INDUSTRIAL MAINTENANCE TECHNOLOGY (IMT)

For additional information, contact the Industrial Technology Department at 503-594-3318.

IMT-104 Reading Schematics and Symbols
2 credits, Not Offered Every Term
A basic course of study that will develop the student's understanding of reading schematics and symbols through lectures and hands-on examples.

IMT-108 Rigging and Lifting
2 credits, Spring
This course provides instruction in rigging and lifting techniques including usage and inspection of rigging equipment, developing lift plans, anchoring to concrete, and heavy machinery installation. Students will be expected to perform lifts independently and in groups.
Prerequisites: MTH-050

IMT-110 Preventative Maintenance
2 credits, Spring
This course will introduce students to the basics of preventative maintenance programs in an industrial environment. Students will learn about how maintenance departments are organized, how projects and tasks are defined and delegated. Topics will include maintenance organization, work order systems, maintenance planning, scheduling, quality control, controlling parts and materials costs.
Prerequisites: MTH-050

IMT-111 Introduction to Renewable Energy and Industrial Systems
3 credits, Fall/Winter
This is a survey course in Renewable Energy and Industrial Technology. Students will gain an understanding of the principles, technologies, and career opportunities in these closely related fields. It will provide a basic understanding of energy and electro-mechanical systems. Students will gain knowledge and skills related to hand and power tools, fasteners, and mechanical systems. Students will acquire a fundamental understanding of the primary energy sources and their impact on the environment. Includes hands-on lab exercises.

IMT-120 Industrial Machinery I
3 credits, Winter
This course will introduce students to industrial machinery and power equipment with respect to industrial maintenance. Students will learn the fundamentals of electro-mechanical machinery repair, assembly and disassembly and how to work safely around mechanical equipment and power tools. Topics discussed will include hand and power tools, preventative maintenance, power transmission systems, fasteners and torque.
Recommended Prerequisites: MTH-050 or higher

IMT-220 Industrial Machinery II
3 credits, Spring
This second course in industrial machinery will focus on advanced concepts in machinery trouble shooting, repair and maintenance. Students will learn about the integration of mechanical, fluid power and electrical systems, their characteristics and repair. Additionally, mechanical concepts of laser shaft alignment, vibration analysis and thermal diagnosis will be covered. Other topics will include electromechanical systems, lock-out tag-out, advanced mechanical diagnosis, motors and motor controls.
Prerequisites: IMT-120

IMT-223 Instrumentation & Controls
3 credits, Spring
Introduction to control systems and instrumentation. Includes open and closed loop systems. Focuses on the use of switches, sensors, and relays to control processes.
Prerequisites: EET-137 or MFG-130
Recommended Prerequisites: EET-141 or MFG-131

IMT-230 Introduction to Heating, Ventilation, and Air Conditioning
3 credits, Not Offered Every Term
This course will introduce students to commercial and residential Heating, Ventilation, and Air Conditioning (HVAC) systems. Students will study HVAC terminology, heating systems, the refrigeration cycle, low voltage controls, basics of air flow and ventilation as well as safety practices while working on these systems. There will be many opportunities for hands-on experience using trainer devices in a lab setting that will include exercises for troubleshooting, understanding controls, and basic system performance and function.