

Using the Lower Division Articulation Chart for Bay Area Two-Year Institutions

The **Lower Division Articulation Chart** lists the SFSU courses that meet the Lower Division Course Requirements for the Biology B.A. and B.S. degrees (see the SFSU Bulletin or the Biology Advising Web Page for more detailed descriptions of each major). For each Bay Area Two-Year Institution (Community College) on the Chart, the equivalent courses from each campus is listed below the college. If no single semester/quarter course at the Community College articulates the SFSU course, a black box is shown.

Please consult the Biology Advising web page to see how to obtain equivalency approval for transfer courses to meet Biology Majors requirements.

<http://online.sfsu.edu/~pasion/AdvisingWeb/biologyadvising.htm>

The equivalent course will not be accepted for more units than the equivalent SFSU course.

Each Community College course is listed with the number of units earned at the home campus. The Degree Audit Report (DARS) or the Advanced Standing Evaluation (ASE) will indicate how many units SFSU awards the students for each transfer course. However, the Department will not accept more units for the Community College course than the equivalent SFSU course. For example, Laney College Math 13 Elementary Statistics is a 4-unit course. At SFSU, Math 124 Elementary Statistics is a 3-unit course. For the Biology Major, the student would receive 3 transfer credit units for Math 13 toward the Major.

The equivalent course will not be accepted for more units than the University has accepted for transfer.

If a Community College course is transferred from a quarter system campus, a transfer course may be equivalent to fewer units than the SFSU course. In this case, the student would need to make up the missing units by taking additional Upper Division units.

Articulation agreements vary amongst the Community College campuses.

Some courses articulate individually. For some courses, two or three semesters/quarters must be completed at the Community College to articulate as equivalent to 1 or 2 semesters at SFSU.

Courses completed at Community Colleges can be used for Lower Division unit credit only.

If a Community College course has content that articulates as equivalent to an Upper Division SFSU course, then the student may be able to use the Community College course to meet the content requirement for a major. The student would not re-take the course at SFSU, but would need to take additional Upper Division Elective units to meet the Upper Division unit requirement for the Major. For example, City College of San Francisco Chem 212A Organic Chemistry is listed as equivalent in content to SFSU Chem 333/334 Organic Chemistry I and Lab. A SFSU Cell & Molecular Biology major who completed CCSF Chem 212A, does not need to take the 3-unit SFSU Chem 333 course (a CMB Major requirement). The student can fill out an Equivalency Form with the Department of Biology (approval of Advisor and Chair required) indicating the content for Chem 333 has been met. The student will take an additional 3 units Upper Division Elective course (selected with advisement from a CMB Major Advisor) to meet the 36-unit Upper Division requirement.

Reminder to all transfer students:

All students should meet with their Major-Specific Biology Advisor to develop a customized course plan based on courses completed at Community Colleges or other campuses and based on the student's career goals. All Biology Major students should consult the SFSU Biology Advising Web Page on a regular basis:

<http://online.sfsu.edu/~pasion/AdvisingWeb/biologyadvising.htm>

Lower Division Articulation Information for Bay Area 2-Year Institutions

SFSU	Berkeley City College ²	Canada College	Chabot College	City College SF	College of Alameda	College of Marin	College of San Mateo	Contra Costa	De Anza College	Diablo Valley	Evergreen Valley College
semester	semester	semester	semester	semester	semester	semester	semester	semester	quarter	semester	semester
¹ BIOL 230 General Biology I (5)	BIOL 1A (4)	BIOL 230 (4)			BIOL 1A (5) & BIOL 1B (5)	BIOL 115 (5)		BIOSC 110 (4)		BIOSC 130 (5)	
BIOL 240 General Biology II (5)	BIOL 1B (5)	BIOL 225 (5)		BIOL 101B (5)	BIOL 1B (5)	BIOL 116 (5)				BIOSC 131 (5)	
² BIOL 230 General Biology I (5)			BIOL 2A (5) &	BIOL 101A (5) &			BIOL 210 & 220 & 230 (14)	BIOSC 140 (9)	BIOL 6A (6),		BIOL-3 (4) &
BIOL 240 General Biology II (5)			BIOL 2B (5)	BIOL 101B (5)			or BIOL 110 & 210 & 220 (14)	& BIOSC 141 (4)	& 6B (6) & 6C (6)		BIOL-1 (5) & BIOL-2 (5)
CHEM 115 General Chem I (5)	CHEM 1A (5)	CHEM 210 (5)	CHEM 1A (5)	CHEM 101A (5) or CHEM103a (4)	CHEM 1A (5)	CHEM 131 (5)	CHEM 210 (5)	CHEM 120 (5)	CHEM 1A (5) & 1B (5)	CHEM 120 (5)	CHEM-1A (5)
CHEM 215 General Chem II (3)	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM	CHEM 1B (5)	CHEM	&
CHEM 216 General Chem II lab (2)	1B (5)	220 (5)	1B (5)	101B (5)	1B (5)	132 (5)	220 (5)	121 (5)	& CHEM 1C (5)	121 (5)	CHEM-1B (5)
CHEM 130 Organic Chemistry (3)			CHEM 8 (6)	CHEM 208A (4)	CHEM 8A (4)		CHEM 231 (5)	CHEM 226 (5)	CHEM 12A & 12B & 12C (15)		
³ PHYS 111 General Physics I (3)	PHYS	PHYS	PHYS	PHYC 2A (3)		PHYS	PHYS	PHYS	PHYS 2A (5)	PHYS	PHYS-
PHYS 112 General Phys I Lab (1)	2A (5)	210 (4)	2A (4)	PHYC 2AL (1)		108A (5)	210 (4)	120 (4)	& 2B (5)	120 (4)	2A (4)
PHYS 121 General Physics I (3)	PHYS	PHYS	PHYS	PHYC 2B (3)		PHYS	PHYS	PHYS	PHYS	PHYS	PHYS-
PHYS 122 General Phys II Lab (1)	2B (5)	220 (4)	2B (4)	PHYC 2BL (1)		108B (5)	220 (4)	121 (4)	2C (5)	121 (4)	2B (4)
MATH 124 Elementary Statistics (3)	MATH 13 (4)	MATH 200 (4)	MTH 43 (4)	MATH 80 (4) or ECON 5 (4) or PSYC 5 (4)	MATH 13 (4)	STAT 115 (4) or MATH 115 (4)	MATH 200 (4)	MATH 164 (4)	MATH 10 (5)	MATH 142 (4) or BUS 240 (3)	MATH-63 (3) or BUS-60 (3)
MATH 226 Calculus I (4)	MATH 3A (5)	MATH 251 (5)	MTH 1 (4)	MATH 110A (4)	MATH 3A (5)	MATH 123 (5)	MATH 251 (5)	MATH 190 (5)	MATH 1A (5) & MATH 1B (5)	MATH 192 (4)	MATH-71 (5)
MATH 227 Calculus II (4)	MATH 3B (5)	MATH 252 (5)	MTH 2 (5)	MATH 110B (4)	MATH 3B (5)	MATH 124 (5)	MATH 252 (5)	MATH 191 (4)	MATH 1C (5)	MATH 193 (4)	MATH-72 (5)
MATH 228 Calculus III (4)	MATH 3C (5)	MATH 253 (5)	MTH 3 (5)	MATH 110C (4)	MATH 3C (5)	MATH 223 (5)	MATH 253 (5)	MATH 290 (5)	MATH 1D (5)	MATH 292 (4)	MATH-73 (4)
CSC 210 Intro Comp Progr (3)	CIS 36A (4)	CIS 250 (3) & 251 (1) or CIS 252 (3)	CSCI 14 (4) or CSCI 15 (4)	CS 110A/111B (6) or CS110A/110B (6) or CS 111A/110B (6) or ENGN 38 (3)	CIS 25 (4) or CIS 26 (4)			CIS 162 (3.5) or COMP 251 (4)	CIS 27 (5)	COMSC 265 (4) or COMSC 266 (4)	

A black box indicates that no single course articulates between the campuses

For the Biology B.A. or B.S. degree, transfer units for a course are determined by the University and cannot be more than the equivalent SFSU course

²Berkeley City College is formerly Vista College

¹Biol courses: Some biology courses articulate separately for each semester

²In some cases, BOTH semesters or ALL THREE quarters must be taken at the community college to be equivalent to SFSU Biol 230/240.

³Phys courses: Generally one semester or two quarters at the community college articulate for one semester of SFSU physics lecture and lab

⁴Mission College PHYS 2B articulates with SFSU PHYS 121/122

⁵Mission College CHEM 1A articulates with SFSU CHEM 115

Lower Division Articulation Information for Bay Area 2-Year Institutions

SFSU	Foothill College	Gavilan College	Laney College	Las Positas College	Merritt College	Mission College	San Jose City College	Santa Rosa Junior College	Skyline College	West Valley College
semester	quarter	semester	semester	semester	semester	semester	semester	semester	semester	semester
¹ BIOL 230 General Biology I (5)			BIOL 1A (5)		BIOL 1A (5)					BIO 43 (5)
BIOL 240 General Biology II (5)			BIOL 1B (5)		BIOL 1B (5)					BIO 41 (5) & BIO 42 (5)
² BIOL 230 General Biology I (5)	BIOL 1A (6) &	BIO 1 (4) &		BIOL 1 (5) &		BIOSC 1A (5)	BIOL-1 (5) &	BIO 2.2 (5) &	BIOL 215 (9)	
BIOL 240 General Biology II (5)	1B (6) & 1C (6)	BIO 4 (4) & BIO 5 (4)		BOTN 1(5) & ZOO 1 (5)		& BIOSC 1B (5)	BIOL-2 (5) & BIOL-3 (5)	BIO 2.3 (5) & BIO 2.1 (5)	& BIOL 230 (5)	
CHEM 115 General Chem I (5)	CHEM 1A (5) & CHEM 1B (5)	CHEM 1A (5)	CHEM 1A (5)	CHEM 1A (5)	CHEM 1A (5)	⁵ CHEM 1A (5)	CHEM-1A (5)	CHEM 1A (5) or CHEM 4A (5)	CHEM 210 (5)	CHEM 1A (5)
CHEM 215 General Chem II (3)	CHEM 1B (5)	CHEM	CHEM	CHEM	CHEM	&	CHEM-	CHEM 1B (5) or	CHEM	CHEM
CHEM 216 General Chem II lab (2)	& CHEM 1C (5)	1B (5)	1B (5)	1B (5)	1B (5)	CHEM 1B (5)	1B (5)	CHEM 4B (5)	220 (5)	1B (5)
CHEM 130 Organic Chemistry (3)	CHEM 12A (6) & CHEM 12B (6)		CHEM 12A (5) or CHEM 12B (5) or CHEM 30B (4)		CHEM 30A (4)			CHEM 8 (5)		
³ PHYS 111 General Physics I (3)	PHYS 2A (5)	PHYS	PHYS 2A (5)	PHYS	PHYS	PHYS	PHYS-	PHYS 2A (3) &	PHYS	PHYS
PHYS 112 General Phys I Lab (1)	& PHYS 2B (5)	2A (4)	or PHYS 3A (5)	2A (5)	2A (5)	2A (5) &	2A (4)	PHYS 3A (1)	210 (4)	2A (5)
PHYS 121 General Physics I (3)	PHYS 2B (5)	PHYS	PHYS 2B (5)	PHYS	PHYS	⁴ PHYS	PHYS-	PHYS 2B (3) &	PHYS	PHYS
PHYS 122 General Phys II Lab (1)	& PHYS 2C (5)	2B (5)	or PHYS 3B (5)	2B (5)	2B (5)	2B (5)	2B (4)	PHYS 3B (1)	220 (4)	2B (5)
MATH 124 Elementary Statistics (3)	MATH 10 (5)	MATH 5 (3)	MATH 13 (4)	MATH 42A (3)	MATH 13 (4)	MATH 10 (4)	MATH-63 (3) or BUS-60 (3)	MATH 15 (3)	MATH 200 (4) or BUS 123 (3)	MATH 10 (3)
MATH 226 Calculus I (4)	MATH 1A (5) & MATH 1B (5)	MATH 1A (4)	MATH 3A (5)	MATH 1 (5)	MATH 3A (5)	MATH 3A (5)	MATH-71 (5)	MATH 1A (5)	MATH 251 (5)	MATH 3A (5)
MATH 227 Calculus II (4)	MATH 1B (5) & MATH 1C (5)	MATH 1B (4)	MATH 3B (5)	MATH 2 (5)	MATH 3B (5)	MATH 3B (5)	MATH-72 (5)	MATH 1B (5)	MATH 252 (5)	MATH 3B (5)
MATH 228 Calculus III (4)	MATH 1C (5) & MATH 1D (5)	MATH 1C (5)	MATH 3C (5)	MATH 3 (5)	MATH 3C (5)	MATH 4A (4)	MATH-73 (4)	MATH 2A (3)	MATH 253 (5)	MATH 4A (4)
CSC 210 Intro Comp Progr (3)	CIS 15A (5)	CSIS 46 (4)	CIS 25 (4) or CIS 26 (4) or CIS 27 (4)		CIS 27 (4)			CIS 10 (4)		

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