Mechatronics (6044)

Technical Certificate | College Catalog Year: 2025-26 | Revised: July 30, 2025

About the Program

The Technical Certificate (T.C.) in Mechatronics focuses on broad, transferable skills and stresses understanding and demonstration of the elements of engineering technology.

Program Requirements

This program requires a **minimum of 30 credit hours.** Total program hours may vary based on the student's individual academic plan. This program **is eligible** for financial aid.

Students in this program are not required to complete math courses unless they are listed as part of the certificate program. If you plan to pursue the degree program in this same field, please note that **this certificate articulates directly into the Engineering Technology (Advanced Manufacturing (2320) (A.S.) degree**, which includes an **Algebra Through Calculus math pathway.** To learn more about the Engineering Technology degree, visit fscj.edu/academics/programs/as/2320.

Placement Testing

Please meet with an advisor to determine if college placement testing is required. 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 and are also required to take one of two student success strategies courses. For additional information, visit catalog.fscj.edu/academics/developmental-education-programs or speak with an advisor.

Technical Certificate Graduation Requirements

- ☐ Fulfill all academic requirements for the chosen program of study as outlined in the Florida State College at Jacksonville catalog and curriculum.
- ☐ Earn minimum prescribed semester hours for the chosen program of study with a cumulative grade point average of 2.0 (C) on a 4.0 scale on all courses that apply to the chosen program of study.
- ☐ Complete a minimum of 25 percent of the total hours required for the program in residence at Florida State College at Jacksonville. Credit by examination and credit for prior learning do not count toward this residency requirement.
- ☐ Fulfill all obligations, financial or otherwise, to the College before graduating.

Catalog Year

This document is prepared for students with a **2025-26 College Catalog year** who have not tested into developmental education courses. **Students who enter under the 2025-26 catalog** will be assigned to the degree or certificate requirements in effect during the 2025-26 academic year. The student's assigned catalog year will remain in effect as long as the student maintains continuous enrollment. Changes to requirements as mandated by law or by rule of the District Board of Trustees may supersede this provision.

To maintain continuous enrollment, a student must have registration for, and successful completion of, at least one course within a three-term period. After three consecutive terms of no enrollment, the student will be discontinued from the current program of study and will need to apply to FSCJ to reenter under the same program of study. Upon readmission, the student will be assigned to the current catalog of record in the chosen program.

Curriculum

All courses in this program must be completed with a grade of C or higher.

Sample Roadmap

This sample roadmap shows one possible pathway to program completion and may not be appropriate for all students. **Terms Offered** are subject to change. Please verify course availability at fscj.edu/schedules. Prior to enrolling in classes, please meet with an advisor for specific guidance about your individual academic plan.

Term 1: Fall or Spring

- ☐ **ETS 1352C - Introduction to Manufacturing Processes,** Credit Hours: 3. Terms Offered: Fall, Spring, Summer. Grade Earned: _____
- ☐ **EET 1084C - Survey of Electronics,** Credit Hours: 3. Terms Offered: Fall, Spring. Grade Earned: _____

Term 2: Spring

- ☐ **ETS 1511C - Motors and Controls,** Credit Hours: 3. Terms Offered: Spring. Grade Earned: _____
- ☐ **ETS 1700C - Hydraulics and Pneumatics,** Credit Hours: 3. Terms Offered: Spring. Grade Earned: _____

Term 3: Fall

- ☐ **ETS 1603C - Robotics - Mechanics and Controls,** Credit Hours: 3. Terms Offered: Fall, Summer. Grade Earned: _____
- ☐ **ETS 1542C - Introduction to Programmable Logic Controllers,** Credit Hours: 3. Terms Offered: Fall. Grade Earned: _____

Term 4: Fall

- ☐ **ETM 2315C - Mechanical Devices and Systems,** Credit Hours: 3. Terms Offered: Fall. Grade Earned: _____
- ☐ **BCN 2732 - Industrial Safety & Human Factors,** Credit Hours: 3. Terms Offered: Fall, Spring, Summer. Grade Earned: _____

Term 5: Spring

- ☐ **ETD 1100C - Engineering Drawing,** Credit Hours: 3. Terms Offered: Fall, Spring, Summer. Grade Earned: _____
- ☐ **ETS 2950C - Engineering Technology Capstone,** Credit Hours: 3. Terms Offered: Fall, Spring, Summer. Grade Earned: _____

Course Requirements

Prerequisites, corequisites, and conditions for any course are subject to change. Students must meet the prerequisite and corequisite requirements of any course at the time the student attempts to register for that course. If you have questions about the prerequisites, corequisites, or conditions for a course, please contact any academic advisor.

Professional Courses

Complete all of the following courses.

BCN 2732 - Industrial Safety & Human Factors, Credit Hours: 3. Prerequisite(s): None. Corequisite(s): None. Conditions: None. Terms Offered: Fall, Spring, Summer.

EET 1084C - Survey of Electronics, Credit Hours: 3. Prerequisite(s): None. Corequisite(s): None. Conditions: None. Terms Offered: Fall, Spring.

ETD 1100C - Engineering Drawing, Credit Hours: 3. Prerequisite(s): None. Corequisite(s): None. Conditions: None. Terms Offered: Fall, Spring, Summer.

ETM 2315C - Mechanical Devices and Systems, Credit Hours: 3. Prerequisite(s): None. Corequisite(s): None. Conditions: None. Terms Offered: Fall.

ETS 1352C - Introduction to Manufacturing Processes, Credit Hours: 3. Prerequisite(s): None. Corequisite(s): None. Conditions: None. Terms Offered: Fall, Spring, Summer.

ETS 1511C - Motors and Controls, Credit Hours: 3. Prerequisite(s): None. Corequisite(s): None. Conditions: None. Terms Offered: Spring.

ETS 1542C - Introduction to Programmable Logic Controllers, Credit Hours: 3. Prerequisite(s): ETS 1511C and ETS 1700C. Corequisite(s): None. Conditions: None. Terms Offered: Fall.

ETS 1603C - Robotics - Mechanics and Controls, Credit Hours: 3. Prerequisite(s): None. Corequisite(s): None. Conditions: None. Terms Offered: Fall, Summer.

ETS 1700C - Hydraulics and Pneumatics, Credit Hours: 3. Prerequisite(s): None. Corequisite(s): None. Conditions: None. Terms Offered: Spring.

ETS 2950C - Engineering Technology Capstone, Credit Hours: 3. Prerequisite(s): ETS 1542C and ETS 1603C and ETM 2315C. Corequisite(s): None. Conditions: Sophomore-level or higher. Department permission required prior to enrolling in this course. Terms Offered: Spring.