INT 112. INDUSTRIAL MAINTENANCE SAFETY PROCEDURES. 3 hrs.
This course is an in-depth study of the health and safety practices required for maintenance of industrial production equipment. Topics include traffic, ladder, electrical, and fire safety, safe work in confined spaces, electrical and mechanical lock-out procedures, emergency procedures, OSHA regulations, MSDS Right-to-Know law, hazardous materials safety, and safety equipment use and care. Upon course completion, student will be able to implement health and safety practices in an industrial production setting.

INT 113. INDUSTRIAL MOTOR CONTROLS I. 3 hrs.
This course focuses on information regarding industrial motor controls and basic information regarding process logic controllers. Upon completion students will be able to remove, replace, and wire different types of control devices for operating industrial motors.

INT 117. PRINCIPLES OF INDUSTRIAL MECHANICS. 3 hrs.
This course provides instruction in basic physics concepts applicable to mechanics of industrial production equipment. Topics include the basic application of mechanical principles with emphasis on power transmission, specific mechanical components, alignment, and tension. Upon completion, students will be able to perform basic troubleshooting, repair and maintenance functions on industrial production equipment.

INT 118. FUNDAMENTALS OF INDUSTRIAL HYDRAULICS AND PNEUMATICS. 3 hrs.
This course includes the fundamental concepts and theories for the safe operation of hydraulic and pneumatic systems used with industrial production equipment. Topics include the physical concepts, theories, laws, air flow characteristics, actuators, valves, accumulators, symbols, circuitry, filters, servicing safety, and preventative maintenance and the application of these concepts to perform work. Upon completion, students should be able to service and perform preventative maintenance functions on hydraulic and pneumatic systems.

INT 120. Concepts of Direct Current. 5hrs.
This course provides an advanced study of direct current (DC) concepts and application principles. Specific topics include safety, terms and symbols, electrical theory, Ohm’s law, power law, electrical measurement, DC electrical components, series, parallel, and series-parallel circuit construction. Students gain hands-on experience through various laboratory problems. Emphasis is placed on the use of scientific calculators, reading schematics, and the operation of common test equipment used to analyze and troubleshoot DC circuits and to prove the theories taught during classroom instruction.

INT 122. Concepts of Alternating Current. 5hrs.
This course provides an advanced study of alternating current (AC) concepts and application principles. Specific topics include safety, terms and symbols, AC electrical theory, components, circuits, electrical measurement instruments, laws of AC, and methods for constructing and measuring various types of AC circuits. Students gain hands-on experience through laboratory exercises designed to analyze complex circuits, power requirements, faults, phase relationships, and power factors. Emphasis is placed on the use of scientific calculators and the operation of various types of test equipment used to analyze and troubleshoot AC circuits.

INT 128. PRINCIPLES OF INDUSTRIAL ENVIRONMENTAL CONTROLS. 3 hrs.
This course is an in-depth study of the health and safety practices required for maintenance of industrial production equipment. Topics include traffic, ladder, electrical, and fire safety, safe work in confined spaces, electrical and mechanical lock-out procedures, emergency procedures, OSHA regulations, MSDS Right-to-Know law, hazardous materials safety, and safety equipment use and care. Upon course completion, student will be able to implement health and safety practices in an industrial production setting.

INT 129. INDUSTRIAL SAFETY AND MAINTENANCE TECHNIQUES. 3 hrs.
This course provides instruction in basic maintenance techniques and safety. Topics include drawing, sketching, basic hand tools, portable power tools, stationary power tools, measurement, screw threads, mechanical fasteners, machinery and equipment installation, rigging, and their proper safe operations.

INT 132. PREVENTIVE AND PREDICTIVE MAINTENANCE. 3 hrs.
This course focuses on the concepts and applications of preventative and predictive maintenance. Topics include the introduction to optic alignment equipment, vibration testing and analysis, data collection, job safety, tool safety, systems analysis, preventative maintenance procedures, and tasks, and predictive maintenance concepts. Upon completion, students will demonstrate the ability to apply the planning process for proper preventive and predictive maintenance.

INT 153. PRECISION MACHINING FUNDAMENTALS I. 3 hrs.
This course focuses on metal cutting machines used to make parts and tools. Topics include lathes, mills, drills, and presses. Upon completion, students will have the ability to use precision measurement instruments and to read mechanical drawings.

INT 158. INDUSTRIAL WIRING I. 3 hrs.
This course focuses on principles and applications of commercial and industrial wiring. Topics include electrical safety practices, an overview of National Electric Code requirements as applied to commercial and industrial wiring, conduit bending, circuit design, pulling cables, transformers, switch gear, and generation principles.

INT 161. BLUEPRINT READING FOR INDUSTRIAL TECHNICIANS. 3 hrs.
This course is designed to provide the student with a comprehensive understanding of blueprint reading. Topics include identifying types of lines and symbols used in mechanical drawings; recognition and interpretation of various types of views, tolerance, and dimensions.
INT 184. INTRODUCTION TO PROGRAMMABLE LOGIC CONTROLLERS. 3 hrs.
This course provides an introduction to programmable logic controllers. Emphasis is placed on, but not limited to, the following:
PLC hardware and software, numbering systems, installation, and programming. Upon completion, students must demonstrate
their ability by developing, loading, debugging, and optimizing PLC programs.

INT 192. INDUSTRIAL MAINTENANCE TECHNOLOGY CO-OP. 3 hrs.
PREREQUISITE: Permission of instructor.
In this series of courses, students work on a part-time basis in job directly related to Industrial Maintenance Technology. The
employer evaluates the student’s performance and the student submits a descriptive report of his or her work experiences. Upon
completion, the student will demonstrate skills learned in an employment setting.

INT 206. INDUSTRIAL MOTORS I. 3 hrs.
This course focuses on basic information regarding industrial electrical motors. Upon completion students will be able to
troubleshoot, remove, replace, and perform routine maintenance on various types of motors.

INT 211. INDUSTRIAL MOTORS II. 3 hrs.
This course focuses on advanced information regarding industrial electrical motors. Upon completion students will be able to
troubleshoot, remove, replace, and perform advanced maintenance on various types of motors.

INT 215. TROUBLESHOOTING TECHNIQUES. 3 hrs.
This course is designated to allow students an opportunity to study directly-related topics of particular interest which require the
application of technical knowledge and technical skills. Emphasis is placed on the application of skills and knowledge with
practical experiences. Upon completion, students should be able to solve job related problems using technical skills and
knowledge.