

# INDUSTRIAL MAINTENANCE TECHNICIAN CERTIFICATE

**Division: Technology and Engineering**

**PROGRAM CODE: 2C44077**

The **Industrial Maintenance Technician Certificate** is designed to provide fundamental, hands-on training on industrial systems and equipment. Students will study the basic principles, applications, concepts and functions of manufacturing, measurement systems, electrical components and motors, programmable logic controllers, mechanical components, and hydraulic/pneumatic systems. This certificate requires a total of 46-50 units. A minimum of grade of C is required in each course taken. At least one half of the units toward the certificate must be completed at Fullerton College.

Code	Title	Units
<b>Required Courses (36 units):</b>		
CSTR 028 F	Introduction to Alternative Energy	3
DRAF 101 F	Blueprint Reading for Manufacturing (formerly DRAF 070 F)	2
DRAF 140 F	AutoCAD for Industry	3
MACH 101 F	Introduction to Machine Tools (formerly MACH 091 F)	5
MACH 180 F	Introduction to Metrology	3
TECH 081 F	Technical Mathematics I	3
TECH 108 F	Manufacturing Processes	3
TECH 127 F	Industrial Safety	2
TECH 131 F	Basic Electricity and Basic Electronics	2
TECH 132 F	Basics of Electric Motor Controls	2
TECH 135 F	Introduction to Programmable Logic Controllers	2
TECH 136 F	Computer Integrated Manufacturing and Advanced PLC	3
WELD 100 F	Introduction to Welding (formerly WELD 121AF)	3
<b>Restricted Electives (10-14 units):</b>		<b>10-14</b>
DART 104 F	Introduction to Maya 3D	3
DART 120 F	3D Modeling	3
DRAF 141 F	Advanced CAD for Industry	3
DRAF 143 F	3D Applications Using AutoCAD	3
MACH 102 F	Intermediate Machine Tools (formerly MACH 092 F)	5
MACH 103 F	Advanced Machine Tools (formerly MACH 093 F)	5
MACH 104 F	Advanced Topics in Machine Technology	5
<b>Total Units</b>		<b>46-50</b>

## Program Level Student Learning Outcomes

**OUTCOME 1:** Practice industry recognized safety practices and guidelines, including the use of personal protective equipment in an industrial operating environment.

**OUTCOME 2:** Work as part of a maintenance team to assemble/disassemble, troubleshoot, diagnose and repair industrial equipment and systems using appropriate tools, materials, and methods.

**OUTCOME 3:** Interpret drawings, schematics, and specifications for industrial equipment.

**OUTCOME 4:** Use precision measuring equipment.

**OUTCOME 5:** Apply knowledge of electricity, electronics, hydraulics, and electric motors and mechanics.

**OUTCOME 6:** Apply electrical skills to troubleshoot control and operator panels.

**OUTCOME 7:** Compile technical information through descriptive writing, sketches/diagrams, mathematical expression, computation, and graphs.

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