Pine Technical & Community College

Automated Systems Technology

• Associate of Applied Science
• Diploma • Certificate

In the Automated Systems Technology (AST) program, the student will be introduced to both electrical and mechanical systems and learn how they work together. Students will focus on building a foundation of knowledge in AC and DC electricity, fluid power systems, mechanical systems, programmable logic controllers (PLCs), motor controls, and robotics.

Students will develop both the technical skills that are associated with the subjects above and soft skills by working on projects individually and within groups. They will learn the importance of teamwork and individual responsibilities and how they correlate to the overall success of a project. These projects mirror projects in industry, familiarizing students with project scopes, timelines, system designs, project documentation, individual and group responsibilities, system testing, troubleshooting, machine startups and training.

Recommended Course Sequence for Completion in 2 Years • 2022-2024

Fall Semester 2022
CMAE 1514 Safety Awareness.. 2
ETEC 1541 Mechanical Systems.. 3
ETEC 1550 DC Power & Basic Control Circuits.................... 3
ETEC 1551 Programmable Logic Controllers I..................... 3
ETEC 1552 AC Power 3
ETEC 2522 Fluid Power 2
Total Credits **16**

Spring Semester 2023
ETEC 1558 Motor Controls 3
CMAE 1526 Maintenance Awareness 2
ETEC 1560 Human Machine Interface I 3
ETEC 2543 Programmable Logic Controllers II.................... 3
ETEC 1581 Automated Systems I 3
MATH 1260 College Algebra
   or MATH 1256 Mathematical Thinking (AAS only)........... 3
Total Credits **17**
Automated Systems Technology Certificate Earned!
Automated Systems Technology Diploma Earned!

Fall Semester 2023
MTTP 1201 Basic Machine Shop 3
CMAE 1518 Manufacturing Processes.................................. 2
ENGL 1276 College Composition 4
General Education electives 5
Total Credits **14**

Spring Semester 2024
WELD 1501 Introduction to Welding.................................... 3
AENG 2230 Manufacturing Project Management.............. 3
ETEC 2900 AST Capstone 4
MnTC Goal Area 1... 3
Total Credits **13**

TOTAL DEGREE CREDITS 60
Automated Systems Technology AAS Earned!

Career Outlook
Graduates from this program are in high demand, with a current demand indicator of 5-stars according to Minnesota Department of Employment and Economic Development. Job titles include Electrical Technician, Electronic Engineering Technician, Controls Technician, and Robotics Technician. Graduates will also enjoy competitive wages in these fields, with the median annual salary ranging from $44,125–$60,965.

www.pine.edu/apply

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