Total Hours: 30 Hours
Advisors: Matt Steel, Larry Rizley, Jody Boweter  Program Director: Curtis Nielsen

REQUIRED COURSES (30 Hours)

I AMT1130  Operator-Maintainer Development-Kimberly Clark- 30 hours  30 Hours
Tuition & Fees: $60.00  Books & Supplies: $220.00
This course was created with a partnership between Kimberly Clark and the Ogden-Weber Applied Technology College (OWATC) to provide employees with the training as required for the Operations Advancement Qualification Program. Students will study the basics in shop and hand tools, bearing types and application, lubrication, fluid power fundamentals, electrical safety, belts and drives and minor repair tasks that your job may require. Students will also identify troubleshooting characteristics to help in communicating with maintenance staff.

I AMT1300  Industrial Mechanics  90 Hours
Tuition & Fees: $175.00  Books & Supplies: $506.50
Students learn effective and efficient methods of maintenance to reduce downtime and increase company profits. Students will receive knowledge and hands-on training with mechanical systems.

Competencies:
- Identify, troubleshoot and repair machine parts and components
- Identify the different types of lubrication and the proper quality and duration of use
- Explain the viscosity index theory and code
- Identify bearing types, drive belt types, the components of each and how to install, troubleshoot, and repair each type
- Identify chain drive types, the components of each and how to install, troubleshoot, and repair each type
- Identify brake and clutch types, the components of each and how to install, troubleshoot and repair each type
- Identify gear reducer types, the components of each, and how to install, troubleshoot and repair each type
- Identify pump types, application, and repair techniques
- Identify preventative and predictive maintenance techniques
**IAMT1260  Fluid Power**  120 Hours

*Tuition & Fees:* $230.00  *Books & Supplies:* $506.50

This course is a real world hands-on approach to learning hydraulic and pneumatic principles and circuitry. Topics include force and energy transmission identifying ANSI and ISO hydraulic and pneumatic symbols and understanding how to read and draw the hydraulic and pneumatic schematics, how to use schematics to construct hydraulic and pneumatic circuits, components construction, operation and symbols including prime movers, reservoirs, pumps, gauges, directional control values, cylinders, motors, and filters.

**Competencies:**
- Identify hydraulic ANSI and ISO symbols
- Identify different types of cylinders, pumps, and motors
- Explain the difference between controls and actuators
- Install, troubleshoot, and repair hydraulic systems
- Calculate formulas for force, pressure, and area
- Compute the formula for GPM, volume, and rod speed

**IAMT1021  Electrical Systems for IAMT**  160 Hours

*Tuition & Fees:* $310.00  *Books & Supplies:* $544.60

Students will gain knowledge about the distribution of electrical power in a manufacturing facility, including service feeders, branch circuits, and control circuits. Industrial electrical fundamentals are covered using hands-on training methods to teach major characteristics of electricity including volts, amperage, resistance and power. The use of testing equipment and NFPA 70 Electrical Safety principles are covered. Facility electrical systems are cover including lighting, HVAC, and are introduced motor control circuits.

**IAMT1602  Electric Motor Control**  150 Hours

*Tuition & Fees:* $290.00  *Books & Supplies:* $163.20

Students learn electrical symbols to read and draw electrical schematics and use wiring diagrams and schematics to wire circuits including control circuits, power circuits, DC motor controls, AC motor and frequency drive controls. Students learn how three-phase alternating current (AC) is used in Delta or Wye circuits in industrial settings. System integration between motors, solenoids, motor control devices that includes instrumentation devices used in controls. Special emphasis is placed on preventive maintenance and the development of troubleshooting skills.

**IAMT2000  Programmable Logic Controllers I**  90 Hours

*Tuition & Fees:* $175.00  *Books & Supplies:* $285.65

Learn ladder logic and programming techniques of Programmable Logic Controllers with hands-on experience. Covers different makes of Programmable Logic Controllers, integration with sensors, switches, and various outputs, various input and output modules, relay and ladder logic diagrams, various software packages for ladder logic design, simulation, and programming and hands-on labs with real components attached for testing.
IAMT2050  Programmable Logic Controllers II  90 Hours

Tuition & Fees: $175.00  Books & Supplies: $0.00

Learn advanced programming techniques of Programmable Logic Controllers. Includes advanced topics of Programmable Logic Controllers not covered in the introductory course such as sequencers, shift registers, process control, data acquisition, computer controlled processes, variable speed drives, and networking. It may cover various software packages not included in the introductory class such as Allen Bradley 5000 and Siemens total integrated automation programming with hands-on labs and other advanced topics as needed to meet employer needs.

Competencies:
- Learn advanced topics of Programmable Logic Controllers
- Learn advanced hardware principles
- Learn advanced software principles

SOLD1001  Electronic Assembly and Soldering  40 Hours

Tuition & Fees: $100.00  Books & Supplies: $241.35

This 40 hour CIS level of certification is training for technicians or specialists, quality assurance, engineers and managers. This hands-on solder certification training program is based on IPC-J-STD-001E requirements and is the authority for electronics assembly manufacturing. This standard describes materials, methods and verification criteria for producing high quality soldered interconnections. The standard emphasizes process control and sets industry-consensus requirements for a broad range of electronic products. The program describes materials, methods and verification criteria for producing high quality soldered interconnections. Five modules are covered that includes: Module #1) Specification Review; Module #2) Wire Preparation & Terminals: Module #3) Through-hole Printed Wiring Board; Module #4) SMT Printed Wiring Board; Module #5) Inspection & Process Control.

SOLD1000SU  IPC J-Standard Certification  60 Hours

Tuition & Fees: $125.00  Books & Supplies: $200.00

Develops the ability to solder and desOLDER connectors, components, and printed circuit boards using industry standards. Topics include: component identification, safety practices, soldering, desoldering, anti-static grounding, and surface mount techniques.

Competencies:
- Component identification
- Safety practices
- Soldering
- Desoldering
- Anti-static grounding
- Through-hole soldering techniques
- Surface mount technique