Welcome!

Ivy Tech Bloomington appreciates your interest in the Automation Controls and Mechatronics certificate programs.

Certificates are sequences of technical and professional courses. They provide access to targeted, short-term workforce training, and completers may sit for specific certification exams. Courses in certificate programs also apply toward technical certificates and associate degree programs in the subject area.

Automation Controls - This certificate provides hands-on laboratory experience enabling you to obtain employment in a large variety of facilities such as bio-manufacturing, food manufacturing, medical device manufacturing, and consumer product design. As a manufacturing technician you will work in clean, modern facilities with high tech devices such as robots, highly automated systems, computer controlled machining systems, and intricate assembly machinery.

Mechatronics Certification Level 1 - This certificate introduces the various control media used in automation systems and explains the operation of some of the components used to allow the delegates to compare control methods. Students gain experience in the control of pneumatic actuators using pneumatic and electrical signaling devices together with the use of PLC’s. The construction and operation of valves and sensors is investigated and used in the construction of control circuits.

Certificate Curriculum and Course Descriptions

To find curriculum for Automation Controls:
2. Under Academics click Courses and Curriculum.
3. Click Curriculum and look under Electronics & Computer Technology.

To find curriculum for Mechatronics Certification Level 1:
2. Under Academics click Courses and Curriculum.
3. Click Curriculum and look under Advanced Manufacturing.

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American manufacturers are becoming increasingly dependent upon the use of high-tech equipment that involves multiple, integrated systems. It is critical that these companies be able to recruit and employ individuals who know how to operate, troubleshoot, and maintain this high-tech equipment. Students receive theory and hands-on lab and shop instruction with several manufacturing systems to help understand computer and programmable logic controller (PLC) interfacing, and control systems. Upon completion leads to employment as a PLC and/or industrial maintenance technician. Certificate credits apply to an associate degree. Completion of the associate degree is required to sit for the Instrumentation Systems and Automation Society (ISA) Certification Exam.

Certificates

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Careers utilizing these certificates

- CAD/CAM Specialist
- CNC Operator/Programmer
- Commercial and Industrial Designer
- Electromechanical Technician
- Industrial Machinery Mechanic
- Manufacturing Engineer Technician
- Mechatronics Technician
- Production Supervisor
- Quality Technician
- Robotics Technician

Mechatronics Certification Level 1
18 Credit Hours

Mechatronics Level I certificate introduces the various control media used in automation systems and explains the operation of some of the components used to allow the delegates to compare control methods. Students gain experience in the control of pneumatic actuators using pneumatic and electrical signaling devices together with the use of PLC’s. The construction and operation of valves and sensors is investigated and used in the construction of control circuits.

Upon completion leads to taking the MSSC Certified Production Technician Certification exam, and/or Siemens Mechatronics Level I certification exam, employment and/or completion of an associate degree.

Automation Controls Certificate
18 Credit Hours

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