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 responsibility and how they correlate to the overall success of a project. These assignments mirror tasks 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

Fall Semester 1
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
MTTP 1241 Introduction to CAD 3
Total Credits **17**

Spring Semester 1
ETEC 1558 Motor Controls 3
ETEC 1560 Human Machine Interface I 3
ETEC 2543 Programmable Logic Controllers II....................3
ETEC 1581 Automated Systems I 3
Choose one:
✦WELD 1501 Introduction to Welding
  or AENG 2230 Manufacturing Project Management........3
Total Credits **15**
Automated Systems Technology Certificate Earned!
Automated Systems Technology Diploma Earned!

✦Take the course you haven't already taken

Pending Minnesota State approval

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Fall Semester 2
MTTP 1201 Basic Machine Shop 3
AENG 1231 Materials and Manufacturing Process..............3
ENGL 1276 College Composition
  or ENGL 1277 Technical Communications 4
MnTC Goal Areas 2, 3, 5-10...4
Total Credits **14**

Spring Semester 2
ETEC 2900 AST Capstone..4
✦WELD 1501 Introduction to Welding
  or AENG 2230 Manufacturing Project Management........3
MnTC Goal Area of choice 4
MATH 1260 College Algebra
  or MATH 1256 Mathematical Thinking............................3
Total Credits **14**
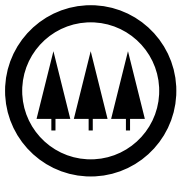**TOTAL DEGREE CREDITS 60**
Automated Systems Technology AAS Earned!

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.

Pine Technical & Community College

Get the Credit You Deserve!

What is Credit for Prior Learning (CPL)?

Pine Technical & Community College (PTCC) values learning that happens outside of the classroom. Many students enrolling at PTCC bring with them a wealth of knowledge and real-world experiences that can be turned into college credit.

Ways students can gain Credit for Prior Learning:
- Job skills and work experience
- Employer training programs
- Volunteer or community services
- Self-study
- Military education and occupations
- Industry certifications
- High school articulate college credit
- Standardized exams

Earning Credit for Prior Learning is Easy

1. Visit the CPL website at **mycpl.minnstate.edu** to see a full list of eligible courses, requirements, and assessment methods to determine if CPL is right for you.
2. Reach out to records@pine.edu to discuss CPL opportunities, payment (if required), and assessment information.

New to PTCC? Visit Campus!

- Take a campus tour
- Learn about scholarships
- Meet the admissions team
- Tour housing and The REC

Book an appointment to explore PTCC!

Sign up to visit in person, or virtually, to learn more about PTCC programs, admissions requirements, housing options, and more.

pine.edu/visit