

The Associate in Science (A.S.) Degree in Engineering Technology (Advanced Manufacturing) prepares students for distinctive success in the installation, repair, and maintenance of industrial/manufacturing environments.

Designed to respond to the needs of regional businesses, this hands-on program provides students with industrial/manufacturing-related technical skills.

<input checked="" type="checkbox"/> Task
<input type="checkbox"/> View career information at <a href="http://www.fscj.edu/careercoach">http://www.fscj.edu/careercoach</a>
<input type="checkbox"/> Meet with your advisor each term.
<input type="checkbox"/> Fulfill the Civic Literacy requirement.
<input type="checkbox"/> Satisfy the associate in science degree graduation requirements.

### Career Options

This occupation is versatile both in the kind of work that it involves and in the industries in which its expertise can be applied.

### Advising

(904) 633-8228 or [amt@fscj.edu](mailto:amt@fscj.edu).

### Recommended Roadmap

This roadmap provides general guidance about recommended courses. For specific guidance about your individual academic degree plan, please see an advisor. Also refer to the College Catalog for additional information. **Full-time students will refer to the term-by-term recommendations**, and **part-time students will take courses in the order listed**. A minimum grade of C or higher must be achieved in all professional courses, as well as courses used to satisfy the general education and civic literacy requirements.

A list of Professional Elective Coursework options is available at the end of this document.

#### Term 1

<input checked="" type="checkbox"/>	Course: Course Title	Credit Hours	Terms Offered	Available Modalities
<input type="checkbox"/>	ENC 1101: English Composition I or ENC 1101C: English Composition I Enhanced	3 or 4	Varies	Varies
<input type="checkbox"/>	MAC 1105: College Algebra or higher-level MAC prefix course or MAP 2302: Differential Equations or MGF 1106: Topics in College Mathematics or MGF 1107: Explorations in Mathematics or STA 2023: Elementary Statistics	3-5	Varies	Varies
<input type="checkbox"/>	ETS 1352: Introduction to Manufacturing Processes	3	Fall, Spring	All
<input type="checkbox"/>	EET 1084C: Survey of Electronics	3	Fall, Spring	All

#### Term 2

<input checked="" type="checkbox"/>	Course: Course Title	Credit Hours	Terms Offered	Available Modalities
<input type="checkbox"/>	BSC 1005: Life in Its Biological Environment or BSC 2010C: Principles of Biology I or BSC 2085C: Human Anatomy and Physiology I or AST 1002: Introduction to Astronomy or CHM 1020: Chemistry for Liberal Arts or CHM 2045C: General Chemistry and Qualitative Analysis I or ESC 1000: Earth and Space Science or EVR 1001: Introduction to Environmental Science or PHY 1020C: Physics for Liberal Arts with Laboratory or PHY 2048C: Physics I With Calculus or PHY 2053C: General Physics I	3-4	Varies	Varies
<input type="checkbox"/>	ETS 1520: Basics of Instrumentation	3	Spring	Hybrid
<input type="checkbox"/>	ETS 1511C: Motors and Controls	3	Spring	Hybrid
<input type="checkbox"/>	ETS 1700C: Hydraulics and Pneumatics	3	Spring	Hybrid

#### Term 3

<input checked="" type="checkbox"/>	Course: Course Title	Credit Hours	Terms Offered	Available Modalities
<input type="checkbox"/>	ARH 2000: Art in the Humanities or PHI 2010: Philosophy in the Humanities or MUL 2010: Music in the Humanities or LIT 2000: Literature in the Humanities or HUM 2020: Topics in the Humanities or THE 2000: Theatre in the Humanities	3	Varies	Varies
<input type="checkbox"/>	ETS 1603: Robotics - Mechanics and Controls	3	Fall, Summer	Hybrid
<input type="checkbox"/>	ETI 2622: Introduction to Lean Manufacturing	3	Fall, Summer	On-Campus, Online
<input type="checkbox"/>	Professional Elective	1-3	Varies	Varies

## Important for You to Know

This academic roadmap does not include developmental education courses in reading, writing, and/or mathematics that you may be required to take. Students who place into developmental education courses are required to complete designated developmental education courses with a grade of C or higher regardless of program of study. In addition, it does not include MAT 1033: Intermediate Algebra, which, for many students, is a prerequisite course for MAC 1105.

## Related Roadmaps

### Embedded Technical Certificate(s)

Technical certificates are available within this degree program. Students may pursue the A.S. degree and earn technical certificates while completing the requirements for the degree or pursue one or more certificates to develop or upgrade their skills in a particular field. Contact an advisor to determine the career education path that is best for you.

Embedded technical certificates include:

- Advanced Manufacturing (Automation)
- CNC Machinist/Fabricator
- Engineering Technology Support Specialist
- Pneumatics, Hydraulics and Motors for Manufacturing
- Mechatronics

## Program Learning Outcomes

Upon completing this program, students will be able to demonstrate proficiency in the following program learning outcomes:

- Students will identify hazards (safety)
- Students will use a multimeter
- Students will learn the fluid power systems
- Students will get information about robotics
- Students will use precision instruments
- Students will use technical mathematics

### Term 4

<input checked="" type="checkbox"/>	Course: Course Title	Credit Hours	Terms Offered	Available Modalities
<input type="checkbox"/>	AMH 2020: United States History From 1877 to the Present or POS 2041: American Federal Government	3	Varies	Varies
<input type="checkbox"/>	Professional Elective	1-3	Varies	Varies
<input type="checkbox"/>	Professional Elective	1-3	Varies	Varies
<input type="checkbox"/>	Professional Elective	1-3	Varies	Varies

### Term 5

<input checked="" type="checkbox"/>	Course: Course Title	Credit Hours	Terms Offered	Available Modalities
<input type="checkbox"/>	Professional Elective	1-3	Varies	Varies
<input type="checkbox"/>	Professional Elective	1-3	Varies	Varies
<input type="checkbox"/>	ETS 1542: Introduction to Programmable Logic Controllers	3	All	On-Campus, Online
<input type="checkbox"/>	BCN 2732: OSHA Safety	3	All	On-Campus

## Total Program Credit Hours

The Engineering Technology A.S. degree program requires a **minimum of 60 credit hours**. Total program hours may vary based on the student's individual degree plan. Please see an advisor for individual guidance.

## Professional Elective Coursework Options

Minimum Credit Hours: 18

<input checked="" type="checkbox"/>	Course: Course Title	Credit Hours	Terms Offered	Available Modalities
<input type="checkbox"/>	CGS 2470: Computer Aided Drafting and Design	3	Fall	On-Campus
<input type="checkbox"/>	ETI 1110: Introduction to Quality Assurance	3	All	Hybrid
<input type="checkbox"/>	ETS 1531C: Human Machine Interface and Systems Graphics	3	Varies	Varies
<input type="checkbox"/>	ETS 1535C: Automated Process Control	3	Fall	Hybrid
<input type="checkbox"/>	ETS 1540C: Industrial Applications Using Programmable Logic Controllers in Instrumentation	3	Spring	Hybrid
<input type="checkbox"/>	ETS 1632: Computer Integrated Manufacturing	3	Spring	Hybrid
<input type="checkbox"/>	ETS 1941: Internship	1	All	Varies
<input type="checkbox"/>	ETS 2527: Electromechanical Components and Mechanism	3	Spring	Hybrid
<input type="checkbox"/>	ETD 1100: Engineering Drawing	3	All	Hybrid
<input type="checkbox"/>	ETM 1010C: Measurement and Instrumentation	3	Varies	On-Campus
<input type="checkbox"/>	ETM 2315C: Mechanical Devices and Systems	3	Fall	Hybrid
<input type="checkbox"/>	ETM 2317: Drive and Pump Systems	3	Fall	Hybrid
<input type="checkbox"/>	PMT 1203: Introduction to Machining	3	Fall	Hybrid
<input type="checkbox"/>	PMT 2213: Advanced Machining I	3	Fall	Hybrid
<input type="checkbox"/>	PMT 2214: Advanced Machining II	3	Summer	Hybrid
<input type="checkbox"/>	PMT 2250: CNC Programming I	3	Varies	Hybrid
<input type="checkbox"/>	PMT 2254: CNC Programming II	3	Varies	Hybrid