



## Advanced Manufacturing College Courses through Distance Learning

Students can prepare for an exciting career in advanced manufacturing while in high school! Enroll students in Minnesota Manufactured (formerly 360 eTECH) courses to earn college certificates in Production Technologies and Welding Technology. Courses are delivered fully online except for hands-on welding labs held at Lake Superior College. These 8-week courses are an ideal way to provide high school students with technical education through distance learning.

### Student Benefits

- Learn foundational skills in advanced manufacturing.
- Earn college credits.
- Prepare to test for an industry-recognized credential from the Manufacturing Skill Standards Council (MSSC) – test even while in high school!
- Start career right out of high school with pay 25% higher than other industries or continue their education pathway for advanced careers in welding and fabrication.

### How it Works

- Courses taught online by faculty at accredited Minnesota State colleges. Welding labs are scheduled for two weekends (F, Sa, Su) per course at Lake Superior College. Alternatively, courses may be delivered through concurrent enrollment where a qualified high school instructor delivers the courses at your high school face-to-face.
- High schools work with Minnesota Manufactured to verify students meet PSEO requirements. The Program Specialist assists with course selection and enrollment and provides ongoing support to students.
- Payment options include PSEO, contract, or concurrent enrollment.

### Participating Colleges





### Production Technologies Certificate (16 CREDITS)

Suggested Schedule for One-Year Completion		
SEMESTER	FIRST SEMESTER	SECOND SEMESTER
Fall, Aug. to mid-Oct.	CMAE 1510 Print Reading (2 credits)	CMAE 1502 Technical Math (3 credits)
Fall, mid-Oct. to Dec.	CMAE 1514 Safety Awareness (2 credits)	CMAE 1518 Manufacturing Processes & Production (2 credits)
Spring, Jan. to early Mar.	CMAE 1506 Introduction to Computers (2 credits)	CMAE 1528 Career Success Skills (1 credit)
Spring, mid-Mar. to May	CMAE 1526 Maintenance Awareness (2 credits)	CMAE 1522 Quality Practices (2 credits)

### Welding Technology Certificate (30 CREDITS)

Suggested Schedule for Two-Year Completion		
SEMESTER	FIRST YEAR	SECOND YEAR
Fall, Aug. to mid-Oct.	CMAE 1510 Print Reading (2 credits) CMAE 1562 Oxyfuel Welding (3 credits, on-site lab)	CMAE 1502 Technical Math (3 credits)
Fall, mid-Oct. to Dec.	CMAE 1514 Safety Awareness (2 credits)	CMAE 1518 Manufacturing Processes & Production (2 credits) CMAE 1564 Shielded Metal Arc Welding (3 credits, on-site lab)
Spring, Jan. to early Mar.	CMAE 1506 Introduction to Computers (2 credits) CMAE 1570 Metallurgy (1 credit)	CMAE 1566 Gas Metal Arc Welding/ Flux Cored Arc Welding (3 credits, on-site lab)
Spring, mid-Mar. to May	CMAE 1526 Maintenance Awareness (2 credits) CMAE 1560 Interpreting Symbols (2 credits)	CMAE 1522 Quality Practices (2 credits) CMAE 1568 Gas Tungsten Arc Welding (3 credits, on-site lab)

#### Learn More

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[www.mnmfg.org/programs-courses/high-school-pseo/](http://www.mnmfg.org/programs-courses/high-school-pseo/)

