

INDUSTRIAL MAINTENANCE-MILLWRIGHT TECHNOLOGY AAS

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

General Education Requirements

Code	Title	Credits
Written Communication		
ENGL-101	WRITING AND RHETORIC I	3.00
Oral Communication		3.00
COMM-101	FUNDAMENTALS OF ORAL COMMUNICATION	
COMM-203	SMALL GROUP COMMUNICATION	
COMM-204	PUBLIC SPEAKING	
Mathematical Ways of Knowing		3.00
CS-108	INTRODUCTION TO COMPUTER SCIENCE	
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	
Social & Behavioral Ways of Knowing		3.00
ANTH-102	CULTURAL ANTHROPOLOGY	
ANTH-120	WORLD PREHISTORY	
ANTH-170	INTRODUCTION TO NATIVE AMERICAN STUDIES	
ECON-201	PRINCIPLES OF MACROECONOMICS	
ECON-202	PRINCIPLES OF MICROECONOMICS	

GEOG-102	INTRODUCTION TO GEOGRAPHY
HIST-101	WORLD HISTORY I
HIST-102	WORLD HISTORY II
HIST-111	UNITED STATES HISTORY I
HIST-112	UNITED STATES HISTORY II
HRPT-184	DIVERSITY IN ORGANIZATIONS
or SS-184	DIVERSITY IN ORGANIZATIONS
HRPT-185	HUMAN RELATIONS IN ORGANIZATIONS
or SS-185	HUMAN RELATIONS IN ORGANIZATIONS
POLS-101	AMERICAN NATIONAL GOVERNMENT
POLS-237	INTERNATIONAL POLITICS
POLS-285	COMPARATIVE GOVERNMENT
PSYC-101	INTRODUCTION TO GENERAL PSYCHOLOGY
PSYC-205	LIFESPAN DEVELOPMENTAL PSYCHOLOGY
SOC-101	INTRODUCTION TO SOCIOLOGY
SOC-102	SOCIAL PROBLEMS

Additional General Education Core Course **3.00**

*Additional Core Course cannot be used to fulfill a requirement above.

Select the link below to review LC State's General Education Core courses

<http://catalog.lcsc.edu/general-education> (<http://catalog.lcsc.edu/general-education/>)

Total Credits **15.00**

Program Requirements

Code	Title	Credits
Technical Core		
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		49.00

Sequential Plan of Study - Even Year

Course	Title	Credits
First Year		
Fall		
AMFTI-110	MACHINING THEORY I	2.00
IMMTI-105	INTRODUCTION TO WELDING	4.00
IMMTI-205	ELECTRIC MOTORS, DRIVES AND CONTROLS	4.00
CORE	Mathematical Ways of Knowing	3.00
ENGL-101	WRITING AND RHETORIC I	3.00
	Credits	16.00
Spring		
AMFTI-141	MACHINING LAB I	3.00
IMMTI-130	TRADE SKILLS	5.00

IMMTI-220	SMAW SHIELDED METAL ARC WELDING	5.00
CORE	Oral Communication	3.00
Credits		16.00
Second Year		
Fall		
IMMTI-108	INTRODUCTION TO PLC'S	4.00
IMMTI-140	MECHANICAL SYSTEMS MAINTENANCE	5.00
IMMTI-225	GMAW MIG WELDING	5.00
CORE	Social & Behavioral Ways of Knowing	3.00
Credits		17.00
Spring		
IMMTI-270	DIRECTED WELDING PROJECTS	5.00
IMMTI-294	INTERNSHIP	2.00
IMMTI-215	GTAW TIG WELDING	5.00
CORE	Additional General Education Course	3.00
Credits		15.00
Total Credits		64.00

Sequential Plan of Study - Odd Year

Course	Title	Credits
First Year		
Fall		
AMFTI-110	MACHINING THEORY I	2.00
IMMTI-105	INTRODUCTION TO WELDING	4.00
IMMTI-140	MECHANICAL SYSTEMS MAINTENANCE	5.00
CORE	Mathematical Ways of Knowing	3.00
ENGL-101	WRITING AND RHETORIC I	3.00
Credits		17.00
Spring		
AMFTI-141	MACHINING LAB I	3.00
IMMTI-130	TRADE SKILLS	5.00
IMMTI-220	SMAW SHIELDED METAL ARC WELDING	5.00
CORE	Oral Communication	3.00
Credits		16.00
Second Year		
Fall		
IMMTI-108	INTRODUCTION TO PLC'S	4.00
IMMTI-205	ELECTRIC MOTORS, DRIVES AND CONTROLS	4.00
IMMTI-225	GMAW MIG WELDING	5.00
CORE	Social & Behavioral Ways of Knowing	3.00
Credits		16.00
Spring		
IMMTI-215	GTAW TIG WELDING	5.00
IMMTI-270	DIRECTED WELDING PROJECTS	5.00
IMMTI-294	INTERNSHIP	2.00
CORE	Additional General Education Course	3.00
Credits		15.00
Total Credits		64.00

View on YouTube (<https://www.youtube.com/watch?v=rnEOhHETbrE>)

Graduates from Industrial Maintenance Millwright Technology programs go on to obtain careers in a variety of fields:

- Industrial mechanic
- Millwright
- Machinery Maintenance Worker
- Commercial and Industrial Machinery Repairer