

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



Mathematics: Associate in Science for Transfer *Focus: Physics* *UC*

Have you ever wondered how we got to the moon? Or how a computer or a cell phone works? Or how the Egyptians made the pyramids? These achievements and many more would not have been possible without mathematics. Math opens the doors to exciting and lucrative careers such as robotics, coding, wealth management, engineering, cybersecurity, astrophysics, aerospace, and many more! MATH = \$\$\$

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

- Mathematics, A.S.-T CSUSM, UC
- Mathematics, A.S.-T UC, Focus: Computer Science/Information Systems, Physics

GE Pattern/Units

- GE Pattern: Option C
- Total Units: 62

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

15 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"/> | COMM-100 | Public Speaking | 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 2

16 Units

| | COURSE | TITLE | UNIT |
|--------------------------|--|--|------|
| <input type="checkbox"/> | ENGL-103 | Critical Thinking and Writing | 3 |
| <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"/> | ANTH-101 | Biological Anthropology | 3 |
| <input type="checkbox"/> | MATH-212 | Analytic Geometry and Calculus II | 4 |
| <input type="checkbox"/> | ECON-201 | Principles of Macroeconomics | 3 |

Career Options

Education (B, M, D), Statisticians (B, M)
Managers (B), Operations Research Analysts (M, D)
Find more careers: msjc.emsicc.com
Required Education: SM: some college; C: Certificate; A: Associate,
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.


Summer**3 Units**

|  COURSE | TITLE | UNIT |
|--|---------------------------|------|
| <input type="checkbox"/> CSIS-113A | C++ Programming - Level 1 | 3 |

Semester 3**15 Units**

|  COURSE | TITLE | UNIT |
|--|------------------------------------|------|
| <input type="checkbox"/> MATH-213 | Analytic Geometry and Calculus III | 5 |
| <input type="checkbox"/> PHY-201 | Mechanics and Wave Motion | 4 |
| <input type="checkbox"/> HIST-101 | Western Civilization to 1650 | 3 |
| <input type="checkbox"/> DAN-100 | History and Appreciation of Dance | 3 |

Semester 4**13 Units**

|  COURSE | TITLE | UNIT |
|---|--|------|
| <input type="checkbox"/> MATH-218 | Linear Algebra | 3 |
| <input type="checkbox"/> PHIL-101 | Introduction to Philosophy I | 3 |
| <input type="checkbox"/> PHY-202 | Electricity and Magnetism | 4 |
| <input type="checkbox"/> PS 103/ETHS 103, HIST 160/ETHS 160, LIT 240/ETHS 240, LIT 275/ETHS 275, or LIT 280/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.

Scheduling Notes

Spread out your class times throughout the week so you're not overloaded with back-to-back classes. You'll want be able to make it to your instructor's office hours before or after class.

Helpful Hints

Use recency to your advantage! Attempting your homework the same day as your lecture will help you apply what you just learned. Consider taking honors courses. In addition to looking great on your transcript, you'll be extra prepared for your upper division coursework.