

## CSU Pathway

### Associate of Arts Degree- Area of Emphasis in Communication, Media and Languages—CSU PATHWAY

Communications is the study of how humans construct meanings through interactions.

Courses in this area may focus on the knowledge and skills needed to communicate effectively in oral, written, or visual forms; on the study of language and culture; and/or on a critical understanding of the structures and patterns of different kinds of communication as they affect individuals and society.

Studies in Communication, Media, and Languages is designed for students interested in pursuing further studies in English, Journalism, Mass Communication, Media Studies, Communication Studies, and World Languages at four-year colleges and universities.

**2017-2018**  
**ASSOCIATE OF ARTS**  
**COMMUNICATION, MEDIA, AND LANGUAGES**  
**(NAA495 /NAA495B/NAA495C)**

The student must successfully complete 18 units of study across three disciplines; nine units must be taken in a single discipline with a grade of "C" or better or a "P" if the course is taken on a "pass-no pass" basis.

**INCLUDED DISCIPLINES AND COURSES:**

Anthropology (ANT): 8  
Applied Digital Media (ADM): 1  
Arabic (ARA): 1, 2, 3, 8, 11  
American Sign Language (AML): 1, 2, 3, 4, 5, 10, 11, 12, 13, 14, 20, 22  
Chinese (CHI): 1, 2, 11  
Communication Studies (COM): 1, 1H, 2, 3, 5, 6, 7, 9, 9H, 11, 12, 13, 19  
English (ENG): 1A, 1AH, 1B, 1BH, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 20, 23, 25, 30, 34, 35, 38, 39, 40, 41, 44, 45, 48, 49  
Film Studies (FST): 1, 1H, 2, 3, 4, 5, 6, 7, 8  
Film, Television and Video (FTV): 12, 44A, 44B, 44C, 44D, 45A, 45B, 45C, 45D, 65  
French (FRE): 1, 2, 3, 4, 8, 11  
German (GER): 1, 2, 3, 11  
Italian (ITA): 1, 2, 3, 11  
Japanese (JPN): 1, 2, 3, 4, 11  
Journalism (JOU): 1, 2, 7, 12, 20A, 20B, 20C, 20D, 52A, 52B, 52C, 52D  
Korean (KOR): 1, 2, 11  
Latin (LAT): 1, 2  
Library (LIB): 1  
Photography (PHO): 12  
Portuguese (POR): 1, 2  
Reading (REA): 4  
Russian (RUS): 1, 2, 3, 11  
Spanish (SPA): 1, 1A, 1B, 1H, 2, 2H, 3, 3N, 4, 8, 11, 12, 13, 51, 52, 53

Career paths chosen by students pursuing undergraduate studies in Communications, Media and Languages may be useful for students interested in pursuing careers in communications, graphic design, journalism, law, marketing, public relations, radio

Course	Units
ENGL 1A	4.0
AREA B4	4.0
COM 1/6/9	3.0
AREA C1	3.0
AREA E	3.0

Total Units: 17.0

Course	Units
AREA A3	4.0
AOE COURSE	3.0
AREA D	3.0
HIS 6/7/14/31/34	3.0
CSU ELECTIVE	3.0

Total Units: 16.0

Course	Units
AOE ELECTIVE COURSE	3.0
AOE ELECTIVE COURSE	3.0
AREA C1/C2	3.0
AREA B2	4.0
CSU ELECTIVE	3.0

Total Units: 16.0

Course	Units
CSU ELECTIVE	3.0
CSU ELECTIVE	3.0
POL 1	3.0
AREA B1/B3	3.0
AREA D	3.0

Total Units: 15.0

Suggested CSU Pathway for AOE in Communication, Media & Languages

## IGETC Pathway for UC/CSU

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Courses in this area may focus on the knowledge and skills needed to communicate effectively in oral, written, or visual forms; on the study of language and culture; and/or on a critical understanding of the structures and patterns of different kinds of communication as they affect individuals and society.

Studies in Communication, Media, and Languages is designed for students interested in pursuing further studies in English, Journalism,

Course	Units
ENGL 1A	4.0
AREA 2	4.0
COM 1/6/9	3.0
AREA 3A	3.0
Total Units:	14.0

Course	Units
ENG 1B	4.0
AREA 4	3.0
AOE COURSE	3.0
HIS 6/7/14/31/34	3.0
UC ELECTIVE	3.0
Total Units:	16.0

Course	Units
AREA 5B	3.0
POL 1	3.0
AREA 3A/3B	3.0
AOE COURSE	3.0
AOE COURSE	3.0
Total Units:	15.0

Course	Units
AREA 4	3.0
AREA 5A/5B	4.0
AREA 6	5.0
UC ELECTIVE	3.0
Total Units:	15.0

2017-2018

### ASSOCIATE OF ARTS COMMUNICATION, MEDIA, AND LANGUAGES (NAA495 /NAA495B/NAA495C)

The student must successfully complete 18 units of study across three disciplines; nine units must be taken in a single discipline with a grade of "C" or better or a "P" if the course is taken on a "pass-no pass" basis.

#### INCLUDED DISCIPLINES AND COURSES:

Anthropology (ANT): 8  
Applied Digital Media (ADM): 1  
Arabic (ARA): 1, 2, 3, 8, 11  
American Sign Language (AML): 1, 2, 3, 4, 5, 10, 11, 12, 13, 14, 20, 22  
Chinese (CHI): 1, 2, 11  
Communication Studies (COM): 1, 1H, 2, 3, 5, 6, 7, 9, 9H, 11, 12, 13, 19  
English (ENG): 1A, 1AH, 1B, 1BH, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 20, 23, 25, 30, 34, 35, 38, 39, 40, 41, 44, 45, 48, 49  
Film Studies (FST): 1, 1H, 2, 3, 4, 5, 6, 7, 8  
Film, Television and Video (FTV): 12, 44A, 44B, 44C, 44D, 45A, 45B, 45C, 45D, 65  
French (FRE): 1, 2, 3, 4, 8, 11  
German (GER): 1, 2, 3, 11  
Italian (ITA): 1, 2, 3, 11  
Japanese (JPN): 1, 2, 3, 4, 11  
Journalism (JOU): 1, 2, 7, 12, 20A, 20B, 20C, 20D, 52A, 52B, 52C, 52D  
Korean (KOR): 1, 2, 11  
Latin (LAT): 1, 2  
Library (LIB): 1  
Photography (PHO): 12  
Portuguese (POR): 1, 2  
Reading (REA): 4  
Russian (RUS): 1, 2, 3, 11  
Spanish (SPA): 1, 1A, 1B, 1H, 2, 2H, 3, 3N, 4, 8, 11, 12, 13, 51, 52, 53

Career paths chosen by students pursuing undergraduate studies in Communications, Media and Languages may be useful for students interested in pursuing careers in communications, graphic design, journalism, law, marketing, public relations, radio

## Suggested CSU Pathway for AOE in Communication, Media & Languages





California Community Colleges are now offering Associate Degrees for Transfer (ADT's) to the CSU. These may include Associate in Arts (AA-T) or Associate in Science (AS-T) degrees. These degrees are designed to provide a clear pathway to a CSU major and baccalaureate degree. California Community College students who are awarded an AA-T or AS-T degree are guaranteed admission with junior standing somewhere in the CSU system and given priority admission consideration to their local CSU campus or to a program that is deemed similar to their community college major. This priority does not guarantee admission to specific majors or campuses. Students who have been awarded an AA-T or AS-T are able to complete their remaining requirements for the 120-unit baccalaureate degree within 60 semester or 90 quarter units. To view the most current list of Norco College Associate Degrees for Transfer and to find out which CSU campuses accept each degree, please go to:

[www.calstate.edu/transfer/adt-search/search.shtml](http://www.calstate.edu/transfer/adt-search/search.shtml)

**Students are encouraged to meet with a Norco College counselor to review their options for transfer and to develop an educational plan that best meets their goals and needs.**

## 2019-2020 COMMUNICATION STUDIES (CSUGE) NAA587

The Associate in Arts in Communication Studies for Transfer degree provides opportunity for students to transfer to a CSU with junior standing. The degree encourages students to examine and evaluate human communication across and within various contexts for the purpose of increasing competence.

Required Courses (18-19 units)		Units
COM-1*/1H*	Public Speaking/Honors	3
COM-9*/9H*	Interpersonal Communication/Honors	3
Electives from Group A		3
Electives from Group B		6
Electives from Group C		3-4
Electives Group A (3 units)		Units
COM-3*	Argumentation and Debate	3
COM-6*	Dynamics of Small Group Communication	3
Electives Group B (6 units)		Units
Any course not applied in group A		
COM-2*	Persuasion in Rhetorical Perspective	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
Electives Group C (3-4 units)		Units
Any course not applied in group A or B 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	4
PSY-1*/PSY-1H*	General Psychology/Honors	3
SOC-1*/SOC-1H*	Introduction to Sociology/Honors	3

\*Courses may also be used to fulfill general education requirements for the CSU GE or IGETC pattern, please confer with a counselor.

Course	Units
ENGL 1A	4.0
AREA B4	4.0
COM 1	3.0
AREA C1	3.0
AREA E	3.0

Total Units: 17.0

Course	Units
AREA A3	3.0
COM 9	3.0
AREA D	3.0
HIS 6/7/14/31/34	3.0
CSU ELECTIVE	3.0

Total Units: 15.0

Course	Units
ELECTIVE GROUP/LIST B	3.0
ELECTIVE GROUP/LIST C	3.0
AREA C1/C2	3.0
AREA B2	3.0
CSU ELECTIVE	3.0

Total Units: 15.0

Course	Units
ELECTIVE GROUP/LIST A	3.0
ELECTIVE GROUP/LIST B	3.0
POL 1	3.0
AREA B1/B3	4.0
AREA D	3.0

Total Units: 16.0

Suggested Pathway for Communication Studies ADT

### Associate in Arts for Transfer Degree

The Associate in Arts in Communication 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 (CSU GE) 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.

See your counselor for **YOUR** plan!

California Community Colleges are now offering Associate Degrees for Transfer (ADT's) to the CSU. These may include Associate in Arts (AA-T) or Associate in Science (AS-T) degrees. These degrees are designed to provide a clear pathway to a CSU major and baccalaureate degree. California Community College students who are awarded an AA-T or AS-T degree are guaranteed admission with junior standing somewhere in the CSU system and given priority admission consideration to their local CSU campus or to a program that is deemed similar to their community college major. This priority does not guarantee admission to specific majors or campuses. Students who have been awarded an AA-T or AS-T are able to complete their remaining requirements for the 120-unit baccalaureate degree within 60 semester or 90 quarter units. To view the most current list of Norco College Associate Degrees for Transfer and to find out which CSU campuses accept each degree, please go to: [www.calstate.edu/transfer/adt-search/search.shtml](http://www.calstate.edu/transfer/adt-search/search.shtml)  
**Students are encouraged to meet with a Norco College counselor to review their options for transfer and to develop an educational plan that best meets their goals and needs.**

## 2019-2020

### ENGLISH (CSUGE) NAA648

The Associate in Arts in English for Transfer degree is a curricular pattern designed specifically to transfer students as English majors with junior status to the CSU system. Though the Associate in Arts in English for Transfer also provides broad general preparation for English majors entering any four-year university, students must consult the specific requirements of any non-CSU campus to which they are applying. Students earning the Associate in Arts in English for Transfer will analyze, interpret, and synthesize diverse texts in order to construct well-supported academic arguments and literary analyses, and they will encounter interpretive questions to which there are multiple plausible answers. Students earning this degree will also have exposure to a variety of literary genres and periods and will be able to illustrate a basic understanding of the ways that literature can embody cultural, intellectual, and artistic trends.

Required Courses: (19 units)	Units
ENG-1B*/1BH* Critical Thinking and Writing/Honors	4
LIST A Choose from the list below	6
LIST B Choose from the list below	6
LIST C Choose from the list below	3

List A: Choose two courses from the following (6 units)	Units
ENG-6* British Lit I: Anglo-Saxon through Eighteenth Century	3
ENG-7* British Lit II: Romanticism through Modernism/Post Modernism	3
ENG-14* American Lit I: Pre-Contact through Civil War	3
ENG-15* American Lit II: 1860 to the Present	3
ENG-40* World Lit I: Ancient Literatures to the Seventeenth Century	3
ENG-41* World Lit II: Seventeenth Century Through the Present	3

List B: Choose two courses from the following (6 units)	Units
Any course from List A not already used	
ENG/HUM-8* Introduction to Mythology	3
ENG-11* Creative Writing	3
ENG-44* Poetry from the Twentieth Century to the Present	3

List C: Choose one course from the following (3 units)	Units
Any course from List A or List B not already used	
ENG-9* Introduction to Shakespeare	3
ENG-10 Special Studies in Literature	3
ENG-20* Survey of African American Literature	3
ENG/HUM-23* The Bible as Literature	3
ENG-30* Children's Literature	3
ENG-35* Images of Women in Literature	3
ENG-45* Modern Drama	3
ENG-48* Short Story & Novel from the Twentieth Century to the Present	3
COM-7* Oral Interpretation of Literature	3
THE-3* Introduction to Theater	3

Course	Units
ENGL 1A	4.0
AREA B4	3.0
AREA C1	3.0
AREA D	3.0
AREA E	3.0

Total Units: 16.0

Course	Units
ENGL 1B	4.0
ELECTIVE GROUP/LIST C	3.0
AREA A1	3.0
AREA B2	3.0
CSU ELECTIVE	3.0

Total Units: 16.0

Course	Units
ELECTIVE GROUP/LIST A	3.0
ELECTIVE GROUP/LIST B	3.0
POL 1	3.0
CSU ELECTIVE	3.0
CSU ELECTIVE	3.0

Total Units: 15.0

Course	Units
ELECTIVE GROUP/LIST B	3.0
ELECTIVE GROUP/LIST A	3.0
HIS 6/7/14/31/34	3.0
AREA B1/B3	4.0

Total Units: 13.0

Suggested Pathway for English ADT

See your counselor for **YOUR** plan!

\*Courses may also be used to fulfill general education requirements for the CSU GE or IGETC pattern, please confer with a counselor.

#### Associate in Arts for Transfer Degree

The Associate in Arts in English 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.

## CSU Pathway

### Associate of Arts Degree- Area of Emphasis in Fine & Applied Arts—CSU PATHWAY

The Associate Degree in Fine and Applied Arts offers a rich variety of courses to acquaint students with the creation of and performance in the arts from a global perspective.

The courses in this area examine the nature of the fine and applied arts through analysis, synthesis, composition, performance and technical development. Students will develop techniques appropriate to the art form, engage in the production and performance of the arts, examine aesthetic valuing, and participate in creative expression.

**2017-2018  
ASSOCIATE OF ARTS  
FINE AND APPLIED ARTS  
(NAA496 /NAA496B/NAA496C)**

**The student must successfully complete 18 units of study across a maximum of three disciplines with nine units from a single discipline with a grade of “C” or better or a “P” if the course is taken on a “pass-no pass” basis.**

**INCLUDED DISCIPLINES AND COURSES:**

Applied Digital Media (ADM): 1, 2C, 30, 67, 68A, 68B, 70, 71A, 71B, 74A, 74B, 77A, 77B, 80, 200

Art (ART): 1, 2, 2H, 5, 6, 6H, 7, 8, 9, 10, 12, 15, 16, 17, 18, 20, 21, 22, 23, 24, 25A, 25B, 26, 27, 28A, 28B, 30A, 30B, 34, 35A, 35B, 36A, 36B, 38, 39, 40A, 40B, 41A, 41B, 42A, 42B, 43A, 43B, 44A, 44B, 44C, 45, 46, 47, 48A, 48B, 49A, 49B, 200

Communication Studies (COM): 1, 1H, 2, 3, 7, 11, 19

Dance (DAN): 6, 6H, 7, 8, 9, D9, D10, D11, D12, D13, D14, D15, D16, D17, D18, D19, D20, D21, D22, D23, D24, D25, D30, D31, D32, D33, D34, D37, D38, D39, D43, D44, D45, D46, D47, D48, D49, D50, D51, D60

English (ENG): 11, 12, 13, 17A, 17B, 17C, 38, 39, 49

Film, Television, and Video (FTV): 38A, 38B, 41, 42, 43, 44A, 44B, 44C, 44D, 45A, 45B, 45C, 45D, 46, 48, 51A, 51B, 51C, 51D, 52, 53, 64A, 65, 66, 67, 68, 70, 71A, 72

Music (MUS): 3, 4, 5, 6, 8A, 8B, 9, 10, 19, 19H, 22, 23, 25, 26, 27, 28, 29, 30, 31, 32A, 32B, 32C, 32D, 33, 35, 36, 37, 38, 39,

41, 42, 43A, 43B, 43C, 44, 48, 49, 50, 51, 52, 53, 54, 55, 57, 58, 61, 65, 68, 69, 70, 73, 77, 81, 82, 83, 84, 87, 89, 89H, 92,

93, 94, P12, P36, P44, P84

Photography (PHO): 8, 9, 10, 17, 20, 200

Theatre Studies (THE): 2, 3, 4, 5, 6, 25, 26, 29, 30, 32, 33, 34, 35, 36, 37, 38, 39, 41, 44, 46, 48, 49, 54

Career paths chosen by students interested in exploring a variety of art forms include digital media, creative writing, dance, film, graphic design, music, photography, communication studies, television, theatre, video and the visual arts and television, translating, and writing, among others.

Course	Units
ENGL 1A	4.0
AREA B4	4.0
AREA E	3.0
AOE COURSE	3.0

Total Units: 14.0

Course	Units
AOE REQUIRED COURSE	4.0
AOE REQUIRED COURSE	3.0
ARE C2	3.0
POL 1	3.0
AREA A3	3.0

Total Units: 16.0

Course	Units
HIS 6/7 13/31/34	3.0
AOE COURSE	3.0
AREA B2	3.0
AREA D	4.0
AREA D	3.0

Total Units: 16.0

Course	Units
COM 1	3.0
AOE ELECTIVE COURSE	3.0
CSU ELECTIVE	3.0
AREA B1/B2	3.0
AREA C1	3.0

Total Units: 15.0

Suggested CSU Pathway for AOE in Fine & Applied Arts

## IGETC Pathway for UC/CSU

### Associate of Arts Degree- Area of Emphasis in Fine & Applied Arts—IGETC PATHWAY

The Associate Degree in Fine and Applied Arts offers a rich variety of courses to acquaint students with the creation of and performance in the arts from a global perspective.

The courses in this area examine the nature of the fine and applied arts through analysis, synthesis, composition, performance and technical development. Students will develop techniques appropriate to the art form, engage in the production and performance of the arts, examine aesthetic valuing, and participate in creative expression.

Course	Units
ENGL 1A	4.0
AREA 2	4.0
AREA 3A	3.0
AOE COURSE	3.0

Total Units: 14.0

Course	Units
ENG 1B	4.0
AOE COURSE	3.0
AOE COURSE	3.0
AREA 3B	3.0
POL 1	3.0

Total Units: 16.0

Course	Units
HIS 6/7/14/31/34	3.0
AOE COURSE	3.0
AREA 4	3.0
AREA 5B	3.0
AREA 4	3.0

Total Units: 15.0

Course	Units
COM 1	3.0
AREA 5A/5C	4.0
AOE COURSE	3.0
AREA 6	5.0

Total Units: 15.0

### 2017-2018 ASSOCIATE OF ARTS FINE AND APPLIED ARTS (NAA496 /NAA496B/NAA496C)

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#### INCLUDED DISCIPLINES AND COURSES:

- Applied Digital Media (ADM):** 1, 2C, 30, 67, 68A, 68B, 70, 71A, 71B, 74A, 74B, 77A, 77B, 80, 200
- Art (ART):** 1, 2, 2H, 5, 6, 6H, 7, 8, 9, 10, 12, 15, 16, 17, 18, 20, 21, 22, 23, 24, 25A, 25B, 26, 27, 28A, 28B, 30A, 30B, 34, 35A, 35B, 36A, 36B, 38, 39, 40A, 40B, 41A, 41B, 42A, 42B, 43A, 43B, 44A, 44B, 44C, 45, 46, 47, 48A, 48B, 49A, 49B, 200
- Communication Studies (COM):** 1, 1H, 2, 3, 7, 11, 19
- Dance (DAN):** 6, 6H, 7, 8, 9, D9, D10, D11, D12, D13, D14, D15, D16, D17, D18, D19, D20, D21, D22, D23, D24, D25, D30, D31, D32, D33, D34, D37, D38, D39, D43, D44, D45, D46, D47, D48, D49, D50, D51, D60
- English (ENG):** 11, 12, 13, 17A, 17B, 17C, 38, 39, 49
- Film, Television, and Video (FTV):** 38A, 38B, 41, 42, 43, 44A, 44B, 44C, 44D, 45A, 45B, 45C, 45D, 46, 48, 51A, 51B, 51C, 51D, 52, 53, 64A, 65, 66, 67, 68, 70, 71A, 72
- Music (MUS):** 3, 4, 5, 6, 8A, 8B, 9, 10, 19, 19H, 22, 23, 25, 26, 27, 28, 29, 30, 31, 32A, 32B, 32C, 32D, 33, 35, 36, 37, 38, 39, 41, 42, 43A, 43B, 43C, 44, 48, 49, 50, 51, 52, 53, 54, 55, 57, 58, 61, 65, 68, 69, 70, 73, 77, 81, 82, 83, 84, 87, 89, 89H, 92, 93, 94, P12, P36, P44, P84
- Photography (PHO):** 8, 9, 10, 17, 20, 200
- Theatre Studies (THE):** 2, 3, 4, 5, 6, 25, 26, 29, 30, 32, 33, 34, 35, 36, 37, 38, 39, 41, 44, 46, 48, 49, 54

Career paths chosen by students interested in exploring a variety of art forms include digital media, creative writing, dance, film, graphic design, music, photography, communication studies, television, theatre, video and the visual arts and television, translating, and writing, among others.

## Suggested IGETC Pathway for AOE in Fine & Applied Arts

See your counselor for **YOUR** plan!



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## 2019-2020

### PHILOSOPHY (CSUGE) NAA715

The Associate in Arts in Philosophy for Transfer Degree is designed to prepare the student for transfer to four-year institutions of higher education and specifically intended to satisfy the lower division requirements for the Baccalaureate in Arts in Philosophy at the California State University. This degree is designed to prepare students to critically analyze the work of major figures in philosophy, evaluate topics in the key areas of philosophy, clearly express philosophical ideas both in writing and orally, and demonstrate an understanding of these ideas through their application to specific philosophical problems.

Required Courses: (18 units)		Units
PHI/MAT-32*	Introduction to Symbolic Logic	3
PHI-10/10H*	Introduction to Philosophy/Honors	3
OR		
PHI-12*	Introduction to Ethics: Contemporary Moral Issues	3
List A	Choose from the list below	3
List B	Choose from the list below	6
List C	Choose from the list below	3

List A: Take 3 units from the following		Units
Any of the above required courses that has not been used OR		
PHI-33*	Introduction to Social and Political Philosophy	3
PHI/HUM-35*	Philosophy of Religion	3

List B: Take 6 units from the following		Units
Any course from List A that has not been used OR		
PHI-11*	Critical Thinking	3

List C: Take 3 units from the following		Units
Any course from List A or B that has not been used OR		
PHI-15*	Bio-Medical Ethics	3
HIS-1*	History of World Civilizations I	3
HIS-2*	History of World Civilizations II	3
HUM-4/4H*	Arts & Ideas: Ancient World through the Late Medieval Period/Honors	3
HUM-5/5H*	Arts & Ideas: The Renaissance through the Modern Era/Honors	3
HUM-10/10H*	World Religions/Honors	3

\*Courses may also be used to fulfill general education requirements for the CSU GE or IGETC pattern, please confer with a counselor.

Course	Units
ENGL 1A	4.0
AREA B4	4.0
PHIL 10	3.0
AREA E	3.0
HIS 6/7/14/31/34	3.0

Total Units: 17.0

Course	Units
ELECTIVE GROUP/LIST A	3.0
ELECTIVE GROUP/LIST B	3.0
PHIL 12	3.0
AREA A1	3.0
CSU ELECTIVE	3.0

Total Units: 15.0

Course	Units
PHIL 11	3.0
ELECTIVE GROUP/LIST C	3.0
AREA B1/B3	4.0
AREA D	3.0
POL 1	3.0

Total Units: 16.0

Course	Units
PHIL 32	3.0
AREA B2	3.0
AREA C1	3.0
CSU ELECTIVE	3.0
CSU ELECTIVE	3.0

Total Units: 15.0

Suggested Pathway for Philosophy ADT

See your counselor for YOUR plan!

**Associate in Arts for Transfer Degree** - The Associate in Arts in Philosophy 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.





California Community Colleges are now offering Associate Degrees for Transfer (ADT's) to the CSU. These may include Associate in Arts (AA-T) or Associate in Science (AS-T) degrees. These degrees are designed to provide a clear pathway to a CSU major and baccalaureate degree. California Community College students who are awarded an AA-T or AS-T degree are guaranteed admission with junior standing somewhere in the CSU system and given priority admission consideration to their local CSU campus or to a program that is deemed similar to their community college major. This priority does not guarantee admission to specific majors or campuses. Students who have been awarded an AA-T or AS-T are able to complete their remaining requirements for the 120-unit baccalaureate degree within 60 semester or 90 quarter units. To view the most current list of Norco College Associate Degrees for Transfer and to find out which CSU campuses accept each degree, please go to:

[www.calstate.edu/transfer/adt-search/search.shtml](http://www.calstate.edu/transfer/adt-search/search.shtml)

**Students are encouraged to meet with a Norco College counselor to review their options for transfer and to develop an educational plan that best meets their goals and needs.**

## 2019-2020

### SPANISH (CSUGE) NAA707

The Associate of Arts in Spanish for Transfer provides transfer majors with a strong foundation not only in the four basic language skills (listening comprehension, reading comprehension, speaking and writing), but also in the civilization and cultures of Spain and Latin America. The degree emphasizes the acquisition of communicative competence and the development of intercultural awareness, appreciation and understanding. Additionally, the Spanish courses align well with preparation for transfer majors in related fields such as liberal arts, language arts and linguistics, and complement majors in international relations, political science, business, education, sociology and other areas of study at UC, CSU, and private colleges and universities.

Required Courses (23 units)		Units
SPA-1*/1H*	Spanish 1 / Honors	5
SPA-2*/2H*	Spanish 2 / Honors	5
SPA-3* or 3N*	Spanish 3 or Spanish 3N (Native Speakers)	5
SPA-4*	Spanish 4	5
List A	Select from the list below	3

List A: Select a minimum of one course (3 units)		Units
SPA-8*	Intermediate Conversation	3
SPA-11*	Spanish Culture and Civilization	3
SPA-12*	Latin American Culture and Civilization	3

\*Courses may also be used to fulfill general education requirements for the CSU GE or IGETC pattern, please confer with a counselor.

**Note:** If a student places out of any required course and is not awarded units for that course, the student will have to take additional units to compensate for the course/units needed to reach at least 18 total units in the major (per Title 5 regulations). Appropriate course substitutions may be from List A or the courses listed below. Any other course substitution must be approved by the Spanish faculty of World Languages.

ANT-2/2H	Intro. to Cultural Anthropology/Honors	CSU Area D
ANT-5	Cultures of Ancient Mexico	CSU Area D
ANT-8	Language and Culture	CSU Area D
ART-13	Pre-Columbian Art History	CSU Area C1
ART-14	Latin American Art: Colonial to the Present	CSU Area C1
COM-12	Intercultural Communication	CSU Area D
GEG-2	Human Geography	CSU Area D
HIS-25	History of Mexico	CSU Area C2 or D
HIS-31	Introduction to Chicano/a Studies	CSU Area C2 or D
SOC-1/1H	Introduction to Sociology /Honors	CSU Area D
SOC-10	Race and Ethnic Relations	CSU Area D

Course	Units
ENGL 1A	4.0
AREA B4	3.0
SPAN 1	5.0
SPAN 11/12	3.0

Total Units: 15.0

Course	Units
SPAN 2	5.0
AREA C1	3.0
AREA B2	3.0
AREA E	3.0
POL 1	3.0

Total Units: 17.0

Course	Units
HIS 6/7/14/31/34	3.0
SPAN 3	5.0
AREA B1/B3	4.0
AREA A3	3.0

Total Units: 15.0

Course	Units
AREA A1	3.0
SPAN 4	5.0
SPAN 8	3.0
AREA D	3.0

Total Units: 14.0

Suggested Pathway for Spanish ADT

See your counselor for  
**YOUR** plan!

### Associate in Arts for Transfer Degree

The Associate in Arts in Spanish 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.





California Community Colleges are now offering Associate Degrees for Transfer (ADT's) to the CSU. These may include Associate in Arts (AA-T) or Associate in Science (AS-T) degrees. These degrees are designed to provide a clear pathway to a CSU major and baccalaureate degree. California Community College students who are awarded an AA-T or AS-T degree are guaranteed admission with junior standing somewhere in the CSU system and given priority admission consideration to their local CSU campus or to a program that is deemed similar to their community college major. This priority does not guarantee admission to specific majors or campuses. Students who have been awarded an AA-T or AS-T are able to complete their remaining requirements for the 120-unit baccalaureate degree within 60 semester or 90 quarter units. To view the most current list of Norco College Associate Degrees for Transfer and to find out which CSU campuses accept each degree, please go to:

[www.calstate.edu/transfer/adt-search/search.shtml](http://www.calstate.edu/transfer/adt-search/search.shtml)

**Students are encouraged to meet with a Norco College counselor to review their options for transfer and to develop an educational plan that best meets their goals and needs.**

**2019-2020**  
**STUDIO ARTS**  
**(CSUGE) NAA693**

The Associate in Arts in Studio Arts for Transfer degree provides a solid preparation for transfer majors in the various areas of studio art, including design, drawing, and painting. This Studio Arts Degree has an emphasis in Art History. Additionally, the studio courses align well with preparation for transfer majors in related fields such as sculpture, photography, and other areas of study at UC, CSU, and private colleges and universities.

Required Courses: (24 units)		Units
ART-2*/2H*	History of Western Art: Renaissance through Contemporary/ Honors	3
ART-17	Beginning Drawing	3
ART-22	Basic Design	3
ART-24	Three Dimensional Design	3
Electives	Choose from List A	3
Electives	Choose from List B	9

List A: Select 1 course (3 units)		Units
ART-1*	History of Western Art: Prehistoric, Ancient, and Medieval	3
ART-5*	History of Non-Western Art	3
ART-9*	African Art History	3

List B: Select 3 courses (9 units)		Units
ART-20	Beginning Sculpture	3
ART-23	Color Theory and Design	3
ART-26	Beginning Painting	3
ART-36A	Computer Art - Introduction	3
OR <u>one</u> of the following:		
ART-18	Intermediate Drawing	3
ART-40A	Figure Drawing - Introduction	3

\*Courses may also be used to fulfill general education requirements for the CSU GE or IGETC pattern, please confer with a counselor.

Course	Units
ENGL 1A	4.0
AREA B4	4.0
ART 17	3.0
ART 2	3.0
AREA E	3.0

Total Units: 17.0

Course	Units
ART 22	3.0
ART 24	3.0
AREA C2	3.0
POL 1	3.0
AREA A3	3.0

Total Units: 15.0

Course	Units
HIS 6/7/14/31/34	3.0
ELECTIVE GROUP/LIST B	3.0
ELECTIVE GROUP/LIST A	3.0
AREA B2	3.0
AREA D	3.0

Total Units: 15.0

Course	Units
AREA A1	3.0
ELECTIVE GROUP/LIST B	3.0
ELECTIVE GROUP/LIST B	4.0
AREA B1 / B3	3.0

Total Units: 13.0

Suggested Pathway for Studio Arts ADT

**Associate in Arts for Transfer Degree**

The Associate in Arts in Studio Arts 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.

See your counselor for **YOUR** plan!

## Audio Production

### 31-38 unit certificate • 60 unit degree

The MIS: Audio Production program is designed to provide students with the knowledge and skills necessary for an entry-level job in the recording industry.

## Required Courses (to earn certification)

### **MIS-1A Beginning Performance Techniques for Studio Recording (2 units)\***

*Limitation on enrollment: Audition on or before the first class meeting.*

Introduction to practical performance techniques for the recording studio.

### **MIS-1B Intermediate Performance Techniques for Studio Recording (2 units)\***

*Prerequisite: MIS-1A.*

Continuation of the skills studied in MIS-1A focusing on song collaboration, organization of vocals and instruments needed to record.

### **MIS-1C Advanced Performance Techniques for Studio Recording (2 units)\***

*Prerequisite: MIS-1B*

Advanced performance techniques for the recording studio.

### **MUS-3 Fundamentals of Music (4 units)\***

*Advisory: Concurrent enrollment is an appropriate level piano class.*

Basic course in music theory designed to develop an understanding of notation, rhythm, pitch, keys, modes, scales, intervals, chords and music terminology.

### **MUS-93 The Business of Music (3 units)\***

Study of contracts, trademarks, copyrights, and marketing; and the roles of personal managers, business managers, attorneys and agents.

### **MIS-2 Songwriting (2 units)\***

This course introduces popular songwriting techniques including chord structure, form, rhythm, melody, har-

mony, lyrics, chord progressions, preparing lead sheets and arranging.

### **MIS-3 Digital Audio Production 1 (1-4 units)\***

This course introduces the techniques and elements of electronic music production.

### **MIS-4 Digital Audio Production 2 (2-4 units)\***

*Prerequisite: MIS-3*

This intermediate course continues exploration and application of the elements and techniques of electronic music production.

### **MIS-7 Introduction to Music Technology (3 units)\***

This course introduces the terminology, equipment, techniques, and concepts related to music technology.

### **MIS-12 Live Sound Reinforcement (3 units)\***

This course is an overview of live concert sound reinforcement.

### **MIS-13 Recording Studio Workshop I (3 units)\***

*Prerequisite: MIS-3 and 12*

This applied workshop course is a survey of the fundamental principles and practices of audio recording.

Plus, an additional 4-6 units from the following courses:

COM-9 (3 units)\*, MUS-4 (4 units)\*, MUS-23 (3 units)\*, MUS-32A (2 unit)\*, MUS-32B (2 unit)\*, MUS-32C (2 units)\*, MUS-38 (2 units)\*, MUS-39 (3 units)\*, MIS-200 (1-4 units)\*

Some of these courses may have prerequisites, advisories or require audition. Refer to Course Catalog for details.

*\*this class transfers toward one or more CSUSB or CalPoly majors. Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.*



## Audio Production

Tuition \$1,426-\$1,748 • Duration of Study: 16 months

An Associate of Science Degree in Audio Production will be awarded upon completion of the required courses (31-38 units), plus the general education requirements. Please refer to the Norco College Catalog or visit the Counseling Center.

## Job & Wage Information

- Sound Engineering Technicians  
Wage Range\*: \$10.78- \$50.01  
4% increase in employment expected in CA 2016-2026; 550 openings annually  
More information: <http://bit.ly/SoundTechNC>

\*2018, Riverside/Ontario/San Bernardino Metro Area

## What type of interests might be a good fit for this career choice?



## Artistic

People who have artistic, innovating, or institutional abilities. People who prefer using their creativity or imagination.

*For more information on careers that fit this category of interests, visit the Career Center in the Center for Student Success.*

## What's Your School?

NORCO COLLEGE  
SCHOOL OF  
Arts &  
Humanities

Visit [www.norcollege.edu/ah](http://www.norcollege.edu/ah)  
for more information about this program.  
View gainful employment information at:  
[www.norcollege.edu/academicaffairs/cte](http://www.norcollege.edu/academicaffairs/cte)

## Performance

### 30-31 unit certificate • 60 unit degree

The MIS: Performance program is designed to provide students with the knowledge and skills necessary for studio recording and live performance in the commercial music industry.

## Required Courses (to earn certificate)

**MIS-1A Beginning Performance Techniques for Studio Recording (2 units)\***

**MIS-1B Intermediate Performance Techniques for Studio Recording (2 units)\***

*Prerequisite: MIS-1A*

**MIS-1C Advanced Performance Techniques for Studio Recording (2 units)\***

*Prerequisite: MIS-1B*

**MUS-3 Fundamentals of Music (4 units)\***

**MUS-93 The Business of Music (3 units)\***

**MUS-39 Intermediate Applied Music (3 units)**

*Limitation on enrollment: audition on or before the first class meeting*

*Co-requisite: Enrollment in a two-unit performance class*

**MUS-79 Intermediate Applied Music II (3 units)\***

*Limitation on enrollment: audition on or before the first class meeting. Co-requisite: Enrollment in a two-unit performance class*

**AND 4 semesters of study (for 8 units total) from the following courses:**

**MUS-41 – Chamber Singers (4x) (2 units)\***

*Limitation on enrollment: audition on or before the first class meeting*

**OR**

**MUS-41 – Chamber Singers (2x) (2 units)\***

*Limitation on enrollment: audition on or before the first class meeting*

**AND**

**MUS-81 – Consort Singers (2x) (2 units)\***

*Prerequisite: MIS-10A*

**OR**

**MIS-11A – Studio Arts Ensemble (2x) (2 units)\***

*Limitation on enrollment: audition on or before the first class meeting*

**AND**

**MIS-11B – Studio Arts Ensemble (2x) (2 units)\***

*Prerequisite: MIS-11A*

**Plus, an addition 3-4 units from the following courses:**

**MIS-3 Digital Audio Production (4 units)\*,**

**MIS-7 – Intro to Music Technology (3 units)\***

**MUS-4 – Music Theory (4 units)\***

*Prerequisite: MUS-3 or equivalent*

**MUS-23 – History of Rock and Roll 3 (3 units)\***

**MUS-32A - Class Piano I (1 unit)\***

**MUS-32B - Class Piano II (1 unit)\***

*Prerequisite: MUS-32A or equivalent*

**MUS-32C –Class Piano III (1 unit)\***

*Prerequisite: MUS-32B or equivalent*

*\*this class transfers toward one or more CSUSB or CalPoly majors. Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.*



## Performance

Tuition \$1,380-\$1,426 • Duration of Study: 16 months

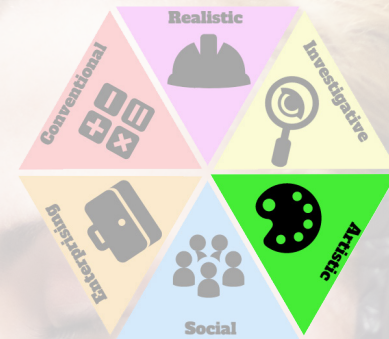
An Associate of Arts Degree in Music Industry Studies: Performance will be awarded upon completion of the required courses (30-31 units), plus the general education requirements. Please refer to the Norco College Catalog or visit the Counseling Center.

## Job & Wage Information

- Singers  
Wage Range\*: \$11.84-\$73.34  
7% increase in employment expected in CA 2016-2026; 1,730 openings annually  
More information: <http://bit.ly/SingersNC>
- Musicians  
Wage Range\*: \$11.84-\$73.34  
7% increase in employment expected in CA 2016-2026; 1,730 openings annually  
More information: <http://bit.ly/MusiciansNC>

\*2018, Riverside/Ontario/San Bernardino Metro Area

## What type of interests might be a good fit for this career choice?



## Artistic

People who have artistic, innovating, or institutional abilities. People who prefer using their creativity or imagination.

*For more information on careers that fit this category of interests, visit the Career Center in the Center for Student Success.*

## What's Your School?

NORCO COLLEGE  
SCHOOL OF  
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[www.norcollege.edu/academicaffairs/cte](http://www.norcollege.edu/academicaffairs/cte)

## CSU Pathway

### Associate of Arts Degree- Area of Emphasis in Administration and Information Systems—CSU PATHWAY

Administration/Information Systems entails the study of theories, procedures and practices and the acquisition of skills necessary to function productively and effectively in an administrative work environment.

Students completing associate degrees in Administration/Information Systems may obtain entry-level positions in the above career fields or may choose to transfer to a four-year college or university to pursue a bachelor's degree in business, accounting, public administration, management information systems or related fields.

**2017-2018  
ASSOCIATE OF ARTS  
ADMINISTRATION AND INFORMATION SYSTEMS  
(NAA494 /NAA494B/NAA494C)**

The student must successfully complete 18 units of study with a grade of "C" or better or a "P" if the course is taken on a "pass-no pass" basis.

**INCLUDED DISCIPLINES AND COURSES:**

Required Courses (nine units, selected from the following):

Accounting (ACC): 1A

Business Administration (BUS): 3, 10, 10H, \*\*18A

Computer Information Systems (CIS): 1A

Economics (ECO): 7, 7H, 8, 8H

Political Science (POL): 8

Elective Courses (nine additional units, selected from the following):

Accounting (ACC): 1A, 1B, 38

Business Administration (BUS): 10, 10H, \*\*18A, \*\*18B, 20, 22, 80

Communication Studies (COM): 1, 1H, 6, 9, 9H, 12, 13

Computer Information Systems (CIS): 1A, 1B, 2, 3, 5

Computer Applications and Office Technology (CAT): 3, 31

Economics (ECO): 4, 6, 7, 7H, 8, 8H

Library (LIB): 1

Management (MAG): 44

Marketing (MKT): 20

Political Science (POL): 6, 8

A course may only be counted once

\*\*Credit limitation: UC will accept a maximum of one course for transfer

Career paths chosen by students pursuing undergraduate studies in Administration/Information Systems typically include managerial positions in business and the public sector, administrative support positions, customer service, sales, accounting/bookkeeping and public relations.

Course	Units
ENGL 1A	4.0
AREA B4	4.0
AOE REQUIRED COURSE	3.0
AREA E	3.0
HIS 6/7/14/31/34	3.0
Total Units:	17.0

Course	Units
AOE REQUIRED COURSE	4.0
AOE REQUIRED COURSE	3.0
POL 1	3.0
AREA C1	3.0
AREA A3	3.0
Total Units:	16.0

Course	Units
AOE ELECTIVE COURSE	3.0
AOE ELECTIVE COURSE	3.0
AOE ELECTIVE COURSE	3.0
AREA B1	4.0
COM 1, 6, 9	3.0
Total Units:	16.0

Course	Units
AREA D	3.0
AREA D	3.0
AREA B2	3.0
AREA C1/2	3.0
Total Units:	12.0

Suggested **CSU Pathway** for AOE in Social & Behavioral Studies



## IGETC Pathway for UC/CSU

### Associate of Arts Degree- Area of Emphasis in Administration and Information Systems—IGETC PATHWAY

Administration/Information Systems entails the study of theories, procedures and practices and the acquisition of skills necessary to function productively and effectively in an administrative work environment.

Students completing associate degrees in Administration/Information Systems may obtain entry-level positions in the above career fields or may choose to transfer to a four-year college or university to pursue a bachelor's degree in business, accounting, public administration, management information systems or related fields.

Course	Units
ENGL 1A	4.0
AREA 2	4.0
AOE REQUIRED COURSE	3.0
AOE REQUIRED COURSE	3.0
HIS 6/7/14/31/34	3.0

Total Units: 17.0

Course	Units
ENG 1B	4.0
POL 1	3.0
AOE REQUIRED COURSE	3.0
AOE ELECTIVE COURSE	3.0
AREA 3A	3.0

Total Units: 16.0

Course	Units
AREA 5A/5C	4.0
AREA 4	3.0
COM 1/6/9	3.0
AOE ELECTIVE COURSE	3.0
AOE ELECTIVE COURSE	3.0

Total Units: 16.0

Course	Units
AREA 6	5.0
AREA 4	3.0
AREA 5B	3.0
AREA 3A OR 3 B	3.0

Total Units: 14.0

2017-2018

### ASSOCIATE OF ARTS ADMINISTRATION AND INFORMATION SYSTEMS (NAA494 /NAA494B/NAA494C)

The student must successfully complete 18 units of study with a grade of "C" or better or a "P" if the course is taken on a "pass-no pass" basis.

#### INCLUDED DISCIPLINES AND COURSES:

Required Courses (nine units, selected from the following):

Accounting (ACC): 1A

Business Administration (BUS): 3, 10, 10H, \*\*18A

Computer Information Systems (CIS): 1A

Economics (ECO): 7, 7H, 8, 8H

Political Science (POL): 8

Elective Courses (nine additional units, selected from the following):

Accounting (ACC): 1A, 1B, 38

Business Administration (BUS): 10, 10H, \*\*18A, \*\*18B, 20, 22, 80

Communication Studies (COM): 1, 1H, 6, 9, 9H, 12, 13

Computer Information Systems (CIS): 1A, 1B, 2, 3, 5

Computer Applications and Office Technology (CAT): 3, 31

Economics (ECO): 4, 6, 7, 7H, 8, 8H

Library (LIB): 1

Management (MAG): 44

Marketing (MKT): 20

Political Science (POL): 6, 8

A course may only be counted once

\*\*Credit limitation: UC will accept a maximum of one course for transfer

Career paths chosen by students pursuing undergraduate studies in Administration/Information Systems typically include managerial positions in business and the public sector, administrative support positions, customer service, sales, accounting/bookkeeping and public relations.

## Suggested IGETC Pathway for AOE in Social & Behavioral Studies

California Community Colleges are now offering Associate Degrees for Transfer (ADT's) to the CSU. These may include Associate in Arts (AA-T) or Associate in Science (AS-T) degrees. These degrees are designed to provide a clear pathway to a CSU major and baccalaureate degree. California Community College students who are awarded an AA-T or AS-T degree are guaranteed admission with junior standing somewhere in the CSU system and given priority admission consideration to their local CSU campus or to a program that is deemed similar to their community college major. This priority does not guarantee admission to specific majors or campuses. Students who have been awarded an AA-T or AS-T are able to complete their remaining requirements for the 120-unit baccalaureate degree within 60 semester or 90 quarter units. To view the most current list of Norco College Associate Degrees for Transfer and to find out which CSU campuses accept each degree, please go to:

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**2019-2020  
BUSINESS ADMINISTRATION  
(CSUGE) NAS626**

This degree is designed to facilitate the student's passage from Norco College to the California State University (CSU) System with an Associate in Science in Business Administration for Transfer degree. This degree will satisfy the lower division requirements for the eventual conferral of the bachelor's degree in Business Administration at a CSU. With this degree the student will be prepared for transfer to the university upper division level. Additionally, the intent of an associate degree for transfer is to assist students in seamlessly transferring to a CSU.

Required Courses: (24-26 units)	Units
ACC-1A Principles of Accounting I	3
ACC-1B Principles of Accounting II	3
ECO-7*/7H* Principles of Macroeconomics/Honors	3
ECO-8*/8H* Principles of Microeconomics/Honors	3
BUS-18A Business Law I	3
LIST A Select from the list below	3-4
LIST B Select from the list below	6-7

LIST A Select one course from the following: (3-4 units)	Units
MAT-4* Finite Mathematics	3
MAT-5* Calculus for Business and Life Science	4
MAT-12*/12H* Statistics/Honors	4

LIST B Select two courses from the following: (6-7 units)	Units
Any course from List A not used above	3-4
CIS-1A Introduction to Computer Information Systems	3
BUS-10/10H Introduction to Business/Honors	3
OR	
BUS-24 Business Communication	3

\*Courses may also be used to fulfill general education requirements for the CSU GE or IGETC pattern, please confer with a counselor.

Course	Units
ENGL 1A	4.0
CIS 1A	3.0
BUS 20	3.0
AREA E	3.0

Total Units: 13.0

Course	Units
ELECTIVE GROUP/LIST A	4.0
BUS 10 OR 24	3.0
POL 1	3.0
AREA C1	3.0
AREA A3	3.0

Total Units: 16.0

Course	Units
BUS 18A	3.0
ACC 1A	3.0
ECO 7 OR 8	3.0
AREA B1	4.0
AREA A1	3.0

Total Units: 16.0

Course	Units
ACC 1B	3.0
ECO 7 OR 8	3.0
AREA B2	3.0
HIS 6/7/14/31/34	3.0
AREA C1/2	3.0

Total Units: 15.0

Suggested Pathway for Business Administration ADT

**Associate in Science for Transfer Degree**

The Associate in Science in Business Administration 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.

See your counselor for **YOUR** plan!

## Business Information Worker 19 unit certificate • 60 unit degree

The Business Information Worker Certificate is designed to prepare students for entry-level and administrative support in a variety of fields and businesses.

### Required Courses (to earn certificate)

#### **CAT-1A – Business Etiquette (1 unit)\***

This course provides students with both the knowledge and the skills required to quickly apply business standards of acceptable behavior and etiquette to project a professional image.

#### **CAT/CIS/BUS-3 - Computer Applications for Business (3 units)\***

This course introduces a suite of computer applications to students preparing to enter business, and office professions.

#### **CAT-31 - Business Communications (3 units)\***

*Advisory: CAT-30.*

This course is designed to teach the fundamentals of written and oral communication in business by providing specific practical applications.

#### **CAT-51 – Intermediate Typewriting/Document Formatting (3 units)\***

Develops professional typing skills. Includes business letters, manuscripts, reports, and tables.

#### **CAT/CIS-90 - Microsoft Outlook (3 units)\***

This course utilizes Microsoft Outlook to organize and plan personal and business information.

#### **CAT-93 – Computers for Beginners (3 units)\***

This course is designed as a practical step-by-step introduction to computer literacy topics including computer hardware and software, application skills, the Internet and Internet searching, Web page creation and computer ethics.

#### **CAT/CIS-98A - Introduction to Excel (1.5 units)\***

Skill development in electronic spreadsheets using Excel for business and scientific related applications.

#### **CAT/CIS-98B - Advanced Excel (1.5 units)\***

*Prerequisite: CAT/CIS-98A.*

Advanced concepts of MS-Excel including managing large spreadsheets, creating and working with databases, creating and using templates and macro creation.

*\*this class transfers toward one or more CSUSB or CalPoly majors.  
Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.*



## Business Information Worker

Tuition \$874 • Duration of Study: 16 months

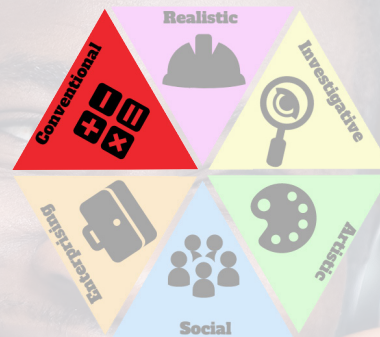
An Associate of Arts Degree in Business Information Worker will be awarded upon completion of the required courses (19 units), plus the general education requirements. Please refer to the Norco College Catalog or visit the Counseling Center.

### Job & Wage Information

- Administrative Assistant  
Wage Range: \$11.17-27.54  
15% decrease in employment expected in CA 2016-2026; 7,610 openings annually  
More info: <http://bit.ly/AdminAsstNC>
- Office Clerk  
Wage Range: \$10.86-24.06  
0% change in employment expected in CA 2016-2026; 38,760 openings annually  
More info: <http://bit.ly/OfficeClerkNC>
- Receptionist  
Wage Range: \$10.73-19.18  
9% increase in employment expected in CA 2016-2026; 15,770 openings annually  
More info: <http://bit.ly/ReceptionistNC>

\*2018, Riverside/Ontario/San Bernardino Metro Area

### What type of interests might be a good fit for this career choice?



## Conventional

People who like to work with data, have numerical or clerical ability. Prefer structured situations over ambiguous ones.

*For more information on careers that fit this category of interests, visit the Career Center in the Center for Student Success.*

### What's Your School?

NORCO COLLEGE  
SCHOOL OF  
**Business &  
Management**

Visit [www.norcollege.edu/business](http://www.norcollege.edu/business) for more information about this program.  
View gainful employment information at: [www.norcollege.edu/academicaffairs/cte](http://www.norcollege.edu/academicaffairs/cte)

## Accounting

### 30 unit certificate • 60 unit degree

The Accounting program prepares individuals to practice the profession of accounting and to perform related business functions.

## Required Courses (to earn certificate)

### **ACC-1A Principles of Accounting, I (3 units)\***

*Advisory: BUS-20*

Introduction to accounting principles and practice.

### **ACC-1B Principles of Accounting, II (3 units)\***

*Prerequisite: ACC-1A*

Study of managerial accounting principles and information systems.

### **BUS-10 Introduction to Business (3 units)\***

Scope, function, and organization of contemporary business.

### **BUS-18A Business Law I (3 units)\***

The social and practical basis of the law.

### **BUS-20 Business Mathematics (3 units)\***

Introduction to quantitative approaches for solving common business problems using general mathematics and first degree equations.

### **BUS-22 Management Communications (3 units)\***

*Advisory: CAT-30*

Examines the dynamics of organizational communication including a cross cultural emphasis. Practical experience is attained in verbal, non-verbal and interpersonal communication. Includes business report writing, letter writing and resume writing.

OR

### **BUS-24 Business Communications (3 units)\***

*Prerequisite: ENG-1A or 1AH*

Examines the dynamics of organizational communication including a cross cultural emphasis.

### **CIS-1A Introduction to Computer Information Systems (3 units)\***

Examination of information systems and their role in business. Focus on information systems, database management systems, networking, e-commerce, ethics and security, computer systems hardware and software components.

OR

### **BUS/CIS/CAT-3 Computer Applications for Business (3 units)\***

Examination of information systems and their role in business.

**Plus, an additional 9 units from the following courses:**

ACC-61 Cost Accounting (3 units)\*, ACC-62 Payroll Accounting (3 units)\*, ACC-63 Income Tax Accounting (3 units)\*, ACC-65 Computerized Accounting (3 units)\*, ACC-66 Non-Profit and Governmental Accounting (3 units)\*, ACC-200 Accounting Work Experience (1-4 units)\*, BUS/MAG-47 Applied Business and Management Ethics (3 units)\*

*Some of these courses have prerequisites or advisories. Refer to College Catalog for more information.*

*\*this class transfers toward one or more CSUSB or CalPoly majors. Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.*



## Accounting

Tuition \$1,380 • Duration of Study: 16 months

An AS Degree in Business Administration with a concentration in Accounting will be awarded upon completion of the required courses (30 units) plus the General Education requirements. Please refer to the College Catalog or visit the Counseling Center.

## Job & Wage Information

- Entry-level Accountant  
Wage Range\*: \$21.82-47.67  
11% increase expected in CA 2016-2026;  
16,640 openings annually  
More info: <http://bit.ly/accountantNC>
- Bookkeeper/Statement Clerks  
Wage Range\*: \$12.77-25.75  
15% change in employment expected in CA 2016-2016; 7,050 openings annually  
More info: <http://bit.ly/BookkeeperNC>
- Budget Analyst  
Wage Range\*: \$18.76-50.29  
10% change in employment expected in CA 2016-2026; 620 openings annually  
More info: <http://bit.ly/BudgetAnalystNC>

\*2018, Riverside/Ontario/San Bernardino Metro Area

## What type of interests might be a good fit for this career choice?



## Conventional

People who like to work with data, have numerical or clerical ability. Prefer structured situations over ambiguous ones.

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## What's Your School?

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## Business Information Worker 19 unit certificate • 60 unit degree

The Business Information Worker Certificate is designed to prepare students for entry-level and administrative support in a variety of fields and businesses.

### Required Courses (to earn certificate)

#### **CAT-1A – Business Etiquette (1 unit)\***

This course provides students with both the knowledge and the skills required to quickly apply business standards of acceptable behavior and etiquette to project a professional image.

#### **CAT/CIS/BUS-3 - Computer Applications for Business (3 units)\***

This course introduces a suite of computer applications to students preparing to enter business, and office professions.

#### **CAT-31 - Business Communications (3 units)\***

*Advisory: CAT-30.*

This course is designed to teach the fundamentals of written and oral communication in business by providing specific practical applications.

#### **CAT-51 – Intermediate Typewriting/Document Formatting (3 units)\***

Develops professional typing skills. Includes business letters, manuscripts, reports, and tables.

#### **CAT/CIS-90 - Microsoft Outlook (3 units)\***

This course utilizes Microsoft Outlook to organize and plan personal and business information.

#### **CAT-93 – Computers for Beginners (3 units)\***

This course is designed as a practical step-by-step introduction to computer literacy topics including computer hardware and software, application skills, the Internet and Internet searching, Web page creation and computer ethics.

#### **CAT/CIS-98A - Introduction to Excel (1.5 units)\***

Skill development in electronic spreadsheets using Excel for business and scientific related applications.

#### **CAT/CIS-98B - Advanced Excel (1.5 units)\***

*Prerequisite: CAT/CIS-98A.*

Advanced concepts of MS-Excel including managing large spreadsheets, creating and working with databases, creating and using templates and macro creation.

*\*this class transfers toward one or more CSUSB or CalPoly majors.  
Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.*

## Business Information Worker

Tuition \$874 • Duration of Study: 16 months

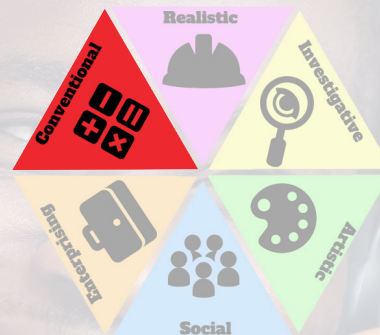
An Associate of Arts Degree in Business Information Worker will be awarded upon completion of the required courses (19 units), plus the general education requirements. Please refer to the Norco College Catalog or visit the Counseling Center.

### Job & Wage Information

- Administrative Assistant  
Wage Range: \$11.17-27.54  
15% decrease in employment expected in CA 2016-2026; 7,610 openings annually  
More info: <http://bit.ly/AdminAsstNC>
- Office Clerk  
Wage Range: \$10.86-24.06  
0% change in employment expected in CA 2016-2026; 38,760 openings annually  
More info: <http://bit.ly/OfficeClerkNC>
- Receptionist  
Wage Range: \$10.73-19.18  
9% increase in employment expected in CA 2016-2026; 15,770 openings annually  
More info: <http://bit.ly/ReceptionistNC>

\*2018, Riverside/Ontario/San Bernardino Metro Area

### What type of interests might be a good fit for this career choice?



## Conventional

People who like to work with data, have numerical or clerical ability. Prefer structured situations over ambiguous ones.

*For more information on careers that fit this category of interests, visit the Career Center in the Center for Student Success.*

### What's Your School?

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## General Business

### 30 unit certificate • 60 unit degree

General Business is for individuals who want to have a wide array of opportunities and a general knowledge of business operations.

## Required Courses (to earn certificate)

#### **ACC-1A Principles of Accounting, I (3 units)\***

*Advisory: BUS-20*

Introduction to accounting principles and practice.

#### **BUS-10 Introduction to Business (3 units)\***

Scope, function, and organization of contemporary business.

#### **BUS-18A Business Law I (3 units)\***

The social and practical basis of the law.

#### **BUS-20 Business Mathematics (3 units)\***

Introduction to quantitative approaches for solving common business problems using general mathematics and first degree equations.

#### **BUS-22 Management Communications (3 units)\***

*Advisory: CAT-30*

Examines the dynamics of organizational communication including a cross cultural emphasis. Practical experience is attained in verbal, non-verbal and interpersonal communication. Includes business report writing, letter writing and resume writing.

OR

#### **BUS-24 Business Communications (3 units)\***

*Prerequisite: ENG-1A or 1AH*

Examines the dynamics of organizational communication including a cross cultural emphasis.

#### **CIS-1A Introduction to Computer Information Systems (3 units)\***

Examination of information systems and their role in business. Focus on information systems, database management systems, networking, e-commerce, ethics and security, computer systems hardware and software components.

OR

#### **BUS/CIS/CAT-3 Computer Applications for Business (3 units)\***

Examination of information systems and their role in business.

**Plus, an additional 12 units from the following courses:**

ACC-1B Principles of Accounting II (3 units)\* or ACC-38 Managerial Accounting (3 units)\*, BUS-18B Business Law II (3 units)\*, BUS-40 International Business-Principles (3 units)\*, BUS/MAG-47 Applied Business & Management Ethics (3 units)\*, BUS-80 Principles of Logistics (3 units)\*, BUS-200 Business Administration Work Experience (1-4 units)\*, MAG-51 Elements of Supervision (3 units), MAG-53 Human Relations (3 units), MKT-20 Principles of Marketing (3 units)\*

*Some of these courses have prerequisites or advisories. Refer to College Catalog for more information.*

*\*this class transfers toward one or more CSUSB or CalPoly majors. Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.*

## General Business

Tuition \$1,380 • Duration of Study: 16 months

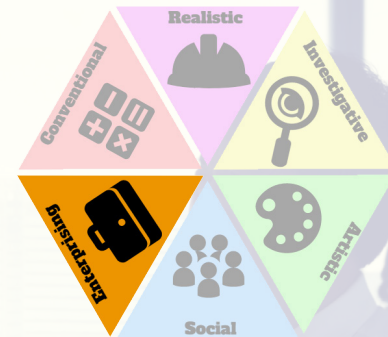
An AS Degree in Business Administration with a concentration in General Business will be awarded upon completion of the required courses (30 units) plus the General Education requirements. Please refer to College Catalog or visit the Counseling Center.

## Job & Wage Information

- General and Operations Managers  
Wage Range\*: \$24.77- over \$100.00  
12% increase in employment expected in CA 2016-2026; 25,860 openings annually  
More info: <http://bit.ly/GenMgrNC>
- Office Coordinator  
Wage Range\*: \$16.83-41.25  
6% increase in employment expected in CA 2016-2026; 18,600 openings annually  
More info: <http://bit.ly/OfficeCoordinatorNC>
- Account Manager/Sales Representatives  
Wage Range\*: \$14.16-53.89  
10% increase in employment expected in CA 2016-2026; 7,100 openings annually  
More info: <http://bit.ly/AcctMgrNC>

\*2018, Riverside/Ontario/San Bernardino Metro Area

## What type of interests might be a good fit for this career choice?



## Enterprising

People who like to influence, persuade, lead and manage. Enjoys leadership positions and broad responsibilities.

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## What's Your School?

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## Logistics Management 30 unit certificate • 60 unit degree

This program prepares students for entry into or career growth within the logistics industry. The focus is on integrated logistics, a necessity for management of effective and efficient supply chains.

### Required Courses (to earn certificate)

#### **BUS-80 Principles of Logistics (3 units)\***

An Introduction of the management of business logistics functions.

#### **ACC-1A Principles of Accounting, I (3 units)\***

*Advisory: BUS-20*

Introduction to accounting principles and practice.

#### **BUS-10 Introduction to Business (3 units)\***

Scope, function, and organization of contemporary business.

#### **BUS-18A Business Law I (3 units)\***

The social and practical basis of the law.

#### **BUS-20 Business Mathematics (3 units)\***

Introduction to quantitative approaches for solving common business problems using general mathematics and first degree equations.

#### **BUS-22 Management Communications (3 units)\***

*Advisory: CAT-30*

Examines the dynamics of organizational communication including a cross cultural emphasis. Practical experience is attained in verbal, non-verbal and interpersonal communication. Includes business report writing, letter writing and resume writing.

OR

#### **BUS-24 Business Communications (3 units)\***

*Prerequisite: ENG-1A or 1AH*

Examines the dynamics of organizational communication including a cross cultural emphasis.

#### **CIS-1A Introduction to Computer Information Systems (3 units)\***

Examination of information systems and their role in business. Focus on information systems, database management systems, networking, e-commerce, ethics and security, computer systems hardware and software components.

OR

#### **BUS/CIS/CAT-3 Computer Applications for Business (3 units)\***

Examination of information systems and their role in business.

#### **Plus, an additional 9 units from the following courses:**

BUS-82 Freight Claims (1.5 units)\*, BUS-83 Contracts (1.5 units)\*, BUS-85 Warehouse Management (3 units)\*, BUS-86 Transportation and Traffic Management (3 units)\*, BUS-87 Purchasing and Supply Management (3 units)\*, BUS-90 International Logistics (3 units)\*

*Some of these courses have prerequisites or advisories. Refer to College Catalog for more information.*

*\*this class transfers toward one or more CSUSB or CalPoly majors. Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.*



## Logistics Management

Tuition \$1,380 • Duration of Study: 16 months

An AS Degree in Business Administration with a concentration in Logistics Management will be awarded upon completion of the required courses (30 units) plus the General Education requirements. Please refer to College Catalog or visit the Counseling Center.

### Job & Wage Information

- Warehouse/Distribution Center Manager  
Wage Range: \$16.75-44.05  
14% increase in employment expected in CA 2016-2026; 1,600 openings annually  
More info: <http://bit.ly/WarehouseMgrNC>
- Transportation Manager or Supervisor  
Wage Range: \$25.33-72.46  
14% increase in employment expected in CA 2016-2026; 1,600 openings annually  
More info: <http://bit.ly/TransportationMgrNC>
- Integrated Logistics Support Manager  
Wage Range: \$25.33-72.46  
14% increase in employment expected in CA 2016-2026; 1,600 openings annually  
More info: <http://bit.ly/LogisticsMgrNC>

\*2018, Riverside/Ontario/San Bernardino Metro Area

### What type of interests might be a good fit for this career choice?



## Enterprising

People who like to influence, persuade, lead and manage. Enjoys leadership positions and broad responsibilities.

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### What's Your School?

NORCO COLLEGE  
SCHOOL OF  
**Business &  
Management**

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View gainful employment information at: [www.norcollege.edu/academicaffairs/cte](http://www.norcollege.edu/academicaffairs/cte)

## Management

### 30 unit certificate • 60 unit degree

The Management program generally prepares individuals to plan, organize, direct and control the functions & processes of a firm or organization with an emphasis on people as the most important asset of a business.

## Required Courses (to earn certificate)

### **MAG-44 Principles of Management (3 units)\***

For those who are in management, preparing for a potential promotion or interested in the management process.

### **ACC-1A Principles of Accounting, I (3 units)\***

*Advisory: BUS-20*

Introduction to accounting principles and practice.

### **BUS-10 Introduction to Business (3 units)\***

Scope, function, and organization of contemporary business.

### **BUS-18A Business Law I (3 units)\***

The social and practical basis of the law.

### **BUS-20 Business Mathematics (3 units)\***

Introduction to quantitative approaches for solving common business problems using general mathematics and first degree equations.

### **BUS-22 Management Communications (3 units)\***

*Advisory: CAT-30*

Examines the dynamics of organizational communication including a cross cultural emphasis. Practical experience is attained in verbal, non-verbal and interpersonal communication. Includes business report writing, letter writing and resume writing.

OR

### **BUS-24 Business Communications (3 units)\***

*Prerequisite: ENG-1A or 1AH*

Examines the dynamics of organizational communication including a cross cultural emphasis.

### **CIS-1A Introduction to Computer Information Systems (3 units)\***

Examination of information systems and their role in business. Focus on information systems, database management systems, networking, e-commerce, ethics and security, computer systems hardware and software components.

OR

### **BUS/CIS/CAT-3 Computer Applications for Business (3 units)\***

Examination of information systems and their role in business.

**Plus, an additional 9 units from the following courses:**

MAG-46 Contemporary Quality Systems (3 units) (Offered at RCC only), MAG/BUS-47 Applied Business & Management Ethics (3 units)\*, MAG-53 Human Relations (3 units), MAG-56 Human Resources Management (3 units)\*, MAG-60 Intro to Hospitality Management (3 units) (Offered at RCC only), MAG-200 Management Work Experience (1-4 units)\*, BUS-48 International Management (3 units) (Offered at RCC only)

*Some of these courses have prerequisites or advisories. Refer to College Catalog for more information.*

*\*this class transfers toward one or more CSUSB or CalPoly majors. Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.*



## Management

Tuition \$1,380 • Duration of Study: 16 months

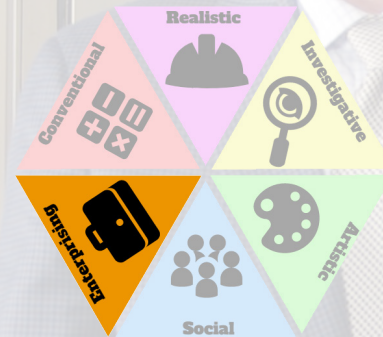
An AS Degree in Business Administration with a concentration in Management will be awarded upon completion of the required courses (30 units) plus the General Education requirements. Please refer to the College Catalog or visit the Counseling Center.

## Job & Wage Information

- General and Operations Managers  
Wage Range\*: \$24.77- over \$100.00  
12% increase in employment expected in CA 2016-2026; 25,860 openings annually  
More info: <http://bit.ly/GenMgrNC>
- Office Supervisor  
Wage Range\*: \$16.83-41.25  
6% increase in employment expected in CA 2016-2026; 18,600 openings annually  
More info:  
<http://bit.ly/OfficeCoordinatorNC>

\*2018, Riverside/Ontario/San Bernardino Metro Area

## What type of interests might be a good fit for this career choice?



## Enterprising

People who like to influence, persuade, lead and manage. Enjoys leadership positions and broad responsibilities.

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## Real Estate

### 30 unit certificate • 60 unit degree

The Real Estate program prepares individuals to develop, sell, appraise and manage real property.

## Required Courses (to earn certificate)

#### **ACC-1A Principles of Accounting, I (3 units)\***

*Advisory: BUS-20*

Introduction to accounting principles and practice.

#### **BUS-10 Introduction to Business (3 units)\***

Scope, function, and organization of contemporary business.

#### **BUS-18A Business Law I (3 units)\***

The social and practical basis of the law.

#### **BUS-20 Business Mathematics (3 units)\***

Introduction to quantitative approaches for solving common business problems using general mathematics and first degree equations.

#### **BUS-22 Management Communications (3 units)\***

*Advisory: CAT-30*

Examines the dynamics of organizational communication including a cross cultural emphasis. Practical experience is attained in verbal, non-verbal and interpersonal communication. Includes business report writing, letter writing and resume writing.

OR

#### **BUS-24 Business Communications (3 units)\***

*Prerequisite: ENG-1A or 1AH*

Examines the dynamics of organizational communication including a cross cultural emphasis.

#### **CIS-1A Introduction to Computer Information Systems (3 units)\***

Examination of information systems and their role in business. Focus on information systems, database management systems, networking, e-commerce, ethics and security, computer systems hardware and software components.

OR

#### **BUS/CIS/CAT-3 Computer Applications for Business (3 units)\***

Examination of information systems and their role in business.

Plus, an additional 12 units from the following courses:

RLE-80 Real Estate Principles (3 units)\*, RLE-81 Real Estate Practices (3 units)\*, RLE-82 Legal Aspects of Real Estate (3 units)\*, RLE-83 Real Estate Finance (3 units)\*, RLE-84 Real Estate Appraisal (3 units)\*, RLE-85 Real Estate Economics (3 units)\*, RLE-86 Escrow Procedures I (3 units)\*, RLE-200 Work Experience (1-4 units)\*

*Some of these courses have prerequisites or advisories. Refer to College Catalog for more information.*

*\*this class transfers toward one or more CSUSB or CalPoly majors. Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.*

## Real Estate

Tuition \$1,380 • Duration of Study: 16 months

An AS Degree in Business Administration with a concentration in Real Estate will be awarded upon completion of the required courses (30 units) plus the General Education requirements. Please refer to the College Catalog or visit the Counseling Center.

## Job & Wage Information

- Licensed Real Estate Agent  
Wage Range\*: \$16.72-42.41  
13% increase in employment expected in CA 2016-2026; 3,100 openings annually  
More info: <http://bit.ly/RealEstateNC>
- Property Management  
Wage Range\*: \$18.20-70.29  
9% increase in employment expected in CA 2016-2026; 4,360 openings annually  
More info: <http://bit.ly/PropertyMgmtNC>
- Loan Officer  
Wage Range\*: \$11.88-74.18  
11% increase in employment expected in CA 2016-2026; 3,770 openings annually  
More info: <http://bit.ly/LoanOfficerNC>
- Title Examiners, Abstractors & Searchers  
Wage Range\*: \$19.41-38.53  
8% increase in employment expected in CA 2016-2026; 610 openings annually  
More info: <http://bit.ly/TitleExaminerNC>

\*2018, Riverside/Ontario/San Bernardino Metro Area

## What's Your School?

NORCO COLLEGE  
SCHOOL OF  
**Business &  
Management**

## What type of interests might be a good fit for this career choice?



## Social

People who like to work with people – to inform, enlighten, help and train. Prefer solving problems through discussion.

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## Entrepreneurship: Getting Started 10 unit certificate

This certificate is intended to help students who are interested in pursuing entrepreneurship to develop new ideas and recognize and take advantage of opportunities as a foundation for creating a new business.

### Required Courses

#### **BUS-12 Opportunity Analysis for Entrepreneurs (2 units)\***

This course examines the entrepreneur's role in the global economy as an exploiter of opportunities. Topics include the creative search for ideas, the innovation process, and the opportunity analysis to screen for the best ideas.

#### **BUS-13 Developing a Successful Business Plan/Models (2 units)\***

This course provides a systematic process for developing a business plan or model. It establishes a clear road map for clarifying a vision for a business and the strategic, tactical, and operational plans and/or model to move ideas into action. Students further along in the planning and research process will work through the major components of writing a business plan and/or model and emerge with a completed draft of a business plan/model.

#### **BUS-14 Social Media and Electronic Marketing for Entrepreneurs (3 units)\***

This course introduces social media and online marketing tools for small businesses. Topics include social networking, online marketing channels, and creating an online presence for small businesses.

#### **BUS-30 Entrepreneurship and Small Business Management (3 units)\***

Identify and evaluate opportunities for start-up and existing small businesses. Investigate concepts, tools and practices associated with identifying or creating new venture opportunities. Explore ways to shape and evaluate the viability of these opportunities by understanding key industry factors, market and competitive factors, and customer needs.

*\*this class transfers toward one or more CSUSB or CalPoly majors.  
Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.*



## Entrepreneurship: Getting Started

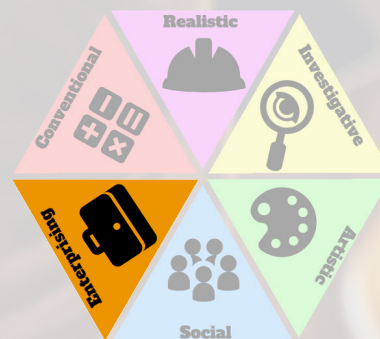
Tuition \$460 • Duration of Study: 8 months

A Certificate in Entrepreneurship: Getting Started will be awarded upon completion of the required course (10 units). Please refer to the Norco College Catalog or visit the Counseling Center.

### Job & Wage Information

- No job/wage range information available; varies by individual and career choice

### What type of interests might be a good fit for this career choice?



## Enterprising

People who like to influence, persuade, lead and manage. Enjoys leadership positions and broad responsibilities.

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## Entrepreneurship: Legal & Finance 10 unit certificate

This certificate is intended to help students who are interested in pursuing entrepreneurship to develop skills in financing, legal issues, and applied accounting and bookkeeping for small businesses.

### Required Courses

**ACC-55 Applied Accounting/Bookkeeping (3 units)**

Introductory course for students who are non-accounting majors. Focus on basic bookkeeping and accounting principles for both merchandising and service oriented small business enterprises.

**BUS-30 Entrepreneurship and Small Business Management (3 units)\***

Identify and evaluate opportunities for start-up and existing small businesses.

**BUS-31 Financing Your Business (2 units)\***

The importance and impact of funding sources for entrepreneurial ventures.

**BUS-33 Business Structure and Legal Issues (2 units)\***

Examines the primary forms of business structures, such as sole proprietorship, partnership, and corporation, and the legal elements needed to comply with regulations and guidelines of various governmental agencies.

*\*this class transfers toward one or more CSUSB or CalPoly majors.  
Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.*



## Entrepreneurship: Legal and Finance

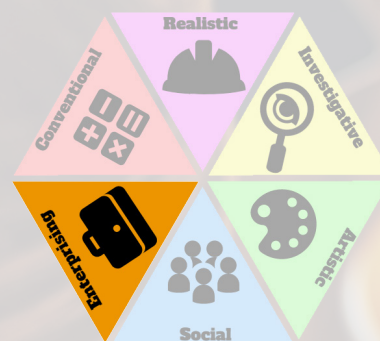
Tuition \$460 • Duration of Study: 8 months

A Certificate in Entrepreneurship: Legal & Finance will be awarded upon completion of the required course (10 units). Please refer to the Norco College Catalog or visit the Counseling Center.

### Job & Wage Information

- No job/wage range information available; varies by individual and career choice

### What type of interests might be a good fit for this career choice?



## Enterprising

People who like to influence, persuade, lead and manage. Enjoys leadership positions and broad responsibilities.

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## Real Estate: Salesperson & Transaction

### 9 unit certificate

This certificate prepares students to qualify for the CA Real Estate Salesperson license and to successfully take the exam. Prepares students to buy, sell and lease, and to represent others to buy, sell and lease residential and commercial real estate property.

### Required Courses

**RLE-80 Real Estate Principles (3 units)\***

Fundamental course covering basic laws and principles of California real estate.

**RLE-81 Real Estate Practices (3 units)\***

Fundamentals of CA real estate practice, terminology and daily operations in a brokerage firm.

**Plus, an additional 3 units from the following courses:**

ACC-1A Principles of Accounting I (3 units)\*, BUS-18A Business Law I (3 units)\*, RLE-82 Legal Aspects of Real Estate (3 units)\*, RLE-83 Real Estate Finance (3 units)\*, RLE-85 Real Estate Economics (3 units)\*

*Some of these courses have prerequisites or advisories. Refer to College Catalog for more information.*



*\*this class transfers toward one or more CSUSB or CalPoly majors. Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.*

## Real Estate: Salesperson & Transaction

Tuition \$414 • Duration of Study: 8 months

A Certificate in Business Administration: Real Estate Sales & Transaction will be awarded upon completion of the required course (9 units). Please refer to the Norco College Catalog or visit the Counseling Center.

### Job & Wage Information

- Licensed Real Estate Agent  
Wage Range\*: \$16.72-42.41  
13% increase in employment expected in CA 2016-2026; 3,100 openings annually  
More info: <http://bit.ly/RealEstateNC>
- Licensed Real Estate Assistant  
Wage Range\*: CA average \$16.49/hr  
Employment projections not available;  
wage information found on indeed.com

\*2018, Riverside/Ontario/San Bernardino Metro Area

### What type of interests might be a good fit for this career choice?



## Social

People who like to work with people – to inform, enlighten, help and train. Prefer solving problems through discussion.

*For more information on careers that fit this category of interests, visit the Career Center in the Center for Student Success.*

### What's Your School?

NORCO COLLEGE  
SCHOOL OF  
**Business &  
Management**

Visit [www.norcollege.edu/business](http://www.norcollege.edu/business)  
for more information about this program.



## Registered Individual & Small Business Income Tax Preparer 4 unit certificate

The Registered Individual & Small Business Income Tax Preparer certificate prepares individuals to become a registered income tax preparer.

### Required Courses

#### **ACC-67 U.S. and California Income Tax Preparation (4 units)\***

U.S. and California income tax principles and tax return preparation as it relates to individuals, sole proprietorships, and other business entities. This course is certified by the California Tax Education Council (CTEC) as fulfilling the 60-hour qualifying education requirement imposed by the State of California for becoming a Registered Tax Preparer.

*This course is certified by the California Tax Education Council (CTEC) as fulfilling the 60-hour qualifying education requirement imposed by the State of California for becoming a Registered Tax Preparer.*

*\*this class transfers toward one or more CSUSB or CalPoly majors.  
Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.*

## Registered Individual & Small Business Income Tax Preparer Tuition \$184 • Duration of Study: 6 months

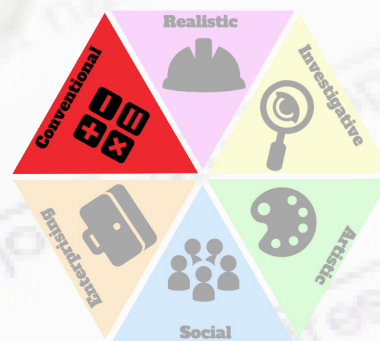
A Certificate in Registered Individual & Small Business Income Tax Preparer will be awarded upon completion of the required course (4 units). Please refer to the Norco College Catalog or visit the Counseling Center.

### Job & Wage Information

- Tax Preparer  
Wage Range\*: \$11.41-50.49  
9% increase in employment expected in CA  
2016-2026; 1,680 openings annually  
More info: <http://bit.ly/TaxPreparerNC>

\*2018, Riverside/Ontario/San Bernardino Metro Area

### What type of interests might be a good fit for this career choice?



## Conventional

People who like to work with data, have numerical or clerical ability. Prefer structured situations over ambiguous ones.

*For more information on careers that fit this category of interests, visit the Career Center in the Center for Student Success.*

### What's Your School?

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for more information about this program.



## Logistics Management

### 18 unit certificate • 60 unit degree

Logistics Management prepares students for entry into or career growth within the logistics industry, and ongoing study of the field. Focus is integrated logistics, a necessity for management of supply chain cost and customer service.

## Required Courses (to earn certificate)

### **BUS-80 Principles of Logistics (3 units)\***

Management of business logistics focusing on integration of the various functions.

### **BUS-82 Freight Claims (1.5 units)\***

Loss avoidance, mitigation and resolution of freight claims.

### **BUS-83 Contracts (1.5 units)\***

Legal and regulatory requirements applicable to third-party logistics contracts.

### **BUS-85 Warehouse Management (3 units)\***

Analysis of warehouse functions and management.

### **BUS-86 Transportation & Traffic Management (3 units)\***

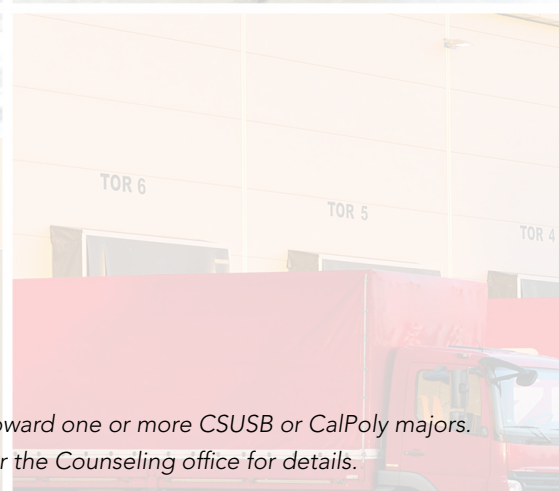
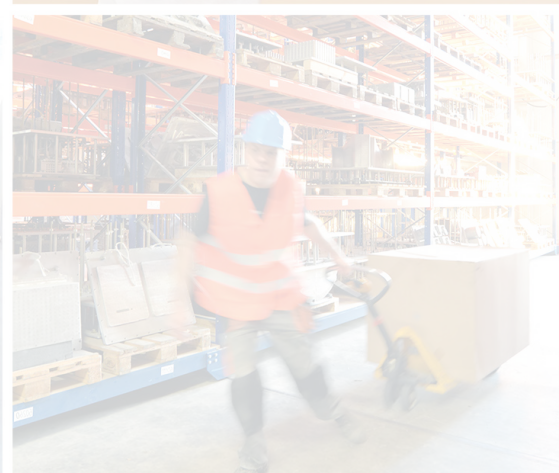
Study of the freight transportation system and management.

### **BUS-87 Purchasing and Supply Management (3 units)\***

Study of the purchasing & supply manager's role in procurement of resources.

### **BUS-90 International Logistics (3 units)\***

Intro to the management of logistics in global business.



*\*this class transfers toward one or more CSUSB or CalPoly majors.  
Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.*



## Logistics Management

Tuition \$828 • Duration of Study: 12 months

An Associate of Science Degree in Logistics Management will be awarded upon completion of the required courses (18 units) plus the General Education requirements. Please refer to the Norco College Catalog or visit the Counseling Center.

### Job & Wage Information

- Storage/Distribution Center Manager  
Wage Range\*: \$25.33-72.46  
14% increase in employment expected in CA 2016-2026; 1,600 openings annually  
More information: <http://bit.ly/WarehouseMgrNC>
- Integrated Logistics Support Manager  
Wage Range\*: \$25.33-72.46  
14% increase in employment expected in CA 2016-2026; 1,600 openings annually  
More information: <http://bit.ly/LogisticsMgrNC>
- Transportation Manager  
Wage Range\*: \$25.33-72.46  
14% increase in employment expected in CA 2016-2026; 1,600 openings annually  
More information: <http://bit.ly/TransportationMgrNC>
- Receiving or Shipping Supervisors  
Wage Range\*: \$16.40-38.59  
12% increase in employment expected in CA 2016-2026; 2,420 openings annually  
More information: <http://bit.ly/ShippingSupervisorNC>

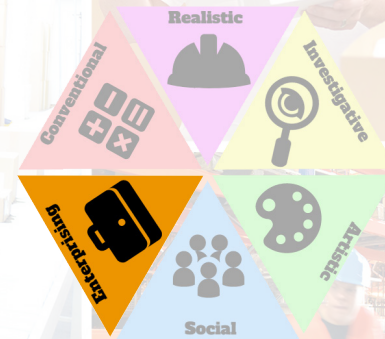
\*2018, Riverside/Ontario/San Bernardino Metro Area

### What's Your School?

NORCO COLLEGE SCHOOL OF  
**Business &  
Management**

Visit [www.norcollege.edu/business](http://www.norcollege.edu/business) for more information about this program. View gainful employment information at: [www.norcollege.edu/academicaffairs/cte](http://www.norcollege.edu/academicaffairs/cte)

### What type of interests might be a good fit for this career choice?



## Enterprising

People who like to influence, persuade, lead and manage. Enjoys leadership positions and broad responsibilities.

*For more information on careers that fit this category of interests, visit the Career Center in the Center for Student Success.*

## Small Business Accounting 6 unit certificate

This certificate prepares individuals to perform the basic duties and responsibilities required of an entry-level accounting clerk or bookkeeper utilizing accounting software.

### Required Courses

#### **ACC-65 Computerized Accounting (3 units)\***

*Prerequisite: ACC-1A or ACC-55*

This course focuses on basic bookkeeping and accounting principles for both merchandising and service oriented small business enterprises.

Plus, an additional 3 units from the following courses:

#### **ACC-1A Principles of Accounting (3 units)\***

*Advisory: BUS-20*

An introduction to accounting principles and practices. Includes recording, analyzing and summarizing procedures used in preparing financial statements.

#### **ACC/CAT-55 Applied Accounting/Bookkeeping (3 units)**

An introductory course for students who are non-accounting.

*\*this class transfers toward one or more CSUSB or CalPoly majors.  
Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.*



## Small Business Accounting

Tuition \$276 • Duration of Study: 8 months

A Certificate in Small Business Accounting will be awarded upon completion of the required course (6 units). Please refer to the Norco College Catalog or visit the Counseling Center.

### Job & Wage Information

- Accounting Clerk  
Wage Range\*: \$11.87-30.00  
0% change in employment expected in CA 2016-2026; 22,450 openings annually  
More info: <http://bit.ly/AccountingClerkNC>
- Bookkeeper/Statement Clerks  
Wage Range\*: \$12.77-25.75  
15% increase in employment expected in CA 2016-2016; 7,050 openings annually  
More info: <http://bit.ly/BookkeeperNC>

\*2018, Riverside/Ontario/San Bernardino Metro Area

### What type of interests might be a good fit for this career choice?



## Conventional

People who like to work with data, have numerical or clerical ability. Prefer structured situations over ambiguous ones.

*For more information on careers that fit this category of interests, visit the Career Center in the Center for Student Success.*

### What's Your School?

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Visit [www.norcollege.edu/business](http://www.norcollege.edu/business) for more information about this program.

## Small Business Payroll Accounting 6 unit certificate

This certificate prepares individuals to perform the basic duties and responsibilities required of an entry level payroll accounting clerk.

### Required Courses

#### **ACC-62 Payroll Accounting (3 units)\***

*Prerequisite: ACC-1A or ACC/CAT-55*

Training in payroll accounting and examine aspects of the Social Security Act, California Unemployment Insurance Act, and the California Workmen's Compensation Insurance Act.

**Plus, an additional 3 units from the following courses:**

#### **ACC-1A Principles of Accounting (3 units)\***

*Advisory: BUS-20*

An introduction to accounting principles and practices. Includes recording, analyzing and summarizing procedures used in preparing financial statements.

#### **ACC/CAT-55 Applied Accounting/Bookkeeping (3 units)**

An introductory course for students who are non-accounting.

*\*this class transfers toward one or more CSUSB or CalPoly majors.  
Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.*

## Small Business Payroll Accounting

Tuition \$276 • Duration of Study: 8 months

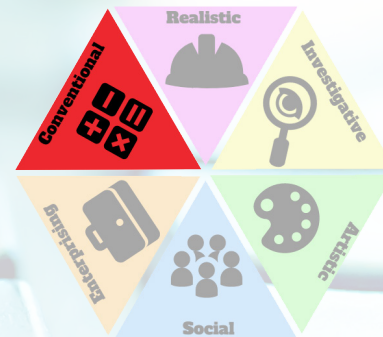
A Certificate in Small Business Payroll Accounting will be awarded upon completion of the required course (6 units). Please refer to the Norco College Catalog or visit the Counseling Center.

### Job & Wage Information

- Accounting Clerk  
Wage Range\*: \$11.87-30.00  
0% change in employment expected in CA 2016-2026; 22,450 openings annually  
More info: <http://bit.ly/AccountingClerkNC>
- Entry-level Payroll Accountant/Payroll Clerk  
Wage Range\*: \$14.89-30.33  
1% increase expected in CA 2016-2026; 2,670 openings annually  
More info: <http://bit.ly/PRAccountantNC>

\*2018, Riverside/Ontario/San Bernardino Metro Area

### What type of interests might be a good fit for this career choice?



## Conventional

People who like to work with data, have numerical or clerical ability. Prefer structured situations over ambiguous ones.

*For more information on careers that fit this category of interests, visit the Career Center in the Center for Student Success.*

### What's Your School?

NORCO COLLEGE  
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## Retail Management/WAFC (Western Association of Food Chains) 30 unit certificate • 60 unit degree

The Retail Management/WAFC program has been fully endorsed by the Western Association of Food Chains. It prepares individuals for success in supervisory and management positions within the grocery industry as well as other retail settings.

### Required Courses (to earn certificate)

ACC-1A Principles of Accounting I (3 units)\*

*Advisory: BUS-20*

OR

ACC/CAT-55 Applied Accounting/Bookkeeping  
(3 units)

MAG-53 Human Relations (3 units)

BUS-20 Business Mathematics (3 units)\*

MAG-56 Human Resources Management (3 units)\*

MKT-20 Principles of Marketing (3 units)\*

*Advisory: BUS-10*

BUS-22 Management Communications (3 units)\*

*Advisory: CAT-30*

OR

BUS-24 Business Communications (3 units)\*

*Prerequisite: ENG-1A or 1AH*

MKT-42 Retail Management (3 units)\*

CIS-1A Intro to CIS (3 units)\*

OR

CIS/CAT/BUS-3 Computer Applications for Business  
(3 units)\*

COM-1/1H Public Speaking (3 units)\*

*Advisory: COM-51 and/or qualification for ENG-1A*

OR

COM-9/9H Interpersonal Communication (3 units)\*

*Advisory: COM-51 and/or qualification for END-1A*

OR

MAG-57 Oral Communications (3 units)\*

MAG-44 Principles of Management (3 units)\*

OR

MAG-51 Elements of Supervision (3 units)

*\*this class transfers toward one or more CSUSB or CalPoly majors.*

*Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.*

# Retail Management

Retail Management/WAFC (Western Association of Food Chains)

Tuition \$1,380 • Duration of Study: 16 months

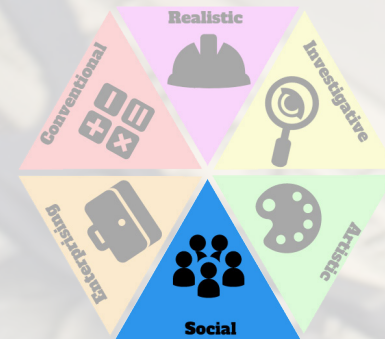
An AS Degree in Retail Management/WAFC will be awarded upon completion of the required courses (30 units) plus the General Education requirements. Please refer to the Norco College Catalog or visit the Counseling Center.

## Job & Wage Information

- Retail Manager  
Wage Range\*: \$11.58-29.69  
3% increase expected in CA 2016-2026; 16,630 openings annually  
More information: <http://bit.ly/RetailMgrNC>

\*2018, Riverside/Ontario/San Bernardino Metro Area

## What type of interests might be a good fit for this career choice?



## Social

People who like to work with people – to inform, enlighten, help and train. Prefer solving problems through discussion.

*For more information on careers that fit this category of interests, visit the Career Center in the Center for Student Success.*

## What's Your School?

NORCO COLLEGE  
SCHOOL OF  
**Business &  
Management**

Visit [www.norcocollege.edu/business](http://www.norcocollege.edu/business) for more information about this program.  
View gainful employment information at: [www.norcocollege.edu/academicaffairs/cte](http://www.norcocollege.edu/academicaffairs/cte)



California Community Colleges are now offering Associate Degrees for Transfer (ADT's) to the CSU. These may include Associate in Arts (AA-T) or Associate in Science (AS-T) degrees. These degrees are designed to provide a clear pathway to a CSU major and baccalaureate degree. California Community College students who are awarded an AA-T or AS-T degree are guaranteed admission with junior standing somewhere in the CSU system and given priority admission consideration to their local CSU campus or to a program that is deemed similar to their community college major. This priority does not guarantee admission to specific majors or campuses. Students who have been awarded an AA-T or AS-T are able to complete their remaining requirements for the 120-unit baccalaureate degree within 60 semester or 90 quarter units. To view the most current list of Norco College Associate Degrees for Transfer and to find out which CSU campuses accept each degree, please go to:

[www.calstate.edu/transfer/adt-search/search.shtml](http://www.calstate.edu/transfer/adt-search/search.shtml)

**Students are encouraged to meet with a Norco College counselor to review their options for transfer and to develop an educational plan that best meets their goals and needs.**

## 2019-20

### ADMINISTRATION OF JUSTICE (CSUGE) NAS642

This degree is designed to facilitate the student's passage from Norco College to the California State University system with an Associate in Science in Administration of Justice for Transfer degree. This degree will satisfy the lower division requirements for the eventual conferral of the bachelor's degree in criminal justice at a CSU. With this degree the student will be prepared to enter the American Justice system as an entry level professional in numerous areas.

Required Courses: (18-19 units)	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 the following (6 units):	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 the following (6-7 units):	Units
Any LIST A course not already used	
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

\*Courses may also be used to fulfill general education requirements for the CSU GE or IGETC pattern, please confer with a counselor.

Course	Units
ENG 1A	4.0
MAT 12/PSY 48/ SOC 48	3.0-4.0
ADJ 1	3.0
AREA E	3.0

Total Units: 13.0-14.0

Course	Units
AREA A3	3.0
ADJ 3	3.0
AREA B1/B3	4.0
POL 1	3.0
CSU ELECTIVE	3.0

Total Units: 16.0

Course	Units
AREA A1	3.0
HIST 6/7/14/31/34	3.0
ELECTIVE GROUP/LIST A	3.0
ELECTIVE GROUP/LIST B	3.0
AREA B2	3.0

Total Units: 15.0

Course	Units
ELECTIVE GROUP/LIST A	3.0
ELECTIVE GROUP/LIST B	3.0
AREA C1/C2	3.0
AREA C1	3.0
CSU ELECTIVE	3.0-4.0

Total Units: 15.0-16.0

Suggested Pathway for Administration of Justice ADT

See your counselor for YOUR plan!

#### 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 with a minimum grade point average of 2.0. All courses in the major must be completed with a grade of "C" or better.





California Community Colleges are now offering Associate Degrees for Transfer (ADT's) to the CSU. These may include Associate in Arts (AA-T) or Associate in Science (AS-T) degrees. These degrees are designed to provide a clear pathway to a CSU major and baccalaureate degree. California Community College students who are awarded an AA-T or AS-T degree are guaranteed admission with junior standing somewhere in the CSU system and given priority admission consideration to their local CSU campus or to a program that is deemed similar to their community college major. This priority does not guarantee admission to specific majors or campuses. Students who have been awarded an AA-T or AS-T are able to complete their remaining requirements for the 120-unit baccalaureate degree within 60 semester or 90 quarter units. To view the most current list of Norco College Associate Degrees for Transfer and to find out which CSU campuses accept each degree, please go to:

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## 2019-20

### ANTHROPOLOGY (CSUGE) NAA616

The Associate in Arts in Anthropology for Transfer degree is designed to prepare the student for transfer to institutions of higher education and specifically intended to satisfy the lower division requirements for the Baccalaureate Degree in Anthropology at a California State University. It will also provide the student with a sufficient academic basis from which to pursue a career in the social science professions. The student will be afforded the opportunity to study the nature of human diversity from a genetic, archaeological, linguistic and cultural basis. The breadth of Anthropology will be examined to include the historical and contemporary theory and research as the basis from which to gain an in-depth awareness and understanding of the humans and the world in which we live.

Required Courses: (18-21 units)	Units
ANT-1*/1H*	Physical Anthropology/Honors 3
ANT-2*/2H*	Cultural Anthropology/Honors 3
ANT-6*	Introduction to Archaeology 3
Group A	Choose 6-7 units from Group A 6-8
Group B	Choose 3 units from Group B 3-4

Electives Group A (6-8 units)	Units
ANT-3*	Prehistoric Cultures 3
GEG-1*/1H*	Physical Geography/Honors 3
GEG-2*	Human Geography 3
MAT-12*/12H*	Statistics/ Honors Statistics 4
OR	
PSY/SOC-48*	Statistics for the Behavioral Sciences 3
PSY-50*	Research Methods in Psychology 4
OR	
SOC-50*	Introduction to Social Research Methods 3

Electives Group B (3-4 units)	Units
Any course from List A not already used	
ANT-1L*	Physical Anthropology Laboratory 1
ANT-4*	Native American Cultures 3
ANT-5*	Cultures of Ancient Mexico 3
ANT-7*	Anthropology of Religion 3
ANT-8*	Language and Culture 3
ANT-10	Forensic Anthropology 3
ANT-16	Field Methods in Archaeology 3

Course	Units
ENGL 1A	4.0
ANT 2	3.0
MAT 12/PSY 48/SOC 48	3.0-4.0
AREA E	3.0

Total Units: 13.0-14.0

Course	Units
ANT 1	3.0
AREA A3	3.0
CSU ELECTIVE	3.0
HIS 6/7/14/31/34	3.0
CSU ELECTIVE	3.0

Total Units: 15.0

Course	Units
POL 1	3.0
AREA A1	3.0
GEG1/1L	4.0
ANT 6	3.0
AREA C1/C2	3.0

Total Units: 16.0

Course	Units
ELECTIVE GROUP/LIST B	3.0-4.0
AREA C1	3.0
CSU ELECTIVE	3.0
CSU ELECTIVE	3.0
CSU ELECTIVE	3.0

Total Units: 15.0 -16.0

\*Courses may also be used to fulfill general education requirements for the CSU GE or IGETC pattern, please confer with a counselor.

Suggested Pathway for Anthropology ADT

See your counselor for **YOUR** plan!

#### Associate in Arts for Transfer Degree

The Associate in Arts in Anthropology 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.



California Community Colleges are now offering Associate Degrees for Transfer (ADT's) to the CSU. These may include Associate in Arts (AA-T) or Associate in Science (AS-T) degrees. These degrees are designed to provide a clear pathway to a CSU major and baccalaureate degree. California Community College students who are awarded an AA-T or AS-T degree are guaranteed admission with junior standing somewhere in the CSU system and given priority admission consideration to their local CSU campus or to a program that is deemed similar to their community college major. This priority does not guarantee admission to specific majors or campuses. Students who have been awarded an AA-T or AS-T are able to complete their remaining requirements for the 120-unit baccalaureate degree within 60 semester or 90 quarter units. To view the most current list of Norco College Associate Degrees for Transfer and to find out which CSU campuses accept each degree, please go to:

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**2019-2020**  
**PSYCHOLOGY**  
**(CSUGE) NAA566**

The Associate in Arts in Psychology for transfer degree is designed to prepare students who wish to transfer for the purposes of pursuing studies in Psychology. Specifically, this degree allows students to complete various lower division courses in preparation for obtaining a baccalaureate degree in Psychology at a California State University.

Required Courses: (19-20 units)		Units
PSY-1*/1H*	General Psychology/Honors	3
PSY-2*	Biological Psychology	3
PSY-9*	Developmental Psychology	3
PSY-50*	Research Methods in Psychology	4
PSY-48*/SOC-48*	Statistics for Behavioral Sciences	3
OR		
MAT-12*/12H*	Statistics/Honors	4
List A	Choose from the list below	3
List A: (3 units)		Units
PSY-8*	Introduction to Social Psychology	3
PSY-33*	Theories of Personality	3
PSY-35*	Abnormal Psychology	3

\*Courses may also be used to fulfill general education requirements for the CSU GE or IGETC pattern, please confer with a counselor.

Course	Units
ENGL 1A	4.0
MAT 12/PSY 48/SOC 48	3.0 -4.0
PSYC 1	3.0
HIS 6/7/14/31/34	3.0
AREA E	3.0

Total Units: 16.0-17.0

Course	Units
ELECTIVE GROUP/LIST A	3.0
AREA C1/C2	3.0
AREA A1	3.0
CSU ELECTIVE	3.0
PSYC 9	3.0

Total Units: 15.0

Course	Units
PSYC 50	4.0
AREA B1/B3	4.0
CSU ELECTIVE	3.0
AREA A3	3.0

Total Units: 14.0

Course	Units
AREA C1	3.0
PSYC 2	3.0
POL 1	3.0
CSU ELECTIVE	3.0
CSU ELECTIVE	3.0

Total Units: 15.0

Suggested Pathway for Psychology ADT

**Associate in Arts for Transfer Degree**

The Associate in Arts in Psychology 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.

See your counselor for **YOUR** plan!





California Community Colleges are now offering Associate Degrees for Transfer (ADT's) to the CSU. These may include Associate in Arts (AA-T) or Associate in Science (AS-T) degrees. These degrees are designed to provide a clear pathway to a CSU major and baccalaureate degree. California Community College students who are awarded an AA-T or AS-T degree are guaranteed admission with junior standing somewhere in the CSU system and given priority admission consideration to their local CSU campus or to a program that is deemed similar to their community college major. This priority does not guarantee admission to specific majors or campuses. Students who have been awarded an AA-T or AS-T are able to complete their remaining requirements for the 120-unit baccalaureate degree within 60 semester or 90 quarter units. To view the most current list of Norco College Associate Degrees for Transfer and to find out which CSU campuses accept each degree, please go to:

[www.calstate.edu/transfer/adt-search/search.shtml](http://www.calstate.edu/transfer/adt-search/search.shtml)

**Students are encouraged to meet with a Norco College counselor to review their options for transfer and to develop an educational plan that best meets their goals and needs.**

## 2019-2020

### CHILD AND ADOLESCENT DEVELOPMENT (CSUGE) NAA885

The Associate in Arts in Child and Adolescent Development for Transfer degree provides lower-division preparation for students planning to transfer to a CSU for a bachelor's degree in Child and Adolescent Development, Child Development, Child, Adolescent & Family Studies, Human Development or other related majors. The intention of this degree is to prepare students to transfer and complete degrees and professional programs in the fields of K-12 teaching, clinical social work, clinical psychology, school psychology, school counseling, college teaching, public policy, and/or developmental research. In this major, students will explore theories and concepts about bio-physical, socio-emotional, and cognitive developmental milestones from conception through adolescence; individual and cultural differences; and common variations in development. In this broad, interdisciplinary curriculum, students will develop critical thinking, writing, and oral presentation skills in preparation to be professionals working with children and families.

Required Courses: (18-20 units)	Units
EAR-20* Child Growth and Development	3
PSY-1/1HH* General Psychology/Honors	3
MAT=12*/12H* Statistics/Honors	4
OR	
PSY-48*/SOC-48* Statistics for the Behavioral Sciences	3
LIST A Choose from the list below	3
LIST B Choose from the list below	6-7

List A: Select one course (3 units)	Units
ANT-2*/2H* Cultural Anthropology/Honors	3
EAR-42* Child, Family, and Community	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 (6-7 units)	Units
BIO-1*/1H* General Biology/Honors	4
OR	
BIO-10* Life Science Principles	3
EAR-24 Introduction to Curriculum	3
EAR-28 Principles and Practices of Teaching Young Children	3
PSY-9* Developmental Psychology	3

\*Courses may also be used to fulfill general education requirements for the CSU GE or IGETC pattern, please confer with a counselor.

Course	Units
ENGL 1A	4.0
EAR 20	3.0
GUI 47	3.0
MAT 12/PSY 48/SOC 48	3.0-4.0

Total Units: 13.0 - 14.0

Course	Units
EAR 42	3.0
POL 1	3.0
PSY 1	3.0
GEG 1 or PHS 1	3.0
AREA C1	3.0

Total Units: 15.0

Course	Units
EAR 28	3.0
AREA C1 or C2	3.0
AREA A3	3.0-4.0
HIS 6/7/14/31/34	3.0
CSU ELECTIVE	3.0

Total Units: 15.0-16.0

Course	Units
COM 1/6/9	3.0
PSY 9	3.0
ANT 2	3.0
BIO 1 or 10	3.0-4.0
EAR 24	3.0

Total Units: 15.0-16.0

Suggested Pathway for Child & Adolescent Development ADT

See your counselor for **YOUR** plan!

#### Associate in Arts for Transfer Degree

The Associate in Arts in Child and Adolescent Development 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.

## Crime Scene Investigation 15 unit certificate

The Crime Scene Investigation certificate is designed to offer basic patterns of coursework that will prepare the participant to enter the professional field of crime scene investigation.

### Required Courses

**ADJ-2 Principles & Procedures of the Justice System (3 units)\***

Examination and analysis of due process in criminal proceedings from pre-arrest through trial and appeal utilizing statutory law and state and constitutional precedents.

**ADJ-3 Concepts of Criminal Law (3 units)\***

Historical, development, philosophy of law and constitutional provisions; definitions, classifications of crimes and their application to the system of administration of justice; legal research, study of case law, methodology, and concepts of law as a social force.

**ADJ-13 Criminal Investigation (3 units)\***

Fundamentals of investigation; crime scene search and recording; collection and preservation of physical evidence; scientific aids; modus operandi sources of information; interviews and interrogation; follow-up and case preparation.

**ADJ-14 Advanced Criminal Investigation (3 units)\***

Prerequisite: ADJ/JUS-13

Advanced training and skills development in the conduct of crime scene investigation and in the recording, collection and preservation of physical evidence.

**ADJ-12 Introduction to Criminalistics (3 Units)\***

An introduction to the role of criminalistics in criminal investigations. The methods utilized in the forensic analysis of crime scenes, pattern evidence, instruments, trace evidence, biological evidence, weapons and firearms, questioned documents, and controlled substances. The categories of direct evidence, circumstantial evidence, physical evidence, testimonial evidence, and exculpatory evidence will be explored, and the pattern, chemical, and biological types of evidence will be examined.

**OR**

**ANT-10 Forensic Anthropology (3 units)\***

The application of the methods of physical anthropology, within a medicolegal framework, to the identification of human remains. Focuses on human osteology for the determination of age, sex, ancestry, stature, and unique features.

*\*this class transfers toward one or more CSUSB or CalPoly majors.  
Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.*

## Crime Scene Investigation

Tuition \$690 • Duration of Study: 8 months

A Certificate in Administration of Justice, Crime Scene Investigation, will be awarded upon completion of the required courses (15 units). Please refer to the Norco College Catalog or visit the Counseling Center.

### Job & Wage Information

- Forensic Science Technician  
Wage Range\*: \$22.04-40.52  
15% increase in employment expected in CA 2016-2026; 280 openings annually  
More information:  
<http://bit.ly/ForensicScienceNC>

\*2018, Riverside/Ontario/San Bernardino Metro Area

### What type of interests might be a good fit for this career choice?



### Investigative

People who like to observe, learn, investigate, analyze, evaluate, or solve problems primarily of a scientific or mathematical nature.

*For more information on careers that fit this category of interests, visit the Career Center in the Center for Student Success.*

### What's Your School?

NORCO COLLEGE  
SCHOOL OF  
Social &  
Behavioral Sciences

Visit [www.norcollege.edu/sbs](http://www.norcollege.edu/sbs)  
for more information about this program.



## Early Childhood Intervention Assistant 34 unit certificate • 60 unit degree

This program prepares individuals to work as an assistant or a paraprofessional in early intervention, early childhood special education, & child development programs serving children with special needs.

### Required Courses (to earn certificate)

#### **EAR-19 Observation & Assessment in Early Childhood Education (3 units)\***

Overview of observation and assessment approaches to understand the development of children from infancy to eight.

#### **EAR-20 Child Growth & Development (3 units)\***

A comprehensive overview of concepts, issues and theories of human development from conception through adolescence.

#### **EAR-24 Introduction to Curriculum (3 units)\***

Intro to designing developmentally appropriate and creative activities to support children's development.

#### **EAR-28 Principles & Practices of Teaching Young Children (3 units)\***

This course provides an overview of the history, educational philosophies, and practices that enhance the healthy development of children's cognitive, emotional, social, creative, and physical selves (the five selves).

#### **EAR-40 Introduction to Children with Special Needs (3 units)\***

Designed to introduce students to the characteristics of infants and children with disabilities and other special needs.

#### **EAR-41 Practicum in Early Intervention/Special Education (4 units)\***

*Prerequisite: EAR-20, 24, 28 and 42.*

*Advisory: EAR-19 (Strongly recommended), EAR-40 or 46.*

Course provides supervised practicum as an assistant in an early intervention/special education setting with children from birth to eight.

#### **EAR-42 Child, Family & Community (3 units)\***

This course focuses on the inter and intra relationships of home, school, and community and their impact on both teachers and children in the learning environment.

#### **EAR-43 Children with Challenging Behaviors (3 units)\***

*Prerequisite: EAR-19 and 20.*

Provides an overview of the developmental, environmental and cultural factors that impact behavior of young children.

#### **EAR-46 Curriculum & Strategies for Children with Special Needs (3 units)\***

*Advisory: EAR-40.*

Curriculum and intervention strategies for working with children with special needs in partnership with their families.

**Plus, an additional 6 units from the following courses: EAR-26 (3 units)\*, EAR-33 (3 units)\*, EAR-34 (3 units)\*, EAR-38 (3 units)\*, EAR-44 (3 units)\*, EAR-47 (3 units)\***

*Courses may have prerequisites or advisories. Check College Catalog for more information.*

*\*this class transfers toward one or more CSUSB or CalPoly majors.*

*Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.*

## Early Childhood Intervention Assistant

Tuition \$1,564 • Duration of Study: 24 months

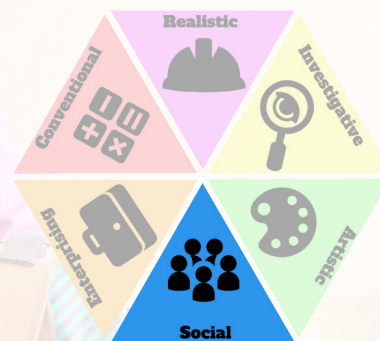
An AS Degree in Early Childhood Intervention Assistant will be awarded upon completion of the required courses (34 units) plus the General Education (34 units) requirements. Please refer to the Norco College Catalog or visit the Counseling Center.

### Job & Wage Information

- **Preschool Teacher**  
Wage Range\*: \$10.96-21.74  
10% increase expected in CA 2016-2026;  
6,160 openings annually  
More info: <http://bit.ly/PreschoolTeacherNC>
- **Instructional Assistant/Teacher Assistant**  
Wage Range\*: \$22,500 to \$45,540 (yearly)  
8% increase expected in CA 2016-2026;  
17,710 openings annually  
More info: <http://bit.ly/TeacherAssistantNC>

\*2018, Riverside/Ontario/San Bernardino Metro Area

### What type of interests might be a good fit for this career choice?



## Social

People who like to work with people – to inform, enlighten, help and train. Prefer solving problems through discussion.

*For more information on careers that fit this category of interests, visit the Career Center in the Center for Student Success.*

### What's Your School?

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View gainful employment information at:  
[www.norcollege.edu/academicaffairs/cte](http://www.norcollege.edu/academicaffairs/cte)





California Community Colleges are now offering Associate Degrees for Transfer (ADT's) to the CSU. These may include Associate in Arts (AA-T) or Associate in Science (AS-T) degrees. These degrees are designed to provide a clear pathway to a CSU major and baccalaureate degree. California Community College students who are awarded an AA-T or AS-T degree are guaranteed admission with junior standing somewhere in the CSU system and given priority admission consideration to their local CSU campus or to a program that is deemed similar to their community college major. This priority does not guarantee admission to specific majors or campuses. Students who have been awarded an AA-T or AS-T are able to complete their remaining requirements for the 120-unit baccalaureate degree within 60 semester or 90 quarter units. To view the most current list of Norco College Associate Degrees for Transfer and to find out which CSU campuses accept each degree, please go to:

[www.calstate.edu/transfer/adt-search/search.shtml](http://www.calstate.edu/transfer/adt-search/search.shtml)

**Students are encouraged to meet with a Norco College counselor to review their options for transfer and to develop an educational plan that best meets their goals and needs.**

## 2019-2020

### EARLY CHILDHOOD EDUCATION (CSUGE) NAS529

This program focuses on the theory and practice of early childhood care and education for children from birth to age eight for occupational preparation. The course of study will include the basic principles of educational and developmental psychology; the art of observing, teaching and guiding young children; planning and administration of developmentally appropriate inclusive educational activities; school safety and health issues; and the social and emotional foundations of early care and education. Students completing this program will have the potential of obtaining occupations in educational settings such as infant/toddler caregivers; preschool teachers; family home childcare providers; master teachers, site supervisors, program directors, child life specialists, and social service workers.

Required Courses (25 units)	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

\*Courses may also be used to fulfill general education requirements for the CSU GE or IGETC pattern, please confer with a counselor.

Course	Units
ENGL 1A	4.0
AREA B4	4.0
EAR 20	3.0
EAR 42	3.0
AREA E	3.0

Total Units: 17.0

Course	Units
AREA B2	3.0
POL 1	3.0
EAR 28	3.0
AREA C1	3.0
EAR 24	3.0

Total Units: 15.0

Course	Units
AREA A3	3.0
EAR 26	3.0
EAR 19	3.0
AREA C1/C2	3.0
HIS 6/7/14/31/34	3.0

Total Units: 15.0

Course	Units
AREA A1	3.0
EAR 25	3.0
EAR 30	4.0
AREA B1/B3	4.0

Total Units: 14.0

Suggested Pathway for Early Childhood Education ADT

#### 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.

See your counselor for **YOUR** plan!



## Early Childhood Education 31 unit certificate • 60 unit degree

The Early Childhood Education certificate provides a comprehensive overview of the concepts needed to excel and grow as a teacher.

### Required Courses (to earn certificate)

#### **EAR-19 Observation & Assessment in Early Childhood Education (3 units)\***

Overview of observation and assessment approaches to understand the development of children from infancy to age eight.

#### **EAR-20 Child Growth & Development (3 units)\***

A comprehensive overview of concepts, issues and theories of human development from conception through adolescence.

#### **EAR-24 Introduction to Curriculum (3 units)\***

An introduction to designing developmentally appropriate and creative activities to support children's development.

#### **EAR-25 Teaching in a Diverse Society (3 units)\***

This course will examine the development of social identities in diverse societies including theoretical and practical implications affecting young children, families, programs, teaching, education and schooling.

#### **EAR-26 Health, Safety and Nutrition (3 units)\***

Intro to basic concepts of health, safety and nutrition for the developing child up to age eight.

#### **EAR-28 Principles & Practices of Teaching Young Children (3 units)\***

This course provides an overview of the history, educational philosophies, and practices that enhance the healthy development of children's cognitive, emotional, social, creative, and physical selves (the five selves).

#### **EAR-30 Practicum in Early Childhood Education (4 units)\***

*Prerequisite EAR-20, 24, 28 and 42, EAR-19 highly recommended*  
Supervised experience and participation in a group program for preschool children at community based child development centers.

#### **EAR-42 Child, Family & Community (3 units)\***

This course focuses on the inter and intra relationships of home, school, and community and their impact on both teachers and children in the learning environment.

Plus, an additional 6 units from the following courses:

EAR-23 (3 units), EAR-33 (3 units)\*, EAR-34 (3 units)\*, EAR-37 (3 units), EAR-38 (3 units)\*, EAR-40 (3 units)\*, EAR-41 (4 units)\*, EAR-43 (3 units)\*, EAR-44 (3 units)\*, EAR-45 (3 units)\*, EAR-46 (3 units)\*, EAR-47 (3 units)\*, EAR-52 (1 unit), EAR-53 (2 units), EAR-54 (1 unit), EAR-55 (1 unit), ART-3 (3 units), EDU-1 (4 units), ENG-30 (3 units)\*, KIN-6 (3 units), KIN-30 (3 units)\*, MUS-1 (3 units)

*Courses may have prerequisites or advisories. Check College Catalog for more information.*

**Note: not all Early Childhood Education elective courses are available at Norco College. Please refer to Riverside City College and/or Moreno Valley College course catalog for more information.**

*\*this class transfers toward one or more CSUSB or CalPoly majors. Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.*



# Early Childhood Education

## Early Childhood Education

Tuition \$1,426 • Duration of Study: 16 months

An AS Degree in Early Childhood Education will be awarded upon completion of the required courses (31 units) plus the General Education (29 units) requirements. Please refer to the Norco College Catalog or visit the Counseling Center.

### Job & Wage Information

- **Preschool Teacher**  
Wage Range\*: \$10.96-21.74  
10% increase expected in CA 2016-2026;  
6,160 openings annually  
More info: <http://bit.ly/PreschoolTeacherNC>
- **Instructional Assistant/Teacher Assistant**  
Wage Range\*: \$22,500 to \$45,540 (yearly)  
8% increase expected in CA 2016-2026;  
17,710 openings annually  
More info: <http://bit.ly/TeacherAssistantNC>
- **Preschool Director**  
Wage Range\*: \$13.89-37.89  
10% increase expected in CA 2016-2026;  
720 openings annually  
More info: <http://bit.ly/PreschoolDirectorNC>

\*2018, Riverside/Ontario/San Bernardino Metro Area

### What type of interests might be a good fit for this career choice?



## Social

People who like to work with people – to inform, enlighten, help and train. Prefer solving problems through discussion.

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### What's Your School?

NORCO COLLEGE  
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## Early Childhood Education Assistant 6 unit certificate

The Assistant Teacher certificate is the first step to becoming a teacher. It will give you the qualifications you need to obtain a position where you can care for and assist in the development and instruction of children in a child development program.

### Required Courses (complete two, in suggested order of completion)

#### **EAR-20 Child Growth & Development (3 units)\***

This introductory course examines the major physical, psychosocial, and cognitive/language developmental milestones for children, both typical and atypical, from conception through adolescence. There will be an emphasis on interactions between maturational processes and environmental factors. While studying developmental theory and investigative research methodologies, students will observe children, evaluate individual differences and analyze characteristics of development at various stages.

#### **EAR-42 Child, Family & Community (3 units)\***

An examination of the developing child in a societal context which focuses on the interrelationships of family, school, and community and emphasizes historical and socio-cultural factors. The processes of socialization and identity development will be highlighted.

#### **EAR-28 Principles & Practices of Teaching Young Children (3 units)\***

An examination of the underlying theoretical principles of developmentally appropriate practices applied to programs, environments, emphasizing the key role of relationships, constructive adult-child interactions, and teaching strategies in supporting physical, social, creative and intellectual development for all young children.

#### **EAR-24 Introduction to Curriculum (3 units)\***

This course presents an overview of knowledge and skills related to providing appropriate curriculum and environments for young children from birth to age 6. Students will examine a teacher's role in supporting development and engagement for all young children. This course provides strategies for developmentally-appropriate practice based on observation and assessments across the curriculum, including: academic content areas; play, art, and creativity; and development of social-emotional, communication, and cognitive skills.

*\*this class transfers toward one or more CSUSB or CalPoly majors.  
Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.*



## Early Childhood Education Assistant

Tuition \$276 • Duration of Study: 4 months

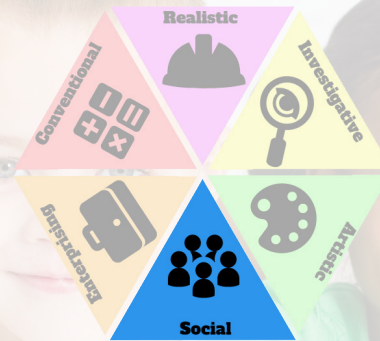
A Certificate in Early Childhood Education Assistant will awarded upon completion of the required courses (6 units). Please refer to the Norco College Catalog or visit the Counseling Center.

### Job & Wage Information

- Instructional Assistant/Teacher Assistant  
Wage Range\*: \$22,500 to \$45,540 (yearly)  
8% increase expected in CA 2016-2026;  
17,710 openings annually  
More info: <http://bit.ly/TeacherAssistantNC>

\*2018, Riverside/Ontario/San Bernardino Metro Area

### What type of interests might be a good fit for this career choice?



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## Early Childhood Education - Twelve Core Units

### 12 unit certificate

The Twelve Core Units certificate will qualify you to be an Associate Teacher in the State of California. With this certificate you will be able to provide services in the care, development, and instruction of children in a childcare or child development program.

### Required Courses

#### **EAR-20 Child Development (3 units)\***

This introductory course examines the major physical, psychosocial, and cognitive/language developmental milestones for children, both typical and atypical, from conception through adolescence. There will be an emphasis on interactions between maturational processes and environmental factors. While studying developmental theory and investigative research methodologies, students will observe children, evaluate individual differences and analyze characteristics of development at various stages.

#### **EAR-24 Introduction to Curriculum (3 units)\***

This course presents an overview of knowledge and skills related to providing appropriate curriculum and environments for young children from birth to age 6. Students will examine a teacher's role in supporting development and engagement for all young children.

#### **EAR-28 Principles & Practices of Teaching Young Children (3 units)\***

This course provides an overview of the history, educational philosophies, and practices that enhance the healthy development of children's cognitive, emotional, social, creative, and physical selves (the five selves).

#### **EAR-42 Child, Family & Community (3 units)\***

An examination of the developing child in a societal context which focuses on the interrelationships of family, school, and community and emphasizes historical and socio-cultural factors.

*\*this class transfers toward one or more CSUSB or CalPoly majors.  
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## Early Childhood Education - Twelve Core Units

Tuition \$552 • Duration of Study: 8 months

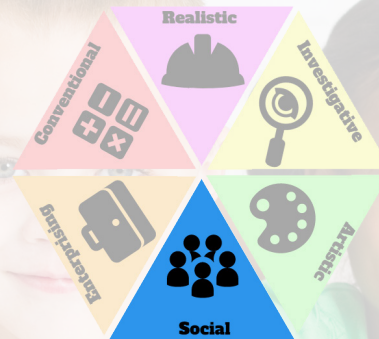
A Certificate in Early Childhood Education: Twelve Core Units will awarded upon completion of the required courses (12 units). Please refer to the Norco College Catalog or visit the Counseling Center.

### Job & Wage Information

- Instructional Assistant/Teacher Assistant  
Wage Range\*: \$22,500 to \$45,540 (yearly)  
8% increase expected in CA 2016-2026;  
17,710 openings annually  
More info: <http://bit.ly/TeacherAssistantNC>

\*2018, Riverside/Ontario/San Bernardino Metro Area

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[www.calstate.edu/transfer/adt-search/search.shtml](http://www.calstate.edu/transfer/adt-search/search.shtml)

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## 2019-2020

### BIOLOGY

(CSUGE for STEM) NAS767

The Associate in Science in Biology for Transfer Degree introduces the concepts and principles upon which biologic knowledge is based including the biochemistry, structure and function, ecology and evolution of organisms, from the levels of cells through the biosphere. Students will develop skills for critical/analytical thinking, perceptive reading/observation and interpretation. The Associate in Science in Biology for Transfer degree provides students with a core curriculum that will prepare them with the knowledge and skills required to earn a baccalaureate degree in biology. The intent of this degree is to assist students in seamlessly transferring to a California State University.

Required Courses (32 units)	Units
BIO-60* Introduction to Molecular and Cellular Biology	5
BIO-61* Introduction to Organismal and Population Biology	5
CHE-1A* General Chemistry I	5
CHE-1B* General Chemistry II	5
MAT-1A* Calculus I	4
Complete one Physics sequence as shown below:	
PHY-2A* General Physics I	4
AND	
PHY-2B* General Physics II	4
OR	
PHY-4A* Mechanics	4
AND	
PHY-4B* Electricity and Magnetism	4

\*Courses may also be used to fulfill general education requirements for the CSU GE for STEM or IGETC for STEM pattern, please confer with a counselor.

Course	Units
ENGL 1A	4.0
Math 1A	4.0
CHEM 1A	5.0
AREA E	3.0
Total Units:	16.0

Course	Units
AREA A3	3.0
MATH 1B	4.0
CHEM 1B	5.0
POL 1	3.0
Total Units:	15.0

Course	Units
BIO 60	5.0
AREA A1	3.0
ELECTIVE GROUP/LIST A	4.0
AREA C1	3.0
Total Units:	15.0

Course	Units
BIO 61	5.0
ELECTIVE GROPU/LIST A	4.0
HIS 6/7/14/31/34	3.0
AREA D	3.0
Total Units:	15.0

Suggested Pathway for Biology ADT

#### Associate in Science for Transfer Degree

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

See your counselor for **YOUR** plan!



## **CSU GE for STEM**

Students pursuing certain Associate Degrees for Transfer may be eligible to complete CSU GE for STEM, deferring two lower-division GE courses until after transfer. CSU GE for STEM is applicable only to majors in which the Transfer Model Curriculum explicitly indicates the availability of the option. **At Norco College, currently only the ADT in Biology allows CSU GE for STEM.**

**"CSU GE Breadth for STEM" certification as part of an Associate Degree for Transfer in Biology would require that the student has completed:**

- a. All courses in Areas A, B, and E of the traditional GE Breadth curriculum; and
- b. One course in Area C1 Arts and one course in Area C2 Humanities; and
- c. Two courses in Area D from two different disciplines.

## **IGETC for STEM**

Students pursuing certain Associate Degrees for Transfer may be eligible to complete IGETC for STEM, deferring two to three lower-division GE courses until after transfer. IGETC for STEM is applicable only to majors in which the Transfer Model Curriculum explicitly indicates the availability of the option. **At Norco College, currently only ADT's in Biology and Chemistry allow IGETC for STEM.**

**"IGETC for STEM" certification as part of an Associate Degree for Transfer in Biology would require:**

**Complete the following courses *before* transfer:**

- All courses in Areas 1 (except 1C for UC-bound students), 2, and 5 of the traditional IGETC; and
- One course in Area 3A; one course in Area 3B; and two courses in Area 4 from two different disciplines.

**Complete the following courses *after* transfer:**

- One remaining lower-division general education course in Area 3;\*
- One remaining lower-division general education course in Area 4;\* and
- One course in Area 6 for UC-bound students who have not satisfied it through proficiency.\*

\*These deferred lower division courses must be replaced with calculus and/or science courses required by the major before transfer.

***Please consult with a Norco College counselor to discuss which general education pattern is the best option for you based on your individual major, goals, and transfer institution.***



California Community Colleges are now offering Associate Degrees for Transfer (ADT's) to the CSU. These may include Associate in Arts (AA-T) or Associate in Science (AS-T) degrees. These degrees are designed to provide a clear pathway to a CSU major and baccalaureate degree. California Community College students who are awarded an AA-T or AS-T degree are guaranteed admission with junior standing somewhere in the CSU system and given priority admission consideration to their local CSU campus or to a program that is deemed similar to their community college major. This priority does not guarantee admission to specific majors or campuses. Students who have been awarded an AA-T or AS-T are able to complete their remaining requirements for the 120-unit baccalaureate degree within 60 semester or 90 quarter units. To view the most current list of Norco College Associate Degrees for Transfer and to find out which CSU campuses accept each degree, please go to:

[www.calstate.edu/transfer/adt-search/search.shtml](http://www.calstate.edu/transfer/adt-search/search.shtml)

**Students are encouraged to meet with a Norco College counselor to review their options for transfer and to develop an educational plan that best meets their goals and needs.**

**2019-2020**  
**HISTORY**  
**(CSUGE) NAA744**

The Associate in Arts in History for Transfer Degree is designed to prepare the student for transfer to institutions of higher education and specifically intended to satisfy the lower division requirements for the Baccalaureate in Arts in History at a California State University. This degree is designed to prepare students to transfer seamlessly to a CSU.

Required Courses: (18 units)	Units
HIS-6*/6H* Political and Social History of the United States/Honors	3
HIS-7*/7H* Political and Social History of the United States/Honors	3
HIS-1* History of World Civilizations I	3
HIS-2* History of World Civilizations II	3
LIST A Choose from the list below	3
LIST B Choose from the list below	3

List A: Select 1 course (3 units)	Units
COM-12* Intercultural Communication	3
ENG-20* Survey of African American Literature	3
HIS-14* African American History I	3
HIS-25* History of Mexico	3
HIS-31* Introduction to Chicano/A Studies	3
HIS-34* History of Women in America	3
POL-4*/4H* Introduction to World Politics/Honors	3
SOC-10* Race and Ethnic Relations	3

List B: Select 1 course (3 units)	Units
ECO-7*/7H Principles of Macroeconomics/Honors	3
GEG-2* Human Geography	3
HIS-26* History of California	3
HUM-4*/4H* Arts & Ideas: Ancient World through the Medieval Period/Honors	3
HUM-5*/5H* Arts & Ideas: Renaissance through the Modern Era/Honors	3
POL-1*/1H* American Politics/Honors	3
POL-2* Comparative Politics	3
SOC-1*/1H Introduction to Sociology/Honors	3

\*Courses may also be used to fulfill general education requirements for the CSU GE or IGETC pattern, please confer with a counselor.

Course	Units
ENGL 1A	4.0
AREA B4	4.0
HIST 1	3.0
AREA C1	3.0
AREA E	3.0

Total Units: 17.0

Course	Units
AREA A1	3.0
HIST 6 or 7	3.0
ELECTIVE GROUP/LIST A	3.0
AREA B2	3.0
CSU ELECTIVE	3.0

Total Units: 15.0

Course	Units
AREA A3	3.0
HIST 6 or 7	3.0
AREA B1/B3	4.0
CSU ELECTIVE	3.0
CSU ELECTIVE	3.0

Total Units: 16.0

Course	Units
HIST 2	3.0
POL 1	3.0
CSU ELECTIVE	3.0
CSU ELECTIVE	3.0
CSU ELECTIVE	3.0

Total Units: 15.0

Suggested Pathway for History ADT

**Associate in Arts for Transfer Degree**

The Associate in Arts in History 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.

See your counselor for **YOUR** plan!





California Community Colleges are now offering Associate Degrees for Transfer (ADT's) to the CSU. These may include Associate in Arts (AA-T) or Associate in Science (AS-T) degrees. These degrees are designed to provide a clear pathway to a CSU major and baccalaureate degree. California Community College students who are awarded an AA-T or AS-T degree are guaranteed admission with junior standing somewhere in the CSU system and given priority admission consideration to their local CSU campus or to a program that is deemed similar to their community college major. This priority does not guarantee admission to specific majors or campuses. Students who have been awarded an AA-T or AS-T are able to complete their remaining requirements for the 120-unit baccalaureate degree within 60 semester or 90 quarter units. To view the most current list of Norco College Associate Degrees for Transfer and to find out which CSU campuses accept each degree, please go to:

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**2019-20**  
**POLITICAL SCIENCE**  
**(CSUGE) NAA754**

The Associate in Arts in Political Science for Transfer degree is a curricular pattern designed specifically to transfer students as political science majors with junior status to the CSU system. Though the Associate in Arts in Political Science for transfer also provides broad general preparation for political science majors entering any four-year university, students must consult the specific requirements of any non-CSU campus to which they are applying. Students earning the Associate in Arts in Political Science for Transfer will be provided with a deep appreciation of the social, economic and cultural dimensions of politics and encourages to approach all political issues and ideas critically.

Required Courses: (18-20 units)		Units
POL-1*/1H*	American Politics/Honors	3
LIST A	Choose from the list below	9-10
LIST B	Choose from the list below	6-7
LIST A Choose three courses from the following: (9-10 units)		Units
POL-2*	Comparative Politics	3
POL-4*/4H*	Introduction to World Politics/Honors	3
POL-11*	Political Theory	3
MAT-12*/12H*	Statistics/Honors	4
OR		
PSY/SOC-48*	Statistics for Social and Behavioral Sciences	3
LIST B Choose two courses from the following: (6-7 units)		Units
Any course from List A not already used		
ADJ-9*	Law in American Society	3
ECO-7*/7H*	Principles of Macroeconomics/Honors	3
HIS-7*/7H*	Political and Social History of the U.S./Honors	3
POL-5*	The Law and Politics	3
POL-13*	Introduction to American Foreign Policy	3
PSY-50*	Research Methods in Psychology	4
SOC-3*	Social Inequality	3
SOC-50*	Introduction to Social Research Methods	3

\*Courses may also be used to fulfill general education requirements for the CSU GE or IGETC pattern, please confer with a counselor.

Course	Units
ENGL 1A	4.0
MAT 12/PSY 48/SOC 48	3.0-4.0
POL 1	3.0
AREA E	3.0

Total Units: 13.0-14.0

Course	Units
AREA A3	3.0
ELECTIVE GROUP/LIST A	3.0
HIS 6/7/14/31/34	3.0
AREA B1/B3	4.0
CSU ELECTIVE	3.0

Total Units: 16.0

Course	Units
ELECTIVE GROUP/LIST B	3.0-4.0
AREA C1/C2	3.0
AREA C2	3.0
CSU ELECTIVE	3.0
CSU ELECTIVE	3.0

Total Units: 15.0-16.0

Course	Units
AREA A1	3.0
ELECTIVE GROUP/LIST A	3.0
AREA B2	3.0
AREA C1	3.0
ELECTIVE GROUP/LIST B	3.0-4.0

Total Units: 15.0 - 16.0

Suggested Pathway for Political Science ADT

**Associate in Arts for Transfer Degree**

The Associate in Arts in Political Science 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.

See your counselor for **YOUR** plan!



California Community Colleges are now offering Associate Degrees for Transfer (ADT's) to the CSU. These may include Associate in Arts (AA-T) or Associate in Science (AS-T) degrees. These degrees are designed to provide a clear pathway to a CSU major and baccalaureate degree. California Community College students who are awarded an AA-T or AS-T degree are guaranteed admission with junior standing somewhere in the CSU system and given priority admission consideration to their local CSU campus or to a program that is deemed similar to their community college major. This priority does not guarantee admission to specific majors or campuses. Students who have been awarded an AA-T or AS-T are able to complete their remaining requirements for the 120-unit baccalaureate degree within 60 semester or 90 quarter units. To view the most current list of Norco College Associate Degrees for Transfer and to find out which CSU campuses accept each degree, please go to:

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**2019-20**  
**SOCIOLOGY**  
**(CSUGE) NAA695**

The Associate in Arts in Sociology for Transfer degree is designed to prepare the student for transfer to four-year institutions of higher education and specifically intended to satisfy the lower division requirements for the Baccalaureate Degree in Sociology at a California State University. It will also provide the student with a sufficient academic basis from which to pursue a career in the social science professions. The student will be afforded the opportunity to study the nature of the human affinity for aggregation and the complexities of societal organization. The breadth of Sociology will be examined to include the historical and contemporary theory and research as the basis from which to gain an in-depth awareness and understanding of the world in which we live.

Required Courses: (18-19 units)		Units
SOC-1*/1H*	Introduction to Sociology/Honors	3
List A	Select from the list below	6-7
List B	Select from the list below	6
List C	Select from the list below	3

List A Select two courses from the following (6-7 units)		Units
MAT-12*/12H*	Statistics /Honors	4
OR		
PSY/SOC-48*	Statistics for the Behavioral Sciences	3
SOC-2*	American Social Problems	3
SOC-50*	Introduction to Social Research Methods	3

List B Select two courses from the following (6 units)		Units
Any course from List A not already used		
SOC-10*	Race and Ethnic Relations	3
SOC-12*	Marriage Family Relations	3
SOC-20*	Introduction to Criminology	3

List C Select one course from the following (3 units)		Units
Any course from List A or B not already used		
SOC-3*	Social Inequality	3
SOC-15*	Women in American Society	3
ANT-2*/2H*	Cultural Anthropology/Honors	3
PSY-1*/1H*	General Psychology/Honors	3
PSY-8*	Introduction to Social Psychology	3

\*Courses may also be used to fulfill general education requirements for the CSU GE or IGETC pattern, please confer with a counselor.

Course	Units
ENGL 1A	4.0
MAT 12/PSY 48/SOC 48	3.0-4.0
SOC 1	3.0
AREA E	3.0

Total Units: 13.0-14.0

Course	Units
AREA A1	3.0
AREA A3	3.0
SOC 12/2/50	3.0
HIS 6/7/14/31/34	3.0
AREA B1/B3	3.0

Total Units: 16.0

Course	Units
POL 1	3.0
AREA C1/C2	3.0
SOC 10/12/20	3.0
ELECTIVE GROUP/LIST C	3.0
CSU ELECTIVE	3.0-4.0

Total Units: 15.0-16.0

Course	Units
SOC 10/12/20	3.0
AREA B2	3.0
AREA C1	3.0
CSU ELECTIVE	3.0
CSU ELECTIVE	3.0

Total Units: 15.0

Suggested Pathway for Sociology ADT

See your counselor for **YOUR** plan!

**Associate in Arts for Transfer Degree**

The Associate in Arts in Sociology 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.



California Community Colleges are now offering Associate Degrees for Transfer (ADT's) to the CSU. These may include Associate in Arts (AA-T) or Associate in Science (AS-T) degrees. These degrees are designed to provide a clear pathway to a CSU major and baccalaureate degree. California Community College students who are awarded an AA-T or AS-T degree are guaranteed admission with junior standing somewhere in the CSU system and given priority admission consideration to their local CSU campus or to a program that is deemed similar to their community college major. This priority does not guarantee admission to specific majors or campuses. Students who have been awarded an AA-T or AS-T are able to complete their remaining requirements for the 120-unit baccalaureate degree within 60 semester or 90 quarter units. To view the most current list of Norco College Associate Degrees for Transfer and to find out which CSU campuses accept each degree, please go to:

[www.calstate.edu/transfer/adt-search/search.shtml](http://www.calstate.edu/transfer/adt-search/search.shtml)

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**2019-2020**  
**CHEMISTRY**  
**(IGETC for STEM) NAS769**

The Associate in Science in Chemistry for Transfer Degree introduces the concepts and principles upon which chemical knowledge is based, including chemical structures and nomenclature, stoichiometry and solving of chemical equations, the thermodynamics of chemical reactions, and theories of chemical bonding. Students will develop skills for critical/analytical thinking, perceptive reading/observation and interpretation. The Associate in Science in Chemistry for Transfer degree provides students with a core curriculum that will prepare them with the knowledge and skills required to earn a baccalaureate degree in chemistry.

Required Courses (36 units)	Units	
CHE-1A*	General Chemistry I	5
CHE-1B*	General Chemistry II	5
CHE-12A*	Organic Chemistry I	5
CHE-12B*	Organic Chemistry II	5
MAT-1A*	Calculus I	4
MAT-1B*	Calculus II	4
PHY-4A*	Mechanics	4
PHY-4B*	Electricity and Magnetism	4

\*Courses may also be used to fulfill general education requirements for the IGETC for STEM pattern, please confer with a counselor.

Course	Units
ENGL 1A	4.0
CHEM 1A	5.0
MAT 1A	4.0
AREA 3B	3.0

Total Units: 16.0

Course	Units
ENGL 1B	4.0
CHEM 1B	5.0
MAT 1B	4.0
AREA 5B	3.0

Total Units: 16.0

Course	Units
AREA 1C	3.0
CHEM 12A	5.0
PHY 4A	4.0
AREA 3A	3.0

Total Units: 15.0

Course	Units
CHEM 12B	5.0
PHY 4B	4.0
AREA 4	3.0
AREA 4	3.0

Total Units: 15.0

Suggested Pathway for Chemistry ADT

**Associate in Science for Transfer Degree**

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

See your counselor for **YOUR** plan!

## **IGETC for STEM**

Students pursuing certain Associate Degrees for Transfer may be eligible to complete IGETC for STEM, deferring two to three lower-division GE courses until after transfer. IGETC for STEM is applicable only to majors in which the Transfer Model Curriculum explicitly indicates the availability of the option. **At Norco College, currently only ADT's in Biology and Chemistry allow IGETC for STEM.**

**"IGETC for STEM" certification as part of an Associate Degree for Transfer in Chemistry would require:**

**Complete the following courses *before* transfer:**

- All courses in Areas 1 (except 1C for UC-bound students), 2, and 5 of the traditional IGETC; and
- One course in Area 3A; one course in Area 3B; and two courses in Area 4 from two different disciplines.

**Complete the following courses *after* transfer:**

- One remaining lower-division general education course in Area 3;\*
- One remaining lower-division general education course in Area 4;\* and
- One course in Area 6 for UC-bound students who have not satisfied it through proficiency.\*

\*These deferred lower division courses must be replaced with calculus and/or science courses required by the major before transfer.

***Please consult with a Norco College counselor to discuss which general education pattern is the best option for you based on your individual major, goals, and transfer institution.***

## C++ Programming 13 unit certificate

The C++ Programming certificate covers structured and object-oriented programming using C++ for business, gaming, mathematical and scientific applications.

### Required Courses

#### **CIS/CSC-5 Programming Concepts and Methodology I: C++ (4 units)\* (Must be completed first)**

*Advisory: CIS-1A*

Intro to the fundamentals of problem definition, algorithm development and structured programming logic for business, science and mathematical applications.

#### **CIS/CSC-17A Programming Concepts and Methodology II: C++ (3 units)\***

*Pre-requisite: CIS/CSC-5*

A comprehensive study of the syntax and semantics of the C++ language and methodology of object-oriented program development.

#### **CIS-17B C++ Programming: Advanced Objects (3 units)\***

*Advisory: Take CIS/CSC-17A before CIS/CSC-17B and CIS/CSC-17C*

Advanced C++ Programming course for students familiar with object-oriented programming and utilization of basic graphical interface techniques.

#### **CIS-17C C++ Programming: Data Structure (3 units)\***

*Advisory: Take CIS/CSC-17A before CIS/CSC-17B and CIS/CSC-17C*

A thorough presentation of the essential principles and practices of data structures using the C++ programming language.

*\*this class transfers toward one or more CSUSB or CalPoly majors.*

*Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.*



## C++ Programming

Tuition \$598 • Duration of Study: 8 months

A Certificate in C++ Programming will be awarded upon completion of the required courses (13 units). Please refer to the Norco College Catalog or visit the Counseling Center.

### Job & Wage Information

- Computer Programmer  
Wage Range\*: \$24.67-51.31  
5% decrease in employment expected in CA 2016-2026; 2,270 openings annually  
More info:  
<http://bit.ly/CompProgrammerNC>
- Software Developer  
Wage Range\*: \$25.64-69.47  
40% increase in employment expected in CA 2016-2026; 15,500 openings annually  
More info:  
<http://bit.ly/SoftwareDeveloperNC>

\*2018, Riverside/Ontario/San Bernardino Metro Area

### What type of interests might be a good fit for this career choice?



### Investigative

People who like to observe, learn, investigate, analyze, evaluate, or solve problems primarily of a scientific or mathematical nature.

*For more information on careers that fit this category of interests, visit the Career Center in the Center for Student Success.*

### What's Your School?

NORCO COLLEGE  
SCHOOL OF  
Science, Technology,  
Engineering & Mathematics

Visit [www.norcollege.edu/STEM](http://www.norcollege.edu/STEM)  
for more information about this program.

## Graphic Design

### 26 unit certificate • 60 unit degree

The Graphic Design certificate focuses on basic skills in graphic design by learning to manipulate drawn, painted, photographed, or computer-generated images as well as basic web design.

### Required Courses (to earn certificate)

#### CIS-66 Web Development I (3 units)\*

Introduction to the webpage technologies and languages.

OR

#### CIS-72A Introduction to Web Page Production (1.5 units)\*

Advisory: Competency in the use of a computer, familiarity with the Internet; CIS/CAT-95A Introduction to webpage creation using Extensible Hypertext Markup Language (XHTML).

An introduction to Web page creation using Extensible Hypertext Markup Language (XHTML).

AND

#### CIA-72B Intermediate Web Page Creation Using Cascading Style Sheets (1.5 units)\*

Advisory: Knowledge of HTML and the Internet; CIS-72A and CIS/CAT-95A Intermediate webpage creation style sheets (CSS) to format and lay out webpage content.

Intermediate Web page creation using cascading style sheets (CSS) to format and lay out web page content.

CSS works with HTML, so HTML knowledge is recommended.

#### CIS/CAT-78A Introduction to Adobe Photoshop (3 units)\*

Introduction to Adobe Photoshop including mastery of digital image editing.

#### CIS-78B Advanced Adobe Photoshop (3 units)\*

prerequisite: CIS/CAT-78A Advanced techniques and methods for using Adobe Photoshop to produce custom graphics.

Advanced techniques and methods for using Adobe PhotoShop to produce custom graphic solutions.

#### CIS/CAT-79 Introduction to Adobe Illustrator (3 units)\*

Fundamentals of Adobe Illustrator, including creating objects, drawing paths and designing.

#### CIS/CAT-81 Introduction Adobe InDesign (3 units)\*

Page design and layout techniques using Adobe InDesign.

#### CIS-59/ADM-62 Typography and Graphic Design (3 units)\*

Fundamentals of typography including anatomy, design, hierarchy, and aesthetic expression.

#### ART-22\* Basic Design (3 units)\*

An introduction to the fundamentals of two-dimensional design.

#### ART-39 Design and Graphics (3 units)\*

Advisory: ART-17, 22 or 35A

Fundamental design methodology for visual communication and exploration of design principles.

#### GAM/CIS-44 Portfolio Production (2 units)\*

Prerequisite: GAM-23 or GAM-32 or GAM-46 or GAM-52 or MUC-6 or [ART-22, ART-39, CIS-59, CIS-66, CIS-78B, CIS/CAT-79 and CIS-81] or [CIS-68 and CIS-75]

Creative organization and presentation of a body of work exhibiting portfolio-quality aptitude.

\*this class transfers toward one or more CSUSB or CalPoly majors. Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.



## Graphic Design

Tuition \$1,196 • Duration of Study: 16 months

An Associate of Science Degree in Graphic Design will be awarded upon completion of the required courses (26 units) plus the General Education requirements. Please refer to the Norco College Catalog or visit the Counseling Center.

### Job & Wage Information

- Graphic Designer  
Wage Range\*: \$15.05-37.36  
7% increase in employment expected in CA 2016-2026; 3,750 openings annually  
More info: <http://bit.ly/GraphicDesignerNC>

\*2018, Riverside/Ontario/San Bernardino Metro Area

### What type of interests might be a good fit for this career choice?



## Artistic

People who have artistic, innovating, or intuitional abilities. People who prefer using their creativity or imagination.

For more information on careers that fit this category of interests, visit the Career Center in the Center for Student Success.

### What's Your School?

NORCO COLLEGE  
SCHOOL OF  
Science, Technology,  
Engineering & Mathematics

Visit [www.norcocollege.edu/STEM](http://www.norcocollege.edu/STEM)  
for more information about this program.  
View gainful employment information at:  
[www.norcocollege.edu/academicaffairs/cte](http://www.norcocollege.edu/academicaffairs/cte)



## Java Programming 13 unit certificate

The Java Programming certificate provides the student with skills a new programmer would need to obtain employment programming Java applications.

### Required Courses

**CIS/CSC-5 Programming Concepts and Methodology I: C++ (4 units)\* (Must be completed first)**

*Advisory: CIS-1A*

Fundamentals of problem definition, algorithm development and structured programming logic for business, science and mathematical applications.

**CIS/CSC-18A Java Programming: Objects (3 units)\***

*Advisory: CIS/CSC-5A/Should be completed prior to CIS/CSC-18B*

Intro to Java Programming for students with experience in the fundamentals of programming.

**CIS-18B Java Programming: Advanced Objects (3 units)\***

*Advisory: CIS/CSC-18A*

Advanced Java Programming course for students already familiar with object-oriented programming and utilization of basic graphical interface techniques.

**CIS-18C Java Programming: Data Structures (3 units)\***

*Advisory: CIS/CSC-18A*

Advanced Java Programming course for students already familiar with object-oriented programming and database concepts.

*\*this class transfers toward one or more CSUSB or CalPoly majors.  
Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.*

## Java Programming

Tuition \$598 • Duration of Study: 8 months

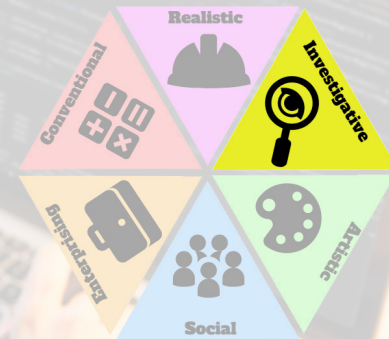
A Certificate in Java Programming will be awarded upon completion of the required courses (13 units). Please refer to the Norco College Catalog or visit the Counseling Center.

## Job & Wage Information

- Computer Programmer  
Wage Range\*: \$24.67-51.31  
5% decrease in employment expected in CA 2016-2026; 2,270 openings annually  
More info:  
<http://bit.ly/CompProgrammerNC>
- Software Developer  
Wage Range\*: \$25.64-69.47  
40% increase in employment expected in CA 2016-2026; 15,500 openings annually  
More info:  
<http://bit.ly/SoftwareDeveloperNC>

\*2018, Riverside/Ontario/San Bernardino Metro Area

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## Investigative

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SCHOOL OF  
Science, Technology,  
Engineering & Mathematics

Visit [www.norcollege.edu/STEM](http://www.norcollege.edu/STEM)  
for more information about this program.



## Computer Programming 26.5 unit certificate • 60 unit degree

The Computer Programming certificate focuses on writing and implementation of computer programs, and procedures of software design and computer programming.

### Required Courses (to earn certificate)

#### **CIS-1A Intro to Computer Information Systems (3 units)\***

Introduction to computer concepts, theory and application.

#### **CIS/CSC-2 Fundamentals of Systems Analysis (3 units)\***

Structured analysis of user requirements related to information systems, for eventual design/development of the system.

#### **CIS/CSC-5 Programming Concepts & Methodology I: C++ (4 units)\***

*Advisory: CIS-1A*

Fundamentals of problem definition, algorithm development and structured programming, logic for business, science and mathematical applications.

#### **CIS-21 Intro to Operating Systems (3 units)\***

*Prerequisite: CIS-1A*

Intro to operating system concepts, structure, performance, function and management.

#### **CIS-72A Intro to Web Page Creation (1.5 units)\***

*Advisory: Competency in the use of a computer, familiarity with the internet; CIS/CAT-95A*

Intro to web page creation using Hypertext Markup Language (HTML).

Plus, an additional 12 units of programming electives from these groups:

Choose 6 units from group one and 6 units from group two:

**Group one:** CIS/CSC-12\*, CIS/CSC-14A\*, CIS-14B, CIS/CSC-17A\*, CIS/CSC-18A\*

**Group two:** CIS/CSC-11\*, CIS-17B\*, CIS-17C\*, CIS-18B\*, CIS-18C\*

*Some of these courses may have prerequisites or advisories. Refer to College Catalog for more information.*

*\*this class transfers toward one or more CSUSB or CalPoly majors. Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.*



## Computer Programming

Tuition \$1,219 • Duration of Study: 16 months

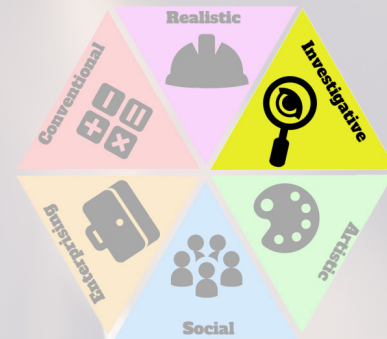
An Associate of Science Degree in Computer Programming will be awarded upon completion of the required courses (26.5 units) plus the General Education requirements. Please refer to the Norco College Catalog or visit the Counseling Center.

### Job & Wage Information

- Computer Programmer  
Wage Range\*: \$24.67-51.31  
5% decrease in employment expected in CA 2016-2026; 2,270 openings annually  
More info:  
<http://bit.ly/CompProgrammerNC>
- Software Developer, Applications  
Wage Range\*: \$25.64-69.47  
40% increase in employment expected in CA 2016-2026; 15,500 openings annually  
More info:  
<http://bit.ly/SoftwareDeveloperNC>

\*2018, Riverside/Ontario/San Bernardino Metro Area

### What type of interests might be a good fit for this career choice?



## Investigative

People who like to observe, learn, investigate, analyze, evaluate, or solve problems primarily of a scientific or mathematical nature.

*For more information on careers that fit this category of interests, visit the Career Center in the Center for Student Success.*

### What's Your School?

NORCO COLLEGE  
SCHOOL OF  
Science, Technology,  
Engineering & Mathematics

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for more information about this program.  
View gainful employment information at:  
[www.norcollege.edu/academicaffairs/cte](http://www.norcollege.edu/academicaffairs/cte)

## Computer Numerical Control (CNC) Operator 17 unit certificate

Computer control programmers and operators use computer numerically controlled (CNC) machines to produce a wide variety of products, from automobile engines to computer keyboards.

### Required Courses

#### **ENE-42 SolidWorks I (3 units)\***

This course is designed to introduce the student to three-dimensional parametric solid modeling with SolidWorks.

#### **ENE-51 Blueprint Reading (2 units)\***

Beginning course in the study of blueprints and their interpretation, types of projection, symbols and abbreviations.

#### **MAN-36 General Machine Shop and Theory of Machining (4 units)**

An introduction to the basic setup and operating of the lathe, mill, saw, drill press, and grinder. Safety, blueprint reading, measurement, shop math, tool grinding, bench work and layout, cutting concepts, and speed and feed calculations are also included. Emphasis will be on the fundamentals of bench work and layout related to the National Institute of Metalworking Skills (NIMS) standards.

#### **MAN/ELE-55 Occupational Safety & Health Administration (OSHA) Standards for General Industry (1 unit)**

Covers OSHA policies, procedures and standards as well as safety for general industry and health principles.

#### **MAN-56 CNC Machine Setup & Operation (4 units)**

Fundamental skills related to setup and operation of CNC (Computer Numerically Controlled) machine tools.

#### **MAN-57 CNC Program Writing (3 units)**

Intro to the manual CNC program writing. This course includes the Cartesian coordinate system, absolute/incremental programming, circular interpolation, cutter radius compensation, canned cycles, and other programming techniques related to CNC machine tools. Students will gain hands-on experience with CNC machine tools.

*\*this class transfers toward one or more CSUSB or CalPoly majors. Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.*



## Computer Numerical Control (CNC) Operator

Tuition \$782 • Duration of Study: 8 months

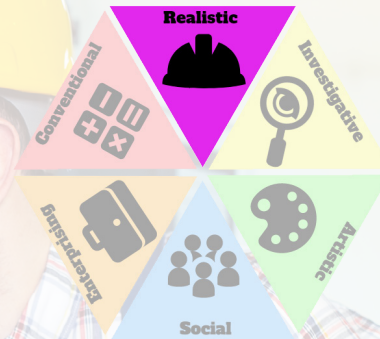
A Certificate in CNC Operator will be awarded upon completion of the required course (17 units). Please refer to the Norco College Catalog or visit the Counseling Center.

### Job & Wage Information

- Manufacturing Production Technician  
Wage Range\*: \$18.15-44.84  
8% increase expected in CA 2016-2026; 950 openings annually  
More information: <http://bit.ly/MfgTechNC>
- Maintenance Machinery Worker  
Wage Range\*: \$13.48-43.59  
12% increase expected in CA 2016-2026; 870 openings annually  
More information: <http://bit.ly/MachMaintNC>

\*2018, Riverside/Ontario/San Bernardino Metro Area

### What type of interests might be a good fit for this career choice?



## Realistic

People who have athletic or mechanical ability and prefer to work with objects, machines and tools. Preference for working with things over people.

*For more information on careers that fit this category of interests, visit the Career Center in the Center for Student Success.*

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Engineering & Mathematics

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for more information about this program.



## Computer Numerical Control (CNC) Programming 26-27 unit certificate • 60 unit degree

The CNC Programming program teaches how to design and carry out the operations needed to make machined products that meet precise specifications.

### Required Courses (to earn certificate)

#### **ENE-30 Computer Aided Drafting (3 units)\***

*Advisory: CIS-1A*

Two-dimensional computer aided drafting class for drafters.

#### **ENE-42 SolidWorks I (3 units)\***

Introduction to three-dimensional parametric solid modeling with SolidWorks.

#### **ENE-51 Blueprint Reading (2 units)\***

Beginning course in the study of blueprints and their interpretation, types of projection, symbols and abbreviations.

#### **ENE-52 Geometric Dimensioning & Tolerancing (2 units)\***

Helps students to read and use ANSI Y14.M, the current standard for drafting.

#### **ENE-60 Math for Engineering Technology (3 units)**

Mathematical problems commonly used by students enrolled in the trade and industrial and engineering programs.

OR

#### **MAT-36 - Trigonometry (4 units)\***

*Prerequisite: MAT-35 and 53 or qualifying placement level*

The study of trigonometric functions, their inverses and their graphs; identities and proofs related to trigonometric expressions.

#### **MAN-35 Computer Aided Manufacturing-Mastercam (5 units)**

A course in computer aided manufacture of parts and assemblies using Mastercam software.

#### **MAN-55 Occupational Safety & Health Administration (OSHA) Standards for General Industry (1 unit)**

Covers OSHA policies, procedures, and standards as well as safety for general industry and health principles.

#### **MAN-56 CNC Machine Setup and Operation (4 units)**

Fundamental skills related to setup and operation of CNC (Computer Numerically Controlled) machine tools.

#### **MAN-57 CNC Program Writing (3 units)**

Introduction to manual CNC program writing.

*\*this class transfers toward one or more CSUSB or CalPoly majors.  
Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.*



## Computer Numerical Control (CNC) Programming

Tuition \$1,196-\$1,242 • Duration of Study: 20 months

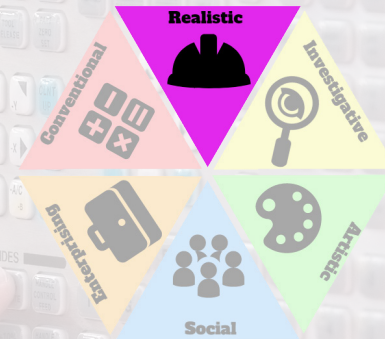
An AS Degree in Computer Numerical Control Programming will be awarded upon completion of the required courses (26-27 units) plus the General Education requirements. Please refer to the Norco College Catalog or visit the Counseling Center.

### Job & Wage Information

- Computer-controlled Machine Tool Operators  
Wage Range\*: \$12.93-\$29.16  
4% increase expected in CA 2016-2026; 1,190 openings annually  
More information: <http://bit.ly/ToolOperatorNC>
- Multiple Machine Tool Setters  
Wage Range\*: \$11.84-26.77  
0% increase expected in CA 2016-2026; 550 openings annually  
More information: <http://bit.ly/MachineSetterNC>
- Manufacturing Production Technician  
Wage Range\*: \$18.15-44.84  
8% increase expected in CA 2016-2026; 950 openings annually  
More information: <http://bit.ly/MfgTechNC>
- Machinists  
Wage Range\*: \$12.82-31.43  
4% increase expected in CA 2016-2026; 3,770 openings annually  
More information: <http://bit.ly/MachinistsNC>

\*2018, Riverside/Ontario/San Bernardino Metro Area

### What type of interests might be a good fit for this career choice?



## Realistic

People who have athletic or mechanical ability and prefer to work with objects, machines and tools. Preference for working with things over people.

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for more information about this program.  
[www.norcocollege.edu/academicaffairs/cte](http://www.norcocollege.edu/academicaffairs/cte)



California Community Colleges are now offering Associate Degrees for Transfer (ADT's) to the CSU. These may include Associate in Arts (AA-T) or Associate in Science (AS-T) degrees. These degrees are designed to provide a clear pathway to a CSU major and baccalaureate degree. California Community College students who are awarded an AA-T or AS-T degree are guaranteed admission with junior standing somewhere in the CSU system and given priority admission consideration to their local CSU campus or to a program that is deemed similar to their community college major. This priority does not guarantee admission to specific majors or campuses. Students who have been awarded an AA-T or AS-T are able to complete their remaining requirements for the 120-unit baccalaureate degree within 60 semester or 90 quarter units. To view the most current list of Norco College Associate Degrees for Transfer and to find out which CSU campuses accept each degree, please go to:

[www.calstate.edu/transfer/adt-search/search.shtml](http://www.calstate.edu/transfer/adt-search/search.shtml)

**Students are encouraged to meet with a Norco College counselor to review their options for transfer and to develop an educational plan that best meets their goals and needs.**

## 2019-2020 COMPUTER SCIENCE (IGETC) NAS650

The Associate in Science in Computer Science for Transfer degree provides a solid preparation for transfer majors in computer science including an emphasis on object-oriented programming logic in C++, computer architecture, calculus and calculus-based physics. The intent of this degree is to assist students in seamlessly transferring to a CSU. With this degree the student will be prepared for transfer to the university upper division level in preparation for the eventual conferral of the bachelor's degree in Computer Science. The degree aligns with the approved Transfer Model Curriculum (TMC) in Computer Science.

Required Courses (29 units)		Units
CSC/CIS-5	Programming Concepts and Methodology I: C++	4
CSC/CIS-7	Discrete Structures	3
CSC/CIS-11	Computer Architecture and Organization: Assembly	3
CSC/CIS-17A	Programming Concepts and Methodology II: C++	3
MAT-1A*	Calculus I	4
MAT-1B*	Calculus II	4
PHY-4A*	Mechanics	4
PHY-4B*	Electricity and Magnetism	4

\*Courses may also be used to fulfill general education requirements for the IGETC pattern, please confer with a counselor.

Course	Units
ENG 1A	4.0
CSC 5	4.0
MATH 1A	4.0
AREA 4	3.0
Total Units: 15.0	
Course	Units
AREA 3A	3.0
CSC 17A	3.0
MATH 1B	4.0
PHY 4A	4.0
Total Units: 14.0	
Course	Units
CSC 7	3.0
PHY 4B	4.0
AREA 3A/3B	3.0
AREA 4	3.0
ENG 1B	3.0
Total Units: 16.0	
Course	Units
AREA 1C	3.0
AREA 5B	5.0
CSC 11	3.0
HIS 6/7	3.0
POL 1	3.0
Total Units: 17.0	

Suggested Pathway for Computer Science ADT

### Associate in Science for Transfer Degree

The Associate in Science in Computer Science 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) 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.

See your counselor for YOUR plan!

## Architectural Graphics

### 9 unit certificate

The Architectural Graphics certificate prepares students with technical communication skills, and the knowledge and craft of two dimensional drafting solutions for architecturally related industry applications.

## Required Courses

### **ENE-21 Drafting (3 units)\***

Fundamentals of mechanical drawing including lettering, instruments and their uses, geometric construction, types of projection, freehand drawing, sectioning, dimensioning, auxiliary views, and pictorial drawing. Recommended for beginners and students with up to one year of drafting in high school.

### **ENE-30 Computer-Aided Drafting (3 units)\***

*Advisory: CIS-1A*

A two-dimensional Computer-Aided Drafting class for drafters. Students will use a CAD computer drafting system to develop computer drawn drawings which are typical to the various fields of drafting.

### **ARE-24 Architectural Drafting (3 units)\***

*Prerequisite: ENE 21 & 30*

Introduction to methods and techniques used in the development of architectural construction documents for light frame structures (Type V construction) including construction theory, notation, materials symbols, drawing format and general practice. Using Computer-Aided Drafting (CAD), this course will focus on the drawing of a set of plans to include a plot plan, foundation plan, floor plan(s), sections, exterior and interior elevations, electrical plan and structural details. Sketching techniques will also be covered.

*\*this class transfers toward one or more CSUSB or CalPoly majors.  
Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.*



## Architectural Graphics

Tuition \$414 • Duration of Study: 8 months

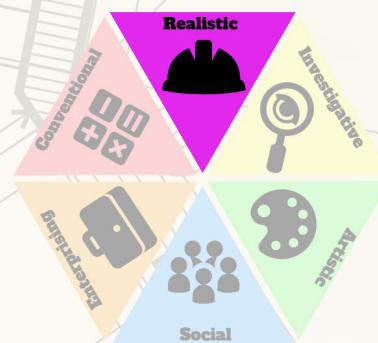
A Certificate in Architectural Graphics will be awarded upon completion of the required courses (9 units). Please refer to the Norco College Catalog or visit the Counseling Center.

### Job & Wage Information

- Architectural/Civil Drafter  
Wage Range\*: \$14.15-40.27  
10% increase expected in CA 2016-2026;  
1,480 openings annually  
More info: <http://bit.ly/DrafterNC>
- Mapping Technicians  
Wage Range\*: \$17.40-47.08  
10% increase expected in CA 2016-2026; 470 openings annually  
More info:  
<http://bit.ly/MappingTechnicianNC>

\*2018, Riverside/Ontario/San Bernardino Metro Area

### What type of interests might be a good fit for this career choice?



## Realistic

People who have athletic or mechanical ability and prefer to work with objects, machines and tools. Preference for working with things over people.

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### What's Your School?

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## Construction Technology 30 unit certificate • 60 unit degree

The Construction Technology program prepares individuals with the technical knowledge and skills in the area of building construction.

### Required Courses (to earn certificate)

#### **CON-63A Building Code (3 units)\***

Use of building codes and ordinances in plan checking for compliance.

#### **CON-64 Office Procedure & Field Inspection (3 units)\***

Office organization, procedures and necessary paperwork pertinent to building and safety office management.

#### **CON-65 Plumbing Code (3 units)\***

Review of plumbing codes including discussion and analysis of new laws.

#### **CON-66 National Electric Code (3 units)\***

Review of electrical codes including discussion and analysis of new laws.

#### **CON-67 Mechanical Codes (3 units)\***

Review of mechanical systems including discussion and analysis of new laws.

#### **CON-68 Simplified Engineering for Building Inspectors (3 units)\***

Intro to basic engineering.

#### **CON-70 Fundamentals of Soil Technology (3 units)\***

Field inspection and testing of soils and rock for grading and building contractors.

#### **CON-71 Energy Conservation Standards (1.5 units)\***

Admin regulations and codes that regulate the energy conservation for new residential buildings.

#### **CON-72 CA State Accessibility Standards (1.5 units)\***

Examines the provisions of Title 24 accessibility standards of the CA Uniform Building Code for application in the construction industry.

Plus, an additional 6 units from the following courses: CON-60 Intro to Construction (3 units)\*, CON-61 Materials of Construction (3 units)\*, CON-62 Blueprint Reading (3 units)\*, CON-63BCD Analysis of Revisions to the Building Code (3 units)\*, CON-73 Project Planning for Site Construction (3 units)\*, CON-200 Construction Work Experience (1-4 units)\*

*Some of these courses have prerequisites or advisories. Refer to College Catalog for more information.*

*\*this class transfers toward one or more CSUSB or CalPoly majors. Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.*



## Construction Technology

Tuition \$1,380 • Duration of Study: 16 months

An Associate of Science Degree in Construction Technology will be awarded upon completion of the required courses (30 units) plus the General Education requirements. Please refer to the Norco College Catalog or visit the Counseling Center.

### Job & Wage Information

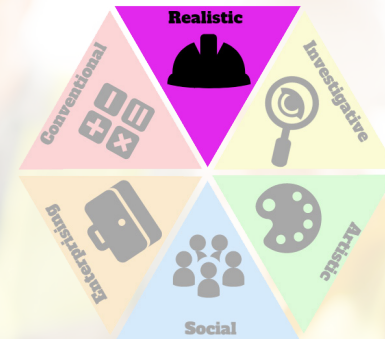
- Construction Carpenter  
Wage Range\*: \$13.63-42.22  
18% increase in employment expected in CA 2016-2026; 16,150 openings annually  
More info:  
<http://bit.ly/ConstructionCarpenterNC>
- Laborer  
Wage Range\*: \$12.14-36.15  
19% increase in employment expected in CA 2016-2026; 15,970 openings annually  
More info:  
<http://bit.ly/ConstructionLaborerNC>
- Painter, Construction & Maintenance  
Wage Range\*: \$12.14-30.10  
18% increase in employment expected in CA 2016-2026; 6,830 openings annually  
More info:  
<http://bit.ly/ConstructionPainterNC>

\*2018, Riverside/Ontario/San Bernardino Metro Area

### What's Your School?

NORCO COLLEGE  
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Engineering & Mathematics

### What type of interests might be a good fit for this career choice?



## Realistic

People who have athletic or mechanical ability and prefer to work with objects, machines and tools. Preference for working with things over people.

*For more information on careers that fit this category of interests, visit the Career Center in the Center for Student Success.*

Visit [www.norcollege.edu/STEM](http://www.norcollege.edu/STEM) for more information about this program.  
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## Conventional Machine Operator

### 10 unit certificate

This certificate is designed to prepare students with basic entry level machine operator skills, safety knowledge, theory, and quality control skills in manufacturing processes.

## Required Courses

### **ENE-42 SolidWorks I (3 units)\***

*Advisory: PC computer experience recommended CIS-1A*

This course is designed to introduce the student to three-dimensional parametric solid modeling with SolidWorks. Students will begin with basic parametric solid modeling techniques advancing into complex assemblies requiring animation.

### **ENE-51 Blueprint Reading (2 units)\***

Beginning course in the study of blueprints and their interpretation, types of projection, symbols and abbreviations.

### **MAN-36 - General Machine Shop and Theory of Machining (4 units)**

An introduction to the basic setup and operating of the lathe, mill, saw, drill press, and grinder. Safety, blueprint reading, measurement, shop math, tool grinding, bench work and layout, cutting concepts, and speed and feed calculations are also included. Emphasis will be on the fundamentals of bench work and layout related to the National Institute of Metal-working Skills (NIMS) standards.

### **MAN-55 Occupational Safety & Health Administration (OSHA) Standards for General Industry (1 unit)**

Covers OSHA policies, procedures and standards as well as safety for general industry and health principles.

*\*this class transfers toward one or more CSUSB or CalPoly majors.  
Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.*



## Conventional Machine Operator

Tuition \$460 • Duration of Study: 8 months

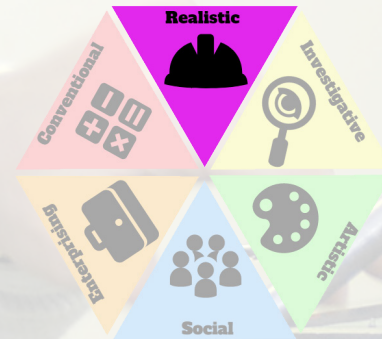
A Certificate in Conventional Machine Operator, will be awarded upon completion of the required courses (10 units). Please refer to the Norco College Catalog or visit the Counseling Center.

### Job & Wage Information

- Conventional Machinist  
Wage Range\*: \$12.23-28.75  
4% increase expected in CA 2016-2026; 3,770 openings annually  
More information: <http://bit.ly/MachinistNC>

\*2018, Riverside/Ontario/San Bernardino Metro Area

### What type of interests might be a good fit for this career choice?



## Realistic

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## Digital Electronics

### 28 unit certificate • 60 unit degree

The Digital Electronics program prepares students with the fundamental theories of DC and AC electronic components, circuits & behaviors before continuing on with digital integrated circuit logic & culminating with Printed Circuit Board (PCB) design.

## Required Courses (to earn certificate)

### **ELC/ELE-11 DC Electronics (4 Units)\***

Basic electrical theory.

### **ELC/ELE-13 AC Electronics (4 Units)\***

*Prerequisite: ELE-10, 11, 21 or 23*

Alternating Current (AC) theory, devices, circuits and applications.

### **ELE-25 Digital Techniques (4 Units)\***

Mathematics, number systems, and logic circuits as they relate to modern electronic computers and digital systems.

### **ELE-26 Microcontrollers (3 Units)\***

*Advisory: ELE-25*

Computer number systems, codes, and arithmetic functions; microcontroller functions, architecture, instruction sets, addressing modes, and I/O operations.

### **ENE/ELE-27 Technical Communications (3 Units)\***

Procedures for organizing and presenting data through informal and formal documents and presentations.

### **ELE-28 MultiSim CAD & PCB Design/Fab (3 Units)\***

Basic Computer-aided Design (CAD) drafting, block diagrams, printed circuit board design-layout.

### **Plus, an additional 7 units from the following courses:**

ELE-10 Survey of Electronics (4 Units)\*

ELE-23 Electronics Devices & Circuits (4 Units)\*

ELE/MAN-61 Robotics for Manufacturing (3 Units)\*

ELE/MAN-63 LabVIEW Visual Programming for Automated Systems (3 Units)\*

ELE/MAN-64 Programmable Logic Controllers (3 Units)\*

ELC/ELE-91 Fundamentals of Solar Energy (3 Units)\*

ELE-200 Electronics Work Experience (1-4 Units)\*

MAN-55 Occupational Safety and Health Administration (OSHA) Standards for General Industry (1unit)

*Some of these courses have prerequisites or advisories. Refer to College Catalog for more information.*

*\*this class transfers toward one or more CSUSB or CalPoly majors.*

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## Digital Electronics

Tuition \$1,288 • Duration of Study: 16 months

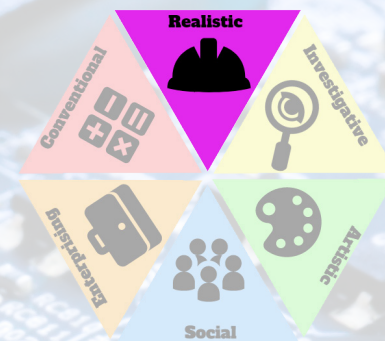
An Association of Science Degree in Digital Electronics will be awarded upon completion of the required courses (28 units) plus the General Education requirements. Please refer to the Norco College Catalog or visit the Counseling Center.

## Job & Wage Information

- Electronics Engineering Technician  
Wage Range\*: \$15.41-47.85  
7% increase in employment expected in CA 2016-2026; 2,330 openings annually  
More info: <http://bit.ly/ElectronicsEngineeringTechNC>
- Electrical & Electronics Installer & Repair  
Wage Range\*: \$12.98-34.45  
10% increase expected in CA 2016-2026; 200 openings annually  
More info: <http://bit.ly/ElectricalInstallerNC>
- Quality Control Technician/Analyst  
Wage Range\*: \$17.77-38.07  
12% increase expected in CA 2016-2026; 1,120 openings annually  
More info: <http://bit.ly/QualityControlNC>

\*2018, Riverside/Ontario/San Bernardino Metro Area

## What type of interests might be a good fit for this career choice?



## Realistic

People who have athletic or mechanical ability and prefer to work with objects, machines and tools. Preference for working with things over people.

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## 3D Mechanical Drafting

### 9 unit certificate

This certificate includes courses intended to help students qualify for an entry level CAD operator/drafter or help someone already in industry to update their skills.

## Required Courses

### ENE-21 Drafting (3 units)\*

Fundamentals of mechanical drawing including lettering, instruments and their uses, geometric construction, types of projection, freehand drawing, sectioning, dimensioning, auxiliary views, and pictorial drawing. Recommended for beginners and students with up to one year of drafting in high school.

### ENE-42 SolidWorks I (3 units)\*

This course is designed to introduce the student to three-dimensional parametric solid modeling with SolidWorks. Students will begin with basic parametric solid modeling techniques and advance into complex assemblies requiring animation.

### ENE-42B SolidWorks II (3 units)\*

*Prerequisite: ENE-42 or prior SolidWorks experience.*

An advanced course in using the three-dimensional parametric solid-modeler SolidWorks. This course is designed to further 3D parametric solid modeling software techniques learned in SolidWorks I. Students will delve deeper into topics that were introduced in the first SolidWorks course such as extruding, sweeping, lofting, shelling, assemblies, and animation.

*\*this class transfers toward one or more CSUSB or CalPoly majors.  
Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.*



## 3D Mechanical Drafting

Tuition \$414 • Duration of Study: 8 months

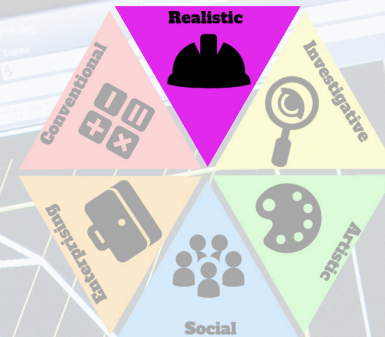
A Certificate in 3D Mechanical Drafting will be awarded upon completion of the required courses (9 units). Please refer to the Norco College Catalog or visit the Counseling Center.

### Job & Wage Information

- CAD Operator/Mechanical Drafter  
Wage Range\*: \$16.12-34.33  
8% increase expected in CA 2016-2026;  
380 openings annually  
More info:  
<http://bit.ly/MechanicalDrafterNC>
- Engineering Assistant/Engineering Technician  
Wage Range\*: \$18.07-42.37  
10% increase expected in CA 2016-2026;  
830 openings annually  
More info:  
<http://bit.ly/EngineeringTechnicianNC>

\*2018, Riverside/Ontario/San Bernardino Metro Area

### What type of interests might be a good fit for this career choice?



## Realistic

People who have athletic or mechanical ability and prefer to work with objects, machines and tools. Preference for working with things over people.

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Science, Technology,  
Engineering & Mathematics

Visit [www.norcocollege.edu/STEM](http://www.norcocollege.edu/STEM)  
for more information about this program.



## Drafting Technology 25-27 unit certificate • 60 unit degree

The Drafting Technology certificate is designed to offer the math and drawing techniques you'll need to represent three-dimensional buildings and objects.

### Required Courses (to earn certificate)

#### **DFT/ENE-21 Drafting (3 units)\***

Fundamentals of mechanical drawing.

#### **DFT/ENE-22 Engineering Drawing (3 units)\***

*Prerequisite: DFT/ENE-21, Advisory: DFT/ENE-30*

Drafting fundamentals reviewed, geometric construction, orthographic projections, free-hand.

#### **DFT/ENE-28 Technical Design (3 units)\***

*Prerequisite: DFT/ENE-22, Advisory: DFT/ENE-30, 42 and 52*

Study of industrial design and drafting procedures relating to the basic elements of mechanisms, including drawing of machine parts in various stages of manufacturing.

#### **DFT/ENE-30 Computer Aided Drafting (CAD) (3 units)\***

*Advisory: CIS-1A*

Two-dimensional computer aided drafting class for drafters.

#### **DFT/ENE-42 SolidWorks I (3 units)\***

Intro to three-dimensional parametric solid modeling with SolidWorks.

#### **DFT/ENE-51 Blueprint Reading (2 units)\***

Study of blueprints, interpretation, projection, symbols and abbreviations.

#### **ENE-52 Geometric Dimensioning & Tolerancing (2 units)\***

Helps students to read and use ANSI Y14.M, the current standard for drafting.

#### **DFT/ENE-60 Math for Engineering Technology (3 units)**

A course for mathematical problems frequently used by students enrolled in the trade and industrial and engineering programs.

OR

#### **MAT-36 Trigonometry (4 units)\***

*Prerequisite: MAT-35 and 53 or qualifying placement level*

The study of trigonometric functions, their inverses and their graphs; identities and proofs related to trigonometric expressions.

Plus, an additional 3-4 units from the following courses:

**DFT/ARE-24 Architectural Drafting (3 units),**

**DFT/ENE-23 Descriptive Geometry (3 units),**

**DFT/ELE/ENE-27 Technical Communications (3 units),**

**DFT/ENE-42B SolidWorks II (3 units), MAN-56 CNC**

**Machine Set-up and Operation (4 units)**

*Some of these courses have prerequisites or advisories. Refer to College Catalog for more information.*

*\*this class transfers toward one or more CSUSB or CalPoly majors. Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.*



## Drafting Technology

Tuition \$1,150 - \$1242 • Duration of Study: 18 months

An Associate of Science Degree in Drafting Technology will be awarded upon completion of the required courses (24-26 units) plus the General Education requirements. Please refer to the Norco College Catalog or visit the Counseling Center.

## Job & Wage Information

- Drafter

Wage Range\*: \$14.15-40.27

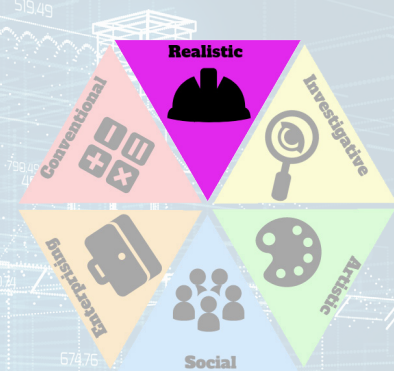
10% increase expected in CA 2016-2026;

1,480 openings annually

More info: <http://bit.ly/DrafterNC>

\*2018, Riverside/Ontario/San Bernardino Metro Area

## What type of interests might be a good fit for this career choice?



## Realistic

People who have athletic or mechanical ability and prefer to work with objects, machines and tools. Preference for working with things over people.

*For more information on careers that fit this category of interests, visit the Career Center in the Center for Student Success.*

## What's Your School?

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SCHOOL OF  
Science, Technology,  
Engineering & Mathematics

Visit [www.norcollege.edu/STEM](http://www.norcollege.edu/STEM)

for more information about this program.

View gainful employment information at:

[www.norcollege.edu/academicaffairs/cte](http://www.norcollege.edu/academicaffairs/cte)

## Electrician

### 31-32 unit certificate • 60 unit degree

The Electrician program prepares students to become an entry-level electrician trainee, and along with California State requirements prepares for careers as electricians. Courses are aligned with the California state standards to prepare students to earn their Electrician Training card.

## Required Courses (to earn certificate)

#### **ELC/ELE-71 Residential Electrical Wiring (4 units)**

The course introduces students to wiring methods commonly used in residential electrical wiring.

#### **ELC/ELE/MAN-72 Commercial and Industrial Electrical Wiring (4 units)**

Wiring of commercial and industrial buildings.

#### **ELC/ELE/MAN-73 Electric Motors and Transformers (4 units)**

Enables electricians to understand and effectively wire most standard DC motors, servos and steppers, as well as many AC motors.

#### **ELC/ELE/MAN-74 Industrial Wiring and Controls (4 units)\***

Industrial controls and electrical wiring of modern facilities, manufacturing, or warehousing.

#### **ELC/ELE-75 Solid State Devices and Lighting Controls (3 units)\***

Students will learn about solid state devices (electronics), sensors, SCR (silicon control rectifier), transistors, and proximity and light sensors used in most industrial and commercial installations.

#### **ELC/ELE-76 Low Voltage Wiring and Alternate Energy Generation (3 units)**

Introduces electricians to the specialized needs and requirements of institutional, educational and government entities.

#### **ELC/ELE/MAN-77 Electrical Theory (3 units)**

This course introduces students to electrical theory, Ohm's Law, magnetism, voltage inductance, capacitance, units of electric measurement, and proper usage of electrical test equipment (meters).

#### **ENE-62 Math for Automated Systems (3 units)**

Course concepts from arithmetic, algebra, geometry and scientific notation, extended and applied to problems in automation technology from electrical and mechanical engineering including metal work, welding, and building energy systems.

OR

#### **MAT-36 Trigonometry (4 units)\***

*Prerequisite: MAT-35 and 53 or qualifying placement level.*

A course in mathematical problems frequently used by students enrolled in the trade, industrial and engineering programs.

#### **CON-66 National Electrical Code (3 units)**

Review of electrical codes including discussion and analysis of the application of physical laws in development of the code requirements.

*\*this class transfers toward one or more CSUSB or CalPoly majors. Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.*



## Electrician

Tuition \$1,426 - \$1,472 • Duration of Study: 16 months

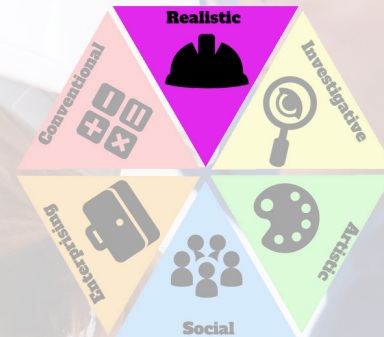
An Association of Science Degree in Electrician will be awarded upon completion of the required courses (31-32 units) plus the General Education requirements. Please refer to the Norco College Catalog or visit the Counseling Center.

### Job & Wage Information

- Electronics Engineering Technician  
Wage Range\*: \$15.41-47.85  
7% increase in employment expected in CA 2016-2026; 2,330 openings annually  
More info: <http://bit.ly/ElectronicsEngineeringTechNC>
- Electrical & Electronics Installer & Repair  
Wage Range\*: \$12.98-34.45  
10% increase expected in CA 2016-2026; 200 openings annually  
More info: <http://bit.ly/ElectricalInstallerNC>
- Quality Control Technician/Analyst  
Wage Range\*: \$17.77-38.07  
12% increase expected in CA 2016-2026; 1,120 openings annually  
More info: <http://bit.ly/QualityControlNC>

\*2018, Riverside/Ontario/San Bernardino Metro Area

### What type of interests might be a good fit for this career choice?



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## Engineering Graphics

### 9 unit certificate

The Engineering Graphics certificate readies students for an entry-level position in drafting or related industries. Students successfully completing this certificate will be proficient in mechanical drafting and two-dimensional AutoCAD.

## Required Courses

(In suggested order of completion)

### ENE-30 Computer Aided Drafting (CAD) (3 units)\*

*Advisory: CIS-1A*

A two-dimensional computer aided drafting class for drafters. Students will use an CAD computer drafting system to develop computer drawn drawings which are typical to the various fields of drafting.

### ENE-21 Drafting (3 units)\*

Fundamentals of mechanical drawing including lettering, instruments and their uses, geometric construction, types of projection, freehand drawing, sectioning, dimensioning, auxiliary views, and pictorial drawing. Recommended for beginners and students with up to one year of drafting in high school.

### ENE-22 Engineering Drawing (3 units)\*

*Prerequisite: ENE-21, Advisory: ENE-30*

Drafting fundamentals briefly reviewed, geometric construction, orthographic projections, free-hand sketching, sectioning, auxiliary views, shop processes, dimensions and tolerances, fasteners, working and pictorial drawings, and as time permits, piping and electrical drawings.

*\*this class transfers toward one or more CSUSB or CalPoly majors.*

*Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.*



## Engineering Graphics

Tuition \$414 • Duration of Study: 8 months

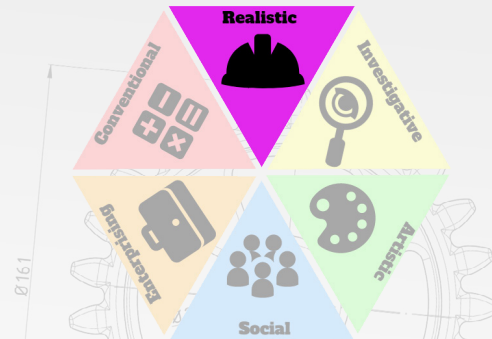
A Certificate in Engineering Graphics will be awarded upon completion of the required courses (9 units). Please refer to the Norco College Catalog or visit the Counseling Center.

### Job & Wage Information

- Drafter  
Wage Range\*: \$14.15-40.27  
10% increase expected in CA 2016-2026;  
1,480 openings annually  
More info: <http://bit.ly/DrafterNC>
- CAD Operator/Mechanical Drafter  
Wage Range\*: \$16.12-34.33  
8% increase expected in CA 2016-2026;  
380 openings annually  
More info:  
<http://bit.ly/MechanicalDrafterNC>

\*2018, Riverside/Ontario/San Bernardino Metro Area

### What type of interests might be a good fit for this career choice?



## Realistic

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for more information about this program.

California Community Colleges are now offering Associate Degrees for Transfer (ADT's) to the CSU. These may include Associate in Arts (AA-T) or Associate in Science (AS-T) degrees. These degrees are designed to provide a clear pathway to a CSU major and baccalaureate degree. California Community College students who are awarded an AA-T or AS-T degree are guaranteed admission with junior standing somewhere in the CSU system and given priority admission consideration to their local CSU campus or to a program that is deemed similar to their community college major. This priority does not guarantee admission to specific majors or campuses. Students who have been awarded an AA-T or AS-T are able to complete their remaining requirements for the 120-unit baccalaureate degree within 60 semester or 90 quarter units. To view the most current list of Norco College Associate Degrees for Transfer and to find out which CSU campuses accept each degree, please go to:

[www.calstate.edu/transfer/adt-search/search.shtml](http://www.calstate.edu/transfer/adt-search/search.shtml)

**Students are encouraged to meet with a Norco College counselor to review their options for transfer and to develop an educational plan that best meets their goals and needs.**

## 2019-2020 ENVIRONMENTAL SCIENCE (IGETC for STEM) NAS893

The Associate in Science in Environmental Science for Transfer Degree introduces the concepts and principles upon which environmental knowledge is based including the biological, chemical, and physical concepts underlying scientific theory and application to environmental issues. Students will develop skills for critical/analytical thinking, perceptive reading/observation and interpretation to apply to environmental concerns affecting our everyday lives. The AS-T in Environmental Science provides students with a core curriculum to develop key skills for applying biological, physical, and chemical principles to the study of the environment and the developing solutions to environmental problems.

### Required Courses (40-41 units) Units

BIO-60* (formerly BIO-11)	Introduction to Molecular and Cellular Biology	5
CHE-1A*	General Chemistry I	5
BIO-61* (formerly BIO-12)	Introduction to Organismal & Population Biology	5
OR		
CHE-1B*	General Chemistry II	5

### List A (14-15 units) Units

BIO-19* (formerly BIO-36)	Environmental Science	3
GEG-1*/1H*	Physical Geography/Honors	3
AND		
GEG-1L*	Physical Geography Laboratory	1
MAT-12*/12H*	Statistics/Honors	4
OR		
PSY/SOC-48*	Statistics for the Behavioral Sciences	3
MAT-1A*	Calculus I	4

### List B (11 units) Units

ECO-8*/8H*	Principles of Microeconomics/Honors	3
PHY-2A* + 2B*	General Physics I and II	8
OR		
PHY-4A* + 4B*	Mechanics AND Electricity and Magnetism	8

Course	Units
ENGL 1A	4.0
CHEM 1A	5.0
MAT 1A	4.0
BIO 19	3.0

Total Units: 16.0

Course	Units
ENGL 1B	4.0
CHEM 1B	5.0
MAT 12/PSY 48/SOC 48	3.0-4.0
AREA 3A	3.0

Total Units: 15.0-6.0

Course	Units
COM 1/6/9	3.0
POL 1	3.0
PHY 4A	4.0
ECO 8	3.0
BIO-60	5.0

Total Units: 18.0

Course	Units
HIS 6/7/14/31/34	3.0
PHY 4B	4.0
GEG 1 and 1L	4.0
BIO-61	5.0

Total Units: 16.0

Suggested Pathway for Environmental Science ADT

\*Courses may also be used to fulfill general education requirements for the IGETC for STEM pattern, please confer with a counselor.

### Associate in Science for Transfer Degree

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

See your counselor for **YOUR** plan!



## **IGETC for STEM**

Students pursuing certain Associate Degrees for Transfer may be eligible to complete IGETC for STEM, deferring two to three lower-division GE courses until after transfer. IGETC for STEM is applicable only to majors in which the Transfer Model Curriculum explicitly indicates the availability of the option. **At Norco College, currently only ADT's in Biology and Chemistry allow IGETC for STEM.**

**"IGETC for STEM" certification as part of an Associate Degree for Transfer in Chemistry would require:**

**Complete the following courses *before* transfer:**

- All courses in Areas 1 (except 1C for UC-bound students), 2, and 5 of the traditional IGETC; and
- One course in Area 3A; one course in Area 3B; and two courses in Area 4 from two different disciplines.

**Complete the following courses *after* transfer:**

- One remaining lower-division general education course in Area 3;\*
- One remaining lower-division general education course in Area 4;\* and
- One course in Area 6 for UC-bound students who have not satisfied it through proficiency.\*

\*These deferred lower division courses must be replaced with calculus and/or science courses required by the major before transfer.

***Please consult with a Norco College counselor to discuss which general education pattern is the best option for you based on your individual major, goals, and transfer institution.***

## Facility Maintenance

### 23-24 unit certificate • 60 unit degree

Students will gain skills in: safety standards, technical math, blueprint reading, troubleshooting, preventative maintenance, drive components, lubrication, bearings, wiring methods, hydraulics, pneumatics, basic electricity, technical communication and more.

## Required Courses (to earn certificate)

### **MAN-55 OSHA Standards for General Industry (1 unit)**

This course covers OSHA policies, procedures, and standards, as well as safety for general industry and health principles.

### **ELE/MAN-68: Fundamentals of Maintenance (3 units)**

Foundational skills training for maintenance technicians. Introduction to the basic maintenance and repair methods used in the facility maintenance profession.

### **ELE/MAN-69: Fundamentals of Tooling and Test Equipment (2 units)**

An introduction to the tools and equipment used in the facility maintenance occupation, with an emphasis on the safe use, maintenance, and storage of a variety of tools and equipment.

### **ELE/ENE-27 Technical Communications (3 units)\***

Procedures for organizing and presenting data through informal and formal documents and presentations. Includes practice in writing memoranda, letter reports, and informal technical reports.

### **ENE-51 Blueprint Reading (2 units)\***

A beginning course in the study of blueprints and their interpretation, types of projection, symbols and abbreviations.

### **ELE/MAN-77 Electrical Theory (3 units)**

This course introduces students to electrical theory, Ohm's Law, magnetism, voltage inductance, capacitance, units of electric measurement, and proper usage of electrical test equipment (meters).

### **MAN-60 Hydraulic and Pneumatic Systems (3 units)**

*Advisory: ENE-60 or MAT 52.*

Basics of hydraulic and pneumatic systems including physical properties of liquids under pressure.

### **ELE/CON-66 National Electrical Code (3 units)**

Review of electrical codes including discussion and analysis of the application of physical laws in development of the code requirements.

### **ENE-60 Math for Engineering Technology (3 units)**

A course in mathematical problems frequently used by students enrolled in the trade and industrial and engineering programs. This course reviews basic arithmetic, linear measurement, basic algebra, basic plane geometry, trigonometry, and compound angles.

**OR**

### **MAT-36 Trigonometry (4 units)**

A course in mathematical problems frequently used by students enrolled in the trade, industrial and engineering programs.

*\*this class transfers toward one or more CSUSB or CalPoly majors.*

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## Facility Maintenance

Tuition \$1,058-\$1,104 • Duration of Study: 18 months

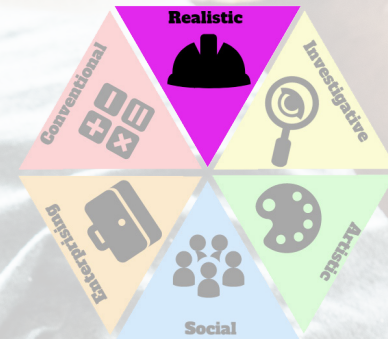
An Associate of Science Degree in Facility Maintenance will be awarded upon completion of the required courses (23-24 units) plus the General Education requirements. Please refer to the Norco College Catalog or visit the Counseling Center.

## Job & Wage Information

- Installation, Maintenance & Repair Tech  
Wage Range\*: \$11.24-30.36  
10% increase expected in CA 2016-2026; 14,040 openings annually  
More information: <http://bit.ly/MaintTechNC>
- Maintenance Worker, Machinery  
Wage Range\*: \$13.48-43.59  
12% increase expected in CA 2016-2026; 870 openings annually  
More information: <http://bit.ly/MachMaintNC>
- Property Maintenance/Managers  
Wage Range\*: \$18.20-70.29  
9% increase expected in CA 2016-2026; 4,360 openings annually  
More information: <http://bit.ly/PropertyMgmtNC>
- Grounds Maintenance Workers  
Wage Range\*: \$10.94-\$28.64  
9% increase expected in CA 2016-2026; 290 openings annually  
More information: <http://bit.ly/GroundsMaintNC>

\*2018, Riverside/Ontario/San Bernardino Metro Area

## What type of interests might be a good fit for this career choice?



## Realistic

People who have athletic or mechanical ability and prefer to work with objects, machines and tools. Preference for working with things over people.

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## Game Art: Character Modeling

### 44 unit certificate • 60 unit degree

The Character Modeling program is designed to provide students with the knowledge and skills for an entry level job in the video game and animation industries, or for university transfer. Courses cover fundamental artistic skills, human and animal anatomy, character design, 3D modeling, and rigging a character for animation.

## Required Courses (to earn certificate)

### **GAM-21 History of Video Games (3 units)\***

A comprehensive study of the evolution of video games.

### **GAM-32 Designing Game Characters (3 units)**

*Prerequisite: GAM-81*

This course provides continued study of the application of 3D modeling techniques within a computer animation environment.

### **GAM-33 Advanced Digital Sculpting (3 units)**

*Prerequisite: GAM-32*

Continued study to perfect character modeling techniques with advanced sculpting methods.

### **GAM-35 Introduction to Simulation and Game Development (3 units)**

An introduction to the field of simulation and computer gaming.

### **GAM-41 Game Asset and Engine Integration (3 units)\*** *Prerequisite: GAM-81*

An intermediate 3D modeling class with a strong focus in low poly modeling, texture mapping and importing art assets into an industry standard game engine.

### **GAM/CIS-44 Portfolio Production (2 units)**

*Concurrent enrollment requirement: GAM-33 / Prerequisite: GAM-82 and GAM-41*

Creative organization and presentation of a body of work exhibiting portfolio-quality aptitude.

### **GAM-70 Game Development Basics (2 units)**

Introduction to fundamental computer concepts related to typical functions required of a game artist.

### **GAM-71 Perspective for Game and Animation (3 units)** *Prerequisite: GAM-80*

This is a perspective drawing class which focuses on creating believable environments.

### **GAM-72 Anatomy for Game Art (3 units)**

*Prerequisite: GAM-80*

An intensive study of the human figure and animal anatomy in preparation for construction of 3D models for the Game Industry.

### **GAM-73 Storyboarding for Games (3 units)\***

*Prerequisite: GAM-81*

Application of strong composition, posing, and camera techniques to tell an engaging story in a video game environment.

### **GAM-79B Game Studio: Character Modeling (4 units)** *Concurrent enrollment requirement: GAM-33/*

*Prerequisite: GAM-82 and GAM-41*

This is the culminating class in the area of character modeling for game art.

### **GAM-80 Digital Drawing for Game Art (4 units)\***

Introduction to digital drawing techniques using industry standard software.

### **GAM-81 3D Modeling and Texturing (4 units)\***

*Prerequisite: GAM-80*

This course introduces the concepts of 3D Modeling in a virtual environment.

### **GAM-82 Game Rigging and Animation (4 units)\***

*Prerequisite: GAM-81*

A course that teaches students how to prepare an animation rig accurately and anatomically in a 3D simulation environment.



## Game Art: Character Modeling

Tuition \$2,024 • Duration of Study: 24 months

An Associate of Science Degree in Game Art: Character Modeling will be awarded upon completion of the required courses (44 units) plus the General Education requirements. Please refer to the Norco College Catalog or visit the Counseling Center.

### Job & Wage Information

- 3D Artist/Multimedia Artists & Animators  
Wage Range\*: \$21.52-62.42  
10% increase in employment expected in CA 2016-2026; 2,460 openings annually  
More info: <http://bit.ly/MultiMediaA-A>
- Software Developer, Applications  
Wage Range\*: \$25.64-69.47  
40% increase in employment expected in CA 2016-2026; 15,500 openings annually  
More info: <http://bit.ly/Softwaredevelop>

\*2018, Riverside/Ontario/San Bernardino Metro Area

### What type of interests might be a good fit for this career choice?



## Artistic

People who have artistic, innovating, or intuitional abilities. People who prefer using their creativity or imagination.

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## Game Art: Environments & Vehicles 38 unit certificate • 60 unit degree

Students completing the Game Art: Environments & Vehicles certificate will be well qualified to create large scale models including environments, props, and vehicles as well as indoor and specialized enclosures in video game worlds.

### Required Courses (to earn certificate)

#### **GAM-21 History of Video Games (3 units)\***

A comprehensive study of the evolution of video games, including their technological and artistic antecedents, with analysis of how video games reflect the beliefs, aspirations and values of the cultures where they flourish.

#### **GAM-35 Introduction to Simulation and Game Development (3 units)\***

An introduction to the field of simulation and computer gaming.

#### **GAM-41 Game Asset and Engine Integration (3 units)**

*Prerequisite: GAM-81*

An intermediate 3D modeling class with a strong focus in low poly modeling, texture mapping and importing art assets into an industry standard game engine.

#### **GAM/CIS-44 Portfolio Production (2 units)**

*Prerequisite: GAM-41, GAM-46 and GAM-82*

Creative organization and presentation of a body of work exhibiting portfolio-quality aptitude.

#### **GAM-46 Environment & Vehicle Modeling (3 units)**

*Prerequisite: GAM-81*

A comprehensive study of game industry modeling techniques for both hard surface and organic models.

#### **GAM-70 Game Development Basics (2 units)**

Introduction to fundamental computer concepts related to typical functions required of a game artist.

#### **GAM-71 Perspective for Game and Animation (3 units) Prerequisite: GAM-80**

This is a perspective drawing class which focuses on creating believable environments, both interior and exterior, through the proper implementation of correct one point, two point and three point perspective while setting up a dynamic composition.

#### **GAM-73 Storyboarding for Games (3 units)\***

*Prerequisite: GAM-81*

Application of strong composition, posing, and camera techniques to tell an engaging story in a video game environment.

#### **GAM-79C Game Studio: Environments and Vehicles (4 units)**

*Prerequisite: GAM-41, GAM-46 and GAM-82*

This is the culminating class in the area of developing environments and vehicles for games.

#### **GAM-80 Digital Drawing for Game Art (4 units)\***

Introduction to digital drawing techniques using industry standard software.

#### **GAM-81 3D Modeling and Texturing (4 units)\***

*Prerequisite: GAM-80*

This course introduces the concepts of 3D Modeling in a virtual environment.

#### **GAM-82 Game Rigging and Animation (4 units)\***

*Prerequisite: GAM-81*

A course that teaches students how to prepare an animation rig accurately and anatomically in a 3D simulation environment.



## Game Art: Environments & Vehicles

Tuition \$1,748 • Duration of Study: 18 months

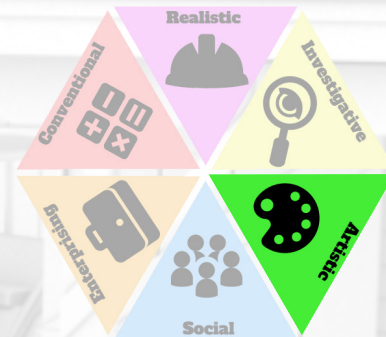
An Associate of Science Degree in Game Art: Environments & Vehicles will be awarded upon completion of the required courses (38 units) plus the General Education requirements. Please refer to the Norco College Catalog or visit the Counseling Center.

### Job & Wage Information

- 3D Artist/Multimedia Artists & Animators  
Wage Range\*: \$21.52-62.42  
10% increase in employment expected in CA 2016-2026; 2,460 openings annually  
More info: <http://bit.ly/MultiMediaA-A>
- Software Developer, Applications  
Wage Range\*: \$25.64-69.47  
40% increase in employment expected in CA 2016-2026; 15,500 openings annually  
More info: <http://bit.ly/Softwaredevelop>

\*2018, Riverside/Ontario/San Bernardino Metro Area

### What type of interests might be a good fit for this career choice?



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## Game Design

### 30 unit certificate • 60 unit degree

The Game Design program prepares students in all aspects of the game design process, including game design documentation, standard game design techniques, and tools for rapid prototyping including both non-digital and digital methods.

## Required Courses (to earn certificate)

### **GAM-21 History of Video Games (3 units)\***

A comprehensive study of the evolution of video games, including their technological and artistic antecedents, with analysis of how video games reflect the beliefs, aspirations and values of the cultures where they flourish.

### **GAM-22 Game Design Principles (4 units)\***

An introduction to the fundamental techniques, concepts, and vocabulary of game design.

### **GAM-23 Digital Game Design (4 units)\***

*Prerequisite: GAM-22*

An introduction to digital game design, including planning, designing and developing an original digital game.

### **GAM-24 Video Game Prototyping (4 units)\***

*Prerequisite: GAM-50*

An introduction to the fundamentals of computer game prototyping with an emphasis on scripting.

### **GAM-35 Introduction to Simulation and Game Development (3 units)\***

An introduction to the field of simulation and computer gaming.

### **GAM-42 Photoshop for Game Art and Animation (3 units)**

### **GAM/CIS-44 Portfolio Production (2 units)\***

*Prerequisite: GAM-23*

Creative organization and presentation of a body of work exhibiting portfolio-quality aptitude.

### **GAM-50 Introduction to Game Programming (3 units)\***

A first course in programming for games stressing fundamental programming principles.

### **GAM-79E Game Studio: Game Design Capstone (4 units)\***

*Prerequisite: GAM-24*

This is the culminating class in the game design track of game development.

*\*this class transfers toward one or more CSUSB or CalPoly majors. Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.*



## Game Design

Tuition \$1,380 • Duration of Study: 16 months

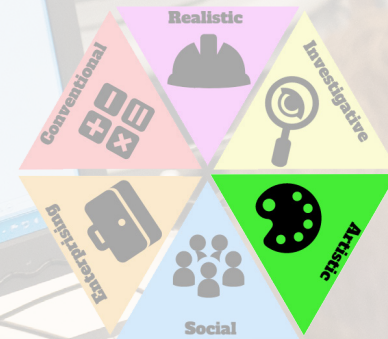
An Associate of Science Degree in Game Design will be awarded upon completion of the required courses (30 units) plus the General Education requirements. Please refer to the Norco College Catalog or visit the Counseling Center.

## Job & Wage Information

- Game Designer  
Wage Range\*: \$73,182/yr average\*\*; Listed as \$17.35 -60.43 online under computer occupations  
14% increase in employment expected in CA 2016-2026; 2,940 openings annually \*\*Data on wages from [www.glassdoor.com](http://www.glassdoor.com); based on June, 2019 information from California. Range is \$51k to \$102k annual salary on O\*NetOnline.org  
More information:  
<http://bit.ly/VideogameDesign>

\*2018, Riverside/Ontario/San Bernardino Metro Area

## What type of interests might be a good fit for this career choice?



## Artistic

People who have artistic, innovating, or intuitional abilities. People who prefer using their creativity or imagination.

*For more information on careers that fit this category of interests, visit the Career Center in the Center for Student Success.*

## What's Your School?

NORCO COLLEGE  
SCHOOL OF  
Science, Technology,  
Engineering & Mathematics

Visit [www.norcollege.edu/STEM](http://www.norcollege.edu/STEM)  
for more information about this program.  
View gainful employment information at:  
[www.norcollege.edu/academicaffairs/cte](http://www.norcollege.edu/academicaffairs/cte)

2019 • NAS685/NAS685B/NAS685C/NCE685

## CSU Pathway

### Associate of Arts Degree- Area of Kinesiology, Health & Wellness—CSU PATHWAY

These courses emphasize the principles for the growth and development of a healthy lifestyle. Students will acquire the knowledge and understanding of these principles to integrate and promote personal, individual or group behavior conducive to the maintenance or restoration of mental and physical wellness. This emphasis will provide students with an understanding of physical skills and their development related to physical activity, exercise and sport. Students will also acquire knowledge of decision making and problem solving strategies for self-management as it pertains to leading a productive and healthful lifestyle. This area of emphasis is designed for students interested in making positive life choices and in the study of health, nutrition, and wellness; physical education/kinesiology; athletic training; sport performance, officiating and coaching; career planning and life management; and the biology, anatomy and physiology of the human body.

2017-2018

### KINESIOLOGY, HEALTH AND WELLNESS (NAA498 /NAA498B/NAA498C)

The student must successfully complete **18 units of study with a grade of "C" or better or a "P" if the course is taken on a "pass-no pass" basis.**

INCLUDED DISCIPLINES AND COURSES:

**Required Courses (take three units in each of the two disciplines):**

**Health Science (HES):** 1

**Kinesiology/academic courses (KIN):** 4, 6, 8, 10, 12, 16, 17, 18, 24, 25, 26, 27, 28, 29, 30, 33, 34, 35, 36, 38, 47

**Elective Courses (12 additional units, selected from the following):**

**Anatomy and Physiology (AMY):** 2A, 2B, 10

**Biology (BIO):** 17, 30, 34

**Early Childhood Education (EAR):** 26

**Guidance (GUI):** 45, 46, 47, 48

**Kinesiology/academic courses (KIN):** 4, 6, 8, 10, 12, 16, 17, 18, 24, 25, 26, 27, 28, 29, 30, 33, 34, 35, 36, 38, 47

**Kinesiology/activity courses (KIN):** A03, A04, A07, A09, A11, A12, A13, A20, A21, A28, A29, A30, A31A, A31B, A31C, A40, A41, A43, A44, A46, A47, A54, A55, A57, A62A, A64, A67, A68, A69, A74, A75A, A75B, A77A, A77B, A77C, A80, A81A, A81B, A82, A83, A86, A87, A88, A89A, A89B, A89C, A90A, A90B, A90C, A92

**Kinesiology/varsity courses (KIN):** V01, V02, V04, V05, V06, V07, V08, V09, V10, V11, V12, V14, V18, V19, V20, V21, V22, V23, V24, V25, V26, V33, V34, V50, V51, V52, V53, V60, V61, V70, V78, V94, V95

A course may only be counted once except for KIN activity or varsity courses.

Career paths typically chosen by undergraduate students emphasizing transfer to four year institutions in majors such as Health Science, Nutrition, Physical Education/Kinesiology, Exercise Science, and Recreation and Leisure Studies. Some careers such as Athletic Trainer, Physical Therapist, Exercise Physiologist, Sport Nutritionist, and Physical Education and Health Education teachers may require education beyond the Bachelor's Degree.

Course	Units
ENGL 1A	4.0
HES 1	3.0
AREA D	3.0
AREA B4	3.0
GUI 47	3.0

Total Units: 16.0

Course	Units
AOE REQUIRED KIN COURSE	3.0
CSU ELECTIVE	3.0
AREA B1/B3	4.0
POL 1	3.0
AREA C1	3.0

Total Units: 16.0

Course	Units
AOE ELECTIVE COURSE	3.0
AOE ELECTIVE COURSE	3.0
AREA A3	3.0
AREA C1/C2	3.0
AREA D	3.0

Total Units: 15.0

Course	Units
AREA A1	3.0
AREA B2	3.0
AOE ELECTIVE COURSE	3.0
HIS 6/7/14/31/34	3.0
CSU ELECTIVE	3.0

Total Units: 15.0

Suggested **CSU Pathway** for AOE in Kinesiology, Health & Wellness



## IGETC Pathway for UC/CSU

### Associate of Arts Degree- Area of Emphasis in - Area of Kinesiology, Health & Wellness —IGETC PATHWAY

These courses emphasize the principles for the growth and development of a healthy lifestyle. Students will acquire the knowledge and understanding of these principles to integrate and promote personal, individual or group behavior conducive to the maintenance or restoration of mental and physical wellness. This emphasis will provide students with an understanding of physical skills and their development related to physical activity, exercise and sport. Students will also acquire knowledge of decision making and problem solving strategies for self-management as it pertains to leading a productive and healthful lifestyle. This area of emphasis is designed for students interested in making positive life choices and in the study of health, nutrition, and wellness; physical education/kinesiology; athletic training; sport performance, officiating and coaching; career planning and life management; and the biology, anatomy and physiology of the human body.

Course	Units
ENGL 1A	4.0
AREA 2	4.0
HES 1	3.0
AREA 4	
GUI 47	3.0
Total Units: 14.0	

Course	Units
ENG 1B	4.0
POL 1	3.0
AREA 5A/5C	4.0
AOE REQUIRED KIN	3.0
Total Units: 14.0	

Course	Units
COM 1/6/9	3.0
AREA 3A/3B	3.0
AREA 4	3.0
AOE ELECTIVE	3.0
AOE ELECTIVE	3.0
Total Units: 15.0	

Course	Units
HIS 6/7/14/31/34	3.0
AREA 3A	3.0
AREA 6	5.0
AOE ELECTIVE	3.0
Total Units: 14.0	

2017-2018

### KINESIOLOGY, HEALTH AND WELLNESS (NAA498 /NAA498B/NAA498C)

**The student must successfully complete 18 units of study with a grade of "C" or better or a "P" if the course is taken on a "pass-no pass" basis.**

INCLUDED DISCIPLINES AND COURSES:

**Required Courses (take three units in each of the two disciplines):**

**Health Science (HES): 1**

**Kinesiology/academic courses (KIN): 4, 6, 8, 10, 12, 16, 17, 18, 24, 25, 26, 27, 28, 29, 30, 33, 34, 35, 36, 38, 47**

**Elective Courses (12 additional units, selected from the following):**

**Anatomy and Physiology (AMY): 2A, 2B, 10**

**Biology (BIO): 17, 30, 34**

**Early Childhood Education (EAR): 26**

**Guidance (GUI): 45, 46, 47, 48**

**Kinesiology/academic courses (KIN): 4, 6, 8, 10, 12, 16, 17, 18, 24, 25, 26, 27, 28, 29, 30, 33, 34, 35, 36, 38, 47**

**Kinesiology/activity courses (KIN): A03, A04, A07, A09, A11, A12, A13, A20, A21, A28, A29, A30, A31A, A31B, A31C, A40, A41, A43, A44, A46, A47, A54, A55, A57, A62A, A64, A67, A68, A69, A74, A75A, A75B, A77A, A77B, A77C, A80, A81A, A81B, A82, A83, A86, A87, A88, A89A, A89B, A89C, A90A, A90B, A90C, A92**

**Kinesiology/varsity courses (KIN): V01, V02, V04, V05, V06, V07, V08, V09, V10, V11, V12, V14, V18, V19, V20, V21, V22, V23, V24, V25, V26, V33, V34, V50, V51, V52, V53, V60, V61, V70, V78, V94, V95**

A course may only be counted once except for KIN activity or varsity courses.

Career paths typically chosen by undergraduate students emphasizing transfer to four year institutions in majors such as Health Science, Nutrition, Physical Education/Kinesiology, Exercise Science, and Recreation and Leisure Studies. Some careers such as Athletic Trainer, Physical Therapist, Exercise Physiologist, Sport Nutritionist, and Physical Education and Health Education teachers may require education beyond the Bachelor's Degree.

Suggested IGETC Pathway for AOE in Kinesiology, Health & Wellness



California Community Colleges are now offering Associate Degrees for Transfer (ADT's) to the CSU. These may include Associate in Arts (AA-T) or Associate in Science (AS-T) degrees. These degrees are designed to provide a clear pathway to a CSU major and baccalaureate degree. California Community College students who are awarded an AA-T or AS-T degree are guaranteed admission with junior standing somewhere in the CSU system and given priority admission consideration to their local CSU campus or to a program that is deemed similar to their community college major. This priority does not guarantee admission to specific majors or campuses. Students who have been awarded an AA-T or AS-T are able to complete their remaining requirements for the 120-unit baccalaureate degree within 60 semester or 90 quarter units. To view the most current list of Norco College Associate Degrees for Transfer and to find out which CSU campuses accept each degree, please go to:

[www.calstate.edu/transfer/adt-search/search.shtml](http://www.calstate.edu/transfer/adt-search/search.shtml)

**Students are encouraged to meet with a Norco College counselor to review their options for transfer and to develop an educational plan that best meets their goals and needs.**

## 2019-2020

### KINESIOLOGY (CSUGE) NAA891

This degree is designed to facilitate the student's passage from Norco College to the California State University System with an Associate in Arts in Kinesiology for Transfer Degree. This degree will satisfy the lower division requirements for the eventual conferral of the Bachelor's Degree in Kinesiology. With this degree the student will be prepared for transfer to the university upper division level.

Required Courses (20-23 units)	Units
KIN-10* Introduction to Kinesiology	3
BIO-50A* (formerly AMY-2A) Anatomy and Physiology I	4
BIO-50B* (formerly AMY-2B) Anatomy and Physiology II	4
CHE-12B* Organic Chemistry II	5

#### Movement-Based Courses

Select a maximum of one (1) course from each area below:

Combatives	Units
KIN-A40* Karate, Beginning	1
KIN-A41* Karate, Intermediate	1

Fitness	Units
KIN-A46* Hatha Yoga, Beginning	1
KIN-A47* Hatha 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* Physical Fitness, Beginning	1
KIN-A81B* Physical Fitness, Intermediate	1
KIN-A83* Kickboxing, Aerobics	1

Team Sports	Units
KIN-A55* Slow Pitch Softball	1
KIN-A64* Soccer	1

List A: Select two courses from the following:	Units
BIO-4* (formerly BIO-17) Human Biology	4
CHE-1A General Chemistry I	5
KIN-30 First Aid and CPR	3
MAT-12*/12H* Statistics/Honors	4
OR	
PSY/SOC-48* Statistics for the Behavioral Sciences	3
PHY-2A* General Physics I	4
OR	
PHY-4A* Mechanics	4

Course	Units
ENGL 1A	4.0
KIN 10	3.0
MAT 12/PSY 48/SOC 48	3.0-4.0
BIO 4	4.0
Fitness Elective	1.0

Total Units: 15.0-16.0

Course	Units
AREA A3	3.0-4.0
BIO-50A	4.0
POL 1	3.0
AREA D	3.0
Fitness Elective	1.0

Total Units: 14.0-15.0

Course	Units
AREA C1	3.0
BIO-50B	4.0
HIS 6/7/14/31/34	3.0
COM 1/6/9	3.0
Combative Elective	1.0

Total Units: 14.0

Course	Units
CHE-1A	5.0
AREA C1 or C2	3.0
KIN 16	3.0
AREA D	3.0
Team Sport Elective	1.0

Total Units: 15.0

\*Courses may also be used to fulfill general education requirements for the CSU GE or IGETC pattern, please confer with a counselor.

See your counselor for **YOUR** plan!

Suggested Pathway for Kinesiology ADT

#### **Associate in Art for Transfer Degree**

The Associate in Art in Kinesiology for Transfer degree will be awarded upon completion of 60 CSU-transferable semester 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.





## Game Programming

### 37-38 unit certificate • 60 unit degree

Students completing the Game Programming Certificate or A.S. degree will be well qualified in the process of designing and coding programming logic for games including coding game rules, mechanics and simulations to create complete modules and game experiences.

## Required Courses (to earn certificate)

### **GAM-24 Video Game Prototyping (4 units)\***

*Prerequisite: GAM-50*

An introduction to the fundamentals of computer game prototyping with an emphasis on scripting.

### **GAM-35 Introduction to Simulation and Game Development (3 units)\***

An introduction to the field of simulation and computer gaming.

### **GAM/CIS-44 Portfolio Production (2 units)\***

*Prerequisite: GAM-52*

Creative organization and presentation of a body of work exhibiting portfolio-quality aptitude.

### **GAM-50 Introduction to Game Programming (3 units)\***

A first course in programming for games stressing fundamental programming principles.

### **GAM-51 Game Mechanics and Simulation (3 units)\***

*Prerequisite: GAM-50 and MAT-35*

Introduction to practical applications of mathematics and physics techniques related to various areas of game programming.

### **GAM-52 Game Engine Scripting I (3 units)\***

*Prerequisite: GAM-50*

Introduction to core programming concepts related to game engine scripting.

### **GAM-53 Game Engine Scripting II (3 units)\***

*Prerequisite: GAM-52*

Extended concepts in core programming as it pertains to game engine scripting.

### **GAM-79F Game Studio Production: Game Programming (4 units)\***

*Prerequisite: GAM-52*

This is the culminating class in the game programming track.

### **MAT-35 Intermediate Algebra (5 units)\***

*Prerequisite: MAT-52 or qualifying placement*

The concepts introduced in elementary algebra are presented again, but in greater depth. In addition to basic algebraic operations and graphing, students are introduced to functions, inverse functions, exponential and logarithmic functions, complex numbers, conic sections, nonlinear systems of equations, and sequences and series.

Plus, an additional 7-8 units from the following courses:

**GAM-21 History of Video Games (3 units)\***

**GAM-22 Game Design Principles (4 units)\***

**GAM-80 Digital Drawing for Game Art (4 units)\***

**GAM-81 3D Modeling and Texturing (4 units)\***

*Prerequisite: GAM-80*

*\*this class transfers toward one or more CSUSB or CalPoly majors.*

*Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.*



## Game Programming

Tuition \$1702-\$1,748 • Duration of Study: 16 months

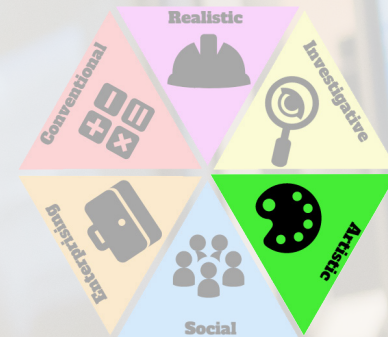
An Associate of Science Degree in Game Programming will be awarded upon completion of the required courses (37/38 units) plus the General Education requirements. Please refer to the Norco College Catalog or visit the Counseling Center.

## Job & Wage Information

- Game Programmer  
Wage Range\*: \$24.67-51.31  
5% decrease in employment expected in CA 2016-2026; 2,270 openings annually  
More information: <http://bit.ly/ComputerProg>

\*2018, Riverside/Ontario/San Bernardino Metro Area

## What type of interests might be a good fit for this career choice?



## Artistic

People who have artistic, innovating, or intuitional abilities. People who prefer using their creativity or imagination.

*For more information on careers that fit this category of interests, visit the Career Center in the Center for Student Success.*

## What's Your School?

NORCO COLLEGE  
SCHOOL OF  
Science, Technology,  
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for more information about this program.  
View gainful employment information at:  
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2019 • NAS691/NAS691B/NAS691C/NCE691



## Green Technician 7-12 unit certificate

The Green Technician certificate program teaches students about renewable energy and related sustainability concepts. Design, installation, and maintenance issues along with OSHA safety are included.

### Required Courses

#### **MAN-77 Electrical Theory for Electricians (3 units)**

An introduction to electrical theory, Ohm's Law, magnetism, electromagnetism, voltage, resistance, current, inductance, capacitance, reactance, impedance, Watts, Volt-Amps, VARs, current control devices, sensors and actuators phase angle, power-factor, transformers, motors, power distribution systems, and proper usage of electrical test equipment (meters). Student will learn concepts of electrical power, energy, Kirchoff's Laws, along with basic math to solve fundamental electrical problems for both alternating current (A.C.) and direct current (D.C.) circuits. Student will learn basic electrical safety procedures, including the proper use and requirements for personal protective equipment (PPE).

#### **OR**

#### **ELE-11 DC Electronics (4 units)\***

Basic electrical theory including Ohm's Law, the Power Law, the Current and Voltage Laws of Kirchhoff, Direct Current (DC) theory, time constants, multimeter measurements, magnetism, electromagnetism, resistors, capacitors, coils, transient analysis and DC motors, voltage, current, resistance, power, series, parallel and complex series/parallel circuits.

#### **AND**

#### **ELE-13 AC Electronics (4 units)\***

*Prerequisite: ELE-10, 11, 21 or 23*

Alternating current (AC) theory, devices, circuits and applications include: resistance, reactance, impedance, capacitance, inductance, Ohm's Law, Power Law, sinusoidal waveforms, Peak, Peak-to-Peak and Root-Mean-Square (RMS) measurements.

#### **ELE-91 Fundamentals of Solar Energy (3 units)\***

This course is for students interested in a career in the solar industry. The fundamental principles and functions of photovoltaic industry will be introduced along with the planning, installation and maintenance of all necessary components for a photovoltaic system.

#### **ELE/MAN-55 Occupational Safety and Health Administration (OSHA) Standards for General Industry (1 unit)**

This course covers OSHA policies, procedures, and standards as well as safety for general industry and health principles. Topics include scope and application of the OSHA general industry standards.

*\*this class transfers toward one or more CSUSB or CalPoly majors.  
Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.*



## Green Technician

Tuition \$322-\$552 • Duration of Study: 10 months

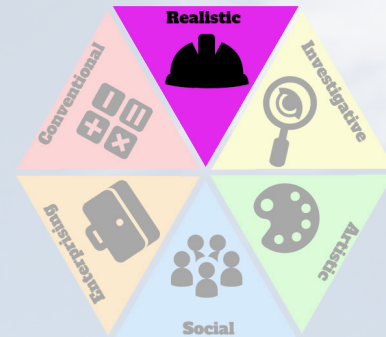
A certificate in Green Technician will be awarded upon completion of the required courses (11-12units). Please refer to the Norco College Catalog or visit the Counseling Center.

## Job & Wage Information

- Solar Photovoltaic Installer  
Wage Range\*: \$15.45-31.53  
131% increase expected in CA 2016-2026; 1,480 openings annually  
More information: <http://bit.ly/SolarInstallerNC>

\*2018, Riverside/Ontario/San Bernardino Metro Area

## What type of interests might be a good fit for this career choice?



## Realistic

People who have athletic or mechanical ability and prefer to work with objects, machines and tools. Preference for working with things over people.

*For more information on careers that fit this category of interests, visit the Career Center in the Center for Student Success.*

## What's Your School?

NORCO COLLEGE  
SCHOOL OF  
Science, Technology,  
Engineering & Mathematics

Visit [www.norcollege.edu/STEM](http://www.norcollege.edu/STEM)  
for more information about this program.

## CSU Pathway

### Associate of Arts Degree- Area of Math & Science—CSU PATHWAY

These courses emphasize the natural sciences, which examine the physical universe, its life forms, and its natural phenomena. Courses in Math emphasize mathematical, analytical, and reasoning skills beyond the level of intermediate algebra. Courses in science emphasize an understanding of the process of science and the scientific method. All courses emphasize the use of mathematics and science as investigative tools, the role of mathematics and science as part of human civilization and society, and the inherent value of both inductive and deductive reasoning as part of the human experience.

#### 2017-2018 MATH AND SCIENCE (NAS493 /NAS493B/NAS493C)

The student must successfully complete **18 units of study with a grade of "C" or better or a "P" if the course is taken on a "pass-no pass" basis.**

#### INCLUDED DISCIPLINES AND COURSES:

*Required Courses (Take one course in each of the three categories, including one course with a lab):*

Mathematics (MAT): 1A, 4, 5, 10, 11, 12, 12H, 25

**Physical Sciences:** Astronomy (AST) 1A, Chemistry (CHE) 1A, 1AH, 2A, 3, 10, Geography (GEG) 1, 1H, 1L, Geology (GEO) 1, 1L, 3, Oceanography (OCE) 1, Physical Science (PHS) 1, Physics (PHY) 2A, 4A

**Life Sciences:** Anatomy (AMY) 2A, Biology (BIO) 1, 1H, 2A, 5, 7, 8, 9, 11, 11H, 34, 36, Microbiology (MIC) 1

*Elective Courses (The remaining units may be taken from any of the following courses):*

Anatomy and Physiology (AMY): 2A, 2B, 10

Anthropology (ANT): 1, 1H

Astronomy (AST): 1A, 1B

Biology (BIO): 1, 1H, 2A, 2B, 3, 5, 6, 7, 8, 9, 10, 11, 11H, 12, 17, 30, 34, 36

Chemistry (CHE): 1A, 1AH, 1B, 1BH, 2A, 2B, 3, 10, 12A, 12B, 17

Computer Information Systems (CIS): 5, 17A, 17B, 17C, 18A, 18B, 18C

Electronics (ELE): 21, 23, 24, 25

Engineering (ENE): 10, 21, 22, 23, 27, 28, 30, 35

Geography (GEG): 1, 1L, 1H, 5

Geology (GEO): 1, 1L, 1B, 3

Health Science (HES): 1

Mathematics (MAT): 1A, 1B, 1C, 2, 3, 4, 5, 10, 11, 12, 12H, 25, 32, 36

Microbiology (MIC): 1

Oceanography (OCE): 1, 1L

Physical Science (PHS): 1, 5

Physics (PHY): 2A, 2B, 4A, 4B, 4C, 4D, 10, 11

Psychology (PSY): 2

**A course may only be counted once.**

Career paths typically chosen by undergraduate students emphasizing general education students, as well as students interested in mathematics or sciences as a possible career path, with career opportunities included in mathematics, chemistry, physics, biology, ecological/earth sciences, geology, engineering, computer science, electronics, oceanography, microbiology, kinesiology/ exercise science and the medical sciences.

Course	Units
ENGL 1A	4.0
AOE MATH COURSE	4.0
AREA D	3.0
AREA E	3.0

Total Units: 14.0

Course	Units
AOE ELECTIVE COURSE	3.0
AOE PHYSICAL SCI COURSE	4.0
POL 1	3.0
AREA C1	3.0
CSU ELECTIVE	3.0

Total Units: 16.0

Course	Units
AREA A3	3.0
AOE LIFE SCI COURSE	4.0
AOE ELECTIVE COURSE	3.0
AREA C1/C2	3.0
AREA D	3.0

Total Units: 16.0

Course	Units
AREA A1	3.0
AOE ELECTIVE COURSE	3.0
HIS 6/7/14/31/34	3.0
AREA B2	3.0
CSU ELECTIVE	3.0

Total Units: 15.0

## Suggested CSU Pathway for AOE in Math & Science



## IGETC Pathway for UC/CSU

### Associate of Arts Degree- Area of Emphasis in - Area of Math & Science —IGETC PATHWAY

These courses emphasize the natural sciences, which examine the physical universe, its life forms, and its natural phenomena. Courses in Math emphasize mathematical, analytical, and reasoning skills beyond the level of intermediate algebra. Courses in science emphasize an understanding of the process of science and the scientific method. All courses emphasize the use of mathematics and science as investigative tools, the role of mathematics and science as part of human civilization and society, and the inherent value of both inductive and deductive reasoning as part of the human experience.

2017-2018

#### MATH AND SCIENCE

(NAS493 /NAS493B/NAS493C)

The student must successfully complete **18 units of study with a grade of "C" or better or a "P" if the course is taken on a "pass-no pass" basis.**

#### INCLUDED DISCIPLINES AND COURSES:

*Required Courses (Take one course in each of the three categories, including one course with a lab):*

**Mathematics (MAT):** 1A, 4, 5, 10, 11, 12, 12H, 25

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**Life Sciences:** Anatomy (AMY) 2A, Biology (BIO) 1, 1H, 2A, 5, 7, 8, 9, 11, 11H, 34, 36, Microbiology (MIC) 1

*Elective Courses (The remaining units may be taken from any of the following courses):*

Anatomy and Physiology (AMY): 2A, 2B, 10

Anthropology (ANT): 1, 1H

Astronomy (AST): 1A, 1B

Biology (BIO): 1, 1H, 2A, 2B, 3, 5, 6, 7, 8, 9, 10, 11, 11H, 12, 17, 30, 34, 36

Chemistry (CHE): 1A, 1AH, 1B, 1BH, 2A, 2B, 3, 10, 12A, 12B, 17

Computer Information Systems (CIS): 5, 17A, 17B, 17C, 18A, 18B, 18C

Electronics (ELE): 21, 23, 24, 25

Engineering (ENE): 10, 21, 22, 23, 27, 28, 30, 35

Geography (GEG): 1, 1L, 1H, 5

Geology (GEO): 1, 1L, 1B, 3

Health Science (HES): 1

Mathematics (MAT): 1A, 1B, 1C, 2, 3, 4, 5, 10, 11, 12, 12H, 25, 32, 36

Microbiology (MIC): 1

Oceanography (OCE): 1, 1L

Physical Science (PHS): 1, 5

Physics (PHY): 2A, 2B, 4A, 4B, 4C, 4D, 10, 11

Psychology (PSY): 2

**A course may only be counted once.**

Course	Units
ENGL 1A	4.0
AOE MATH COURSE	4.0
AREA 3A	3.0
AREA 4	3.0

Total Units: 14.0

Course	Units
ENG 1B	4.0
COM 1/6/9	3.0
AOE PHYSICAL SCI	3.0
POL 1	3.0
AREA 4	3.0

Total Units: 16.0

Course	Units
AOE LIFE SCIENCE	4.0
HIS 6/7/14/31/34	3.0
AREA 3A/3B	3.0
AOE ELECTIVE	3.0
AOE ELECTIVE	3.0

Total Units: 16.0

Course	Units
AREA 6	5.0
UC ELECTIVE	3.0
UC ELECTIVE	3.0
UC ELECTIVE	3.0

Total Units: 14.0

Career paths typically chosen by undergraduate students emphasizing general education students, as well as students interested in mathematics or sciences as a possible career path, with career opportunities included in mathematics, chemistry, physics, biology, ecological/earth sciences, geology, engineering, computer science, electronics, oceanography, microbiology, kinesiology/ exercise science and the medical sciences.

Suggested **IGETC Pathway** for AOE in Math & Science



California Community Colleges are now offering Associate Degrees for Transfer (ADT's) to the CSU. These may include Associate in Arts (AA-T) or Associate in Science (AS-T) degrees. These degrees are designed to provide a clear pathway to a CSU major and baccalaureate degree. California Community College students who are awarded an AA-T or AS-T degree are guaranteed admission with junior standing somewhere in the CSU system and given priority admission consideration to their local CSU campus or to a program that is deemed similar to their community college major. This priority does not guarantee admission to specific majors or campuses. Students who have been awarded an AA-T or AS-T are able to complete their remaining requirements for the 120-unit baccalaureate degree within 60 semester or 90 quarter units. To view the most current list of Norco College Associate Degrees for Transfer and to find out which CSU campuses accept each degree, please go to:

[www.calstate.edu/transfer/adt-search/search.shtml](http://www.calstate.edu/transfer/adt-search/search.shtml)

**Students are encouraged to meet with a Norco College counselor to review their options for transfer and to develop an educational plan that best meets their goals and needs.**

**2019-2020**  
**MATHEMATICS**  
**(CSUGE) NAS719**

The Associate in Science Degree in Mathematics for Transfer degree is designed to prepare the student for transfer to institutions of higher education and specifically intended to satisfy the lower division requirements for the Baccalaureate Degree in Mathematics at a California State University (but does not guarantee acceptance to a particular campus or major). It will also provide the student with a sufficient academic basis from which to pursue a career in mathematics, statistics, actuarial science and education.

Required Courses: (19-20 units)	Units
MAT-1A* Calculus I	4
MAT-1B* Calculus II	4
MAT-1C* Calculus III	4
Choose 2 courses from the following with at least one course from Group A:	7-8
<b>Group A</b>	<b>Units</b>
MAT-2* Differential Equations	4
MAT-3* Linear Algebra	3
<b>Group B</b>	<b>Units</b>
PHY-4A* Mechanics	4
CSC/CIS-5 Programming Concepts and Methodology I: C++	4

\*Courses may also be used to fulfill general education requirements for the CSU GE or IGETC pattern, please confer with a counselor.

Course	Units
ENGL 1A	4.0
MAT 1A	4.0
AREA D	3.0
AREA E	3.0

Total Units: 14.0

Course	Units
MAT 1B	4.0
AREA B1/B3	4.0
POL 1	3.0
AREA C1	3.0

Total Units: 14.0

Course	Units
AREA A3	3.0
MAT 1C	4.0
MAT 2/3	3.0
AREA C1/C2	3.0
AREA D	3.0

Total Units: 16.0

Course	Units
AREA A1	3.0
PHY 4A/CIS 5	4.0
HIS 6/7/14/31/34	3.0
AREA B2	3.0
CSU ELECTIVE	3.0

Total Units: 16.0

Suggested Pathway for Math ADT

**Associate in Science for Transfer Degree**

The Associate in Science in Mathematics 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.

See your counselor for **YOUR** plan!





California Community Colleges are now offering Associate Degrees for Transfer (ADT's) to the CSU. These may include Associate in Arts (AA-T) or Associate in Science (AS-T) degrees. These degrees are designed to provide a clear pathway to a CSU major and baccalaureate degree. California Community College students who are awarded an AA-T or AS-T degree are guaranteed admission with junior standing somewhere in the CSU system and given priority admission consideration to their local CSU campus or to a program that is deemed similar to their community college major. This priority does not guarantee admission to specific majors or campuses. Students who have been awarded an AA-T or AS-T are able to complete their remaining requirements for the 120-unit baccalaureate degree within 60 semester or 90 quarter units. To view the most current list of Norco College Associate Degrees for Transfer and to find out which CSU campuses accept each degree, please go to:

[www.calstate.edu/transfer/adt-search/search.shtml](http://www.calstate.edu/transfer/adt-search/search.shtml)

**Students are encouraged to meet with a Norco College counselor to review their options for transfer and to develop an educational plan that best meets their goals and needs.**

## 2019-2020

### PHYSICS (CSUGE) NAS638

The Associate in Science in Physics for Transfer degree provides a foundation in physics and mathematics for students planning to transfer into a baccalaureate program in Physics. Successful completion of the transfer degree in Physics guarantees student acceptance to a local California State University to pursue a baccalaureate degree in Physics.

Required Courses (24 units)		Units
PHY-4A*	Mechanics	4
PHY-4B*	Electricity and Magnetism	4
PHY-4C*	Heat, Light and Waves	4
MAT-1A*	Calculus I	4
MAT-1B*	Calculus II	4
MAT-1C*	Calculus III	4

\*Courses may also be used to fulfill general education requirements for the CSU GE or IGETC pattern, please confer with a counselor.

Course	Units
ENGL 1A	4.0
MAT 1A	4.0
AREA D	3.0
AREA E	3.0

Total Units: 14.0

Course	Units
AREA A3	3.0
MAT 1B	4.0
PHY 4A	4.0
AREA C1	3.0
POL 1	3.0

Total Units: 17.0

Course	Units
PHY 4C	4.0
AREA D	3.0
CSU ELECTIVE	3.0
MAT 1C	4.0

Total Units: 14.0

Course	Units
AREA A1	3.0
AREA B2	3.0
PHY 4B	4.0
HIS 6/7/14/31/34	3.0
AREA C1/2	3.0

Total Units: 16.0

Suggested Pathway for Physics ADT

#### Associate in Science for Transfer Degree

The Associate in Science in Physics 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.

See your counselor for **YOUR** plan!

## Industrial Automation

23-24 unit certificate • 60 unit degree

The Industrial Automation program teaches how to use electronics, programmable logic control and fluid power systems to create and program new machinery used in industry.

### Required Courses (to earn certificate)

#### **ELE-10 Survey of Electronics (4 units)\***

Basic electronic theory featuring electron-flow, Ohm's, Watt's, and Kirchoff's Laws, analog DC and AC devices, circuits, parameters and equations, diodes, transistors, thyristors, digital logic, integrated circuits, power supplies, amplifiers, oscillators, with laboratory test and measurement equipment.

#### **ELE/ENE-27 Technical Communications (3 units)\***

Procedures for organizing and presenting data through informal and formal documents and presentations.

#### **ELE/MAN-64 Programmable Logic Controllers (3 units)\***

*Advisory: ELE-10 or 21*

Fundamentals of programmable logic controllers, with an emphasis on introductory programming of PLCs.

#### **ELE-74 Industrial Wiring and Controls (4 units)\***

Industrial controls and electrical wiring of modern facilities, manufacturing or warehousing.

#### **ENE-51 Blueprint reading (2 units)\***

A beginning course in the study of blueprints and their interpretation, types of projection, symbols and abbreviations.

#### **ELE/MAN-55 Occupational Safety & Health Admin. [OSHA] Standards for General Industry (1 unit)**

This course covers OSHA policies, procedures, and standards, as well as safety for general industry and health principles.

#### **MAN-60 Hydraulic & Pneumatic Systems (3 units)**

*Advisory: ENE-60 or MAT 52*

Basics of hydraulic and pneumatic systems including physical properties of liquids under pressure.

#### **ENE-62 Math for Automated Systems (3 units)**

Course concepts from arithmetic, algebra, geometry and scientific notation, extended and applied to problems in automation technology from electrical and mechanical engineering including metal work, welding, and building energy systems.

**OR**

#### **MAT-36 Trigonometry (4 units)\***

*Prerequisite: MAT-35 and 53 or qualifying placement level*

The study of trigonometric functions, their inverses and their graphs; identities and proofs related to trigonometric expressions.

*\*this class transfers toward one or more CSUSB or CalPoly majors. Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.*



## Industrial Automation

Tuition \$1,058-\$1,104 • Duration of Study: 16 months

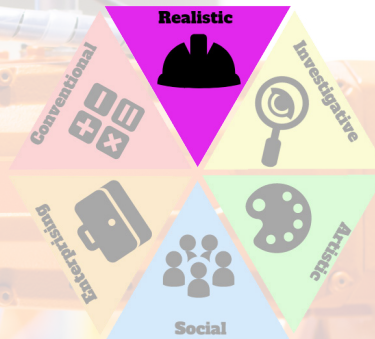
An AS Degree in Manufacturing Technology: Industrial Automation will be awarded upon completion of the required courses (23-24 units) plus the General Education requirements. Please refer to the Norco College Catalog or visit the Counseling Center.

## Job & Wage Information

- Robotics Technician/Electro-Magnetic Tech  
Wage Range\*: \$24.98-47.47  
8% increase expected in CA 2016-2026; 220 openings annually  
More information: <http://bit.ly/RoboticTechNC>
- Electronic Drafter  
Wage Range\*: \$19.49- 55.58  
12% increase expected in CA 2016-2026; 520 openings annually  
More information: <http://bit.ly/ElectronicDrafterNC>
- Electronics Engineering Technician  
Wage Range\*: \$15.41-47.85  
7% increase expected in CA 2016-2026; 2,330 openings annually  
More information: <http://bit.ly/ElectronicsEngineeringTechNC>
- Industrial Engineering Technician  
Wage Range\*: \$18.07-42.37  
10% increase expected in CA 2016-2026; 830 openings annually  
More information: <http://bit.ly/EngineeringTechnicianNC>

\*2018, Riverside/Ontario/San Bernardino Metro Area

## What type of interests might be a good fit for this career choice?



## Realistic

People who have athletic or mechanical ability and prefer to work with objects, machines and tools. Preference for working with things over people.

*For more information on careers that fit this category of interests, visit the Career Center in the Center for Student Success.*

## What's Your School?

NORCO COLLEGE  
SCHOOL OF  
Science, Technology,  
Engineering & Mathematics

Visit [www.norcollege.edu/STEM](http://www.norcollege.edu/STEM)  
for more information about this program.  
View gainful employment information at:  
[www.norcollege.edu/academicaffairs/cte](http://www.norcollege.edu/academicaffairs/cte)

## Supply Chain Automation

### 32-33 unit certificate • 60 unit degree

Supply Chain Automation is a rapidly-emerging discipline that supports the automated warehousing industry. This program provides students with the skills and hands-on training needed to install, operate, support, upgrade or maintain the software, hardware, automated equipment and systems that support the supply chain.

## Required Courses (to earn certificate)

### SCT/SCA-1 Introduction to Automated Warehousing (3 units)

An industrial technology overview course covering the basic knowledge and skills needed for supply chain technicians to successfully work in an automated distribution center.

### ELC/ELE/MAN-73 Electric Motors and Transformers (4 units)

Enables electricians to understand and effectively wire most standard DC motors, servos and steppers, as well as many AC motors, including single and poly-phase units, from fractional horsepower to multi-horsepower, industrial giants.

### ELC/ELE/MAN-74 Industrial Wiring and Controls (4 units)\*

Industrial controls and electrical wiring of modern facilities, manufacturing, or warehousing.

### ELC/ELE-77 Electrical Theory (3 units)\*

An introduction to electrical theory

### DFT/ENE/ELE-27 Technical Communications (3 units)\*

Procedures for organizing and presenting technical data through informal and formal documents and presentations.

### DFT/ENE-51 Blueprint Reading (2 units)\*

A beginning course in the study of blueprints and their interpretation, types of projection, symbols and abbreviations.

### ENE-62 Math for Automated Systems (3 units)

Course concepts from arithmetic, algebra, geometry and scientific notation, extended and applied to problems in automation technology from electrical and mechanical engineering, including metal work, welding, and building energy systems.

OR

### MAT-36 Trigonometry (4 units)\*

*Prerequisite: MAT-35 and 53 or qualifying placement level*  
The study of trigonometric functions, their inverses and their graphs; identities and proofs related to trigonometric expressions.

### MAN-55 OSHA Standards for General Industry (1 unit)

This course covers OSHA policies, procedures, and standards, as well as safety for general industry and health principles.

### MAN-60 Hydraulic and Pneumatic Systems (3 units)

*Advisory: ENE-60 or MAT 52.*

Basics of hydraulic and pneumatic systems including physical properties of liquids under pressure.

### ELE/MAN-64 Programmable Logic Controllers

**(3 units)\*** *Advisory: ELE-10*

Fundamentals of programmable logic controllers, with an emphasis on introductory programming of PLCs.

### ELE-26 Microcontrollers (3 units)\* *Advisory: ELE-25*

Computer number systems, codes, and arithmetic functions.

*\*this class transfers toward one or more CSUSB or CalPoly majors. Visit [www.assist.org](http://www.assist.org) or the Counseling office for details.*



# Supply Chain Automation

## Supply Chain Automation

Tuition \$1,472-\$1,518 • Duration of Study: 16 months

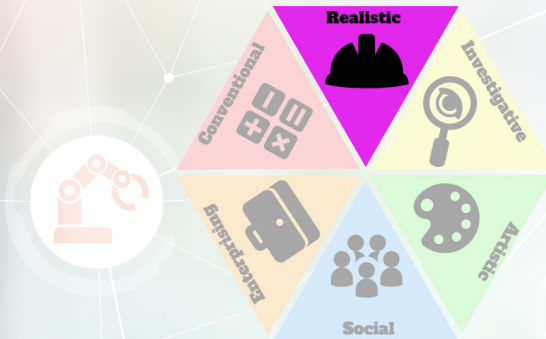
An Associate of Science Degree in Supply Chain Automation will be awarded upon completion of the required courses (32-33 units), plus the General Education requirements. Please refer to the Norco College Catalog or visit the Counseling Center.

### Job & Wage Information

- Industrial Machinery Mechanic  
Wage Range\*: \$17.04-37.41  
10% increase expected in CA 2016-2026; 2,480 openings annually  
More information: <http://bit.ly/IndustrialMachinery>
- Logistics Analyst  
Wage Range\*: \$23.63-57.67  
11% increase expected in CA 2016-2026; 1,890 openings annually  
More information: <http://bit.ly/LogisticsNC>
- Supply Chain Manager  
Wage Range\*: \$33.58-88.19  
11% increase expected in CA 2016-2026; 8,820 openings annually  
More information: <http://bit.ly/SupplyChainNC>

\*2018, Riverside/Ontario/San Bernardino Metro Area

### What type of interests might be a good fit for this career choice?



## Realistic

People who have athletic or mechanical ability and prefer to work with objects, machines and tools. Preference for working with things over people.

*For more information on careers that fit this category of interests, visit the Career Center in the Center for Student Success.*

### What's Your School?

**NORCO COLLEGE** SCHOOL OF  
**Science, Technology,  
Engineering & Mathematics**

Visit [www.norcollege.edu/STEM](http://www.norcollege.edu/STEM)  
for more information about this program.  
View gainful employment information at:  
[www.norcollege.edu/academicaffairs/cte](http://www.norcollege.edu/academicaffairs/cte)