INSIDE

One Year Certificates

Associate Degrees

Apprenticeships

West Shore Community College

OPEN-ENTRY/OPEN-EXIT TRAINING OPPORTUNITIES

WEST SHORE COMMUNITY COLLEGE BUSINESS OPPORTUNITY CENTER
Open-Entry/Open-Exit Training Opportunities

YOUR START DATE, YOUR SCHEDULE

The WSCC Business Opportunity Center offers Open-Entry/Open-Exit (OE/OE) training allowing for enrollment at any time throughout the year. Employers have flexibility in building training programs by ala carte selection of modules from a menu of skill sets. Students have an increased ability to work while earning a college degree since the hours of delivery are modeled to fit work schedules, including both online & hands-on training.

PROGRAM OFFERINGS

• **Certified Production Technician** - MSSC
• **Electrical-Electronic Systems** - A.A.A.S. & One-Year Certificate
• **Mechanical Systems** - A.A.A.S. & One-Year Certificate
• **Mechatronics** - A.A.A.S. & One-Year Certificate
• **Precision Machine Technologies (non-NIMS)** - A.A.A.S.
• **Supply Chain Logistics** - MSSC

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West Shore Community College
MFG 01 is the MSSC Safety Core which is one of the four knowledge cores required by the Manufacturing Skill Standards Council (MSSC) for the certification as a Certified Production Technician. The beginning modules in this core provide the student with the knowledge and understanding of the overall importance of manufacturing to the U.S. economy and provide and overall level of organizational savvy of how manufacturing works. The later modules focus on the main purpose of this core, which is to provide the learner with the safety skills necessary to be a contributing member of a well-trained, highly skilled team of workers in advanced manufacturing today.

MFG 02 is the MSSC Quality and Continuous Improvement Core. This is the second of the four knowledge cores. The need for quality in manufacturing has resulted in a number of different theories and techniques. However, some of the central concepts shared by all of them include 1) emphasizing that quality is everyone’s job, 2) focusing on prevention, 3) monitoring quality throughout the complete process, and 4) identifying quality problems and investigating of their root cause.

MFG 03 is the MSSC Manufacturing Process and Production Core. This is the third core and it helps the student develop the skills necessary to perform many of the necessary tasks in a high-performance manufacturing enterprise. The student is provided with the basic knowledge and understanding of the mechanical principles of planning, production workflow, production process documentation, product packaging, and production distribution.

MFG 04 is the MSSC Maintenance Awareness Core. This is the last core and explains the importance of electricity. Its use in manufacturing is demonstrated in the modules that emphasize machine automation, machine operational modes, and electric motor control. Additional modules in this core demonstrate the important use of pneumatics to drive mechanical actuators to perform machine operations. Modules in lubrication, coolants, bearing and couplings, belt drives, and chain drives give the would-be Certified Production Technician diversified understanding of how machines work in high performance manufacturing.
### MSSC*: Certified Production Technician

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**TOTAL CERTIFIED PRODUCTION TECHNICIAN** 12.00 120.0

*MSSC (Manufacturing Skill Standards Council) endorsed by NAM (National Association of Manufacturers) and DOL-ETA (Dept. of Labor-Employee Training Adm.)*

Modules in this certification cannot be taken individually.
According to the Manufacturing Skills Standards Council (MSSC), “to remain competitive, logistics-related companies increasingly need a flexible, knowledgeable, problem-solving workforce. They need workers who can keep pace with rapid changes in technology and processes, be easily trainable, and work in a global environment. These workers must also be competent in the critical work activities common across all facilities within the supply chain: safety, quality control, communications, teamwork, good workplace conduct and familiarity with the key computer systems that underpin supply chain operations.”

Through the Manufacturing Skills Standards Council (MSSC), students are assessed for two certifications: the foundational-level Certified Logistics Associate (CLA) and mid-level Certified Logistics Technician (CLT). Please note that CLA is a prerequisite for CLT. Each series of modules for both the CLA Certificate and CLT Certification are as follows:

Certified Logistics Associate (CLA) is based upon the individual’s command of the foundational knowledge and skills in the topical areas that includes such topical areas as Global Supply Chain Logistics, The Logistics Environment, Material Handling Equipment, Safety Principles, Safe Use of Material Handling Equipment, , Quality Work, Teamwork and Workplace Conduct, Work Communication, Using Computers, Basic U.S./Metric Conversions, and Common Logistics Terminology.

Certified Logistics Technician (CLT) is based upon the individual’s command of mid-level technical knowledge up to the level of the first line of supervision and includes knowledge and skills in the topical areas of Product Receiving, Product Storage, Order Processing, Packaging and Shipping, Logistics Documentation, Inventory Control, Safe Handling-Storage-Transportation of Hazardous Materials, Evaluation of Transportation Modes, and Dispatch-Tracking Operations.
<table>
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<tr>
<th>Module Number</th>
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*MSCC (Manufacturing Skill Standards Council) endorsed by NAM (National Association of Manufacturers) and DOL-ETA (Dept. Of Labor-Employee Training Adm.)

Modules in this certification cannot be taken individually.
Electricity and electronics are the bonding agents for much of today's technology society. Building a body of knowledge and understanding of these topical areas provides the ability to work with electrical applications involving transformers, AC-DC motors, electrical-electronic controllers, sequencers and sensors. Foundational skills include understanding and application of PLC, electrical wiring techniques, wiring system installation, raceways, and conduit bending. The WSCC Electricity/Electronics Program is available in an Open-Entry/Open-Exit (OE/OE) format allowing for enrollment at any time throughout the year. Employers have great flexibility in building training programs by a la carte carte selection of modules from a menu of skill sets. Students have an increased ability to work while earning a college degree since the hours of delivery are modeled to fit work schedules, including both online and hands-on training.
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One-Year Certificate Electrical-Electronic Systems

- **Total OE/OE and General Study Courses**: 36.90 / 855.5
## A.A.A.S. Electrical-Electronic Systems

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### Electrical Journeyman Apprentice Program (Meets State Requirements)

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#### ELCT 102 - Circuits Course

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Michigan Law requires students to take 450 hours of core classes and an additional 126 hours to reach the 576 hours required by the Electrical Apprenticeship Bureau and the Department of Labor. Students are allowed to apply up to 1,000 hours of Related Technical Training that is not related to the Electrical Apprenticeship Bureau and the Department of Labor. Electrician apprentices must work under the direct instruction of a licensed electrical contractor, and must register with the State of Michigan Bureau of Construction Codes within 30 days of beginning apprenticeship employment. THIS PROGRAM DOES NOT LEAD TO A WSCC DEGREE OR CERTIFICATE. However, all courses listed, including the Additional Modules, apply toward the Electrical-Electronics, A.A.A.S. program. Please see an advisor for more information.
MECHANICAL SYSTEMS
ONE-YEAR CERTIFICATE
A.A.A.S. DEGREE

Mechanical equipment maintenance technician careers offer some of the highest paying and most satisfying opportunities available as companies increase their usage of newer and more complex machinery. A highly-trained/highly-skilled technician can earn more than $50,000 per year in today’s sophisticated workplace. To perform these jobs well, technicians must have higher skill levels in a wider range of technologies than ever before. Our Mechanical Systems Program includes training in mechanical drives, pumps, hydraulics, electricity-electronics, welding, and piping. The WSCC Mechanical Systems Program is available in an Open-Entry/Open-Exit (OE/OE) format allowing for enrollment at any time throughout the year. Employers have great flexibility in building training programs by ala carte selection of modules from a menu of skill sets. Students have an increased ability to work while earning a college degree since the hours of delivery are modeled to fit work schedules, including both online and hands-on training.
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Mechatronics is the field of study that produces operators, technicians, and engineers who are qualified to support sophisticated automation systems. Mechatronics workers must have knowledge of various automation components and also have an understanding of the integration of these components into a system. Skills and knowledge of electricity, electronics, PLC, robotics mechanics, including fluid power principles are all necessary to troubleshoot, maintain, and repair various types of automation systems. As manufacturing industries strive to be successful in a highly competitive environment, they are increasing their use of more sophisticated automation systems. These systems frequently involve higher speeds, more precision, and integration of IT networks.

The WSCC Mechanical Systems Program is available in an Open-Entry/Open-Exit (OE/OE) format allowing for enrollment at any time throughout the year. Employers have great flexibility in building training programs by a la carte selection of modules from a menu of skill sets. Students have an increased ability to work while earning a college degree since the hours of delivery are modeled to fit work schedules, including both online and hands-on training.
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*A 4-credit Math/Science elective may be taken in place of Tech Mach 1 & 2
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The ability to operate Computer Numerically Controlled machinery efficiently, while producing quality parts, are skills that are in demand today in many advanced manufacturing environments. This program concentrates on developing the student’s knowledge and skills to 1) accurately measure dimensions with high-precision devices, 2) read and understand blueprints and technical drawings, 3) understand concepts of design, 4) operate saws, drills, grinders, manual mills & lathes, and to program and operate the CNC mills and lathes to produce precision parts.

The WSCC Precision Machine Technology Program is available in an Open-Entry/Open-Exit (OE/OE) format allowing for enrollment at any time throughout the year. Employers have great flexibility in building training programs by a la carte carte selection of modules from a menu of skill sets. Students have an increased ability to work while earning a college degree since the hours of delivery are modeled to fit work schedules, including both online and hands-on training.
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*Acceptable General Studies and Humanities Electives are available in the WSCC Curriculum Guide.