

Santa Rosa Junior College  
 New Program of Study Application  
 Cover Page

**Basic information:**

<b>Proposed Program Title:</b> Mechatronics Technician	<b>Submitter:</b> MJ Papa
<b>Program Type:</b> Associate of Science Degree (at least 18 units)	
<b>TOP Code:</b> 093400 <b>Career Technical Education (CTE):</b> Yes <b>Total Program Units:</b> 26.00	
<b>Summary of new program costs:</b> 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.	
<b>Why is this certificate/major needed:</b> Within the Advanced Manufacturing industry sector, this major 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.	
<b>For CTE only, brief summary of labor market information:</b> 219 annual openings between Sonoma and neighboring counties.	

**Checklist of Attachments:**

<b>All Applications:</b>
<input checked="" type="checkbox"/> <a href="#">Recommended Course Sequence</a> *
<b>For Programs in a Career Education TOP Code only, include the following attachments:</b>
<input checked="" type="checkbox"/> Advisory committee <b>roster</b> including: First names, last names, titles, companies and contact information
<input checked="" type="checkbox"/> Advisory committee <b>minutes</b> where the advisory committee recommends the College create the proposed program
<input type="checkbox"/> Bay Area Community College Consortium Recommendation and <a href="#">Labor Market Information, including job titles</a> (not required for Skills Certificates)*
<b>For Associate Degrees for Transfer (based on State-Approved Transfer Model Curriculum) only:</b>
<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 Leihi, Curriculum Technician, [aleihy@santarosa.edu](mailto: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, Associate of Science Degree (at least 18 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 major 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 I	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
<b>Total</b>			26

## Item 4. Master Planning

This major 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, Associate of Science Degree (at least 18 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**

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#### **Item 6. Place of Program in Curriculum/Similar Programs**

This major shares coursework with the proposed certificate of the same name as well as the existing certificates: Electronic Technology Fundamentals, Industrial Maintenance, and Signal Technician.

#### **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.