

INDUSTRIAL MAINTENANCE-MILLWRIGHT TECHNOLOGY ATC

Industrial Maintenance-Millwright Technology prepares students for work in industrial mills. This is a multi-skilled trade that uses areas of fabrication, electronics, electrical systems, automation, computers, hydraulics, PLC's, and mechanical systems. Conveyor systems, power distribution, and service to all sorts of automated equipment are taught. Rigging, mechanical drive systems, installation and alignment of equipment, and pumps are taught. The Millwright program is designed to prepare graduates for entry-level employment as apprentice-technicians, with emphasis on practical experience in both theory and laboratory settings using lab equipment and assemblies similar to equipment found in industry.

Training begins in the classroom and continues in the shop area. Students complete all lab assignments in accordance with industry standards, using the tools and equipment of the profession with an emphasis on safety and quality. Refer to the Technical & Industrial website for a tool list.

Program Entrance Requirements:

- ALEKS score of 30 or higher in Math and Writing Placement Exam score of 2 or higher or equivalent college placement exams (SAT, ACT, etc.)

Upon completion of the Industrial Maintenance-Millwright program, students should be able to:

- Effectively weld and fabricate with all common weld procedures including SMAW, GMAW, GTAW.
- Understand trade skills to include blueprint reading, construction documents, hand tools, fasteners/ anchors, construction equipment, safety, resume building, teamwork, leadership and trade accounting.
- Be familiar with principles of electricity and how to work safely with electrical devices.
- Know the theory of DC and AC motors.
- Perform rough and precision motor alignment.
- Understand with mechanical systems. These include bearings, couplings, motors, pumps, heat exchangers, compressors and methods for the transmission of power
- Identify PLC hardware; wire up PLC power, inputs and outputs
- Install and repair basic hydraulic and pneumatic systems
- Know and understand OSHA rules and regulations

Advanced Technical Certificate Requirements

Code	Title	Credits
Mathematical Ways of Knowing		
Take one of the following:		3.00
MATH-123	MATH IN MODERN SOCIETY	
MATH-140	ALGEBRAIC REASONING AND PROBLEM-SOLVING	
MATH-143	PRECALCULUS I: ALGEBRA	
MATH-147	PRECALCULUS	
MATH-153	STATISTICAL REASONING	
MATH-170	CALCULUS I	
MATH-253	STATISTICAL METHODS FOR THE SCIENCES	
MATH-257	MATHEMATICS FOR ELEMENTARY TEACHERS II	
MTHPT-130	FINITE MATHEMATICS	
MTHPT-137	MATH FOR TECHNOLOGY	
MTHPT-153	STATISTICAL REASONING	
Maintenance/Millwright Technology Courses		
Take all of the following:		
AMFTI-110	MACHINING THEORY I	2.00
AMFTI-141	MACHINING LAB I	3.00
IMMTI-105	INTRODUCTION TO WELDING	4.00
IMMTI-108	INTRODUCTION TO PLC'S	4.00
IMMTI-130	TRADE SKILLS	5.00
IMMTI-140	MECHANICAL SYSTEMS MAINTENANCE	5.00
IMMTI-205	ELECTRIC MOTORS, DRIVES AND CONTROLS	4.00
IMMTI-215	GTAW TIG WELDING	5.00
IMMTI-220	SMAW SHIELDED METAL ARC WELDING	5.00

IMMTI-225	GMAW MIG WELDING	5.00
IMMTI-270	DIRECTED WELDING PROJECTS	5.00
IMMTI-294	INTERNSHIP	2.00
Total Credits		52.00