

Precision Machining and CNC Technology AAS

West Burlington Campus, and select courses available at the Keokuk Campus

Instructor - Advanced Manufacturing
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Program Information

The Precision Machining and CNC Technology program is designed to provide students with the skills necessary to enter the production environment as entry level computer numeric controls programmers or production technicians. The program provides broad theoretical and hands-on education for those seeking careers in the production field, emphasizing various levels of the production process. Each level builds upon the previous section, continuing the students' education and knowledge base of the production process. Students will learn skills in safety, 2D and 3D production design, machining, and quality control with an emphasis placed on emerging trends including 5-axis design and machining principles. The OSHA 10 General Industry card is awarded upon the successful completion of the MFG-212 course.

Intro to Machine Shop Certificate: This certificate would provide a basic concept to introductory skills & fundamentals of working in a machine shop manufacturing environment. Working with credit and noncredit students this could be a very good pathway of just getting into a manufacturing machine shop. Gen Eds MAT-702 & SOC-114 this semester for Diploma and AAS Degree. Gen Eds can be taken online.

Precision Machining Diploma: This diploma would provide the next skill set needed to advance in a machine shop manufacturing environment with the additional skills of Manual Machining, Introduction to CNC / Cam software, GD&T, 3D Modeling, and Continuous Quality Management courses.

Please [view the technical-standards](#) for this course.

Instructor and Staff

Bradley Junker

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Program Requirements

Fall Semester I	Credit
CAD-101 Introduction to CAD	3
DRF-113 Fundamentals of Technical Drafting	3
MAT-702 Introduction to Math Applications	3
MFG-212 Basic Machine Theory	3
MFG-398 Introduction to Machine Shop	3
SOC-114 Conflict Resolution in the Workplace	3
Semester Total.....	18

Spring Semester I	Credit
MFG-142 Geometric Dimensioning Tolerancing	3
CAD-277 3-D Dimensional (3-D) Modeling I	3
EGT-116 Continuous Quality Management	3
MFG-206 Manufacturing Processes I	3
MFG-237 Introduction to Machine Trades	3
Semester Total.....	15

Fall Semester II	Credit
CAD-140 Parametric Solid Modeling	3
MFG-156 Introduction to CNC Machining	3
MFG-362 Machines Operations II	5.5
PHY-106 Survey of Physics	4
Semester Total.....	15.5

Spring Semester II	Credit
SPC-112 Public Speaking	3
MFG-303 Advanced CNC Programming	5.5
MFG-323 Mastercam Designs	4

Take 1 of 2 courses:

ENG-105 Composition I	3
ENG-110 Writing for the Workplace	3
Semester Total.....	15.5

Program Total.....64