

Liberal Arts & Science: Math & Science Emphasis (CSU GE Track)

+If you have completed coursework at another college and/or are starting in a semester other than a Fall term, please follow up with the Counseling Department to determine if this sequence is appropriate for your academic and career goals.

Program Description: The Liberal Arts and Sciences major is designed for students planning to transfer to either the California State University or University of California. To earn the Associate in Arts degree with a Liberal Arts and Sciences major, students must complete either the Intersegmental General Education Transfer Curriculum (IGETC) UC or CSU option or the CSU General Education Certification pattern and one of the three areas of emphasis. The areas of emphasis are: Mathematics and Science, Social and Behavioral Sciences, Health Sciences, or Humanities. The area of emphasis requires a minimum of 18 units with a grade of "C" or better in all courses in the area of emphasis. The courses identified for each area of emphasis fulfill major preparation requirements as demonstrated through ASSIST.org articulation. A minimum of six units must be within a single discipline and in the case of the Mathematics and Science area of emphasis at least one mathematics course must be completed. Select courses based on ASSIST.org data for major preparation articulation with selected transfer institutions. Consult a counselor for specific information regarding the intended major at the college the student is choosing. Courses used to complete a student's area of emphasis can double count for general education just as they may for any other major. Although the associate degree recognizes the completion of lower division general education requirements, it does not guarantee admission to a specific campus in the CSU or UC system, nor does it guarantee admission to a specific major. Some majors and schools require a higher GPA than is necessary for the associate degree. Students should meet with a counselor to determine the lower division major preparation needed for their intended transfer school.

To meet requirements for the CSU General Education Breadth associate degree program, students must:
 "Complete CSU General Education Breadth for Certification, including the American Institutions and Diversity requirements. Consult with the Counseling Office for the appropriate list of applicable courses. "Earn a "C" or "CR" grade or higher in all CSU Breadth course. "Complete a minimum of 60 degree applicable CSU transferable semester units. "Earn a cumulative G.P.A. of 2.0 in all college coursework completed. "Meet College of the Canyons residency requirements for graduation. "Note: No Physical Education and/or Wellness courses are required.

Program SLO: Students will be able to analyze concepts from the liberal arts and sciences.

Important Information: The sequence listed below, may not meet all your transfer admissions requirements. Connect with a counselor to develop an individual student education plan through the Counseling Department @ <https://www.canyons.edu/counseling> or (661) 362-3288/(661) 362-3811.

Major courses are sequenced and **BOLDED** based on recommendations by the [Counseling Department](#)
NOTE: This pathway is mapped with the assumption that placement into Math 211-Calculus I, has occurred. If not, please begin at your math placement level, which might be Math 102 or Math 102X (FA, WI, SP, SU) and Math 104 (FA, SP, SU).

First Semester (3-14 units minimum) FA = Fall; WI = Winter; SP = Spring; SU = Summer

Course	Title	Units	Major and GE Courses
Group 1 Class (Dept recommends Math 211, if eligible)	Calculus I (FA, SP, SU) or choose one course from Group 1, listed below (FA, WI, SP, SU)	5-4	Major & Area B4
Group 1 Class	Choose one course from Group 1, listed below (FA, WI, SP, SU)	3-4	Major & Area B1 or B2 (plus likely B3 if lab is included)
English 101/101H	English Composition (FA, WI, SP, SU)	4	Area A2
Lifelong Learning Course (Dept recommends COUNS 110 or 150)	Career & Life Planning (FA, WI, SP, SU) or Student success (FA, WI, SP, SU) or choose another course from CSU GE area E (FA, WI, SP, SU)	3	Area E
Term Total:		14-16	

Check the [Honors website](#) for most recent course offerings. Must be enrolled in Honors program to take courses.

Second Semester (15-26 units minimum)

Course	Title	Units	Major Courses
Group 1 Class	Choose one course from Group 1, listed below (FA, WI, SP, SU)	3-5	Major & Area B1, B2 (possibly B3, if lab is included) or B4
^Critical Thinking	Choose one course from the CSU GE Area A3 category (FA, WI, SP, SU)	3	Area A3
COMS 105/105H or COMS 120	Fundamentals of Public Speaking (FA, WI, SP, SU) or Small Group Communication (FA, WI, SP, SU)	3	Area A1
*Social Science	Choose one course from CSU GE Area D (FA, WI, SP, SU)	3	Area D and *Diversity possibly (check with a Counselor)
Term Total:		12-14	

^Some CSU's will require a second semester of English Composition.

Courses with an () next to them will double-count toward the Diversity GE Requirement (talk with Counseling).

Interession (27-29 units minimum)

Course	Title	Units	Major Courses
Group 1 Class	Choose one course from Group 1, listed below (FA, WI, SP, SU)	3-5	Major & Area B1, B2 (possibly B3, if lab is included) or B4
Term Total:		3	

Third Semester (30-44 units minimum)

Course	Title	Units	Major Courses
Group 1 Class	Choose one course from Group 1, listed below (FA, WI, SP, SU) – consider Calculus 1, if it hasn't been taken yet. Math 211 is required for this degree	3-5	Major & Area B1, B2 (possibly B3, if lab is included) or B4
Ethnic Studies	Choose one course from CSU GE Area F (FA, WI, SP, SU)	3	Area F
Arts Course	Choose one course from CSU GE Area C1 (FA, WI, SP, SU)	3	Area C1
*American Institutions Choose Option I or II	Complete first course in chosen option – (note: must take both classes within one option) (FA, WI, SP, SU) – <i>see table below</i>	3	American Institutions, Area C2, and *Diversity possibly (check with a Counselor)
CSU Elective	Choose any course that is CSU transferable (FA, WI, SP, SU)	3	Elective
Term Total:		15-17	

Fourth Semester (45-60 units minimum) Note: May not need all CSU Elective units if you have already reached 60 CSU applicable units, have all of the CSU GE and major requirements met.

Course	Title	Units	Major Courses
Group 1 Class	Choose one course from Group 1, listed below (FA, WI, SP, SU)	4-5	Major & Area B1, B2 (possibly B3, if lab is included) or B4
*American Institutions Choose Option I or II	Complete second course in chosen option – (note: must take both classes within one option) (FA, WI, SP, SU) – <i>see table below</i>	3	American Institutions, Area D, and *Diversity possibly (Check with a Counselor)
Arts or Humanities Course	Choose one course from either CSU GE Area C1 or C2 (FA, WI, SP, SU)	3	Area C1 or C2
CSU Elective	Choose any course that is CSU transferable (FA, WI, SP, SU)	3	Elective
CSU Elective	Choose any course that is CSU transferable (FA, WI, SP, SU)	3	Elective
Term Total:		16-17	

Total Units: 60+

Group 1: Select 6 units from a single discipline and at least one mathematics course (must take 18 units minimum)

BIOSCI 100/100H	General Biology (FA, WI, SP, SU)	4
BIOSCI 106/106H	Organismal & Environmental Biology (FA, SP, SU)	4
BIOSCI 107/107H	Molecular & Cellular Biology (FA, SP, SU)	4
BIOSCI 115	General Zoology (FA)	4
BIOSCI 116	General Botany (SP)	4
BIOSCI 201	Introduction to Human Anatomy (FA, SP, SU)	4
BIOSCI 202	Introduction to Human Physiology (FA, SP, SU)	4
BIOSCI 221	Introduction to Microbiology (FA, SP, SU)	5
CHEM 151/151H	Preparatory General Chemistry (FA, WI, SP, SU)	4
CHEM 201/201H	General Chemistry I (FA, WI, SP, SU)	5
CHEM 202	General Chemistry II (FA, SP, SU)	5
CHEM 255	Organic Chemistry I (FA, SP)	5
CHEM 256	Organic Chemistry II (FA, SP)	5
GEOGRPH 100	Physical Geography (FA, WI, SP, SU)	3
GEOGRPH 101	Physical Geography with Lab (FA, WI, SP, SU)	4
GEOGRPH 103	Weather and Climate (FA, SP, SU)	3
GEOLOGY 100	Physical Geology (FA, WI, SP, SU)	3
GEOLOGY 101	Physical Geology with Lab (FA, WI, SP, SU)	4
GEOLOGY 110	Earth Science with Lab (FA, WI, SP, SU)	4
MATH 211	Calculus I (FA, SP, SU)	5
MATH 212	Calculus II (FA, SP, SU)	5
MATH 213	Calculus III (FA, SP, SU)	5
MATH 214	Linear Algebra (FA, SP, SU)	4
MATH 215	Differential Equations (FA, SP, SU)	4
PHYSIC 110	General Physics I (FA, SP, SU)	4
PHYSIC 111	General Physics II (FA, SP, SU)	4
PHYSIC 220	Physics for Scientists and Engineers: Mechanics of Solids and Fluids (FA, SP, SU)	4
PHYSIC 221	Physics for Scientists and Engineers: Electricity and Magnetism (FA, SP, SU)	4
PHYSIC 222	Physics for Scientists and Engineers: Wave Motion, Heat, Optics, and Modern Physics (FA, WI, SP)	4

American Institutions Requirement – Select one of the options below and complete at total of 6 units

Option 1	One course from the following: Economics 170/170H, History 111/111H, History 112/112H, History 120*/120H*, or History 130* AND Political Science 150/150H (FA, WI, SP, SU)
Option 2	History 111/111H AND History 112/112H (FA, WI, SP, SU)

Counseling Resources

Counseling Department: <https://www.canyons.edu/studentservices/counseling/>

CSU General Education Guide: <https://www.canyons.edu/studentservices/counseling/transfer/index.php>

Articulation Agreement: www.assist.org

Cal State University: www.calstate.edu

Program Mapper: <https://canyons.programmapper.ws/academics>

COC honors Program: <https://www.canyons.edu/academics/honors/index.php>

Mathematics Engineering Science Achievement (MESA) Program: <https://www.canyons.edu/academics/mesa/>

Biology Club: for more information email: cocbio.club@gmail.com

Chemistry Club: for more information email: cocchemclub@gmail.com

Math Club: for more information email: MathClub.COC@gmail.com

Campus Alliances: <https://www.canyons.edu/administration/ie2/equity/alliances/index.php>

Petition for Associate Degree – Check the [student calendar](#) for term-specific submission deadlines. Summer graduation associate degree petition are due by April 1st for your name to appear in the spring commencement pamphlet. The petition form must be reviewed with a counselor and may be found here:

<https://www.canyons.edu/resources/documents/studentservices/counseling/forms/PetitionforAssociateDegree>

[andCertificateofAchievement.pdf](#)

Career Resources

California Career Zone: <https://www.cacareerzone.org/>

O*Net Online: <https://www.onetonline.org/>

Bureau of Labor and Statistics: www.bls.gov