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Associate in Arts General Education (GE) Pattern

*Courses listed in more than one area will NOT be applied to more than one GE area/subarea: A-F (excluding B3). For a course to meet a AA GE requirement, the course must be on the AA GE pattern during the academic year it is Completed. Use of credit from previous academic years and from other California Community Colleges can be verified on ASSIST www.assist.org ***AREA F: Ethnic Studies*** - This new GE Area is effective starting Fall 2021. New students and students who are returning who do not have Catalog Rights (please refer to the Catalog Rights policy within this catalog) are required to follow this updated GE pattern which contains Area F. Students who have been continuously enrolled and have Catalog Rights to previous Academic Years, may choose which catalog year they use for the purpose of degree conferment and GE Certification. Consult with a counselor for more information and to ensure appropriate educational planning.*

AA GE Starting Fall 2021 - Area D: two courses (6 units), Area F: one course (3 units)

AA GE Prior to this academic year = Area D: three courses from at least two different disciplines (9 units), Area F: n/a

AREA A: English Language Communication and Critical Thinking

Minimum 9 units - three courses: one course from each subarea with grades of "C" or better.

Course	Title	Credits
A1: Oral Communication		
COMS 010	Interpersonal Communication	3
COMS 020	Oral Communication	3
COMS 040	Introduction to Argumentation	3
COMS 045	Small Group Communication	3
A2: Written Communication		
ENGL 001A	English Composition	3
A3: Critical Thinking		
COMS 040	Introduction to Argumentation	3
ENGL 001C	Critical Thinking/Composition	3
PHIL 060	Logic and Critical Thinking	3
READ 010	Critical Reading	3

AREA B: Scientific Inquiry and Quantitative Reasoning

Minimum 9 units - one course from each subarea: B1, B2, and B4.

B3 may be satisfied with a B1 or a B2 course that contains a laboratory component (these courses are also listed in B3).

B4 with a "C" grade or better

Course	Title	Credits
B1: Physical Science		
ASTRO 010	Introduction to Astronomy ¹	3
CHEM 001A	General Chemistry	5
	or CHEM 001AHonors General Chemistry	
CHEM 001B	General Chemistry	5
CHEM 010	Everyday Chemistry	4

CHEM 012A	Organic Chemistry	5
CHEM 012B	Organic Chemistry	5
CHEM 015	Fundamentals of Chemistry	4
	or CHEM 015H Honors Fundamentals of Chemistry	
CHEM 032A	Intro to General, Organic, & Biological Chemistry	4
CHEM 032B	Intro to General, Organic, & Biological Chemistry	4
CHEM 061	Introduction to Fermentation Chemistry	3
CHEM 065	Quantitative Analysis	4
ENVIR 010	Environmental Science	4
GEOG 010	Introduction to Physical Geography	3
GEOL 010	Physical Geology ¹	3
GEOL 015	Earth Science ¹	3
METEO 010	Weather and Climate	3
OCEAN 010	Descriptive Oceanography	3
PHYS 002A	Algebra/Trigonometry-Based Physics I	4
PHYS 002B	Algebra/Trigonometry-Based Physics II	4
PHYS 004A	General Physics	5
PHYS 004B	General Physics	5
PHYS 004C	General Physics	5

B2: Life Science

BIOL 004A	General Principles and Cell Biology	5
BIOL 004B	Biodiversity and Organismal Biology	5
BIOL 020	Human Biology	4
BIOL 021	General Biology	4
BIOL 061	Human Heredity	3
BIOL 062	Plants and Human Welfare	3
BIOL 063	Ecology	3
BIOL 064	Marine Biology	4
BIOL 071	Human Anatomy	5
BIOL 072	Human Physiology	5
BIOL 074	General Microbiology	5
ENVIR 010	Environmental Science	4
OCEAN 010	Descriptive Oceanography	3
PSYCH 031	Biological Psychology	3

B3: Laboratory Activity

ASTRO 010L	Introductory Astronomy Lab ¹	1
BIOL 004A	General Principles and Cell Biology	5
BIOL 004B	Biodiversity and Organismal Biology	5
BIOL 020	Human Biology	4
BIOL 021	General Biology	4
BIOL 064	Marine Biology	4
BIOL 071	Human Anatomy	5
BIOL 072	Human Physiology	5
BIOL 074	General Microbiology	5
CHEM 001A	General Chemistry	5
	or CHEM 001AHonors General Chemistry	
CHEM 001B	General Chemistry	5
CHEM 010	Everyday Chemistry	4
CHEM 012A	Organic Chemistry	5
CHEM 012B	Organic Chemistry	5

CHEM 015	Fundamentals of Chemistry	4	ETH 022	African American Cinema	3
or CHEM 015H	Honors Fundamentals of Chemistry		ETH 032	Introduction to Chicana/Latinx Music in The U.S.	3
CHEM 032A	Intro to General, Organic, & Biological Chemistry	4	or MUSIC 032	Introduction to Chicana/Latinx Music in The U.S.	
CHEM 032B	Intro to General, Organic, & Biological Chemistry	4	HUMNT 001	Introduction to Visual and Performing Arts	3
ENVIR 010	Environmental Science	4	MUSIC 083	Exploring the World of Music	3
GEOL 010L	Physical Geology Laboratory ¹	1	or MUSIC 083H	Honors Exploring the World of Music	
GEOL 015L	Earth Science Laboratory ¹	1	MUSIC 091	Music Appreciation: Western Civilization	3
PHYS 002A	Algebra/Trigonometry-Based Physics I	4	MUSIC 095	Music Appreciation: Jazz	3
PHYS 002B	Algebra/Trigonometry-Based Physics II	4	MUSIC 099	Introductory Music	3
PHYS 004A	General Physics	5	THEAT 002	Beginning Acting	3
PHYS 004B	General Physics	5	THEAT 020	Introduction to Theatre	3
PHYS 004C	General Physics	5	THEAT 040	Introduction to Film	3
	B4: Mathematics/Quantitative Reasoning		THEAT 055	Chicana/Latinx Theatre	3
BUS 060	Fundamentals of Business Statistics	3		C2: Humanities	
CIS 107	Technest 2: Data Science Coding	3	ARABC 001A	Elementary Arabic	5
MATH 020	College Algebra for Liberal Arts	3	ARABC 001B	Elementary Arabic	5
MATH 021	Precalculus Algebra	4	ENGL 001B	English Composition	3
MATH 022	Trigonometry	3	ENGL 010	Great Works of Literature	3
MATH 025	Precalculus Algebra and Trigonometry	6	ENGL 033	Women in Literature	3
MATH 051	Mathematics for General Education	3	ENGL 065	The Short Story	3
MATH 052	Mathematics for Elementary Education	3	ENGL 071A	Fundamentals of Creative Writing/Poetry	3
MATH 061	Finite Mathematics	3	ENGL 071B	Fundamentals of Creative Writing/Fiction	3
MATH 062	Calculus for Business and the Social Sciences	3	ENGL 071C	Fundamentals of Creative Writing/Drama	3
MATH 063	Elementary Statistics	3	ENGL 073	Introduction to Shakespeare	3
MATH 070	Discrete Mathematics	4	ENGL 079	Memoir Writing	3
MATH 071	Calculus I With Analytic Geometry	5	ENGL 080	Mexican-American Literature	3
or MATH 071H	Honors Calculus I With Analytic Geometry		ENGL 081	Introduction to African American Literature	3
MATH 072	Calculus II with Analytic Geometry	5	ENGL 084A	Survey of American Literature I	3
MATH 073	Multivariable Calculus	5	ENGL 084B	Survey of American Literature II	3
MATH 078	Differential Equations	4	ENGL 086A	Survey of British Literature I	3
MATH 079	Linear Algebra	3	ENGL 086B	Survey of British Literature II	3
			ETH 019	The African American Family	3
			ETH 020	African American Culture	3
			ETH 026	Vietnamese Women in the U.S.	3
			ETH 027	Introduction to Race & Ethnicity in American History	3
			ETH 028	Introduction to Critical Race & Social Justice	3
			ETH 029	Women of Color in the United States	3
			ETH 030	Chicana/o Culture	3
			ETH 037A	Mexican American History I	3
			or ETH 037AH	Honors Mexican American History I	
			ETH 037B	Mexican American History II	3
			ETH 041	Vietnamese American Culture	3
			ETH 042	Asian Pacific American Culture	3
			FREN 001A	Elementary French	5
			FREN 001B	Elementary French	5
			FREN 002A	Intermediate French	5
			FREN 002B	Intermediate French	5
			GLOBL 007	Global Citizenship/Civics	3
			HIST 010A	Development of Western Culture	3
			HIST 010B	Development of Western Culture	3

¹ Course fulfills laboratory requirement as long as companion course is also completed: ASTRO 010+ASTRO 010L, GEOL 010+GEOL 010L, GEOL015+GEOL015L

AREA C: Arts and Humanities

Minimum 9 units – three courses: one course from C1, one course from C2, and one additional course from C1 or C2

Course	Title	Credits
C1: Arts		
ART 090	Art Appreciation	3
ART 091	Survey of Art History: Prehistoric Through Gothic	3
ART 092	Survey of Art History: Renaissance to the Present	3
ART 093	Art of the Americas	3
ART 096	Survey of Asian Art	3
DANCE 002	Dance Appreciation	3
ETH 011	Ethnic Film: Reel Studies	3

ETH 022	African American Cinema	3
ETH 032	Introduction to Chicana/Latinx Music in The U.S.	3
or MUSIC 032	Introduction to Chicana/Latinx Music in The U.S.	
HUMNT 001	Introduction to Visual and Performing Arts	3
MUSIC 083	Exploring the World of Music	3
or MUSIC 083H	Honors Exploring the World of Music	
MUSIC 091	Music Appreciation: Western Civilization	3
MUSIC 095	Music Appreciation: Jazz	3
MUSIC 099	Introductory Music	3
THEAT 002	Beginning Acting	3
THEAT 020	Introduction to Theatre	3
THEAT 040	Introduction to Film	3
THEAT 055	Chicana/Latinx Theatre	3
	C2: Humanities	
ARABC 001A	Elementary Arabic	5
ARABC 001B	Elementary Arabic	5
ENGL 001B	English Composition	3
ENGL 010	Great Works of Literature	3
ENGL 033	Women in Literature	3
ENGL 065	The Short Story	3
ENGL 071A	Fundamentals of Creative Writing/Poetry	3
ENGL 071B	Fundamentals of Creative Writing/Fiction	3
ENGL 071C	Fundamentals of Creative Writing/Drama	3
ENGL 073	Introduction to Shakespeare	3
ENGL 079	Memoir Writing	3
ENGL 080	Mexican-American Literature	3
ENGL 081	Introduction to African American Literature	3
ENGL 084A	Survey of American Literature I	3
ENGL 084B	Survey of American Literature II	3
ENGL 086A	Survey of British Literature I	3
ENGL 086B	Survey of British Literature II	3
ETH 019	The African American Family	3
ETH 020	African American Culture	3
ETH 026	Vietnamese Women in the U.S.	3
ETH 027	Introduction to Race & Ethnicity in American History	3
ETH 028	Introduction to Critical Race & Social Justice	3
ETH 029	Women of Color in the United States	3
ETH 030	Chicana/o Culture	3
ETH 037A	Mexican American History I	3
or ETH 037AH	Honors Mexican American History I	
ETH 037B	Mexican American History II	3
ETH 041	Vietnamese American Culture	3
ETH 042	Asian Pacific American Culture	3
FREN 001A	Elementary French	5
FREN 001B	Elementary French	5
FREN 002A	Intermediate French	5
FREN 002B	Intermediate French	5
GLOBL 007	Global Citizenship/Civics	3
HIST 010A	Development of Western Culture	3
HIST 010B	Development of Western Culture	3

HUMNT 002	Introduction to World Literature	3
HUMNT 003	Introduction to Women's, Gender, and Sexuality Studies	3
JAPAN 001A	Elementary Japanese 1	5
JAPAN 001B	Elementary Japanese 2	5
JAPAN 002A	Intermediate Japanese 1	5
JAPAN 002B	Intermediate Japanese 2	5
PHIL 010	Introduction to Philosophy: Metaphysics and Epistemology	3
PHIL 011	Introduction to Political and Aesthetic Philosophies	3
PHIL 012	Introduction to Existentialism: The Meaning of Life	3
PHIL 014	Introduction to Peace Studies	3
PHIL 065	Introduction to Ethics	3
PHIL 070	Comparative Religions	3
SL 001A	American Sign Language 1	3
SL 001B	American Sign Language 2	3
SL 002A	American Sign Language 3	3
SL 002B	American Sign Language 4	3
SPAN 001A	Elementary Spanish 1	5
SPAN 001B	Elementary Spanish 2	5
SPAN 002A	Intermediate Spanish 1	5
SPAN 002B	Intermediate Spanish 2	5
SPAN 022A	Spanish for Heritage Speakers 1	5
SPAN 022B	Spanish for Heritage Speakers 2	5
SPAN 031	Introduction to Spanish Linguistics	3
SPAN 032	Introduction to Spanish and Latin American Literature	3
THEAT 015	Theatre History 1	3
VIET 001A	Elementary Vietnamese 1	5
VIET 001B	Elementary Vietnamese 2	5

One additional course from C1 or C2

AREA D: Social Sciences

Minimum 6 units - two courses

Course	Title	Credits
Administration of Justice		
AJ 010	Introduction to Administration of Justice	3
AJ 011	Criminal Law	3
AJ 013	Criminal Procedures	3
AJ 014	Contemporary Police Issues	3
AJ 016	Street Law	3
AJ 019	Law Enforcement in Multicultural Communities	3
AJ 113	Violent Crime in America	3
AJ 116	Introduction to Corrections	3
Alcohol Drug Studies		
ADS 070	Introduction to Chemical Dependency	3
Anthropology and Archaeology		
ANTH 062	Introduction to Physical Anthropology	3
ANTH 063	Introduction to Social and Cultural Anthropology	3

Communication Studies

COMS 010	Interpersonal Communication	3
COMS 018	Introduction to Communication Studies	3
COMS 035	Intercultural Communication	3

Computer Information Systems

CIS 041	Introduction to Computer Information Systems	3
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Early Childhood Education

ECE 107	Child, Family and Community	3
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Economics

ECON 010A	Principles of Macroeconomic Theory	3
ECON 010B	Introduction to Microeconomic Theory	3

English

ENGL 033	Women in Literature	3
ENGL 080	Mexican-American Literature	3
ENGL 081	Introduction to African American Literature	3

Ethnic Studies

ETH 018	The African American Male Identity	3
ETH 019	The African American Family	3
ETH 020	African American Culture	3
ETH 022	African American Cinema	3
ETH 026	Vietnamese Women in the U.S.	3
ETH 027	Introduction to Race & Ethnicity in American History	3
ETH 028	Introduction to Critical Race & Social Justice	3
ETH 029	Women of Color in the United States	3
ETH 030	Chicana/o Culture	3
ETH 031	Social Justice Issues in Mexican American Communities	3
ETH 037A	Mexican American History I	3
or ETH 037AH	Honors Mexican American History I	
ETH 037B	Mexican American History II	3
ETH 041	Vietnamese American Culture	3
ETH 042	Asian Pacific American Culture	3

Family and Consumer Studies

FCS 070	Child Development	3
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Geography

GEOG 010	Introduction to Physical Geography	3
GEOG 011	Introduction to Cultural Geography	3
GEOG 012	World Regions in Global Context	3

Global Studies

GLOBL 001	Introduction to Global Studies	3
GLOBL 002	Global Issues	3
GLOBL 003	Introduction to Sustainability	3
GLOBL 007	Global Citizenship/Civics	3
GLOBL 012	World Regions in Global Context	3

Health Education

HED 010	Introduction to Public Health	3
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History

HIST 001	Survey of American History	3
or HIST 001H	Honors Survey of American History	
HIST 009	Women in American History	3

HIST 010A	Development of Western Culture	3
HIST 010B	Development of Western Culture	3
HIST 011A	World History to 1500	3
HIST 011B	World History from 1500	3
HIST 017A	History of the United States	3
or HIST 017AH	Honors History of the United States	
HIST 017B	History of the United States	3
or HIST 017BH	Honors History of the United States	
HIST 021	African American History	3
HIST 024	History and Culture of the American Indian	3
Humanities		
HUMNT 003	Introduction to Women's, Gender, and Sexuality Studies	3
Journalism		
JOURN 021	Mass Media and Society	3
Kinesiology		
KIN 010	Sports in Society	3
Political Science		
POLSC 001	Politics and Government In America	3
or POLSC 001H	Honors Politics and Government in America	
POLSC 002	Comparative Politics	3
POLSC 004	International Relations	3
POLSC 005	International Law and Human Rights	3
Psychology		
PSYCH 010	General Psychology	3
or PSYCH 010H	Honors General Psychology	
PSYCH 012	Social Psychology	3
PSYCH 020	Psychology of Stress Reduction	3
PSYCH 022	Research Methods in Psychology	3
PSYCH 031	Biological Psychology	3
PSYCH 035	Psychology of Women	3
PSYCH 041	The Psychology of Developmental Disabilities	3
PSYCH 060	Personal Growth and Adjustment	3
PSYCH 092	Developmental Psychology	3
PSYCH 099	Abnormal Psychology	3
PSYCH 100	Human Sexuality	3
Sign Language		
SL 015	Deaf Culture	3
Sociology		
SOC 010	Introduction to Sociology	3
or SOC 010H	Honors Introduction to Sociology	
SOC 011	Social Problems	3
SOC 017	Sociology of Marriage and Family	3
ADS 075A	Counseling Theories and Skills	3
FCS 019	Nutrition	3
FCS 070	Child Development	3
GUIDE 050A	First Year Experience College Success	2
GUIDE 050B	First Year Experience-Careers	2
GUIDE 087	College Study Techniques	3
GUIDE 096	Career and Life Planning	3
GUIDE 130	College and Life Success	3
HED 011	Dynamic Health Concepts	3
KIN 005	Introduction to Kinesiology	3
KIN 010	Sports in Society	3
KIN 095	Life Skills for the Student Athlete	3
PSYCH 020	Psychology of Stress Reduction	3
PSYCH 035	Psychology of Women	3
PSYCH 060	Personal Growth and Adjustment	3
PSYCH 092	Developmental Psychology	3
PSYCH 100	Human Sexuality	3
Physical Activity		
APE 030E	Adapted Physical Education - Adapted Fitness for Life	1
APE 053E	Adapted Low Impact Walking/Jogging for Health	1
APE 056E	Adapted Physical Education - Adapted Weight Training	1
DANCE 010	Ballet, Beginning	1
DANCE 011	Ballet, Intermediate	1
DANCE 011B	Ballet, High-Intermediate	1
DANCE 011C	Ballet, Advanced	1
DANCE 013A	Dancers' Workshop - Student, Large Group	0.5-1
DANCE 013B	Dancers' Workshop - Student, Small Group	0.5-1
DANCE 013C	Dancers' Workshop - Student, Solo/Duet	0.5-1
DANCE 014A	Rehearsal and Performance - Modern Dance	0.5-1.5
DANCE 014B	Rehearsal and Performance - Jazz Dance	0.5-1.5
DANCE 014C	Rehearsal and Performance - Hip-Hop Dance	0.5-1.5
DANCE 014D	Rehearsal and Performance - Tap Dance	0.5-1.5
DANCE 014E	Rehearsal and Performance - Ballroom Dance	0.5-1.5
DANCE 014F	Rehearsal and Performance - Ballet	0.5-1.5
DANCE 020	Jazz Dance, Beginning	1
DANCE 021	Jazz Dance, Intermediate	1
DANCE 021B	Jazz Dance, High-Intermediate	1
DANCE 023B	Hip-Hop Dance, Beginning	1
DANCE 023C	Hip-hop Dance, Intermediate	1
DANCE 030	Dance Improvisation	1.5
DANCE 032	Choreography	1.5
DANCE 034A	Choreography Workshop - Large Group	1
DANCE 034B	Choreography Workshop - Small Group	1
DANCE 034C	Choreography Workshop - Solo/Duet	1
DANCE 040B	Tap Dance, Beginning	0.5
DANCE 040C	Tap Dance, Intermediate	0.5
DANCE 050	Modern Dance, Beginning	1

AREA E: Lifelong Learning and Self-Development

Minimum 3 units - one lecture course (if needed, only 1 unit of physical activity may be used in this area)

Course	Title	Credits
ECE 108	Health, Safety, and Nutrition in Child Care (GE designation ends Summer2022)	

DANCE 051	Modern Dance, Intermediate	1
DANCE 051B	Modern Dance, High-Intermediate	1
DANCE 064	Ballroom Dance, Beginning	0.5
DANCE 065	Ballroom Dance, Intermediate	0.5
DANCE 066	Intermediate Ballroom - Latin	1
DANCE 067	Intermediate Ballroom - Swing	1
KINA 011	Sport-Specific Training for the Intercollegiate Athlete	1
KINA 057	Cross-Training for the Intercollegiate Athlete	1
KINPE 008	Archery	1
KINPE 008B	Intermediate Archery	1
KINPE 009	Badminton	1
KINPE 009B	Intermediate Badminton	1
KINPE 012	Basketball	1
KINPE 012B	Intermediate Basketball	1
KINPE 013	Advanced Football	1
KINPE 017	Beginning Pickleball	1
KINPE 019	Tae Kwon Do	1
KINPE 023	Cardio Kickboxing	1
KINPE 024	Beginning Golf	1
KINPE 030	Fit for Life	1
KINPE 038	Soccer	1
KINPE 038A	Intermediate Soccer	1
KINPE 039	Hatha Yoga	1
KINPE 039B	Hatha Yoga-Intermediate	1
KINPE 040	Softball	1
KINPE 041	Pilates Mat Workout	1
KINPE 043	Body Sculpting	1
KINPE 044	Core, Alignment, and Resistance Exercise on the Ball	1
KINPE 048	Track and Field	1
KINPE 050	Cross Fitness	1
KINPE 052	Volleyball	1
KINPE 053	Walking/Jogging for Health	1
KINPE 055	Step Aerobics	1
KINPE 056	Beginning Weight Training	1
KINPE 056B	Intermediate Weight Training	1
KINPE 059	Yoga for Stress Management	1
KINPE 070	Beginning Hiking	1
KINPE 099A	Spin Cycling	1
KINPE 099B	Intermediate Spin Cycling	1

AREA F: Ethnic Studies (New GE Area Effective Fall 2021)

Minimum 3 units - one course

Course	Title	Credits
ETH 027	Introduction to Race & Ethnicity in American History	3

U.S. History, Constitution, and American Ideals (US-1, US-2, and US-3)

Complete one of the following options. These courses may also be used to satisfy 6 units in AREA C or D.

Course	Title	Credits
OPTION 1:		
ETH 037A	Mexican American History I	3
or ETH 037AH	Honors Mexican American History I	
ETH 037B	Mexican American History II	3
OPTION 2:		
HIST 017A	History of the United States	3
or HIST 017AH	Honors History of the United States	
HIST 017B	History of the United States	3
or HIST 017BH	Honors History of the United States	
OPTION 3:		
HIST 001	Survey of American History	3
or HIST 001H	Honors Survey of American History	
POLSC 001	Politics and Government In America	3
or POLSC 001H	Honors Politics and Government in America	
OPTION 4:		
HIST 009	Women in American History	3
POLSC 001	Politics and Government In America	3
or POLSC 001H	Honors Politics and Government in America	
OPTION 5:		
HIST 021	African American History	3
POLSC 001	Politics and Government In America	3
or POLSC 001H	Honors Politics and Government in America	
OPTION 6:		
HIST 024	History and Culture of the American Indian	3
POLSC 001	Politics and Government In America	3
or POLSC 001H	Honors Politics and Government in America	

Total Requirements

Course	Title	Credits
Minimum GE for AA Degree		39

Additional Graduation Requirements

Course	Title	Credits
Cultural Pluralism/Ethnic Studies		
Completion of an Area F course will meet this requirement.		
Grade Point Average		
Minimum 2.0 GPA.		
Math Competency		
B4 course with a grade of "C" or better		
Major Coursework		
Courses must be completed with grades of "C" or better. Review catalog and consult with a counselor.		
Physical Activity		
1 unit from Area E - Physical Activity		
Reading/Written Expression Competency		
A2 course - ENGL 001A with a grade of "C" or better		

Residency

Complete at least 12 semester units in residence at SJCC.

U.S. History, Constitution, and American Ideals

Complete one of the six options listed above.

Course	Title	Credits
Total Minimum AA Degree Applicable Units Required		60

Biology - Associate in Science for Transfer

The Associate in Science in Biology for Transfer (AS-T) Degree provides students with a solid foundation in the life sciences, in preparation for a potential transfer to a 4 year institution. Successful completion of the AS-T satisfies lower division requirements and guarantees admission to the California State University (CSU) system (though not to a particular campus or major). The AS-T degree in biology is designed to prepare those students interested in majoring in biology, and/or those considering careers in the life sciences, including research, teaching, medicine and healthcare, biotechnology, and other related disciplines.

To be awarded the Associate in Science in Biology for Transfer degree, students must:

(1) Complete 60 semester units or 90 quarter units which are eligible for transfer to the California State University (CSU) system, including both of the following:

(A) The Intersegmental General Education Transfer Curriculum (IGETC for CSU) for STEM or the California State University General Education - Breadth Requirement (CSU GE) for STEM.

(B) A minimum of 18 semester units or 27 quarter units in a major or area of emphasis, as determined by the community college district.

(2) Obtain a minimum grade point average of 2.0.

While a minimum of 2.0 is required for admission, some majors may require a higher GPA. Please consult with a counselor for more information.

Associate Degrees for Transfer (ADTs) also require that students must earn a "C" or better in all courses required for the major or area of emphasis.

Program Learning Outcomes

- Formulate and test hypotheses by employing the scientific method, including collecting, interpreting and presenting data.
- Properly use scientific terms and concepts, especially in the context of critically assessing scientific arguments.
- Classify organisms into taxonomic groups and compare and contrast their living functions and organization.
- Apply chemical, physical, and biological principles to explain the significance of fundamental processes and phenomena in biology (including but not limited to photosynthesis, metabolism, DNA replication, and current uses of biotechnology).
- Apply ecological principles to explain the natural histories of organisms, their interconnectedness with the environment, and the importance of conservation.

Program Requirements

Course	Title	Credits
BIOL 004A	General Principles and Cell Biology	5
BIOL 004B	Biodiversity and Organismal Biology	5
List A		
CHEM 001A	General Chemistry	5
CHEM 001B	General Chemistry	5
MATH 071	Calculus I With Analytic Geometry	5
PHYS 002A	Algebra/Trigonometry-Based Physics I	4
and		
PHYS 002B	Algebra/Trigonometry-Based Physics II	4
or		
PHYS 004A	General Physics	5
and		
PHYS 004B	General Physics	5
Total Units		33-35

A.S.-T Degree Requirements

Course	Title	Credits
Major Requirements		33-35
IGETC for STEM or CSU GE for STEM		31-33
Transferable Electives		1-6
Total Units		60

CSU GE Breadth for STEM and IGETC (CSU) for STEM are only applicable to the Biology AS-T degree.

Students pursuing San Jose City College's Biology AS-T must complete one of the following General Education patterns:

CSU GE Breadth for STEM (33 units) - Areas A, B, E, and F of the traditional CSU GE curriculum; and one course in Subarea C1 Arts and one course in Subarea C2 Humanities; and one course in Area D.

OR

IGETC for CSU for STEM (31 units) - Area 1, 2, and 5 of the traditional IGETC for CSU curriculum; and one course in 3A Arts and one course in 3B Humanities; and two courses in Area 4 from two different disciplines.

California State University General Education (CSU GE) Breadth Requirements

Courses listed in more than one area will NOT be applied to more than one GE area/subarea: A-F (excluding B3). For a course to meet a CSU GE requirement, the course must be on the CSU GE pattern during the academic year it is completed. Use of credit from previous academic years and from other California Community Colleges can be verified on ASSIST www.assist.org

*****AREA F: Ethnic Studies*** - This new GE Area is effective starting Fall 2021. New students and students who are returning who do not have Catalog Rights (please refer to the Catalog Rights policy within this catalog) are required to follow this updated GE pattern which contains Area F. Students who have been continuously enrolled and have Catalog Rights to previous Academic Years, may choose which catalog year they use for the purpose of degree conferment and GE Certification. Consult with a counselor for more information and to ensure appropriate educational planning.**

CSU GE Starting Fall 2021 - Area D: two courses (6 units), Area F: one course (3 units)

CSU GE Prior to this academic year = Area D: three courses from at least two different disciplines (9 units), Area F: n/a

AREA A: English Language Communication and Critical Thinking

Minimum 9 units - three courses: one course from each subarea with grades of "C" or better.

Course	Title	Credits
A1: Oral Communication		
COMS 010	Interpersonal Communication	3
COMS 020	Oral Communication	3
COMS 040	Introduction to Argumentation	3
COMS 045	Small Group Communication	3
A2: Written Communication		
ENGL 001A	English Composition	3
A3: Critical Thinking		
COMS 040	Introduction to Argumentation	3
ENGL 001C	Critical Thinking/Composition	3
PHIL 060	Logic and Critical Thinking	3
READ 010	Critical Reading	3

AREA B: Scientific Inquiry and Quantitative Reasoning

Minimum 9 units - one course from each subarea: B1, B2, and B4.

B3 may be satisfied with a B1 or a B2 course that contains a laboratory component (these courses are also listed in B3).

B4 with a "C" grade or better

Course	Title	Credits
B1: Physical Science		
ASTRO 010	Introduction to Astronomy ¹	3
CHEM 001A	General Chemistry	5
	or CHEM 001AHonors General Chemistry	
CHEM 001B	General Chemistry	5
CHEM 010	Everyday Chemistry	4
CHEM 012A	Organic Chemistry	5
CHEM 012B	Organic Chemistry	5
CHEM 015	Fundamentals of Chemistry	4
	or CHEM 015H Honors Fundamentals of Chemistry	
CHEM 032A	Intro to General, Organic, & Biological Chemistry	4
CHEM 032B	Intro to General, Organic, & Biological Chemistry	4

CHEM 061	Introduction to Fermentation Chemistry	3
CHEM 065	Quantitative Analysis	4
ENVIR 010	Environmental Science	4
GEOG 010	Introduction to Physical Geography	3
GEOL 010	Physical Geology ¹	3
GEOL 015	Earth Science ¹	3
METEO 010	Weather and Climate	3
OCEAN 010	Descriptive Oceanography	3
PHYS 002A	Algebra/Trigonometry-Based Physics I	4
PHYS 002B	Algebra/Trigonometry-Based Physics II	4
PHYS 004A	General Physics	5
PHYS 004B	General Physics	5
PHYS 004C	General Physics	5
B2: Life Science		
BIOL 004A	General Principles and Cell Biology	5
BIOL 004B	Biodiversity and Organismal Biology	5
BIOL 020	Human Biology	4
BIOL 021	General Biology	4
BIOL 061	Human Heredity	3
BIOL 062	Plants and Human Welfare	3
BIOL 063	Ecology	3
BIOL 064	Marine Biology	4
BIOL 071	Human Anatomy	5
BIOL 072	Human Physiology	5
BIOL 074	General Microbiology	5
ENVIR 010	Environmental Science	4
OCEAN 010	Descriptive Oceanography	3
PSYCH 031	Biological Psychology	3
B3: Laboratory Activity		
ASTRO 010L	Introductory Astronomy Lab ¹	1
BIOL 004A	General Principles and Cell Biology	5
BIOL 004B	Biodiversity and Organismal Biology	5
BIOL 020	Human Biology	4
BIOL 021	General Biology	4
BIOL 064	Marine Biology	4
BIOL 071	Human Anatomy	5
BIOL 072	Human Physiology	5
BIOL 074	General Microbiology	5
CHEM 001A	General Chemistry	5
	or CHEM 001AHonors General Chemistry	
CHEM 001B	General Chemistry	5
CHEM 010	Everyday Chemistry	4
CHEM 012A	Organic Chemistry	5
CHEM 012B	Organic Chemistry	5
CHEM 015	Fundamentals of Chemistry	4
	or CHEM 015H Honors Fundamentals of Chemistry	
CHEM 032A	Intro to General, Organic, & Biological Chemistry	4
CHEM 032B	Intro to General, Organic, & Biological Chemistry	4
ENVIR 010	Environmental Science	4
GEOL 010L	Physical Geology Laboratory ¹	1

GEOL 015L	Earth Science Laboratory ¹	1
PHYS 002A	Algebra/Trigonometry-Based Physics I	4
PHYS 002B	Algebra/Trigonometry-Based Physics II	4
PHYS 004A	General Physics	5
PHYS 004B	General Physics	5
PHYS 004C	General Physics	5
B4: Mathematics/Quantitative Reasoning		
BUS 060	Fundamentals of Business Statistics	3
CIS 107	Technest 2: Data Science Coding	3
MATH 020	College Algebra for Liberal Arts	3
MATH 021	Precalculus Algebra	4
MATH 022	Trigonometry	3
MATH 025	Precalculus Algebra and Trigonometry	6
MATH 051	Mathematics for General Education	3
MATH 052	Mathematics for Elementary Education	3
MATH 061	Finite Mathematics	3
MATH 062	Calculus for Business and the Social Sciences	3
MATH 063	Elementary Statistics	3
MATH 070	Discrete Mathematics	4
MATH 071	Calculus I With Analytic Geometry or MATH 071H Honors Calculus I With Analytic Geometry	5
MATH 072	Calculus II with Analytic Geometry	5
MATH 073	Multivariable Calculus	5
MATH 078	Differential Equations	4
MATH 079	Linear Algebra	3

¹ Course fulfills laboratory requirement as long as companion course is also completed: ASTRO 010+ASTRO 010L, GEOL 010+GEOL 010L, GEOL 015+GEOL 015L

AREA C: Arts and Humanities

Minimum 9 units – three courses: one course from C1, one course from C2, and one additional course from C1 or C2

Course	Title	Credits
C1: Arts		
ART 090	Art Appreciation	3
ART 091	Survey of Art History: Prehistoric Through Gothic	3
ART 092	Survey of Art History: Renaissance to the Present	3
ART 093	Art of the Americas	3
ART 096	Survey of Asian Art	3
DANCE 002	Dance Appreciation	3
ETH 011	Ethnic Film: Reel Studies	3
ETH 022	African American Cinema	3
ETH 032	Introduction to Chicanx/Latinx Music in The U.S. or MUSIC 032 Introduction to Chicanx/Latinx Music in The U.S.	3
HUMNT 001	Introduction to Visual and Performing Arts	3
MUSIC 083	Exploring the World of Music or MUSIC 083H Honors Exploring the World of Music	3
MUSIC 091	Music Appreciation: Western Civilization	3

MUSIC 095	Music Appreciation: Jazz	3
MUSIC 099	Introductory Music	3
THEAT 002	Beginning Acting	3
THEAT 020	Introduction to Theatre	3
THEAT 040	Introduction to Film	3
THEAT 055	Chicanx/Latinx Theatre	3
C2: Humanities		
ARABC 001A	Elementary Arabic	5
ARABC 001B	Elementary Arabic	5
ENGL 001B	English Composition	3
ENGL 010	Great Works of Literature	3
ENGL 033	Women in Literature	3
ENGL 065	The Short Story	3
ENGL 071A	Fundamentals of Creative Writing/Poetry	3
ENGL 071B	Fundamentals of Creative Writing/Fiction	3
ENGL 071C	Fundamentals of Creative Writing/Drama	3
ENGL 073	Introduction to Shakespeare	3
ENGL 079	Memoir Writing	3
ENGL 080	Mexican-American Literature	3
ENGL 081	Introduction to African American Literature	3
ENGL 084A	Survey of American Literature I	3
ENGL 084B	Survey of American Literature II	3
ENGL 086A	Survey of British Literature I	3
ENGL 086B	Survey of British Literature II	3
ETH 019	The African American Family	3
ETH 020	African American Culture	3
ETH 026	Vietnamese Women in the U.S.	3
ETH 027	Introduction to Race & Ethnicity in American History	3
ETH 028	Introduction to Critical Race & Social Justice	3
ETH 029	Women of Color in the United States	3
ETH 030	Chicana/o Culture	3
ETH 037A	Mexican American History I or ETH 037AH Honors Mexican American History I	3
ETH 037B	Mexican American History II	3
ETH 041	Vietnamese American Culture	3
ETH 042	Asian Pacific American Culture	3
FREN 001A	Elementary French	5
FREN 001B	Elementary French	5
FREN 002A	Intermediate French	5
FREN 002B	Intermediate French	5
GLOBL 007	Global Citizenship/Civics	3
HIST 010A	Development of Western Culture	3
HIST 010B	Development of Western Culture	3
HUMNT 002	Introduction to World Literature	3
HUMNT 003	Introduction to Women's, Gender, and Sexuality Studies	3
JAPAN 001A	Elementary Japanese 1	5
JAPAN 001B	Elementary Japanese 2	5
JAPAN 002A	Intermediate Japanese 1	5
JAPAN 002B	Intermediate Japanese 2	5

PHIL 010	Introduction to Philosophy: Metaphysics and Epistemology	3
PHIL 011	Introduction to Political and Aesthetic Philosophies	3
PHIL 012	Introduction to Existentialism: The Meaning of Life	3
PHIL 014	Introduction to Peace Studies	3
PHIL 065	Introduction to Ethics	3
PHIL 070	Comparative Religions	3
SL 001A	American Sign Language 1	3
SL 001B	American Sign Language 2	3
SL 002A	American Sign Language 3	3
SL 002B	American Sign Language 4	3
SPAN 001A	Elementary Spanish 1	5
SPAN 001B	Elementary Spanish 2	5
SPAN 002A	Intermediate Spanish 1	5
SPAN 002B	Intermediate Spanish 2	5
SPAN 022A	Spanish for Heritage Speakers 1	5
SPAN 022B	Spanish for Heritage Speakers 2	5
SPAN 031	Introduction to Spanish Linguistics	3
SPAN 032	Introduction to Spanish and Latin American Literature	3
THEAT 015	Theatre History 1	3
VIET 001A	Elementary Vietnamese 1	5
VIET 001B	Elementary Vietnamese 2	5

One additional course from C1 or C2

AREA D: Social Sciences

Minimum 6 units - two courses

Course	Title	Credits
Administration of Justice		
AJ 010	Introduction to Administration of Justice	3
AJ 011	Criminal Law	3
AJ 013	Criminal Procedures	3
AJ 014	Contemporary Police Issues	3
AJ 016	Street Law	3
AJ 019	Law Enforcement in Multicultural Communities	3
AJ 113	Violent Crime in America	3
AJ 116	Introduction to Corrections	3
Alcohol and Drug Studies		
ADS 070	Introduction to Chemical Dependency	3
Anthropology		
ANTH 062	Introduction to Physical Anthropology	3
ANTH 063	Introduction to Social and Cultural Anthropology	3
Communication Studies		
COMS 010	Interpersonal Communication	3
COMS 018	Introduction to Communication Studies	3
COMS 035	Intercultural Communication	3
Computer Information Systems		
CIS 041	Introduction to Computer Information Systems	3

Early Childhood Education

ECE 107	Child, Family and Community	3
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Economics

ECON 010A	Principles of Macroeconomic Theory	3
ECON 010B	Introduction to Microeconomic Theory	3

English

ENGL 033	Women in Literature	3
ENGL 080	Mexican-American Literature	3
ENGL 081	Introduction to African American Literature	3

Ethnic Studies

ETH 018	The African American Male Identity	3
ETH 019	The African American Family	3
ETH 020	African American Culture	3
ETH 022	African American Cinema	3
ETH 026	Vietnamese Women in the U.S.	3
ETH 027	Introduction to Race & Ethnicity in American History	3
ETH 028	Introduction to Critical Race & Social Justice	3
ETH 029	Women of Color in the United States	3
ETH 030	Chicana/o Culture	3
ETH 031	Social Justice Issues in Mexican American Communities	3
ETH 037A	Mexican American History I	3
or ETH 037AH	Honors Mexican American History I	
ETH 037B	Mexican American History II	3
ETH 041	Vietnamese American Culture	3
ETH 042	Asian Pacific American Culture	3

Family and Consumer Studies

FCS 070	Child Development	3
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Geography

GEOG 010	Introduction to Physical Geography	3
GEOG 011	Introduction to Cultural Geography	3
GEOG 012	World Regions in Global Context	3

Global Studies

GLOBL 001	Introduction to Global Studies	3
GLOBL 002	Global Issues	3
GLOBL 003	Introduction to Sustainability	3
GLOBL 007	Global Citizenship/Civics	3
GLOBL 012	World Regions in Global Context	3

Health Education

HED 010	Introduction to Public Health	3
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History

HIST 001	Survey of American History	3
or HIST 001H	Honors Survey of American History	
HIST 009	Women in American History	3
HIST 010A	Development of Western Culture	3
HIST 010B	Development of Western Culture	3
HIST 011A	World History to 1500	3
HIST 011B	World History from 1500	3
HIST 017A	History of the United States	3
or HIST 017AH	Honors History of the United States	
HIST 017B	History of the United States	3

	or HIST 017BH Honors History of the United States	
HIST 021	African American History	3
HIST 024	History and Culture of the American Indian	3
Humanities		
HUMNT 003	Introduction to Women's, Gender, and Sexuality Studies	3
Journalism		
JOURN 021	Mass Media and Society	3
Kinesiology		
KIN 010	Sports in Society	3
Political Science		
POLSC 001	Politics and Government In America	3
	or POLSC 001HHonors Politics and Government in America	
POLSC 002	Comparative Politics	3
POLSC 004	International Relations	3
POLSC 005	International Law and Human Rights	3
Psychology		
PSYCH 010	General Psychology	3
	or PSYCH 010HHonors General Psychology	
PSYCH 012	Social Psychology	3
PSYCH 020	Psychology of Stress Reduction	3
PSYCH 022	Research Methods in Psychology	3
PSYCH 031	Biological Psychology	3
PSYCH 035	Psychology of Women	3
PSYCH 041	The Psychology of Developmental Disabilities	3
PSYCH 060	Personal Growth and Adjustment	3
PSYCH 092	Developmental Psychology	3
PSYCH 099	Abnormal Psychology	3
PSYCH 100	Human Sexuality	3
Sign Language		
SL 015	Deaf Culture	3
Sociology		
SOC 010	Introduction to Sociology	3
	or SOC 010H Honors Introduction to Sociology	
SOC 011	Social Problems	3
SOC 017	Sociology of Marriage and Family	3

AREA E: Lifelong Learning and Self-Development

Minimum 3 units - one lecture course (if needed, only 1 unit of physical activity may be used in this area)

Course	Title	Credits
<i>ECE 108</i>	<i>Health, Safety, and Nutrition in Child Care (GE designation ends Summer2022)</i>	
ADS 075A	Counseling Theories and Skills	3
FCS 019	Nutrition	3
FCS 070	Child Development	3
GUIDE 050A	First Year Experience College Success	2
GUIDE 050B	First Year Experience-Careers	2
GUIDE 087	College Study Techniques	3
GUIDE 096	Career and Life Planning	3

GUIDE 130	College and Life Success	3
HED 011	Dynamic Health Concepts	3
KIN 005	Introduction to Kinesiology	3
KIN 010	Sports in Society	3
KIN 095	Life Skills for the Student Athlete	3
PSYCH 020	Psychology of Stress Reduction	3
PSYCH 035	Psychology of Women	3
PSYCH 060	Personal Growth and Adjustment	3
PSYCH 092	Developmental Psychology	3
PSYCH 100	Human Sexuality	3
Physical Activity		
APE 030E	Adapted Physical Education - Adapted Fitness for Life	1
APE 053E	Adapted Low Impact Walking/Jogging for Health	1
APE 056E	Adapted Physical Education - Adapted Weight Training	1
DANCE 010	Ballet, Beginning	1
DANCE 011	Ballet, Intermediate	1
DANCE 011B	Ballet, High-Intermediate	1
DANCE 011C	Ballet, Advanced	1
DANCE 013A	Dancers' Workshop - Student, Large Group	0.5-1
DANCE 013B	Dancers' Workshop - Student, Small Group	0.5-1
DANCE 013C	Dancers' Workshop - Student, Solo/Duet	0.5-1
DANCE 014A	Rehearsal and Performance - Modern Dance	0.5-1.5
DANCE 014B	Rehearsal and Performance - Jazz Dance	0.5-1.5
DANCE 014C	Rehearsal and Performance - Hip-Hop Dance	0.5-1.5
DANCE 014D	Rehearsal and Performance - Tap Dance	0.5-1.5
DANCE 014E	Rehearsal and Performance - Ballroom Dance	0.5-1.5
DANCE 014F	Rehearsal and Performance - Ballet	0.5-1.5
DANCE 020	Jazz Dance, Beginning	1
DANCE 021	Jazz Dance, Intermediate	1
DANCE 021B	Jazz Dance, High-Intermediate	1
DANCE 023B	Hip-Hop Dance, Beginning	1
DANCE 023C	Hip-hop Dance, Intermediate	1
DANCE 030	Dance Improvisation	1.5
DANCE 032	Choreography	1.5
DANCE 034A	Choreography Workshop - Large Group	1
DANCE 034B	Choreography Workshop - Small Group	1
DANCE 034C	Choreography Workshop - Solo/Duet	1
DANCE 040B	Tap Dance, Beginning	0.5
DANCE 040C	Tap Dance, Intermediate	0.5
DANCE 050	Modern Dance, Beginning	1
DANCE 051	Modern Dance, Intermediate	1
DANCE 051B	Modern Dance, High-Intermediate	1
DANCE 064	Ballroom Dance, Beginning	0.5
DANCE 065	Ballroom Dance, Intermediate	0.5
DANCE 066	Intermediate Ballroom - Latin	1
DANCE 067	Intermediate Ballroom - Swing	1

KINA 011	Sport-Specific Training for the Intercollegiate Athlete	1
KINA 057	Cross-Training for the Intercollegiate Athlete	1
KINPE 008	Archery	1
KINPE 008B	Intermediate Archery	1
KINPE 009	Badminton	1
KINPE 009B	Intermediate Badminton	1
KINPE 012	Basketball	1
KINPE 012B	Intermediate Basketball	1
KINPE 013	Advanced Football	1
KINPE 017	Beginning Pickleball	1
KINPE 019	Tae Kwon Do	1
KINPE 023	Cardio Kickboxing	1
KINPE 024	Beginning Golf	1
KINPE 030	Fit for Life	1
KINPE 038	Soccer	1
KINPE 038A	Intermediate Soccer	1
KINPE 039	Hatha Yoga	1
KINPE 039B	Hatha Yoga-Intermediate	1
KINPE 040	Softball	1
KINPE 041	Pilates Mat Workout	1
KINPE 043	Body Sculpting	1
KINPE 044	Core, Alignment, and Resistance Exercise on the Ball	1
KINPE 048	Track and Field	1
KINPE 050	Cross Fitness	1
KINPE 052	Volleyball	1
KINPE 053	Walking/Jogging for Health	1
KINPE 055	Step Aerobics	1
KINPE 056	Beginning Weight Training	1
KINPE 056B	Intermediate Weight Training	1
KINPE 059	Yoga for Stress Management	1
KINPE 070	Beginning Hiking	1
KINPE 099A	Spin Cycling	1
KINPE 099B	Intermediate Spin Cycling	1

and one course in Area D Social Sciences. Consult with a counselor for more information.

CSU Graduation Requirement - U.S. History, Constitution, and American Ideals

Not required for ADTs (AA-T/AS-T degrees) | *US-1, US-2, and US-3*

Complete one of the following options. These course may also be used to satisfy units in Area C or D.

Options 1-6 satisfies the CSU Graduation Requirement and also the SJCC Graduation Requirement for local AA and AS degrees.

Options 7-12 only satisfies the CSU Graduation Requirement. Not applicable for local AA and AS degrees.

Course	Title	Credits
OPTION 1:		
ETH 037A	Mexican American History I	3
or ETH 037AH	Honors Mexican American History I	
ETH 037B	Mexican American History II	3
OPTION 2:		
HIST 017A	History of the United States	3
or HIST 017AH	Honors History of the United States	
HIST 017B	History of the United States	3
or HIST 017BH	Honors History of the United States	
OPTION 3:		
HIST 001	Survey of American History	3
or HIST 001H	Honors Survey of American History	
POLSC 001	Politics and Government In America	3
or POLSC 001H	Honors Politics and Government in America	
OPTION 4:		
HIST 009	Women in American History	3
POLSC 001	Politics and Government In America	3
or POLSC 001H	Honors Politics and Government in America	
OPTION 5:		
HIST 021	African American History	3
POLSC 001	Politics and Government In America	3
or POLSC 001H	Honors Politics and Government in America	
OPTION 6:		
HIST 024	History and Culture of the American Indian	3
POLSC 001	Politics and Government In America	3
or POLSC 001H	Honors Politics and Government in America	
OPTION 7:		
ETH 037A	Mexican American History I	3
or ETH 037AH	Honors Mexican American History I	
HIST 017B	History of the United States	3
or HIST 017BH	Honors History of the United States	
OPTION 8:		
HIST 017A	History of the United States	3
or HIST 017AH	Honors History of the United States	
ETH 037B	Mexican American History II	3
OPTION 9:		
ETH 037A	Mexican American History I	3
or ETH 037AH	Honors Mexican American History I	

AREA F: Ethnic Studies (New GE Area Effective Fall 2021)

Minimum 3 units - one course

Course	Title	Credits
ETH 027	Introduction to Race & Ethnicity in American History	3

Total

Course	Title	Credits
Minumum of^		39

^CSU GE Breadth for STEM is only applicable to an approved Associate Degree for Transfer (ADT) e.g. Biology AS-T. Students pursuing an approved ADT using CSU GE Breadth for STEM must complete: CSU GE Breadth for STEM (33 units) - Areas A, B, E, and F of the traditional CSU GE curriculum; and one course in Subarea C1 Arts and one course in Subarea C2 Humanities;

POLSC 001	Politics and Government In America	3
or POLSC 001H Honors Politics and Government in America		
OPTION 10:		
ETH 037B	Mexican American History II	3
POLSC 001	Politics and Government In America	3
or POLSC 001H Honors Politics and Government in America		
OPTION 11:		
HIST 017A	History of the United States	3
or HIST 017AH Honors History of the United States		
POLSC 001	Politics and Government In America	3
or POLSC 001H Honors Politics and Government in America		
OPTION 12:		
HIST 017B	History of the United States	3
or HIST 017BH Honors History of the United States		
POLSC 001	Politics and Government In America	3
or POLSC 001H Honors Politics and Government in America		

Intersegmental General Education Transfer Curriculum (IGETC)

Courses listed in more than one area will NOT be applied to more than one GE area/subarea: 1-5 (excluding 5C)

Use of credit from previous academic years and from other California Community Colleges can be verified on ASSIST www.assist.org

This GE pattern may be used for General Education Certification for the University of California (UC) or the California State University (CSU). *For a course to meet an IGETC requirement, the course must be on the IGETC pattern during the academic year it is completed.*

ALL COURSES MUST BE COMPLETED WITH A GRADE OF "C" OR BETTER

AREA 1: English Communication

CSU: Minimum 9 units - three courses, one course from each subarea: 1A, 1B, and 1C

UC: Minimum 6 units - two courses, subareas 1A and 1B

Course	Title	Credits
1A: English Composition		
ENGL 001A	English Composition	3
1B: Critical Thinking/English Composition		
ENGL 001C	Critical Thinking/Composition	3
1C: Oral Communication – CSU Only Requirement		
COMS 010	Interpersonal Communication	3
COMS 020	Oral Communication	3
COMS 040	Introduction to Argumentation	3
COMS 045	Small Group Communication	3

AREA 2A: Mathematical Concepts and Quantitative Reasoning

Minimum 3 units - one course

Course	Title	Credits
BUS 060	Fundamentals of Business Statistics	3
MATH 020	College Algebra for Liberal Arts	3

MATH 021	Precalculus Algebra	4
MATH 025	Precalculus Algebra and Trigonometry	6
MATH 061	Finite Mathematics	3
MATH 062	Calculus for Business and the Social Sciences	3
MATH 063	Elementary Statistics	3
MATH 071	Calculus I With Analytic Geometry	5
or MATH 071H Honors Calculus I With Analytic Geometry		
MATH 072	Calculus II with Analytic Geometry	5
MATH 073	Multivariable Calculus	5
MATH 078	Differential Equations	4
MATH 079	Linear Algebra	3

AREA 3: Arts and Humanities

Minimum 9 units - three courses, one course from 3A, one course from 3B, and one additional course from 3A or 3B

Course	Title	Credits
3A: Arts		
ART 090	Art Appreciation	3
ART 091	Survey of Art History: Prehistoric Through Gothic	3
ART 092	Survey of Art History: Renaissance to the Present	3
ART 093	Art of the Americas	3
ART 096	Survey of Asian Art	3
DANCE 002	Dance Appreciation	3
ETH 011	Ethnic Film: Reel Studies	3
ETH 022	African American Cinema	3
ETH 032	Introduction to Chicana/Latinx Music in The U.S.	3
or MUSIC 032 Introduction to Chicana/Latinx Music in The U.S.		
HUMNT 001	Introduction to Visual and Performing Arts	3
MUSIC 083	Exploring the World of Music	3
or MUSIC 083H Honors Exploring the World of Music		
MUSIC 091	Music Appreciation: Western Civilization	3
MUSIC 095	Music Appreciation: Jazz	3
THEAT 020	Introduction to Theatre	3
THEAT 040	Introduction to Film	3
THEAT 055	Chicana/Latinx Theatre	3
3B: Humanities		
ENGL 001B	English Composition	3
ENGL 010	Great Works of Literature	3
ENGL 033	Women in Literature	3
ENGL 065	The Short Story	3
ENGL 073	Introduction to Shakespeare	3
ENGL 080	Mexican-American Literature	3
ENGL 081	Introduction to African American Literature	3
ENGL 084A	Survey of American Literature I	3
ENGL 084B	Survey of American Literature II	3
ENGL 086A	Survey of British Literature I	3
ENGL 086B	Survey of British Literature II	3
ETH 019	The African American Family	3

ETH 020	African American Culture	3	ANTH 063	Introduction to Social and Cultural Anthropology	3
ETH 026	Vietnamese Women in the U.S.	3	Communication Studies		
ETH 027	Introduction to Race & Ethnicity in American History	3	COMS 010	Interpersonal Communication	3
ETH 028	Introduction to Critical Race & Social Justice	3	COMS 018	Introduction to Communication Studies	3
ETH 029	Women of Color in the United States	3	COMS 035	Intercultural Communication	3
ETH 030	Chicana/o Culture	3	Early Childhood Education		
ETH 037A	Mexican American History I	3	ECE 107	Child, Family and Community	3
or ETH 037AH	Honors Mexican American History I		Economics		
ETH 037B	Mexican American History II	3	ECON 010A	Principles of Macroeconomic Theory	3
ETH 041	Vietnamese American Culture	3	ECON 010B	Introduction to Microeconomic Theory	3
ETH 042	Asian Pacific American Culture	3	English		
FREN 001B	Elementary French	5	ENGL 080	Mexican-American Literature	3
FREN 002A	Intermediate French	5	ENGL 081	Introduction to African American Literature	3
FREN 002B	Intermediate French	5	Ethnic Studies		
HIST 010A	Development of Western Culture	3	ETH 018	The African American Male Identity	3
HIST 010B	Development of Western Culture	3	ETH 019	The African American Family	3
HUMNT 002	Introduction to World Literature	3	ETH 020	African American Culture	3
HUMNT 003	Introduction to Women's, Gender, and Sexuality Studies	3	ETH 022	African American Cinema	3
JAPAN 002A	Intermediate Japanese 1	5	ETH 026	Vietnamese Women in the U.S.	3
JAPAN 002B	Intermediate Japanese 2	5	ETH 027	Introduction to Race & Ethnicity in American History	3
PHIL 010	Introduction to Philosophy: Metaphysics and Epistemology	3	ETH 028	Introduction to Critical Race & Social Justice	3
PHIL 011	Introduction to Political and Aesthetic Philosophies	3	ETH 029	Women of Color in the United States	3
PHIL 012	Introduction to Existentialism: The Meaning of Life	3	ETH 030	Chicana/o Culture	3
PHIL 014	Introduction to Peace Studies	3	ETH 031	Social Justice Issues in Mexican American Communities	3
PHIL 065	Introduction to Ethics	3	ETH 037A	Mexican American History I	3
PHIL 070	Comparative Religions	3	or ETH 037AH	Honors Mexican American History I	
SL 001B	American Sign Language 2	3	ETH 037B	Mexican American History II	3
SL 002A	American Sign Language 3	3	ETH 041	Vietnamese American Culture	3
SL 002B	American Sign Language 4	3	ETH 042	Asian Pacific American Culture	3
SPAN 002A	Intermediate Spanish 1	5	Family and Consumer Studies		
SPAN 002B	Intermediate Spanish 2	5	FCS 070	Child Development	3
SPAN 031	Introduction to Spanish Linguistics	3	Geography		
SPAN 032	Introduction to Spanish and Latin American Literature	3	GEOG 011	Introduction to Cultural Geography	3
THEAT 015	Theatre History 1	3	GEOG 012	World Regions in Global Context	3
One additional course from 3A or 3B					

AREA 4: Social and Behavioral Sciences

Minimum 9 units - three courses from at least two different disciplines

Course	Title	Credits
Administration of Justice		
AJ 010	Introduction to Administration of Justice	3
AJ 019	Law Enforcement in Multicultural Communities	3
AJ 116	Introduction to Corrections	3
Anthropology		
ANTH 062	Introduction to Physical Anthropology	3
Communication Studies		
COMS 010	Interpersonal Communication	3
COMS 018	Introduction to Communication Studies	3
COMS 035	Intercultural Communication	3
Early Childhood Education		
ECE 107	Child, Family and Community	3
Economics		
ECON 010A	Principles of Macroeconomic Theory	3
ECON 010B	Introduction to Microeconomic Theory	3
English		
ENGL 080	Mexican-American Literature	3
ENGL 081	Introduction to African American Literature	3
Ethnic Studies		
ETH 018	The African American Male Identity	3
ETH 019	The African American Family	3
ETH 020	African American Culture	3
ETH 022	African American Cinema	3
ETH 026	Vietnamese Women in the U.S.	3
ETH 027	Introduction to Race & Ethnicity in American History	3
ETH 028	Introduction to Critical Race & Social Justice	3
ETH 029	Women of Color in the United States	3
ETH 030	Chicana/o Culture	3
ETH 031	Social Justice Issues in Mexican American Communities	3
ETH 037A	Mexican American History I	3
or ETH 037AH	Honors Mexican American History I	
ETH 037B	Mexican American History II	3
ETH 041	Vietnamese American Culture	3
ETH 042	Asian Pacific American Culture	3
Family and Consumer Studies		
FCS 070	Child Development	3
Geography		
GEOG 011	Introduction to Cultural Geography	3
GEOG 012	World Regions in Global Context	3
Global Studies		
GLOBL 001	Introduction to Global Studies	3
GLOBL 002	Global Issues	3
GLOBL 003	Introduction to Sustainability	3
GLOBL 007	Global Citizenship/Civics	3
GLOBL 012	World Regions in Global Context	3
Health Education		
HED 010	Introduction to Public Health	3
History		
HIST 001	Survey of American History	3
or HIST 001H	Honors Survey of American History	
HIST 009	Women in American History	3
HIST 010A	Development of Western Culture	3
HIST 010B	Development of Western Culture	3
HIST 011A	World History to 1500	3

HIST 011B	World History from 1500	3
HIST 017A	History of the United States	3
or HIST 017AH	Honors History of the United States	
HIST 017B	History of the United States	3
or HIST 017BH	Honors History of the United States	
HIST 021	African American History	3
HIST 024	History and Culture of the American Indian	3
Humanities		
HUMNT 003	Introduction to Women's, Gender, and Sexuality Studies	3
Journalism		
JOURN 021	Mass Media and Society	3
Kinesiology		
KIN 010	Sports in Society	3
Political Science		
POLSC 001	Politics and Government In America	3
or POLSC 001H	Honors Politics and Government in America	
POLSC 002	Comparative Politics	3
POLSC 004	International Relations	3
POLSC 005	International Law and Human Rights	3
Psychology		
PSYCH 010	General Psychology	3
or PSYCH 010H	Honors General Psychology	
PSYCH 012	Social Psychology	3
PSYCH 022	Research Methods in Psychology	3
PSYCH 031	Biological Psychology	3
PSYCH 035	Psychology of Women	3
PSYCH 041	The Psychology of Developmental Disabilities	3
PSYCH 060	Personal Growth and Adjustment	3
PSYCH 092	Developmental Psychology	3
PSYCH 099	Abnormal Psychology	3
PSYCH 100	Human Sexuality	3
Sign Language		
SL 015	Deaf Culture	3
Sociology		
SOC 010	Introduction to Sociology	3
or SOC 010H	Honors Introduction to Sociology	
SOC 011	Social Problems	3
SOC 017	Sociology of Marriage and Family	3

AREA 5: Physical and Biological Sciences

Minimum 7 units - two courses: one Physical Science and one Biological Science; at least one must include a laboratory.

Courses with a laboratory component are listed in subarea 5C.

Course	Title	Credits
5A: Physical Science		
ASTRO 010	Introduction to Astronomy ¹	3
CHEM 001A	General Chemistry	5
or CHEM 001AH	Honors General Chemistry	
CHEM 001B	General Chemistry	5
CHEM 010	Everyday Chemistry	4

CHEM 012A	Organic Chemistry	5
CHEM 012B	Organic Chemistry	5
CHEM 015	Fundamentals of Chemistry	4
or CHEM 015H	Honors Fundamentals of Chemistry	
CHEM 032A	Intro to General, Organic, & Biological Chemistry	4
CHEM 032B	Intro to General, Organic, & Biological Chemistry	4
CHEM 061	Introduction to Fermentation Chemistry	3
CHEM 065	Quantitative Analysis	4
ENVIR 010	Environmental Science	4
GEOG 010	Introduction to Physical Geography	3
GEOL 010	Physical Geology ¹	3
GEOL 015	Earth Science ¹	3
METEO 010	Weather and Climate	3
OCEAN 010	Descriptive Oceanography	3
PHYS 002A	Algebra/Trigonometry-Based Physics I	4
PHYS 002B	Algebra/Trigonometry-Based Physics II	4
PHYS 004A	General Physics	5
PHYS 004B	General Physics	5
PHYS 004C	General Physics	5
5B: Biological Science		
BIOL 004A	General Principles and Cell Biology	5
BIOL 004B	Biodiversity and Organismal Biology	5
BIOL 020	Human Biology	4
BIOL 021	General Biology	4
BIOL 061	Human Heredity	3
BIOL 062	Plants and Human Welfare	3
BIOL 063	Ecology	3
BIOL 064	Marine Biology	4
BIOL 071	Human Anatomy	5
BIOL 072	Human Physiology	5
BIOL 074	General Microbiology	5
ENVIR 010	Environmental Science	4
OCEAN 010	Descriptive Oceanography	3
PSYCH 031	Biological Psychology	3
5C: Science Laboratory		
ASTRO 010L	Introductory Astronomy Lab ¹	1
BIOL 004A	General Principles and Cell Biology	5
BIOL 004B	Biodiversity and Organismal Biology	5
BIOL 020	Human Biology	4
BIOL 021	General Biology	4
BIOL 064	Marine Biology	4
BIOL 071	Human Anatomy	5
BIOL 072	Human Physiology	5
BIOL 074	General Microbiology	5
CHEM 001A	General Chemistry	5
or CHEM 001AH	Honors General Chemistry	
CHEM 001B	General Chemistry	5
CHEM 010	Everyday Chemistry	4
CHEM 012A	Organic Chemistry	5
CHEM 012B	Organic Chemistry	5

CHEM 015	Fundamentals of Chemistry	4
or CHEM 015H	Honors Fundamentals of Chemistry	
CHEM 032A	Intro to General, Organic, & Biological Chemistry	4
CHEM 032B	Intro to General, Organic, & Biological Chemistry	4
ENVIR 010	Environmental Science	4
GEOL 010L	Physical Geology Laboratory ¹	1
GEOL 015L	Earth Science Laboratory ¹	1
PHYS 002A	Algebra/Trigonometry-Based Physics I	4
PHYS 002B	Algebra/Trigonometry-Based Physics II	4
PHYS 004A	General Physics	5
PHYS 004B	General Physics	5
PHYS 004C	General Physics	5

¹ Course fulfills laboratory requirement as long as companion course is also completed: ASTRO 010+ASTRO 010L, GEOL 010+GEOL 010L, GEOL015+GEOL015L

AREA 6: Language Other Than English (LOTE) – UC Only Requirement

Not required for ADTs (AA-T/AS-T degrees)

Proficiency in a language other than English may be met in one of the ways listed below

- Complete one of the following SJCC courses with a grade of “C” or better

Course	Title	Credits
ARABC 001A	Elementary Arabic	5
ARABC 001B	Elementary Arabic	5
FREN 001A	Elementary French	5
FREN 001B	Elementary French	5
FREN 002A	Intermediate French	5
FREN 002B	Intermediate French	5
JAPAN 001A	Elementary Japanese 1	5
JAPAN 001B	Elementary Japanese 2	5
JAPAN 002A	Intermediate Japanese 1	5
JAPAN 002B	Intermediate Japanese 2	5
SL 001A	American Sign Language 1	3
SL 001B	American Sign Language 2	3
SL 002A	American Sign Language 3	3
SL 002B	American Sign Language 4	3
SPAN 001A	Elementary Spanish 1	5
SPAN 001B	Elementary Spanish 2	5
SPAN 002A	Intermediate Spanish 1	5
SPAN 002B	Intermediate Spanish 2	5
SPAN 022A	Spanish for Heritage Speakers 1	5
SPAN 022B	Spanish for Heritage Speakers 2	5
VIET 001A	Elementary Vietnamese 1	5
VIET 001B	Elementary Vietnamese 2	5

- High School Level Courses: Two years or coursework equivalent to the second level of high school instruction in a language other than English (LOTE). The two years must be in the same language. LOTE

requires a grade of “C-” or better in the second semester of the second year.

- External Exams: Appropriate scores on the SAT II, AP, IBHL, GCE “O” or “A” level exams. See a counselor for appropriate scores.
- Complete two years of formal schooling at the sixth-grade level or higher at an institution where the language of instruction is not English.
- Have competency verified by a faculty member associated with a California Community College. Such verification requires that the college provide a document on letterhead asserting that the student has mastered proficiency in the language equivalent to two years/second level of high school instruction.

Total

Course	Title	Credits
Minimum of^		34-37

¹IGETC for CSU for STEM is only applicable with an approved Associate Degree for Transfer (ADT). Students pursuing an approved ADT and using IGETC for CSU for STEM must complete: IGETC for CSU for STEM (31 units) - Area 1, 2, and 5 of the traditional IGETC for CSU curriculum; and one course in 3A Arts and one course in 3B Humanities; and two courses in Area 4 from two different disciplines. Area 6 LOTE is not required for IGETC for STEM certification; however, students may need to complete a course after UC transfer if LOTE proficiency has not been met.

U.S. History, Constitution, and American Ideals – CSU Graduation Requirement

Not required for ADTs (AA-T/AS-T degrees) | US-1, US-2, and US-3

Complete one of the following options. These course may also be used to satisfy units in Area 3 or 4.

Options 1-6 satisfies the CSU Graduation Requirement and also the SJCC Graduation Requirement for local AA and AS degrees.

Options 7-12 only satisfies the CSU Graduation Requirement. Not applicable for local AA and AS degrees.

Course	Title	Credits
OPTION 1:		
ETH 037A	Mexican American History I	3
or ETH 037AH	Honors Mexican American History I	
ETH 037B	Mexican American History II	3
OPTION 2:		
HIST 017A	History of the United States	3
or HIST 017AH	Honors History of the United States	
HIST 017B	History of the United States	3
or HIST 017BH	Honors History of the United States	
OPTION 3:		
HIST 001	Survey of American History	3
or HIST 001H	Honors Survey of American History	
POLSC 001	Politics and Government In America	3
or POLSC 001H	Honors Politics and Government in America	
OPTION 4:		
HIST 009	Women in American History	3
POLSC 001	Politics and Government In America	3

or POLSC 001H Honors Politics and Government in America		
OPTION 5:		
HIST 021	African American History	3
POLSC 001	Politics and Government In America	3
or POLSC 001H Honors Politics and Government in America		
OPTION 6:		
HIST 024	History and Culture of the American Indian	3
POLSC 001	Politics and Government In America	3
or POLSC 001H Honors Politics and Government in America		
OPTION 7:		
ETH 037A	Mexican American History I	3
or ETH 037AH Honors Mexican American History I		
HIST 017B	History of the United States	3
or HIST 017BH Honors History of the United States		
OPTION 8:		
HIST 017A	History of the United States	3
or HIST 017AH Honors History of the United States		
ETH 037B	Mexican American History II	3
OPTION 9:		
ETH 037A	Mexican American History I	3
or ETH 037AH Honors Mexican American History I		
POLSC 001	Politics and Government In America	3
or POLSC 001H Honors Politics and Government in America		
OPTION 10:		
ETH 037B	Mexican American History II	3
POLSC 001	Politics and Government In America	3
or POLSC 001H Honors Politics and Government in America		
OPTION 11:		
HIST 017A	History of the United States	3
or HIST 017AH Honors History of the United States		
POLSC 001	Politics and Government In America	3
or POLSC 001H Honors Politics and Government in America		
OPTION 12:		
HIST 017B	History of the United States	3
or HIST 017BH Honors History of the United States		
POLSC 001	Politics and Government In America	3
or POLSC 001H Honors Politics and Government in America		

Public Health Science - Associate in Science for Transfer

About the Program

The Associate in Science in Public Health Science for Transfer (AS-T) degree provides students with a solid foundation in public health and the health sciences, in preparation for transfer to a four-year institution.

Successful completion of the AS-T degree satisfies lower division requirements and guarantees admission to the California State University (CSU) system (though not to a particular campus or major). The AS-T degree in Public Health Science is designed to prepare those students interested in majoring in biology, health science, or public health. It is also designed to prepare students that are considering careers in health sciences, healthcare, medicine, and similar research fields for transfer.

To be awarded the Associate in Science in Public Health Science for Transfer degree, students must:

(1) Complete 60 semester units or 90 quarter units which are eligible for transfer to the California State University (CSU) system, including both of the following:

(A) The Intersegmental General Education Transfer Curriculum (IGETC) for CSU or the California State University General Education (CSU GE) Breadth Requirements.

(B) A minimum of 18 semester units or 27 quarter units in a major or area of emphasis, as determined by the community college district.

(2) Obtain a minimum grade point average of 2.0.

While a minimum of 2.0 is required for admission, some majors may require a higher GPA. Please consult with a counselor for more information.

Associate Degrees for Transfer (ADTs) also require that students must earn a "C" or better in all courses required for the major or area of emphasis. A 'P' (Pass) grade is acceptable grade for courses in the major if the course is taken on a "pass/no pass" basis.

Upon successful completion of this program, students will be able to:

1. Apply a public health equity framework to support the health and well-being of diverse communities.
2. Access, interpret, and analyze health data and evidence-based research to understand and improve community health.
3. Apply human biology and chemistry principles to address challenges to public health.

A.S-T Major requirements

Course	Title	Credits
HED 010	Introduction to Public Health	3
HED 011	Dynamic Health Concepts	3
MATH 063	Elementary Statistics	3
BIOL 021	General Biology	4
or BIOL 020	Human Biology	
CHEM 015	Fundamentals of Chemistry	4
or CHEM 001A	General Chemistry	
PSYCH 010	General Psychology	3
BIOL 071	Human Anatomy	5
BIOL 072	Human Physiology	5
List A: Complete One Course		
ECON 010A	Principles of Macroeconomic Theory	3
ECON 010B	Introduction to Microeconomic Theory	3
FCS 019	Nutrition	3
PSYCH 100	Human Sexuality	3
SOC 010	Introduction to Sociology	3
BIOL 074	General Microbiology	5
PSYCH 092	Developmental Psychology	3
BIOL 004A	General Principles and Cell Biology	5
CHEM 032A	Intro to General, Organic, & Biological Chemistry	4

CHEM 032B	Intro to General, Organic, & Biological Chemistry	4
FCS 070	Child Development	3

A.S.-T Degree Requirements

Course	Title	Credits
Major Requirements		33-36
IGETC or CSU GE		37-39
Transferable Elective Units		0-6
Total Units for Degree		60

Administration of Justice (AJ)

AJ 010 Introduction to Administration of Justice 3 Units

Students will learn the history and philosophy of administration of justice including law enforcement, the courts, and corrections. Students study the responsibilities of criminal justice agents, legal frameworks, and the role of the justice system in a pluralistic society. Students will also explore the concepts of crime causation, punishments and rehabilitation, and training standards of criminal justice personnel. (C-ID AJ 110)
Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L
Advisory Level: Read: 3 Write: 3 Math: None
Transfer Status: CSU/UC Degree Applicable: AA/AS
CSU GE: D IGETC: 4 District GE: D

AJ 011 Criminal Law 3 Units

Students study concepts of criminal law including history, philosophy, and legal structure. Students will examine definitions and classifications of crime, case law analysis, the court system, and the U.S. Constitution. Students will also explore crimes against person, property crimes, and the legal system as a social and cultural ideology. (C-ID AJ 120)
Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L
Advisory Level: Read: 4 Write: 4 Math: None
Transfer Status: CSU/UC Degree Applicable: AA/AS
CSU GE: D IGETC: None District GE: D

AJ 013 Criminal Procedures 3 Units

Students are introduced to the history, legal terminology, and principles of criminal procedures. Students will examine constitutional provisions, interpretation of statutory and case law, legal aspects of arrest, rules governing search and seizure, and institutional responsibilities of the criminal justice system. Students will examine and analyze due process in criminal proceedings from pre-arrest through trial and appeal. (C-ID AJ 122)
Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L
Advisory Level: Read: 3 Write: 3 Math: None
Transfer Status: CSU/UC Degree Applicable: AA/AS
CSU GE: D IGETC: None District GE: D

AJ 014 Contemporary Police Issues 3 Units

Students will focus on both the historical and contemporary role of police in American society. Emphasis is placed on police hiring and training procedures, ethical issues, use of police discretion, police corruption, policing strategies, and the role of women and minorities in law enforcement.
Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L
Advisory Level: Read: 3 Write: 3 Math: None
Transfer Status: CSU/UC Degree Applicable: AA/AS
CSU GE: D IGETC: None District GE: D

AJ 015 Introduction to Criminal Investigation 3 Units

Students are introduced to fundamental principles and procedures of criminal investigation including crime scene management, documentation methods, rules of evidence, and interviewing and interrogation. Students will also examine modus operandi, sources of information, chain of custody, and investigative techniques related to persons and property crimes. (C-ID AJ 140)
Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L
Advisory Level: Read: 4 Write: 4 Math: None
Transfer Status: CSU Degree Applicable: AA/AS
CSU GE: None IGETC: None District GE: None

AJ 016 Street Law 3 Units

Students will learn about civil, criminal, constitutional, family, immigration, and consumer law in a multicultural society. This course will cover the evaluation, debate, legal research, and critical analysis of law and legal issues that affect individuals, their families, and communities. This course will examine the historical and contemporary perspectives of various stakeholders, including ethnic minorities and women in the legal system.
Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L
Advisory Level: Read: 3 Write: 3 Math: None
Transfer Status: CSU/UC Degree Applicable: AA/AS
CSU GE: D IGETC: 4 District GE: D

AJ 019 Law Enforcement in Multicultural Communities 3 Units

Students examine the complex, dynamic relations between multicultural communities and the justice system in addressing crime and conflict with an emphasis on the challenges and prospects of administering justice. Topics will include the consensus and conflicting values in culture, religion, and law. (C-ID AJ 160)
Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L
Advisory Level: Read: 3 Write: 3 Math: None
Transfer Status: CSU/UC Degree Applicable: AA/AS
CSU GE: D IGETC: 4 District GE: D

AJ 098 Directed Study in Administration of Justice 0.5-9 Units

Individual or small groups of students, with previous course work in the discipline, who would benefit from Independent Study under the direction of faculty members in specific or related disciplines may develop individualized learning contracts designed to enhance their individual instructional programs. The students and the faculty member will develop appropriate learning outcomes and activities. The number of units to be earned will be determined by the faculty and Division Dean. Instructions and the Learning Contract forms are available in the Division office. Repeatable to a maximum of 9 units across all disciplines.
Lecture Hours: None Lab Hours: 2.07 Repeatable: Yes Grading: O
Prerequisite: AJ 010 or AJ 126; with a C or better.
Advisory Level: Read: 3 Write: 3 Math: None
Transfer Status: CSU Degree Applicable: AA/AS
CSU GE: None IGETC: None District GE: None

AJ 110 Drugs and Society 3 Units

Students will explore the history and classification of legal and illegal psychoactive drugs including physiological and physical effects.

Students will also examine historical and contemporary trends relating to criminalization, decriminalization, addiction, and the relationship between drug use and violence. Students will learn basic symptomology of Central Nervous System stimulants, depressants, and the opioids.

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

AJ 111 Juvenile Law and Procedures 3 Units

Students will examine the application of specific statutes from the California Welfare and Institutions Code, and the Penal Code, to the juvenile justice system. Students focus on the role of law enforcement, probation services, schools, and parents/guardians in responding to delinquency issues. Also included are discussions relating to gangs, juvenile sex offenders, mentally ill juvenile offenders, and juvenile victimization and exploitation. (C-ID AJ 220)

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

AJ 112 Introduction to Evidence 3 Units

Students will examine the history, legal standards, and social aspects of the rules of evidence including burden of proof, rules governing admissibility, hearsay, relevance, and types of evidence. Students will also explore judicial considerations, documentary evidence, and issues relating to witness examination and competency, and privileges. (C-ID AJ 124)

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

AJ 113 Violent Crime in America 3 Units

Students examine theories and predictors of violence, the role of victims in the criminal justice system, and approaches to crime measurement. Common crimes including criminal homicide, sex crimes, domestic violence, gang and hate crimes, and elder abuse are also addressed.

The legal and social impact of violence on quality-of-life as well as crime prevention, intervention, and treatment strategies are explored. (C-ID SOCI 160)

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: D IGETC: None District GE: D

AJ 115 Introduction to Forensic Science 3 Units

Students examine principles, concepts, and practices of forensic science including identification, collection, comparison, and analysis of different types of physical evidence. Emphasis on standard analytical techniques to identify and examine evidence such as biological fluids, ballistics, impression marks, fingerprints, hair and fibers, documents, drugs, and explosives are explored. (C-ID AJ 150)

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

AJ 116 Introduction to Corrections 3 Units

Students learn about the history, theory, and practice of the correctional process in America with critical analysis of adult and juvenile correctional institutions, probation, parole, and community-based alternatives.

Specific issues facing correctional systems such as inmate constitutional rights, effects of institutionalization, cost, overcrowding, ethnicity, gender, and aging are also explored. (C-ID AJ 200)

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: D IGETC: 4 District GE: D

AJ 125 Fundamentals of Court Operations-Court Case Types 3 Units

Students are introduced to the fundamentals of legal processing and the types of cases adjudicated in the California State court system. This includes an overview of state courts (primarily California) and focus on similarities and differences in case types including applicable statutes, caseload and processing standards, agency participants, court staff functions, management of case files, etc. The emergence of collaborative courts will be reviewed. Attendance at a court session and/or observation of clerk's office procedures will be required.

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

AJ 127 Introduction to Government and the Judicial Branch 3 Units

Students will learn the foundations of the governmental branches and institutions. Emphasis will be on the relationship of the executive and legislative branches and the inter-relations with the judicial branch at both the federal and state levels, including specifics to the California judiciary.

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

AJ 128 Public Trust and Confidence in the Judicial Branch 3 Units

Students will review and analyze the importance of court accountability, transparency, and procedural fairness to instill the public's trust and confidence in the courts. Students will discuss purposes and tools of court performance and how court performance directly relates to the public's perception of the court system. Students will identify the relationship among the court, the media, and the community.

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

AJ 129 Fundamentals of Court Operations- Courtroom Support 3 Units

Students will review and analyze the role and responsibilities of courtroom support personnel: role of jury services, courtroom clerks, court reporters, court security (bailiffs), and interpreters. The functions of records management including public access, retention, and destruction of records will also be covered. Students will identify and examine services available for self-represented litigants and alternate methods of resolution.

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

AJ 131 Judicial Branch Workplace: Relationships and Communications 3 Units

Students will learn about the complexities of interpersonal workplace relationships and communications in the judicial branch. Knowledge will be gained of successful workplace skills and abilities, such as leadership, management, individual, group, and organizational behavior.

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

AJ 132 Introduction to Judicial Administration 3 Units

Students will learn the history, administrative requirements, and complex environment of the administration of justice in the judicial branch.

This course examines traditional business functions that comprise the administrative infrastructure unique to the judicial branch and court administration of the state of California. Topics covered will include human resources, training and education, finance, facilities, information technology, security, media relations, strategic planning, and governance.

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

AJ 133 Career Readiness in the Judicial/Justice System 3 Units

Students will examine the variety of careers in the judicial branch and justice system. Students will learn about the public employment process and the basics of a successful application. They will identify the key knowledge, skills, and abilities involved in the employment process, such as locating job opportunities, writing resumes, networking, preparing for employment testing, and interviewing techniques. Topics will also include employer expectations, performance management, and work/life balance.

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

AJ 138 Work Experience 1-8 Units

Work Experience is designed for students who work or volunteer in a field related to their career major. Students are required to provide evidence that they are enrolled in a career program (e.g., education plan or coursework in a career/technical subject area). Students can earn one unit of credit for each 60 hours of unpaid volunteer time or 75 hours of paid work during the semester. Students can repeat Career/Technical Work Experience, combined with General Work Experience, or alone, up to a maximum of 16 units. Internship/job placement is not guaranteed.

Lecture Hours: None Lab Hours: 2.07 Repeatable: Yes Grading: O

Corequisite: Be employed or a volunteer at an approved work-site for the minimum number of hours per unit as stipulated for paid and unpaid status.

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

AJ 139 Introduction to Public Safety Community Service Officer 3 Units

Students in this course prepare for public safety professional support careers including Community Service Officer, Explorer, and other ancillary-support functions. Role and responsibility of law enforcement support staff and basic duties including crime reporting, investigations, parking enforcement, integrity of evidence, and interacting with a diverse community will be explored.

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

Computer Information Systems (CIS)

CIS 014A Internet Principles and Protocols 3 Units

Students will study the principles and protocols of the Internet. Students learn methods used to move data from one location to another over the Internet including TCP/IP, Internet security, routing, DHCP, DNS, and VPN.

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: L

Recommended: CIS 041

Advisory Level: Read: 3 Write: 3 Math: 3

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 017A Windows 3 Units

Students acquire skills installing, planning, implementing, configuring and maintaining the Windows operating system. Students are introduced to remote desktop and virtual mode, printing, managing data storage, network services, speech recognition, remote access services, and network monitoring. The course also includes information on virtualization support, backup and data recovery, and managing system reliability and availability.

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: L

Recommended: CIS 041 or equivalent

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 017B Windows Server 3 Units

Students will acquire skills installing, planning, implementing, configuring and maintaining the Windows Server operating system. Students are introduced to Active Directory and account management, printing, managing data storage, network services, deploying Internet Information Server (IIS) services and Certificate Authority, remote access services, server and network monitoring. The course also includes information on virtualization, application services, data provisioning, backup and data recovery, and managing system reliability and availability.

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: L

Prerequisite: CIS 017A with C or better

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 017C Microsoft Windows Server Active Directory 3 Units

Students learn various aspects of planning, implementing, configuring, and maintaining Microsoft Windows Active Directory infrastructure.

Students will acquire skills of active directory design and security concepts, account management, and group policy configuration.

Students will also learn new features of Windows Active Directory such as active directory federation services, active directory certificate services, and read only domain controllers.

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: L

Prerequisite: CIS 017B with C or better

Advisory Level: Read: 3 Write: 3 Math: 4

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 017D Microsoft Windows Server Network Infrastructure 3 Units

Students acquire in-depth knowledge of Windows Server, TCP/IP networking, Domain Name System (DNS), Dynamic Host Configuration Protocol (DHCP), Active Directory Domain services, file services, printers and print services, network policy and access service, security, and managing the Windows server network infrastructure.

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: L

Prerequisite: CIS 017B with C or better

Advisory Level: Read: 3 Write: 3 Math: 4

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 018A CCNAv7: Introduction to Networks 3 Units

This is the first of three courses for the Cisco Certified Network Associate (CCNAv7) Program. Students are introduced to the fundamentals of networking concepts and technologies. Students acquire the skills necessary to plan and implement small networks across a range of applications. Topics include the OSI model and industry standards, network topologies, IP addressing, IPv4, IPv6, subnet masks, networking components, and basic network design. Students will learn the architecture, structure, functions, and components of the Internet and other computer networks. Students achieve a basic understanding of how networks operate and how to build simple local area networks (LAN), perform basic configurations for routers and switches, and implement Internet Protocol (IP).

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: L

Recommended: CIS 041 or equivalent

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 018B CCNAv7: Switching, Routing, and Wireless Essentials 3 Units

Students acquire knowledge of how a router "learns" about remote networks and determines the best path to those networks. Students study topics including both static routing and dynamic routing protocols. Students acquire the skills necessary to plan and implement small networks using Cisco IP routers and basic switches.

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: L

Prerequisite: CIS 018A with C or better

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 018C CCNAv7: Enterprise Networking, Security And Automation (ENSA) 3 Units

Students learn the design of a Local Area Network (LAN) and prepare for the Cisco Certified Network Associate (CCNA) test. Students will design and configure an actual network for a typical LAN. Topics covered include IPX addresses and access lists, advantages of LAN segmentation using bridges, routers, and switches. The course also covers features and benefits of Fast Ethernet connections and Virtual Local Area Networks (VLANs). (The course is a part of the CISCO Academy.)

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: L

Prerequisite: CIS 018B with C or better

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 018D CCNA R&S: Connecting Networks 3 Units

Students acquire knowledge of (Wide Area Network) WAN technology used to provide network access to resources across large geographical locations. Students study topics including network security and dynamic IP addressing services that are necessary to implement small networks for a range of applications. Students learn to implement WAN using Cisco networks.

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: O

Prerequisite: CIS 018C with C or better

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 020 XML Fundamentals 3 Units

Students will learn the essential concepts of XML technologies by creating XML documents, using Document Type Definitions (DTDs) and Schemas to validate XML documents, and creating their own DTDs and Schemas thereby defining the rulebook for the structure and content of XML documents. Students will also learn the basics of XPath to locate and extract content from an XML data file, use XLink and XPointer to link content, use SVG to create graphics and icons using XML, and the basics of XSL to transform an XML document into other types of objects, such as web pages, computer scripts, emails, and books. Students will also learn how to use Cascading Style Sheets (CSS) to render XML documents using nothing but a text editor and a web browser.

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: L

Advisory Level: Read: 3 Write: 3 Math: 3

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 020A Advanced XML 3 Units

Students will increase their knowledge and expertise in the essential concepts of XML technologies. Students will experience an in-depth deep dive into DTDs and Schemas to validate and analyze programmatically the structure of XML data. Students will learn the basics of computer programming, and build XML parsers to process and analyze XML files. Using XSLT, students will convert XML files into other files, such as computer scripts, and will build RESTful web applications using XML, PHP, and APIs.

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: L

Recommended: CIS 020 or equivalent

Advisory Level: Read: 3 Write: 3 Math: 3

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 022 Database Technology 3 Units

Students will learn how to create a database, implement using SQL (Structured Query Language), and create access to the Internet. Students will study database concepts, structure, access methods, and design considerations. The class will focus on object-relational databases.

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: L

Recommended: Completion of CIS 041 or equivalent.

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 023 JavaScript Programming 3 Units

Students will study how to use JavaScript to create dynamic web pages, and how to add animation and interactivity to make Web pages come alive. Students will learn how to use Document Object Model (DOM), Browser Object Model (BOM), and Dynamic HTML (DHTML) to be able to develop well-formed web pages.

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: L

Recommended: CIS 041

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 023A Advanced Javascript 3 Units

Students study advanced JavaScript techniques to develop code for real applications. Topics include forms, validation, cookies, hierarchical menus, XML, security, style sheets, browsers, and DOM (Document Object Model) programming.

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: L

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 024A Perl Programming 3 Units

Students will study Perl, the leading web-server dynamic language used in the industry. Knowledge of Perl will prepare students to use this leading web technology to develop, create, and maintain industry-standard web sites across all computing platforms.

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: L

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 024B PHP Programming 3 Units

Students will learn PHP programming to develop, create, and maintain industry-class web sites. Topics include mixing PHP and HTML, building web pages, and developing web browsers.

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: L

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 024C Python Programming 3 Units

Students will study the use of Python, a programming language, to create stand-alone and web-based applications. Students will acquire skills necessary to locate, evaluate, and utilize open source web materials.

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: L

Recommended: CIS 041 or CIT 010

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 036 Web 2.0 Programming 3 Units

Students learn to use and integrate the technologies that form the foundation of Web 2.0 to produce rich web applications such as podcasts, blogging tools, XML, HTML, HTTP, and user interface.

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: L

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 037 SQL Fundamentals 3 Units

Students learn and apply SQL (Structured Query Language), to access and manipulate relational databases. Topics include simple and multiple queries, database creation, dynamic and embedded SQL, and data warehousing.

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: L

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 038 Programming the Mobile Web 3 Units

Students learn to create effective and rich application experiences for mobile web browsers. Students also learn how to create offline applications that will be installed in the mobile device.

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: L

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 041 Introduction to Computer Information Systems 3 Units

Students will learn basic computer concepts with an emphasis on both the personal computer and enterprise computing. Students cover topics including hardware, application and system software, the internet and World Wide Web, communications, e-commerce, societal issues, database management, systems analysis and design, programming, information systems, career opportunities, certifications in the computer field, and computer trends. Student get hands-on practice of introductory level skills in word processing, spreadsheets, database, presentation graphics, and use of the internet. Students will be exposed to a programming language. (C-ID ITIS 120)

Lecture Hours: 3 Lab Hours: 1 Repeatable: No Grading: L

Advisory Level: Read: 3 Write: 3 Math: 2

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: D IGETC: None District GE: D

CIS 047 Introduction to Web Development 3 Units

Students will study how to manage and maintain industry-class websites. Students will study the basics of open-source web-server (Apache).

Students will gain knowledge to use and implement the most widely used open-source server-side scripting language (PHP) along with the most popular open-source relational database (MySQL).

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: L

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 054 C/C++ Programming 3 Units

Students will study C, a general-purpose programming language that features brevity of expression, modern control flow and data structures, and a rich set of operators. Students will also study C++, an object oriented programming language that is built using the C language as a base. Students will learn the importance of portability and efficiency through a variety of programming assignments. This course includes application programs and/or systems software.

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: L

Recommended: CIS 041 or equivalent

Advisory Level: Read: 3 Write: 3 Math: 2

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 055 Data Structures 3 Units

Students will learn a language-independent treatment of topics including computer organization, data formats, recursion, and abstract data types. Data structures covered include abstract data types, arrays, pointers, link lists, stacks, queues, trees, heaps, hash tables, and graphs. Applications of recursion are discussed in detail. Techniques for sorting and searching, as well as measuring algorithm performance and data structure efficiency using Big-O notation, are presented.

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: L

Prerequisite: CIS 054 or CIS 084, both with C or better

Advisory Level: Read: 3 Write: 3 Math: 5

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 059 Object Oriented Design and Programming 3 Units

Students learn the fundamentals and techniques of Object Oriented Programming (OOP). Topics covered include the elements of OOP, classes and objects, inheritance, polymorphism, overloading, overriding, member functions, member access, virtual functions, constructors, derived classes, dynamic objects, and exception handling. Modern programming and debugging techniques will be stressed throughout the course. Design Patterns and UML will also be introduced.

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: L

Prerequisite: CIS 054 or CIS 084 both with C or better

Advisory Level: Read: 3 Write: 3 Math: 4

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 060 Systems Analysis and Design 3 Units

Students apply the concepts of the systems analysis development cycle which includes problem definition; data collection, and analysis, analysis of system alternatives, determination of feasibility, development of the system proposal, pilot or prototype systems development, systems design, program development, systems implementation, systems review, and evaluation.

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L

Recommended: CIS 041 or equivalent

Advisory Level: Read: 3 Write: 3 Math: 3

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 062A Introduction to PC Hardware and Diagnostics 2 Units

Students acquire basic hands-on skills to operate and support today's personal computer (PC) hardware. Students study the hardware architecture and major components of the PC including diagnostic tests, processors, motherboards, memory, storage devices, peripherals, and video. This class is the first step towards acquiring the skills needed for the CompTia A+ certification.

Lecture Hours: 1.5 Lab Hours: 1.5 Repeatable: No Grading: L

Advisory Level: Read: 3 Write: 3 Math: 2

Transfer Status: None Degree Applicable: AS

CSU GE: None IGETC: None District GE: None

CIS 062B A+ PC Hardware Technology 2 Units

Students acquire the hands-on skills needed to diagnose hardware problems, configure PC components, and replace defective computer parts. Students learn how to install boards, configure multiple hard drives, add peripheral devices, work with network adapters, solve basic printer problems, and modify CMOS setups. Other topics include diagnostic software, hardware procedures, virtualization and hard drive imaging. This class prepares students for the current CompTia A+ certification exams.

Lecture Hours: 1.5 Lab Hours: 1.5 Repeatable: No Grading: L

Prerequisite: CIS 062A with C or better

Advisory Level: Read: 3 Write: 3 Math: 2

Transfer Status: None Degree Applicable: AS

CSU GE: None IGETC: None District GE: None

CIS 062C A+ Core PC Operating Systems Technology 2 Units

Students will acquire skills to diagnose, load and setup a wide array of operating systems. Topics include the use of the command prompt, essential utilities, boot files, file systems, OS installation procedures, Windows configuration, hard disk partitioning, backup, and disaster recovery. The Cloud, Virtualization, and hard disk imaging solutions will be discussed. This class prepares students for CompTIA's A+ certification exams.

Lecture Hours: 1.5 Lab Hours: 1.5 Repeatable: No Grading: L

Prerequisite: CIS 062A with C or better

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: None Degree Applicable: AS

CSU GE: None IGETC: None District GE: None

CIS 068 Administering Microsoft SQL Server 3 Units

Students acquire skills needed to install and upgrade Microsoft SQL database. Topics include database storage configuration, database backup and restore, data security, disaster recovery, data replication, high availability, and troubleshooting. Students apply effective data management and administration of SQL data environment.

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: L

Prerequisite: CIS 017B with C or better

Advisory Level: Read: 3 Write: 3 Math: 4

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 073 Visual Basic Programming 3 Units

Students will learn to use Visual Basic .NET concepts, tools, and programming methodology to create user friendly Microsoft Windows applications. Visual Basic is a programming language that allows rapid development of the Microsoft Windows graphical user interface.

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: L

Advisory Level: Read: 3 Write: 3 Math: 2

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 084 Java Programming 3 Units

Students are introduced to the Java programming language, data types, and data structures using an object-oriented approach. Topics include problem solving, classes, variable passing, Graphical User Interface (GUI), input/output, Java libraries, applets, and exception handling.

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: L

Recommended: CIS 041 or equivalent

Advisory level: Read: 3 Write: 3 Math: 2

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 098 Directed Study in Computer Information Systems 0.5-9 Units

Individual or small groups of students who would benefit from Independent Study under the direction of faculty members in specific or related disciplines may develop individualized learning contracts designed to enhance their individual instructional programs. The students and the faculty member in consultation with the Division Dean will determine appropriate learning objectives and activities as well as the number of units to be earned. Instructions and the Learning Contract forms are available in the Division office. Repeatable to a maximum of 9 units across all disciplines.

Lecture Hours: None Lab Hours: 2.07 Repeatable: Yes Grading: O

Advisory Level: Read: 2 Write: 2 Math: None

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 106 Technest 1: Introduction to Computer Coding (python) 3 Units

As the first course in the Technest Coding Academy, students will learn to think algorithmically to create code and to solve programming problems. Utilizing MIT-created instructional videos, SJCC faculty will guide, coach, and assist students in creating code. After students view the MIT lecture videos, faculty will answer questions, assist students with lab assignments, and proctor exams. This course is based on the MITx6.00 Introduction to Computer Science course curriculum. Enrollment in this class is contingent upon acceptance into the Technest Coding Academy. Interested students will need to contact course instructor listed in the schedule of classes.

Lecture Hours: 1.5 Lab Hours: 4.5 Repeatable: No Grading: O

Prerequisite: Successful completion of the assessment exercises must be done before student can enroll. Recommended: Interested students should visit the Technest webpage at <http://www.sjcc.edu/home/technest> or contact the course instructor for additional information.

Advisory Level: Read: 3 Write: 3 Math: 3

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 107 Technest 2: Data Science Coding 3 Units

As the second course in the Technest Coding Academy, students learn the three main factors of data science: inferential thinking, computational thinking, and real-world relevance. Topics include critical concepts and skills in computer programming and statistical inference, and the analysis of real-world datasets, as well as social issues surrounding data analysis such as privacy and design. This course is based on UC Berkeley's Data 8 course curriculum. Enrollment in this class is contingent upon acceptance into the Technest Coding Academy. Interested students will need to contact course instructor listed in the schedule of classes.

Lecture Hours: 1.5 Lab Hours: 4.5 Repeatable: No Grading: O

Recommended: Successful completion of CIS 106, CIS 024A or similar Python programming experience is recommended. Students should visit the Technest webpage at <http://www.sjcc.edu/home/technest> or contact the course instructor for additional information.

Advisory Level: Read: 3 Write: 3 Math: 3

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: B4 IGETC: None District GE: B4

CIS 108 Technest 3: Internet of Things 3 Units

As the third course in the Technest Coding Academy, students are exposed to the emerging platform called the Internet of Things (IoT). Topics include: exploration of the convergence of multiple disciplines leading to modern smartphones; exploring the emerging IoT platform, enabling unprecedented, innovative products and services; learn how information from physical devices in the real world gets communicated to smartphone processors; interfacing common sensors and actuators to hardware; developing software to acquire sensory data, process the data and actuate stepper motors, LEDs, etc. for use in mobile-enabled products.

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: O

Prerequisite: Successful completion of the assessment exercises must be done before student can enroll. Recommended: Successful completion of CIS 106, CIS 024A or similar Python programming experience is recommended. Students should visit the Technest webpage at <http://www.sjcc.edu/home/technest> or contact the course instructor for additional information.

Advisory Level: Read: 3 Write: 3 Math: 3

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 111 Introduction to Cyber-Security 1.5 Units

Students will learn basic information security (Cyber-Security) concepts with an emphasis on both the personal computer and enterprise computing. Students cover topics including hardware, application and system software, the internet and World Wide Web, communications, e-commerce, societal issues, database management, systems analysis and design, programming, information systems, career opportunities.

Lecture Hours: 1.5 Lab Hours: None Repeatable: No Grading: L

Advisory Level: Read: 3 Write: 3 Math: 2

Transfer Status: None Degree Applicable: AS

CSU GE: None IGETC: None District GE: None

CIS 120 Fundamentals of Business & Data Analytics 3 Units

This course is the first in a four-part series and is designed to introduce students to the fundamentals of Business and Data Analytics. It aims to develop students' understanding of analytics in the context of a business and to provide a framework for students to apply topics such as: framing a business problem, stakeholder analysis, data wrangling using Google Sheets, data visualizations, descriptive statistics, exploratory data analysis, and data storytelling in business. In this course students will learn how to clean, visualize, analyze, and communicate data insights to stakeholders. This course culminates in a hands-on final project in which students will perform an end-to-end exploratory data analysis (EDA) using real industry data. This course has been developed by Pathstream and is part of the Business & Data Analytics Certificate in collaboration with Tableau & Silicon Valley Bank.

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: L

Recommended: Completion of CIS 041.

Advisory Level: Read: 3 Write: 3 Math: 3

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 122 SQL for Data Analytics 3 Units

This course is the second in a four-part series and is designed to introduce students to the fundamentals of Business and Data Analytics. Students will be introduced to Structured Query Language (SQL) and will learn to identify the role and structure of relational databases as they apply to data analytics, apply the Structured Query Language (SQL) in MySQL for data manipulation language (DML), apply the Structured Query Language (SQL) in MySQL for data definition language (DDL), and apply normal forms (1NF, 2NF, & 3NF) for database normalization. This course has been developed by Pathstream and is part of the Business & Data Analytics Certificate in collaboration with Tableau & Silicon Valley Bank.

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: L

Advisory Level: Read: 3 Write: 3 Math: 3

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 123 Data Visualization With Tableau 3 Units

This course is the third in a four-part series focused on Business / Data Analytics and is designed for community college students. In this course, students will explore the role and application of data visualization in the data analysis process using Tableau. They will create and design both static and dynamic tables, data visualizations, dashboards, and stories while incorporating visual design best practices to better communicate insights to intended audience, such as business stakeholders. Students will also connect multiple external data sources (e.g., Text Files, Excel, SQL databases) to Tableau and optimize large data to efficiently wrangle and analyze real-industry data. The course is focused on project-based learning and prepares students for the skills identified in the Tableau Desktop Specialist certification. Pathstream has built this course in partnership with Silicon Valley Bank and Tableau.

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: L

Recommended: CIS 120 and CIS 122

Advisory Level: Read: 3 Write: 3

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 124 Utilizing Statistics for Data Analytics 3 Units

This course is the fourth in a four-part series focused on business / data analytics, and aimed at community college students who have little or no background in business or analytics. The first three courses in the series are not necessarily prerequisites for this course, but a basic familiarity with data and spreadsheets is assumed. The course is focused on project-based learning using Google Sheets and Python to apply basic statistical techniques to data.

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: L

Recommended: Previous completion of CIS 120, CIS 122, and CIS 123 or equivalent experience.

Advisory Level: Read: 3 Write: 3 Math: 3

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 132 Creating Web Pages with HTML and CSS 3 Units

Cascading Style Sheets (CSS) and HTML are the foundation languages of all web development. Whether your website is built using a content management system like WordPress, Drupal, or Joomla!, or a WYSIWYG tool like Dreamweaver, becoming fluent in these two languages is critical to the development of top-notch websites. In this introductory course, students will learn the fundamentals of coding, publishing, and putting together of web pages into web sites. Students will learn in this introductory course, the fundamentals of coding, publishing, and compiling web pages into websites. They will gain knowledge and use Cascading Style Sheets (CSS) and HTML languages.

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: L

Advisory Level: Read: 3 Write: 3 Math: None Setting up World Wide Web pages using HTML.

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 138 Work Experience 1-8 Units

Work Experience is designed for students who work or volunteer in a field related to their career major. Students are required to provide evidence that they are enrolled in a career program (e.g., education plan or coursework in a career/technical subject area). Students can earn one unit of credit for each 60 hours of unpaid volunteer time or 75 hours of paid work during the semester. Students can repeat Career/Technical Work Experience, combined with General Work Experience, or alone, up to a maximum of 16 units. Internship/job placement is not guaranteed.

Lecture Hours: None Lab Hours: 2.07 Repeatable: Yes Grading: O

Corequisite: Be employed or a volunteer at an approved work-site for the minimum number of hours per unit as stipulated for paid and unpaid status.

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 140 IT Technical Support Fundamentals 2 Units

This course is the first of a series that aims to prepare students for a role as an entry-level IT Support Specialist. In this course, students will be introduced to the world of Information Technology, or IT. Students will learn about the different facets of Information Technology. Topics will include: an introduction to computer hardware, the Internet and security, managing computer software, networking and security, understanding operating systems and how to install them, troubleshooting, and customer service.

Lecture Hours: 1.5 Lab Hours: 1.5 Repeatable: No Grading: L

Advisory Level: Read: 2 Write: 2 Math: 2

Transfer Status: None Degree Applicable: AS

CSU GE: None IGETC: None District GE: None

CIS 141 The Bits and Bytes of Computer Networking 2 Units

This course is part of a series that aims to prepare students for a role as an entry-level IT Support Specialist. In this course, students will learn a full overview of Computer Networking. Topics will include: the fundamentals of modern networking technologies and protocols to an overview of the cloud to practical applications and network troubleshooting.

Lecture Hours: 1.5 Lab Hours: 1.5 Repeatable: No Grading: L

Prerequisite: Take CIS 140; with C or better

Advisory Level: Read: 2 Write: 2 Math: 2

Transfer Status: None Degree Applicable: AS

CSU GE: None IGETC: None District GE: None

CIS 142 Operating Systems and Becoming a Power User 2 Units

This course is part of a series that aims to prepare students for a role as an entry-level IT Support Specialist. In this course, students will learn about the main components of an operating system (Windows, Linux OS, etc.) and how to perform critical tasks like managing software and users and configuring hardware.

Lecture Hours: 1.5 Lab Hours: 1.5 Repeatable: No Grading: L

Prerequisite: Take CIS 140; with C or better

Advisory Level: Read: 2 Write: 2 Math: 2

Transfer Status: None Degree Applicable: AS

CSU GE: None IGETC: None District GE: None

CIS 143 System Administration and IT Infrastructure Services 3 Units

This course is part of a series that aims to prepare students for a role as an entry-level IT Support Specialist. In this course, students will learn infrastructure services that keep all organizations, big and small, up and running, typical cloud infrastructure setups and how to manage cloud resources, how to manage and configure servers and how to use industry tools to manage computers, user information, and user productivity, and how to recover your organization's IT infrastructure in the event of a disaster.

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: L

Prerequisite: Take CIS 140; with C or better

Advisory Level: Read: 2 Write: 2 Math: 2

Transfer Status: None Degree Applicable: AS

CSU GE: None IGETC: None District GE: None

CIS 144 IT Security: Defense Against the Digital Dark Arts 3 Units

This course is part of a series that aims to prepare students for a role as an entry-level IT Support Specialist. In this course, students will learn about IT security concepts, tools, and best practices. Topics will include: the manner in which threats and attacks manifest, an overview of encryption algorithms and how they're used to safeguard data, the three As of information security (authentication, authorization, and accounting), network security solutions ranging from firewalls to Wifi encryption options, and a multi-layered, in-depth understanding of security architecture followed by recommendations on how to integrate a culture of security into your organization or team.

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: L

Prerequisite: Take CIS 140; with C or better

Advisory Level: Read: 2 Write: 2 Math: 2

Transfer Status: None Degree Applicable: AS

CSU GE: None IGETC: None District GE: None

CIS 157 Introduction to Unix/Linux 3 Units

Students are introduced to the Unix/Linux operating systems. Topics covered include a basic editor, shells, directory and file structure, file permissions, passwords, security, redirection, pipes, filters, regular expressions and shell programming. Additional topics include the use of I/O devices, Internet access, and an introduction to system administration.

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: L

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 158 Linux System Administration 3 Units

Students study the concepts of Linux system administration. Topics include Linux installation, Unix/Linux file systems, managing user accounts, user shells, security, system resources, system and file backup and restore, printers and print spooling systems, TCP/IP network configuration and/or management, network access using telnet and ftp, ssh (secure shell), interface to networks using NFS 3 and SAMBA, electronic mail systems, system kernel builds, and system tuning. Students use shell scripts to demonstrate system administration.

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: L

Prerequisite: CIS 157 with C or better

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 160 Introduction to Information Systems Security 3 Units

Students are introduced to the fundamental principles and topics of Information Technology Security and Risk Management at the organizational level. They will gain knowledge in hardware, software, processes, communications, applications, and policies and procedures with respect to organizational Cybersecurity and Risk Management. This course prepares students for the CompTIA Security certification exams.

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: L

Prerequisite: Take CIS 014A; with a C or better.

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

Credit by Exam: Yes

CIS 164 Introduction to Cybersecurity: Ethical Hacking 3 Units

Students will be introduced to the various methodologies for attacking a network. They will learn the concepts, principles, and techniques, as well as gain supplemental hands-on experience attacking and disabling a network within the context of properly securing a network. The course will emphasize network attack methodologies with the emphasis on student use of network attack techniques and tools, and appropriate defenses and countermeasures. Students will receive course content information through a variety of methods including lectures and demonstration of hacking tools in addition to a virtual environment.

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: L

Prerequisite: Take CIS 160; with a C or better.

Advisory Level: Read: 3 Write: 3 Math: 2

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 165 Digital Forensics Fundamentals 3 Units

Students will be introduced to the methods used to properly conduct a digital forensics investigation beginning with a discussion of ethics, while mapping to the objectives of the International Association of Computer Investigative Specialists (IACIS) certification. Topics covered include an overview of computer forensics as a profession; the computer investigation process; understanding operating systems boot processes and disk structures; data acquisition and analysis; technical writing; and a review of familiar digital forensics tools.

Lecture Hours: 2.5 Lab Hours: 1.5 Repeatable: No Grading: L

Prerequisite: Take CIS 160; with a C or better.

Advisory Level: Read: 3 Write: 3 Math: 2

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

CIS 500 Troubleshooting and Repairing iOS/iPhone and Android Mobile Devices 0 Units

Students will learn how to troubleshoot, find faults, and to repair iOS/iPhone and Android mobile cell phones. Cell phone repair is a service that is growing exponentially and is in constant demand. Due to the complexity of technology it needs skilled and knowledgeable technicians to provide necessary repairs. This short course is designed to teach students how to troubleshoot, find faults, and to repair mobile devices.

Lecture Hours: 0.5 Lab Hours: 1.5 Repeatable: Yes Grading: N

Transfer Status: None Degree Applicable: NC

CSU GE: None IGETC: None District GE: None

Emerging Technology (ETEC)

ETEC 110 Energy Master Planning for Commercial Facilities 2 Units

Students will learn and apply methods of energy master planning for commercial and institutional facilities for increased user comfort, lower operating costs, and climate resiliency. They will learn how to develop metrics in support of energy master planning and design investments. Integration of renewable energy and high performance solutions will be covered as well as related subject areas of efficient water use and waste reduction strategies. Students will receive training in performing energy master planning audits for facilities and prepare an energy systems retrofit proposal.

Lecture Hours: 1.5 Lab Hours: 1.5 Repeatable: No Grading: L

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: None Degree Applicable: AS

CSU GE: None IGETC: None District GE: None

ETEC 116 Introduction to Computer Integrated Manufacturing 3 Units

Students will receive theory, practical knowledge, skills, and abilities that will readily apply to automation technology. They will gain skills in automation control including sensors, actuators, programmable logic controllers (PLCs), industrial robotics, and computerized numerical control (CNC) technology.

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L

Advisory Level: Read: 2 Write: 2 Math: 3

Transfer Status: None Degree Applicable: AS

CSU GE: None IGETC: None District GE: None

ETEC 150 Commercial Wiring and Lighting Facilities 4 Units

Students are introduced to commercial and industrial wiring, including conduit bending, wire fill, load calculations, raceways, LED lighting, high pressure sodium lighting, metal halide and fluorescent lighting. The students will be bending conduit, pull wires and learn how to wire commercial and industrial lighting circuits/proposal.

Lecture Hours: 3 Lab Hours: 3 Repeatable: No Grading: L

Prerequisite: AIRC 121 with C or better

Advisory Level: Read: 3 Write: 3 Math: 2

Transfer Status: None Degree Applicable: AS

CSU GE: None IGETC: None District GE: None

ETEC 151 Motor Controls Facilities 5 Units

Students will acquire knowledge and skills working with various types of motor controls used in a commercial or industrial facility. They will wire multiple commercial projects using ladder and schematic diagrams, including timer circuits, motion sensors, photo cells, pilot duty relays, safety and overload controls.

Lecture Hours: 4 Lab Hours: 3 Repeatable: No Grading: L

Prerequisite: AIRC 121 with C or better

Advisory Level: Read: 3 Write: 3 Math: 2

Transfer Status: None Degree Applicable: AS

CSU GE: None IGETC: None District GE: None

ETEC 501 Fundamentals of Energy Efficiency 4 Units

Students will be introduced to an overview of energy production and transmission, energy conservation and efficiency, renewable energy, and careers in energy efficiency. Students will also engage in hands-on learning through lab activities that include operation of a hydroelectric kit, practical application of electrical circuitry of solar charging units, calculation of energy efficient appliance energy use, and completion of an energy audit for conservation. Students also will gain information regarding career and employment opportunities in the field and develop a career roadmap towards these goals.

Lecture Hours: 1 Lab Hours: 1.5 Repeatable: Yes Grading: N

Transfer Status: None Degree Applicable: NC

CSU GE: None IGETC: None District GE: None

Ethnic Studies (ETH)

ETH 011 Ethnic Film: Reel Studies 3 Units

This course will examine contemporary and classic cinema, focusing primarily on US ethnic films from African American, Native American, Latinx, Asian Pacific Islander American, and Middle Eastern American cultures, as a tool to explore universal human themes as well as ethnic and cultural stereotypes.

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: C1 IGETC: 3A District GE: C1, ES

ETH 018 The African American Male Identity 3 Units

Students will examine the historical and contemporary African American male identity in the United States. Students will analyze the African American male's intersectional identities, roles and responsibilities in society related to the institutions of politics, economics, education, community and family structures. Students will also learn about contributions made to society by African American men.

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: D IGETC: 4 District GE: D, ES

ETH 019 The African American Family 3 Units

Students will examine and evaluate past, present and evolving subject matter relevant to the formation and continuance of the African American family in the United States. This course will focus on topics including how the family shapes the foundations of identity, culture and class in West Africa and in the US. Attention will be paid to the social and cultural dynamics that have shaped African American family life including topics such as traditions and family values, mass incarceration, relationships, health and wellness, education, gender roles and contributions made by the African American family.

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L
Advisory Level: Read: 3 Write: 3 Math: None
Transfer Status: CSU/UC Degree Applicable: AA/AS
CSU GE: C2, D IGETC: 3B, 4 District GE: C2, D, ES

ETH 020 African American Culture 3 Units

Students will critically examine past, present and evolving social, political, and economic dynamics that create African American culture. African American culture is an integral component of U.S. culture. African American culture continues to evolve and change with time. This course is a survey of the African American cultural experience in the United States.

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L
Advisory Level: Read: 3 Write: 3 Math: None
Transfer Status: CSU/UC Degree Applicable: AA/AS
CSU GE: C2, D IGETC: 3B, 4 District GE: C2, D, ES

ETH 022 African American Cinema 3 Units

This course explores classic and contemporary African American films as a medium of artistic self-expression. This course also provides a more thorough understanding of the African American experience and condition through a critical perspective and historical analysis of African American actors, actresses and producers within the multi-billion dollar, US film industry. Students will explore and assess African American film as an appreciated artistic form and its use in addressing cultural and social issues.

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L
Advisory Level: Read: 3 Write: 3 Math: None
Transfer Status: CSU/UC Degree Applicable: AA/AS
CSU GE: C1, D IGETC: 3A, 4 District GE: C1, D, ES

ETH 026 Vietnamese Women in the U.S. 3 Units

Students study the phenomena of gender, race and ethnicity in the history of the United States, focusing upon the Vietnamese American experience through the literature of women of Vietnam. They will acquire knowledge of the historical origins of Vietnamese identity, as well as those cultural social, political, economic systems and processes, and key events such as the Vietnam War, which have yielded important consequences for gender stratification among Vietnamese American women.

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L
Advisory Level: Read: 3 Write: 3 Math: None
Transfer Status: CSU/UC Degree Applicable: AA/AS
CSU GE: C2, D IGETC: 3B, 4 District GE: C2, D, ES

ETH 027 Introduction to Race & Ethnicity in American History 3 Units

Students will critically explore the phenomena of race and ethnicity in the history of the United States. Examining the socio-political realities of power, students analyze the processes by which racial stratification occur. Particular emphasis is placed on the socio-historical experiences of major, subordinate ethnic groups in America --African Americans, Latina/o Americans, Asian Americans, and Native Americans. Students critically analyze major theoretical approaches to understanding the circumstances that have shaped present race relations in America and various Ethnic Studies paradigms. (C-ID SOCI 150)

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L
Advisory Level: Read: 3 Write: 3 Math: None
Transfer Status: CSU/UC Degree Applicable: AA/AS
CSU GE: C2, D, F IGETC: 3B, 4 District GE: C2, D, F, ES

ETH 027H Honors Introduction to Race & Ethnicity In American History 3 Units

Students will critically explore the phenomena of race and ethnicity in the history of the United States. Examining the socio-political realities of power, students analyze the processes by which racial stratification occur. Particular emphasis is placed on the socio-historical experiences of major, subordinate ethnic groups in America --African Americans, Latina/o Americans, Asian Americans, and Native Americans. Students critically analyze major theoretical approaches to understanding the circumstances that have shaped present race relations in America and various Ethnic Studies paradigms. This honors section will be enhanced in one or more of the following ways: 1) Students will write research papers/projects utilizing the library database 2) Individual oral presentations on a topic discussed in the course 3) Group oral presentations on a topic discussed in the course. (C-ID SOCI 150)

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L
Advisory Level: Read: 3 Write: 3 Math: None
Transfer Status: CSU/UC Degree Applicable: AA/AS
CSU GE: None IGETC: None District GE: None

ETH 028 Introduction to Critical Race & Social Justice 3 Units

Interdisciplinary study of contemporary issues related to race and ethnicity in the United States. This course will critically examine social justice movements in relation to ethnic and racial groups in the United States to provide a basis for a better understanding of the socio-economic, cultural and political conditions among key social groups. (C-ID SJS 110)

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L
Advisory Level: Read: 3 Write: 3 Math: None
Transfer Status: CSU/UC Degree Applicable: AA/AS
CSU GE: D, C2 IGETC: 4, 3B District GE: D, C2, ES

ETH 029 Women of Color in the United States 3 Units

Students will be introduced to feminist perspectives and the historical and contemporary experiences of women of color in the United States. Students will analyze gender, race, and their intersections with class, sexuality, dis/ability, culture, age, and other systems of difference as they pertain to women of color. Other areas of emphasis will include selected feminist political, cultural, and social contributions made by and for women of color. (C-ID SJS 120)

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L
Advisory Level: Read: 3 Write: 3 Math: None
Transfer Status: CSU/UC Degree Applicable: AA/AS
CSU GE: C2, D IGETC: 3B, 4 District GE: C2, D, ES

ETH 030 Chicana/o Culture 3 Units

Students study the development of Mexican and Chicana/o culture in Mexico and the United States Southwest including theory, an analysis of the concept of culture and its application to the Mexican and Chicano community. Cultural expression as well as the socio-cultural realities in the study of people of Mexican origin will be emphasized. Other areas of interest include historical influences on art, language, music, folklore, and lifestyles of Chicanas/os in the United States Southwest.

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: C2, D IGETC: 3B, 4 District GE: C2, D, ES

ETH 031 Social Justice Issues in Mexican American Communities 3 Units

Students study political, economic, and social justice issues facing Mexican American communities in the United States. Students analyze several issues including: education, health care, immigrant rights, economic development, labor rights, the criminal justice system, and political empowerment.

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L

Recommended: Completion of ETH 030

Advisory Level: Read: 4 Write: 4 Math: None

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: D IGETC: 4 District GE: D, ES

ETH 032 Introduction to Chicana/Latina Music in The U.S. 3 Units

Students are introduced to the diverse musical influences that have shaped the Chicana/Latina experience in the United States. Particular focus will be placed on African, Indigenous and European origins. Cultural influences such as Afro-Caribbean, Salsa, Son Jarocho, Norteno/Tejano, Corridos, Chicano Rock and Hip Hop will be analyzed with an emphasis on seminal works and their impact on Chicana/Latina musical experiences and identity formation.

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: C1 IGETC: 3A District GE: C1, ES

ETH 037A Mexican American History I 3 Units

Students will survey the social, political, economic, and cultural history of the Mexican American experience within the context of U.S. history from the pre-Columbian era to Reconstruction. Students will also critically analyze the roles and contributions that Mexican Americans have played in the development of the United States with comparisons to other groups. ETH 037A, along with ETH 037B, satisfies the District requirements in U.S. History, Constitution and American Ideals requirement. (C-ID HIST 130)

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: C2, D, US-1, US-2 IGETC: 3B, 4 District GE: C2, D, ES

ETH 037AH Honors Mexican American History I 3 Units

Students will survey the social, political, economic, and cultural history of the Mexican American experience within the context of U.S. history from the pre-Columbian era to Reconstruction. Students will also critically analyze the roles and contributions that Mexican Americans have played in the development of the United States with comparisons to other groups. ETH 037A/037AH, along with ETH 037B/037BH, satisfies the District requirements in U.S. History, Constitution and American Ideals requirement. This honors section will be enhanced in one or more of the following ways: 1) Students will write research papers/projects utilizing the library database 2) Individual oral presentations on a topic discussed in the course 3) Group oral presentations on a topic discussed in the course. (C-ID HIST 130)

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: C2, D, US-1, US-2 IGETC: 3B, 4 District GE: C2, D, ES

ETH 037B Mexican American History II 3 Units

Students will survey the social, political, economic, and cultural history of the Mexican American experience within the context of U.S. history from Reconstruction to the present. Students will also analyze roles and contributions that Mexican Americans have played in the development of the United States and California, with comparisons to other groups. ETH 037B, along with ETH 037A, satisfies the District requirements in U.S. History, Constitution and American Ideals requirement. (C-ID HIST 140)

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: C2, D, US-1, US-3 IGETC: 3B, 4 District GE: C2, D, ES

ETH 037BH Honors Mexican American History II 3 Units

Students will survey the social, political, economic, and cultural history of the Mexican American experience within the context of U.S. history from Reconstruction to the present. Students will also analyze roles and contributions that Mexican Americans have played in the development of the United States and California, with comparisons to other groups. ETH 037A/037AH, along with ETH 037B/037BH, satisfies the District requirements in U.S. History, Constitution and American Ideals requirement. This honors section will be enhanced in one or more of the following ways: 1) Students will write research papers/projects utilizing the library database 2) Individual oral presentations on a topic discussed in the course 3) Group oral presentations on a topic discussed in the course. (C-ID HIST 140)

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

ETH 041 Vietnamese American Culture 3 Units

Students will analyze the transition and adaptation of the Vietnamese American community in the context of history, culture, family, religion, education, career, community leadership and internal politics by examining the experiences of Vietnamese Americans who have resettled in the United States since the Vietnam War ended in the mid '70s.

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: C2, D IGETC: 3B, 4 District GE: C2, D, ES

ETH 042 Asian Pacific American Culture 3 Units

Students will survey Asian Pacific American experience, with more emphasis on the six largest ethnic groups: Chinese, Filipino, Indian, Vietnamese, Korean, and Japanese. Students will analyze migration, ethnic culture, and contributions of Asian Pacific Americans in the United States, with comparison to other racial groups including African and Latinx Americans.

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L
Advisory Level: Read: 3 Write: 3 Math: None
Transfer Status: CSU/UC Degree Applicable: AA/AS
CSU GE: C2, D IGETC: 3B, 4 District GE: C2, D, ES

ETH 098 Directed Studies in Ethnic Studies 0.5-9 Units

Individual or small groups of students, with previous course work in the discipline, who would benefit from Independent Study under the direction of faculty members in specific or related disciplines, may develop individualized learning contracts designed to enhance their individual instructional programs. The students and the faculty member in consultation with the Division Dean will determine appropriate learning objectives and activities as well as the numbers of units to be earned. Instructions and the Learning Contract forms are available in the Division Office. Repeatable to a maximum of 9 units across all disciplines.

Lecture Hours: None Lab Hours: 2.07 Repeatable: Yes Grading: O
Prerequisite: ETH 020 or ETH 026 or ETH 027 or ETH 030 or ETH 031 or ETH 037A or ETH 041 with a C or better
Advisory Level: Read: 3 Write: 3 Math: None
Transfer Status: CSU Degree Applicable: AA/AS
CSU GE: None IGETC: None District GE: None

Guidance (GUIDE)

GUIDE 010 Transfer Success 1 Unit

Students will engage in a comprehensive review of the transfer process, including a study of higher education systems, transfer admissions practices, major preparation, financial planning, and current topics related to transfer. This course offers students an opportunity to develop an individualized transfer plan in preparation for transfer to a 4-year college.

Lecture Hours: 1 Lab Hours: None Repeatable: No Grading: L
Advisory Level: Read: 3 Write: 3 Math: None
Transfer Status: CSU/UC Degree Applicable: AA/AS
CSU GE: None IGETC: None District GE: None

GUIDE 050A First Year Experience College Success 2 Units

Students will acquire skills necessary to be successful in college. Students will identify personal strengths and weakness by examining and identifying barriers and learning how to identify and overcome them. Topics will include college policies, procedures, identifying programs and academic resources and student services on campus. They will develop critical thinking, study skills and gain awareness of learning styles. Students will increase awareness of cultural diversity on campus and the community.

Lecture Hours: 2 Lab Hours: None Repeatable: No Grading: L
Advisory Level: Read: 3 Write: 3 Math: None
Transfer Status: CSU/UC Degree Applicable: AA/AS
CSU GE: E IGETC: None District GE: E

GUIDE 050B First Year Experience-Careers 2 Units

Students will explore careers and the current labor market. They will examine academic majors related to careers and will analyze their interests, values, and skill sets to help them in career selection. Students will complete self-assessments as part of their career planning and decision making.

Lecture Hours: 2 Lab Hours: None Repeatable: No Grading: L
Advisory Level: Read: 3 Write: 3 Math: None
Transfer Status: CSU/UC Degree Applicable: AA/AS
CSU GE: E IGETC: None District GE: E

GUIDE 085 Blueprint for Success 1 Unit

Students will explore and clarify their belief systems, values, and attitudes. Students will identify personal strengths and weaknesses by examining and identifying barriers and learning how to overcome obstacles for their success. They will learn how to apply techniques such as time and stress management, and goal setting.

Lecture Hours: 1 Lab Hours: None Repeatable: No Grading: L
Advisory Level: Read: 3 Write: 3 Math: None
Transfer Status: CSU/UC Degree Applicable: AA/AS
CSU GE: None IGETC: None District GE: None

GUIDE 087 College Study Techniques 3 Units

Students learn study skill techniques and strategies to build confidence as a college student including identifying individual learning styles, effective study habits, and reducing test anxiety. Students identify personal and educational values and create a plan for college success. Students learn problem solving and creative thinking skills, and will be introduced to the library and on and off campus resources. Emphasis is on acquisition of skills for the attainment of life-long success in academic and personal development.

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L
Advisory Level: Read: 3 Write: 3 Math: None
Transfer Status: CSU Degree Applicable: AA/AS
CSU GE: E IGETC: None District GE: E

GUIDE 096 Career and Life Planning 3 Units

Students examine career/major options, as well as attainment of life-long success in academic, professional, and personal development. Emphasis is on interest and personality testing, values clarification, career information, research skills, individual skills assessment, decision making and goal setting. Students acquire skills in professional planning including job search techniques, resume writing, and interviewing.

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L
Advisory Level: Read: 3 Write: 3 Math: None
Transfer Status: CSU/UC Degree Applicable: AA/AS
CSU GE: E IGETC: None District GE: E

GUIDE 097 Orientation to College 1 Unit

Students receive an introduction to San Jose City College, including programs, support services, academic policies, and educational options. At the conclusion of the course, students will be able to identify or explain the California higher education system, the differences between high school and college, and retention strategies for student success. Additionally, students will also learn about SJCC certificate programs and degrees, general education requirements for transfer and graduation, as well as the registration process and basic educational planning.

Lecture Hours: 1 Lab Hours: None Repeatable: No Grading: O
Advisory Level: Read: 3 Write: 3 Math: None
Transfer Status: None Degree Applicable: AS
CSU GE: None IGETC: None District GE: None

GUIDE 097A Orientation to College - Part I 0.5 Units

Students receive an introduction to San Jose City College, including programs, support services, academic policies, and educational options. Students will learn key terms and ideas that support student success. At the conclusion of the course, students will be able to identify or explain the California higher education system, important SJCC programs and services, the differences between high school and college, and retention strategies for student success.

Lecture Hours: 0.5 Lab Hours: None Repeatable: No Grading: K
Open Curriculum: No prerequisite, corequisite or advisory levels
Transfer Status: None Degree Applicable: NAA
CSU GE: None IGETC: None District GE: None

GUIDE 098 Directed Study in Guidance 0.5-9 Units

Individual or small groups of students, with previous course work in the discipline, who would benefit from Independent Study under the direction of faculty members in specific or related disciplines, may develop individualized learning contracts designed to enhance their individual instructional programs. The students and the faculty member in consultation with the Division Dean will determine appropriate learning objectives and activities as well as the numbers of units to be earned. Instructions and the Learning Contract forms are available in the Division Office. Repeatable to a maximum of 9 units across all disciplines.

Lecture Hours: None Lab Hours: 2.07 Repeatable: Yes Grading: L
Prerequisite: GUIDE 010, GUIDE 085, GUIDE 087, GUIDE 096 or GUIDE 130; all with C or better
Advisory Level: Read: 3 Write: 3 Math: None
Transfer Status: CSU Degree Applicable: AA/AS
CSU GE: None IGETC: None District GE: None

GUIDE 102 Diagnostic Learning - Reading Strategies 1 Unit

Students will acquire skills in decoding, sight vocabulary, reading rate, comprehension, and use of curriculum materials appropriate to their needs. This is an individualized course designed for students who have difficulty reading due to a weakness in one or more of the learning modalities. This is intended for students in DSP&S.

Lecture Hours: None Lab Hours: 3 Repeatable: No Grading: K
Recommended: Students are advised to seek DSP&S referral prior to registering for this course.
Advisory Level: Read: None Write: None Math: None
Transfer Status: None Degree Applicable: NAA
CSU GE: None IGETC: None District GE: None

GUIDE 106 English Skills Development Strategies 3 Units

This course is designed for students with learning limitations who need support in developing reading and writing strategies and foundational skills. Students will study, practice, and demonstrate aspects of English such as sentence construction, paragraph development, reading comprehension, and summarizing. Curriculum materials will be appropriate to students' needs and will be used to achieve course objectives. Students must be enrolled through Student Accessibility Services (SAS) program.

Lecture Hours: 1 Lab Hours: 6 Repeatable: No Grading: K
Prerequisite: Students must enroll in this course through the Student Accessibility Services (SAS) program, and meet with a SAS counselor.
Transfer Status: None Degree Applicable: NAA
CSU GE: None IGETC: None District GE: None

GUIDE 107 English Skills Mastery Strategies 2 Units

This course is designed for students with learning limitations who need support in reading and writing strategies, skill development, and application. Students will study, practice, and demonstrate aspects of English such as pre-writing skills for major writing assignments, essay construction, thesis development, understanding of complex sentences, summarizing, and reading response. Curriculum materials will be appropriate to students' needs and will be used to achieve course objectives. Students must be enrolled through the Student Accessibility Services program.

Lecture Hours: None Lab Hours: 6 Repeatable: No Grading: K
Prerequisite: Students must enroll in this course through the Student Accessibility Services (SAS) program and meet with a SAS counselor.
Transfer Status: None Degree Applicable: NAA
CSU GE: None IGETC: None District GE: None

GUIDE 108 Mathematical Skills Development Strategies 3 Units

This course is designed for students with learning limitations who need support in developing mathematical skills. Students will study, practice, and demonstrate math skills such as operations, integers, fractions, decimals, percentages, graphing, and equations. Curriculum materials will be appropriate to students' needs and will be used to achieve course objectives. Students must be enrolled through Student Accessibility Services (SAS) program.

Lecture Hours: 1 Lab Hours: 6 Repeatable: No Grading: K
Prerequisite: Students must enroll in this course through the Student Accessibility Services (SAS) program and meet with a SAS counselor.
Advisory Level: Read: None Write: None Math: None
Transfer Status: None Degree Applicable: NAA
CSU GE: None IGETC: None District GE: None

GUIDE 109 Mathematical Skills Mastery 2 Units

This course is designed for students with learning limitations who need support in developing mathematical skills. Students will study, practice, and demonstrate math skills such as algebraic expressions, inequalities, roots, factoring, and simplification of more complex equations. Curriculum materials will be appropriate to students' needs and will be used to achieve course objectives. Students must be enrolled through Student Accessibility Services (SAS) program.

Lecture Hours: None Lab Hours: 6 Repeatable: No Grading: K
Prerequisite: Students must enroll in this course through the Student Accessibility Services (SAS) program and meet with a SAS counselor.
Advisory Level: Read: None Write: None Math: None
Transfer Status: None Degree Applicable: NAA
CSU GE: None IGETC: None District GE: None

GUIDE 115 Computer Assisted Instruction 1 Unit

Students with various disabilities will learn basic introductory computer skills. Students will use adaptive hardware and software technology depending on their functional limitations and abilities. This is a self-paced beginners course.

Lecture Hours: None Lab Hours: 3 Repeatable: No Grading: K
Open Curriculum: No prerequisite, corequisite or levels
Transfer Status: None Degree Applicable: NAA
CSU GE: None IGETC: None District GE: None

GUIDE 119 Orientation to College for Students With Disabilities 1 Unit

Students will acquire information on the Student Accessibility Services (SAS) program, SJCC college facilities, policies, programs, course offerings, and services including accommodations per their medical documented needs, technological assistive devices and software, and academic adjustments. Students will also be introduced to an overview of general education requirements, vocational and transfer majors, degrees, registration process and educational planning.

Lecture Hours: 1 Lab Hours: None Repeatable: No Grading: K
Open Curriculum: No prerequisite, corequisite or levels
Transfer Status: None Degree Applicable: NAA
CSU GE: None IGETC: None District GE: None

GUIDE 130 College and Life Success 3 Units

Students will acquire skills and resources that will help them to become successful college students as well as aid them throughout their lives. Topics will include college policies, procedures, programs, and academic and student services. They will develop critical thinking and study skills, gain awareness of learning styles and strategies, and time management. Career research, selection, self-assessment, and educational planning will be introduced. Students examine their health wellness, stress management, and financial literacy. They will increase awareness of cultural diversity and intercultural communication both professionally and personally, including instructor-student interaction and student-student relationships.

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L
Advisory Level: Read: 3 Write: 3 Math: None
Transfer Status: CSU/UC Degree Applicable: AA/AS
CSU GE: E IGETC: None District GE: E

GUIDE 150 Adaptive MS Office and Word Processing 2 Units

Students with various disabilities will receive training on specialized adaptive hardware and software while learning introductory Microsoft (MS) Office and word processing skills. Students will use adaptive hardware and software technology depending on their functional limitations and abilities. This is a self-paced introductory course.

Lecture Hours: 1.5 Lab Hours: 1.5 Repeatable: No Grading: K
Recommended: Knowledge of the keyboard
Advisory Level: Read: 2 Write: 2 Math: None
Transfer Status: None Degree Applicable: NAA
CSU GE: None IGETC: None District GE: None

GUIDE 151 Basic Computerized Job Readiness Skills For Students With Disabilities 2 Units

Students with various disabilities will learn basic computer skills related to job readiness skills and resume development. Students will be introduced to specialized adaptive hardware and software technology to create basic resumes, cover letters, and be able to use the internet for basic job readiness tasks.

Lecture Hours: 1.5 Lab Hours: 1.5 Repeatable: No Grading: K
Advisory Level: Read: 2 Write: 2 Math: None
Transfer Status: None Degree Applicable: NAA
CSU GE: None IGETC: None District GE: None

GUIDE 152 Intermediate Job Readiness Skills For Students With Disabilities 2 Units

Students with various disabilities will learn intermediary computer skills related to job readiness, resume development, cover letters, reference information and job log tracking. Students will be introduced to specialized adaptive hardware and software technology to create two intermediate style resumes (chronological and functional), cover letters, and use the internet for intermediate job readiness tasks including employer information, job postings, and resume submittal process.

Lecture Hours: 1.5 Lab Hours: 1.5 Repeatable: No Grading: K
Advisory Level: Read: 2 Write: 2 Math: None
Transfer Status: None Degree Applicable: NAA
CSU GE: None IGETC: None District GE: None

GUIDE 502 Reading Skills for Everyday Life 0 Units

This course is designed for students with learning limitations who require support in developing skills and strategies necessary for everyday reading needs. Students will study, practice, and demonstrate reading skills such as decoding, sight word vocabulary, reading rate, and comprehension. Curriculum materials will be appropriate to students' needs and will be used to achieve course objectives. Students must be enrolled through the Student Accessibility Services program.

Lecture Hours: 1.5 Lab Hours: 1.5 Repeatable: Yes Grading: K
Prerequisite: Students must enroll in this course through the Student Accessibility Services (SAS) program and meet with a SAS counselor.
Transfer Status: None Degree Applicable: NAA
CSU GE: None IGETC: None District GE: None

GUIDE 504 Writing Skills for Everyday Life 0 Units

This course is designed for students with learning limitations who need support in developing writing strategies and writing skills necessary for everyday life. Students will study, practice, and demonstrate writing skills such as understanding parts of a sentence, formulating complete sentences, developing understanding and application of pre-writing skills. Curriculum materials will be appropriate to students' needs and will be used to achieve course objectives. Students must be enrolled through the Student Accessibility Services program.

Lecture Hours: 1.5 Lab Hours: 1.5 Repeatable: Yes Grading: K
Prerequisite: Students must enroll in this course through the Student Accessibility Services (SAS) program and meet with a SAS counselor.
Transfer Status: None Degree Applicable: NAA
CSU GE: None IGETC: None District GE: None

GUIDE 508 Math Skills for Everyday Life 0 Units

This course is designed for students with learning limitations who need support in developing math strategies and math skills necessary for everyday life. Students will study, practice, and demonstrate math skills such as operations, decimals, place value, and word problem application. Curriculum materials will be appropriate to students' needs and will be used to achieve course objectives. Students must be enrolled through the Student Accessibility Services program.

Lecture Hours: 1.5 Lab Hours: 1.5 Repeatable: Yes Grading: K
Prerequisite: Students must enroll in this course through the Student Accessibility Services (SAS) program and meet with a SAS counselor.
Transfer Status: None Degree Applicable: NAA
CSU GE: None IGETC: None District GE: None

GUIDE 515 Computer Assisted Instruction 0 Units

Students with various disabilities will learn basic introductory computer skills. Students will use adaptive hardware and software technology depending on their functional limitations and abilities. This is a self-paced beginners course.

Lecture Hours: 1.5 Lab Hours: 1.5 Repeatable: Yes Grading: N
Open Curriculum: No prerequisite, corequisite or levels
Transfer Status: None Degree Applicable: NAA
CSU GE: None IGETC: None District GE: None

GUIDE 519 Orientation to College for Students With Limitations 0 Units

Students will acquire information on the Student Accessibility Services (SAS) program, SJCC college facilities, policies, programs, course offerings, and services including accommodations per their medical documented needs, technological assistive devices and software, and academic adjustments. Students will also be introduced to an overview of general education requirements, vocational and transfer majors, degrees, registration process and educational planning.

Lecture Hours: None Lab Hours: 3 Repeatable: Yes Grading: N
Open Curriculum: No prerequisite, corequisite or levels
Transfer Status: None Degree Applicable: NAA
CSU GE: None IGETC: None District GE: None

GUIDE 520 Self-Development & Career Exploration 0 Units

This course is designed for students with learning limitations who need support in developing skills pertaining to employment preparation and retention. Curriculum materials will be appropriate to students' needs and will be used to achieve course objectives. Students must be enrolled through the Student Accessibility Services program.

Lecture Hours: None Lab Hours: 1.5 Repeatable: Yes Grading: N
Recommended: Students must enroll in this course through the Student Accessibility Services (SAS) program and meet with a SAS counselor.
Transfer Status: None Degree Applicable: NAA
CSU GE: None IGETC: None District GE: None

GUIDE 550 Adaptive Technology and Microsoft Office 0 Units

Students with various disabilities will receive training on specialized adaptive hardware and software while learning introductory Microsoft Office (MS) and word processing skills. Students will use adaptive hardware and software technology depending on their functional limitations and abilities.

Lecture Hours: 1.5 Lab Hours: 1.5 Repeatable: No Grading: K
Prerequisite: Take GUIDE 115 or GUIDE 515; Minimum grade C
Transfer Status: None Degree Applicable: NAA
CSU GE: None IGETC: None District GE: None

GUIDE 551 Computerized Job Readiness Skills 0 Units

Students with various learning limitations will focus on developing computer skills related to job readiness and resume development. Students will be introduced to specialized adaptive hardware and software technology to create basic resumes, cover letters, and be able to use the internet for basic job readiness tasks.

Lecture Hours: 1.5 Lab Hours: 1.5 Repeatable: Yes Grading: K
Transfer Status: None Degree Applicable: NAA
CSU GE: None IGETC: None District GE: None

Mathematics (MATH)

MATH 013 Intermediate Algebra 5 Units

This course continues the Algebra sequence and is a prerequisite to transfer level math courses. Students will review elementary algebra topics and further their skills in solving absolute value in equations and inequalities, quadratic functions and complex numbers, radicals and rational exponents, exponential and logarithmic functions, inverse functions, and sequences and series.

Lecture Hours: 5 Lab Hours: None Repeatable: No Grading: O
Prerequisite: MATH 111 with P grade or equivalent
Advisory Level: Read: 3 Write: 3 Math: None
Transfer Status: None Degree Applicable: AS
CSU GE: None IGETC: None District GE: None

MATH 014 Geometry 3 Units

Students will study logical proofs, simple constructions, and numerical calculations. The course involves the study of plane geometric figures and relationships.

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: O
Prerequisite: MATH 111 with P grade or placement based on math assessment
Advisory Level: Read: 3 Write: 3 Math: None
Transfer Status: None Degree Applicable: AS
CSU GE: None IGETC: None District GE: None

MATH 020 College Algebra for Liberal Arts 3 Units

This is a college-level course in college algebra for non-STEM or liberal arts majors. This course includes topics such as: polynomial, rational, radical, exponential, absolute value, and logarithmic functions; systems of equations; theory of polynomial equations; and sequences and series. (C-ID MATH 150)

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L
Prerequisite: MATH 013 with C or better
Advisory Level: Read: 3 Write: 3 Math: None
Transfer Status: CSU/UC Degree Applicable: AA/AS
CSU GE: B4 IGETC: 2A District GE: B4

MATH 020X Just-In-Time Support for Algebra for Liberal Arts 2 Units

Students will receive "just-in-time" review of the core prerequisite skills, competencies, and concepts needed for students concurrently enrolled in MATH 020 Algebra for Liberal Arts. Topics include: a review of computational skills developed in intermediate algebra, factoring, dividing polynomials, solving linear, absolute value, quadratic, radical, exponential, and logarithmic equations, linear and nonlinear inequalities, functions including composition and inverses. This course is appropriate for students who are confident in beginning algebra skills. This course is recommended for students advised to receive additional academic and concurrent support. Students are strongly encouraged to meet with an academic counselor.

Lecture Hours: 2 Lab Hours: None Repeatable: No Grading: O
Advisory Level: Read: 3 Write: 3 Math: None
Transfer Status: None Degree Applicable: NAA
CSU GE: None IGETC: None District GE: None

MATH 021 Precalculus Algebra 4 Units

Students will study topics which include basic algebraic concepts, complex numbers, equations and inequalities, graphs of functions, linear and quadratic functions, polynomial functions of higher degree, rational, exponential, absolute value, and logarithmic functions, sequences and series, and conic sections. This course is designed to prepare students for the level of algebra required in calculus. Students may not take a combination of MATH 021 and MATH 025. (C-ID MATH 151)

Lecture Hours: 4 Lab Hours: None Repeatable: No Grading: L

Prerequisite: MATH 013 with C or better

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: B4 IGETC: 2A District GE: B4

Credit by Exam: Yes

MATH 021X Just-In-Time Support for Precalculus Algebra 2 Units

Students will receive "just-in-time" review of the core prerequisite skills, competencies, and concepts needed in Precalculus. Intended for majors in science, technology, engineering, and mathematics who are concurrently enrolled in MATH 21 Precalculus. Topics include: a review of computational skills developed in intermediate algebra, factoring, operations on rational and radical expressions, absolute value equations and inequalities, functions including composition and inverses, and an in-depth focus on quadratic functions. This course is appropriate for students who are confident in beginning algebra skills. This course is recommended for students advised to receive additional academic and concurrent support. Students are strongly encouraged to meet with an academic counselor.

Lecture Hours: 2 Lab Hours: None Repeatable: No Grading: K

Transfer Status: None Degree Applicable: NAA

CSU GE: None IGETC: None District GE: None

MATH 022 Trigonometry 3 Units

Students will study trigonometric functions and equations, basic identities, graphing, inverse trigonometric functions, vectors, polar coordinates, and polar equations. This course in numerical and analytical trigonometry is designed to prepare students for the level of trigonometry and advanced algebraic concepts necessary for calculus. Students may not take a combination of MATH 022 and MATH 025. (C-ID MATH 851)

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L

Prerequisite: MATH 013 and MATH 014, both with C or better

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: B4 IGETC: None District GE: B4

Credit by Exam: Yes

MATH 025 Precalculus Algebra and Trigonometry 6 Units

Students will study basic algebraic concepts, complex numbers, equations and inequalities, graphs of functions, system of equations and inequalities, linear and quadratic functions, polynomial functions of higher degree, rational, exponential, logarithmic, and trigonometric functions, inverse functions, basic identities, vectors, polar coordinates and graphs, and conic sections. This course is an intensive combined course in college algebra and trigonometry designed primarily as preparation for calculus. Students may take both MATH 021 and MATH 022 or take only MATH 025. (C-ID MATH 955)

Lecture Hours: 6 Lab Hours: None Repeatable: No Grading: L

Prerequisite: MATH 013 and MATH 014, both with C or better.

Advisory Level: Read: 3 Write: 3 Math: 3

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: B4 IGETC: 2A District GE: B4

Credit by Exam: Yes

MATH 025X Just-In-Time Support for Precalculus Algebra and Trigonometry 2 Units

Students will receive "just-in-time" review of the core prerequisite skills, competencies, and concepts needed in Precalculus Algebra and Trigonometry. Intended for majors in science, technology, engineering, and mathematics who are concurrently enrolled in MATH 25 Precalculus Algebra and Trigonometry. Topics include: a review of computational skills developed in intermediate algebra, factoring, operations on rational and radical expressions, absolute value equations and inequalities, functions including composition and inverses, an in-depth focus on quadratic functions, and topics from geometry such as congruent and similar triangles properties. This course is appropriate for students who are confident in beginning algebra skills. This course is recommended for students advised to receive additional academic and concurrent support. Students are strongly encouraged to meet with an academic counselor.

Lecture Hours: 2 Lab Hours: None Repeatable: No Grading: K

Advisory Level: Read: None Write: None Math: None

Transfer Status: None Degree Applicable: NAA

CSU GE: None IGETC: None District GE: None

MATH 051 Mathematics for General Education 3 Units

Students will study topics including functions and models, geometry, problem solving, financial management, counting methods, and probability. This course is intended for transfer students with non-science majors. Successful completion of this course will fulfill the general education requirement in Mathematics for the California State University (CSU) system.

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L

Prerequisite: MATH 013 with C or better or equivalent

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: B4 IGETC: None District GE: B4

Credit by Exam: Yes

MATH 052 Mathematics for Elementary Education 3 Units

Students will study the development of quantitative reasoning skills through in-depth exploration of the structures of the real number system and subsystems, elementary number theory, and the use of manipulatives to present mathematical concepts to children. Students will develop lesson plans and teaching techniques appropriate for an elementary school setting. Additionally, there will be an emphasis on comprehension and analysis of mathematical concepts and applications of logical reasoning. Mathematics 52 is designed especially for prospective elementary school teachers. (C-ID MATH 120)

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L

Prerequisite: MATH 013 and MATH 014, both with C or better.

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: B4 IGETC: None District GE: B4

MATH 061 Finite Mathematics 3 Units

Students will study how to apply algebra to solve problems in economics, the behavioral sciences, and the social sciences. Course topics include systems of linear equations and inequalities, matrices, linear programming, set theory, counting techniques, probability theory, and the mathematics of finance. (C-ID MATH 130)

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L

Prerequisite: MATH 013 with C or better

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: B4 IGETC: 2A District GE: B4

MATH 062 Calculus for Business and the Social Sciences 3 Units

Students study functions and graphs; limits; continuity; differentiation and integration of polynomials, rational functions, power functions, exponential functions, and logarithmic functions; partial differentiation; and applications of these topics in business and social science.

This course includes single variable calculus and an introduction to multivariable calculus with applications for students majoring in business or social science. (C-ID MATH 140)

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L

Prerequisite: MATH 020 or MATH 021 or MATH 025 with C or better

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: B4 IGETC: 2A District GE: B4

MATH 063 Elementary Statistics 3 Units

Students are introduced to the study of statistics. Students will learn methods of displaying data, descriptive statistics, basic concepts of probability theory, random variables, common statistical distributions, estimates and sample size, hypothesis testing, tests of two independent population parameters, tests of 3 or more population means or proportions (Chi-square, one-way ANOVA), and regression and correlation. Students will apply basic statistical concepts to data from education, business, social sciences, and natural sciences. To aid in the analysis of data, the use of computational technology will be required. (C-ID MATH 110)

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L

Prerequisite: MATH 013 with C or better

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: B4 IGETC: 2A District GE: B4

MATH 063X Just-In-Time Support for Elementary Statistics 2 Units

Students will receive "just-in-time" review of skills, concepts and competencies needed to succeed in statistics. This course will cover topics from arithmetic, pre-algebra, elementary and intermediate algebra that are required for statistics. Students will also develop and practice study skills that promote success in MATH 063 Elementary Statistics. This course is recommended for students advised to receive additional academic and concurrent support. Students are strongly encouraged to meet with an academic counselor.

Lecture Hours: 2 Lab Hours: None Repeatable: No Grading: K

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: None Degree Applicable: NAA

CSU GE: None IGETC: None District GE: None

MATH 070 Discrete Mathematics 4 Units

Students prepare for further study in mathematics, computer science, or other sciences. Students will learn and apply concepts and ideas in logic, Boolean algebra, methods of proofs, induction, sequences, set theory, counting techniques, probability, recursion, relations, graphs, and trees. (C-ID MATH 160)

Lecture Hours: 4 Lab Hours: None Repeatable: No Grading: L

Prerequisite: (MATH 021 and MATH 022) or MATH 025, all with C or better, or equivalent

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: B4 IGETC: None District GE: B4

Credit by Exam: Yes

MATH 071 Calculus I With Analytic Geometry 5 Units

Students study functions and inverse functions, limits, the derivative as a limit, continuity, rules of differentiation, chain rule, implicit differentiation, applications of differentiation, linear approximations, related rates, optimization problems, antiderivatives, Riemann sums, the Fundamental Theorem of Calculus, and the substitution rule for integration. This is the first course in calculus for students majoring in mathematics, physical science, computer science, or engineering. (C-ID MATH 210)

Lecture Hours: 5 Lab Hours: None Repeatable: No Grading: L

Prerequisite: (MATH 021 and MATH 022) or MATH 025, all with C or better

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: B4 IGETC: 2A District GE: B4

Credit by Exam: Yes

MATH 071H Honors Calculus I With Analytic Geometry 5 Units

Students study functions and inverse functions, limits, the formal definition of the limit, the derivative as a limit, continuity, rules of differentiation, chain rule, implicit differentiation, applications of differentiation, linear approximations, related rates, optimization problems, antiderivatives, Riemann sums, the Fundamental Theorem of Calculus, and the substitution rule for integration. This is the first course in the calculus sequence for students majoring in mathematics, physical science, computer science, or engineering. As an honors course the focus will extend the understanding the theory and application of differential calculus through projects, extended readings, or programming and computational problems. (C-ID MATH 210)

Lecture Hours: 5 Lab Hours: None Repeatable: No Grading: L

Prerequisite: (MATH 021 and MATH 022) or MATH 025, all with C or better

Advisory Level: Read: 4 Write: 4 Math: None

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: B4 IGETC: 2A District GE: B4

Credit by Exam: Yes

MATH 072 Calculus II with Analytic Geometry 5 Units

Students study techniques of integration, applications of integration to areas, volumes, average values of functions, arc lengths, surfaces of revolution, problems in physics and engineering, use of parametric equations and polar equations to plot curves and compute derivatives, areas and arc length, a thorough study of infinite sequences, infinite and power series, and an introduction to differential equations. (C-ID MATH 220)

Lecture Hours: 5 Lab Hours: None Repeatable: No Grading: L

Prerequisite: MATH 071 with C or better.

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: B4 IGETC: 2A District GE: B4

Credit by Exam: Yes

MATH 073 Multivariable Calculus 5 Units

Students study the concepts of differential and integral calculus extended to multivariable functions. The course content includes vectors; dot products; cross products; surfaces in three dimensions; derivatives, integrals, arc length and curvature for vector-valued functions; partial derivatives; the chain rule; tangent planes; maximum and minimum values of functions of several variables; the Lagrange multiplier method; multiple integrals; and vector calculus. This is the third course in calculus for students majoring in mathematics, physical science, computer science, or engineering. (C-ID MATH 230)

Lecture Hours: 5 Lab Hours: None Repeatable: No Grading: L

Prerequisite: MATH 072 with C or better.

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: B4 IGETC: 2A District GE: B4

Credit by Exam: Yes

MATH 078 Differential Equations 4 Units

Students will study ordinary differential equations and their applications, including methods for solving first order equations, linear equations of arbitrary orders, and systems of linear differential equations. Students are introduced to Laplace transforms, series solutions, and some theoretical aspects of differential equations such as existence and uniqueness of solutions, the phase plane, and stability of equilibrium solutions for autonomous equations. (C-ID MATH 240)

Lecture Hours: 4 Lab Hours: None Repeatable: No Grading: L

Prerequisite: MATH 072 with C or better.

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: B4 IGETC: 2A District GE: B4

Credit by Exam: Yes

MATH 079 Linear Algebra 3 Units

Students study systems of linear equations, matrices, determinants, vector spaces and their properties, linear transformations, eigenvalues and eigenvectors, diagonalization, inner product vector spaces, orthogonality, and applications. This course is designed for students majoring in mathematics, computer science, statistics, or engineering. (C-ID MATH 250)

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L

Prerequisite: MATH 072 with C or better.

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: B4 IGETC: 2A District GE: B4

Credit by Exam: Yes

MATH 080 Discrete Structures for Computer Science 3 Units

Students will be introduced to the discrete structures used in Computer Science. Students will learn and apply concepts and ideas in the following topics: functions, relations, set theory, logic, methods of proof, counting principles, discrete probability, recursion, graphs, and trees.

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: L

Prerequisite: Take CIS 024B or CIS 024C or CIS 054 or CIS 084 and

MATH 025 or MATH 021 and MATH 022; with a C or better

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU/UC Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

Credit by Exam: Yes

MATH 098 Directed Study in Mathematics 0.5-9 Units

Individual or small groups of students who would benefit from Independent Study under the direction of faculty members in specific or related disciplines may develop individualized learning contracts designed to enhance their individual instructional programs. The students and the faculty member in consultation with the Division Dean will determine appropriate learning objectives and activities as well as the number of units to be earned. Instructions and the Learning Contract forms are available in the Division office. Repeatable to a maximum of 9 units across all disciplines.

Lecture Hours: None Lab Hours: 2.07 Repeatable: Yes Grading: O

Prerequisite: Completion of the following course(s) and project approval is required by sponsoring faculty, division dean, and Vice President of Academic Affairs, MATH 025 or MATH 063 with C or better grade

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None IGETC: None District GE: None

MATH 111 Elementary Algebra 5 Units

Students will study operations on real numbers and algebraic expressions, linear equations and inequalities, and algebraic methods for solving application problems. They will also study systems of linear equations, laws of exponents, operations on polynomials, solving quadratic equations by factoring, and operations on rational expressions and rational equations.

Lecture Hours: 5 Lab Hours: None Repeatable: No Grading: K

Recommended: Completion of MATH 512.

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: None Degree Applicable: NAA

CSU GE: None IGETC: None District GE: None

MATH 311 Pre-Algebra 3 Units

Students will study the fundamental operations in arithmetic and other math concepts including a basic introduction to algebra. This course is designed to give students the math foundation they need to be successful in an elementary algebra course. Topics include: integers, fractions, decimals, percents, order of operations, unit conversions, algebraic expressions, equations, basic geometric shapes and graphing, and simple applications.

Lecture Hours: 3 Lab Hours: None Repeatable: No Grading: K

Prerequisite: placement based on math assessment

Advisory Level: Read: 2 Write: 2 Math: None

Transfer Status: None Degree Applicable: NAA

CSU GE: None IGETC: None District GE: None

MATH 501 Review of Common Core Integrated Mathematics I 0 Units

Students will review the concepts and ideas in Common Core Integrated Mathematics I, including algebraic expressions and equations, functions, congruence, expressing geometric properties with equations, and interpreting categorical and quantitative data.

Lecture Hours: 3 Lab Hours: None Repeatable: Yes Grading: N

Recommended: Perform basic arithmetic operations, create linear equations; solve linear equations in one variable, both algebraically and graphically; define, evaluate, and compare basic linear functions; use linear functions to model relationships among quantities; and solve systems of linear equations in two variables.

Transfer Status: None Degree Applicable: NC

CSU GE: None IGETC: None District GE: None

MATH 502 Review of Common Core Integrated Mathematics II 0 Units

Students will review the concepts and ideas in Common Core Integrated Mathematics II, including algebraic expressions and equations, functions, congruence, expressing geometric properties with equations, and interpreting categorical and quantitative data.

Lecture Hours: 3 Lab Hours: None Repeatable: Yes Grading: N

Recommended: Completion of Common Core Integrated Mathematics I or the equivalent.

Transfer Status: None Degree Applicable: NC

CSU GE: None IGETC: None District GE: None

MATH 503 Review of Common Core Integrated Mathematics III 0 Units

Students will review the concepts and ideas in Common Core Integrated Mathematics II, including algebraic expressions and equations, functions, congruence, expressing geometric properties with equations, and interpreting categorical and quantitative data.

Lecture Hours: 3 Lab Hours: None Repeatable: Yes Grading: N

Recommended: Completion of Common Core Integrated Mathematics II or equivalent.

Transfer Status: None Degree Applicable: NC

CSU GE: None IGETC: None District GE: None

MATH 512 Prealgebra 0 Units

This is a noncredit course designed to give students the mathematical foundation they need to be successful in an elementary algebra course.

Topics include integers, fractions, decimals, percents, order of operations, unit conversions, algebraic expressions, equations, basic geometric shapes, graphing and basic applications.

Lecture Hours: 3 Lab Hours: None Repeatable: Yes Grading: N

Transfer Status: None Degree Applicable: NC

CSU GE: None IGETC: None District GE: None

MATH 521 Math for Medical Assisting 0 Units

Students solve problems and do calculations encountered in the Medical Assisting field. Basic math concepts are applied to problems such as conversion within the Metric system and conversion between Decimal and Metric systems.

Lecture Hours: 1.5 Lab Hours: None Repeatable: Yes Grading: N

Advisory Level: Read: 3 Write: 3 Math: None

Transfer Status: None Degree Applicable: NC

CSU GE: None IGETC: None District GE: None

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