

a Great
place
to start **for**

ADVANCED MANUFACTURING



education that works!

The Advanced Manufacturing Program (Computer Aided Machining) consists of classroom and shop learning experiences which will permit the student successfully completing the program to be qualified as an entry-level machinist. Major contact areas covered in the program are machine shop safety; measuring instruments; blueprint reading; operation of general machine tools such as lathe, mills, saws, lathes, solidworks, 3D printing, laser engraving, design/ manufacturing and certification. In addition, students will gain valuable experience in the Job Shop course through the design and production of customer projects. (Hours to be arranged by Instructor). A focal point of the Advanced Manufacturing Program is instruction in the programming set-up, and operation of the computer numerical control (CNC) equipment, as well as learning the basics of 3D Printing and Laser Engraving. Apprenticeships may be available with local machine shops and manufacturing businesses.

The following certificates may be earned:

- Computer Aided Manufacturing Certificate
- Advanced Manufacturing Level I Certificate
- Advanced Manufacturing Certificate
- Advanced Computer Aided Manufacturing Certificate

Please see reverse side for specific certificate information

Class hours

- 7:50-10:40 am, M, T, W, Th, F
- OR
- 12:05-2:55 pm, M, T, W, Th, F
- OR
- Evening Classes
- 5:30-10:00 pm, M, T, W, Th

Estimated cost

Tuition/Credit Hour Fee:**

Semester 1: \$1,508.00(Tuition) \$180.00(Credit Hour Fee) <u> </u> \$1,688.00	Semester 4: \$1,392.00(Tuition) \$170.00(Credit Hour Fee) <u> </u> \$1,562.00
Semester 2: \$1,392.00(Tuition) \$180.00(Credit Hour Fee) <u> </u> \$1,562.00	Semester 5: \$1,392.00(Tuition) \$170.00(Credit Hour Fee) <u> </u> \$1,562.00
Semester 3: \$1,392.00(Tuition) \$170.00(Credit Hour Fee) <u> </u> \$1,562.00	

Program charges: \$500.00/semester*

Student ID: \$10.00/yearly

CTSO Charge \$20.00/yearly

Safety Glasses: \$5.00(plus tax)

Books: \$129.00 (plus tax)

Mandatory Purchase off Campus:

Shop Shirt: \$17.00-30.00(plus tax)

Estimated Total:

Advanced Manufacturing Level I Certificate: \$4,474.00 (plus tax)

Advanced Manufacturing Certificate: \$8,608.00 (plus tax)

Computer Aided Manufacturing Certificate: \$2,092.00 (plus tax)

Advanced Computer Aided Manufacturing Certificate: \$10,690.00 (plus tax)

Students will be charged a program fee each semester they attend*

Based on Colorado Resident In-state tuition**

Optional Costs:

Books: \$350.00

Skills USA Workforce Ready Assessment: \$20.00

Additional costs may apply. All books, kits & supply costs are estimated. Please contact our registration office for more information (303)344-4910, ext 27797.



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Cost and information revised June, 2018 and subject to change

ADVANCED MANUFACTURING LEVEL I CERTIFICATE

This is a basic program, students are strongly encouraged to continue onto to the advanced level.

Certificate length: 2 Semesters

Courses required for this certificate:

MAC 101 Introduction to Machine Shop
MAC 102 Print Reading for Machinists
MAC 110 Introduction to Engine Lathe
MAC 111 Intermediate Engine Lathe
MAC 120 Introduction to Milling Machine
MAC 121 Intermediate Milling Machine
MAC 145 Production Manufacturing
MAC 275 Special Topics

Advanced Manufacturing Level I Certificate Total

Clock Hours: 540 Credit Hours: 25

ADVANCED MANUFACTURING CERTIFICATE

This certificate is a combination of the Advanced Manufacturing Level I Certificate and the following courses:

Certificate length: 2 Semesters

Courses required for this certificate:

MAC 201 Introduction to CNC Turning Operations
MAC 202 CNC Turning Operations II
MAC 205 Introduction to CNC Milling Operations
MAC 221 Surface Grinder Setups and Operations
MAC 222 Cylindrical Grinder Setups and Operations
MAC 252 Practical Metallurgy
MAC 258 Interpreting Engineering Drawings
MAC 278 Machining Workshop

Advanced Manufacturing Certificate Total:

Clock Hours: 1080 Credit Hours: 49

COMPUTER AIDED MANUFACTURING CERTIFICATE

Four courses are offered in this area: CNC Machining, an introductory class, followed by CNC Programming and CNC Programming on a CAM system. These courses are for the machinist who wants to learn the programming, set-up and operation of the CNC equipment.

Certificate length: 1 Semester

Courses required for this certificate:

MAC 206 CNC Milling Operations II
MAC 207 CNC Milling Lab
MAC 240 CAD/CAM 2D
MAC 241 CAD/CAM 2D Lab

Advanced Computer Aided Manufacturing Certificate Total

Clock Hours: 270 Credit Hours: 12

ADVANCED COMPUTER AIDED MANUFACTURING CERTIFICATE

This certificate is a combination of the Advanced Manufacturing Level I, Advanced Manufacturing and Computer Aided Manufacturing Certificates.

Advanced Computer Aided Manufacturing Certificate Total

Clock Hours: 1350 Credit Hours: 61

The Advanced Manufacturing program is eligible for Financial Aid. You may begin the Financial Aid process by completing your Free Application for Federal Aid (FAFSA) at www.FASFA.ed.gov. If you have further questions, please call (303)344-4910, ext 27797.

Cost and information are subject to change



**“PTC is a great place for career training.
Come to work and learn.**

**If you use the facility to
it’s maximum potential, you can go far towards what you want.”**

- Advanced Manufacturing Student