

Course Descriptions

Industrial Technology Mechanical Technology

ITMT 1111 Introduction to Print Reading

This course will introduce students to the various aspects of print reading. Students will become familiar with orthographic projections, section views, special views, surface texture, and violations of true projections. In addition, students will study positional dimensioning and geometric tolerances.

ITMT 1213 Introduction to Welding

This course will introduce students to arc welding and oxyacetylene cutting. Students will learn to operate safely and efficiently in the welding shop. Students will learn cutting techniques using oxyacetylene equipment. Students will also learn to weld in several positions using a variety of arc welding equipment.

ITMT 1311 Introduction to Metallurgy

This course will introduce the student to metal classification, identification, and the various properties of metals. Specific attention will be directed toward the study of iron and steel including cast iron, low/high speed and carbon steels, steel alloy, and stainless steel. The students will also become familiar with the nonferrous metals of aluminum, magnesium, copper, brass, bronze, and other precious metals. Hardening, tempering, annealing, and normalizing will be studied within the heat treatment dimension.

ITMT 1414 Introduction to Mechanical Equipment

This course is designed to increase individual knowledge in areas of measuring devices and systems including standard and metric systems, scales and rules, vernier scales, micrometers and gauges. Students will be introduced to specific knowledge and hands-on skills pertaining to predictive maintenance, alignment, and precision measurement. Students in the course will learn to select, inspect, maintain, and repair components of a mechanical system. Topics will include flexible drives, couplings, bearings, gears, lubrication techniques, and troubleshooting a mechanical system. Safety will be emphasized throughout the course.

ITMT 1512 Introduction to Machining

This course will introduce the student to the art and science of removing metal. The students will learn to turn and mill to specifications in a safe and timely manner. The students will learn to read a detailed shop drawing, calculate proper spindle speeds and proper feed rates. The students will also learn proper order of production steps and layout procedures. Suggested prerequisites: ITMT 1111 & ITMT 1414)

ITMT 2123 Introduction to Hydraulics

This course will introduce the student to the principles of hydraulic power systems, hydraulic circuits and speed controls, pressure control circuits, and cylinder applications. Students will learn about hydraulic DCV's and electro-fluid powers systems, as well as relief valve operations and electronic sensors.

ITMT 2124 Mechanical Troubleshooting Technology

ITMT 2222 Introduction to Electricity & Electronics

This course will introduce students to specific knowledge and hands-on skills relative to electricity and electronics. Students will become familiar with electrical measurements to include magnetism, relays, and meters, voltage, current, and resistance. Within the area of electronics, students will be introduced to alternating current, odes and diode circuits, integrated circuits, digital electronics, AC and DC motors and motor controls, and programmable logic controller fundamentals.

ITMT 2324 Mechanical Operations

Suggested Prerequisite: ITMT 1111.

ITMT 2460 Internship in Mechanical Technology