

2023-2024

CAREER and TECHNICAL EDUCATION HANDBOOK





RIVERSIDE COMMUNITY COLLEGE DISTRICT

Wolde-Ab Isaac, Ph.D., Chancellor

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Alternate formats for this material are available to individuals requiring disability accommodation. Please contact the office of Diversity, Equity and Compliance at (951) 222-8039.

WELCOME

Career Educated Professionals Are In Demand in Every Industry

Fast, focused career programs can lead to employment in as little as one semester. The Riverside Community College District offers virtually unlimited options for career education degrees and certificates in high-demand fields like business, healthcare, cybersecurity and IT, energy, construction, and more!

Regional job growth is expanding at nearly double the national rate.

Middle-skill jobs, which require education beyond high school but not a four-year degree, make up the largest part of the labor market in the United States!

Career education certificate holders increase their earnings by nearly 30% on average, according to the Aspen Institute.

70% of all future jobs will require more education than a high school diploma.

Why the “Middle-Skills Job Gap” is Good for You

Middle-skill jobs are those occupations that require more education than a high school diploma, but are not a four-year degree. According to the Public Policy Institute of California, California was predicted to be facing a middle-skill job gap of up to 1.5 million workers by 2025. Not surprisingly, this gap increased due to the COVID-19 pandemic. This is especially alarming for the Inland Empire region, which is among the state’s fastest-growing, yet least-prepared economies, in terms of education and training.

While this demand poses a challenge for regional employers, it represents a huge opportunity for people looking for secure careers and great salaries. All you need is the right education to gain entry into these in-demand fields. And that’s exactly what the Riverside Community College District career education programs provide.

If you’re ready for a high-demand, high-paying career, you’ve come to the right place!



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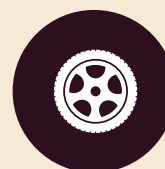
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STEPS TO ENROLL

ADMISSIONS APPLICATION

Students only need to apply to **one** of the three colleges within Riverside Community College District (RCCD). The college to which you apply will be your Home College. This is where you will receive services related to assessment, counseling, and financial aid. You can still take classes at **any** of the three college sites, or online.

STEP
1

TO APPLY:

MORENO VALLEY COLLEGE: www.mvc.edu and click the *Apply for College* link

NORCO COLLEGE: www.norcocollege.edu and click the *Apply Now* link

RIVERSIDE CITY COLLEGE: www.rcc.edu and click the *Apply Here* link

STEP
2

ORIENTATION:

Orientation introduces you to terminology, academic programs, and student services and gives you planning tools you'll need to succeed in college. To access the online orientation, log on to your WebAdvisor account and click on the *Take Your Online Orientation* link under the **Academic Planning** header.

STEP
3

PLACEMENT SURVEY:

This will assist in placing you in the class best suited to your skills. As of October 2018, the placement survey is completed during the application process. You either completed this step through the admissions application or a survey that was sent to your email address. To check for your placements, login to WebAdvisor/MyPortal, go to **Academic Planning**, then click on *Placement Test Summary* to view your results. If you do not see MMAP English or MMAP math placements, go back to **Academic Planning**, then click on *Placement Survey* to complete the survey for placements.

STEP
4

ABBREVIATED STUDENT EDUCATIONAL PLAN:

MORENO VALLEY COLLEGE: Students connect with an educational advisor virtually or in person to create the first semester educational plan and to gain a better understanding of the courses needed for their first term. Email: movaac@mvc.edu • Text: (951) 472-2176

NORCO COLLEGE: Students schedule an appointment to meet with an educational advisor to create the first semester educational plan and to gain a better understanding of the placement results and courses needed. Phone: (951) 372-7176 • Email: norcoEC@norcocollege.edu

RIVERSIDE CITY COLLEGE: View your Abbreviated Educational Plan/Trailhead and Placement Summary under **Academic Planning** for suggested first-term courses on <https://portal.rcc.edu>.

STEP
5

COUNSELING:

Students are encouraged to meet with a counselor to receive information on which courses to take to meet their educational and career goals.

STEP
6

CAREER AND TECHNICAL EDUCATION ENGAGEMENT CENTER:

Students are encouraged to visit the MVC or RCC Career and Technical Education Engagement Center to get assistance from educational advisors and support team.

Note: Make sure to activate your student email address. This is how the college will communicate important information and updates including registration date, available courses, schedule changes, waitlist status, and more.



APPRENTICESHIPS

Apprenticeships are an effective approach for assisting students with knowledge and skills needed in the area of study. There are a number of positives when choosing whether to participate in an apprenticeship, such as a career exploration, strengthening your professionalism, resume building, and improving classroom performance. Apprenticeships also allow students to earn while they learn while experiencing the rigors of their chosen field of study. At the conclusion of an apprenticeship, the student will have developed industry needed qualifications which can lead to improved employability upon graduation. An apprenticeship is all about transferring a student's skillset from the classroom to industry.

WHAT IS AN APPRENTICE?

Apprentices learn the skills of an occupation while earning a paycheck and completing on-the-job training combined with related instruction.

HOW DO I GET STARTED?

Apprenticeship programs are run by different entities. Some individual companies run internal apprenticeship programs and other times trade unions and employer associations sponsor apprenticeship programs and work with large employer groups.

The best method for getting started is to begin researching programs in occupations you are interested in pursuing. You can use the state's database of approved apprenticeship programs to find contact information for programs available in your area at <https://launchapprenticeship.org>.

Norco College works with apprenticeship programs in the region and can assist you with getting information on the occupations and programs in your area.

Riverside City College currently offers apprenticeship programs in the following occupations:

Automotive:¹

Automotive Service Tech and Mechanic

Culinary:²

Cook

Pastry Cook

Early Childhood Education:¹

Teacher

Master Teacher

School Site Supervisor

Healthcare:¹

CNA to LVN (Licensed Vocational Nurse)

LVN to RN (Registered Nurse)

Information Technology:¹

Cyber Security Support Technician

Information Technology Specialist

The students will be taking courses to achieve a certificate and/or degree in their chosen pathway while being employed as an apprentice with a local apprenticeship employer partner. Their tuition is waived, and their apprenticeship is registered with the Division of Apprenticeship Standards for the State of California and the U. S. Department of Labor. They will receive an apprenticeship from each upon completion of the apprenticeship program.

¹ These apprenticeship programs are competency based and are completed when registered courses are completed and registered skills competencies are met.

² The Culinary Apprenticeship program is registered with the Division of Apprenticeship Standards for the State of California and the American Culinary Foundation. This apprenticeship program is time based. The standard is 4000 hours, 10 stations for Cook and 5 stations for Pastry Cook.



APPRENTICESHIP

Apprenticeship: Manufacturing Technician I (N) NCE968

Required Courses (14-16 units) – 4-6 courses

Certificate Course Requirements	Units
APP-450 Apprenticeship Work Experience	8
Electives	6-8
Electives (6-8 units)	
DFT/ENE-42 SOLIDWORKS I	3
DFT/ENE-51 Blueprint Reading	2
ENE-30 Computer Aided Drafting (CAD)	3
ENE-62 Math for Automated Systems	3
MAN-35 Computer Aided Manufacturing	5
MAN/ELE-55 Occupational Safety and Health Administration (OSHA) Standards for General Industry	1
MAN-56 CNC Machine Set-up and Operation	4
MAN-57 CNC Program Writing	3

Apprenticeship: Manufacturing Technician II (N)

Associate of Science Degree*
NAS967/NAS967B/NAS967C/NCE967

Required Courses (30-31 units) – 6-8 courses

Degree Course Requirements	Units
APP-450 Apprenticeship Work Experience	16
Electives	14-15
Electives (14-15 units)	
DFT/ENE-30 Computer Aided Drafting (CAD)	3
DFT/ENE-42 SOLIDWORKS I	3
DFT/ENE-51 Blueprint Reading	2
ENE-60 Math for Engineering Technology OR ENE-62 Math for Automated Systems	3
MAN-35 Computer Aided Manufacturing	5
MAN-36 General Machine Shop and Theory of Machining	4
MAN/ELE-55 Occupational Safety and Health Administration (OSHA) Standards for General Industry	1
MAN-56 CNC Machine Set-up and Operation	4
MAN-57 CNC Program Writing	3

Sound and Communication Systems Installer Apprenticeship (N)

Associate of Science Degree*
NAS644/NAS644B/NAS644C/NCE644

Required Courses (37 units) – 7 courses

Degree Course Requirements	Units
ELE-420 Intro to Sound/Communication	3.5
ELE-421 Electrical Theory and Practices DC	3.5
ELE-422 Electrical Theory and Practices AC	3.5
ELE-423 Semiconductor Electronics	3.5
ELE-424 Intro to Digital Electronics and Signaling Devices	3.5
ELE-425 Management/Alarms/Codes/Circuits	3.5
ELE-499 Work Experience in Electricians Apprenticeship	1-4

Applicants for Riverside/San Bernardino/Mono/Inyo counties should be directed to the Riverside and San Bernardino Joint Electrical Apprenticeship Training Committees, 1855 Business Center Drive, San Bernardino, CA 92408. Telephone: (909) 890-1703.

Electrician Apprenticeship (N)

Associate of Science Degree*
NAS485/NAS485B/NAS485C/NCE485

Required Courses (35 units) – 10 courses

Degree Course Requirements	Units
ELE-400 Introduction to the Electrical Trades and Construction Safety	3.5
ELE-401 Introduction to Electrical Theory, Basic Math Concepts, and the National Electric Code	3.5
ELE-402 Advanced DC Circuit Concepts, Introduction to 3-Phase AC Circuits, Test Equipment, and National Electric Code Applications	3.5
ELE-403 AC Circuit Concepts, Applied Electronics, and National Electric Code Applications	3.5
ELE-404 Digital Logic Circuits, Conductor Characteristics, Applications, and National Electric Code (NEC)	3.5
ELE-405 Electrician Blueprint Reading with Code Applications for National Electrical Code (NEC)	3.5
ELE-406 Grounding Systems, Advanced Blueprints and Specifications, Motor Design and Installation, and National Electric Code	3.5
ELE-407 Motor Control Principles, Generators and Power Supplies, with National Electric Code (NEC)	3.5
ELE-408 Transformer Theory, Leadership, Management, and Test Equipment	3.5
ELE-409 Electrician Specialty Systems	3.5

* The Associate of Science Degree will be awarded upon completion of the degree requirements, including general education and other graduation requirements as described in the college catalog.



ARTS, MEDIA and ENTERTAINMENT

The days of working in the arts and being a “starving artist” are over. Entertainment, especially in California, is big business. According to PricewaterhouseCoopers, the U.S. media and entertainment market is projected to grow to \$825 billion by 2023, making it the largest media and entertainment market in the world. As the future of media continues to merge with new and emerging technologies, the demand for technologically savvy designers and creative professionals will continue to grow.

Unlike other career pathways, jobs in the Arts, Media, and Entertainment sector tend to be cross-disciplinary, demanding a constantly changing combination of imaginative and hands-on skills. Students in this sector generally study across a mix of several different academic disciplines, in order to acquire a mix of technical and creative skills, as well as the ability to work both independently and collaboratively.



TYPES OF CAREERS

- Stage Manager
- Recording Studio Assistant
- Special Effects Coordinator
- Web Designer
- Prop Maker
- Photographer
- Graphic Designer/Artist
- Filmmaker
- Camera Operator
- Screen Writer
- Photojournalist
- Music Minister
- Radio/Television Broadcaster
- Gaffer
- Negative Cutter
- Key Production Grip

SALARY SNAPSHOT

- Musicians & Singers \$59,384 / \$28.55 hourly
- Writers & Authors \$54,018 / \$25.97 hourly
- Film & Video Editors \$62,504 / \$30.05 hourly
- Camera Operators \$53,768 / \$25.85 hourly
- Photographers \$51,085 / \$24.56 hourly
- Broadcast Technicians \$59,738 / \$28.72 hourly
- Sound Engineering Technicians \$59,758 / \$28.73 hourly
- Commercial & Industrial Designers \$64,626 / \$31.07 hourly

INDUSTRY SECTOR PATHWAYS

- Animation, 3D Animation, Motion Graphics
- Audio Production, Radio Production
- Audio/Music Technology, Music Industry Studies, Commercial Music
- Dance, Pilates
- Film/Television/Video Production/Electronic Media
- Journalism
- Multimedia: Art/Digital Media, Graphic Design
- Music Performance, Jazz, Piano
- Music Technology, Songwriting
- Photography, Digital Photography
- Post-Production Editing
- Printing Production
- Screenwriting
- Theatre Arts, Technical Theatre, Musical Theatre
- Game Art/Design, Game Programming

APPLIED DIGITAL MEDIA and PRINTING

Animation (R) CE973

Required Courses (15 units) – 5 courses

Certificate Course Requirements	Units
ART-40A Figure Drawing - Introduction OR ART-41A Figure Painting - Introduction	3
ART-44A Beginning Animation Principles	3
ART-50A Beginning Storyboarding	3
ART-51A Beginning Animation Production	3
Electives: Choose One From List Below (3 units)	
ART-22 Basic Design	3
ART-24 Three Dimensional Design	3
ART-36A Computer Art - Introduction	3
ADM-67 Multimedia Animation	3
ADM-68A 3D Animation with Maya I	3
ADM-68B 3D Animation with Maya II	3
ADM-69 Motion Graphics and Special Effects with After Effects	3
FTV-48 Short Film Production	3
FTV-74 Production Planning and Management	3
PHO-20 Introduction to Digital Photography	3

Basic Graphic Communication (R) CE949

Required Courses (20 units) – 7 courses

Certificate Course Requirements	Units
ADM-1 Introduction to Applied Digital Media	3
ADM-2B Prepress and Printing Substrates	2
ADM-63A Design for Print Publication	3
ADM-71A Adobe Photoshop for Image Manipulation OR ADM-77A Adobe Illustrator for Graphic Art	3
ADM-84A Screen Printing	3
ADM-85A Commercial Printing	3
Electives: Choose One From List Below (3 units)	
ADM-84B Screen Printing, Advanced	3
ADM-85B Commercial Printing, Advanced	3

Basic Graphic Design (MR) MCE939/CE939

Required Courses (17 units) – 6 courses

Certificate Course Requirements	Units
ADM-1 Introduction to Applied Digital Media	3
ADM-2A Color Systems and File Management	2
ADM-62 Typography and Graphic Design	3
ADM-63A Design for Print Publication	3
ADM-71A Adobe Photoshop for Image Manipulation	3
ADM-77A Adobe Illustrator for Graphic Art	3

Electronic Publishing and Design (R) CE951

Required Courses (17 units) – 6 courses

Certificate Course Requirements	Units
ADM-2A Color Systems and File Management	2
ADM-63A Design for Print Publication	3
ADM-63B Design for Electronic Publication OR ADM-74B Web Design with Dreamweaver	3
ADM-71A Adobe Photoshop for Image Manipulation	3
ADM-74A Web Design	3
ADM-77A Adobe Illustrator for Graphic Art	3

Graphic Design (N)

Associate of Science Degree*

NAS647/NAS647B/NAS647C/NCE647

Required Courses (26 units) – 9 courses

Degree Course Requirements	Units
ART-22 Basic Design	3
ART-39 Design and Graphics	3
CIS-44 Portfolio Production	2
CIS-59/ADM-62 Typography and Graphic Design	3
CIS-66 Web Development I OR CIS-72A Introduction to Web Page Production AND CIS-72B Intermediate Web Page Creation Using Cascading Style Sheets (CSS)	1.5
CIS-72B Intermediate Web Page Creation Using Cascading Style Sheets (CSS)	1.5
CIS/CAT-78A Introduction to Adobe Photoshop	3
CIS-78B Advanced Adobe Photoshop	3
CIS/CAT-79 Introduction to Adobe Illustrator	3
CIS-81 Introduction to Adobe InDesign	3

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Graphic Design and Digital Media (R)

Associate of Science Degree*

AS950/AS950B/AS950C/CE950

Required Courses (37 units) – 11-12 courses

Degree Course Requirements	Units
ADM-1 Introduction to Applied Digital Media	3
ADM-2A Color Systems and File Management	2
ADM-2B Pre-press and Printing Substrates	2
ADM-62 Typography and Graphic Design	3
ADM-63A Design for Print Publication	3
ADM-63B Design for Electronic Publication	3
ADM-70 Project Production and Portfolio	3
ADM-71A Adobe Photoshop for Image Manipulation	3
ADM-71B Adobe Photoshop, Advanced	3
ADM-77A Adobe Illustrator for Graphic Art	3
ADM-77B Adobe Illustrator, Advanced	3



Electives: Choose 2 from List Below (6 units)	Units
Business Emphasis:	
ADM-55 Business Management for Graphic Communications	3
MKT-40 Advertising	3
Digital Animation Emphasis:	
ADM-68A 3D Animation with Maya I	3
AND	
ADM-68B 3D Animation with Maya II	3
OR	
ART-50A Beginning Storyboarding	3
AND	
ART-50B Intermediate Storyboarding	3
Digital Illustration Emphasis:	
ART-36A Computer Art - Introduction	3
ART-36B Computer Art - Intermediate	3
Digital Media and Production Emphasis:	
FTV-64A Beginning Digital Editing Principles and Techniques	3
PHO-20 Introduction to Digital Photography	3
Motion Graphics Emphasis:	
ADM-67 Multimedia Animation	3
ADM-69 Motion Graphics and Special Effects with After Effects	3
Web Design Emphasis:	
ADM-74A Web Design	3
AND	
ADM-74B Web Design with Dreamweaver	3
OR	
CIS-72A Introduction to Web Page Creation	1.5
AND	
CIS-72B Intermediate Web Page Creation using Cascading Style Sheets (CSS)	1.5
AND	
CIS-76B Introduction to Dreamweaver	3

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Graphic Design and Printing (R)

Associate of Science Degree*

AS653/AS653B/AS653C/CE653

Required Courses (34 units) – 12 courses

Degree Course Requirements	Units
ADM-1 Introduction to Applied Digital Media	3
ADM-2A Color Systems and File Management	2
ADM-2B Prepress, Paper and Ink	2
ADM-55 Business Mgmt for Graphic Communications	3
ADM-63A Design for Print Publication	3
ADM-70 Project Production and Portfolio	3
ADM-71A Adobe Photoshop for Image Manipulation	3
ADM-77A Adobe Illustrator for Graphic Art	3
ADM-84A Screen Printing	3
ADM-85A Commercial Printing	3
Electives: Choose 2 from List Below (6 units)	
Graphic Design Emphasis:	
ADM-62 Typography and Graphic Design AND ADM-63B Design for Electronic Publication OR ADM-71B Adobe Photoshop, Advanced OR ADM-77B Adobe Illustrator, Advanced	3 3 3 3
Commercial Printing Emphasis:	
ADM-84B Screen Printing, Advanced	3
ADM-85B Commercial Printing, Advanced	3
Cross Discipline Emphasis:	
ADM-67 Multimedia Animation	3
ADM-68A 3D Animation with Maya I	3
ADM-68B 3D Animation with Maya II	3
ADM-69 Motion Graphics and Special Effects w/After Effects	3
ADM-74A Web Design	3
ADM-74B Web Design with Dreamweaver	3
ADM-200 Applied Digital Media and Printing Work Exper.	1-4
ART-22 Basic Design	3
ART-23 Color Theory and Design	3
ART-36A Computer Art - Introduction	3
ART-36B Computer Art - Intermediate	3
FTV-64A Beginning Digital Editing Principles and Techniques	3
MKT-40 Advertising	3
PHO-20 Introduction to Digital Photography	3

Motion Graphics and 3D Animation (R)

CE952

Required Courses (17 units) – 6 courses

Certificate Course Requirements	Units
ADM-2A Color Systems and File Management	2
ADM-67 Multimedia Animation	3
ADM-68A 3D Animation with Maya I	3
ADM-68B 3D Animation with Maya II	3
ADM-69 Motion Graphics and Special Effects with After Effects	3
ADM-71A Adobe Photoshop for Image Manipulation	3

APPLIED DIGITAL MEDIA and PRINTING NONCREDIT

Graphic Design and Promotional Printing Entrepreneur (R)

CC8042

Required Courses (64 hours) – 4 courses

Certificate Course Requirements	Hours
ADM-801 Design Process for Graphic Design and Printing Entrepreneur	16
ADM-802 Adobe Illustrator for Graphic Design and Printing Entrepreneur	16
ADM-803 Adobe Photoshop for Graphic Design and Printing Entrepreneur	16
ADM-804 Promotional Printing for Graphic Design and Printing Entrepreneur	16

FILM, TELEVISION and VIDEO

Basic Television Production (R)

CE996

Required Courses (14 units) – 5 courses

Certificate Course Requirements	Units
FTV-38A Beginning Film, Television and Video Production Project	3
FTV-44A Beginning Television Production	3.5
FTV-45A Beginning Television News Production	3.5
FTV-51A Film, Television and Video Laboratory I	1
FTV-64A Beginning Digital Editing Principles and Techniques	3

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Film, Television and Electronic Media (R)

Associate Degree for Transfer**

CSUGE AS993/IGETC AS994

Required Courses (18-18.5 units) – 6 courses

Degree Course Requirements	Units
REQUIRED CORE - Choose two	
FTV-41 Introduction to Telecommunications	3
FST-1/1H Introduction to Film Studies/Honors	3
LIST A Select one course from each area	
Area 1: Audio	
FTV-71A Beginning Sound Engineering for Audio in Media	3
Area 2: Video or Film Production	
FTV-48 Short Film Production	3
LIST B Select one course	
FTV-38A Beginning Film, Television and Video Production Project	3
LIST C Select one CSU transferable FTV or FST course below	
FST-2 Television Studies	3
FST-3 International Cinema	3
FST-4 Film Genres	3
FST-5 Fiction and Film: Adaptation	3
FTV-12 American Film History	3
FTV-42 Writing for Broadcast Television	3
FTV-44A Beginning Television Production	3.5
FTV-64A Beginning Digital Editing	3
FTV-65 The Director's Art	3
FTV-72 Lighting	3
FTV-79 Special Effects	3

**Associate in Arts for Transfer Degree

The Associate in Arts in Film, Television and Electronic Media for Transfer Degree (AA-T in Film, Television and Electronic Media) will be awarded upon completion of 60 California State University (CSU) transferable units including the above major requirements and the Intersegmental General Education Transfer Curriculum (IGETC) or California State University General Education (CSUGE) requirements with a minimum grade point average of 2.0. All courses in the major must be completed with a grade of "C" or better (or a "P" if taken as Pass/No Pass).

Film, Television and Video - Production Specialist (R)

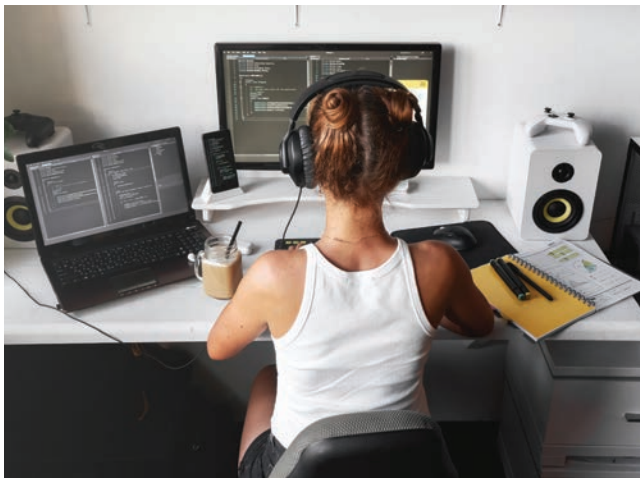
Associate of Science Degree*

AS641/AS641B/AS641C/CE641

Required Courses (29-30 units) – 11-12 courses

Degree Course Requirements	Units
FTV-41 Introduction to Telecommunications	3
FTV-44A Beginning Television Production	3.5
FTV-45A Beginning Television News Production	3.5
FTV-48 Short Film Production	3
FTV-51A Film, Television and Video Laboratory I	1
FTV-64A Beginning Digital Editing Principles and Techniques	3
Electives - Choose from list A below	3-4
Emphasis - Select 9 units from one emphasis - Production Emphasis OR Sound Engineering Emphasis	9
List A Choose 3-4 units from the following:	
FTV-38A Beginning Film, Television and Video Production Project	3
FTV-38B Advanced Film, Television and Video Production Project	3
FTV-200 Film, Television and Video Work Experience	1-4
Production Emphasis: Choose 9 units from the following:	
ADM-69 Motion Graphics and Special Effects with After Effects	3
ADM-71A Adobe Photoshop for Image Manipulation	3
ENG-38A Screenwriting: Beginning	3
ENG-38B Screenwriting: Intermediate	3
ENG-38C Screenwriting: Advanced	3
FTV-12 History of Film	3
FTV-51B Film, Television and Video Laboratory II	1
FTV-52 Film, Television and Video Laboratory	2
FTV-72 Introduction to Lighting Design for Film and Television	3
FTV-74 Production Planning and Management	3
FTV-77 Intermediate Lighting Techniques for Film	3
FTV-79 Introduction to Special Effects Makeup for Film, Television and Video	3
PHO-8 Introduction to Photography	3
Sound Engineering Emphasis: Choose 9 units from the following:	
FTV-53 Telecommunications Laboratory	3
MUS-8A Music Technology I	3
MUS-8B Music Technology II	3

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GAME DEVELOPMENT

3D Game Modeling and Animation (N)

Associate of Science Degree*
NAS972/NAS972B/NAS972C/NCE972

Required Courses (27 units) – 9 courses

Degree Course Requirements	Units
GAM-1 Business of Video Games	3
GAM-2 History of Video Games	3
GAM-3A Game Design	3
GAM-4A Game Scripting	3
GAM-5A Concept Art	3
GAM-6A 3D Digital Modeling	3
GAM-6B 3D Animation	3
GAM-7 Game Studio	3
GAM-8 Current Topics in Game Development	3

Game Concept Art (N)

Associate of Science Degree*
NAS971/NAS971B/NAS971C/NCE971

Required Courses (27 units) – 9 courses

Degree Course Requirements	Units
GAM-1 Business of Video Games	3
GAM-2 History of Video Games	3
GAM-3A Game Design	3
GAM-4A Game Scripting	3
GAM-5A Concept Art	3
GAM-5B Advanced Concept Art	3
GAM-6A 3D Digital Modeling	3
GAM-7 Game Studio	3
GAM-8 Current Topics in Game Development	3

Game Design (N)

Associate of Science Degree*
NAS685/NAS685B/NAS685C/NCE685

Required Courses (27 units) – 9 courses

Degree Course Requirements	Units
GAM-1 Business of Video Games	3
GAM-2 History of Video Games	3
GAM-3A Game Design	3
GAM-3B Advanced Game Design	3
GAM-4A Game Scripting	3
GAM-5A Concept Art	3
GAM-6A 3D Digital Modeling	3
GAM-7 Game Studio	3
GAM-8 Current Topics in Game Development	3

Game Development Core (N)

Associate of Science Degree*
NAS970/NAS970B/NAS970C/NCE970

Required Courses (21 units) – 7 courses

Degree Course Requirements	Units
GAM-1 Business of Video Games	3
GAM-2 History of Video Games	3
GAM-3A Game Design	3
GAM-4A Game Scripting	3
GAM-5A Concept Art	3
GAM-6A 3D Digital Modeling	3
GAM-7 Game Studio	3

Game Programming (N)

Associate of Science Degree*
NAS691/NAS691C/NCE691

Required Courses (27 units) – 9 courses

Degree Course Requirements	Units
GAM-1 Business of Video Games	3
GAM-2 History of Video Games	3
GAM-3A Game Design	3
GAM-4A Game Scripting	3
GAM-4B Advanced Game Scripting	3
GAM-5A Concept Art	3
GAM-6A 3D Digital Modeling	3
GAM-7 Game Studio	3
GAM-8 Current Topics in Game Development	3

* The Associate of Science Degree will be awarded upon completion of the degree requirements, including general education and other graduation requirements as described in the college catalog.



JOURNALISM

Journalism (M)

Associate Degree for Transfer**
CSUGE MAA670/IGETC MAA671

Required Courses (9 units) – See College catalog for degree requirements.

Degree Course Requirements	Units
JOU-1 Introduction to Journalism	3
JOU-7 Mass Communications	3
JOU-20A Newspaper: Beginning	3
List A Select from the list below	3
List B Select from the list below	6-7
List A: Choose 3 units	
JOU-2 Intermediate Reporting/Newswriting	3
List B: Choose 6 units	
MAT-12 Statistics	4
ECO-7/7H Principles of Macroeconomics/ Honors	3
POL-1/1H American Politics/ Honors	3
POL-2/2H Comparative Politics/ Honors	3
PHI-32 Introduction to Symbolic Logic	3
COM-3 Argumentation and Debate	3

**Associate in Arts for Transfer Degree

The Associate in Arts in Journalism for Transfer Degree (AA-T in Journalism) will be awarded upon completion of 60 California State University (CSU) transferable units including the above major requirements and the Intersegmental General Education Transfer Curriculum (IGETC) or California State University General Education (CSUGE) requirements with a minimum grade point average of 2.0. All courses in the major must be completed with a grade of "C" or better (or a "P" if taken as Pass/No Pass).

Journalism (R)

Associate Degree for Transfer**
CSUGE AA670/IGETC AA671

Required Courses (60 units) – See College catalog for degree requirements.

Degree Course Requirements	Units
JOU-1 Introduction to Journalism	3
JOU-7 Mass Communications	3
JOU-20A Newspaper: Beginning	3
List A Select from the list below	3
List B Select from the list below	6-7
List A: Choose 3 units	
JOU-2 Intermediate Reporting/Newswriting	3
JOU/PHO-12 Photojournalism	3
JOU-20B Newspaper: Intermediate	3
List B: Choose 6-7 units	
COM-3 Argumentation and Debate	3
ENG-1B/1BH Critical Thinking and Writing/Honors	4
ENG-11 Creative Writing	3
PHI-11 Critical Thinking	3
PHO-8+ Introduction to Photography OR PHO-20+ Introduction to Digital Photography	3

*Students may choose to take PHO-8 or PHO-20 to fulfill the List B requirement, but not both.

**Associate in Arts for Transfer Degree

The Associate in Arts in Journalism for Transfer Degree (AA-T in Journalism) will be awarded upon completion of 60 California State University (CSU) transferable units including the above major requirements and the Intersegmental General Education Transfer Curriculum (IGETC) or California State University General Education (CSUGE) requirements with a minimum grade point average of 2.0. All courses in the major must be completed with a grade of "C" or better (or a "P" if taken as Pass/No Pass).





MUSIC INDUSTRY STUDIES

Audio Production (N)

Associate of Science Degree*

NAS684/NAS684B/NAS684C/NCE684

Required Courses (36-38 units) – 12-14 courses

Degree Course Requirements	Units
MIS-1A Beginning Performance Techniques for Studio Recording	2
MIS-1B Intermediate Performance Techniques for Studio Recording	2
MIS-1C Advanced Performance Techniques for Studio Recording	2
MIS-2 Songwriting	2
MIS-3 Digital Audio Production 1	4
MIS-4 Digital Audio Production 2	4
MIS-7 Introduction to Music Technology	3
MIS-12 Live Sound Reinforcement	3
MIS-13 Recording Studio Workshop I	3
MUS-3 Fundamentals of Music	4
MUS-93 The Business of Music	3
Electives	4-6
Elective Courses (4-6 units from the following):	
MUS-4 Music Theory I	4
MUS-23 History of Rock and Roll	3
MUS-32A Class Piano I	2
MUS-32B Class Piano II	2
MUS-32C Class Piano III	2
MUS-38 Beginning Applied Music I	2
MUS-39 Applied Music I	3
MIS-200 Music Industry Studies Work Experience	1-4

Performance (N)

Associate of Science Degree*

NAA645/NAA645B/NAA645C/NCE645

Required Courses (36-37 units) – 12-14 courses

Degree Course Requirements	Units
MIS-1A Beginning Performance Techniques for Studio Recording	2
MIS-1B Intermediate Performance Techniques for Studio Recording	2
MIS-1C Advanced Performance Techniques for Studio Recording	2
MIS-11B Studio Arts Ensemble (2x)	2
MUS-3 Fundamentals of Music	4
MUS-3 Fundamentals of Music	4
MUS-39 Applied Music II (2x)	3
MUS-41 Chamber Singers (4x) OR	2
MUS-41 Chamber Singers (2x) AND	2
MIS-81 Concert Singers (2x)	2
OR MIS-11A Studio Arts Ensemble (2x)	2
MUS-79 Intermediate Applied Music II (2x)	3
MUS-93 The Business of Music	3
Electives	3-4
Elective Courses (3-4 units from the following):	
MIS-3 Digital Audio Production	1-4
MIS-7 Introduction to Music Technology	3
MUS-4 Music Theory I	4
MUS-23 History of Rock and Roll	3
MUS-32A Class Piano I	2
MUS-32B Class Piano II	2
MUS-32C Class Piano III	2

* The Associate of Science Degree will be awarded upon completion of the degree requirements, including general education and other graduation requirements as described in the college catalog.

PHOTOGRAPHY

Crime Scene Photography Essentials (R) CE1026

Required Courses (9 units) – 3 courses

Certificate Course Requirements	Units
ADJ/PHO-27 Crime Scene Photography	3
PHO-20 Introduction to Digital Photography	3
Electives	3
Elective Courses (3 units from the following):	
PHO-9 Intermediate Photography	3
PHO-23 Drone Photography	3

Entrepreneurial Photography (R)

Associate of Science Degree*
AS1037/AS1037B/AS1037C/CE1037

Required Courses (18 units) – 6 courses

Degree Course Requirements	Units
PHO-8 Introduction to Photography OR PHO-20 Introduction to Digital Photography	3
PHO-9 Intermediate Photography	3
PHO-14 Lighting for Photographers	3
PHO-19 Color Correction and the Photographic Portfolio	3
Electives	6
Elective Courses (6 units from the following):	
PHO-15 Wedding and Event Photography	3
PHO-18 Photoshop, Lightroom, and Printing for Photographers	3
PHO-22 Photography for Social Media	3
PHO-67 Business Practices for Photographers	3

FUN FACT:

Of all the career industries, the Arts, Media, and Entertainment sector requires perhaps the greatest crossdisciplinary skills because the work in this sector has a propensity to be largely project-based, requiring both independent work and interdependent management skills for career success.



Photography (R)

Associate of Science Degree*
AS592/AS592B/AS592C/CE592

Required Courses (12 units) – 5 courses

Degree Course Requirements	Units
PHO-8 Introduction to Photography OR PHO-20 Introduction to Digital Photography	3
PHO-9 Intermediate Photography	3
PHO-14 Lighting for Photographers	3
PHO-19 Color Correction and the Photographic Portfolio	3
Electives	6
Elective Courses (6 units from the following):	
PHO-7 Medium and Large Format Film Photography	3
PHO-11 Commercial and Advertising Photography	3
PHO-12 Photojournalism	3
PHO-23 Drone Photography	3
ADJ/PHO-27 Forensic & Crime Scene Photography	3

* The Associate of Science Degree will be awarded upon completion of the degree requirements, including general education and other graduation requirements as described in the college catalog.

Professional Photography Essentials (R) CE1031

Required Courses (9 units) – 3 courses

Certificate Course Requirements	Units
PHO-14 Lighting for Photographers	3
PHO-20 Introduction to Digital Photography	3
PHO-67 Business Practices for Photographers	3

Special Event Photography Essentials (R) CE1032

Required Courses (12 units) – 4 courses

Certificate Course Requirements	Units
PHO-15 Wedding and Event Photography	3
PHO-19 Color Correction and the Photographic Portfolio	3
PHO-20 Introduction to Digital Photography	3
PHO-67 Business Practices for Photographers	3

Photojournalism Essentials (R) CE1030

Required Courses (12 units) – 4 courses

Certificate Course Requirements	Units
PHO-12 Photojournalism	3
PHO-14 Lighting for Photographers	3
PHO-20 Introduction to Digital Photography	3
PHO-67 Business Practices for Photographers	3

SIMULATION and GAMING

Simulation and Gaming: Game Art (M)

Associate of Science Degree*

MAS739/MAS739B/MAS739C/MCE739

Required Courses (36-37 units) – 11 courses

Degree Course Requirements	Units
ART-17 Beginning Drawing	3
ART-18 Intermediate Drawing	3
ART-22 Basic Design	3
ART-40A Figure Drawing - Introduction	3
CIS-35 Introduction to Simulation and Game Development	3
CIS-38A Simulation and Gaming/3D Modeling for Real-Time Interactive Simulations	4
CIS-38B Simulation and Gaming/3D Animation for Real-Time Interactive Simulations	4
CIS-38C Simulation and Gaming/3D Dynamics and Rendering for Real-Time Interactive Simulations	4

CIS/CAT-78A Introduction to Adobe Photoshop	3
Electives	6-7
Elective Courses (6-7 units)	
ART-23 Color Theory and Design	3
ART-36A Computer Art - Introduction	3
CIS-54A Introduction to Animate	3
CIS/CAT-79 Introduction to Adobe Illustrator	3
CIS-37 Beginning Level Design/Computer Games	3
CIS-39 Current Techniques in Game Art	4

THEATRE

Technical Theatre (R) CE914

Required Courses (18 units) – 6 courses

Certificate Course Requirements	Units
Theatre Stagecraft and Practicum (9 units):	
THE-5 Theater Practicum	3
THE-6 Advanced Theater Practicum	3
THE-41 Elementary Stagecraft	3
Design and Practical Application (Choose 9 units from the following):	
THE-25 Makeup for the Stage	3
THE-44 Theatrical Set Design	3
THE-46 Theatrical Costume Design	3
THE-48 Lighting Design	3



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BUILDING and CONSTRUCTION TRADES

The United States is not only one of the world's leading suppliers of energy, it is also one of its largest consumers. To serve this ever-expanding market, the Building and Construction Trades sector employs technicians in electrical, mechanical, and construction jobs as well as architects, engineers, business managers, sales/marketing professionals, and public policy specialists.

With the increase of public and governmental interest in renewable energy, clean energy generation, and energy efficiency, job opportunities across the energy spectrum are growing rapidly and will continue to do so, especially since 40% of the existing workforce will be eligible for retirement in the next five years. As a result, employers will need skilled workers for traditional energy jobs as well as future energy-related positions. While this sector consists of many different kinds of companies and products, skills developed in one area are generally transferable to others.

In California alone, this sector accounted for seven percent of all new job growth, according to the 2019 Energy Employment Report. These opportunities boast high salaries, with construction laborers averaging \$47,190 per year and managers drawing more than \$110,000. Especially strong demand is projected for heating, ventilation, and air conditioning (HVAC) technicians, electricians, plumbers and pipefitters, utility workers, engineers, and a wide range of business professionals. According to some estimates, jobs in the energy and the environment sector could triple over the next decade.



TYPES OF CAREERS

- Electronic Technician
- Maintenance Supervisor
- Heating/Ventilation/AC (HVAC) Technician
- Electrician
- Construction Supervisor
- Computerized Numerical Control (CNC) Technician
- Computer-Aided Design (CAD) Technician
- Building Contractor
- Automotive Control System Technician
- Solar Technician
- Sub-Contractor

SALARY SNAPSHOT

- Carpenters \$49,525 / \$23.81 hourly
- First-Line Supervisors of Construction Trades & Extraction Workers \$63,814 / \$30.68 hourly
- Plumbers, Pipefitters & Steamfitters \$54,912 / \$26.40 hourly
- Construction Managers \$71,406 / \$34.33 hourly
- Operating Engineers & Other Construction Equipment Operators \$76,253 / \$36.66 hourly
- Heating, Air Conditioning & Refrigeration Mechanics and Installers \$47,424 / \$22.80 hourly
- Structural Iron & Steelworkers \$69,618 / \$33.47 hourly
- Construction & Building Inspectors \$82,077 / \$39.46 hourly
- Sheet Metal Workers \$56,680 / \$27.25 hourly
- Water & Wastewater Treatment Plant & Systems Operators \$71,323 / \$34.29 hourly
- Electricians \$49,878 / \$23.98 hourly

INDUSTRY SECTOR PATHWAYS

- Building Automation Control, Facilities Operations Technician
- Building Inspection, Inspection Technology
- Construction Technology/Management, Building Construction
- Electrician, Electrician Apprentice, General/Basic Electrician
- Heating, Ventilation, Air Conditioning & Refrigeration
- Plumbing
- Residential Maintenance
- Woodworking
- Land Surveying

AIR CONDITIONING and REFRIGERATION

Building Automation Control (R) CE944

Courses (21 units) – 7 courses

Certificate Course Requirements	Units
AIR-61A Air Conditioning and Refrigeration I	3
AIR-64A Air Conditioning and Refrigeration, Electricity I	3
AIR-64B Air Conditioning and Refrigeration, Electricity II	3
AIR-76 Facilities Maintenance – Chillers	3
AIR-90 Building Automation Fundamentals	3
AIR-91 Advanced Building Control Networks	3
AIR-92 Advanced Building Automation Networks and Programming	3

Building Energy Systems Professional in HVAC Technology (R)

Associate of Science Degree*

AS945/AS945B/AS945C

Required Courses (60-74 units) – 11-14 courses

Degree Course Requirements	Units
CAT-61 Professional Office Procedures	3
EST-10 Industrial Calculations	3
EST-15 Zero Net Energy Building Science	4
EST-20 California Energy Codes	3
EST-30 Architectural Blueprint Reading	3
EST-200 Energy Systems Technology Work Experience	1-4
Electives	15
Elective Courses (15 units)	
	Units
AIR-61A Air Conditioning and Refrigeration I	3
AIR-64A Air Conditioning and Refrigeration, Electricity I	3
AIR-75 HVACR System Designs	3
AIR-76 Facilities Maintenance – Chillers	3
AIR-77 Energy Conservation Methods for HVACR	3
AIR-84 Boiler and Hydronic Heating	3
AIR-90 Building Automation Fundamentals	3
EST-22 California Mechanical Codes	3

HVAC Commercial Technology (R)

Associate of Science Degree*

AS946/AS946B/AS946C/CE946

Required Courses (36 units) – 12 courses

Degree Course Requirements	Units
AIR-61A Air Conditioning and Refrigeration I	3
AIR-61B Air Conditioning and Refrigeration II	3
AIR-64A Air Conditioning and Refrigeration, Electricity I	3
AIR-64B Air Conditioning and Refrigeration, Electricity II	3
AIR-75 HVACR System Designs	3
AIR-76 Facilities Maintenance – Chillers	3
AIR-77 Energy Conservation Methods for HVACR	3
AIR-78 Safe Refrigerant Handling and Management	3
AIR-83 All Weather Heating and Cooling Systems	3
AIR-84 Boiler and Hydronic Heating	3
AIR-90 Building Automation Fundamentals	3
EST-22 California Mechanical Codes	3

HVAC Residential Technology (R)

Associate of Science Degree*

AS947/AS947B/AS947C/CE947

Required Courses (27 units) – 9 courses

Degree Course Requirements	Units
AIR-61A Air Conditioning and Refrigeration I	3
AIR-61B Air Conditioning and Refrigeration II	3
AIR-64A Air Conditioning and Refrigeration, Electricity I	3
AIR-64B Air Conditioning and Refrigeration, Electricity II	3
AIR-75 HVACR System Designs	3
AIR-77 Energy Conservation Methods for HVACR	3
AIR-78 Safe Refrigerant Handling and Management	3
AIR-80 Gas Heating	3
AIR-83 All Weather Heating and Cooling Systems	3

Residential Installation (R)

CE948

Required Courses (12 units) – 4 courses

Certificate Course Requirements	Units
AIR-30 Residential Installation	3
AIR-61A Air Conditioning and Refrigeration I	3
AIR-61B Air Conditioning and Refrigeration II	3
AIR-78 Safe Refrigerant Handling and Maintenance	3

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CONSTRUCTION TECHNOLOGY

Construction Management (N)

Associate of Science Degree*
NAS906/NAS906B/NAS906C/NCE906

Required Courses (24-25 units) – 8 courses

Degree Course Requirements	Units
CON-62 Blueprint Reading	3
CON-73 Project Planning for Site Construction	3
CON-74 Construction Estimating	3
CON-80 Construction Scheduling	3
ENE-27 Technical Communications	3
MAG-51 Elements of Supervision	3
Electives	6-7
Electives (6-7 units)	
CON-63A Uniform Building Codes and Operations	3
CON-64 Office Procedures and Field Inspections	3
CON-66 National Electrical Code	3
ELE-77 Electrical Theory	3
ELE-408 Transformer Theory, Leadership, Management and Test Equipment	3.5
ELE-409 Electrician Specialty Systems	3.5
ELE-424 Intro to Digital Electronics and Signaling Devices	3.5
ELE-425 Management/Alarms/Codes/Circuits	3.5

Construction Technology (N)

Associate of Science Degree*
NAS532/NAS532B/NAS532C/NCE532

Required Courses (30 units) – 11 courses

Degree Course Requirements	Units
CON-63A Uniform Building Codes and Ordinances	3
CON-64 Office Procedure and Field Inspection	3
CON-65 Plumbing Code	3
CON-66 National Electrical Code	3
CON-67 Mechanical Codes	3
CON-68 Simplified Engineering for Building Inspectors	3
CON-70 Fundamentals of Soil Technology	3
CON-71 Energy Conservation Standards	1.5
CON-72 California State Accessibility Standards	1.5
Electives	6
Electives (6 units)	
CON-60 Introduction to Construction	3
CON-61 Materials of Construction	3
CON-62 Blueprint Reading	3
CON-63BCD Analysis of Revisions to the Uniform Building Code	3-9
CON-73 Project Planning for Site Construction	3
CON-200 Construction Work Experience	1-4



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ELECTRICIAN/ELECTRONICS

Digital Electronics (N)

Associate of Science Degree*

NAS656/NAS656B/NAS656C/NCE656

Required Courses (28 units) – 8-9 courses

Degree Course Requirements	Units
DFT/ENE/ELE-27 Technical Communications	3
ELC/ELE-11 DC (Direct Current) Electronics	4
ELC/ELE-13 AC (Alternating Current) Electronics	4
ELE-25 Digital Techniques	4
ELE-26 Microcontrollers	3
ELE-28 MultiSim CAD PCB Design/Fab	3
Electives	7
Electives (7 units)	
ELC/ELE-91 Fundamentals of Solar Energy	3
ELE-10 Survey of Electronics	4
ELE-23 Electronic Devices and Circuits	4
ELE/MAN-61 Robotics for Manufacturing	3
ELE/MAN-63 LabView Visual Programming for Automated Systems	3
ELE/MAN-64 Programmable Logic Controllers	3
ELE-200 Electronics, Work Experience	1-4
MAN-55/ELE-55 Occupational Safety and Health Administration (OSHA) Standards for General Industry	1

Electrician (N)

Associate of Science Degree*

NAS766/NAS766B/NAS766C/NCE766

Required Courses (31-32 units) – 9 courses

Degree Course Requirements	Units
CON-66 National Electrical Code	3
ELC/ELE-71 Residential Electrical Wiring	4
ELC/ELE/MAN-72 Commercial and Industrial Electrical Wiring	4
ELC/ELE/MAN-73 Electric Motors and Transformers	4
ELC/ELE/MAN-74 Industrial Wiring and Controls	4
ELC/ELE-75 Solid State Devices and Lighting Controls	3
ELC/ELE-76 Low Voltage Wiring and Alternate Energy Generation	3
ELC/ELE/MAN-77 Electrical Theory for Electricians	3
ENE-62 Math for Automated Systems	3
OR	
MAT-36 Trigonometry	4



Electrician Apprenticeship (N)

Associate of Science Degree*

NAS485/NAS485B/NAS485C/NCE485

Required Courses (35 units) – 10 courses

Please note that separate application and additional requirements may be needed

Degree Course Requirements	Units
ELE-400 Introduction to the Electrical Trades and Construction Safety	3.5
ELE-401 Introduction to Electrical Theory, Basic Math Concepts, and the National Electric Code	3.5
ELE-402 Advanced DC Circuit Concepts, Introduction to 3-Phase AC Circuits, Test Equipment, and National Electric Code Applications	3.5
ELE-403 AC Circuit Concepts, Applied Electronics, and National Electric Code Applications and National Electric Code Applications	3.5
ELE-404 Digital Logic Circuits, Conductor Characteristics, Applications, and National Electric Code (NEC)	3.5
ELE-405 Electrician Blueprint Reading with Code Applications for National Electrical Code (NEC)	3.5
ELE-406 Grounding Systems, Advanced Blueprints and Specifications, Motor Design and Installation, and National Electric Code	3.5
ELE-407 Motor Control Principles, Generators and Power Supplies with National Electric Code (NEC)	3.5
ELE-408 Transformer Theory, Leadership, Management, and Test Equipment	3.5
ELE-409 Electrician Specialty Systems	3.5

Green Technician (N)

NCE856

Required Courses (12 units) – 3-4 courses

Certificate Course Requirements	Units
ELC/ELE/MAN-77 Electrical Theory for Electricians	3
OR	
ELE-11 DC Electronics	4
AND	
ELE-13 AC Electronics	4
ELE-91 Fundamentals of Solar Energy	3
MAN-55/ELE-55 Occupational Safety and Health Administration (OSHA) Standards for General Industry	1

* The Associate of Science Degree will be awarded upon completion of the degree requirements, including general education and other graduation requirements as described in the college catalog.

Sound and Communication Systems Installer Apprenticeship (N) NAS644/NCE644

Required Courses (37 units) – 8-9 courses

Certificate Course Requirements	Units
ELE-420 Intro to Sound/Communication	3.5
ELE-421 Electrical Theory and Practices DC	3.5
ELE-422 Electrical Theory and Practices AC	3.5
ELE-423 Semiconductor Electronics	3.5
ELE-424 Intro to Digital Electronics and Signaling Devices	3.5
ELE-425 Management/Alarms/Codes/Circuits	3.5
ELE-499 Work Experience in Electricians Apprenticeship	1-4

WELDING TECHNOLOGY

Pipe Welding (R) CE982

Required Courses (13 units) – 5 courses

Certificate Course Requirements	Units
WEL-24 Pipe Fitting for the Trades	2
WEL-26 Pipe Layout	2
WEL-65A Beginning Shielded Metal Arc Welding (SMAW)	3
WEL-75A Gas Metal Arc Welding	3
WEL-115A SMAW/GMAW Pipe Welding Fundamentals	3

Stick Welding (SMAW) (R) CE824

Required Courses (9 units) – 3 courses

Certificate Course Requirements	Units
WEL-65A Beginning Shielded Metal Arc Welding	3
WEL-65B Advanced Shielded Metal Arc Welding	3
WEL-85A American Welding Society/Los Angeles City Welding I OR WEL-85B American Welding Society/Los Angeles City Welding II	3

Tig Welding (GTAW) (R) CE819

Required Courses (6 units) – 2 courses

Certificate Course Requirements	Units
WEL-95A Introduction to Gas Tungsten Arc Welding	3
WEL-95B Advanced Gas Tungsten Arc Welding (GTAW)	3

Welding Technology (R)

Associate of Science Degree*

AS606/AS606B/AS606C/CE606

Required Courses (28 units) – 10 courses

Degree Course Requirements	Units
WEL-20 Blueprint Reading for Welders Trades	2
WEL-65A Beginning Shielded Metal Arc Welding	3
WEL-65B Advanced Shielded Metal Arc Welding	3
WEL-75A Gas Metal Arc Welding	3
WEL-75B Flux Cored Arc Welding (FCAW)	3
WEL-85A American Welding Society/Los Angeles City Welding I	3
WEL-95A Introduction to Gas Tungsten Arc Welding	3
WEL-115A SMAW/GMAW Pipe Welding Fundamentals	3
Electives (Choose from list below)	5
Electives (5 units)	
WEL-22 Plate and Structural Steel Layout	2
WEL-24 Pipe Fitting for the Trades	2
WEL-26 Pipe Layout	2
WEL-85B American Welding Society/Los Angeles City Welding II	3
WEL-95B Advanced Gas Tungsten Arc Welding (GTAW)	3
WEL-200 Welding Work Experience	1-4

Wire Welding (FCAW, GMAW) (R) CE818

Required Courses (9 units) – 3 courses

Certificate Course Requirements	Units
WEL-75A Gas Metal Arc Welding	3
WEL-75B Flux Cored Arc Welding (FCAW)	3
WEL-85A American Welding Society/Los Angeles City Welding I OR WEL-85B American Welding Society/Los Angeles City Welding II	3

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BUSINESS ADMINISTRATION

Who says more money means more problems? The Business Administration industry sector is a critical component of the U.S. economy and employs more than 8 million people in careers ranging from book-keeping to financial and investment planning. Advances in technology as well as market globalization and the expansion of banking and investment institutions around the world will continue to create exciting and challenging career opportunities in this industry for the foreseeable future.

With more than \$21.8 trillion in assets, the U.S. banking system supports the world's largest economy, but students who study business and finance don't just work for banks. Career opportunities for those with degrees related to business and finance are available in every sector of the economy and tend to require specific skills in mathematics, organization, time management, customer service, and communication.

Specializations typically emphasize accounting and finance concepts as they relate to international business, computer applications, taxes, investments, and business management.



TYPES OF CAREERS

- Account Specialist
- Cost Estimator
- Tax Preparer
- Associate Accountant
- Administrative Assistant
- Office Manager
- Loan Specialist
- Credit Analyst
- Claims Examiner
- Tax Examiner
- Treasurer
- Underwriting Assistant
- Insurance Claims Agent

SALARY SNAPSHOT

- Sales Representatives \$59,530 / \$28.62 hourly
- General & Operations Managers \$98,613 / \$47.41 hourly
- Accountants & Auditors \$72,467 / \$34.84 hourly
- Market Research Analysts \$52,749 / \$25.36 hourly
- Executive Administrative Assistants \$65,541 / \$31.51 hourly
- Real Estate Sales Agents \$58,906 / \$28.32 hourly
- Cost Estimators \$65,458 / \$31.47 hourly
- Administrative Services Managers \$97,864 / \$47.05 hourly

INDUSTRY SECTOR PATHWAYS

- Accounting, Financial Planning, Payroll, Income Tax
- Administrative/Office Assistant, Office Professional/Administration
- Banking & Finance, Bank Operations, Personal Finance
- Business Administration, General Business
- Business Information Worker (BIW),
- Business/Computer Technology, Computer Applications
- Human Resources
- Human Services, Career/Employment Support, Case Management
- Leadership Development
- Logistics/Logistics Management
- Management, Supervision, Project Management
- Office Management, Executive Office Management

BUSINESS ADMINISTRATION

Business Administration 2.0 (M)

Associate Degree for Transfer**

CSUGE MA1001/IGETC MA1002

Required Courses (60 units) – See College catalog for degree requirements.

Degree Course Requirements	Units
ACC-1A Principles of Accounting I	3
ACC-1B Principles of Accounting II	3
BUS-10/10H Introduction to Business/Honors OR BUS-24 Business Communication	3
BUS-18A Business Law I	3
ECO-7/7H Principles of Macroeconomics/Honors	3
ECO-8/8H Principles of Microeconomics/Honors	3
MAT-5* Calculus for Business and Life Science OR MAT-1A* Calculus I	4
MAT-12*/12H* Statistics/Honors	4

**Associate in Science for Transfer Degree
Associate Degree for Transfer in Business Administration 2.0 will be awarded upon completion of 60 California State University (CSU) transferable units including the above major requirements and the Intersegmental General Education Transfer Curriculum (IGETC) or California State University General Education (CSUGE) requirements with a minimum grade point average of 2.0. All courses in the major must be completed with a grade of "C" or better (or a "P" if taken as Pass/No Pass).

Business Administration 2.0 (N)

Associate Degree for Transfer**

CSUGE NAS1001/IGETC NAS1002

Required Courses (60 units) – See College catalog for degree requirements.

Degree Course Requirements	Units
ACC-1A Principles of Accounting I	3
ACC-1B Principles of Accounting II	3
BUS-18A Business Law I	3
ECO-7/7H Principles of Macroeconomics/Honors	3
ECO-8/8H Principles of Microeconomics/Honors	3
MAT-12/12H Statistics/Honors	4
Select one course from the following (4 units)	
MAT-1A Calculus I	4
MAT-5 Calculus for Business and Life Sciences	4
Select one course from the following (3 units)	
BUS-10/10H Introduction to Business/Honors	3
BUS-24 Business Communications	3

**Associate in Science for Transfer Degree
The Associate in Science in Business Administration 2.0 for Transfer degree will be awarded upon completion of 60 semester CSU-transferable units; the California State University General Education-Breadth pattern (CSU GE-Breadth) or the Intersegmental General Education Transfer Curriculum (IGETC) pattern; a minimum of 18 semester or 27 quarter units in the major or area of emphasis as determined by the community college district; obtainment of a minimum grade point average (GPA) of 2.0; earn a grade of C or better in all courses required for the major or area of emphasis or a "P" if taken as Pass/No Pass.



Business Administration 2.0 (R)

Associate Degree for Transfer**

CSUGE AS1001/IGETC AS1002

Required Courses (60 units) – See College catalog for degree requirements.

Degree Course Requirements	Units
ACC-1A Principles of Accounting I	3
ACC-1B Principles of Accounting II	3
BUS-18A Business Law I	3
ECO-7/7H Principles of Macroeconomics/Honors	3
ECO-8/8H Principles of Microeconomics/Honors	3
MAT-12/12H Statistics/Honors	4
Select one from the following (4 units):	
MAT-1A Calculus I	4
MAT-5 Calculus for Business and Life Sciences	4
Select one from the following (3 units):	
BUS-10/10H Introduction to Business/Honors	3
BUS-24 Business Communications	3

**Associate in Science for Transfer Degree

The Associate in Science in Business Administration for Transfer degree will be awarded upon completion of coursework totaling 60 California State University (CSU) transferable units including a minimum of 18 semester units or 27 quarter units in a major area of emphasis, as determined by the community college district, and the Intersegmental General Education Transfer Curriculum (IGETC) or California State University General Education (CSUGE) requirements with a minimum grade point average of 2.0. All courses in the major must be completed with a grade of "C" or better (or a "P" if taken as Pass/No Pass).

Business Administration - Major Core Requirements+ (MNR)

Required Courses (18 units plus concentration units) – 10 courses

Degree Course Requirements	Units
ACC-1A Principles of Accounting I	3
BUS-10/10H Introduction to Business/Honors	3
BUS-18A Business Law I	3
BUS-20 Business Mathematics	3
BUS-22 Management Communications OR BUS-24 Business Communications	3
CIS-1A Introduction to Computer Information Systems OR CIS/CAT-3 Computer Applications for Business	3
Major Concentration Requirements	12

FUN FACT:

Because all companies need people with business and financial expertise, persons trained in this sector are in demand across all industries.

Business Administration-Accounting (M)

Associate of Science Degree*

MAS523/MAS523B/MAS523C/MCE523

Required Courses (30 units) – 10 courses

Degree Course Requirements	Units
Business Administration Major Core Requirements+	18
ACC-1B Principles of Accounting II	3
Select another 9 units from the following:	
ACC-62 Payroll Accounting	3
ACC-63 Income Tax Accounting	3
ACC-65 Computerized Accounting	3
ACC-200 Accounting Work Experience	1-4
BUS/MAG-47 Applied Business and Management Ethics	3

Business Administration-Accounting (NR)

Associate of Science Degree*

NAS523/NAS523B/NAS523C/NCE523

AS523/AS523B/AS523C/CE523

Required Courses (30 units) – 10 courses

Degree Course Requirements	Units
Business Administration Major Core Requirements+	18
ACC-1B Principles of Accounting II	3
Select another 9 units from the following:	
ACC-61 Cost Accounting	3
ACC-62 Payroll Accounting	3
ACC-63 Income Tax Accounting	3
ACC-65 Computerized Accounting	3
ACC-66 Non-Profit and Governmental Accounting	3
ACC-200 Accounting Work Experience	1-4
BUS/MAG-47 Applied Business and Management Ethics	3

* The Associate of Science Degree will be awarded upon completion of the degree requirements, including general education and other graduation requirements as described in the college catalog.

Business Administration-General Business (MNR)

Associate of Science Degree*

MAS524/MAS524B/MAS524C/MCE524

NAS524/NAS524B/NAS524C/NCE524

AS524/AS524B/AS524C/CE524

Required Courses (30 units) – 10 courses

Degree Course Requirements	Units
Business Administration Major Core Requirements*	18
Select another 12 units from the following:	
ACC-1B Principles of Accounting II OR ACC-38 Managerial Accounting	3
BUS-18B Business Law II	3
BUS-40 Introduction to Global Business	3
BUS/MAG-47 Applied Business and Management Ethics	3
BUS-80 Principles of Logistics	3
BUS-200 Business Administration Work Experience	1-4
MAG-51 Elements of Supervision	3
MAG-53 Human Relations	3
MKT-20 Principles of Marketing	3

Business Administration-Global Enterprise Concentration (R)

Associate of Science Degree*

AS1036/AS1036B/AS1036C/CE1036

Required Courses (12 units) – 4 courses

Degree Course Requirements	Units
Business Administration Major Core Requirements*	18
BUS-40 Introduction to Global Business	3
BUS-43 Global Marketing	3
BUS-46 Global Trade	3
BUS-48 Global Management	3



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Business Administration-Human Resources (R)

Associate of Science Degree*

AS623/AS623B/AS623C/CE623

Required Courses (30 units) – 10 courses

Degree Course Requirements	Units
Business Administration Major Core Requirements*	18
MAG-56 HRM: Human Resources Management	3
Select another 9 units from the following:	
MAG-51 Elements of Supervision	3
MAG-52 Employee Training and Development	3
MAG-54 Employee Labor Relations	3
MAG/BUS-70 Introduction to Organizational Behavior	3

Business Administration-Management (MNR)

Associate of Science Degree*

MAS521/MAS521B/MAS521C/MCE521

NAS521/NAS521B/NAS521C/NCE521

AS521/AS521B/AS521C/CE521

Required Courses (30 units) – 10 courses

Degree Course Requirements	Units
Business Administration Major Core Requirements*	18
MAG-44 Principles of Management	3
Select another 9 units from the following:	
BUS-48 Global Management	3
MAG/BUS-47 Applied Business and Management Ethics	3
MAG-53 Human Relations	3
MAG-56 HRM: Human Resources Management	3
MAG-60 Introduction to Hospitality Management	3
MAG-200 Management Work Experience	1-4

General Business (R)

CE1062

Required Courses (15 units) – 5 courses

Certificate Course Requirements	Units
BUS-10/10H Introduction to Business	3
BUS-48 Global Management	3
MAG-40 The American Management Association Certified Professional in Management	3
MAG/BUS-47 Applied Business and Management Ethics	3
MKT-20 Principles of Marketing	3

Gig Economy (R)

CE872

Required Courses (9 units) – 3 courses

Certificate Course Requirements	Units
BUS-14 Social Media and Online Digital Media Promotions for Entrepreneurs	3
BUS-30 Entrepreneurship: Foundations and Fundamentals	3
BUS-200 Business Administration Work Experience	3

Human Resources (R)

CE868

Required Courses (15 units) – 5 courses

Certificate Course Requirements	Units
BUS-10/10H Introduction to Business	3
MAG/BUS-47 Applied Business and Management Ethics	3
MAG-52 Employee Training, Development	3
MAG-53 Human Relations	3
MAG-56 HRM: Human Resources Management	3

Global Industry (R)

CE1042

Required Courses (15 units) – 5 courses

Certificate Course Requirements	Units
BUS-10/10H Introduction to Business	3
BUS-40 Introduction to Global Business	3
BUS-43 Global Marketing	3
BUS-46 Global Trade	3
BUS-48 Global Management	3



Logistics Management (MN)

Associate of Science Degree*

MAS580/MAS580B/MAS580C/MCE580

NAS580/NAS580B/NAS580C/NCE580

Required Courses (27 units) – 10-11 courses

Degree Course Requirements	Units
Business Administration Major Core Requirements ⁺	18
BUS-80 Principles of Logistics	3
Select another 9 units from the following:	
BUS-82 Freight Claims	1.5
BUS-83 Contracts	1.5
BUS-85 Warehouse Management	3
BUS-86 Transportation and Traffic Management	3
BUS-87 Purchasing and Supply Management	3
BUS-90 International Logistics	3

Management (R)

CE1063

Required Courses (15 units) – 5 courses

Certificate Course Requirements	Units
BUS-10/10H Introduction to Business	3
BUS-22 Management Communications	3
BUS/MAG-47 Applied Business and Management Ethics	3
BUS-48 Global Management	3
MAG-40 The American Management Association Certified Professional in Management	3

Project Management Professional (M)

MCE984

Required Courses (10 units) – 3 courses

Certificate Course Requirements	Units
BUS-10 Introduction to Business	3
BUS-77A Introduction to Project Management	4
BUS-77B Project Management CAPM and PMP Exam Prep	3

Registered Individual and Small Business Income Tax Preparer (N)

NCE858

Required Courses (4 units) – 1 course

Certificate Course Requirements	Units
ACC-67 U.S. and California Income Tax Preparation	4

* The Associate of Science Degree will be awarded upon completion of the degree requirements, including general education and other graduation requirements as described in the college catalog.

**Retail Management/
Western Association of Food Chains (WAFC) (N)**

Associate of Science Degree*
NAS536/NAS536B/NAS536C/NCE536

Required Courses (30 units) – 10 courses

Degree Course Requirements	Units
ACC-1A Principles of Accounting I OR ACC/CAT-55 Applied Accounting/Bookkeeping	3
BUS-20 Business Mathematics	3
BUS-22 Management Communications OR BUS-24 Business Communications	3
CIS-1A Introduction to Computer Information Systems OR CIS/CAT-3 Computer Applications for Business	3
COM-1/1H Public Speaking OR COM-9/9H Interpersonal Communication OR MAG-57 Oral Communications	3
MAG-44 Principles of Management OR MAG-51 Elements of Supervision	3
MAG-53 Human Relations	3
MAG-56 HRM: Human Resources Management	3
MKT-20 Principles of Marketing	3
MKT-42 Retail Management	3

**Small Business Accounting (MNR)
MCE859/NCE859/CE859**

Required Courses (6 units) – 2 courses

Certificate Course Requirements	Units
ACC-65 Computerized Accounting	3
Select three units from the following:	
ACC-1A Principles of Accounting	3
ACC/CAT-55 Applied Accounting/Bookkeeping	3

**Small Business Payroll Accounting (MNR)
MCE860/NCE860/CE860**

Required Courses (6 units) – 2 courses

Certificate Course Requirements	Units
ACC-62 Payroll Accounting	3
Select three units from the following:	
ACC-1A Principles of Accounting	3
ACC/CAT-55 Applied Accounting/Bookkeeping	3

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**BUSINESS
ADMINISTRATION
NONCREDIT**

**Accounting Basics for Small Business (MNR)
MCC8009/NCC8009/CC8009**

Required Courses (48 hours) – 3 courses

Certificate Course Requirements	Hours
ACC-801 Setting Up QuickBooks for Small Business	16
ACC-802 Monthly Procedures Using QuickBooks	16
ACC-803 Year End Procedures with QuickBooks	16

**GIG: The Solopreneurs Adventure (R)
CC8004**

Required Courses (45 hours) – 3 courses

Certificate Course Requirements	Hours
BUS-813 Solopreneurs: Personal Finance and QuickBooks Quickstart	9
BUS-815 Business Skills: Professional Online Presence	9
BUS-819 Business Success Seminar	27

**Non-Credit Global Industry (R)
CC8040**

Required Courses (208 hours) – 4 courses

Certificate Course Requirements	Hours
BUS-840 Introduction to Global Business	54
BUS-843 Global Marketing	54
BUS-846 Global Trade	54
BUS-848 Global Management	54



ENTREPRENEURSHIP

Entrepreneurship (R)

Associate of Science Degree*

AS531/AS531B/AS531C/CE531

Required Courses (24 units) – 9 courses

Degree Course Requirements	Units
CAT/CIS-3 Computer Applications for Business	3
BUS-10/10H Introduction to Business/Honors	3
BUS-30 Entrepreneurship and Small Business Management	3
MKT-20 Principles of Marketing	3
Four Electives Courses – at least one from each cluster	12
Cluster 1:	
ACC/CAT-55 Applied Accounting/Bookkeeping	3
ACC-62 Payroll Accounting	3
ACC-65 Computerized Accounting	3
BUS-20 Business Mathematics	3
Cluster 2:	
BUS-18A Business Law I	3
CAT-31 Business Communications	3
MAG/BUS-47 Applied Business and Management Ethics	3
MAG-51 Elements of Supervision	3
MAG-53 Human Relations	3
MAG/BUS-70 Introduction to Organization Development	3
Cluster 3:	
MKT-40 Advertising	3
MKT-41 Techniques of Selling	3
MKT-42 Retail Management	3



Entrepreneurship (M)

MAS531/MAS531B/MAS531C

Required Courses (24 units) – 8 courses

Certificate Course Requirements	Units
ENP-50 Introduction to Entrepreneurship	3
ENP-51 Entrepreneurship Basics	3
ENP-52 Starting a Business with Limited Resources	3
ENP-53 Money, Finance and Accounting for Entrepreneurs	3
ENP-54 Business Model Canvas and Presentations for Entrepreneurs	3
ENP-55 Entrepreneurial Simulation - Capstone	3
ENP-70 Building an Entrepreneurial Team	3
ENP-71 Solopreneurship	3

Entrepreneurship (R)

CE874

Required Courses (15 units) – 5 courses

Certificate Course Requirements	Units
BUS-10/10H Introduction to Business /Honors	3
BUS-18A Business Law I	3
BUS-30 Entrepreneurship: Foundations and Fundamentals	3
BUS-51 Principles of Electronic Commerce	3
MKT-20 Principles of Marketing	3

Entrepreneurial Essentials (MNR)

MCE977/NCE977/CE977

Required Courses (12 units) – 4 courses

Certificate Course Requirements	Units
ENP-50 Introduction to Entrepreneurship	3
ENP-51 Entrepreneurship Basics	3
ENP-52 Starting a Business with Limited Resources	3
ENP-53 Money, Finance and Accounting for Entrepreneurs	3

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Entrepreneurial Foundations (MNR)
MCE978/NCE978/CE978

Required Courses (15 units) – 5 courses

Certificate Course Requirements	Units
ENP-50 Introduction to Entrepreneurship	3
ENP-51 Entrepreneurship Basics	3
ENP-53 Money, Finance and Accounting for Entrepreneurs	3
ENP-54 Business Model Canvas and Presentations for Entrepreneurs	3
ENP-55 Entrepreneurial Simulation - Capstone	3

Entrepreneurship: Getting Started (N)
NCE861

Required Courses (10 units) – 4 courses

Certificate Course Requirements	Units
BUS-12 Opportunity Analysis for Entrepreneurs	2
BUS-13 Developing a Successful Business Plan/Model	2
BUS-14 Social Media and Electronic Marketing for Entrepreneurs	3
BUS-30 Entrepreneurship and Small Business Management	3

Entrepreneurship: Legal and Finance (N)
NCE864

Required Courses (10 units) – 4 courses

Certificate Course Requirements	Units
ACC-55 Applied Accounting/Bookkeeping	3
BUS-30 Entrepreneurship and Small Business Management	3
BUS-31 Financing Your Business	2
BUS-33 Business Structure and Legal Issues	2

Entrepreneurship and the Team (MNR)
MCE979/NCE979/CE979

Required Courses (18 units) – 6 courses

Certificate Course Requirements	Units
ENP-50 Introduction to Entrepreneurship	3
ENP-51 Entrepreneurship Basics	3
ENP-53 Money, Finance and Accounting for Entrepreneurs	3
ENP-54 Business Model Canvas and Presentations for Entrepreneurs	3
ENP-70 Building an Entrepreneurial Team	3
ENP-71 Solopreneurship	3

ENTREPRENEURSHIP NONCREDIT

Non-Credit Entrepreneurial Essentials (MNR)
MCC8035/NCC8035/CC8035

Required Courses (216 hours) – 4 courses

Certificate Course Requirements	Hours
ENP-850 Introduction to Entrepreneurship	54
ENP-851 Entrepreneurship Basics	54
ENP-852 Starting a Business with Limited Resources	54
ENP-853 Money, Finance and Accounting for Entrepreneurs	54

Non-Credit Entrepreneurial Foundations (MNR)
MCC8036/NCC8036/CC8036

Required Courses (270 hours) – 5 courses

Certificate Course Requirements	Hours
ENP-850 Introduction to Entrepreneurship	54
ENP-851 Entrepreneurship Basics	54
ENP-853 Money, Finance and Accounting for Entrepreneurs	54
ENP-854 Business Model Canvas and Presentations for Entrepreneurs	54
ENP-855 Entrepreneurial Simulation - Capstone	54

Non-Credit Entrepreneurship and the Team (MNR)
MCC8037/NCC8037/CC8037

Required Courses (324 hours) – 6 courses

Certificate Course Requirements	Hours
ENP-850 Introduction to Entrepreneurship	54
ENP-851 Entrepreneurship Basics	54
ENP-853 Money, Finance and Accounting for Entrepreneurs	54
ENP-854 Business Model Canvas and Presentations for Entrepreneurs	54
ENP-870 Building an Entrepreneurial Team	54
ENP-871 Solopreneurship	54

Social Media for Business (MNR)
MCC8011/NCC8011/CC8011

Required Courses (50 hours) – 5 courses

Certificate Course Requirements	Hours
ENP-801 Facebook for Business	10
ENP-802 Pinterest and Instagram for Business	10
ENP-803 YouTube for Business	10
ENP-804 Twitter for Business	10
ENP-805 LinkedIn for Business	10

PROFESSIONAL DEVELOPMENT STUDIES NONCREDIT

Customer Relations (MNR) MCC8012/NCC8012/CC8012

Required Courses (36 hours) – 3 courses

Certificate Course Requirements	Hours
PDS-806 The Art of Negotiating and Collaborating	12
PDS-807 Personality Styles and Difficult Relations	12
PDS-813 Best Practices in Customer Service	12

Emerging Leaders (MNR) MCC8013/NCC8013/CC8013

Required Courses (48 hours) – 4 courses

Certificate Course Requirements	Hours
PDS-801 Leadership Skills	12
PDS-802 Supervisory Skills	12
PDS-803 Increasing Productivity	12
PDS-804 Motivating Yourself and Others	12

Enterprise Communication (MNR) MCC8014/NCC8014/CC8014

Required Courses (48 hours) – 4 courses

Certificate Course Requirements	Hours
PDS-809 Business Writing in a Technological World	12
PDS-812 Workplace Communication Strategies	12
Electives	24
Elective (24 hours)	
PDS-805 Difficult Conversations	12
PDS-806 The Art of Negotiating and Collaborating	12
PDS-807 Personality Styles and Difficult Relationships	12
PDS-813 Best Practices in Customer Service	12

Financial Literacy (MNR) MCC8015/NCC8015/CC8015

Required Courses (27 hours) – 2 courses

Certificate Course Requirements	Hours
PDS-816 Personal Finance	18
PDS-817 Financial Future	9

Sales Techniques (MNR) MCC8016/NCC8016/CC8016

Required Courses (16 hours) – 2 courses

Certificate Course Requirements	Hours
PDS-814 Closing Techniques that Win the Sale	8
PDS-815 Winning Sales Scripts	8

Successful Career Transition (MNR) MCC8038/NCC8038/CC8038

Required Courses (21 hours) – 2 courses

Certificate Course Requirements	Hours
PDS-818 The Successful Job Search	9
Electives	12
Electives (12 Hours)	
PDS-809 Business Writing in the Technological World	12
PDS-812 Workplace Communication Strategies	12

Workplace Essentials (MNR) MCC8017/NCC8017/CC8017

Required Courses (48 hours) – 4 courses

Certificate Course Requirements	Hours
PDS-808 Critical Thinking, Problem Solving and Decision Making	12
PDS-809 Business Writing in the Technological World	12
PDS-810 Time Management	12
PDS-812 Workplace Communication Strategies	12





COSMETOLOGY

For people with a great sense of style and strong creative drive, fashion and interior design – Personal Services is an industry worth exploring. Jobs in the Personal Services area include barbers, hair stylists, and estheticians. Check out our programs in Cosmetology.



TYPES OF CAREERS

- Hairstylists and Cosmetologists
- Merchandise Displayers
- Barbers
- Interior Designers
- Skincare Specialists
- Fashion Designers
- Makeup Artists

SALARY SNAPSHOT

- Hairstylists and Cosmetologists: \$14.65
- Merchandise Displayers: \$13.91
- Barbers: \$12.08
- Interior Designers: \$24.31
- Skincare Specialists: \$15.27
- Fashion Designers: \$40.59
- Makeup Artists: \$30.67

INDUSTRY SECTOR PATHWAYS

- Cosmetology
- Cosmetology Entrepreneurship, Management & Supervision, Cosmetology Teacher Training
- Fashion Design/Merchandising, Sewing/Dressmaking
- Floral Design
- Interior Design
- Trim and Upholstery



COSMETOLOGY

Barbering Concepts (R) CE959

Required Courses (47.5-64.5) – 19 courses

Certificate Course Requirements	Units
COS-1A Introduction to Cosmetology Level I	3
COS-1B Introduction to Cosmetology Level II	3
COS-1C Cosmetology Business Concepts	1
COS-10A Level I Hairstyling Concepts	3
COS-10B Level II Hairstyling Concepts	3
COS-10C Level III Hairstyling Concepts	2
COS-20A Level I Chemical Texture Concepts	3
COS-20B Level II Chemical Texture Concepts	3
COS-30A Level I Haircutting Concepts	2
COS-30B Level II Haircutting Concepts	2
COS-30C Level III Haircutting Concepts	1.50
COS-30D Level IV Haircutting Barbering Concepts	7
COS-40A Level I Haircoloring and Bleaching Concepts	3
COS-40B Level II Haircoloring and Bleaching Concepts	3
COS-90A Level I Clinic Floor Concepts	1-8
COS-90B Level II Clinic Floor Concepts	2-8
COS-90C Level III Clinic Floor Concepts	4-8
COS-96A Barbering Theory Exam Readiness	0.5
COS-96B Barbering Practical Exam Readiness	0.5

Cosmetology (R)

Associate of Science Degree*

AS534/AS534B/AS534C/CE534

Required Courses (39-39.5 units) – 5-7 courses

Please note that separate application and additional requirements may be needed

Degree Course Requirements	Units
Complete one of the following options:	
Option 1:	
COS-60A Beginning Cosmetology Concepts	11
Option 2:	
COS-60A1 Cosmetology Concepts Level A1	5.5
COS-60A2 Cosmetology Concepts Level A2	5.5
Complete one of the following options	
Option 1:	
COS-60B Level II Cosmetology Concepts	10.5
Option 2:	
COS-60B1 Cosmetology Concepts Level B1	5
COS-60B2 Cosmetology Concepts Level B2	5
Complete one of the following options:	
Option 1:	
COS-60C Level III Cosmetology Concepts	10
Option 2:	
COS-60C1 Cosmetology Concepts Level C1	5
COS-60C2 Cosmetology Concepts Level C2	5
Complete one of the following options:	
Option 1:	
COS-60D Level IV Cosmetology Concepts	8
Option 2:	
COS-60D1 Cosmetology Concepts Level D1	4
COS-60D2 Cosmetology Concepts Level D2	4

* The Associate of Science Degree will be awarded upon completion of the degree requirements, including general education and other graduation requirements as described in the college catalog.



Cosmetology Business Administration- Entrepreneurial Concentration (R)

Associate of Science Degree*
AS537/AS537B/AS537C/CE537

Required Courses (21 units) – 7 courses

Please note that separate application and additional requirements may be needed

Degree Course Requirements	Units
BUS-10/10H Introduction to Business/Honors	3
BUS-20 Business Mathematics	3
BUS-30 Entrepreneurship and Small Business Management	3
Major Concentration Requirements - see below	12
Select another 12 units from the following:	
ACC/CAT-55 Applied Accounting/Bookkeeping	3
ACC-62 Payroll Accounting	3
ACC-65 Computerized Accounting	3
ART-39 Design and Graphics	3
CAT/CIS-3 Computer Applications for Business	3
CAT-30 Business English	3
MKT-20 Principles of Marketing	3
MKT-40 Advertising	3
MKT-41 Techniques of Selling	3

Cosmetology Business Administration- Management and Supervision Concentration (R)

Associate of Science Degree*
AS535/AS535B/AS535C/CE535

Required Courses (21 units) – 7 courses

Please note that separate application and additional requirements may be needed

Degree Course Requirements	Units
BUS-10/10H Introduction to Business	3
BUS-20 Business Mathematics	3
BUS-30 Entrepreneurship and Small Business Management	3
Major Concentration Requirements - see below	12
Select another 12 units from the following:	
CAT/CIS-3 Computer Applications for Business	3
BUS-22 Management Communications OR BUS-24 Business Communication	3
BUS/MAG-47 Applied Business and Management Ethics	3
MAG-44 Principles of Management	3
MAG-53 Human Relations	3
MAG-56 HRM: Human Resources Management	3
MAG-70 Introduction to Organization Development	3
MKT-42 Retail Management	3

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Cosmetology Concepts (R)

CE960

Required Courses (53-70 units) – 23 courses

Certificate Course Requirements	Units
COS-1A Introduction to Cosmetology Level I	3
COS-1B Introduction to Cosmetology Level II	3
COS-1C Cosmetology Business Concepts	1
COS-10A Level I Hairstyling Concepts	3
COS-10B Level II Hairstyling Concepts	3
COS-10C Level III Hairstyling Concepts	2
COS-20A Level I Chemical Texture Concepts	3
COS-20B Level II Chemical Texture Concepts	3
COS-30A Level I Haircutting Concepts	2
COS-30B Level II Haircutting Concepts	2
COS-30C Level III Haircutting Concepts	1.50
COS-40A Level I Haircoloring and Bleaching Concepts	3
COS-40B Level II Haircoloring and Bleaching Concepts	3
COS-57A Level I Skin Care Concepts	2.5
COS-57B Level II Skin Care Concepts	2
COS-70A Level I Makeup and Hair Removal Concepts	3
COS-80A Level I Nail Care Concepts	2
COS-80B Level II Nail Care Concepts	3
COS-90A Level I Clinic Floor Concepts	1-8
COS-90B Level II Clinic Floor Concepts	2-8
COS-90C Level III Clinic Floor Concepts	4-8
COS-97A Cosmetology Theory Exam Readiness Concepts	0.5
COS-97B Cosmetology Practical Exam Readiness Concepts	0.5

Cosmetology Instructor Training (R)

CE675

Required Courses (19 units) – 2 courses

Please note that separate application and additional requirements may be needed

Certificate Course Requirements	Units
COS-61A Level I Cosmetology Instructor Concepts	9.5
COS-61B Level I Cosmetology Instructor Concepts	9.5

Esthetician (R)

CE674

Required Courses (20 units) – 2 courses

Certificate Course Requirements	Units
COS-62A Level I Esthetician Concepts	10
COS-62B Level II Esthetician Concepts	10

Esthetician Concepts (R)

CE961

Required Courses (33.5-50.5 units) – 13 courses

Certificate Course Requirements	Units
COS-1A Introduction to Cosmetology Level I	3
COS-1B Introduction to Cosmetology Level II	3
COS-1C Cosmetology Business Concepts	1
COS-57A Level I Skin Care Concepts	2.5
COS-57B Level II Skin Care Concepts	2
COS-57C Level III Skin Care Concepts	8
COS-70A Level I Makeup and Hair Removal Concepts	3
COS-70B Level II Makeup and Hair Removal Concepts	3
COS-90A Level I Clinic Floor Concepts	1-8
COS-90B Level II Clinic Floor Concepts	2-8
COS-90C Level III Clinic Floor Concepts	4-8
COS-98A Esthetics Theory Exam Readiness Concepts	0.5
COS-98B Esthetics Practical Exam Readiness Concepts	0.5



Hairstyling Concepts (R)

CE962

Required Courses (40.5-57.5 units) – 18 courses

Certificate Course Requirements	Units
COS-1A Introduction to Cosmetology Level I	3
COS-1B Introduction to Cosmetology Level II	3
COS-1C Cosmetology Business Concepts	1
COS-10A Level I Hairstyling Concepts	3
COS-10B Level II Hairstyling Concepts	3
COS-10C Level III Hairstyling Concepts	2
COS-20A Level I Chemical Texture Concepts	3
COS-20B Level II Chemical Texture Concepts	3
COS-30A Level I Haircutting Concepts	2
COS-30B Level II Haircutting Concepts	2
COS-30C Level III Haircutting Concepts	1.50
COS-40A Level I Haircoloring and Bleaching Concepts	3
COS-40B Level II Haircoloring and Bleaching Concepts	3
COS-90A Level I Clinic Floor Concepts	1-8
COS-90B Level II Clinic Floor Concepts	2-8
COS-90C Level III Clinic Floor Concepts	4-8
COS-95A Hairstyling Theory Exam Readiness Concepts	0.5
COS-95B Hairstyling Practical Exam Readiness Concepts	0.5

Manicuring Concepts (R)

CE963

Required Courses (24-41 units) – 11 courses

Certificate Course Requirements	Units
COS-1A Introduction to Cosmetology Level I	3
COS-1B Introduction to Cosmetology Level II	3
COS-1C Cosmetology Business Concepts	1
COS-80A Level I Nail Care Concepts	2
COS-80B Level II Nail Care Concepts	3
COS-80C Level III Nail Care Concepts	4
COS-90A Level I Clinic Floor Concepts	1-8
COS-90B Level II Clinic Floor Concepts	2-8
COS-90C Level III Clinic Floor Concepts	4-8
COS-99A Manicuring Theory Exam Readiness	0.5
COS-99B Manicuring Practical Exam Readiness	0.5





EDUCATION, CHILD DEVELOPMENT, and FAMILY SERVICES



If you are looking for a fulfilling career that makes a positive difference in the lives of children and adults, you might consider a job in the Education, Child Development, and Family Services sector. Professionals who follow this path tend to be good communicators with the ability to empathize with people from diverse backgrounds.

As populations increase and older teachers retire, this area will continue to be one of the fastest-growing industry sectors in the nation despite the limits that state and local budgets often put on its growth.

According to the U.S. Department of Labor, enrollment in all grades, from preschool to college, will continue to grow, which means that teachers of all levels will be needed to meet the demand. Among the fastest-growing segments of this industry sector are childcare services; individual, family, community, and vocational rehabilitation services; and community and residential elder care services.

TYPES OF CAREERS

- Preschool Teacher
- Teacher Assistant
- Head Start Teacher
- Special Education Aide
- Parent Educator
- Consumer Credit Manager
- Property Manager
- Consumer Product Tester
- Insurance Representative

SALARY SNAPSHOT

- Education & Childcare Administrators \$41,933 / \$20.16 hourly
- Library Technicians \$46,322 / \$22.27 hourly
- Special Education Teachers \$77,064 / \$37.05 hourly
- Interpreters \$73,778 / \$35.47 hourly
- Child, Family & School Social Workers \$49,046 / \$23.58 hourly
- Training & Development Specialists \$64,522 / \$31.02 hourly
- Elementary School Teachers \$92,539 / \$44.49 hourly
- Community & Social Service Specialists \$49,754 / \$23.92 hourly

INDUSTRY SECTOR PATHWAYS

- Child Development
- Child Development Site Supervisor
- Child Development Teacher, Assistant/Associate/Master Teacher
- Day Care Provider, Family Day Care
- Early Childhood Education (ECE), ECE 12 Core Units
- Early Childhood Specializations: Infant, Toddler, Early Intervention & Inclusion
- Education Paraprofessional
- Education Technology
- Gerontology, Community Caregiver
- Interpretation: Community Interpretation
- Sign Language Interpreting, American Sign Language
- Teacher Preparation, Elementary Teacher Education

COMMUNICATION STUDIES

Communication Studies 2.0 (N)

Associate Degree for Transfer**

CSUGE NAA1058/IGETC NAA1059

Required Courses (18-19 units) - courses

Degree Course Requirements	Units
COM-1*/1H* Public Speaking/Honors	3
COM-9*/9H* Interpersonal Communication/ Honors	3
List A Select from the list below	9
List B Select from the list below	3-4
List A Select 3 courses from the following (9 units)	
COM-2* Introduction to Persuasion	3
COM-3* Argumentation and Debate	3
COM-6* Small Group Communication	3
COM-7* Oral Interpretation of Literature	3
COM-12* Intercultural Communication	3
COM-20* Introduction to Communication Theory	3
JOU-7* Mass Communications	3
List B Select 1 course from the following (3-4 units)	
Any course not applied in List A above	
ANT-2*/2H* Cultural Anthropology/Honors	3
COM-11* Storytelling	3
COM-13* Gender and Communication	3
ENG-1B*/1BH* Critical Thinking and Writing/Honors	4
MAT-12*/12H* Statistics/Honors Statistics	4
PSY-1*/1H* General Psychology/Honors	3
SOC-1*/1H* Introduction to Sociology/Honors	3

**Associate in Arts for Transfer Degree

The Associate in Arts in Communication Studies 2.0 for Transfer degree awarded upon completion of 60 semester CSU-transferable units; the California State University-General Education-Breadth pattern (CSU GE-Breadth) or the Intersegmental General Education Transfer Curriculum (IGETC) pattern; a minimum of 18 semester or 27 quarter units in the major or area of emphasis as determined by the community college district; attainment of a minimum grade point average (GPA) of 2.0; earn a grade of "C" or better in all courses required for the major or area of emphasis or a "P" if taken as Pass/NoPass.

COMMUNITY INTERPRETATION

Community Interpretation (M)

Associate of Science Degree*

MAS557/MAS557B/MAS557C/MCE557

Required Courses (18 units) – 4 courses

Degree Course Requirements	Units
CMI-61 Introduction to Spanish English Translation	3
CMI-71 Bilingual Interpretation for the Medical Professions	6
CMI-81 Bilingual Interpretation for the Legal Professions	6
CMI-91 Introduction to Translation and Interpretation for Business	3



* The Associate of Science Degree will be awarded upon completion of the degree requirements, including general education and other graduation requirements as described in the college catalog.

EARLY CHILDHOOD EDUCATION

Child and Adolescent Development (NR)

Associate Degree for Transfer**

CSUGE NAA885/IGETC NAA886

CSUGE AA885/IGETC AA886

Required Courses (18-21 units) – See College catalog for degree requirements.

Degree Course Requirements	Units
EAR-20 Child Growth and Development	3
MAT-12/12H Statistics/Honors OR PSY-48/SOC-48 Statistics for the Behavioral Sciences	4 3
PSY-1/1H General Psychology/Honors	3
List A Select from the list below	3
List B Select from the list below	6-7
LIST A Select 9-11 units from below	
ANT-2/2H Cultural Anthropology/Honors	3
BIO-1/1H General Biology/Honors	4
EAR-42 Child, Family, and Community	3
PSY-9 Developmental Psychology	3
SOC-1/1H Introduction to Sociology/Honors	3
SOC-10 Race and Ethnic Relations	3
SOC-12 Marriage and Family Relations	3
LIST B Select two courses from below (5-6 units)	
EAR-19 Observations and Assessment	3
EAR-24 Introduction to Curriculum	3
EAR-25 Teaching in a Diverse Society	3
EAR-30 Practicum in Early Childhood Education	3
EAR-33 Infants and Toddler Development	3
EAR-34 Infant and Toddler Care and Education	2
EAR-43 Children with Challenging Behavior	3
HES-1 Health Science	3

** Associate in Science for Transfer Degree

The Associate Degree for Transfer in Early Childhood Education will be awarded upon completion of 60 California State University (CSU) transferable units including the above major requirements and the Intersegmental General Education Transfer Curriculum (IGETC) or California State University General Education (CSUGE) requirements with a minimum grade point average of 2.0. All courses in the major must be completed with a grade of "C" or better (or a "P" if taken as Pass/No Pass).

FUN FACT:

The Education, Child Development, and Family Services sector boasts 299,150 job openings every year—but only 69,404 graduates with the right education to fill them!

Early Childhood Education (MNR)

Associate Degree for Transfer**

CSUGE MAS529/IGETC MAS530

CSUGE NAS529/IGETC NAS530

CSUGE AS529/IGETC AS530

Required Courses (25 units) – See College catalog for degree requirements.

Degree Course Requirements	Units
EAR-19 Observation and Assessment in Early Childhood Education	3
EAR-20 Child Growth and Development	3
EAR-24 Introduction to Curriculum	3
EAR-25 Teaching in a Diverse Society	3
EAR-26 Health, Safety and Nutrition	3
EAR-28 Principles and Practices of Teaching Young Children	3
EAR-30 Practicum in Early Childhood Education	4
EAR-42 Child, Family and Community	3

** Associate in Science for Transfer Degree

The Associate in Science in Early Childhood Education for Transfer degree will be awarded upon completion of 60 California State University (CSU) transferable units including the above major requirements and the Intersegmental General Education Transfer Curriculum (IGETC) or California State University General Education (CSUGE) requirements with a minimum grade point average of 2.0. All courses in the major must be completed with a grade of "C" or better (or a "P" if taken as Pass/No Pass).

Early Childhood Education Assistant Teacher (MNR)

MCE795/NCE795/CE795

Required Courses (6 units) – 2 courses

Certificate Course Requirements	Units
Complete two courses from the list below:	
EAR-20 Child Growth and Development	3
EAR-24 Introduction to Curriculum	3
EAR-28 Principles and Practices of Teaching Young Children	3
EAR-42 Child, Family, and Community	3



Early Childhood Education School Age (M)
MCE1060

Required Courses (30 units) - 10 courses

Certificate Course Requirements	Units
EAR-19 Observation and Assessment in Early Childhood Education	3
EAR-20 Child Growth and Development	3
EAR-24 Introduction to Curriculum	3
EAR-25 Teaching in a Diverse Society	3
EAR-26 Health, Safety and Nutrition	3
EAR-28 Principles and Practices of Teaching Young Children	3
EAR-42 Child, Family, and Community	3
EAR-57 School Age Child Care Programs and Curriculum	3
EAR-58 Recreational Leadership in School Age Child Care	3
EAR-59 Practicum in School-Age	3

Early Childhood Education Twelve Core Units (MNR)
MCE797/NCE797/CE797

Required Courses (12 units) – 4 courses

Certificate Course Requirements	Units
EAR-20 Child Growth and Development	3
EAR-24 Introduction to Curriculum	3
EAR-28 Principles and Practices of Teaching Young Children	3
EAR-42 Child, Family, and Community	3

Early Childhood Education (MNR)

*Associate of Science Degree**

MAS544/MAS544B/MAS544C/MCE544

NAS544/NAS544B/NAS544C/NCE544

AS544/AS544B/AS544C/CE544

Required Courses (31 units) – 10-11 courses

Degree Course Requirements	Units
EAR-19 Observation and Assessment in Early Childhood Education	3
EAR-20 Child Growth and Development	3
EAR-24 Introduction to Curriculum	3
EAR-25 Teaching in a Diverse Society	3
EAR-26 Health, Safety and Nutrition	3
EAR-28 Principles and Practices of Teaching Young Children	3
EAR-30 Practicum in Early Childhood Education	4
EAR-42 Child, Family, and Community	3
Electives (Choose from the list below)	6
Electives (6 units)	
	Units
EAR-23 Family Home Child Care Program	3
EAR-33 Infant and Toddler Development	3
EAR-34 Infant and Toddler Care and Education	3
EAR-38 Adult Supervision and Mentoring in Early Childhood Education	3
EAR-40 Introduction to Children with Special Needs	3
EAR-41 Practicum in Early Intervention/Special Education	4
EAR-43 Children with Challenging Behaviors	3
EAR-44 Administration I: Programs in Early Childhood Education	3
EAR-45 Administration II: Personnel and Leadership in Early Childhood Education	3
EAR-46 Curriculum and Strategies for Children with Special Needs	3
EAR-47 Childhood Stress and Trauma	3
EAR-53 Parenting: Guiding Young Children - Approaches to Discipline	2
EAR-54 Parenting: Contemporary Parenting Issues	1
EDU-1 Introduction to Elementary Classroom Teaching	4
ENG-30 Children's Literature	3
KIN-6 Introduction to Physical Education for Preschool and Elementary Children	3
KIN-30 First Aid and CPR	3
MUS-1 Teaching Music to Young Children	3

* The Associate of Science Degree will be awarded upon completion of the degree requirements, including general education and other graduation requirements as described in the college catalog.

Early Childhood Intervention Assistant (M)

Associate of Science Degree*

MAS601/MAS601B/MAS601C/MCE601

Required Courses (34 units) – 11 courses

Degree Course Requirements	Units
EAR-19 Observation and Assessment in Early Childhood Education	3
EAR-20 Child Growth and Development	3
EAR-24 Introduction to Curriculum	3
EAR-28 Principles and Practices of Teaching Young Children	3
EAR-40 Introduction to Children with Special Needs	3
EAR-41 Practicum in Early Intervention/Special Education	4
EAR-42 Child, Family, and Community	3
EAR-43 Children with Challenging Behaviors	3
EAR-46 Curriculum and Strategies for Children with Special Needs	3
Electives (Choose from the list below)	6
Electives (6 units)	
EAR-23 Family Home Child Care Program	3
EAR-33 Infant and Toddler Development	3
EAR-34 Infant and Toddler Care and Education	3
EAR-38 Adult Supervision and Mentoring in Early Childhood Education	3
EAR-44 Administration I: Programs in Early Childhood Education	3
EAR-47 Childhood Stress and Trauma	3



Early Childhood Intervention Assistant (NR)

Associate of Science Degree*

NAS601/NAS601B/NAS601C/NCE601

AS601/AS601B/AS601C/CE601

Required Courses (34 units) – 11 courses

Degree Course Requirements	Units
EAR-19 Observation and Assessment in Early Childhood Education	3
EAR-20 Child Growth and Development	3
EAR-24 Introduction to Curriculum	3
EAR-28 Principles and Practices of Teaching Young Children	3
EAR-40 Introduction to Children with Special Needs	3
EAR-41 Practicum in Early Intervention/Special Education	4
EAR-42 Child, Family, and Community	3
EAR-43 Children with Challenging Behaviors	3
EAR-46 Curriculum and Strategies for Children with Special Needs	3
Electives (Choose from the list below)	6
Electives (6 units)	
EAR-26 Health, Safety and Nutrition	3
EAR-33 Infant and Toddler Development	3
EAR-34 Infant and Toddler Care and Education	3
EAR-38 Adult Supervision and Mentoring in Early Childhood Education	3
EAR-44 Administration I: Programs in Early Childhood Education	3
EAR-47 Childhood Stress and Trauma	3

Infant and Toddler Specialization (MR)

MCE681/CE681

Required Courses (12 units) – 4 courses

Certificate Course Requirements	Units
EAR-20 Child Development	3
EAR-33 Infant and Toddler Development	3
EAR-34 Infant and Toddler Care and Education	3
EAR-35 Practicum in Infant and Toddler Care	3

* The Associate of Science Degree will be awarded upon completion of the degree requirements, including general education and other graduation requirements as described in the college catalog.

EARLY CHILDHOOD EDUCATION NONCREDIT

Family Childcare Provider (MR)

MCC8033/ NCC8033/CC8033

Required Courses (24 hours) – 3 courses

Certificate Course Requirements	Hours
EAR-810 Family Child Care - Our Business	8
EAR-811 Family Child Care - Our Curriculum	8
EAR-812 Family Child Care - Our Family and Community	8

EDUCATION PARAPROFESSIONAL

Education Paraprofessional (M)

Associate of Science Degree*

MAS603/MAS603B/MAS603C/MCE603

Required Courses (22 units) – 7 courses

Degree Course Requirements	Units
BIO-1/1H General Biology	4
COM-1/1H Public Speaking	3
EAR-20 Child Growth and Development	3
EDU-1 Introduction to Elementary Classroom Teaching	4
EDU-200 Education Work Experience	1
ENG-1A/1AH English Composition	4
HES-1 Health Science	3



Education Paraprofessional (R)

Associate of Science Degree*

S603/AS603B/AS603C/CE603

Required Courses (25-27 units) – 7-8 courses

Degree Course Requirements	Units
COM-1/1H Public Speaking OR COM-9/9H Interpersonal Communication	3
EAR-20 Child Growth and Development	3
EDU-1 Introduction to Elementary Classroom Teaching	4
ENG-1A/1AH English Composition OR ENG-50 Basic English Composition	4
HIS-6/6H United States History to 1877/Honors OR HIS-7/7H United States History from 1865/Honors	3
Electives	8-10
Electives (8-10 units)	
EAR-26 Health, Safety and Nutrition	3
ENG-30 Children's Literature	3
KIN-30 First Aid and CPR	3
SPA-3N Spanish for Spanish Speakers	5

ENGLISH AS A SECOND LANGUAGE NONCREDIT

Beginning American College English (N) NCC8028

Required Courses (180 hours) – 2 courses

Certificate Course Requirements	Hours
EAR-846 Beginning American College English	90
EAR-847 Low Intermediate American College English	90

Advanced American College English (N) NCC8027

Required Courses (270 hours) – 3 courses

Certificate Course Requirements	Hours
EAR-848 Intermediate American College English	90
EAR-849 High Intermediate American College English	90
EAR-850 Advanced American College English	90

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Introduction To Education Profession For ESL Students (M)

MCC8007

Required Courses (48 hours) - 2 courses

Certificate Course Requirements	Hours
ESL-804 Introduction to American Public Education	24
ESL-805 Introduction to Education Practices and Related Service Providers in Special Education	24

SIGN LANGUAGE INTERPRETING

Sign Language Interpreting (R)

Associate of Science Degree*

AA505/AA505B/AA505C/CE505

Required Courses (28.5 units) – 8 courses

Degree Course Requirements	Units
ASL-5 American Sign Language for Interpreters	4
ASL-10 Introduction to Sign Language Interpreting	3
ASL-11 American Sign Language Interpreting I	4.5
ASL-12 American Sign Language Interpreting II	4.5
ASL-13 American Sign Language Interpreting III	4.5
ASL-14 American Sign Language Interpreting IV/ Practicum	2
ASL-20 Ethics and Professional Standards of Interpreting	3
ASL-22 American Deaf Culture	3

SOCIAL JUSTICE STUDIES

Social Justice Studies (N)

Associate Degree for Transfer**

CSUGE NAA1003/IGETC NAA1004

Required Courses (18-20 units)– 8 courses

Degree Course Requirements	Units
SJS-110 Introduction to Social Justice Studies OR SOC-10/10H Race and Ethnic Relations/Honors	3
SOC-15 Introduction to Women's Studies	3
MAT-12/12H Statistics/Honors 4 OR PSY/SOC-48 Statistics for the Behavioral Sciences	3

List A Select 3 courses from at least 2 of the following areas (9-10 units)

Area 1: History or Government	Units
ETS-2/HIS-31 Introduction to Chicana and Latinx Studies	3
ETS/HIS-14 African American History I	3
ETS/POL-21 Latinx Politics	3
ETS/POL-23 Race, Ethnicity, and Politics in America	3
HIS-34 History of Women in United States	3
POL-20 Latin American Politics	3
Area 2: Arts and Humanities	Units
ENG-35 Women in Literature	3
ETS/ENG-18 Survey of Native American Literature	3
ETS/ENG-20 Survey of African American Literature	3
ETS/ENG-24 Survey of Asian American Literature	3
ETS/ENG-25 Latinx Literature of the United States	3
HUM-9 American Voices	3
HUM-10/10H World Religions/Honors	3
HUM-16 Arts and Ideas: American Culture	3
HUM/PHI-35 Philosophy of Religion	3
MUS-89/89H Music of Multicultural America/Honors	3
Area 3: Social Science	Units
ANT-2/2H Cultural Anthropology/Honors	3
ANT-7 Anthropology of Religion	3
ANT-8 Language and Culture	3
ETS-27/ANT-4 Native American Cultures	3
COM-12 Intercultural Communication	3
COM-13 Gender and Communication	3
PSY-8 Social Psychology	3
PSY-9 Developmental Psychology	3
PSY-50 Research Methods in Psychology	4
SOC-2 American Social Problems	3
SOC-3 Social Inequality	3
SOC-50 Introduction to Social Research Methods	3

**Associate in Arts for Transfer Degree

The Associate in Arts in Social Justice Studies for Transfer degree will be awarded upon completion of 60 California State University (CSU) transferable units including the above major requirements and the Intersegmental General Education Transfer Curriculum (IGETC) or California State University General Education (CSUGE) requirements and with a minimum grade point average of 2.0. All courses in the major must be completed with a grade of "C" or better (or a "P" if taken as Pass/No Pass).

* The Associate of Science Degree will be awarded upon completion of the degree requirements, including general education and other graduation requirements as described in the college catalog.

SOCIAL WORK, HUMAN SERVICES and COUNSELING PRACTICES

Behavioral Therapist (M)

MCE1044

Required Courses (13-16 units) – 5 courses

Certificate Course Requirements	Units
HMS-36 Counseling Families of Special Needs Youth	3
HMS-39 Introduction to Special Education and the IEP (Individualized Education Program)	3
HMS/WKX-200 Human Services Work Experience	1-4
Electives Courses (6 units)	Units
HMS-4 Introduction to Human Services	3
HMS-5 Introduction to Evaluation and Counseling	3
HMS-6 Introduction to Case Management	3
HMS-7 Introduction to Psychosocial Rehabilitation	3
HMS-8 Introduction to Group Process	3
HMS-13 Employment Support Strategies	3
HMS-14 Job Development	3
HMS-16 Public Assistance and Benefits	1
HMS-17 Introduction to Community Mental Health	3
HMS-18 Introduction to Social Work	3
HMS-19 Generalist Practices of Social Work	3
HMS-20 Medical Social Work	3
HMS-21 Social Justice in the Criminal Justice System	3
HMS-22 Human Behavior and the Social Environment	3
HMS-23 Law and Ethics in Social Work, Human Services, & Counseling Practices	3
HMS-24 Creative Arts Therapies and Self-Care for Helping Professionals	3
HMS-25 Crisis-Intervention Management	3
HMS-26 Trauma-Focused Counseling	3
HMS-27 Introduction to Multicultural Counseling	3
HMS-28 Military Social Work	3
HMS-29 Introduction to Careers in Social Work	3
HMS-30 Counseling of African Americans	3
HMS-31 Counseling of Latina and Latino Americans	3
HMS-32 Counseling of Asian Americans	3
HMS-33 Counseling of Native Americans	3
HMS-34 Counseling Emotionally Disabled Students	3

HMS-35 Counseling Students with a Learning Disability	3
HMS-37 Counseling of Clients with Disabilities	3
HMS-38 Introduction to Applied Behavioral Analysis	3
HMS-40 Counseling Youth and Adolescents	3
HMS-41 Counseling and Resources for Survivors of Domestic Violence	3
HMS-42 Counseling and Resources for Families in the Child Welfare System	3
HMS-43 Counseling and Resources for Older Adults and Their Families	3
HMS-44 Counseling Youth in Gangs	3
HMS-45 Counseling Youth on Probation	3
HMS-46 Introduction to Resources and Counseling Individuals on Probation or Parole	3
HMS-47 Counseling of Residential Treatment Clients	3
HMS-48 Counseling and Case Management in Correctional Facilities	3
HMS-49 Careers in Social Work - Counseling Athletes	3
HMS-60 Introduction to Drugs and Alcohol	3
HMS-61 Evaluation of Narcotics and Controlled Substances	3
HMS-62 Introduction to the Diagnostic and Statistical Manual of Mental Disorders	3
HMS-70 Social Work Administration Studies - Non-Profit Organizations	3
HMS-71 Grant Writing Essentials	3
HMS-72 Social Work Administration Studies - Social Welfare Policy	3
HMS-73 Social Work Administration Studies - Administration in Social Work	3
HMS-74 Social Work Administration - Social Work Theory	3

Child Welfare & Family Studies (M)

MCE1038

Required Courses (16-19 units) - 6 courses

Certificate Course Requirements	Units
HMS-19 Generalist Practices of Social Work	3
HMS-22 Human Behavior and the Social Environment	3
HMS-42 Family Studies - Counseling in Foster Care	3
HMS/WKX-200 Human Services Work Experience	1-4
Elective Courses (6 units)	Units
HMS-4 Introduction to Human Services	3
HMS-5 Introduction to Evaluation and Counseling	3
HMS-6 Introduction to Case Management	3

HMS-7 Introduction to Psychosocial Rehabilitation	3
HMS-8 Introduction to Group Process	3
HMS-13 Employment Support Strategies	3
HMS-14 Job Development	3
HMS-16 Public Assistance and Benefits	1
HMS-17 Introduction to Community Mental Health	3
HMS-18 Introduction to Social Work	3
HMS-20 Medical Social Work	3
HMS-21 Social Justice in the Criminal Justice System	3
HMS-23 Law and Ethics in Social Work, Human Services, & Counseling Practices	3
HMS-24 Creative Arts Therapies and Self-Care for Helping Professionals	3
HMS-25 Crisis-Intervention Management	3
HMS-26 Trauma-Focused Counseling	3
HMS-27 Introduction to Multicultural Counseling	3
HMS-28 Military Social Work	3
HMS-29 Introduction to Careers in Social Work	3
HMS-30 Counseling of African Americans	3
HMS-31 Counseling of Latina and Latino Americans	3
HMS-32 Counseling of Asian Americans	3
HMS-33 Counseling of Native Americans	3
HMS-34 Counseling Emotionally Disabled Students	3
HMS-35 Counseling Students with a Learning Disability	3
HMS-36 Counseling Families of Special Needs Youth	3
HMS-37 Counseling of Clients with Disabilities	3
HMS-38 Introduction to Applied Behavioral Analysis	3
HMS-39 Introduction to Special Education and the IEP (Individualized Education Program)	3
HMS-40 Counseling Youth and Adolescents	3
HMS-41 Counseling and Resources for Survivors of Domestic Violence	3
HMS-43 Counseling and Resources for Older Adults and Their Families	3
HMS-44 Counseling Youth in Gangs	3
HMS-45 Counseling Youth on Probation	3
HMS-46 Introduction to Resources and Counseling Individuals on Probation or Parole	3
HMS-47 Counseling of Residential Treatment Clients	3
HMS-48 Counseling and Case Management in Correctional Facilities	3
HMS-49 Careers in Social Work - Counseling Athletes	3

HMS-60 Introduction to Drugs and Alcohol	3
HMS-61 Evaluation of Narcotics and Controlled Substances	3
HMS-62 Introduction to the Diagnostic and Statistical Manual of Mental Disorders	3
HMS-70 Social Work Administration Studies - Non-Profit Organizations	3
HMS-71 Grant Writing Essentials	3
HMS-72 Social Work Administration Studies - Social Welfare Policy	3
HMS-73 Social Work Administration Studies - Administration in Social Work	3
HMS-74 Social Work Administration Studies - Social Work Theory	3

Drug and Alcohol Studies (M) MCE1045

Required Courses (32.5 units) – 10 courses

Certificate Course Requirements	Units
HMS-5 Introduction to Evaluation and Counseling	3
HMS-6 Introduction to Case Management	3
HMS-23 Law and Ethics in Social Work, Human Services, & Counseling Practices	3
HMS-24 Creative Arts Therapies and Self-Care for Helping Professionals	3
HMS-60 Introduction to Drugs and Alcohol	3
HMS-64 Introduction to Physiology and Pharmacology Related to Addiction	3
HMS-65 Supervised Practicum	3
HMS-66 Clinically Supervised Experience	5.5
Electives Courses (6 units)	Units
HMS-4 Introduction to Human Services	3
HMS-7 Introduction to Psychosocial Rehabilitation	3
HMS-8 Introduction to Group Process	3
HMS-13 Employment Support Strategies	3
HMS-14 Job Development	3
HMS-16 Public Assistance and Benefits	1
HMS-17 Introduction to Community Mental Health	3
HMS-18 Introduction to Social Work	3
HMS-19 Generalist Practices of Social Work	3
HMS-20 Medical Social Work	3
HMS-21 Social Justice in the Criminal Justice System	3
HMS-22 Human Behavior and the Social Environment	3

HMS-25 Crisis-Intervention Management	3
HMS-26 Trauma-Focused Counseling	3
HMS-27 Introduction to Multicultural Counseling	3
HMS-28 Military Social Work	3
HMS-29 Introduction to Careers in Social Work	3
HMS-30 Counseling of African Americans	3
HMS-31 Counseling of Latina and Latino Americans	3
HMS-32 Counseling of Asian Americans	3
HMS-33 Counseling of Native Americans	3
HMS-34 Counseling Emotionally Disabled Students	3
HMS-35 Counseling Students with a Learning Disability	3
HMS-36 Counseling Families of Special Needs Youth	3
HMS-37 Counseling of Clients with Disabilities	3
HMS-38 Introduction to Applied Behavioral Analysis	3
HMS-39 Introduction to Special Education and the IEP (Individualized Education Program)	3
HMS-40 Counseling Youth and Adolescents	3
HMS-41 Counseling and Resources for Survivors of Domestic Violence	3
HMS-42 Counseling and Resources for Families in the Child Welfare System	3
HMS-43 Counseling and Resources for Older Adults and Their Families	3
HMS-44 Counseling Youth in Gangs	3
HMS-45 Counseling Youth on Probation	3
HMS-46 Introduction to Resources and Counseling Individuals on Probation or Parole	3
HMS-47 Counseling of Residential Treatment Clients	3
HMS-48 Counseling and Case Management in Correctional Facilities	3
HMS-49 Careers in Social Work - Counseling Athletes	3
HMS-61 Evaluation of Narcotics and Controlled Substances	3
HMS-62 Introduction to the Diagnostic and Statistical Manual of Mental Disorders	3
HMS-70 Social Work Administration Studies - Non-Profit Organizations	3
HMS-71 Grant Writing Essentials	3
HMS-72 Social Work Administration Studies - Social Welfare Policy	3
HMS-73 Social Work Administration Studies - Administration in Social Work	3
HMS-74 Social Work Administration - Social Work Theory	3

Employment Support Specialization (M) MCE802

Required Courses (4 units) – 2 courses

Certificate Course Requirements	Units
HMS-13 Employment Support Strategies	3
HMS-16 Public Assistance and Benefits	1

Military Social Work (M) MCE903

Required Courses (17-20 units) – 7 courses

Certificate Course Requirements	Units
HMS-16 Public Assistance and Benefits	1
HMS-18 Introduction to Social Work	3
HMS-26 Trauma-Focused Counseling	3
HMS-28 Military Social Work	3
WKX/HMS-200 Human Services Work Experience	1-4

Electives Courses (6 units)	Units
HMS-4 Introduction to Human Services	3
HMS-5 Introduction to Evaluation and Counseling	3
HMS-6 Introduction to Case Management	3
HMS-7 Introduction to Psychosocial Rehabilitation	3
HMS-8 Introduction to Group Process	3
HMS-13 Employment Support Strategies	3
HMS-14 Job Development	3
HMS-17 Introduction to Community Mental Health	3
HMS-19 Generalist Practices of Social Work	3
HMS-20 Medical Social Work	3
HMS-21 Social Justice in the Criminal Justice System	3
HMS-22 Human Behavior and the Social Environment	3
HMS-23 Law and Ethics in Social Work, Human Services, & Counseling Practices	3
HMS-24 Creative Arts Therapies and Self-Care for Helping Professionals	3
HMS-25 Crisis-Intervention Management	3
HMS-27 Introduction to Multicultural Counseling	3
HMS-29 Introduction to Careers in Social Work	3
HMS-30 Counseling of African Americans	3
HMS-31 Counseling of Latina and Latino Americans	3
HMS-32 Counseling of Asian Americans	3
HMS-33 Counseling of Native Americans	3
HMS-34 Counseling Emotionally Disabled Students	3

HMS-35 Counseling Students with a Learning Disability	3
HMS-36 Counseling Families of Special Needs Youth	3
HMS-37 Counseling of Clients with Disabilities	3
HMS-38 Introduction to Applied Behavioral Analysis	3
HMS-39 Introduction to Special Education and the IEP (Individualized Education Program)	3
HMS-40 Counseling Youth and Adolescents	3
HMS-41 Counseling and Resources for Survivors of Domestic Violence	3
HMS-42 Counseling and Resources for Families in the Child Welfare System	3
HMS-43 Counseling and Resources for Older Adults and Their Families	3
HMS-44 Counseling Youth in Gangs	3
HMS-45 Counseling Youth on Probation	3
HMS-46 Introduction to Resources and Counseling Individuals on Probation or Parole	3
HMS-47 Counseling of Residential Treatment Clients	3
HMS-48 Counseling and Case Management in Correctional Facilities	3
HMS-49 Careers in Social Work - Counseling Athletes	3
HMS-60 Introduction to Drugs and Alcohol	3
HMS-61 Evaluation of Narcotics and Controlled Substances	3
HMS-62 Introduction to the Diagnostic and Statistical Manual of Mental Disorders	3
HMS-70 Social Work Administration Studies - Non-Profit Organizations	3
HMS-71 Grant Writing Essentials	3
HMS-72 Social Work Administration Studies - Social Welfare Policy	3
HMS-73 Social Work Administration Studies - Administration in Social Work	3
HMS-74 Social Work Administration - Social Work Theory	3



Multicultural Counseling & Advocacy Resources (M) MCE1039

Required Courses (13-16 units) – 5 courses

Certificate Course Requirements	Units
HMS-27 Introduction to Multicultural Counseling	3
HMS-62 Introduction to the Diagnostic and Statistical Manual of Mental Disorders	3
WKX/HMS-200 Human Services Work Experience	1-4
Elective Courses (6 units)	Units
HMS-18 Introduction to Social Work	3
HMS-22 Human Behavior and the Social Environment	3
HMS-30 Counseling of African Americans	3
HMS-31 Counseling of Latina and Latino Americans	3
HMS-32 Counseling of Asian Americans	3
HMS-33 Counseling of Native Americans	3
HMS-42 Counseling in Foster Care	3

Social Justice System Studies (M) MCE988

Required Courses (17-20 units) – 7 courses

Certificate Course Requirements	Units
HMS-16 Public Assistance and Benefits	1
HMS-21 Social Justice in the Criminal Justice System	3
HMS-46 Introduction to Resources and Counseling Individuals on Probation or Parole	3
HMS-48 Counseling and Case Management in Correctional Facilities	3
WKX/HMS-200 Human Services Work Experience	1-4

Elective Courses (6 units)	Units
HMS-4 Introduction to Human Services	3
HMS-5 Introduction to Evaluation and Counseling	3
HMS-6 Introduction to Case Management	3
HMS-7 Introduction to Psychosocial Rehabilitation	3
HMS-8 Introduction to Group Process	3
HMS-13 Employment Support Strategies	3
HMS-14 Job Development	3
HMS-17 Introduction to Community Mental Health	3
HMS-18 Introduction to Social Work	3
HMS-19 Generalist Practices of Social Work	3
HMS-20 Medical Social Work	3

HMS-22 Human Behavior and the Social Environment	3
HMS-23 Law and Ethics in Social Work, Human Services, & Counseling Practices	3
HMS-24 Creative Arts Therapies and Self-Care for Helping Professionals	3
HMS-25 Crisis-Intervention Management	3
HMS-26 Trauma-Focused Counseling	3
HMS-27 Introduction to Multicultural Counseling	3
HMS-28 Military Social Work	3
HMS-29 Introduction to Careers in Social Work	3
HMS-30 Counseling of African Americans	3
HMS-31 Counseling of Latina and Latino Americans	3
HMS-32 Counseling of Asian Americans	3
HMS-33 Counseling of Native Americans	3
HMS-34 Counseling Emotionally Disabled Students	3
HMS-35 Counseling Students with a Learning Disability	3
HMS-36 Counseling Families of Special Needs Youth	3
HMS-37 Counseling of Clients with Disabilities	3
HMS-38 Introduction to Applied Behavioral Analysis	3
HMS-39 Introduction to Special Education and the IEP (Individualized Education Program)	3
HMS-40 Counseling Youth and Adolescents	3
HMS-41 Counseling and Resources for Survivors of Domestic Violence	3
HMS-42 Counseling and Resources for Families and the Child Welfare System	3
HMS-43 Counseling and Resources for Older Adults and Their Families	3
HMS-49 Careers in Social Work - Counseling Athletes	3
HMS-60 Introduction to Drugs and Alcohol	3
HMS-61 Evaluation of Narcotics and Controlled Substances	3
HMS-62 Introduction to the Diagnostic and Statistical Manual of Mental Disorders	3
HMS-70 Social Work Administration Studies - Non-Profit Organizations	3
HMS-71 Grant Writing	3
HMS-72 Social Work Administration Studies - Social Welfare Policy	3
HMS-73 Social Work Administration Studies - Administration in Social Work	3
HMS-74 Social Work Administration Studies - Social Work Theory	3

Social Work, Human Services, & Counseling Practices (M)

Associate of Science Degree*

MAS987/MAS987B/MAS987C/MCE987

Required Courses (20-23 units) – 8 courses

Degree Course Requirements	Units
HMS-4 Introduction to Human Services	3
HMS-5 Introduction to Evaluation and Counseling	3
HMS-6 Introduction to Case Management	3
HMS-8 Introduction to Group Process	3
HMS-16 Public Assistance and Benefits	1
HMS/WKX-200 Human Services Work Experience	1-4
Electives (6 units)	Units
HMS-7 Introduction to Psychosocial Rehabilitation	3
HMS-13 Employment Support Strategies	3
HMS-14 Job Development	3
HMS-17 Introduction to Community Mental Health	3
HMS-18 Introduction to Social Work	3
HMS-19 Generalist Practices of Social Work	3
HMS-20 Medical Social Work	3
HMS-21 Social Justice in the Criminal Justice System	3
HMS-22 Human Behavior and the Social Environment	3
HMS-23 Law and Ethics in Social Work, Human Services, & Counseling Practices	3
HMS-24 Creative Arts Therapies and Self-Care for Helping Professionals	3
HMS-25 Crisis-Intervention Management	3
HMS-26 Trauma-Focused Counseling	3
HMS-27 Introduction to Multicultural Counseling	3
HMS-28 Military Social Work	3
HMS-29 Introduction to Careers in Social Work	3
HMS-30 Counseling of African Americans	3
HMS-31 Counseling of Latina and Latino Americans	3
HMS-32 Counseling of Asian Americans	3
HMS-33 Counseling of Native Americans	3
HMS-34 Counseling Emotionally Disabled Students	3
HMS-35 Counseling Students with a Learning Disability	3
HMS-36 Counseling Families of Special Needs Youth	3
HMS-37 Counseling of Clients with Disabilities	3

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HMS-38 Introduction to Applied Behavioral Analysis	3
HMS-39 Introduction to Special Education and the IEP (Individualized Education Program)	3
HMS-40 Counseling Youth and Adolescents	3
HMS-41 Counseling Survivors of Domestic Violence	3
HMS-42 Counseling and Resources for Families and the Child Welfare System	3
HMS-43 Counseling and Resources for Older Adults and Their Families	3
HMS-44 Counseling Youth in Gangs	3
HMS-45 Counseling Youth on Probation	3
HMS-46 Introduction to Resources and Counseling Individuals on Probation or Parole	3
HMS-47 Counseling of Residential Treatment Clients	3
HMS-48 Counseling and Case Management in Correctional Facilities	3
HMS-49 Careers in Social Work - Counseling Athletes	3
HMS-60 Introduction to Drugs and Alcohol	3
HMS-61 Evaluation of Narcotics and Controlled Substances	3
HMS-62 Introduction to the Diagnostic and Statistical Manual of Mental Disorders	3
HMS-70 Social Work Administration Studies - Non-Profit Organizations	3
HMS-71 Grant Writing	3
HMS-72 Social Work Administration Studies - Social Welfare Policy	3
HMS-73 Social Work Administration Studies - Administration in Social Work	3
HMS-74 Social Work Administration Studies - Social Work Theory	3





ENERGY, ENVIRONMENT, and UTILITIES

The United States is not only one of the world's leading suppliers of energy, it is also one of its largest consumers. To serve this ever-expanding market, the Energy, Environment, and Utilities sector employs technicians in electrical, mechanical, and construction jobs as well as architects, engineers, business managers, sales/marketing professionals, and public policy specialists.

With the increase of public and governmental interest in renewable energy, clean energy generation, and energy efficiency, job opportunities across the energy spectrum are growing rapidly and will continue to do so, especially since 40% of the existing workforce will be eligible for retirement in the next five years. As a result, employers will need skilled workers for traditional energy jobs as well as future energy-related positions. While this sector consists of many different kinds of companies and products, skills developed in one area are generally transferable to others.

In California alone, this sector creates 15,000 jobs per year, many of which are for high-wage jobs, starting at \$40,000 and progressing to more than \$100,000. Especially strong demand is projected for Heating, Ventilation, and Air Conditioning (HVAC) technicians, electricians, plumbers and pipefitters, utility workers, engineers, and a wide range of business professionals. According to some estimates, jobs in the energy and environment sector could triple over the next decade.



TYPES OF CAREERS

- Electronic Technician
- Maintenance Supervisor
- Heating/Ventilation/AC (HVAC) Technician
- Electrician
- Construction Supervisor
- Computerized Numerical Control (CNC) Technician
- Computer-Aided Design (CAD) Technician
- Building Contractor
- Automotive Control System Technician
- Solar Technician
- Sub-Contractor

SALARY SNAPSHOT

- Carpenters \$49,525 / \$23.81 hourly
- First-Line Supervisors of Construction Trades and Extraction Workers \$63,814 / \$30.68 hourly
- Plumbers, Pipefitters & Steamfitters \$54,912 / \$26.40 hourly
- Construction Managers \$71,406 / \$34.33 hourly
- Operating Engineers & Other Construction Equipment Operators \$76,253 / \$36.66 hourly
- Heating, Air Conditioning & Refrigeration Mechanics and Installers \$47,424 / \$22.80 hourly
- Structural Iron & Steelworkers \$69,618 / \$33.47 hourly
- Construction & Building Inspectors \$82,077 / \$39.46 hourly
- Sheet Metal Workers \$56,680 / \$27.25 hourly
- Water & Wastewater Treatment Plant & Systems Operators \$71,323 / \$34.29 hourly
- Electricians \$49,878 / \$23.98 hourly

INDUSTRY SECTOR PATHWAYS:

- Building Automation Control, Facilities Operations Technician
- Building Inspection, Inspection Technology
- Construction Technology/Management, Building Construction
- Electrician, Electrician Apprentice, General/Basic
- Electrician
- Heating, Ventilation, Air Conditioning & Refrigeration
- Plumbing
- Residential Maintenance
- Woodworking
- Land Surveying



FUN FACT:
California has set the goal that by the year 2030, 50% of the state's buildings will consume zero net energy. This challenge can only be met with a highly skilled workforce.

Zero Net Energy (R)
CE965

Required Courses (17-20 units) – 6 courses

Certificate Course Requirements	Units
CAT-61 Professional Office Procedures	3
EST-10 Industrial Calculations	3
EST-15 Zero Net Energy Building Science	4
EST-20 California Energy Codes	3
EST-30 Architectural Blueprint Reading	3
EST-200 Energy Systems Technology Work Experience	1-4

ENERGY SYSTEMS TECHNOLOGY

Building Inspection Technology (R)
CE964

Required Courses (27 units) – 9 courses

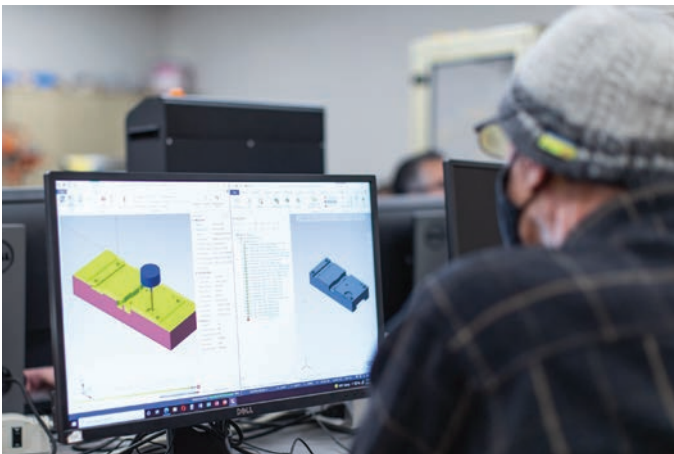
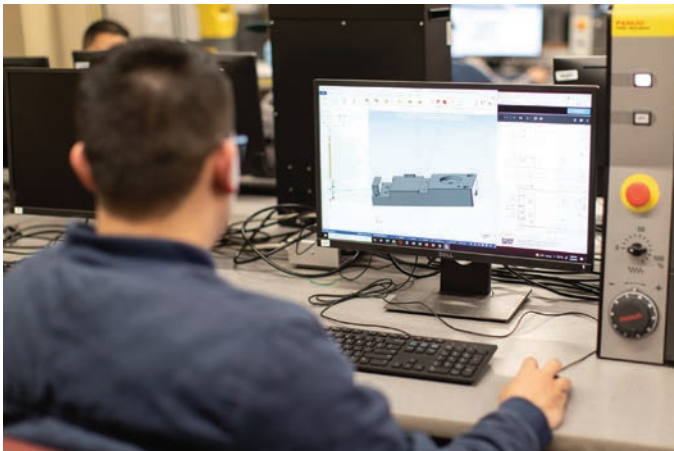
Certificate Course Requirements	Units
EST-20 California Energy Codes	3
EST-21 California Building Codes	3
EST-22 California Mechanical Codes	3
EST-23 California Plumbing Codes	3
EST-24 California Electrical Codes	3
EST-25 California Residential Codes	3
EST-26 California Fire Codes	3
EST-32 Architectural Practice I	3
EST-33 Materials of Construction	3





ENGINEERING and ARCHITECTURE

The world's future will be shaped by ideas that are developed by those working in the Engineering and Architecture industry. Do you want to play a role in helping to create the world of tomorrow? If you answered yes, then consider a career in this field. Jobs in this industry include CAD/CAM technicians, software engineers, architects, surveyors, and mechanical drafting. Check out our programs in Architecture, Drafting Technology and Engineering Technology.



TYPES OF CAREERS

- Civil Drafters
- Surveying Technicians (same as Mapping Tech)
- Electro-Mechanical Technicians (in ICT)
- Power Distributors and Dispatchers
- Nuclear Technicians
- Mapping Technicians (same as Survey Tech)

SALARY SNAPSHOT

- Civil Drafters: \$27.24
- Surveying Technicians: \$28.08
- Electro-Mechanical Technicians: \$30.99
- Power Distributors & Dispatchers: \$45.90
- Nuclear Technicians: \$43.85
- Mapping Technicians: \$28.08

INDUSTRY SECTOR PATHWAYS

- Electronics Engineering, Digital Electronics
- Drafting Technology, Computer Aided Design and Drafting, Mechanical Drafting
- Architecture Technology/Environmental Design, Architectural Graphics
- Computer Engineering Technology, Electronics/Computer Technology
- Engineering Technology
- Engineering, Pre-Engineering, Engineering Graphics, Rapid Prototyping

ARCHITECTURE

Architectural Graphics (N)

Associate of Science Degree*

NAS983/NAS983B/NAS983C/NCE983

Required Courses (27 units) – 9 courses

Degree Course Requirements	Units
ARE/DFT-24 Revit I - Architectural Drafting	3
ARE-25 Revit II - Advanced Architectural Drafting	3
ARE-37 Architectural Design	3
CON-62 Blueprint Reading for Construction	3
DFT/ENE-21 Drafting	3
DFT/ENE-27 Technical Communications	3
DFT/ENE-30 Computer-Aided Drafting (CAD)	3
Electives (Choose from list below)	9
Electives (6 units)	
ARE-35 History of Architecture: Beginnings through Gothic	3
ARE-36 History of Architecture: Renaissance to Modern	3
CON-60 Introduction to Construction	3
CON-74 Construction Estimating	3

Essential 3D Tour (N)

NCE1020

Required Courses (6 units) – 2 courses

Certificate Course Requirements	Units
CON-62 Blueprint Reading for Construction	3
ARE-63 3D Tour - VR, AR, MR and XR	3

Essential 3D Tour Noncredit (N)

NCC8043

Required Courses (279 hours) – 2 courses

Certificate Course Requirements	Hours
CON-862 Blueprint Reading for Construction	162
ARE-863 3D Tour - VR, AR, MR and XR	117

Essential Revit (N)

NCE1023

Required Courses (6 units) – 2 courses

Certificate Course Requirements	Units
ARE/DFT-24 Revit I - Architectural Drafting	3
ARE-25 Revit II - Advanced Architectural Drafting	3

Essential Revit Noncredit (N)

NCC8046

Required Courses (234 hours) – 2 courses

Certificate Course Requirements	Hours
ARE/DFT-824 Revit I - Architectural Drafting	117
ARE-825 Revit II - Advanced Architectural Drafting	117

DRAFTING TECHNOLOGY

Drafting Technology (N)

Associate of Science Degree*

NAS539/NAS539B/NAS539C/NCE539

Required Courses (20-23 units) – 9 courses

Degree Course Requirements	Units
DFT/ENE-21 Drafting	3
DFT/ENE-27 Technical Communications	3
DFT/ENE-30 Computer Aided Drafting (CAD)	3
DFT/ENE-51 Blueprint Reading OR CON-62 Print Reading for Construction	2-3
ENE-41 Engineering Graphics	3
Electives (Choose from list below)	6-8
Electives (6-8 units)	
ARE-37 Architectural Design	3
CON-60 Introduction to Construction	3
DFT/ENE-42 SOLIDWORKS I	3
DFT/ENE-60 Math for Engineering Technology OR MAT-36 Trigonometry	3 4
MAN-56 CNC Machine Set-Up and Operation	4

Essential CAD (N)

NCE1021

Required Courses (6 units) – 2 courses

Certificate Course Requirements	Units
DFT/ENE-30 Computer Aided Design	3
DFT-31 Advanced Computer Aided Design	3

Essential CAD Noncredit (N)

NCC8044

Required Courses (216 hours) – 2 courses

Certificate Course Requirements	Hours
DFT/ENE-830 Computer Aided Design	108
DFT-831 Advanced Computer Aided Design	108

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Essential Fusion 360 (N) NCE1022

Required Courses (6 units) – 2 courses

Certificate Course Requirements	Units
DFT-62 Basic Fusion 360	3
DFT-63 Advanced Fusion 360	3

Essential Fusion 360 Noncredit (N) NCC8045

Required Courses (234 hours) – 2 courses

Certificate Course Requirements	Hours
DFT-862 Basic Fusion 360	117
DFT-863 Advanced Fusion 360	117

Essential SOLIDWORKS (N) NCE1024

Required Courses (6 units) – 2 courses

Certificate Course Requirements	Units
DFT/ENE-42 SOLIDWORKS I	3
DFT/ENE-42B SOLIDWORKS II	3

Essential SOLIDWORKS Noncredit (N) NCC8047

Required Courses (216 hours) – 2 courses

Certificate Course Requirements	Hours
DFT/ENE-842 SOLIDWORKS I	108
DFT/ENE-842B SOLIDWORKS II	108

ENGINEERING TECHNOLOGY

3D Mechanical Drafting (N)

Associate of Science Degree*

NAS995/NAS995B/NAS995C/NCE995

Required Courses (20 units) – 8-9 courses

Degree Course Requirements	Units
DFT/ENE-21 Drafting	3
DFT/ENE-27 Technical Communications	3
DFT/ENE-30 Computer Aided Drafting (CAD)	3
DFT/ENE-42 SOLIDWORKS I	3
DFT/ENE-42B SOLIDWORKS II	3
DFT/ENE-51 Blueprint Reading	2
ENE-52 Geometric Dimensioning and Tolerancing	3
Electives (3-5 units) Choose list from below:	
ENE-41 Engineering Graphics	3
MAN-35 Computer Aided Manufacturing - Mastercam	5
MAN-56 CNC Machine Set-Up and Operation	4
MAT-36 Trigonometry	4



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Pre-Engineering (N)

Associate of Science Degree*

NAS763/CSUGE NAS764/IGETC NAS765

Required Courses (24-26 units) – 6 courses

Degree Course Requirements	Units
MAT-1A Calculus I	4
MAT-1B Calculus II	4
PHY-4A Mechanics	4
Choose one of the following:	
PHY-4B Electricity and Magnetism OR PHY-4C Heat, Light and Waves	4
Elective Courses (8-10 units)	
CHE-1A General Chemistry I	5
CHE-1B General Chemistry II	5
MAT-1C Calculus III	4
PHY-4B Electricity and Magnetism (if not used above) OR PHY-4C Heat, Light and Waves (if not used above)	4

Engineering Graphics (N)

NCE796

Required Courses (9 units) – 3 courses

Certificate Course Requirements	Units
DFT/ENE-21 Drafting	3
DFT/ENE-30 Computer-Aided Drafting (CAD)	3
Select one:	
ELE/ENE-27 Technical Communications OR ENE-41 Engineering Graphics	3



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HEALTH SCIENCE and MEDICAL TECHNOLOGY

The medical and health-related industry is one of the largest employers in California, employing nearly 1.7 million professionals across a wide range of well-paying career opportunities. Employment in healthcare occupations is projected to grow at a rate of 15% from 2019 to 2029, adding more jobs than any other occupational groups and maintaining its position as one of the top five grossing industries in the United States.

Programs of study in this sector can lead you in many different directions, including nursing, biotechnology research, diagnostic services, health informatics, support services, and physical therapy. While many of the careers in this sector require advanced-level preparation, there are many options available for students of various aptitudes, interests, abilities, and degree levels.

While significant expansion will continue across all occupational segments, the Health Workforce Initiative notes especially high growth opportunities for certified nursing assistants, home health aides, and licensed vocational nurses.



TYPES OF CAREERS

- Certified Nursing Assistant (CNA)
- Pharmacy Technician
- Registered Nurse (2 year)
- Paramedic
- Operating Room Technician
- Medical Records Technician
- Emergency Medical Technician (EMT)
- Licensed Vocational Nurse (LVN)
- Radiology Technologist
- Dental Lab Technician
- Respiratory Therapist
- Cardiovascular Technologist
- Dental Hygienist
- Diagnostic Medical Sonographer
- Biomedical Technician
- Environmental Services Technician
- Gerontologist

SALARY SNAPSHOT

- Registered Nurses \$109,075 / \$52.44 hourly
- Licensed Vocational Nurses \$59,717 / \$28.71 hourly
- Substance Abuse, Behavioral Disorder & Mental Health Counselors \$53,539 / \$25.74 hourly
- Medical and Health Services Managers \$123,094 / \$59.18 hourly
- Social Workers \$49,046 / \$23.58 hourly
- Phlebotomists \$45,386 / \$21.82 hourly
- Dental Hygienists \$99,070 / \$47.63 hourly

INDUSTRY SECTOR PATHWAYS

- Alcohol/Drug Studies, Dual Diagnosis
- Athletic Training
- Dental Assisting, Dental Hygiene
- Kinesiology: Coaching Professions
- Kinesiology: Fitness/Recreation Professions
- Medical Assisting, Medical Transcription
- Medical Front Office, Coding/Billing, Electronic Records
- Nursing Assistant, Home Health Aide
- Nursing Specialty: Acute Care Technician, Mobile Intensive Care, Critical Care
- Nursing: LVN
- Nursing: Registered Nurse, Associate Degree
- Nursing (ADN)
- Pharmacy Technician
- Phlebotomy
- Psychiatric Technology
- Radiologic Technology, Sonography
- Respiratory Therapy/Care
- Sports Medicine

DANCE

Pilates Dance/Conditioning Instructor (R) CE981

Required Courses (17 units) – 9-11 courses

Certificate Course Requirements	Units
DAN-12 Kinesiology for Pilates Instructors/Dancers	3
DAN-13 Pilates Methodology	2
DAN-14 Internship in Pilates Education and Teaching	4
DAN-D46 Pilates Mat Work	1
DAN-D48 Reformer Technique	1
DAN-D49 Pilates, Intermediate	1
DAN-D50 Pilates for Dancers	1
DAN-D51 Pilates, Advanced	1
Electives (Select 3 units from one emphasis below)	3
Dance/Athletes Emphasis (3 units):	
DAN-D21 Ballet, Beginning	1
DAN-D22 Ballet, Intermediate	1
DAN-D32 Jazz, Beginning	1
DAN-D33 Jazz, Intermediate	1
DAN-D37 Modern Dance, Beginning	1
DAN-D38 Modern Dance, Intermediate	1
KIN-16 Introduction to Athletic Training	3
KIN-43 Personal Training	3
General Lifestyle Management Emphasis (3 units):	
KIN-4 Nutrition	3
KIN-35 Foundation for Fitness and Wellness	3
KIN-36 Wellness: Lifestyle Choices	3
KIN-38 Stress Management	3



DENTAL ASSISTING

Dental Assistant (M)

Associate of Science Degree*

MAS621/MAS621B/MAS621C/MCE621

Required Courses (33 units) – 13 courses

Please note that separate application and additional requirements may be needed.

PROGRAM PREREQUISITE: Previous Academic GPA (either high school or college work, if attempted) of 2.0 or higher.

Degree Course Requirements	Units
FALL	
DEA-10 Introduction to Dental Assisting and Chairside Assisting	4.5
DEA-20 Infection Control for Dental Assistants	2
DEA-21 Introduction to Radiology for Dental Assistants	2.5
DEA-22 Introduction to Supervised Externships	1.5
DEA-23 Introduction to Dental Sciences	3
DEA-24 Dental Materials for the Dental Assistant	2
WINTER	
DEA-30 Intermediate Chairside Dental Assisting	2
DEA-31 Radiology for Dental Assistants	1
DEA-32 Intermediate Supervised Externships	1
SPRING	
DEA-40A Advanced Chairside Surgical Dental Assistant	3.5
DEA-40B Advanced Chairside Orthodontic Dental Assistant	2
DEA-40C Advanced Chairside Restorative Dental Assistant	6
DEA-41 Dental Office Procedures	2

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DENTAL HYGIENE

Dental Hygiene (M)

Associate of Science Degree*

MAS724/MAS724B/MAS724C

Required Courses (61.5 units) – 37 courses

Please note that separate application and additional requirements may be needed

Degree Course Requirements	Units
FALL	
DEH-10A Pre-Clinic Dental Hygiene #1	2.5
DEH-11 Principles of Dental Hygiene	2
DEH-12A Principles of Oral Radiology	1
DEH-12B Oral Radiology Laboratory	1
DEH-13 Infection Control in Dentistry	1
DEH-14 Systems Analysis of Dental Anatomy Morphology, Histology, Embryology	3
DEH-15 Head and Neck Anatomy	2
DEH-16 Preventive Dentistry	1.5
DEH-17 General Pathology	2
WINTER INTERSESSION	
DEH-10B Pre-Clinic Dental Hygiene #2	1
DEH-19 Pain Control	2.5
SPRING	
DEH-20A Clinical Dental Hygiene #1	3
DEH-21 Clinical Seminar #1	1
DEH-22 Oral Radiology Interpretation	1
DEH-23 Introduction to Periodontology	2
DEH-24 Ethics	1
DEH-25 Medical and Dental Emergencies	1
DEH-26 Dental Treatment of Geriatric and Medically Compromised	2
DEH-27 Oral Pathology	2.5
DEH-28 Basic and Applied Pharmacology	2

FUN FACT:

The average annual wage for this sector in California is over \$100,000.

SUMMER	
DEH-20B Clinical Dental Hygiene #2	1
FALL	
DEH-30A Clinical Dental Hygiene #3	3.5
DEH-31 Clinical Seminar #2	1
DEH-32 Dental Materials	3
DEH-33 Periodontology	1
DEH-34 Cultural Diversity in Healthcare	1
DEH-35 Community Dental Health Education Practicum #1	1
DEH-36 Research Methodology	2
DEH-37 Nutrition in Dentistry	1
WINTER INTERSESSION	
DEH-30B Clinical Dental Hygiene #4	1
SPRING	
DEH-40 Clinical Dental Hygiene #5	4
DEH-41 Clinical Seminar #3	1
DEH-42 Practice Management and Jurisprudence	2
DEH-43 Advanced Periodontology	1
DEH-44 Community Dental Health Education #2	1
DEH-45 Community Dental Health Education Practicum #2	1
DEH-46 Advanced Topics in Dental Hygiene	1



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EMERGENCY MEDICAL SERVICES

Emergency Medical Technician (M) MCE935

Required Courses (8.5 units) – 2 courses

Certificate Course Requirements	Units
EMS-50 Emergency Medical Technician	7
EMS-51 Emergency Medical Services-Basic Clinical/Field	1.5

Paramedic (M)

Associate of Science Degree*

MAS585/MAS585B/MAS585C/MCE585

Required Courses (49.5 units) – 12 courses

Degree Course Requirements	Units
EMS-60 Patient Assessment and Airway Management	4.5
EMS-61 Introduction to Medical Pathophysiology	3
EMS-62 Emergency Pharmacology	4
EMS-63 Cardiology	4
EMS-70 Trauma Management	3.5
EMS-71 Clinical Medical Specialty I	3
EMS-80 Medical Emergencies	4.5
EMS-81 Special Populations	4
EMS-82 Special Topics	3
EMS-83 Clinical Medical Specialty II	3
EMS-90 Assessment Based Management	3
EMS-91 Paramedic Field Internship	10

KINESIOLOGY/EXERCISE, SPORTS and WELLNESS

Athletic Training Emphasis (R)

Associate of Science Degree*

AS597/AS597B/AS597C/CE597

Required Courses (29 units) – 11 courses

Degree Course Requirements	Units
KIN-4 Nutrition	3
KIN-10 Introduction to Kinesiology	3
KIN-12 Sport Psychology	3
KIN-14 Athletic and Fitness Organization and Administration	3
KIN-16 Introduction to Athletic Training	3
KIN-30 First Aid and CPR	3
KIN-35 Foundations for Fitness and Wellness	3
Electives List A	4
Electives List B	4
Elective List A (4 units)	
KIN-17 Athletic Training, Fall Sports, Upper Extremity	2
KIN-18 Athletic Training, Spring Sports, Lower Extremity	2
KIN-19 Athletic Training, Fall Sports, Head, Neck, and Spine	2
KIN-20 Athletic Training, Spring Sports, General Medicine	2
Elective List B (4 units)	
KIN-21A Athletic Training Applications	2
KIN-21B Athletic Training Applications	2



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Coaching Emphasis (R)

Associate of Science Degree*

AS599/AS599B/AS599C/CE599

Required Courses (24 units) – 8 courses

Degree Course Requirements	Units
KIN-4 Nutrition	3
KIN-10 Introduction to Kinesiology	3
KIN-12 Sport Psychology	3
KIN-14 Athletic and Fitness Organization and Administration	3
KIN-16 Introduction to Athletic Training	3
KIN-30 First Aid and CPR	3
KIN-35 Foundations for Fitness and Wellness	3
Electives	3
Elective Courses (3 units)	
KIN-24 Sports Officiating, Fall Sports	3
KIN-25 Sports Officiating, Spring Sports	3
KIN-26 Foundations of Coaching	3
KIN-27 Football Theory	3
KIN-28 Basketball Theory	3
KIN-29 Soccer Theory	3
KIN-33 Baseball Theory	3
KIN-34 Softball Theory	3



Fitness Professions Emphasis (R)

Associate of Science Degree*

AS595/AS595B/AS595C/CE595

Required Courses (24-25 units) – 8 courses

Degree Course Requirements	Units
KIN-4 Nutrition	3
KIN-10 Introduction to Kinesiology	3
KIN-12 Sport Psychology	3
KIN-14 Athletic and Fitness Organization and Administration	3
KIN-16 Introduction to Athletic Training	3
KIN-30 First Aid and CPR	3
KIN-35 Foundations for Fitness and Wellness	3
Electives	3-4
Elective Courses (3-4 units)	
KIN-42 Lifeguard and Water Safety Instructor Certification	4
KIN-43 Personal Training	3
KIN-44 Yoga Instructor Training	3
KIN-45 Group Fitness Instructor	3

Fitness Professionals (M)

MCE1061

Required Courses (11-14 units) – 5 courses

Certificate Course Requirements	Units
KIN-4 Nutrition	3
KIN-35 Foundations for Fitness and Wellness	3
KIN-43 Introduction to Personal Training	3
KIN-A81A Cardio and Strength Training, Beginning OR KIN-A81B Cardio and Strength Training, Intermediate OR KIN-A81C Cardio and Strength Training, Advance	1 1 1
Electives	1-4
Elective Courses (1-4 units)	
KIN-12 Sport Psychology	3
KIN-30 First Aid and CPR	3
KIN-200 Kinesiology Work Experience	1-4

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Kinesiology (NR)

Associate Degree for Transfer**

CSUGE NAA890/IGETC NAA891

CSUGE AA890/IGETC AA891

Required Courses (60 units) – See College catalog for degree requirements.

Degree Course Requirements	Units
KIN-10 Introduction to Kinesiology	3
BIO-50A Anatomy and Physiology I	4
BIO-50B Anatomy and Physiology II	4
Electives Select one course from Movements list	3
Electives Select one course from List A	6-9
Elective Movements Courses (3 units)	
Aquatics	
KIN-A28 Swimming, Beginning	1
KIN-A29 Swimming, Intermediate	1
KIN-A31A Beginning Water Aerobics and Deep Water Exercise	1
KIN-A31B Beginning Water Aerobics and Deep Water Exercise	1
Combatives	
KIN-A40 Karate, Beginning	1
KIN-A41 Karate, Intermediate	1
KIN-A43 T'ai-chi Ch'uan, Beginning	1
KIN-A44 T'ai-chi Ch'uan, Intermediate	1
Dance	
DAN-D21 Ballet, Beginning	1
DAN-D22 Ballet, Intermediate	1
DAN-D32 Jazz, Beginning	1
DAN-D33 Jazz, Intermediate	1
DAN-D43 Tap, Beginning	1
DAN-D44 Tap, Intermediate	1
Fitness	
KIN-A46 Yoga, Beginning	1
KIN-A47 Yoga, Intermediate	1
KIN-A75A Walking for Fitness, Beginning	1
KIN-A75B Walking for Fitness, Intermediate	1
KIN-A77A Jogging for Fitness, Beginning	1
KIN-A77B Jogging for Fitness, Intermediate	1
KIN-A81A Cardio and Strength Training, Beginning	1

KIN-A81B Cardio and Strength Training, Intermediate	1
KIN-A83 Kickboxing Aerobics	1
KIN-A89A Beginning Body Sculpting	1
KIN-A89B Intermediate Body Sculpting	1
KIN-A90A Weight Training, Beginning	1
KIN-A90B Weight Training, Intermediate	1
Individual Sports	
KIN-A11 Tennis, Beginning	1
KIN-A12 Tennis, Intermediate	1
KIN-A20 Golf, Beginning	1
KIN-A21 Golf, Intermediate	1
Team Sports	
KIN-A55 Slow Pitch Softball	1
KIN-A57A Basketball, Beginning	1
KIN-A57B Basketball, Intermediate	1
KIN-A62 Flag Football	1
KIN-A64A Soccer, Beginning	1
KIN-A64B Soccer, Intermediate	1
KIN-A67 Volleyball, Beginning	1
KIN-A68 Volleyball, Intermediate	1
KIN-A71 Sand Volleyball, Intermediate	1
List A: Select 2 courses from the following (6-9 units)	
CHE-1A General Chemistry I	5
KIN-36 Wellness: Lifestyle Choices	3
MAT-12/12H Statistics/Honors Statistics	4
OR	
PSY/SOC-48 Statistics for the Behavioral Sciences	3
PHY-2A General Physics I	4
OR	
PHY-4A Mechanics	4
PSY-1/1H General Psychology/Honors General Psychology Mechanics	3
OR	
SOC-1/1H Introduction to Sociology/Honors Introduction to Sociology	3

** Associate in Art for Transfer Degree

The Associate in Art in Kinesiology for Transfer degree will be awarded upon completion of 60 California State University (CSU) transferable units including the above major requirements and the Intersegmental General Education Transfer Curriculum (IGETC) or California State University General Education (CSUGE) requirements with a minimum grade point average of 2.0. All courses in the major must be completed with a grade of "C" or better (or a "P" if taken as Pass/No Pass).



MEDICAL ASSISTING

Administrative/Clinical Medical Assisting (M)

Associate of Science Degree*

MAS718/MAS718B/MAS718C/MCE718

Required Courses (30 units) – 11 courses

Degree Course Requirements	Units
BIO-45 Survey of Human Anatomy and Physiology	3
MDA-10 Medical Terminology	3
MDA-11 Medical Documentation and Terminology	2
MDA-50 Medical Assisting Core	2
MDA-54A Clinical Medical Assisting I	2
MDA-54B Clinical Medical Assisting II	4
MDA-59 Medical Office Procedures	3.5
MDA-60 Survey of Human Diseases	2
MDA-61 Pharmacology for Medical Office Personnel	2
MDA-100 Clinical Externship	3.5
Choose one of the following:	
CAT/CIS-3 Computer Applications for Business	3
CAT/CIS-80 Word Processing: Microsoft Word for Windows	3
CIS-1A Introduction of Computer Information Systems	3

Transcriptionist/Health Documentation Specialist (M)

Associate of Science Degree*

MAS1040/MAS1040B/MAS1040C/MCE1040

Required Courses (19-20 units) – 6 courses

Degree Course Requirements	Units
BIO-45 Survey of Human Anatomy and Physiology	3
CAT-30 Business English	3
MDA-10 Medical Terminology	3
MDA-58A Medical Transcription	5
Electives	9
Elective Courses: 5-6 units (one course from Category A and at least one from Category B)	
Category A: (3 units)	
CAT/CIS-3 Computer Applications for Business	3
CAT-50 Beginning Computer Keyboarding	3
CAT/CIS-80 Word Processing Microsoft Word for Windows	3
Category B: (2-3 units)	
MDA-58B Advanced Medical Transcription	3
MDA-60 Survey of Human Diseases Processes	2
MDA-61 Pharmacology for Medical Office Personnel	2
MDA-11 Medical Documentation and Terminology	2

NURSING

Critical Care Nurse (R)

CE581

Required Courses (5 units) – 1 course

Certificate Course Requirements	Units
NXN-81 Critical Care Nurse	5

Nursing Assistant (R)

CE584

Required Courses (6-9.5 units) – 1-2 courses

Certificate Course Requirements	Units
NNA-80 Nursing Assistant Training Program (NATP)	6
OR	
NRN-11 Foundations of Nursing Practice Across the Lifespan	8.5
AND	
NRN-11A Nursing Learning Laboratory	.5

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Registered Nursing Program (R)

Associate of Science Degree*

AS921/AS921B/AS921C

Required Courses (73-74 units) – 22 courses

Please note that separate application and additional requirements may be needed

Degree Course Requirements	Units
BIO-50A Anatomy and Physiology I	4
BIO-50B Anatomy and Physiology II	4
BIO-55 Microbiology	4
COM-1/1H Public Speaking/Honors OR COM-9/9H Interpersonal Communication/Honors	3
MAT-12/12H Statistics/Honors OR PSY/SOC-48 Statistics for the Behavioral Sciences	4 3
NRN-11 Foundations of Nursing Practice Across the Lifespan	8.5
NRN-11A Nursing Learning Laboratory	.5
NRN-12 Acute and Chronic Medical-Surgical Nursing Across the Lifespan and Maternity Nursing	8.5
NRN-12A Nursing Learning Laboratory	.5
NRN-14 Health Promotion and Wellness Across the Lifespan	3
NRN-21 Acute Adult Medical-Surgical and Mental Health Nursing	8.5
NRN-21A Nursing Learning Laboratory	.5
NRN-22 Advanced Medical-Surgical Nursing Across the Lifespan and Acute Pediatrics	8.5
NRN-22A Nursing Learning Laboratory	.5
PSY-9 Developmental Psychology	3
SOC-1/1H Introduction to Sociology/Honors OR ANT-2/2H Cultural Anthropology/Honors	3 3
ENG-1A/1AH English Composition	4
Electives (choose from options below)	6
Electives (6 units)	Units
American Institutions	3
Humanities Elective	3
Prerequisites for Required Courses (5 units)	Units
BIO-1 General Biology	1
CHE-2A Introductory Chemistry I OR CHE-3 Fundamentals of Chemistry	4 4
Required Course Prior to Enrollment for All Advanced Placement (2.5 units)	Units
NRN-18 Transition Course for Advanced Placement (AP) Students	2.5



Vocational Nursing (R)

Associate of Science Degree*

AS588/AS588B/AS588C/CE588

Required Courses (51-56 units) – 11 courses

Degree Course Requirements	Units
BIO-45 Survey of Human Anatomy and Physiology OR BIO-50A Anatomy and Physiology I AND BIO-50B Anatomy and Physiology II	3 4 4
NVN-52 Introductory Concepts of Vocational Nursing - Nursing Fundamentals	9.5
NVN-55A Vocational Nursing Practice and Nutrition Across the Lifespan	3
NVN-55B Principles of Pathophysiology	2
NVN-60 Intermediate Vocational Nursing Foundations - Nursing Process/Communication	1
NVN-61 Intermediate Concepts of Vocational Nursing - Care of the Family	6
NVN-62 Intermediate Concepts of Vocational Nursing - Medical/Surgical	12
NVN-63 Intermediate Concepts of Vocational Nursing - Mental Health	3
NVN-70 Advanced Vocational Nursing Foundations - Role Transition	1
NVN-71 Advanced Concepts of Vocational Nursing - Medical/Surgical	7.5
PSY-9 Developmental Psychology	3

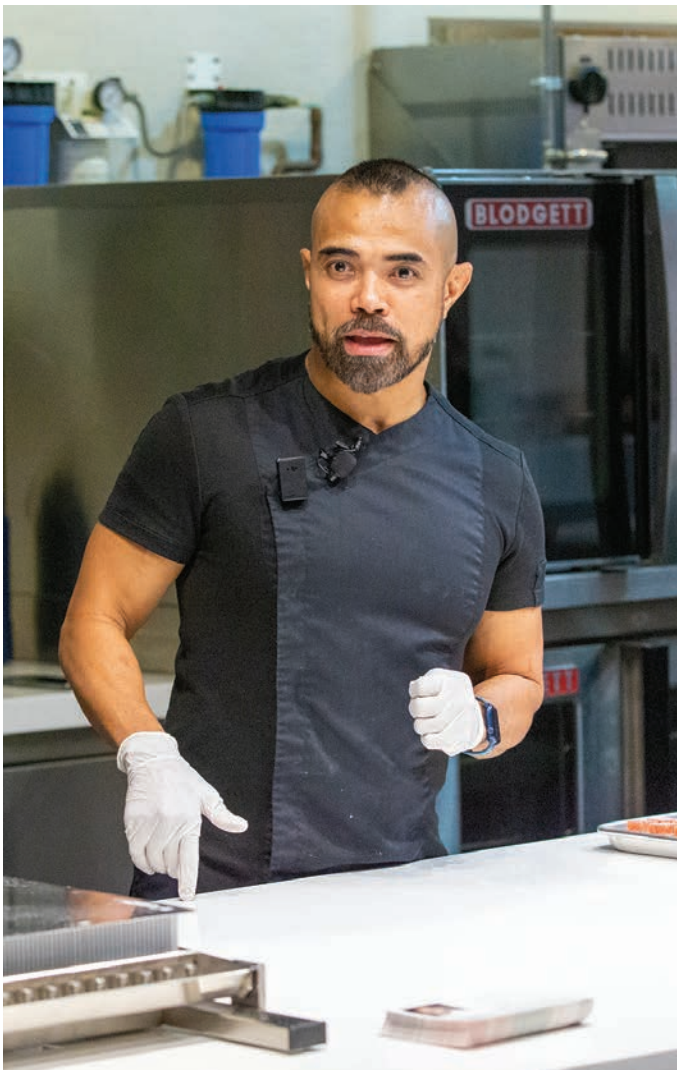
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HOSPITALITY, TOURISM, and RECREATION

The travel and tourism market is one of the world's largest industries, with a global economic impact of over \$9 trillion U.S. in 2019. In the U.S. alone, this industry supports nearly 9 million jobs. Whether you have a passion for food, travel, sports or nutrition, California's unique position as premier travel destination makes this an exciting sector to be a part of.

Certificate and associate degrees available in Retail, Hospitality, Tourism, and Recreation Management are not only transferable to related CSU and UC programs, but will also qualify you for many immediate employment opportunities. Since many of these sectors depend on the work of part-time employees, opportunities abound for students who want to gain valuable work experience while earning a paycheck and going to school. As a bonus, these jobs often offer unique travel options and industry discounts.



TYPES OF CAREERS

- Food Inspector
- Dietetic Technician
- Food Production Chemist
- Food & Beverage Director
- Food Service Manager
- Food Designer
- Social Director
- Tour Guide/Manager
- Hotel Concierge
- Convention Planner
- Chef/Cook/Baker
- Caterer
- Travel Agent
- Concert Promoter
- Event/Wedding Planner
- Flight Attendant
- Club Manager

SALARY SNAPSHOT

- Chefs & Head Cooks \$53,747 / \$25.84 hourly
- Flight Attendants \$77,376 / \$37.20 hourly
- First-Line Supervisors of Food Preparation & Services Workers \$37,586 / \$18.07 hourly
- Lodging Managers \$68,765 / \$33.06 hourly
- Food Service Managers \$49,254 / \$23.68 hourly
- Meeting, Convention & Event Planners \$49,005 / \$23.56 hourly
- First-Line Supervisors of Housekeeping & Janitorial Workers \$44,678 / \$21.48 hourly

INDUSTRY SECTOR PATHWAYS

- Culinary Arts, Restaurant Service, Food Preparation
- Golf Management
- Management: Culinary, Hospitality, Hotel, Restaurant
- Nutrition and Food, Dietetics
- Retail Management, Retail Management-Western Association of Food Chains (WAFC)
- Viticulture, Enology and Winery Technology

CULINARY ARTS

Baking and Pastry (R)

Associate of Science Degree*

AS909/AS909B/AS909/CE909

Please note that separate application and additional requirements may be needed

Required Courses (25 units) – 5 courses

Degree Course Requirements	Units
CUL-46 Fundamentals of Baking and Pastry	8.5
CUL-47 Advanced Baking and Pastry	8.5
CUL-50 ServSafe Food Safety	2
KIN-4 Nutrition	3
MAG-56 HRM: Human Resources Management	3

Cake Decorating (R)

CE1025

Please note that separate application and additional requirements may be needed

Required Courses (4 units) – 2 courses

Certificate Course Requirements	Units
CUL-22 Cake Decorating I	2
CUL-23 Advanced Cake Decorating	2

Culinary Arts (R)

Associate of Science Degree*

AS561/AS561B/AS561C/CE561

Please note that separate application and additional requirements may be needed

Required Courses (33.5 units) – 6 courses

Degree Course Requirements	Units
CUL-20 Fundamentals of Baking	2
CUL-36 Introduction to Culinary Arts	8.5
CUL-37 Intermediate Culinary Arts	8.5
CUL-38 Advance Culinary Arts	8.5
KIN-4 Nutrition	3
MAG-56 HRM: Human Resources Management	3

FUN FACT:

The sector encompasses three distinct, yet interrelated, career pathways: Food Science, Dietetics, and Nutrition; Food Service and Hospitality; and Hospitality, Tourism, and Recreation.

Foundational Culinary Arts (R)

CE1028

Please note that separate application and additional requirements may be needed

Required Courses (25.5 units) – 3 courses

Certificate Course Requirements	Units
CUL-36 Introduction to Culinary Arts	8.5
CUL-37 Intermediate Culinary Arts	8.5
CUL-38 Advance Culinary Arts	8.5

CULINARY ARTS NONCREDIT

Food Service Career and Certification Preparation (R)

CC8025

Required Courses (240 hours) – 8 courses

Certificate Course Requirements	Hours
CUL-824 The Art of Garde Manager	30
CUL-825 Menu Planning	30
CUL-826 Food Cost Accounting	30
CUL-827 Culinary Purchasing and Receiving	30
CUL-828A Culinary Food Preparation I	30
CUL-828B Culinary Food Preparation II	30
CUL-842 International Cuisine	30
CUL-850 ServSafe Food Safety	30

Math Skills for the Professional Baker (R)

CC8026

Required Courses (48 hours) – 4 courses

Certificate Course Requirements	Hours
CUL-875 Introduction to Math for Baking Professionals	12
CUL-876 Introduction to Cost Control for Professional Bakers	12
CUL-877 Baker's Percentages and Recipe Conversion	12
CUL-878 Cost Control for Baking and Pastry	12

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INFORMATION and COMMUNICATION TECHNOLOGIES

More than a quarter of the \$7.85 trillion global information and communication technology market resides in the United States, where it has created upwards of 12.4 million jobs. In California alone, where Silicon Valley has become synonymous with the rapidly evolving world of technology, this industry accounts for 10.3% of the state's economy while providing more than 1 million jobs across the state.

Information and communication technology students learn about the design, development, maintenance, and management of hardware, software, multimedia, and systems integration services. Because of the central role that technology plays in all industries, IT professionals are and will continue to be in great demand in every sector of the economy. Specific areas of future growth are likely to be in the areas of cloud computing, the collection and storage of big data, and information security.



TYPES OF CAREERS

- Computer Support Specialist
- LAN Support Technician
- Software/Hardware Installer
- Telecommunications Specialist
- Network Administrator
- Data Communications Specialist
- Computer Graphic Artist
- Desktop Publisher
- Multimedia Specialist
- Web Designer
- Webmaster
- Database Administrator
- Technical Writer

SALARY SNAPSHOT

- Software Developers \$97,573 / \$46.91 hourly
- Computer User Support Specialists \$57,928 / \$27.85 hourly
- Computer Systems Analysts \$87,090 / \$41.87 hourly
- Information Security Analysts \$122,283 / \$58.79 hourly
- Computer Network Support Specialists \$59,176 / \$28.45 hourly
- Computer Programmers \$87,880 / \$42.25 hourly
- Computer Network Architects \$115,003 / \$55.29 hourly
- Database Administrators \$99,965 / \$48.06 hourly

INDUSTRY SECTOR PATHWAYS

- Web Design/Development
- Microsoft Certified Systems Engineer (MSCE)
- Communication Technology: Sound, Wireless, Electronic
- Computer Information Systems, Software/Computer Applications
- Computer Programming, C++, Java
- Computer Science
- Database Design/Management, MIS, Systems Development, UNIX, MYSQL
- Hardware Specialist, Computer Maintenance, Help Desk, IT Technician
- Information Security, Cyber Security, Computer Forensics
- Information/Computer Technology/Literacy Internet/ Web Authoring, E-Commerce, Mobile Applications
- Networking/Computer Support, CISCO: CCNA & CCNP, A+, N+

COMPUTER APPLICATIONS and OFFICE TECHNOLOGY

Administrative Office Professional (R) CE637

Required Courses (13.5 units) – 5 courses

Certificate Course Requirements	Units
CAT/CIS-3 Computer Applications for Business	3
CAT-31 Business Communications	3
CAT-61 Professional Office Procedures	3
CAT-62 Records Management	3
CAT/CIS-98A Introduction to Excel	1.5

Business Information Worker (M) MCE522

Required Courses (19 units) – 8 courses

Certificate Course Requirements	Units
CAT-1A Business Etiquette	1
CAT/CIS-3 Computer Applications for Business	3
CAT-31 Business Communications	3
CAT-51 Intermediate Keyboarding/Document Formatting	3
CAT/CIS-90 Microsoft Outlook	3
CAT/CIS 93 Computers for Beginners	3
CAT/CIS-98A Introduction to Excel	1.5
CAT/CIS-98B Advanced Excel	1.5

Business Information Worker (NR)

Associate of Science Degree*

NAS522/NCE522/CE522

Required Courses (19 units) – 8 courses

Degree Course Requirements	Units
CAT-1A Business Etiquette	1
CAT/CIS-3 Computer Applications for Business	3
CAT-31 Business Communications	3
CAT-51 Intermediate Typewriting/Document Formatting	3
CAT/CIS-90 Microsoft Outlook	3
CAT-93 Computers for Beginners	3
CAT/CIS-98A Introduction to Excel	1.5
CAT/CIS-98B Advanced Excel	1.5

Executive Office Management (R)

Associate of Science Degree*

AS639/AS639B/AS639C/CE639

Required Courses (34 units) – 13 courses

Degree Course Requirements	Units
CAT-1A Business Etiquette	1
CAT/CIS-3 Computer Applications for Business	3
CAT-30 Business English	3
CAT-31 Business Communications	3
CAT-51 Intermediate Typewriting/Document Formatting	3
CAT/ACC-55 Applied Accounting/Bookkeeping	3
CAT-61 Professional Office Procedures	3
CAT-62 Records Management	3
CAT/CIS-80 Word Processing: Microsoft Word for Windows	3
CAT/CIS-90 Microsoft Outlook	3
CAT/CIS-98A Introduction to Excel	1.5
CAT/CIS-98B Advanced Excel	1.5
MAG-44 Principles of Management	3

Executive Office Professional (R) CE635

Required Courses (13.5 units) – 5 courses

Certificate Course Requirements	Units
CAT/ACC-55 Applied Accounting/Bookkeeping	3
CAT/CIS-80 Word Processing: Microsoft Word for Windows	3
CAT/CIS-90 Microsoft Outlook	3
CAT/CIS-98B Advanced Excel	1.5
MAG-44 Principles of Management	3

Legal Administrative Professional (R) CE611

Required Courses (12 units) – 4 courses

Certificate Course Requirements	Units
CAT-36A Legal Office Procedures I	3
CAT-36B Legal Office Procedures II	3
CAT-37 Legal Terminology	3
CAT-38 Legal Word Processing and Forms	3

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Medical Secretary (R)

CE1029

Required Courses (13 units) – 5 courses

Certificate Course Requirements	Units
CAT-1A Business Etiquette	1
CAT-31 Business Communication Fundamentals	3
CAT/CIS-90 Microsoft Outlook	3
CIS-1A Introduction to Computer Information Systems	3
NA-79 Medical Terminology for Healthcare Professionals	3

Office Assistant (R)

CE633

Required Courses (10 units) – 4 courses

Certificate Course Requirements	Units
CAT-1A Business Etiquette	1
CAT-30 Business English	3
CAT-51 Intermediate Typewriting/Document Formatting	3
CAT/CIS-93 Computers for Beginners	3

COMPUTER APPLICATIONS and OFFICE TECHNOLOGY NONCREDIT

Business Information Worker Essential Preparation: Workplace Communication (M) MCC8029

Required Courses (21 hours) – 2 courses

Certificate Course Requirements	Hours
CAT-811/PDS-811 High Impact Presentations and Proposals for the Work Place	12
CAT-814/PDS-814 Business Skills: Professional Communication Basics	9

Business Information Worker Essential Preparation: Workplace Communication (R) CC8029

Required Courses (21 hours) – 2 courses

Certificate Course Requirements	Hours
CAT-811 High Impact Presentations and Proposals for the Workplace	12
CAT-814 Business Skills: Professional Communication Basics	9

Business Information Worker Essential Preparation: Workplace Decision Making and Time Management (M) MCC8030

Required Courses (33 hours) – 3 courses

Certificate Course Requirements	Hours
CAT/PDS-808 Critical Thinking, Problem Solving and Decision Making	12
CAT/PDS-810 Time Management	12
BUS/CAT-817 Business Skills: Professional Self-Management	9

Business Information Worker Essential Preparation: Workplace Decision Making and Time Management (R) CC8030

Required Courses (33 hours) – 3 courses

Certificate Course Requirements	Hours
CAT-808 Critical Thinking, Problem Solving and Decision Making	12
CAT-810 Time Management	12
CAT-817 Business Skills: Professional Self-Management	9

Business Skills - MOSPrep - Microsoft Office Specialist (M) MCC8001

Required Courses (54 hours) – 4 courses

Certificate Course Requirements	Hours
CAT-841 MOSPrep: Microsoft Office Word Expert Exam Preparation	18
CAT-842 MOSPrep: Microsoft Office Excel Expert Exam Preparation	18
CAT-843 MOSPrep: Microsoft Office PowerPoint Core Exam Preparation	9
CAT-844 MOSPrep: Microsoft Office Access Core Exam Preparation OR CAT-845 MOSPrep: Microsoft Office Outlook Core Exam Preparation	9

Business Skills - MOSPrep - Microsoft Office Specialist (R) CC8001

Required Courses (54 hours) – 4 courses

Certificate Course Requirements	Hours
BUS/CAT-814 Business Skills Professional Communication Basics	9
BUS-815 Business Skills Professional Online Presence	9
BUS-816 Business Skills Customer Experience	9
BUS/CAT-817 Business Skills Professional Self-Management	9

COMPUTER INFORMATION SYSTEMS

Amazon Web Services (AWS) Cloud Computing (R) CE957

Required Courses (23 units) – 6 courses

Certificate Course Requirements	Units
CIS-25 Information and Communication Technology Essentials	4
CIS-26A Cisco Networking Academy 1A	4
CIS-26B Cisco Networking Academy 1B	4
CIS-49A AWS Academy Cloud Foundations	4
CIS-49B AWS Academy Cloud Architecting	4
Electives	3
Select another (3 units) from the following:	
CIS-12 PHP Dynamic Web Site Programming	3
CIS-21A Linux Operating System Administration	3

Computer Applications (M)

Associate of Science Degree*

MAS726/MAS726B/MAS726C/MCE726

Required Courses (21-27.5 units) – 8 courses

Degree Course Requirements	Units
CAT-31 Business Communications OR BUS-22 Management Communications OR BUS-24 Business Communications	3
CIS-1A Introduction to Computer Information Systems	3
CIS-1B Advanced Concepts in Computer Information Systems	3
CIS/CSC-5 Programming Concepts and Methodology I: C++ OR CIS/CSC-28A MS Access Programming	4 3
CIS/CSC-21 Introduction to Operating Systems	3
CIS-95A Introduction to the Internet-- Living Online	1.5
Electives 1 (Choose from list below)	7.5
Electives 2 (Choose from list below)	7.5

Electives - Group 1 (1.5-4 units)	Units
CIS/CSC-2 Fundamentals of Systems Analysis	3
CIS/CSC-25 Information and Communication Technology Essentials	3
CIS/CSC-61 Introduction to Database Theory	3
CIS/CAT-80 Word Processing: Microsoft Word for Windows	3
CIS/CAT-98B Advanced Excel	1.5
Electives - Group 2 (3-6 units)	
CIS/CSC-12 PHP Dynamic Web Site Programming	3
CIS/CSC-14A Web Programming: Java Script	3
CIS-14B Web Programming: Server Pages	3
CIS-54A Introduction to Animate	3
CIS-56A Designing Web Graphics	3
CIS-72A Introduction to Web Page Creation	1.5
CIS-72B Intermediate Web Page Creation using Cascading Style Sheets (CSS)	1.5
CIS-76A Introduction to Microsoft Expression Web	3
CIS-76B Introduction to DreamWeaver	3
CIS/CAT-78A Introduction to Adobe PhotoShop	3
CIS/CAT-79 Introduction to Adobe Illustrator	3
CIS/CAT-81 Introduction to Desktop Publishing/Adobe InDesign	3

Computer Programming (MNR)

Associate of Science Degree*

MAS728/MAS728B/MAS728C/MCE728

NAS728/NAS728B/NAS728C/NCE728

AS728/AS728B/AS728C/CE728

Required Courses (26.5 units) – 9 courses

Degree Course Requirements	Units
CIS-1A Introduction to Computer Information Systems	3
CIS/CSC-2 Fundamentals of Systems Analysis	3
CIS/CSC-5 Programming Concepts and Methodology I: C++	4
CIS/CSC-21 Introduction to Operating Systems	3
CIS-72A Introduction to Web Page Creation	1.5
Electives From Group 1	6
Electives From Group 2	6

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Electives - Group 1 (6 units)	Units
CIS/CSC-12 PHP Dynamic Web Site Programming	3
CIS/CSC-14A Web Programming: JavaScript	3
CIS-14B Web Programming: Active Server Pages	3
CIS/CSC-17A Programming Concepts and Methodology II: C++	3
CIS/CSC-18A Java Programming: Objects	3
Electives - Group 2 (6 units)	Units
CIS/CSC-11 Computer Architecture and Organization: Assembly	3
CIS/CSC-17B C++ Programming: Advanced Objects	3
CIS/CSC-17C C++ Programming: Data Structures	3
CIS/CSC-18B Java Programming: Advanced Objects	3
CIS/CSC-18C Java Programming: Data Structures	3

C++ Programming (NR) NCE803/CE741

Required Courses (13 units) – 4 courses

Certificate Course Requirements	Units
CIS/CSC-5 Programming Concepts and Methodology I: C++	4
CIS/CSC-17A Programming Concepts and Methodology II: C++	3
CIS/CSC-17B C++ Programming: Advanced Objects	3
CIS/CSC-17C C++ Programming: Data Structures	3

Cisco Networking (R) CE920

Required Courses (16 units) – 4 courses

Certificate Course Requirements	Units
CIS-26A Cisco Networking Academy 1A	4
CIS-26B Cisco Networking Academy 1B	4
CIS-26C Cisco Networking Academy 1C	4
CIS-26D Cisco Networking Academy 1D	4

FUN FACT:

This sector boasts almost 100,00 annual job openings and an average annual salary of \$111,740.

Cyber Defense (R)

Associate of Science Degree*

AS969/AS969B/AS969C

Required Courses (60-67 units) – 8 courses

Degree Course Requirements	Units
CIS-21A Linux Operating System Administration	3
CIS-25 Information and Communication Technology Essentials	4
CIS-26A Cisco Networking Academy 1A	4
CIS-26B Cisco Networking Academy 1B	4
CIS-27 Information and Network Security	3
CIS-27A Computer Forensic Fundamentals	3
CIS-27B Introduction to Cybersecurity: Ethical Hacking	3
Electives	4
Electives (4 units)	Units
CIS-5 Programming Concepts and Methodologies	4
CIS-26F Cisco Networking Security	4

Data Analytics (MNR) MCE1009/NCE1009/CE1009

Required Course: (33 units) - 10 courses

Certificate Course Requirements	Units
CIS-1A Introduction to Computer Information Systems	3
MAT-70A/CIS-70A Foundations of Data Science	3
CIS/CSC-61 Introduction to Database Theory	3
CIS-30A Introduction to Python Programming OR CSC-8 Programming Concepts: Python	3
MAT-70B Statistics for STEM	4
MAT-1A Calculus I	4
CIS/CSC-63 Introduction to Structured Query Language (SQL)	3
MAT-1B Calculus II	4
CIS-30E Advanced Python Programming	3
Electives (3 units)	Units
CIS-68A Introduction to Machine Learning OR CIS-68B Big Data Fundamentals OR CIS/CSC-2 Fundamental of Systems Analysis OR CIS/CSC-20 Systems Analysis and Design	3

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Data Quick Start (R)

CE992

Required Courses (8 units) – 4 courses

Certificate Course Requirements	Units
CAT/CIS-98A Introduction to Excel	1.5
CAT/CIS-98B Advanced Excel	1.5
CIS-62 Microsoft Access	3
CIS-94 Data Analysis with Excel and Access	2

Data Science (MNR)

Associate of Science Degree*

MAS1011/MAS1011B/MAS1011C

NAS1011/NAS1011B/NAS1011C

AS1011/AS1011B/AS1011C

Required Courses: (40 units) – 12 courses

Degree Course Requirements	Units
CIS-1A Introduction to Computer Information Systems	3
MAT-70A/CIS-70A Foundations of Data Science	3
CIS/CSC-61 Introduction to Database Theory	3
CIS-30A Introduction to Python Programming OR CSC-8 Programming Concepts: Python	3
MAT-70B Statistics for STEM	4
MAT-1A Calculus I	4
CIS/CSC-63 Introduction to Structured Query Language (SQL)	3
MAT-1B Calculus II	4
CIS-30E Advanced Python Programming	3
MAT-1C Calculus III	4
MAT-3 Linear Algebra	3
Electives (3 units)	
CIS-68A Introduction to Machine Learning OR CIS-68B Big Data Fundamentals OR CIS/CSC-2 Fundamentals of Systems Analysis OR CSC-20 System Analysis and Design	3



Information Assurance Auditing (M)

MCE896

Required Courses (18 units) – 6 courses

Certificate Course Requirements	Units
BUS-30 Entrepreneurship	3
CIS-2 Systems Analysis and Design	3
CIS-4 Practical Computer Security	3
CIS-8 Information Systems Auditing	3
CIS-21 Introductions to Operating Systems	3
CIS-22 Systems Auditing	3

Information Security Certificate and Cyber Defense (R)

CE740

Required Courses (21-22 units) – 6 courses

Certificate Course Requirements	Units
CIS/CSC-21A Linux Operating Systems Administration	3
CIS/CSC-25 Information and Communication Technology Essentials	4
CIS-26A Cisco Networking Academy 1A	4
CIS-26B Cisco Networking Academy 1B	4
CIS/CSC-27 Information and Network Security	3
Electives (Choose from the list below)	3-4
Select another 3-4 units from the following:	
CIS-1A Introduction to Computer Information	3
CIS/CSC-5 Programming Concepts and Methodology	4
CIS/CSC-21 Introduction to Operating Systems	3
CIS-26F Cisco Networking Security	4
CIS/CSC-27A Computer Forensics Fundamentals	3

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Information Technology (MR)

MCE958/CE958

Required Courses (24 units) – 7 courses

Certificate Course Requirements	Units
CIS-1A Introduction to Computer Information Systems	3
CIS/CSC-5 Programming Concepts and Methodology I: C++	4
CIS-25 Information and Communication Technology Essentials	4
CIS-26A Cisco Networking Academy 1A OR CIS-40A Computer Network Fundamentals	4 3
Electives List A	6-7
Electives List B	4
List A (6-7 units)	
BUS-24 Business Communications	3
CIS/CSC-2 Fundamentals of Systems Analysis	3
CIS/CSC-21 Introduction to Operating Systems	3
CIS-26B Cisco Networking Academy 1B OR CIS-40B Routing and Switching Essentials	4 3
CIS-27 Information and Network Security	3
CIS-27A Computer Forensics Fundamentals	3
CIS-27B Introduction to Cybersecurity: Ethical Hacking	3
CIS-61 Introduction to Database Theory	3
List B (4 units)	
MAT-1A Calculus I	4
MAT-5 Calculus for Business and Life Science	4
MAT-12 Statistics	4

Information Technology (IT) Cybersecurity (M)

Associate of Science Degree*

MAS1012/MAS1012B/MAS1012C

Required Courses (32 units) - 10 courses

Degree Course Requirements	Units
CIS-1A Introduction to Computer Information Systems	3
CIS-25 Information and Communication Technology Essentials	4
CIS-27 Information and Network Security	3
CIS-40A Computer Network Fundamentals	3
CIS-40B Routing and Switching Essentials	3
CIS-40D Systems and Network Administration	3
CIS-41A Principles of Cybersecurity Analysis	3
MAT-12/12H Statistics/Honor Statistics	4
Electives (6 units)	
BUS-24 Business Communications	3
CIS-30A Introduction to Python Programming	3
CIS-30C Python Programming in Cybersecurity	3
CIS-40C Installing, Configuring & Administering Microsoft Operating Systems	3
CIS-21 Introduction to Operating Systems	3
CIS-27A Computer Forensics Fundamentals	3
CIS-27B Introduction to Cybersecurity: Ethical Hacking	3
CIS-61 Introduction to Database Theory	3

IT Project Management (M)

MCE1010

Required Courses: (22 units) - 7 courses

Certificate Course Requirements	Units
BUS-77A Introduction to Project Management	4
CIS-1A Introduction to Computer Information Systems	3
CIS-48A Introduction to Cloud Computing	3
CIS-87A Introduction IT Project Management	3
CIS-27 Information and Network Security	3
CIS-87B IT Project Management Framework	3
BUS-77B Project Management CAPM and PMP Exam Prep	3

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IT Technician Pathway: Cybersecurity Analyst (M)
MCE985

Required Courses: (18 units) – 6 courses:

Certificate Course Requirements	Units
CIS-27 Information and Network Security	3
CIS-27B Introduction to Cybersecurity: Ethical Hacking	3
CIS-30A Introduction to Python Programming	3
CIS-40D Systems and Network Administration	3
CIS-41A Principles of Cybersecurity Analysis	3
CIS-41D Advanced Security Concepts and Practices	3

IT Technician Pathway: Cybersecurity Healthcare Specialist (M)
MCE986

Required Courses: (18 units) – 6 courses:

Certificate Course Requirements	Units
CIS-8 Fundamentals: Information Systems Security Auditing	3
CIS-25 Information and Communication Technology Essentials	3
CIS-27 Information and Network Security	3
CIS-40D Systems and Network Administration	3
CIS-41A Principles of Cybersecurity Analysis	3
CIS-41B HealthCare Information Security & Privacy for Practitioner	3

IT Technician Pathway: Cybersecurity Specialist (M)
MCE936

Required Courses (15 units) – 5 courses

Certificate Course Requirements	Units
CIS-27 Information and Network Security	3
CIS-27A Computer Forensics Fundamentals	3
CIS-27B Introduction to Cybersecurity: Ethical Hacking	3
CIS-30A Introduction to Python Programming	3
CIS-41A Principles of Cybersecurity Analysis	3

IT Technician Pathway: IT Systems Specialist (M)
MCE937

Required Courses (15 units) – 5 courses

Certificate Course Requirements	Units
CIS-21 Introduction to Operating Systems	3
CIS-27 Information and Network Security	3
CIS-40A Computer Network Fundamentals	3
CIS-40C Installing, Configuring and Administering Microsoft Operating Systems	3
CIS-40D Systems and Network Administration	3

IT Technician Pathway: IT Systems Support and Sales (MR)
MCE905/CE905

Required Courses (16 units) – 5 courses

Certificate Course Requirements	Units
BUS-10/10H Introduction to Business/Honors	3
BUS-24 Business Communications	3
BUS-47 Applied Business and Management Ethics	3
CIS-1A Introduction to Computer Information Systems	3
CIS-25 Information and Communication Technology Essentials	4

Java Programming (NR)
NCE809/CE742

Required Courses (13 units) – 4 courses

Certificate Course Requirements	Units
CIS/CSC-5 Programming Concepts and Methodology I: C++	4
CIS/CSC-18A Java Programming: Objects	3
CIS/CSC-18B Java Programming: Advanced Objects	3
CIS/CSC-18C Java Programming: Data Structures	3

Python Programming Certificate (MN)
MCE938/NCE938

Required Courses (15 units) – 5 courses

Certificate Course Requirements	Units
CIS-30A Introduction to Python Programming	3
CIS-30B Python Programming in Networking	3
CIS-30C Python Programming in Cybersecurity	3
CIS-30D Python Programming for Internet of Things	3
CIS-30E Advanced Python Programming	3

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Webmaster-Web Designer Concentration (MR) MCE933/CE933

Required Courses (17-18 units) – 7 courses

Certificate Course Requirements	Units
ADM-67 Multimedia Animation	3
CIS-56A Designing Web Graphics OR CIS-78A /CAT-78A Introduction to Adobe Photoshop OR ADM-71A Adobe Photoshop for Image Manipulation	3
CIS-72A Introduction to Web Page Creation	1.5
CIS-72B Intermediate Web Page Creation using Cascading Style Sheets	1.5
CIS-76B Introduction to DreamWeaver	3
Electives (Choose from the list below)	5-6
Concentration Electives (5-6 units)	
ADM-2A Color Systems and File Management OR ADM-62 Typography and Graphic Design OR ADM-74A Web Design	2 3 3
CIS/CAT-79 Introduction to Adobe Illustrator OR ADM-77A Adobe Illustrator for Graphic Art	3

Webmaster-Web Developer Concentration (MR) MCE934/CE934

Required Courses (18-19 units) – 7 courses

Certificate Course Requirements	Units
CIS/CSC-12 PHP Dynamic Web Site Programming	3
CIS/CSC-14A Web Programming: Java Script	3
CIS-72A Introduction to Web Page Creation	1.5
CIS-72B Intermediate Web Page Creation using Cascading Style Sheets	1.5
CIS-76B Introduction to DreamWeaver	3
Electives (Choose from the list below)	6
Concentration Electives (6-7 units)	
CIS/CSC-5 Programming Concepts and Methodology I: C++ OR CIS/CSC-18A Java Programming: Objects OR CIS-30A Introduction to Python Programming	4 3 3
CIS-56A Designing Web Graphics OR CIS-78A/CAT-78A Introduction to Adobe Photoshop OR ADM-71A Adobe Photoshop for Image Manipulation	3

COMPUTER INFORMATION SYSTEMS NONCREDIT

Business Skills Boot Camp (R) CC8005

Required Courses (36 hours) – 4 courses

Certificate Course Requirements	Hours
BUS/CAT-814 Business Skills: Professional Communication Basics	9
BUS-815 Business Skills: Professional Online Presence	9
BUS-816 Business Skills: Customer Experience	9
BUS/CAT-817 Business Skills: Professional Self-Management	9

Coding Prep (MR) MCC8010/CC8010

Required Courses (54 hours) – 6 courses

Certificate Course Requirements	Hours
CIS-834 Historical Perspective: Napier to Torvalds	9
CIS-835 Foundational Approach: Word Problems to Work Flow	9
CIS-836 Computational Tools: Calculators to Spreadsheets	9
CIS-837 Boolean Formulation: Logic to Relationships	9
CIS-838 Pseudo-code and Flowcharts: Descriptive to Visual	9
CIS-839 Tools of the Trade: IDE's to Backup	9

Computer Maintenance and Security (M) MCC8006

Required Courses (48 hours) – 3 courses

Certificate Course Requirements	Hours
CIS-824A Computer Repairs for Beginners	16
CIS-824B Networking for Home and Small Business	16
CIS-824C Cybersecurity for Beginners	16

Information Systems: Cyber Skills (R) CC8002

Required Courses (54 hours) – 3 courses

Certificate Course Requirements	Hours
CIS-825 Cyber Skills: Introduction to Cybersecurity	18
CIS-826 Cyber Skills: Introduction to Virtualization	18
CIS-827 Cyber Skills: Introduction to Protocol Analysis	18

**Internet of Things (IOT):
Embedded Systems and Microcontrollers (M)**
MCC8018

Required Courses (48 hours) – 3 courses

Certificate Course Requirements	Hours
CIS-833A Introduction to Microcontroller: Arduino	16
CIS-833B Introduction to Embedded System: Raspberry Pi	16
CIS-833C Designing Internet of Things (IoT)	16

**Introduction to Basic Computer and IT Careers for
ESL Students (MR)**
MCC8034/CC8034

Required Courses (48 hours) – 2 courses

Certificate Course Requirements	Hours
ESL-810 Basic Computer and Technology Language Support	24
ESL-811 IT Workplace Language Support	24

Introduction to Python Programming (R)
CC8003

Required Courses (54 hours) – 3 courses

Certificate Course Requirements	Hours
CIS-830 Introduction to Python Programming: Part 1	18
CIS-831 Introduction to Python Programming: Part 2	18
CIS-832 Introduction to Python Programming: Part 3	18

Operating Systems and Internet Literacy (M)
MCC8008

Required Courses (48 hours) – 3 courses

Certificate Course Requirements	Hours
CIS-897A Windows Operating System and Internet Literacy	16
CIS-897B Linux Operating System and Internet Literacy	16
CIS-897C Mac Operating System and Internet Literacy	16

Remote Work Productivity Essentials (R)
CE8041

Required Courses (27 hours) – 3 courses

Certificate Course Requirements	Hours
CIS-801 Remote Work Technology	9
CIS-802 Remote Work Communication Tools and Apps	9
CIS-803 Remote Productivity and Time Management Tools	9

CYBERPRENEURSHIP

Cyberpreneurship (R)

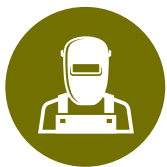
*Associate of Science Degree**

AS1048/AS1048B/AS1048C/CE1048

Required Courses: (60-70 units) – 10 courses

Degree Course Requirements	Units
BUS-30 Entrepreneurship: Foundations and Fundamentals	3
BUS-56 Cyber Law	3
BUS-73 Exploring the Entrepreneurial Mindset	3
CIS-27 Information and Network Security	3
CIS-27A Computer Forensics Fundamentals	4
CIS-27B Introduction to Cybersecurity: Ethical Hacking	3
CIS-27F Cyber Threat Intelligence & Automated Response	4
CIS-27G Cyberpreneurship Capstone	3
CIS-87A Introduction to IT Project Management	4
Electives (3-4 units)	
ACC-65 QuickBooks Accounting	3
BUS-10 Introduction to Business	3
BUS-24 Business Communication	3
CIS-21A Linux Operating System Administration	3
CIS-21B Linux Operating System Administration II	3
CIS-25 Information and Communication Technology Essentials	4





MANUFACTURING and PRODUCT DEVELOPMENT

With an estimated 125,930 annual job openings, but only 5,565 graduates to fill them, manufacturing and product development remains a promising sector for those who like to work with their minds and hands. While certain kinds of manufacturing jobs are in decline, high-tech manufacturing continues to grow, especially in the areas of 3D printing and high-speed, computerized numerical control machining.

Employers in this sector look for technicians who are at ease in the mechanical world and able to apply scientific and technical principles to manufacturing processes. Students of manufacturing and product development learn about manufacturing processes and systems, and can follow a wide variety of paths, including graphic design production, machine tooling and forming, welding and materials joining, and product innovation and design.

Opportunities for advancement are plentiful, as technological advancements make higher-skill jobs in basic research and technology development, product and process engineering and design, operations and maintenance, transportation, testing, and lab work become more prevalent.



TYPES OF CAREERS

- CNC Programmer
- Machine Technician
- Industrial Electrician
- Cabinetmakers & Bench Carpenter
- Tool & Die Maker
- Power Plant Operator
- Fabric & Apparel Pattern Maker
- Certified Welder

SALARY SNAPSHOT

- First-Line Supervisors of Production & Operating Workers \$62,504 / \$30.05 hourly
- Industrial Machinery Mechanics \$63,669 / \$30.61 hourly
- Industrial Engineers \$80,226 / \$38.57 hourly
- Mechanical Engineers \$87,651 / \$42.14 hourly
- Welders, Cutters, Solders & Brazers \$40,643 / \$19.54 hourly
- Electrical & Electronics Engineering Technicians \$72,634 / \$34.92 hourly
- Electrical & Electronics Repairers \$71,323 / \$34.29 hourly
- Industrial Engineering Technicians \$73,341 / \$35.26 hourly
- Occupational Health & Safety Specialists \$59,758 / \$28.73 hourly
- CNC Machine Tool Programmers \$71,344 / \$34.30 hourly

INDUSTRY SECTOR PATHWAYS

- CAD/CAM, Computer Numerical Control (CNC)
- Industrial Automation, Supply Chain Technology
- Industrial Maintenance Mechanic, Instrumentation Technology
- Machine Technology, Machine Operator, Basic/Conventional Machining, Tool & Die
- Operations and Production Management
- Quality Assurance
- Supply Chain Management
- Welding, SMAW, GTAW, FCAW, Stick, TIG

MANUFACTURING TECHNOLOGY

Manufacturing Technician I (N) NCE968

Required Courses (14-16 units) – 4-6 courses

Certificate Course Requirements	Units
APP-450 Apprenticeship Work Experience	8
Electives	6-8
Electives (6-8 units)	
	Units
ENE-30 Computer Aided Drafting (CAD)	3
ENE-42 SOLIDWORKS I	3
ENE-51 Blueprint Reading	2
ENE-62 Math for Automated Systems	3
MAN-35 Computer Aided Manufacturing	5
MAN-55/ELE-55 Occupational Safety and Health Administration (OSHA) Standards for General Industry	1
MAN-56 CNC Machine Set-up and Operation	4
MAN-57 CNC Program Writing	3

Manufacturing Technician II (N)

Associate of Science Degree*

NAS967/NAS967B/NAS967C/NCE967

Required Courses (30-31 units) – 6-8 courses

Degree Course Requirements	Units
APP-450 Apprenticeship Work Experience	16
Electives	14-15
Electives (14-15 units)	
	Units
ENE-30 Computer Aided Drafting (CAD)	3
ENE-42 SOLIDWORKS I	3
ENE-51 Blueprint Reading	2
ENE-62 Math for Automated Systems	3
MAN-35 Computer Aided Manufacturing	5
MAN-36 General Machine Shop and Theory of Machining	4
MAN-55/ELE-55 Occupational Safety and Health Administration (OSHA) Standards for General Industry	1
MAN-56 CNC Machine Set-up and Operation	4
MAN-57 CNC Program Writing	3

Computer Numerical Control Programming (N)

Associate of Science Degree*

NAS655/NAS655B/NAS655C/NCE655

Required Courses (26-27 units) – 9 courses

Degree Course Requirements	Units
ENE-30 Computer Aided Drafting (CAD)	3
ENE-42 SOLIDWORKS I	3
ENE-51 Blueprint Reading	2
ENE-52 Geometric Dimensioning and Tolerancing	2
ENE-60 Math for Engineering Technology	3
OR	
MAT-36 Trigonometry	4
MAN-35 Computer-Aided Manufacturing-Mastercam	5
MAN-55/ELE-55 Occupational Safety and Health Administration (OSHA) Standards for General Industry	1
MAN-56 CNC Machine Set-up and Operation	4
MAN-57 CNC Program Writing	3

Computer Numerical Control (CNC) Operator (N) NCE966

Required Courses (17 units) – 6 courses

Certificate Course Requirements	Units
ENE-42 SOLIDWORKS I	3
ENE-51 Blueprint Reading	2
MAN-36 General Machine Shop and Theory of Machining	4
MAN-55/ELE-55 Occupational Safety and Health Administration (OSHA) Standards for General Industry	1
MAN-56 CNC Machine Set-up and Operation	4
MAN-57 CNC Program Writing	3

Conventional Machine Operator (N)

NCE865

Required Courses (10 units) – 4 courses

Certificate Course Requirements	Units
ENE-42 SOLIDWORKS I	3
ENE-51 Blueprint Reading	2
MAN-36 General Machine Shop and Theory of Machining	4
MAN-55/ELE-55 Occupational Safety and Health Administration (OSHA) Standards for General Industry	1

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Facility Maintenance (N)

Associate of Science Degree*

NAS771/NAS771B/NAS771C/NCE771

Required Courses (23-24 units) – 9 courses

Degree Course Requirements	Units
ELE/ENE-27 Technical Communications	3
ELE/CON-66 National Electrical Code	3
ELE/MAN-68 Fundamentals of Maintenance	3
ELE/MAN-69 Fundamentals of Tooling and Test Equipment	2
ELE/MAN-77 Electrical Theory	3
ENE-51 Blueprint Reading	2
ENE-60 Math for Engineering Technology	3
OR MAT-36 Trigonometry	4
MAN-55/ELE-55 Occupational Safety and Health Administration (OSHA) Standards for General Industry	1
MAN-60 Hydraulic and Pneumatics Systems	3

Industrial Automation (N)

Associate of Science Degree*

NAS737/NAS737B/NAS737C/NCE737

Required Courses (23-24 units) – 8 courses

Degree Course Requirements	Units
ELE-10 Survey of Electronics	4
ELE/ENE-27 Technical Communications	3
ELE/MAN-64 Programmable Logic Controllers OR ELE/MAN-67 Programmable Logic Controllers Using Siemens	3
ELE-74 Industrial Wiring and Controls	4
ENE-51 Blueprint Reading	2
ENE-62 Math for Automation OR MAT-36 Trigonometry	4
MAN-55/ELE-55 Occupational Safety and Health Administration (OSHA) Standards for General Industry	1
MAN-60 Hydraulic and Pneumatic Systems	3

FUN FACT:

California's manufacturing sector boasts 125,930 annual job openings, but only 5,565 graduates with the right education to fill them!

MANUFACTURING TECHNOLOGY NONCREDIT

Computerized Numerical Control Operator (N) NCC8019

Required Courses (216 hours – 2 courses)

Certificate Course Requirements	Hours
MAN-857 CNC Program Writing	108
MAN-856 CNC Machine Set-up and Operation	108

SUPPLY CHAIN TECHNOLOGY

Supply Chain Automation (N)

Associate of Science Degree*

NAS924/NAS924B/NAS924C/NCE924

Required Courses (32-33 units) – 10 courses

Degree Course Requirements	Units
DFT/ENE/ELE-27 Technical Communications	3
DFT/ENE-51 Blueprint Reading	2
ELC/ELE-73/MAN-73 Electric Motors and Transformers	4
ELC/ELE/MAN-74 Industrial Wiring and Controls	4
ELC/ELE/ELC-77 Electrical Theory for Electricians	3
ELE-26 Microcontrollers	3
ELE/MAN-64 Programmable Logic Controllers OR ELE/MAN-67 Programmable Logic Controllers Using Siemens	3
ENE-62 Math for Automated Systems OR MAT-36 Trigonometry	4
MAN-55/ELE-55 Occupational Safety and Health Administration (OSHA) Standards for General Industry	1
MAN-60 Hydraulic and Pneumatic Systems	3
SCT/SCA-1 Introduction to Automated Warehousing	3



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WELDING TECHNOLOGY

Pipe Welding (R) CE982

Required Courses (13 units) – 5 courses

Certificate Course Requirements	Units
WEL-24 Pipe Fitting for the Trades	2
WEL-26 Pipe Layout	2
WEL-65A Beginning Shielded Metal Arc Welding (SMAW)	3
WEL-75A Gas Metal Arc Welding	3
WEL-115A SMAW/GMAW Pipe Welding Fundamentals	3

Stick Welding (SMAW) (R) CE824

Required Courses (9 units) – 3 courses

Certificate Course Requirements	Units
WEL-65A Beginning Shielded Metal Arc Welding	3
WEL-65B Advanced Shielded Metal Arc Welding	3
WEL-85A American Welding Society/Los Angeles City Welding I OR WEL-85B American Welding Society/Los Angeles City Welding II	3

Tig Welding (GTAW) (R) CE819

Required Courses (6 units) – 2 courses

Certificate Course Requirements	Units
WEL-95A Introduction to Gas Tungsten Arc Welding	3
WEL-95B Advanced Gas Tungsten Arc Welding (GTAW)	3

Welding Technology (R)

Associate of Science Degree*
AS606/AS606B/AS606C/CE606

Required Courses (28 units) – 10 courses

Degree Course Requirements	Units
WEL-20 Blueprint Reading for Welders Trades	2
WEL-65A Beginning Shielded Metal Arc Welding	3
WEL-65B Advanced Shielded Metal Arc Welding	3
WEL-75A Gas Metal Arc Welding	3
WEL-75B Flux Cored Arc Welding (FCAW)	3
WEL-85A American Welding Society/Los Angeles City Welding I	3
WEL-95A Introduction to Gas Tungsten Arc Welding	3
WEL-115A SMAW/GMAW Pipe Welding Fundamentals	3
Electives (Choose from list below)	5
Electives (5 units)	
WEL-22 Plate and Structural Steel Layout	2
WEL-24 Pipe Fitting for the Trades	2
WEL-26 Pipe Layout	2
WEL-85B American Welding Society/Los Angeles City Welding II	3
WEL-95B Advanced Gas Tungsten Arc Welding (GTAW)	3
WEL-200 Welding Work Experience	1-4

Wire Welding (FCAW, GMAW) (R) CE818

Required Courses (9 units) – 3 courses

Certificate Course Requirements	Units
WEL-75A Gas Metal Arc Welding	3
WEL-75B Flux Cored Arc Welding (FCAW)	3
WEL-85A American Welding Society/Los Angeles City Welding I OR WEL-85B American Welding Society/Los Angeles City Welding II	3

* The Associate of Science Degree will be awarded upon completion of the degree requirements, including general education and other graduation requirements as described in the college catalog.



MARKETING, SALES, and SERVICES

Thanks to the internet, companies sell their products globally. With so many products on the market, companies will need salespeople and marketing to get the job done. If you think you would be good at selling the merits of a product, then you should consider a career in Marketing, Sales and Service. Jobs in this industry include sales managers, marketing directors, insurance sales agents, real estate agents, and advertising executives. Check out our programs in Business Administration – with a concentration in Marketing and Real Estate.



TYPES OF CAREERS

- Customer Service Representatives
- Retail Sales Supervisors
- Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products
- Real Estate Brokers
- Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products
- Public Relations Specialists
- Advertising Sales Agents
- Brokerage Clerks

SALARY SNAPSHOT

- Customer Service Representatives: \$17.45 hourly
- Retail Sales Supervisors: \$19.16 hourly
- Sales Representatives, Wholesale and Manufacturing, Except Technical & Scientific Products: \$27.65 hourly
- Real Estate Brokers: \$36.01 hourly
- Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products: \$34.39 hourly
- Public Relations Specialists: \$29.24 hourly
- Advertising Sales Agents: \$20.33 hourly
- Brokerage Clerks: \$26.25 hourly

INDUSTRY SECTOR PATHWAYS

- International Business
- Small Business, Entrepreneurship
- Marketing
- Real Estate
- Real Estate Development
- Real Estate Escrow, Sales

BUSINESS ADMINISTRATION

Business Administration - Major Core Requirements* (MNR)

Degree Course Requirements	Units
ACC-1A Principles of Accounting I	3
BUS-10/10H Introduction to Business/Honors	3
BUS-18A Business Law I	3
BUS-20 Business Mathematics	3
BUS-22 Management Communications OR BUS-24 Business Communications	3
CIS-1A Introduction to Computer Information Systems OR CIS/CAT-3 Computer Applications for Business	3
Major Concentration Requirements	12

Business Administration-Marketing (MR)

Associate of Science Degree*

MAS525/MAS525B/MAS525C/MCE525

AS525/AS525B/AS525C/CE525

Required Courses (30 units) – 10 courses

Degree Course Requirements	Units
Business Administration Major Core Requirements*	18
MKT 40 - Advertising	3
MKT 43 - Digital Marketing	3
MKT-20 Principles of Marketing OR MKT-25 Marketing for Professionals	3
Electives (3 units)	Units
BUS-43 Global Marketing	3
MKT-41 Techniques of Selling	3
MKT-42 Retail Management	3

Business Administration - Real Estate (MNR)

Associate of Science Degree*

MAS527/MAS527B/MAS527C/MCE527

NAS527/NAS527B/NAS527C/NCE527

AS527/AS527B/AS527C/CE527

Required Courses (30 units) – 10 courses

Degree Course Requirements	Units
Business Administration Major Core Requirements*	18
Select another 12 units from the following:	Units
RLE-80 Real Estate Principles	3
RLE-81 Real Estate Practices	3
RLE-82 Legal Aspects of Real Estate	3
RLE-83 Real Estate Finance	3
RLE-84 Real Estate Appraisal	3
RLE-85 Real Estate Economics	3
RLE-86 Escrow Procedures I	3
RLE-200 Real Estate Work Experience	1-4

Industry Marketing (R)

CE1043

Required Courses (15 units) – 5 courses

Certificate Course Requirements	Units
BUS-10/10H Introduction to Business/Honors	3
MKT-25 Marketing for Professionals	3
MKT-40 Advertising	3
BUS-43 Global Marketing OR MKT-41 Techniques of Selling OR MKT-42 Retail Management	3
MKT-43 Digital Marketing	3

Real Estate Practice (R)

CE873

Required Courses (15 units) – 5 courses

Certificate Course Requirements	Units
BUS-10/10H Introduction to Business/Honors	3
RLE-80 Real Estate Principles	3
RLE-81 Real Estate Practices	3
RLE-82 Legal Aspects of Real Estate	3
RLE-83 Real Estate Finance OR RLE-86 Escrow Procedures I	3

* The Associate of Science Degree will be awarded upon completion of the degree requirements, including general education and other graduation requirements as described in the college catalog.



**Real Estate Salesperson and Transaction (N)
NCE854**

Required Courses (9 units) – 3 courses

Certificate Course Requirements	Units
RLE-80 Real Estate Principles	3
RLE-81 Real Estate Practices	3
Select 3 units from the following:	
ACC-1A Principles of Accounting I	3
BUS-18A Business Law I	3
RLE-82 Legal Aspects of Real Estate	3
RLE-83 Real Estate Finance	3
RLE-85 Real Estate Economics	3

**Real Estate Salesperson and Transaction (R)
CE869**

Required Courses (9 units) – 3 courses

Certificate Course Requirements	Units
RLE-80 Real Estate Principles	3
RLE-81 Real Estate Practices	3
RLE-82 Legal Aspects of Real Estate	3



PUBLIC SERVICES

A public service is one that is provided by the government for the benefit of its citizens. Generally speaking, “government jobs” are highly prized because of their benefits and retirement packages, and they encompass working in everything from public safety and emergency response to community outreach and vocational counseling. Students who want to make a difference in their communities by serving the public’s interest should consider working in this sector.

Because jobs in this sector offer some of the best benefits and retirement packages available, their job markets are highly competitive. As a result, students will generally find more opportunity and less competition for these jobs in their local communities.



TYPES OF CAREERS

- Police Officer
- Probation or Correctional Officer
- Correctional Officer and Jailer
- Police Patrol Officer
- Sheriff and Deputy Sheriff
- Firefighter
- Fire Apparatus Engineer
- U.S. Customs Officer
- Eligibility Worker
- Vocational Counselor
- Employment and Training Technician
- Residential Counselor
- Substance Abuse Counselor
- Licensed Psychiatric Technician
- Mental Health Worker
- Paralegals and Legal Assistant

SALARY SNAPSHOT

- Police & Sheriff’s Patrol Officers \$104,790 / \$50.38 hourly
- Correctional Officers & Jailers \$85,238 / \$40.98 hourly
- Firefighters \$67,434 / \$32.42 hourly
- Supervisors, Protective Service Workers \$53,518 / \$25.73 hourly
- Probation Officers & Correctional Treatment Specialists \$86,507 / \$41.59 hourly
- Detectives & Criminal Investigators \$105,747 / \$50.84 hourly
- Court Reporters \$101,982 / \$49.03 hourly

INDUSTRY SECTOR PATHWAYS

- Victim Services
- EMS, EMT, Paramedic
- Administration of Justice/Criminal Justice
- Chief Fire Officer
- Corrections
- Fire Apparatus Operation
- Fire Inspection, Fire Prevention, Fire Technology
- Firearms, Laws of Arrest, Investigative Assistant
- Firefighter Academy, Professional Firefighter, Fire Officer Training
- Forensic Specialist, Crime Scene Investigation, Fingerprint Recognition
- Homeland Security
- Paralegal Studies, Legal Assistant
- Peace Officer Academy
- Science, Reserve Officer
- Public Works

ADMINISTRATION OF JUSTICE

Administration of Justice (M)

Associate of Science Degree*

MAS504/MAS504B/MAS504C/MCE504

Required Courses (18 units) – 6 courses

Degree Course Requirements	Units
ADJ-1 Introduction to the Administration of Justice	3
ADJ-3 Concepts of Criminal Law	3
ADJ-4 Legal Aspects of Evidence	3
ADJ-5 Community Relations	3
ADJ-8 Juvenile Procedures	3
ADJ-20 Introduction to Corrections	3

Administration of Justice (N)

Associate of Science Degree*

NAS504/NAS504B/NAS504C/NCE504

Required Courses (18 units) – 6 courses

Degree Course Requirements	Units
ADJ-1 Introduction to the Administration of Justice	3
ADJ-2 Principles and Procedures of the Justice System	3
ADJ-3 Concepts of Criminal Law	3
ADJ-4 Legal Aspects of Evidence	3
ADJ-5 Community Relations	3
ADJ-9 Law in American Society	3
Select another 9 units from the following:	
Choose from any elective courses in the discipline OR POL-5 The Law and Politics	3
SOC-20 Introduction to Criminology	3

Administration of Justice (R)

Associate of Science Degree*

AS504/AS504B/AS504C/CE504

Required Courses (27 units) – 9 courses

Degree Course Requirements	Units
ADJ-1 Introduction to the Administration of Justice	3
ADJ-2 Principles and Procedures of the Justice System	3
ADJ-3 Concepts of Criminal Law	3
ADJ-4 Legal Aspects of Evidence	3
ADJ-5 Community Relations	3
Electives (Choose from elective courses in the discipline)	12

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Administration of Justice (MN)

Associate Degree for Transfer*

CSUGE MAS642/IGETC MAS643

CSUGE NAS642/IGETC NAS643

Required Courses (60 units) – See College catalog for degree requirements.

Degree Course Requirements	Units
ADJ-1 Introduction to the Administration of Justice	3
ADJ-3 Concepts of Criminal Law	3
Electives from List A	6
Electives from List B	6-8
Electives List A (6 units)	
ADJ-2 Principles and Procedures of the Justice System	3
ADJ-4 Legal Aspects of Evidence	3
ADJ-5 Community Relations	3
ADJ-8 Juvenile Law and Procedures	3
ADJ-12 Introduction to Criminalistics	3
ADJ-13 Criminal Investigation	3
ADJ-20 Introduction to Corrections	3
Electives List B (6-8 units)	
Any List A course not already used	
ADJ-15 Narcotics	3
MAT-11 College Algebra	4
MAT-12 Statistics OR PSY-48/SOC-48 Statistics for the Behavioral Sciences	4 3
SOC-1 Introduction to Sociology	3
PSY-1 Introduction to Psychology	3

*Associate in Science for Transfer Degree

The Associate in Science in Administration of Justice for Transfer degree will be awarded upon completion of 60 California State University (CSU) transferable units including the above major requirements and the Intersegmental General Education Transfer Curriculum (IGETC) or California State University General Education (SCUGE) requirements with a minimum grade point average of 2.0. All courses in the major must be completed with a grade of "C" or better.



Administration of Justice (N)

Associate Degree for Transfer*

CSUGE NAS642/IGETC NAS643

Required Courses (18-19 units) – See College catalog for degree requirements.

Degree Course Requirements	Units
ADJ-1 Introduction to the Administration of Justice	3
ADJ-3 Concepts of Criminal Law	3
List A Choose from the list below	6
List B Choose from the list below	6-7
List A: Choose two courses from below (6 Units)	
ADJ-2 Principles and Procedures of the Justice System	3
ADJ-4 Legal Aspects of Evidence	3
ADJ-5 Community Relations	3
ADJ-8 Juvenile Law and Procedures	3
ADJ-12 Introduction to Criminalistics	3
ADJ-13 Criminal Investigation	3
ADJ-20 Introduction to Corrections	3
List B: Choose two courses from below (6-7 Units)	
Any LIST A course not already used	3
ADJ-9 Law in American Society	3
ADJ-14 Advanced Criminal Investigation	3
ADJ-200 Work Experience	3
MAT-12/12H Statistics/Honors	4
OR PSY/SOC-48 Statistics for the Behavioral Sciences	3
POL-1/1H American Politics/Honors	3
PSY-1/1H General Psychology/Honors	3
SOC-1/1H Introduction to Sociology/Honors	3
SOC-2 American Social Problems	3
SOC-20 Introduction to Criminology	3
SOC-50 Introduction to Social Research Methods	3

*Associate in Science for Transfer Degree

The Associate in Science in Administration of Justice for Transfer degree will be awarded upon completion of 60 California State University (CSU) transferable units including the above major requirements and the Intersegmental General Education Transfer Curriculum (IGETC) or California State University General Education (CSUGE) requirements and with a minimum grade point average of 2.0. All courses in the major must be completed with a grade of "C" or better (or a "P" if taken as Pass/No Pass).

Administration of Justice (R)

Associate Degree for Transfer*

CSUGE AS642/IGETC AS643

Required Courses (60 units) – See College catalog for degree requirements.

Degree Course Requirements	Units
ADJ-1 Introduction to the Administration of Justice	3
ADJ-3 Concepts of Criminal Law	3
Electives from List A	6
Electives from List B	6
Electives List A (6 units)	
ADJ-2 Principles and Procedures of the Justice System	3
ADJ-4 Legal Aspects of Evidence	3
ADJ-5 Community Relations	3
ADJ-8 Juvenile Law and Procedures	3
ADJ-12 Introduction to Criminalistics	3
ADJ-13 Criminal Investigation	3
ADJ-20 Introduction to Corrections	3
Electives List B (6-7 units)	
Any course not taken from List A	3
ADJ-9/9H Law in American Society	3
PSY-1/1H General Psychology/Honors	3
SOC-1/1H Introduction to Sociology/Honors	3
SOC-20 Introduction to Criminology	3
PSY/SOC-48 Statistics for Behavioral Sciences	3
OR MAT-12/12H Statistics	4

*Associate in Science for Transfer Degree

The Associate in Science in Administration of Justice for Transfer degree will be awarded upon completion of 60 California State University (CSU) transferable units including the above major requirements and the Intersegmental General Education Transfer Curriculum (IGETC) or California State University General Education (CSUGE) requirements and with a minimum grade point average of 2.0. All courses in the major must be completed with a grade of "C" or better (or a "P" if taken as Pass/No Pass).

FUN FACT:

Public service professions offer many career opportunities, including career pathways in Public Safety, Emergency Response, and Legal Practices.

**Administration of Justice/
Basic Correctional Deputy Academy (M)
MCE923**

Please note that separate application and additional requirements may be needed

Required Courses (15 units) – 1 course

Certificate Course Requirements	Units
ADJ-C1D Basic Correctional Deputy Academy	15

**Administration of Justice/
Basic Public Safety Dispatch (M)
MCE940**

Please note that separate application and additional requirements may be needed

Required Courses (8 units) – 2-6 courses

Certificate Course Requirements	Units
ADJ-D1A Basic Public Safety Dispatch	6
Electives	2
Electives (2 units)	
	Units
ADJ-D1B Dispatcher Update	1
ADJ-D1C Communications Training Officer	2
ADJ-D3A Handling the Rising Tide of Suicide	.25
ADJ-D4A Dispatcher Role in Critical Incidents	.25
ADJ-D5A Dispatcher Public Safety Advanced	.5
ADJ-D6A Crisis Negotiator Concepts	.25
ADJ-D7A Dispatcher's Role in Domestic Violence/ Sexual Assault	.25

Administration of Justice/Corrections (M)

Associate of Science Degree*

MAS932/MAS932B/MAS932C

Required Courses (18 units) – 2 courses

Degree Course Requirements	Units
ADJ-C1D Basic Correctional Deputy Academy	15
Electives (3 units) Choose one:	
	Units
ADJ-13 Criminal Investigation	3
ADJ-22 Legal Aspects of Corrections	3
ADJ-24 Interviewing and Interrogation	3

**Administration of Justice/Law Enforcement
Basic Peace Officer Academy Intensive (M)**

Associate of Science Degree*

MAS931/MAS931B/MAS931C/MCE931

Please note that separate application and additional requirements may be needed

Required Courses (40 units) – 1 course

Degree Course Requirements	Units
ADJ-B1B Basic Peace Officer Training Academy Intensive	40

**Administration of Justice/Law Enforcement
Basic Peace Office Modular Academy (M)**

Associate of Science Degree*

MAS922/MAS922B/MAS922C/MCE922

Required Courses (35 units) – 3 courses

Degree Course Requirements	Units
ADJ-R1A2 Level III Modular Academy Training	7.5
ADJ-R1B Level II Modular Academy Training	10.5
ADJ-R1C Level I Regular Basic Course, Modular Format, Modular Training 1	17

Corrections (R)

CE943

Required Courses (16 units) – 5 courses

Certificate Course Requirements	Units
ADJ-20 Introduction to Corrections	3
ADJ-21 Control and Supervision in Corrections	3
ADJ-22 Legal Aspects of Corrections	3
ADJ-25 Introduction to Probation and Parole	3
ENG-1A English Composition	4



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Crime and Intelligence Analysis (M)

Associate of Science Degree*

MAS1013/MAS1013B/MAS1013C/MCE1013

Required Courses: (28.5-32 units) – 10 courses

*Note: ENG-1B/ENG-1BH course is recommended.

Degree Course Requirements	Units
ADJ-1 Introduction to the Administration of Justice	3
ADJ-3 Concepts of Criminal Law	3
ADJ-40 Law Enforcement Crime Analysis	3
ADJ-41 Technology & Investigative Analysis	3
ADJ-42 Criminal Behavior and Intelligence Analysis	3
ADJ-43 Criminal Intelligence Analyst Simulations	3
GEG-8 Introduction to Geographic Information Systems, with Lab	3
MAT-12/12H Statistics / Honors Statistics OR PSY-48/SOC-48 Statistics for the Behavioral Sciences	4 3
SOC-50 Introduction to Social Research Methods OR PSY-50 Research Methods in Psychology	3 4
Electives (1.5-3 units)	
CIS/CSC-61 Introduction to Database Theory	3
CIS-65/CAT-65 Introduction to Microsoft PowerPoint	1.5
CIS/CAT-98A Introduction to Excel	1.5

Crime Scene Investigation (N)

NCE1041

Required Courses (21 units) – 7 courses

Certificate Course Requirements	Units
ADJ-2 Principles and Procedures of the Justice System	3
ADJ-3 Concepts of Criminal Law	3
ADJ-4 Legal Aspects of Evidence	3
ADJ-12 Introduction to Criminalistics	3
ADJ-13 Criminal Investigation	3
ADJ-14 Advanced Criminal Investigation	3
ADJ-27 Forensic & Crime Scene Photography OR PHO-27 Forensic & Crime Scene Photography	3 3

Crime Scene Investigation (R)

CE1041

Required Courses (21 units) – 7 courses

Certificate Course Requirements	Units
ADJ-2 Principles and Procedures of the Justice System	3
ADJ-3 Concepts of Criminal Law	3
ADJ-12 Criminalistics	3
ADJ-13 Criminal Investigation	3
ADJ-14 Advanced Criminal Investigation	3
ADJ-27 Forensic & Crime Scene Photography OR PHO-27 Forensic & Crime Scene Photography	3 3
Select another 3 units from the following:	
ADJ-24 Interviewing & Interrogation	3
ADJ-31 Cybercrime & Digital Forensics	3
CIS-27A Computer Forensics Fundamentals	3

Digital Forensics Investigations (R)

CE1027

Required Courses (18 units) – 6 courses

Certificate Course Requirements	Units
CIS-1A Introduction to Computer Information Systems	3
CIS-21 Introduction to Operating Systems	3
CIS-27A Computer Forensics Fundamentals	3
ADJ-2 Principles & Procedures of the Justice System	3
ADJ-13 Criminal Investigation	3
ADJ-31 Cybercrime & Digital Forensics	3

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Emergency Medical Technician (M) MCE935

Please note that separate application and additional requirements may be needed

Required Courses (8.5 units) – 2 courses

Certificate Course Requirements	Units
EMS-50 Emergency Medical Technician	7
EMS-51 Emergency Medical Services-Basic Clinical/Field	1.5

Investigative Technician (R) CE980

Required Courses (22 units) – 7 courses

Certificate Course Requirements	Units
ADJ-2 Principles and Procedures of the Justice System	3
ADJ-3 Concepts of Criminal Law	3
ADJ-4 Legal Aspects of Evidence	3
ADJ-13 Criminal Investigation	3
ADJ-14 Advanced Criminal Investigation	3
ADJ-24 Interviewing and Interrogation	3
ENG-1A English Composition	4

FIRE TECHNOLOGY

Fire Fighter Academy (M)

Associate of Science Degree*

MAS669/MAS669B/MAS669C/MCE669

Please note that separate application and additional requirements may be needed

Required Courses (23 units) – 2 courses

Degree Course Requirements	Units
FIT-S3 Basic Firefighter Academy	21.5
FIT-S3A Introduction to Fire Academy and Physical Conditioning for Fire Academy Students	1.5

Fire Service Leadership (M)

Associate of Science Degree*

MAS895/MAS895B/MAS895C/MCE895

Required Courses (18 units) – 15 courses

Degree Course Requirements	Units
FIT-COHI Hazardous Materials Incident Commander	.5
FIT-C30 Intermediate ICS	.5
FIT-CO2A Human Resource Management	2
FIT-CO2B General Administrative Functions	1
FIT-CO2C Fire Inspection and Investigations	2
FIT-CO2D All Risk Command Operations	2
FIT-CO2E Wildland Incident Operations	1.5
FIT-CFO3A Human Resource Management Chief Fire Officer	1.5
FIT-CFO3B Budget and Fiscal Responsibilities Chief Fire Officer	1
FIT-CFO3C General Administration Functions Chief Fire Officer	1
FIT-CFO3D Emergency Services Delivery Responsibilities	1
FIT-INS1 Instructor I	1
FIT-INS2 Instructor II	1.5
FIT-DO1A Fire Apparatus Driver/Operator	1
FIT-DO1B Pumping Apparatus Driver/Operator 1B (2017)	1.5

* The Associate of Science Degree will be awarded upon completion of the degree requirements, including general education and other graduation requirements as described in the college catalog.

Fire Technology (M)

Associate of Science Degree*

MAS555/MAS555B/MAS555C/MCE555

Please note that separate application and additional requirements may be needed

Required Courses (26.5 - 31.5 units) – 8 courses

Degree Course Requirements	Units
FIT-1 Fire Protection Organization	3
FIT-2 Fire Behavior and Combustion	3
FIT-3 Fire Protection Equipment and Systems	3
FIT-4 Building Construction for Fire Protection	3
FIT-5 Fire Prevention	3
FIT-7 Principles of Fire and Emergency Services Safety and Survival	3
Electives (8.5-13.5 units)	
EMS-50* Emergency Medical Technician	7
EMS-51* Emergency Medical Services - Basic Clinical/Field	1.5
FIT-C30 Intermediate Incident Command System (I-300)	.5
FIT-S21 Public Safety Honor Guard Academy	1.5
KIN-35 Foundation for Fitness and Wellness	3

*Students who successfully complete the certificate may also be eligible to receive certification through FEMA/National Fire Academy.

*Students seeking a fire service career are HIGHLY ENCOURAGED to successfully complete EMS-50 & EMS-51



HOMELAND SECURITY

Emergency Management and Homeland Security (M)

Associate of Science Degree*

MAS1014/MAS1014B/MAS1014C/MCE1014

Required Courses: (30 units) – 8-10 courses

Degree Course Requirements	Units
HLS-1 Introduction to Homeland Security and Terrorism	3
HLS-2 Preparedness for Emergencies, Disasters & Homeland Security Incidents	3
HLS-3 Response to Emergencies, Disasters & Homeland Security Incidents	3
HLS-4 Recovery in Emergencies, Disasters & Homeland Security Incidents	3
HLS-5 Investigation of Emergencies, Disasters & Homeland Security Incidents	3
HLS-6 Case Studies Emergencies, Disasters & Homeland Security Incidents	3
HLS-101 Introduction to Emergency Management	3
Electives (Select a minimum of 9 units from below):	
ADJ-1 Introduction to the Administration of Justice	3
ADJ-2 Principles and Procedures of the Justice System	3
ADJ-3 Concepts of Criminal Law	3
ADJ-4 Legal Aspects of Evidence	3
ADJ-5 Community Relations	3
ADJ-6 Patrol Procedures	3
ADJ-8 Juvenile Law and Procedures	3
ADJ-12 Introduction to Criminalistics	3
ADJ-13 Criminal Investigation	3
ADJ-15 Narcotics	3
ADJ-19 Introduction to Policing	3
ADJ-20 Introduction to Corrections	3
ADJ-21 Control & Supervision in Corrections	3
ADJ-22 Legal Aspects of Corrections	3
ADJ-24 Interviewing & Interrogation	3
ADJ-40 Law Enforcement Crime Analysis	3
ADJ-41 Technology & Investigative Analysis	3
ADJ-42 Criminal Behavior and Intelligence Analysis	3
ADJ-43 Criminal Intelligence Analyst Simulations	3
ADJ-B1B Basic Peace Officer Training Academy	40

Continued on next page

* The Associate of Science Degree will be awarded upon completion of the degree requirements, including general education and other graduation requirements as described in the college catalog.

Emergency Management and Homeland Security (M) Continued

Degree Course Requirements	Units
ADJ-C1D Basic Correctional Deputy Academy	15
ADJ-D1A Basic Public Safety Dispatch Course	6
ADJ-R1B Level II Modular Academy Training	10.50
ADJ-R1A2 Level III Modular Academy Training	7.5
ADJ-R1C Regular Basic Course, Modular Format, Module I Training	17
EMS-50 Emergency Medical Technician	7
EMS-51 Emergency Medical Services - Basic Clinical/Field	1.50
EMS-60 Patient Assessment and Airway Management	4.50
EMS-61 Introduction to Medical Pathophysiology	3
EMS-62 Emergency Pharmacology	4
EMS-63 Cardiology	4
FIT-1 Fire Protection Organization	3
FIT-2 Fire Behavior and Combustion	3
FIT-3 Fire Protection Equipment and Systems	3
FIT-4 Building Construction for Fire Protection	3
FIT-5 Fire Prevention	3
FIT-7 Principles of Fire and Emergency Services Safety and Survival	3
FIT-S3 Basic Fire Fighter Academy	21.50

Emergency Management and Homeland Security - Cybersecurity (M)

Associate of Science Degree*

MAS1015/MAS1015B/MAS1015C/MCE1015

Required Courses: (30 units) - 10 courses

Degree Course Requirements	Units
HLS-1 Introduction to Homeland Security and Terrorism	3
HLS-2 Preparedness for Emergencies, Disasters & Homeland Security Incidents	3
HLS-3 Response to Emergencies, Disasters & Homeland Security Incidents	3
HLS-4 Recovery in Emergencies, Disasters & Homeland Security Incidents	3
HLS-5 Investigation of Emergencies, Disasters & Homeland Security Incidents	3
HLS-6 Case Studies Emergencies, Disasters & Homeland Security Incidents	3
HLS-101 Introduction to Emergency Management	3
CIS-27 Information and Network Security	3
CIS-27A Computer Forensic Fundamentals	3
CIS-41A Principles of Cybersecurity Analysis	3

Emergency Management and Homeland Security - Emergency Medical Services (M)

Associate of Science Degree*

MAS1016/MAS1016/MAS1016C/MCE1016

Required Courses: (29.5-36.5 units) - 9-11 courses

Degree Course Requirements	Units
HLS-1 Introduction to Homeland Security and Terrorism	3
HLS-2 Preparedness for Emergencies, Disasters & Homeland Security Incidents	3
HLS-3 Response to Emergencies, Disasters & Homeland Security Incidents	3
HLS-4 Recovery in Emergencies, Disasters & Homeland Security Incidents	3
HLS-5 Investigation of Emergencies, Disasters & Homeland Security Incidents	3
HLS-6 Case Studies Emergencies, Disasters & Homeland Security Incidents	3
HLS-101 Introduction to Emergency Management	3
Electives Option 1 (8.5 units):	
	Units
EMS-50 Emergency Medical Technician	7
EMS-51 Emergency Medical Services - Basic Clinical/Field	1.5
OR	
Electives Option 2 (15.5 units):	
	Units
EMS-60 Patient Assessment and Airway Management	4.5
EMS-61 Introduction to Medical Pathophysiology	3
EMS-62 Emergency Pharmacology	4
EMS-63 Cardiology	4

Emergency Management and Homeland Security - Fire Technology (M)

Associate of Science Degree*

MAS1017/MAS1017B/MAS1017C/MCE1017

Required Courses: (30 units) - 10 courses

Degree Course Requirements	Units
HLS-1 Introduction to Homeland Security and Terrorism	3
HLS-2 Preparedness for Emergencies, Disasters & Homeland Security Incidents	3
HLS-3 Response to Emergencies, Disasters & Homeland Security Incidents	3
HLS-4 Recovery in Emergencies, Disasters & Homeland Security Incidents	3
HLS-5 Investigation of Emergencies, Disasters & Homeland Security Incidents	3
HLS-6 Case Studies Emergencies, Disasters & Homeland Security Incidents	3
HLS-101 Introduction to Emergency Management	3

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Electives (9 units):	Units
FIT-1 Fire Protection Organization	3
FIT-2 Fire Behavior and Combustion	3
FIT-3 Fire Protection Equipment and Systems	3
FIT-4 Building Construction for Fire Protection	3
FIT-5 Fire Prevention	3
FIT-7 Principles of Fire and Emergency Services Safety and Survival	3
FIT-S3 Basic Fire Fighter Academy	21.50

Emergency Management and Homeland Security - Law Enforcement (M)

Associate of Science Degree*

MAS1018/MAS1018B/MAS1018C/MCE1018

Required Courses: (30 units) - 10 courses

Degree Course Requirements	Units
HLS-1 Introduction to Homeland Security and Terrorism	3
HLS-2 Preparedness for Emergencies, Disasters & Homeland Security Incidents	3
HLS-3 Response to Emergencies, Disasters & Homeland Security Incidents	3
HLS-4 Recovery in Emergencies, Disasters & Homeland Security Incidents	3
HLS-5 Investigation of Emergencies, Disasters & Homeland Security Incidents	3
HLS-6 Case Studies Emergencies, Disasters & Homeland Security Incidents	3
HLS-101 Introduction to Emergency Management	3
Electives (9 units):	
Units	
ADJ-1 Introduction to the Administration of Justice	3
ADJ-2 Principles and Procedures of the Justice System	3
ADJ-3 Concepts of Criminal Law	3
ADJ-4 Legal Aspects of Evidence	3
ADJ-5 Community Relations	3
ADJ-6 Patrol Procedures	3
ADJ-8 Juvenile Law and Procedures	3
ADJ-12 Introduction to Criminalistics	3
ADJ-13 Criminal Investigation	3
ADJ-15 Narcotics	3
ADJ-19 Introduction to Policing	3
ADJ-20 Introduction to Corrections	3
ADJ-21 Control & Supervision in Corrections	3

ADJ-22 Legal Aspects of Corrections	3
ADJ-24 Interviewing & Interrogation	3
ADJ-40 Law Enforcement Crime Analysis	3
ADJ-41 Technology & Investigative Analysis	3
ADJ-42 Criminal Behavior and Intelligence Analysis	3
ADJ-43 Criminal Intelligence Analyst Simulations	3
ADJ-B1B Basic Peace Officer Training Academy	40
ADJ-C1D Basic Correctional Deputy Academy	15
ADJ-D1A Basic Public Safety Dispatch Course	6
ADJ-R1B Level II Modular Academy Training	10.5
ADJ-R1A2 Level III Modular Academy Training	7.5
ADJ-R1C Regular Basic Course, Modular Format, Module I Training	17

Emergency Management and Homeland Security - Leadership (M)

Associate of Science Degree*

MAS1019/MAS1019B/MAS1019C/MCE1019

Required Courses: (33 units) 11 courses

Degree Course Requirements	Units
HLS-1 Introduction to Homeland Security and Terrorism	3
HLS-101 Introduction to Emergency Management	3
HLS-2 Preparedness for Emergencies, Disasters & Homeland Security Incidents	3
HLS-3 Response to Emergencies, Disasters & Homeland Security Incidents	3
HLS-4 Recovery in Emergencies, Disasters & Homeland Security Incidents	3
HLS-5 Investigation of Emergencies, Disasters & Homeland Security Incidents	3
HLS-6 Case Studies Emergencies, Disasters & Homeland Security Incidents	3
HLS-50 Developing a Personal Philosophy of Leadership and Ethics	3
HLS-51 Leading Others Ethically	3
HLS-52 Ethical Leadership in Organizations	3
HLS-53 Ethics and the Challenge of Leadership	3

* The Associate of Science Degree will be awarded upon completion of the degree requirements, including general education and other graduation requirements as described in the college catalog.

PARALEGAL STUDIES

Paralegal Studies (R)

Associate of Science Degree*

AS591/AS591B/AS591C

Required Courses (64.5-76.5 units) – See College catalog for degree requirements.

Degree Course Requirements	Units
Level I Courses:	
BUS-18A Business Law I	3
PAL-10 Introduction to Paralegal Studies	3
PAL-64 Legal Research and Computer Applications	3
PAL-68 Civil Litigation and Procedures I	3
Level II Courses:	
BUS-18B Business Law II	3
PAL-14 Legal Ethics	3
PAL-70 Law Office Policies, Procedures and Ethics	1.5
PAL-72 Legal Analysis and Writing	3
PAL-78 Civil Litigation and Procedures II	3

Specialty Courses (Select 9 units from the following) :	Units
BUS-15 Street Law	3
COM-1 Public Speaking	3
COM-3 Argumentation and Debate	3
PAL-80 Internship Project	1.5
PAL-81 Bankruptcy Law and Procedures	3
PAL-82 Immigration Law, Practice and Procedures	3
PAL-83 Estate Planning and Probate Procedures	3
PAL-84 Criminal Law and Procedures	3
PAL-85 Family Law and Procedures	3
PAL-86 Tort Law and Alternate Discipline	3
PAL-87 Trial Practice Preparation and Procedures	3
PAL-89 Sports Management and Entertainment Law	3
PAL-90 E-Discovery and Litigation Support	3
RLE-82 Legal Aspects of Real Estate	3



* The Associate of Science Degree will be awarded upon completion of the degree requirements, including general education and other graduation requirements as described in the college catalog.



TRANSPORTATION

Whether it's scooters or jet airplanes, the Transportation sector plays a crucial role in our "on-the-move" world by making sure people and products get from one place to another. As vehicle components and repair techniques become increasingly sophisticated, the Transportation sector will continue to provide highly transferable employment opportunities in a wide range of related occupations.

When you think about the role that transportation plays in all of our personal and professional lives, it's obvious why transportation professionals are so important. Students who have good "mechanical" minds and enjoy working with their hands can choose from three main career pathways: Collision Repair and Refinishing; Vehicle Maintenance, Service and Repair, and Logistics.

Areas of projected market growth include the use of Global Positioning Systems (GPS) and Radio Frequency Identification (RFID), developments in rocket technology, super-capacity jet airplanes, hybrid and hydrogen fuel-cell technology, and the use of biodiesel and other alternative fuels.



TYPES OF CAREERS

- Bus & Truck Mechanic
- Automotive Master Mechanic
- Diesel Engine Specialist
- Motorcycle Mechanic
- Auto Glass Installer
- Dispatcher
- Service Writer
- Licensed Smog Technician
- Avionics Technician
- Airframe and Power Plant Technician
- Aircraft Mechanic/Service Technician
- Air Traffic Controller
- Commercial Pilot

SALARY SNAPSHOT

- Heavy & Tractor Trailer Truck Drivers \$49,733 / \$23.91 hourly
- First-Line Supervisors of Mechanics, Installers & Repairers \$79,934 / \$38.43 hourly
- Bus & Truck Mechanics / Diesel Engine Specialists \$49,691 / \$23.89 hourly
- Transportation, Storage & Distribution Managers \$92,435 / \$44.44 hourly
- Logisticians \$79,914 / \$38.42 hourly
- Aircraft Mechanics & Service Technicians \$73,278 / \$35.23 hourly

INDUSTRY SECTOR PATHWAYS

- Automotive Air Conditioning/Heat
- Automotive Alignment, Brakes, Steering, Suspension, Driveability, Detailer/Porter
- Automotive Electrical Systems
- Automotive Management: Repair Shop
- Automotive Technology, Automotive/General Service Technician
- Aviation Maintenance, Airframe, Powerplant, Avionics Technology
- Collision Repair, Refinishing
- Diesel Technology, Heavy/Medium/Light Duty Diesel Trucks
- Engine Performance, Inspection, Smog/Emissions Technician
- Engine Rebuilding, High Performance Automotive, Fabrication
- Geographic Information Science/Systems (GIS), Geospatial Technician
- Transmissions

AUTOMOTIVE TECHNOLOGY

Automotive Technology - Collision Repair (R)

Associate of Science Degree*

AS953/AS953B/AS953C/CE953

Required Courses (20 units) – 5 courses

Degree Course Requirements	Units
AUB-50 Introduction to Automotive Collision Repair	4
AUB-51 Automotive Non-Structural Collision Repair and Estimating	4
AUB-54 Automotive Structural Collision Repair and Frame	4
AUB-56 Automotive Technology for the Automotive Collision Specialist	4
Electives	4
Elective Courses (4 units)	Units
AUB-52 Automotive Refinishing and Paint	4
AUB-53 Automotive Collision Repair Special Projects	4
AUB-59A Automotive Collision Service and Repair	2

Automotive Refinishing and Paint (R)

Associate of Science Degree*

AS955/AS955B/AS955C/CE955

Required Courses (20 units) – 5 courses

Degree Course Requirements	Units
AUB-50 Introduction to Automotive Collision Repair	4
AUB-51 Automotive Non-Structural Collision Repair and Estimating	4
AUB-52 Automotive Refinishing and Paint	4
AUB-55 Automotive Advanced Refinishing and Custom Paint	4
Electives	4
Elective Courses (4 units)	Units
AUB-53 Automotive Collision Repair Special Projects	4
AUB-59B Automotive Refinishing Service and Repair	2
AUB-60 Automotive Trim and Upholstery I	4

Automotive Technology - Trim and Upholstery (R)

Associate of Science Degree*

AS516/AS516B/AS516C/CE516

Required Courses (20 units) – 5-6 courses

Degree Course Requirements	Units
AUB-50 Introduction to Automotive Collision Repair	4
AUB-51 Automotive Non-Structural Collision Repair and Estimating	4
AUB-60 Automotive Trim and Upholstery I	4
AUB-61 Automotive Trim and Upholstery II	4
Electives (Choose from the list below)	4
Electives (4 units)	Units
AUB-53 Automotive Collision Repair Special Projects	4
AUB-59A Automotive Collision Service and Repair	2
AUB-59B Automotive Refinishing Service and Repair	2

Automotive Electrical and Electronics Specialist (R)

Associate of Science Degree*

AS991/AS991B/AS991C/CE991

Required Courses (24 units) – 6 courses

Degree Course Requirements	Units
AUT-6A Automotive Electrical Systems I	4
AUT-6B Automotive Electrical Systems II	4
AUT-7 Automotive Heating and Air Conditioning	4
AUT-8A Automotive Engine Performance I	4
AUT-8B Automotive Engine Performance II	3
AUT-50 Automotive Principles	4

Automotive Engine Performance Specialist (R)

Associate of Science Degree*

AS974/AS974B/AS974C/CE974

Required Courses (24 units) – 6 courses

Degree Course Requirements	Units
AUT-6A Automotive Electrical Systems I	4
AUT-8A Automotive Engine Performance I	4
AUT-8B Automotive Engine Performance II	4
AUT-8C Automotive Emission Controls	4
AUT-50 Automotive Principles	4

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Automotive Hybrid and Electrical Vehicles (R)

Associate of Science Degree*

AS954/AS954B/AS954C/CE954

Required Courses (23 units) – 6 courses

Degree Course Requirements	Units
AUT-6A Automotive Electrical Systems	4
AUT-8A Automotive Engine Performance I	4
AUT-8B Automotive Engine Performance II	4
AUT-13A Introduction to Hybrid and Electric Vehicle Technology	3
AUT-13B Advanced Hybrid and Electric Vehicle Technology	4
AUT-50 Automotive Principles	4

Automotive Powertrain Specialist (R)

Associate of Science Degree*

AS990/AS990B/AS990C/CE990

Required Courses (24 units) – 7 courses

Degree Course Requirements	Units
AUT-1A Automotive Engine Repair (Upper End)	4
AUT-1B Automotive Engine Repair (Lower End)	4
AUT-2 Automotive Automatic Transmissions/Transaxles	4
AUT-3 Automotive Manual Drivetrain Systems	4
AUT-6A Automotive Electrical Systems	4
AUT-50 Automotive Principles	4

Automotive Undercar Specialist (R)

Associate of Science Degree*

AS975/AS975B/AS975C/CE975

Required Courses (20 units) – 5 courses

Degree Course Requirements	Units
AUT-4A Automotive Steering and Suspension	4
AUT-4B Advanced Suspension and Brake System	4
AUT-5 Automotive Brakes	4
AUT-6A Automotive Electrical Systems I	4
AUT-50 Automotive Principles	4



AUTOMOTIVE TECHNOLOGY NONCREDIT

ASE Engine Performance and Electric Specialist (R)

CC8022

Required Courses (72 hours) – 4 courses

Certificate Course Requirements	Hours
AUT-806 ASE Test Preparation - Electrical/Electronic Systems	18
AUT-807 ASE Test Preparation - Heating and Air Conditioning	18
AUT-808 ASE Test Preparation - Engine Performance	18
AUT-809 ASE Test Preparation - Advanced Engine Performance	18

ASE Powertrain Specialist (R)

CC8023

Required Courses (72 hours) – 4 courses

Certificate Course Requirements	Hours
AUT-801 ASE Test Preparation - Engine Repair	18
AUT-802 ASE Test Preparation - Automatic Transmission/Transaxle	18
AUT-803 ASE Test Preparation - Manual Drive Train and Axles	18
AUT-806 ASE Test Preparation - Electrical/ Electronic Systems	18

ASE Undercar Specialist (R)

CC8024

Required Courses (54 hours) – 3 courses

Certificate Course Requirements	Hours
AUT-804 ASE Test Preparation - Suspension and Steering	18
AUT-805 ASE Test Preparation - Brakes	18
AUT-806 ASE Test Preparation - Electrical/Electronic Systems	18

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LOGISTICS

Logistics Management (N)

Associate of Science Degree*

NAS579/NAS579B/NAS579C/NCE579

Required Courses (18 units) – 7 courses

Degree Course Requirements	Units
BUS-80 Principles of Logistics	3
BUS-82 Freight Claims	1.5
BUS-83 Contracts	1.5
BUS-85 Warehouse Management	3
BUS-86 Transportation and Traffic Management	3
BUS-87 Purchasing and Supply Management	3
BUS-90 International Logistics	3

FUN FACT:

In California, there are an average 227,420 job openings every year, but only 9,708 graduates with the right education to fill them!



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NONCREDIT/ EXTENDED LEARNING



About RCCD Extended Learning

The Extended Learning programs at Moreno Valley College, Norco College and Riverside City College offer noncredit, tuition-free courses. Whether you are looking to gain professional expertise to expand your career opportunities or grow your business, learn foundational skills to enter a CTE pathway or augment your educational experience while taking credit courses, Extended Learning programs provide a pathway to success!

HOW TO REGISTER

Step 1: Choose the classes you would like to take. Any updates to the class schedule will be noted on the Extended Learning website at <https://extendedlearning.rccd.edu/scheduleapp/Pages/default.aspx>. Please see the official college course schedule as course time and days are subject to change.

Step 2: Visit the “Get Started” page under the Extended Learning website for step-by-step instructions on how to register using MyPortal or EduNav.

After completing the free application to one of the colleges through CCC Apply, you must wait one to two business days to receive your official welcome email with your MyPortal login information. The email will contain your RCCD student ID number, which is needed to login to your MyPortal account. All students register for both noncredit and credit courses in MyPortal or EduNav. Students that apply to one college, can take classes at all three colleges in the Riverside Community College District. Please apply at least three weeks before the class starts.

WANT MORE INFORMATION?

Virtual information session dates are listed on the Get Started page. For additional information, please visit the RCCD Extended Learning website or email extlearning@rccd.edu.

NONCREDIT CERTIFICATES OFFERED

AUTOMOTIVE

ASE Engine Performance and Electric Specialist (p. 111)

- ASE Test Preparation - Electrical/Electronic Systems (AUT-806)
- ASE Test Preparation - Heating and Air Conditioning (AUT-807)
- ASE Test Preparation - Engine Performance (AUT-808)
- ASE Test Preparation - Advanced Engine Performance (AUT-809)

ASE Powertrain Specialist (p. 111)

- ASE Test Preparation - Engine Repair (AUT-801)
- ASE Test Preparation - Automatic Transmission/Transaxle (AUT-802)
- ASE Test Preparation - Manual Drive Train and Axles (AUT-803)
- ASE Test Preparation - Electrical/ Electronic Systems (AUT-806)

ASE Undercar Specialist (p.111)

- ASE Test Preparation - Suspension and Steering (AUT-804)
- ASE Test Preparation - Brakes (AUT-805)
- ASE Test Preparation - Electrical/Electronic Systems (AUT-806)

APPLIED DIGITAL MEDIA AND PRINTING

- Graphic Design and Promotional Printing Entrepreneurship

BUSINESS ADMINISTRATION

Accounting Basics for Small Business (p. 31)

- Setting Up Quickbooks for Small Business (ACC-801)
- Monthly Procedures using Quickbooks (ACC-802)
- Year End Procedures with Quickbooks (ACC-803)

Gig: The Solopreneurs Adventure (p. 31)

- Solopreneurs: Personal Finance and Quickbooks Quickstart (BUS-813)
- Business Skills: Professional Online Presence (BUS-815)
- Business Success Seminar (BUS-819)

Non-Credit Global Industry

COMPUTER APPLICATIONS AND OFFICE TECHNOLOGY

Business Information Worker Essential Preparation: Workplace Communication (p. 81)

- High Impact Presentations and Proposals for the Workplace (CAT-811/PDS-811)
- Business Skills: Professional Communication Basics (CAT-814/PDS-814)

Business Information Worker Essential Preparation: Workplace Decision Making and Time Management (p. 82)

- Critical Thinking, Problem Solving and Decision Making (CAT-808/PDS-808)
- Time Management (CAT-810/PDS-810)
- Business Skills: Professional Self-Management (CAT-817/BUS-817)

Business Skills - MOSPrep - Microsoft Office Specialist (p. 82)

- Business Skills Professional Communication Basics (BUS/CAT-814)
- Business Skills Professional Online Presence (BUS-815)
- Business Skills Customer Experience (BUS-816)
- Business Skills Professional Self-Management (BUS/CAT-817)
- MOS Prep: Microsoft Office Word Expert Exam Preparation (CAT-841)
- MOS Prep: Microsoft Office Excel Expert Exam Preparation (CAT-842)
- MOS Prep: Microsoft Office PowerPoint Core Exam Preparation (CAT-843)
- MOS Prep: Microsoft Office Access Core Exam Preparation (CAT-844) OR
- MOS Prep: Microsoft Office Outlook Core Exam Preparation (CAT-845)

COMPUTER INFORMATION SYSTEMS

Business Skills Boot Camp (p. 87)

- Business Skills: Professional Communication Basics (BUS/CAT-814)
- Business Skills: Professional Online Presence (BUS-815)
- Business Skills: Customer Experience (BUS-816)
- Business Skills: Professional Self-Management (BUS/CAT-817)

Coding Prep (p. 87)

- Historical Perspective: Napier to Torvalds (CIS-834)
- Foundational Approach: Word Problems to Work Flow (CIS-835)
- Computational Tools: Calculators to Spreadsheets (CIS-836)
- Boolean Formulation: Logic to Relationships (CIS-837)
- Pseudo-code and Flowcharts: Descriptive to Visual (CIS-838)
- Tools of the Trade: IDE's to Backup (CIS-839)

Computer Maintenance and Security (p. 87)

- Computer Repairs for Beginners (CIS-824A)
- Networking for Home and Small Business

- (CIS-824B)
- Cybersecurity for Beginners (CIS-824C)

Information Systems: Cyber Skills (p. 88)

- Cyber Skills: Introduction to Cybersecurity (CIS-825)
- Cyber Skills: Introduction to Virtualization (CIS-826)
- Cyber Skills: Introduction to Protocol Analysis (CIS-827)

Internet of Things (IOT): Embedded Systems and Microcontrollers (p. 88)

- Introduction to Microcontroller: Arduino (CIS-833A)
- Introduction to Embedded System: Raspberry Pi (CIS-833B)
- Designing Internet of Things (IOT) (CIS-833C)

Introduction to Basic Computer and IT Careers for ESL Students (p. 88)

- Basic Computer and Technology Language Support (ESL-810)
- IT Workplace Language Support (ESL-811)

Introduction to Python Programming (p. 88)

- Introduction to Python Programming: Part 1 (CIS-830)
- Introduction to Python Programming: Part 2 (CIS-831)
- Introduction to Python Programming: Part 3 (CIS-832)

Operating Systems and Internet Literacy (p. 88)

- Windows Operating System and Internet Literacy (CIS-897A)
- Linux Operating System and Internet Literacy (CIS-897B)
- Mac Operating System and Internet Literacy (CIS-897C)

Remote Work Productivity Essentials

CULINARY

Food Service Career and Certification Preparation (p. 77)

- The Art of Garde Manager (CUL-824)
- Menu Planning (CUL-825)
- Food Cost Accounting (CUL-826)
- Culinary Purchasing and Receiving (CUL-827)
- Culinary Food Preparation I (CUL-828A)
- Culinary Food Preparation II (CUL-828B)
- International Cuisine (CUL-842)
- ServeSafe Food Safety (CUL-850)

Math Skills for the Professional Baker (p. 77)

- Introduction to Math for Baking Professionals (CUL-875)
- Introduction to Cost Control for Professional Bakers (CUL-876)
- Baker's Percentages and Recipe Conversion

(CUL-877)

- Cost Control for Baking and Pastry (CUL-878)

EARLY CHILDHOOD EDUCATION

Family Childcare Provider (p. 46)

- Family Child Care - Our Business (EAR-810)
- Family Child Care - Our Curriculum (EAR-811)
- Family Child Care - Our Family and Community (EAR-812)

ENGLISH AS A SECOND LANGUAGE

Beginning American College English (p. 47)

- Beginning American College English (EAR-846)
- Low Intermediate American College English (EAR-847)

Advanced American College English (p. 47)

- Intermediate American College English (EAR-848)
- High Intermediate American College English (EAR-849)
- Advanced American College English (EAR-850)

Introduction to Education Profession for ESL Students (p. 40)

- Introduction to American Public Education (ELS-804)
- Introduction to Education Practices and Related Service Providers in Special Education (ESL-805)

ENTREPRENEURSHIP

Non-Credit Entrepreneurial Essentials (p. 33)

- Introduction to Entrepreneurship (ENP-850)
- Entrepreneurship Basics (ENP-851)
- Starting a Business with Limited Resources (ENP-852)
- Money, Finance and Accounting for Entrepreneurs (ENP-853)

Non-Credit Entrepreneurial Foundations (p. 33)

- Introduction to Entrepreneurship (ENP-850)
- Entrepreneurship Basics (ENP-851)
- Money, Finance and Accounting for Entrepreneurs (ENP-853)
- Business Model Canvas and Presentations for Entrepreneurs (ENP-854)
- Entrepreneurial Simulation - Capstone (ENP-855)

Non-Credit Entrepreneurship and the Team (p. 33)

- Introduction to Entrepreneurship (ENP-850)
- Entrepreneurship Basics (ENP-851)
- Money, Finance and Accounting for Entrepreneurs (ENP-853)
- Business Model Canvas and Presentations for Entrepreneurs (ENP-854)
- Building an Entrepreneurial Team (ENP-870)
- Solopreneurship (ENP-871)

Social Media for Business (p. 33)

- Facebook for Business (ENP-801)
- Pinterest and Instagram for Business (ENP-802)
- YouTube for Business (ENP-803)
- Twitter for Business (ENP-804)
- LinkedIn for Business (ENP-805)

MANUFACTURING TECHNOLOGY

Computerized Numerical Control Operator (p. 93)

- CNC Program Writing (MAN-857)
- CNC Machine Set-up and Operation (MAN-856)

PROFESSIONAL DEVELOPMENT STUDIES

Customer Relations (p. 33)

- The Art of Negotiating and Collaborating (PDS-806)
- Personality Styles & Difficult Relationships (PDS-807)
- Best Practices in Customer Service (PDS-813)

Emerging Leaders (p. 33)

- Leadership Skills (PDS-801)
- Supervisory Skills (PDS-802)
- Increasing Productivity (PDS-803)
- Motivating Yourself and Others (PDS-804)

Enterprise Communication (p. 34)

- Business Writing in a Technological World (PDS-809)
- Workplace Communication Strategies (PDS-812)
- Difficult Conversations (PDS-805)
- The Art of Negotiating and Collaborating (PDS-806)
- Personality Styles and Difficult Relationships (PDS-807)
- Best Practices in Customer Service (PDS-813)

Financial Literacy (p. 34)

- Personal Finance (PDS-816)
- Financial Future (PDS-817)

Sales Techniques (p. 34)

- Closing Techniques That Win the Sale (PDS-814)
- Winning Sales Scripts (PDS-815)

Successful Career Transition (p. 34)

- The Successful Job Search (PDS-818)
- Business Writing in the Technological World (PDS-809)
- Workplace Communication Strategies (PDS-812)

Workplace Essentials (p. 34)

- Critical Thinking, Prob. Solving & Decision-Making (PDS-808)
- Business Writing in the Technological World (PDS-809)
- Time Management (PDS-810)
- Workplace Communication Studies (PDS-812)

NONCREDIT FREQUENTLY ASKED QUESTIONS (FAQS)

What are noncredit courses?

Noncredit courses are designed for students interested in pursuing personal, professional or academic goals. Noncredit courses focus on helping students build specific skills that are necessary for reaching their individual goals. All courses are taught by college faculty.

Who can take noncredit courses?

Any community member 18 years or older can take noncredit courses. Those under 18 must complete a concurrent enrollment form and return it to the college's Admissions and Records office. Please contact extlearning@rccd.edu for more information.

How much does it cost to enroll in a noncredit course?

All noncredit courses are tuition free, though students may have to pay for books. All students who park on campus must purchase a parking pass. Since noncredit courses are tuition free, financial aid is not available for these courses.

How long will it take to earn a certificate?

The time it takes to complete a certificate varies. Visit the Courses and Certificates pages on the Extended Learning website to learn more. Students can also make an appointment with an educational advisor or college counselor. Email extlearning@rccd.edu to get connected.

For additional frequently asked questions (FAQs), visit the About Noncredit page under the Extended Learning website about residency, how to sign up, and more!

CAREER and TECHNICAL EDUCATION PROGRAMS

Apprenticeship

Apprenticeship: Manufacturing Technician I (N)
Apprenticeship: Manufacturing Technician II (N)
Electrician Apprentice (N)
Sound and Communication Systems Installer Apprenticeship (N)

Arts, Media, and Entertainment

3D Game Modeling and Animation (N)
Animation (R)
Basic Graphic Communication (R)
Basic Graphic Design (MR)
Basic Television Production (R)
Crime Scene Photography Essentials (R)
Electronic Publishing and Design (R)
Entrepreneurial Photography (R)
Film, Television and Electronic Media for Transfer (R)
Game Concept Art (N)
Game Design (N)
Game Development Core (N)
Game Programming (N)
Graphic Design (N)
Graphic Design and Digital Media (R)
Graphic Design and Printing (R)
Journalism Associate Degree for Transfer (MR)
Motion Graphics and 3D Animation (R)
Music (MNR)
Music Industry Studies: Audio Performance (N)
Music Industry Studies: Audio Production (N)
Photography (R)
Photojournalism Essentials (R)
Production Specialist (R)
Professional Photography Essentials (R)
Simulation and Gaming: Game Art (M)
Special Event Photography (R)
Technical Theatre (R)

Building and Construction Trades

Building Automation Control (R)
Building Energy Systems Professional in HVAC Technology Associate Degree (R)
Construction Management (N)
Construction Technology (N)
Digital Electronics (N)
Electrician (N)
Electrician Apprenticeship (N)
Green Technician (N)
HVAC Commercial Technology (R)
HVAC Residential Technology (R)
Residential Installation (R)
Sound and Communication Systems Installer Apprenticeship (N)

Business Administration

Accounting Basics for Small Business Noncredit (MNR)
Business Administration-Accounting (MNR)
Business Administration Associate Degree for Transfer (MNR)
Business Administration-General Business (MNR)
Business Administration-Global Enterprise
Business Administration-Human Resources (R)
Business Administration-Logistics Management (MN)
Business Administration-Management (MNR)
Customer Relations Noncredit (MNR)
Emerging Leaders Noncredit (MNR)
Enterprise Communication Noncredit (MNR)
Entrepreneurial Essentials (MNR)
Entrepreneurial Foundations (MNR)
Entrepreneurship and the Team (MNR)
Entrepreneurship (MR)
Entrepreneurship: Getting Started (N)

Entrepreneurship: Legal and Finance (N)
Financial Literacy Noncredit (MNR)
General Business (R)
Gig Economy (R)
Gig: The Solopreneurs Adventure Noncredit (R)
Human Resources (R)
Global Industry (R)
Logistics Management (N)
Management (R)
Non-Credit Entrepreneurial Essentials (MNR)
Non-Credit Entrepreneurial Foundations (MNR)
Non-Credit Entrepreneurship and the Team (MNR)
Project Management Professional (M)
Registered Individual and Small Business Income Tax Preparer (N)
Retail Management/Western Association of Food Chains (WAFC) (N)
Sales Technique Noncredit (MNR)
Small Business Accounting (MNR)
Small Business Payroll Accounting (MNR)
Social Media for Business Noncredit (MN)
Successful Career Transitions (MR)
Workplace Essentials Noncredit (MNR)

Cosmetology

Barbering Concepts (R)
Cosmetology (R)
Cosmetology Business Administration-Entrepreneurial Concentration (R)
Cosmetology Business Administration-Management and Supervision Concentration (R)
Cosmetology Concepts (R)
Cosmetology Instructor Training (R)
Esthetician (R)
Esthetician Concepts (R)
Hair Styling Concepts (R)
Manicuring Concepts (R)

Education, Child Development, and Family Services

Advanced American College English (N)
Beginning American College English (N)
Behavioral Therapist (M)
Child and Adolescent Development Associate Degree for Transfer (N)
Child Welfare and Family Studies (M)
Community Interpretation (M)
Drug and Alcohol Studies (M)
Early Childhood Education (MNR)
Early Childhood Education Assistant Teacher (MNR)
Early Childhood Education Associate Degree for Transfer (MNR)
Early Childhood Education School Age (M)
Early Childhood Education Twelve Core Units (MNR)
Early Childhood Intervention Assistant (MNR)
Education Paraprofessional (MR)
Employment Support Specialization (M)
Family Childcare Provider (MR)
Infant and Toddler Specialization (MR)
Military Social Work (M)
Multicultural Counseling & Advocacy Resources (M)
Sign Language Interpreting (R)
Social Justice Studies (N)
Social Justice System Studies (M)
Social Work, Human Services, & Counseling Practices (M)

Energy, Environment, and Utilities

Building Inspection Technology (R)
Zero Net Energy (R)

Engineering and Architecture

3D Mechanical Drafting (N)
Architectural Graphics (N)

Drafting Technology (N)
Engineering Graphics (N)
Essential CAD (N)
Essential SOLIDWORKS (N)
Essential Fusion 360 (N)
Essential 3D Tour (N)
Essential Revit (N)
Noncredit Essential CAD (N)
Noncredit Essential Solidworks (N)
Noncredit Essential Fusion 360 (N)
Noncredit Essential 3D Tour (N)
Noncredit Essential Revit (N)
Pre-Engineering Associate Degree (N)

Health Science and Medical Technology

Administrative/Clinical Medical Assisting (M)
Critical Care Nurse (R)
Dental Assistant (M)
Dental Hygiene Associate Degree (M)
Emergency Medical Technician (M)
Fitness Professionals (M)
Kinesiology Associate Degree (R)
Kinesiology/Exercise, Sports and Wellness-Coaching Emphasis (R)
Kinesiology/Exercise, Sports and Wellness-Fitness Professions Emphasis (R)
Kinesiology/Exercise, Sports and Wellness-Athletic Training Emphasis (R)
Nursing Assistant (R)
Paramedic (M)
Pilates Dance/Conditioning Instructor (R)
Registered Nursing Program Associate Degree (R)
Transcriptionist/Health Documentation Specialist (M)
Vocational Nursing (R)

Homeland Security

Emergency Management and Homeland Security (M)
Emergency Management and Homeland Security - Cybersecurity (M)
Emergency Management and Homeland Security - Emergency Medical Services (M)
Emergency Management and Homeland Security - Fire Technology (M)
Emergency Management and Homeland Security - Law Enforcement (M)
Emergency Management and Homeland Security - Leadership (M)

Hospitality, Tourism, and Recreation

Baking and Pastry (R)
Cake Decorating (R)
Culinary Arts (R)
Food Service Career and Certification Preparation Noncredit (R)
Foundational Culinary Arts (R)
Math Skills for the Professional Baker Noncredit (R)

Information and Communication Technologies

Administrative Office Professional (R)
Amazon Web Services (AWS) Cloud Computing (R)
Business Information Worker (MNR)
Business Information Worker Essential Preparation: Workplace Communication Noncredit (MR)
Business Information Worker Essential Preparation: Workplace Decision Making and Time Management Noncredit (MR)
Business Skills Boot Camp Noncredit (R)
Business Skills - MOSPrep-Microsoft Office Specialist Noncredit (MR)
C++ Programming (NR)
Cisco Networking (R)
Coding Prep Noncredit (MR)
Computer Applications (M)
Computer Maintenance and Security Noncredit (M)
Computer Programming (MNR)
Cyber Defense Associate Degree (R)
Data Quick Start (R)
Executive Office Management (R)
Executive Office Professional (R)
Information Assurance Auditing (M)
Information Security Certificate and Cyber Defense (R)
Information Systems: Cyber Skills Noncredit (R)
Information Technology (MR)

Internet of Things (IOT): Embedded Systems and Microcontrollers Noncredit (M)
Introduction of Python Programming Noncredit (R)
Introduction to Basic Computer and IT Careers for ESL Students (MR)
IT Technician Pathway: Cybersecurity Analyst (M)
IT Technician Pathway: Cybersecurity Healthcare Specialist (M)
IT Technician Pathway: Cybersecurity Specialist (M)
IT Technician Pathway: IT Systems Specialist (M)
IT Technician Pathway: IT Systems Support and Sales (MR)
Java Programming (NR)
Legal Administrative Professional (R)
Medical Secretary (R)
Office Assistant (R)
Operating Systems and Internet Literacy Noncredit (M)
Python Programming Certificate (M)
Webmaster-Web Designer Concentration (MR)
Webmaster-Web Developer Concentration (MR)

Manufacturing and Product Development

Apprenticeship: Manufacturing Technician I (N)
Apprenticeship: Manufacturing Technician II (N)
Computer Numerical Control Programming (N)
Computer Numerical Control (CNC) Operator (N)
Computer Numerical Control Operator Noncredit (N)
Conventional Machine Operator (N)
Facility Maintenance (N)
Industrial Automation (N)
Pipe Welding (R)
Stick Welding (SMAW) (R)
Supply Chain Automation (N)
Tig Welding (GTAW) (R)
Welding Technology (R)
Wire Welding (FCAW, GMAW) (R)

Marketing, Sales, and Services

Business Administration-Marketing (MR)
Business Administration-Real Estate (MNR)
Industry Marketing (R)
Real Estate Practice (R)
Real Estate Salesperson and Transaction (NR)

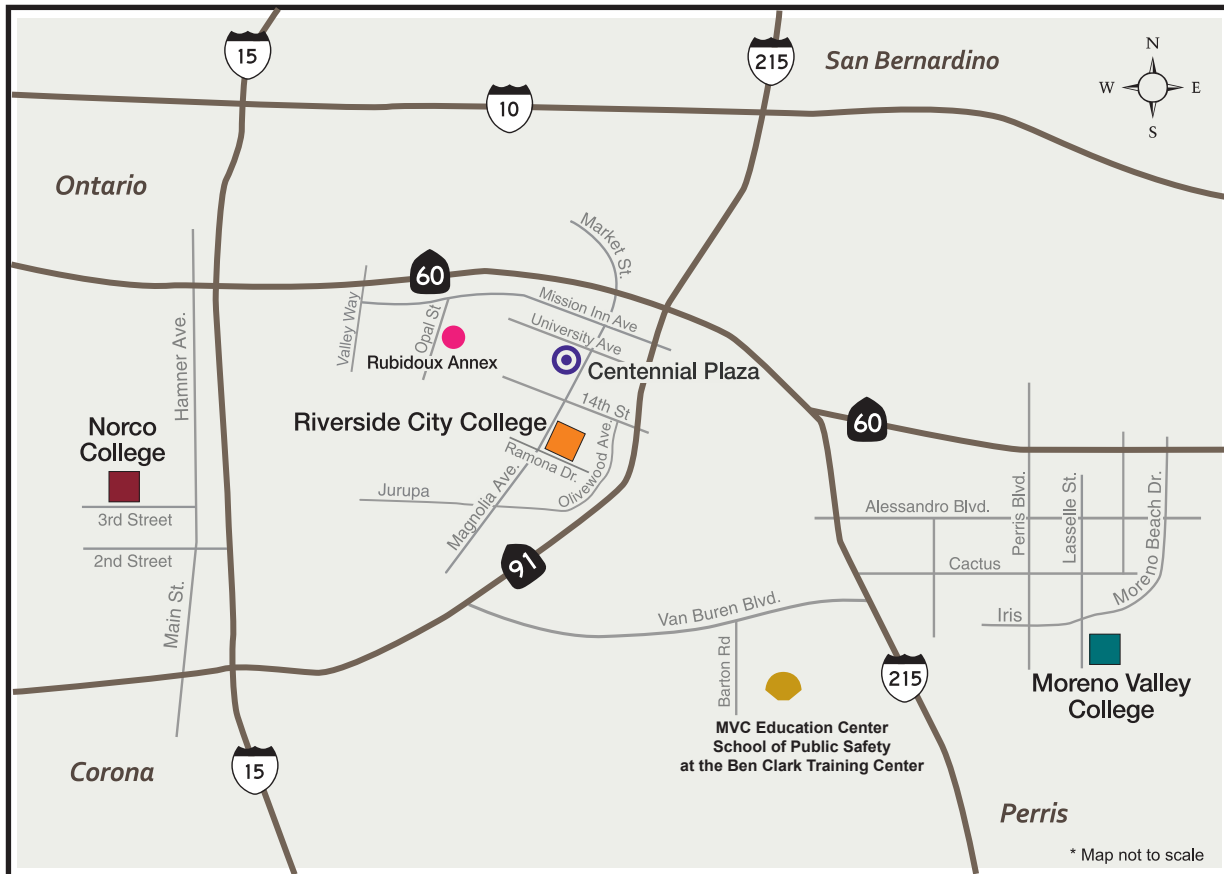
Public Services

Administration of Justice (MR)
Administration of Justice Associate Degree for Transfer (MNR)
Administration of Justice/Basic Correctional Deputy Academy (M)
Administration of Justice/Basic Public Safety Dispatch (M)
Administration of Justice/Corrections Associate Degree (M)
Administration of Justice/Law Enforcement Basic Peace Officer Academy Intensive (M)
Administration of Justice/Law Enforcement Basic Peace Office Modular Academy (M)
Crime and Intelligence Analysis (M)
Crime Scene Investigation (NR)
Emergency Medical Technician (M)
Fire Fighter Academy (M)
Fire Service Leadership (M)
Fire Technology (M)
Investigative Assistant (R)
Paralegal Studies Associate Degree (R)

Transportation

ASE Engine Performance and Electric Specialist Noncredit (R)
ASE Powertrain Specialist Noncredit (R)
ASE Undercar Specialist Noncredit (R)
Automotive Collision Repair (R)
Automotive Electrical and Electronics Specialist (R)
Automotive Engine Performance Specialist (R)
Automotive Hybrid and Electrical Vehicles (R)
Automotive Powertrain Specialist (R)
Automotive Undercar Specialist (R)
Automotive Refinishing and Paint (R)
Automotive Trim and Upholstery (R)
Logistics Management (N)

RIVERSIDE COMMUNITY COLLEGE DISTRICT LOCATIONS



Moreno Valley College
 16130 Lasselle Street
 Moreno Valley, CA 92551-2045
 (951) 571-6100
www.mvc.edu

Norco College
 2001 Third Street
 Norco, CA 92860-2600
 (951) 372-7000
www.norcocollege.edu

Riverside City College
 4800 Magnolia Avenue
 Riverside, CA 92506-1299
 (951) 222-8000
www.rcc.edu

**MVC Education Center
 School of Public Safety
 at the Ben Clark Training
 Center**
 20629 11th Street
 Riverside, CA 92518
 (951) 571-6300

Rubidoux Annex
 4250 Opal Street
 Jurupa Valley, CA 92509
 (951) 328-3790

Centennial Plaza:

- Center for Social Justice and Civil Liberties
 3855 Market Street
 Riverside, CA 92501
- RCC Coil School for the Arts
 3890 University Avenue
 Riverside, CA 92501
- RCC Culinary Arts Academy & RCCD District Offices
 3801 Market Street
 Riverside, CA 92501
 (951) 222-8800
www.rccd.edu



RCCD | RIVERSIDE COMMUNITY COLLEGE DISTRICT

3801 Market Street
Riverside, CA 92501

