**INDUSTRIAL MAINTENANCE - COURSE DESCRIPTIONS**

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| **Class** | **Hours** | **Description** |
| Technology Intro | 8 | Teaches students how to access TRCC systems and work with computer, and manage files, folders, e-mail and Internet research skills. |
| NCCER Core Curriculum | 48 | Teaches basic safety rules, hand and power tools, construction drawings, basic rigging, and material handling skills. |
| Soft Skills & Resume I | 8 | Covers the communication process; listening, speaking, reading, writing skills and resume preparation. |
| Applied Math | 40 | Teaches basic math functions including adding, subtracting, dividing and multiplying whole numbers, fractions, and decimals, and explains their applications in the workplace. Students learn how to read various measuring tools. Learn decimal-fraction conversions, the metric system and basic algebra. |
| Machine Trades | 48 | Teaches basic knowledge in the use of milling machines and lathe operations. |
| NCCER Electrical Level One | 48 | Introduces the student to the electrical trade. Class covers safety rules and regulations, circuits, theory, National Electric Code (NEC), conduit bending, raceways, conductors, drawings, residential service and test equipment. |
| Electrical Controls for Machines | 60 | Teaches the components used in electrical controls and their symbols. Students learn how to read a ladder diagram and wire pushbuttons, limit switches and solenoid valves to make a control work and how to wire a motor starter to make a motor run. |
| Hydraulics/Pneumatics | 48 | This class covers the basic principles and operations of hydraulic and pneumatic controls. Students learn how to ready hydraulic and pneumatic symbols and to follow piping diagrams. |
| Electrical /Mechanical Troubleshooting | 48 | Students learn how to read and interpret electrical, hydraulic, and pneumatic schematics and diagrams. Students are instructed in how to systematically troubleshoot a system in a logical manner. |
| Intro to Programmable Logic Controllers-PLCs | 48 | Teaches how to program, operate, and troubleshoot a number of PLC applications typically used in industry today. |
| Intro to Robotics | 56 | Teaches basic robotics concepts with emphasis on tool handling and basic programming. |
| Basic Welding | 48 | Covers the basic knowledge of shielded metal arc welding (SMAW), gas metal arc welding (GMAW) and oxyacetylene gas fuel cutting (OFC). |
| Advanced Welding | 48 | This class is for an individual in the field of welding who has previous experience with arc welding and/or has completed our Basic Welding class and prepares the student to take an American Welding Society (AWS) certification test. |
| ESCO EPA 608 and R410-A | 20 | Covers section 608 of the Federal Clean Air Act which requires that anyone who maintains, services, repairs or disposes of appliances that contain regulated refrigerants to be certified in the proper refrigerant handling techniques effective November 14, 1994. |
| Introduction to Heating Ventilation and Air Conditioning | 20 | Class introduces the student to the basic principles and theory of heating, ventilating and air conditioning. |
| Soft Skills & Resume II | 4 | Review of and preparation for interview, presentation and communication skills. |