required plus:

### REQUIRED COURSES:

PUB 160	Public Administration	3
PUB 164	Plan Interpretation and Cost Estimating	3
PUB 166	Supervision in Public Works	3
CSIS 130	Microcomputer Applications I	4

Plus two of the following:

BUS 172	Personnel Management	3
BUS 175	Introduction to Management	3
BUS 176	Management for the Office Professional	3
SPCH 100	Interpersonal Communication	3
SPCH 101	Public Address	3

Any Public Works classes.

**Total Units 19**

## PUBLIC WORKS/LANDSCAPE MANAGEMENT

This program of study will prepare students who want to enter or seek a promotion in the public landscaping field. Job opportunities include public works maintenance worker, arborist, landscape and park maintenance workers. This program is a partnership between Citrus College and Mt. San Antonio College, with course requirements that must be taken at each college (courses in Public Works are offered through Citrus, while horticulture and landscape courses are offered at Mt. SAC). Upon completion of the program requirements, students may apply for and receive a Certificate of Achievement from either of the two colleges.

### Citrus College Required Courses

	Units	
PUB 150	Public Works I	3
PUB 158	Municipal and Urban Tree	3

### Mt. San Antonio College Required Courses

AGOR 1	Horticultural Science	3
AGOR 39	Turf Management	3

**Total Units 12**

## THEATRE

### Emerging Theatre Technologies

The following courses are required for an Emerging Theatre Technologies certificate.

<b>REQUIRED COURSES:</b>		<b>Units</b>
THEA 101	Introduction to Theatre Arts	3
THEA 130	Introduction to Theatrical Scenery	3
THEA 140	Introduction to Stage Lighting	3
THEA 150	Introduction to Intelligent Lighting Systems for Theatre	3
THEA 160	Computer Aided Design for Theatre	4
THEA 245	Stage Management	3
THEA 260	Introduction to Show Production Systems	3
THEA 698C	Cooperative Education	3
THEA 699A	Cooperative Education	1
REC 135	Live Sound Reinforcement	4
REC 255	Advanced Live Sound Reinforcement	4
<b>Total Units 34</b>		

## VOCATIONAL NURSING

Successful completion of the program studies allows the student to become eligible to take the State Board Examination for Licensed Vocational Nurse-NCLEX.

<b>REQUIRED COURSES:</b>		
VNRS 150	Fundamentals of Nursing	3
VNRS 151L	Fundamentals of Nursing Lab	3
VNRS 152	Pharmacology I	1
VNRS 153	Introductory Nutrition for the Vocational Nurse	1
VNRS 154	Body Structure and Function for the Vocational Nurse I	1.5
VNRS 155	Social-Psychology for the Vocational Nurse	1
VNRS 160	Medical-Surgical Nursing I	3
VNRS 161L	Medical-Surgical Nursing I Lab	3
VNRS 162	Pharmacology II	1
VNRS 163	Diet Therapy for the Vocational Nurse	1
VNRS 164	Body Structure and Function for the Vocational Nurse II	1.5
VNRS 165	Growth and Development: Young Adult - Elderly	1
VNRS 170	Medical-Surgical Nursing II	7
VNRS 171L	Medical-Surgical Nursing II Lab	7
VNRS 172	Advanced Pharmacology	2
VNRS 173	Psychology for Vocational Nurses	2
VNRS 180	Pediatric Nursing	3
VNRS 181	Growth and Development: Infancy-Adolescence	1

		<b>Units</b>
VNRS 182	Obstetrical-Gynecological Nursing	4
VNRS 183	Leadership in Nursing	3

EMPLOYMENT OPPORTUNITY: Vocational Nurse

**Total Units 50**

## WATER TECHNOLOGY

This program is designed to prepare students who wish to seek employment in the public water supply industry or qualify for a more responsible position within the industry. These courses will be helpful to students who wish to prepare for the T1, T2, T3, T4 and T5 Water Treatment Operator and D1, D2, D3, D4, and D5 Water Distribution Operator certification examinations given by the Department of Health Services. Coursework also provides contact hours for Operator certification maintenance requirements.

### REQUIRED COURSES:

MATH 115	Business Mathematics <b>or higher</b>	3
WATR 150	Introduction to Water Systems	3
WATR 151	Water Resources and Distribution I	3
WATR 156	Water Treatment I	3
WATR 153	Water Resources and Distribution II <b>or</b>	3
WATR 157	Water Treatment II	3
Select one course from the following:		
BUS 152	Business Communications	3
BIOL 145	Environmental Science	3
CSIS 107	Fundamentals of Information Technology	4
CSIS 130	Microcomputer Applications I - Introductory MS Office	4
PUB 155	Public Works Inspection	3
PUB 160	Public Administration	3
PUB 161	California Occupational Safety and Health	3
PUB 166	Supervision in Public Works	3
SPCH 101	Public Address	3
SPCH 106	Small Group Communication	3
WATR 162	Water Conservation	3

Employment Opportunity: Pumping Station Operator, Water Line Worker, Water Maintenance Mechanic Helper, Water Motor Installer, Water Service Dispatcher, Treatment Plant Operator

**Total Units 18-19**

## WEB DESIGN

### Digital and Web Design

The Digital and Web Design certificate is designed to introduce and develop the basic skills necessary for success as an entry level graphic, digital or web designer. Fundamental to the core of a strong design sensibility, the computer is an essential tool for design success and a compliment to composition, design principles, layout, and typography.

<b>REQUIRED COURSES:</b>		<b>Units</b>
ART 111	Beginning Drawing	3
ART 120	Two-Dimensional Design	3
ART 150	Computer Art Basics	3
ART 153	Digital Media Production I	3
ART 158	Commercial Graphic Design	3
ART 162	Computer Graphics I	3
ART 167	Web Design I	3
ART 168	Computer Animation I	3
ART 189	Art Portfolio and Resume Production	3
PHTO 101	Basic Photography	3
<b>Total Units</b>		<b>30</b>

### Advanced Digital and Web Design

This certificate advances the student further into a digital design environment. Project and portfolios will reflect a higher level of understanding and execution from the designer.

<b>REQUIRED COURSES:</b>		
Digital and Web Design certificate		30
ART157	Digital Color File Manipulation	3
ART163	Computer Graphics II	3
ART253	Digital Media Production II	3
ART257	Projects: Advanced Digital Portfolio	3
ART267	World Wide Web Design II	3
DRAF190	Computer Imaging Practices for Industry and Architecture	3
<b>Total Units</b>		<b>48</b>

