

SCIENCE, MATH & ENGINEERING PATHWAY PROGRAM MAP: CATALOG YEAR: 2023-24



Biology: Associate in Science for Transfer UC

Biology will change your life because you will learn about yourself and the world around you. Biologists study how humans, animals and other organisms function and interact. It is essential for understanding the facts about topics such as vaccines, climate change, and genetically modified organisms. This will help you make more informed decisions about things that greatly impact you and your loved ones. Biology is required for medical and environmental careers.

Please see a Pathways Counselor: Transfer degrees require a minimum of 60 semester CSU transferable units or UC semester transferable units with a minimum 2.0 GPA overall. [Contact a Counselor](#) to create an education plan customized to meet your needs.

Transfer Majors/Award Focus

- Biology, A.S.-T CSU, UC

GE Pattern/Units

- GE Pattern: Option C
- Total Units: 70

Program maps indicate the major coursework and recommended general education courses to fulfill your degree in 2 years (approximately 15 units/semester or 30 units/year). If you are a part-time student, start Semester 1 courses and follow the course sequence. Some of the courses listed may be substituted by another course. Please view these options in the official course [catalog](#).

Semester 1

17 Units

	COURSE	TITLE	UNIT
<input type="checkbox"/>	ENGL-101	College Composition	4
<input type="checkbox"/>	MATH-211	Analytic Geometry and Calculus I	4
<input type="checkbox"/>	BIOL-150	General Biology I	4
<input type="checkbox"/>	CHEM-101	General Chemistry I	5

Semester 2

16 Units

	COURSE	TITLE	UNIT
<input type="checkbox"/>	COMM-100	Critical Thinking and Writing	3
<input type="checkbox"/>	BIOL-151	General Biology II	4
<input type="checkbox"/>	MATH-212	Analytic Geometry and Calculus II	4
<input type="checkbox"/>	CHEM-102	General Chemistry II	5

Career Options

Post-secondary Teachers (M+)
Registered Nurses (B+)
Physicians & Surgeons (D)
Dentists (D)

Find more careers: msjc.emsicc.com

Required Education: B: Bachelor's, M: Master's; D: Doctorate


Financial Aid

Financial aid is determined by the number of credit hours you take in a semester. Maximize your financial aid by taking 12-15 units per semester.


Scheduling Notes

Make sure to complete a college level math class as soon as possible because both BIOL-150 and CHEM-101 have MATH-105 or higher as a prerequisite. There are several sequential year-long course series in this program like BIOL-150 and BIOL-151. Make sure to plan ahead because you have to take the courses in the series in order over two semesters.


Summer 1 – STEM ONLY**7 Units**

	COURSE	TITLE	UNIT
<input type="checkbox"/>	PS-101, or HIST-111, or HIST-112	Introduction to American Government and Politics, U.S. History to 1877, or U.S. History Since 1865	3
<input type="checkbox"/>	SPAN-101 or FREN-101 or ASL-100	Elementary Spanish I or Elementary French I or American Sign Language I	4

Semester 3**15 Units**

	COURSE	TITLE	UNIT
<input type="checkbox"/>	ENGL-103	Critical Thinking and Writing	3
<input type="checkbox"/>	PHY-201	Mechanics and Wave Motion	4
<input type="checkbox"/>	CHEM-112	Organic Chemistry I	5
<input type="checkbox"/>	ART-100	Art Appreciation	3

Semester 4**15 Units**

	COURSE	TITLE	UNIT
<input type="checkbox"/>	HIST-107 or HIST 117 or HIST 140	The History of East Asia Before 1600 or History of India or History of Mexico	3
<input type="checkbox"/>	PHY-202	Electricity and Magnetism	4
<input type="checkbox"/>	CHEM-113	Organic Chemistry II	5
<input type="checkbox"/>	PS 103/ETHS 103, HIST 103/ETHS 160, LIT 240/ETHS 240, LIT 240/ETHS 275, or LIT 240/ETHS 280	Ethnic Politics in America Black History in American Context American Indian Literature Latinx/Chicanx Literature or Multiethnic Literature	3

Notes

Recommended: Students should take courses the summer before the Fall start of the semester.

Language Requirement: For students who did not meet the LOTE requirement in high school, they may fulfill Area 6 by demonstrating proficiency by completing ASL-100 American Sign Language I, FREN-101 Elementary French I or SPAN-101 Elementary Spanish I with a grade C or better. Languages other than English for Native Speakers are also acceptable for meeting this requirement.

Although not an IGETC requirement, MSJC may certify completion of the CSU graduation requirement in U.S. History, Constitution and American Ideals with PS-101/101H and HIST-111/111H or HIST-112/112H. Courses used to meet this requirement may also be used to satisfy IGETC Subject Area 4 requirements.

Work Experience

Sign up for a special project or internship opportunity. Gain [work experience](#) and earn credits.

Helpful Hints

- Free Math and Science tutoring are available in the Learning Resource Centers msjc.edu/learningresourcecenter
- Consider joining the Honors Enrichment Program at MSJC to enhance your learning experience. msjc.edu/honors
- There are several options for the non-science/math general education courses like history. Speak to a counselor to identify a different option if the listed classes are full.