

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



## Engineering Technology: Drafting Associate in Science – Non-Transfer

Engineers help find ways to feed and house the world! And have shrunk supercomputers to fit into your pocket! Everything around you was created with the designs and innovation of Engineers. Engineers combine an understanding of people’s goals, innovative science, practical methods and perseverance to create the modern world.

**Please see a Pathways Counselor:** A local degree requires a minimum of 60 degree-applicable 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

- Engineering Drafting Technology, A.S.
- Engineering Technologist Support Certificate
- Engineering: Drafting Technology Certificate

### GE Pattern/Units

- GE Pattern: Option A
- Total Units: 60

**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"/>	ENGR-154	Computer Aided Drafting I	3
<input type="checkbox"/>	PHOT-125	Digital Photography Production I	3
<input type="checkbox"/>	ENGR-180	Intro to Engineering	2
<input type="checkbox"/>	ENG-101	College Composition	4
<input type="checkbox"/>	CSCR-116	Integrative Career/Life Planning	3

### Semester 2

16 Units

	COURSE	TITLE	UNIT
<input type="checkbox"/>	ENGR-155	Computer Aided Drafting II	3
<input type="checkbox"/>	ENGR-121	Introduction to Engineering Design	3
<input type="checkbox"/>	COMM-103	Interpersonal Communication	3
<input type="checkbox"/>	MATH-105	College Algebra <sup>1</sup>	4
<input type="checkbox"/>	ENGR-121 or ENGR-164	Engineering Technologists or Plane Surveying I	3

### Career Options

Surveying Technicians (C, A)  
Civil Engineers (B, M)  
Mechanical Engineering Technologists (A, B)  
Mapping Technicians (SM, C, B)  
Find more careers: [msjc.emsicc.com](http://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.

**Notes:** <sup>1</sup> AREA G (Math Competency) can be demonstrated by a high school math course at or above the level of Algebra 2 with a grade of C or better.

**Semester 3****14 Units**

	COURSE	TITLE	UNIT
<input type="checkbox"/>	ENGR 122 or ENGR 565	Electronics for Engineering Technologists or Plane Surveying II	3
<input type="checkbox"/>	PS-101	Introduction to American Government and Politics	3
<input type="checkbox"/>	ART-108 or ART-120	Beginning Drawing or 2D Design	3
<input type="checkbox"/>	ENGR-549	Cooperative Work Experience	2
<input type="checkbox"/>	ENGR-566 or ENGR-756	Legal Aspects of Surveying or SolidWorks I	3

**Semester 4****15 Units**

	COURSE	TITLE	UNIT
<input type="checkbox"/>	GEOG-101	Physical Geography	3
<input type="checkbox"/>	ANTH-102	Cultural Anthropology	3
<input type="checkbox"/>	PS-103/ETHS-103	Ethnic Politics in America	3
<input type="checkbox"/>	GEOG-115 or ENGR-757	Intro to GIS or MicroStation	3
<input type="checkbox"/>	ENGR 567 or ENGR 523	Global Positioning Systems for Surveying or Computer Integrated Manufacturing	3

**Notes:**

Surveying, Land Use, GIS electives: ENGR-164, ENGR 565, ENGR 566, ENGR 567, and GEOG 515. Drafting Specialist electives: ENGR-121, ENGR 756, ENGR 757. Electronics/Electrical Design electives: ENGR-121, ENGR-122, ENGR 523

**Work Experience**

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