

Computer Aided Design Career Pathway Certificate

Less-Than-One-Year Certificate of Completion

The Computer Aided Design Career Pathway Certificate will allow the student to fill needs in multiple current industrial, design, and construction companies to create two- and three-dimensional drawings needed for structural and solid modeling design. This specific skill set will allow local and regional design and fabricating companies to hire local talent with a high-end skill set for first-tier, highly technically skilled workforce that would prefer to stay in the local area.

Program Learning Outcomes

Upon successful completion of the program, students will be able to:

- Analyze manufacturing processes and procedures to ensure products meet industry competitive standards.
- Create and plot 2D, 3D and solid models with standard notations like BOM, parts lists and revision blocks that meet ANSI/ASME industry drawing standards.
- Create detailed parts, assemblies, drawings, presentations, plans and analysis tools that fill all informational needs for shop floor fabricators.
- Manipulate manual and CNC mills and lathes to program and create products that adhere to print specifications, and meet form, fit and function.

Program Requirements

Number of credit hours necessary for completion: **21**

Technical Core

- [CAS 133 - Intro to Computing Skills](#) **3.00 credits**
 - [CAS 133L - Intro to Computing Skills Lab](#) **1.00 credit**
 - [MET 241 - CAD for Mechanical Design I](#) **2.00 credits**
 - [MET 241L - CAD for Mechanical Design I Lab](#) **1.00 credits**
 - [MET 242 - CAD for Mechanical Design II](#) **2.00 credits**
 - [MET 242L - CAD for Mechanical Design II Lab](#) **1.00 credits**
 - [MET 243 - CAD for Mechanical Design III](#) **2.00 credits**
 - [MET 243L - CAD for Mechanical Design III Lab](#) **1.00 credits**
 - [MFG 120 - Manufacturing Process I](#) **2.00 credits**
 - [MFG 120L - Manufacturing Process I Lab](#) **2.00 credits**
 - [MFG 121 - Manufacturing Process II - CNC](#) **2.00 credits**
 - [MFG 121L - Manufacturing Process II - CNC Lab](#) **2.00 credits**
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Fall Term 2021

On Campus Courses

CGS100.03	College Survival & Success	M, W, F	1:00 - 1:50
CAS133.02	Intro to Computing Skills Lecture	M, W	2:00 - 3:20
CAS133L.02	Intro to Computing Skills Lab	T, R	2:00 - 3:20
WLD101.01	Welding Processes and Applications (<u>Recommended</u> prior to taking MET241)	T, R	8:00 – 10:50

Online Courses

CGS100.01DE	College Survival & Success
CAS133.01DE	Intro to Computing Skills Lecture
CAS133L.01DE	Intro to Computing Skills Lab



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Winter Term 2022

On Campus Courses

MET241.01	CAD for Mechanical Design I (<u>Prerequisite:</u> for MET242)	T, R	11:00 – 11:50
MET241L.01	CAD for Mechanical Design I Lab	W	2:00 – 4:50
MFG120.01	Manufacturing Process I (<u>Prerequisite</u> for MFG121)	T, R	12:00 – 12:50
MFG120L.01	Manufacturing Process I Lab	T, R	2:00 – 4:50



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Spring Term 2022

On Campus Courses

MET242.01	CAD for Mechanical Design II (Prerequisite: MET241)	T, R	11:00 – 11:50
MET242L.01	CAD for Mechanical Design II Lab	W	2:00 – 4:50
MFG121.01	Manufacturing Process II – CNC (Prerequisite: MFG120)	T, R	12:00 – 12:50
MFG121L.01	Manufacturing Process II Lab	T, R	2:00 – 4:50