Pine Technical & Community College

Applied Engineering Technology

- **Associate of Applied Science**
- **Diploma** • **Certificate**

The 60 credit Applied Engineering Technology (AET) associate of applied science degree includes basic engineering principles, computer aided design, project management, industrial processes, production and operations management, and quality control. In PTCC's AET program, the student will be introduced to, and become efficient with computer aided design (CAD) software. Students will focus on building a foundation of knowledge in statics, kinetics, machine design, manufacturing processes, automation and metrology. They will be introduced to complimentary manufacturing functions such as basic machine shop, welding, and automation to provide them with the basic language and skills of these processes needed to make their designs a reality. Students will be able to develop both technical skills and soft skills by working on projects individually and within groups. These projects will simulate projects in industry and cover skills such as project scopes, timelines, system designs, project documentation, and manufacturability of designs.

This two-year AAS degree has been designed to transfer credits seamlessly to Bemidji State University (BSU) if you wish to continue your education beyond PTCC.

Recommended Course Sequence for Completion in 2 Years

Fall Semester 1
MTTP 1220 Print Reading 1 2
MTTP 1241 Intro to Computer Aided Design (CAD) 3
AENG 1231 Material & Manufacturing Process 3
MTTP 1201 Basic Machine Shop 3
MATH 1260 College Algebra 3
CCPD 1010 College Success Strategies 2
Total Credits **16**
Applied Engineering Technology Certificate Earned!

Spring Semester 1
AENG 1241 Introduction to Statics 3
AENG 1250 Applied Engineering Design Project 3
AENG 2230 Manufacturing Project Management 3
AENG 1205 Geometric Dimensioning and Tolerancing 2
ENGL 1276 College Composition 4
Total Credits **15**
Applied Engineering Technology Diploma Earned!

Fall Semester 2
AENG 2241 Advanced Computer Aided Design (CAD) 3
AENG 2210 Reverse Engineering 3
ETEC 2522 Fluid Power 2
ETEC 1550 DC Power & Basic Control Circuits 3
ETEC 1551 Programmable Logic Controllers I 3
Total Credits **14**

Spring Semester 2
AENG 2220 Machine Design & Kinematics 3
AENG 2250 Applied Engineering Capstone 3
AENG 2215 Prototyping 2
MnTC Goal Area 3, 5-10 Electives 7
Total Credits **15**

TOTAL DEGREE CREDITS 60
Applied Engineering Technology AAS Earned!

Pending Minnesota State approval

Career Outlook

Industrial engineering technicians apply engineering theory and principles to problems of industrial layout or manufacturing production, usually under the direction of engineering staff. They may perform time and motion studies on worker operations in a variety of industries for purposes such as establishing standard production rates or improving efficiency. Minnesota ranks as one of the five states with the highest employment level in Industrial Engineering.

pine.edu/apply

320.629.5100 • 800.521.7463

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