

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



## *Mathematics: Associate in Science for Transfer CSUSM*

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 B
- Total Units: 64

**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**

**14 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"/>	HIST-111 or HIST-112	U.S. History to 1877 or U.S. History Since 1865	3
<input type="checkbox"/>	PHIL-101	Introduction to Philosophy I	3

### **Semester 2**

**16 Units**

	COURSE	TITLE	UNIT
<input type="checkbox"/>	ENGL-103 or PHIL-112	Critical Thinking and Writing or Critical Thinking and Composition	3
<input type="checkbox"/>	HIST-160/ETHS-160, LIT-275/ETHS-275 or LIT-280/ETHS-280	Black History in the American Context or Latinx/Chicanx Literature or Multiethnic Literature	3
<input type="checkbox"/>	CSIS-113A	C++ Programming - Level 1	3
<input type="checkbox"/>	MATH-212	Analytic Geometry and Calculus II	4
<input type="checkbox"/>	COMM-100	Public Speaking	3

### **Career Options**

- Education (B, M, D)
- Statisticians (B, M)
- Managers (B)
- Operations Research Analysts (M, D)

Find more careers: [msjc.emsicc.com](https://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****6 Units**

 COURSE	TITLE	UNIT
<input type="checkbox"/> CSIS-123A	C++ Programming - Level 2	3
<input type="checkbox"/> ANTH-101	Biological Anthropology	3

**Semester 3****15 Units**

 COURSE	TITLE	UNIT
<input type="checkbox"/> MATH-213	Analytic Geometry and Calculus III	5
<input type="checkbox"/> HIST-101	Western Civilization to 1650	3
<input type="checkbox"/> PHY-201	Mechanics and Wave Motion	4
<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 <sup>1</sup>	3
<input type="checkbox"/> PHY-202	Electricity and Magnetism	4
<input type="checkbox"/> PSYC-101	Introduction to Psychology	3
<input type="checkbox"/> PS-101	Introduction to American Government and Politics	3

**Notes:**

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

<sup>1</sup>MATH-215 Differential Equations could replace MATH-218 Linear Algebra

**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.