ADVANCED MANUFACTURING AND AUTOMATION TECHNOLOGY (A.S.)

ASSOCIATE OF SCIENCE

The Advanced Manufacturing and Automation Technology – Associate of Science program provides students an education that combines general education and Automation and Machine Tool Technology with basic and advanced training in industrial control, maintenance, numerical control machining and quality control to form and develop the fundamental skills and necessary for the average and expected working knowledge in preparation for employment with potential for future advancement in the manufacturing and automation environment. Enrolled students are strongly positioned for employment throughout the course of the Program. Employment opportunities are available in manufacturing companies where automation systems are utilized. Typical job titles can include but not limited to Automation Technicians, Operations Technicians, Engineering Technicians, Industrial Maintenance Technicians.

Program Student Learning Outcomes

- Utilize OSHA standards that apply to the mechanical maintenance of machine tools
- Utilize OSHA standards that apply to the electrical maintenance of machine tools
- Create a cost-effective production plan for an automated manufacturing system
- Create a plan for the commissioning of Variable Frequency Drive (VDF) in automated manufacturing
- Create a simple connection to a Programmable Logic Controller (PLC)

Program Requirements

Code Number	Course Title	Units
Required Courses		
MTT 100	Machine Tool Introduction	2.0
MTT 110	Mechanical Maintenance of Machine Tools	3.0
MTT 111	Programmable Logic Controllers In Automated Manufacturing	3.0
MTT 112	Variable Frequency Drives in Automated Manufacturing	3.0
MTT 113	Electrical Maintenance of Machine Tools	3.0
MTT 130	Quality Practices and Measurement	2.0
MTT 140	Industrial and Machine Tool Safety	1.0
MTT 180	Robotics for Computer Numerically Controlled Machines	3.0
Total Units		**20**

ASSOCIATE OF SCIENCE DEGREE REQUIREMENTS

Students must complete the required major courses, the General Education requirements, and electives as needed. Students must earn a 2.0 grade point average and earn a grade of “C” or higher in major/emphasis courses.