

Program Information

Industrial Mechanic/Millwright

2025/2026

Program Overview	Through a mix of theory and hands-on learning, students develop a variety of machine shop skills—including operation of cut-off saws, drill presses, lathes, and milling machines—learn how to read blueprints, and use precision measuring and layout instruments.
Area of Study	Skilled Trades
Credential	Certificate
Program Length	1 Year Full time (10 months) This program runs for 10 consecutive months, excluding student success weeks and holidays. See the Academic Schedule for details.
Delivery	In-Classroom This program is primarily taught in person during full-day sessions, with less than 10% of course content delivered online.
Work-Integrated Learning	4-week practicum
Accreditation	Graduates may receive Level 1 technical training credit and 800 hours toward the Industrial Mechanic/Millwright Apprenticeship through Apprenticeship Manitoba, if they:



	• Achieve a minimum 70 per cent average in trade-specific courses • Gain employment in the field • Register as an apprentice within two years of graduation
Open to International Students	No
CIP Code	47.0303

Career Outcomes

- Industrial Mechanic
- Millwright
- Equipment Operator
- CWB (Canadian Welding Bureau) Welder
- Internal Combustion Specialist
- Gas Turbine Engine Specialist
- Hydraulic Specialist
- Machining Equipment Specialist
- Compressor Maintenance Technician
- Pump Maintenance Technician
- Parts Sales Representative

All Courses

Course Name	Description	Hours
Millwright Safety and Orientation (IMM-400)	This course introduces students to industry health and safety standards while providing insight into the millwright trade. Students will learn essential safety	42 hours

	protocols and effective communication methods relevant to the field.	
Tools and Fasteners (IMM-410)	Students will develop the skills to safely and effectively use hand and power tools commonly used in the millwright trade. The course also covers measurement techniques and precision measuring devices.	84 hours
Prints, Drawings, and Schematics (IMM-420)	This course introduces basic print terminology and principles. Students will learn how to extract key information from technical drawings, communicate findings, and develop basic sketching techniques.	42 hours
Mathematics for Millwrights (IMM-430)	Students will explore mathematical concepts used in the millwright trade, including ratios, proportions, and applied calculations essential for industrial mechanics.	42 hours
Rigging, Lifting, and Access Equipment (IMM-440)	This course covers the safe operation of various lifting and access equipment. Students will learn best practices for rigging and working with heavy machinery.	42 hours
Welding 1 and Metallurgy (Theory) (IMM-450)	This course covers the principles of oxy-fuel equipment operation for brazing, soldering, cutting, and welding applications.	42 hours
Welding 1 and Metallurgy (Lab) (IMM-460)	Students will apply their knowledge of welding techniques in a hands-on lab setting, practicing oxy-fuel welding, cutting, brazing, and soldering.	63 hours

Lathes and Mills (Theory) (IMM-470)	This course introduces students to the operation and maintenance of lathes, mills, and drills, providing a foundation in machining principles.	42 hours
Lathes and Mills (Lab) (IMM-480)	In this lab course, students gain hands-on experience using lathes, mills, and drills, applying techniques learned in the theory component.	84 hours
Welding 2 and Metallurgy (Theory) (IMM-500)	This course covers Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), and Gas Tungsten Arc Welding (GTAW), focusing on equipment operation and maintenance.	42 hours
Welding 2 and Metallurgy (Lab) (IMM-510)	Students apply welding techniques from Welding 2 (Theory) in a lab environment, with a primary focus on SMAW applications.	84 hours
Alignment (IMM-520)	This course teaches students how to use, maintain, and troubleshoot alignment equipment for industrial machinery.	63 hours
Millwright Capstone Project (IMM-530)	Students will complete a final project demonstrating the knowledge and skills acquired throughout the program. The capstone project integrates multiple competencies from various millwright courses.	84 hours
Industrial Maintenance Technician Work Practicum (IMM-540)	This unpaid, work-integrated learning experience provides students with hands-on industry exposure. Under the supervision of industry professionals, students will apply their technical skills in	160 hours

	real-world settings to enhance job readiness and employability.	
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