

INDUSTRIAL MAINTENANCE MILLWRIGHT TECHNOLOGY (IMMTI)

IMMTI-105 INTRODUCTION TO WELDING 4.00 Credits

This course is designed for students who desire to learn to weld and fabricate in a shop setting. This course will start with the most basic practices and fundamentals and teach them where to start. We will cover all of the common welding processes and machines including but not limited to GTAW, SMAW, and GMAW.

IMMTI-108 INTRODUCTION TO PLC'S 4.00 Credits

Today's electronic technicians must be familiar with programmable logic controllers (PLC's) as they are widely used in the industry. The course begins with an introduction to programmable logic controller hardware, memory, I/O modules, numbering systems, and programming devices. The learner will then gain experience working with PLC wiring diagrams, PCL setup configuration, and ladder logic programming. Pre-requisite: IETTI-101 or IMMTI-115, and MTHPT-103 or instructor permission. Cross-listed with IETTI-108.

IMMTI-115 BASIC ELECTRICITY 5.00 Credits

The student will learn basic electricity principles including how to measure voltage, current, resistance, and wattage. Troubleshooting various types of motors (single-phase and three phase) along with capacitance and inductance measures will be taught. Further, the course will explain how various controls are used in HVAC-R and other maintenance fields as well as their applications. Shaft alignment and various motor mounting is taught. Cross-listed with HVACR-115.

IMMTI-130 TRADE SKILLS 5.00 Credits

Introduces skills needed in construction/manufacturing/industrial trades. Subjects include blueprint reading, construction documents, hand tools, fasteners/anchors, construction equipment, safety, resume building, teamwork, leadership, and trade accounting. Cross-listed with HVACR-130.

IMMTI-140 MECHANICAL SYSTEMS MAINTENANCE 5.00 Credits

Emphasis on skills needed for millwrights and maintenance personal including proper bearing installation, lubrication methods, alignment of motor and other equipment installation needs, pneumatic and hydraulic systems, and seal installation will be included. Pumps and compressor maintenance and control devices are taught. Proper rigging procedures for lifting heavy and awkward equipment will be emphasized. Cross-listed with HVACR-140.

IMMTI-150 WELDING POWER SOURCES 2.00 Credits

Introduces various basic power sources used in welding industry. Students learn construction of power sources, how to obtain optimum performance from a power source, and how to troubleshoot a power source. Cross-listed with WLDTC-150.

IMMTI-155 BASIC WELDING PROCESSES LAB 7.00 Credits

To develop employable skills for combination welder (DOT 812.844). This involves welding with the SMAW and GMAW process in all positions, single and multi-pass. Includes gas welding, brazing and flame cutting. Cross-listed with WLDTC-155.

IMMTI-165 ADVANCED WELDING PROCESSES 7.00 Credits

To further develop employable skills for arc welder (DOT810.884) and combination line welder (DOT 812.844). This involves welding with the SMAW process in all positions, single and multi-pass, using DC equipment and covered electrodes. Covers welding with the GTAW process on thin gauge mild steel, stainless steel, and aluminum in all positions using both direct and alternating current. Pre-requisite: IMMTI-155. Cross-listed with WLDTC-165.

IMMTI-194 IN:INDUSTRIAL MAINTENANCE/MILLWRIGHT 2.00-8.00 Credits

This is a capstone course. The student will relate on the job experience to the material covered in HVACR 130: Trade Skills. This will include communication skills, research skills, critical thinking, team building, and leadership. This will be a blended course in which the student will need to access, participate and complete tasks through an online forum.

IMMTI-205 ELECTRIC MOTORS, DRIVES AND CONTROLS 4.00 Credits

This course will introduce the student to DC and AC motors, electrical diagrams, motor starters, motor control circuits, three phase power, ac and dc motor drives, and motor maintenance. Cross-listed with IETTI-205.

IMMTI-215 GTAW TIG WELDING 5.00 Credits

This course will teach students the fundamentals of TIG welding. We will cover different types of rod and practices and how to apply the correct rod in each situation. This course will cover different types of materials that can and cannot be welded and proper application for different materials. We will also cover different welding positions and different types of weld tests and certifications in each position.

IMMTI-220 SMAW SHIELDED METAL ARC WELDING 5.00 Credits

This course will teach students the fundamentals of stick welding. We will cover different types of rod and practices and how to apply the correct rod in each situation. This course will cover different types of materials that can and cannot be welded and proper application for different materials. We will also cover different welding positions and different types of weld tests and certifications in each position.

IMMTI-225 GMAW MIG WELDING 5.00 Credits

This course will teach students the fundamentals of MIG welding. We will cover different types of wire and practices and how to apply the correct wire in each situation. This course will cover different types of materials that can and cannot be welded and proper application for different materials. We will also cover different welding positions and different types of weld tests and certifications in each position.

IMMTI-251 BLUEPRINT READING 2.00 Credits

To give the student a basic working knowledge of blue print reading as it applies in today's welding/millwright industries. This includes welding symbols, nondestructive testing symbols, and methods of dimensioning drawings. Pre-requisite: MTHPT-137. Cross-listed with WLDT-251.

IMMTI-261 BENCHMARK FOR WELDERS 2.00 Credits

Familiarizes student with basic hand and machine tools, measuring devices, and shop and tool safety. Cross-listed with WLDT-261.

IMMTI-262 DISTORTION CONTROL 2.00 Credits

Trains students in the correct method of distortion control in welded fabrications. Gives basic guidance to assist student in overcoming and understanding some difficulties inherent when working metals where heat input is involved. Cross-listed with WLDT-262.

IMMTI-270 DIRECTED WELDING PROJECTS 1.00-8.00 Credits

This course is designed for students who desire to specialize in one field of the welding industry. The student will learn how to safely operate and optimize the performance of various welding machines and how to operate welding shop equipment. They will also acquire additional knowledge of welding theory concerning specific processes or applications, and welding skills appropriate to the area of interest. Cross-listed with WLDT-270. Pre-requisite: IMMTI-105.

IMMTI-294 INTERNSHIP 2.00-8.00 Credits

This is a capstone course. The student will relate on the job experience to the material covered in Trade Skills. This will include communication skills, research skills, critical thinking, team building, and leadership. This will be a blended course in which the student will need to access, participate and complete tasks through an online forum. Cross-listed with HVACR-294.