

Santa Rosa Junior College
 New Program of Study Application
 Cover Page

Basic information:

Proposed Program Title: Mechatronics Technician	Submitter: MJ Papa
Program Type: Certificate of Achievement (at least 8 units)	
TOP Code: 093400 Career Technical Education (CTE): Yes Total Program Units: 26.00	
Summary of new program costs: Current Mechatronics lab facilities and faculty positions are able to support this new certificate program. Any new equipment will be grant funded or purchased within department discretionary budgets.	
Why is this certificate/major needed: This stackable certificate is one of two of the major Certificate of Achievements in the Mechatronics program. Within the Advanced Manufacturing industry sector, this certificate will train students to perform the work of a manufacturing production technician in robotics environments and other automation technologies. A manufacturing technician sets up, tests, and adjusts manufacturing machinery or equipment, using any combination of electrical, electronic, mechanical, or computer technologies.	
For CTE only, brief summary of labor market information: 219 annual openings between Sonoma and neighboring counties.	

Checklist of Attachments:

All Applications: <input type="checkbox"/> Recommended Course Sequence*
For Programs in a Career Education TOP Code only, include the following attachments: <input type="checkbox"/> Advisory committee roster including: First names, last names, titles, companies and contact information <input type="checkbox"/> Advisory committee minutes where the advisory committee recommends the College create the proposed program <input type="checkbox"/> Bay Area Community College Consortium Recommendation and Labor Market Information, including job titles (not required for Skills Certificates)*
For Associate Degrees for Transfer (based on State-Approved Transfer Model Curriculum) only: <input type="checkbox"/> Only complete Items #1 & #2 in the Narrative section <input type="checkbox"/> Include Transfer Model Curriculum Template* <input type="checkbox"/> Attach applicable C-ID & ASSIST transfer documentation*

**Can be obtained after AAC review. Curriculum office can also assist with this documentation.*

- After obtaining department chair & dean support, submit application to:
Adrienne Leihy, Curriculum Technician, aleihy@santarosa.edu

For Curriculum Office Use

After AAC recommendation:

- EPCC Majors & Certificate Review BACCC

Final Approvals:

- CRC Board of Trustees CCCCCO

Santa Rosa Junior College

Mechatronics Technician, Certificate of Achievement (at least 8 units)

Narrative Items 1 – 7

Item 1. Program Goals and Objectives

1. Statement of Program Goals and Objectives:

Upon completion of this program, students will be able to:

1. use computers to monitor and regulate processes and equipment, and to generate reports.
2. analyze, construct and test automated systems including electronic sensors, mechanical actuators and computer control.
3. demonstrate the ability to create PLCs and microcontroller programs and properly interface them to input and output devices.

Item 2. Catalog Description

The Mechatronics Technician Certificate of Achievement provides training in a multi-disciplinary field focusing on industrial automation. Topics include electricity, electronics, industrial motor controls, programmable logic controllers, robotics, AC/DC drives, and manufacturing technologies.

Item 3. Program Requirements

R/RE	Course #	Title	Units
R	ELEC 54A	Direct and Alternating Current Theory	3.00
R	ELEC 54B	Fundamentals of Electronic Devices	3.00
R	ELEC 54C	Microcontrollers	3.00
R	ELEC 64A	Electronic Construction 1	2.00
R	ELEC 82	Mechatronics Fundamentals	3.00
R	ELEC 88	Computer Hardware	3.00
R	ELEC 153	Programmable Logic Controllers	3.00
R	ELEC 180	LabVIEW for Technicians	3.00
R	ELEC 184	Industrial Robotics	3.00
Total			26

Item 4. Master Planning

This certificate provides the skills needed for students to obtain entry level jobs in the following positions in the advanced manufacturing industries: Automation Technician, Field Service Technician, Instrument and Automation Technician, Instrumentation and Controls Technician, Instrumentation and Process Controls Technician, Process Control Technician, and Programmable Logic Controllers Technician.

Santa Rosa Junior College

Mechatronics Technician, Certificate of Achievement (at least 8 units)

Narrative Items 1 – 7

At Santa Rosa Junior College, faculty members with discipline expertise develop all certificates and majors. For AA-T and AS-T degrees, faculty members with appropriate expertise determine which courses align with the C-ID descriptors. The Supervising Administrator(s) then review the application to assure that it aligns with Chancellor's Office criteria for approval and SRJC guidelines for financial feasibility and community need. The Majors & Certificate Review Committee reviews the application and suggests any changes to assure than all guidelines have been observed. The item is then placed on the Curriculum Review Committee agenda for approval, and when approved, is submitted for approval by the Board of Trustees.

Item 5. Enrollment and Completer Projections

5 annual completers

Item 6. Place of Program in Curriculum/Similar Programs

This stackable certificate is one of two of the major Certificate of Achievements in the Mechatronics program. Within the Advanced Manufacturing industry sector, this certificate will train students to perform the work of a manufacturing production technician in robotics environments and other automation technologies. A manufacturing technician sets up, tests, and adjusts manufacturing machinery or equipment, using any combination of electrical, electronic, mechanical, or computer technologies.

Item 7. Similar Programs at Other Colleges in Service Area

College of Marin, over 40 miles away, offers three skills certificates in Electronics Technology. Napa Valley College, over 40 miles away, does not offer any similar programs.