

Santa Rosa Junior College  
 New Program of Study Application  
 Cover Page

**Basic information:**

|   |                           |
|---|---------------------------|
| <b>Proposed Program Title:</b> Industrial Maintenance Technician  | <b>Submitter:</b> MJ Papa |
| <b>Program Type:</b> Certificate of Achievement (at least 8 units)  |                           |
| <b>TOP Code:</b> 093400 <b>Career Technical Education (CTE):</b> Yes <b>Total Program Units:</b> 19.00  |                           |
| <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> 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 teach students cores and necessary skills in this field. Upon completion of this program, students will be able to fabricate and construct mechanical assemblies from technical drawings using hand and machine tools; analyze, construct and test automated systems including electronic sensors, mechanical actuators and computer control; and demonstrate the ability to create PLCs and microcontroller programs and properly interface them to input and output devices. |                           |
| <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><br><input type="checkbox"/> <b>Recommended Course Sequence*</b>  |
| <b>For Programs in a Career Education TOP Code only, include the following attachments:</b><br><input type="checkbox"/> Advisory committee <b>roster</b> including: First names, last names, titles, companies and contact information<br><input type="checkbox"/> Advisory committee <b>minutes</b> where the advisory committee recommends the College create the proposed program<br><input type="checkbox"/> Bay Area Community College Consortium Recommendation and <b>Labor Market Information, including job titles</b> (not required for Skills Certificates)* |
| <b>For Associate Degrees for Transfer (based on State-Approved Transfer Model Curriculum) only:</b><br><input type="checkbox"/> Only complete Items #1 & #2 in the Narrative section<br><input type="checkbox"/> Include Transfer Model Curriculum Template*<br><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](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

Industrial Maintenance 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. Identify and troubleshoot PLC program problems.
2. Operate and maintain AC and DC motors, generators and controllers.
3. Implement safety procedures in the workplace.
4. Understand safety codes and regulations applied to usage of industrial equipment and industrial working environment.
5. Test, align, and troubleshoot various complex electronic circuits.

### Item 2. Catalog Description

The Industrial Maintenance Technician Certificate of Achievement prepares individuals for employment as electro-mechanical maintenance technicians in high tech manufacturing. Instruction is provided in the fundamentals of electronics, programmable logic controllers, rotating machinery, and mathematics.

### Item 3. Program Requirements

| R/RE   | Course # | Title  | Units        |
|--|----------|--|--------------|
| R  | ELEC 51A | Fundamentals of Electricity                            | 3.00         |
| R  | ELEC 54A | Direct and Alternating Current Theory                  | 3.00         |
| R  | ELEC 54B | Fundamentals of Electronic Devices                     | 3.00         |
| R  | ELEC 64A | Electronic Construction I                              | 2.00         |
| R  | ELEC 153 | Programmable Logic Controllers                         | 3.00         |
| R  | ELEC 154 | Rotating Machinery                                     | 3.00         |
| <b>Complete any combination totaling at least 2.00 units from the following:</b> |          |  |              |
| RE   | DET 184  | Mobile Hydraulics                                      | 3.00         |
| RE   | MACH 51A | Beginning Machine Tool Technology                      | 2.00         |
| RE   | WEOC 99  | Occupational Work Experience                           | .50-8.00     |
| RE   | WEOC 99I | Occupational Work Experience Internship                | .50-8.00     |
| RE   | WELD 170 | Beginning Welding: Fundamentals of Arc and Gas Welding | 2.00         |
| <b>Total</b>   |          |  | <b>19.00</b> |

## Santa Rosa Junior College

Industrial Maintenance Technician, Certificate of Achievement (at least 8 units)

Narrative Items 1 – 7

### **Item 4. Master Planning**

This certificate provides the skills needed for students to obtain entry level jobs in the manufacturing industry, such as Electro-Mechanical Technicians, Industrial Engineering Technicians, and Manufacturing Production Technicians

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 is the final in a stackable certificate with the existing Industrial Maintenance Fundamentals and Electronic Technology Fundamentals certificates.

### **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.