

# MECHANICAL DESIGN ENGINEERING TECHNOLOGY (ITC)

## Interm Technical Certificate

### Career-Technical Program

#### Interest Areas:

**Manufacturing and Trades**

This program teaches drafting and engineering skills through CAD and places heavy emphasis on the needs of manufacturers. All students will learn manufacturing principles with computer-aided design applications. Students are also provided the opportunity to apply the skills specifically to the machining discipline.

### Trades & Industry Division

**Parker Technical Education Center**

**7064 West Lancaster Road**

**Rathdrum, ID 83858**

**Phone: (208) 769-3448**

Program Website (<https://www.nic.edu/cadt-mechanical/>)

## Program Requirements

Course	Title	Credits
<b>Semester 1</b>		
MCTE-105	Technical Mathematics for Machining and Computer Aided Design Technologies	3
MDET-110	SolidWorks Basic	4
MDET-150	Machining Technology Theory I	4
MDET-151L	Machining Technology Lab I	5
<b>Credits</b>		<b>16</b>
<b>Semester 2</b>		
A TEC-117	Occupational Relations and Job Search	2
CAOT-165	Productivity Software for Technical Programs	1
MDET-115	Basic Mechanical Design	4
MDET-120	Intermediate SolidWorks	3
GEM 1 - A.A.S. Written Communication		3-4
Elective Credit		1
<b>Credits</b>		<b>14-15</b>
<b>Total Credits</b>		<b>30-31</b>

### Course Key



GEM



AAS  
Institutionally  
Designated



Gateway



Milestone

- parametric feature-based geometry methodology for parts, assemblies, and drawings.
- Use Microsoft Office for Word, Excel, and PowerPoint as well as access the internet.
- Utilize mathematical skills to plan, calculate and execute precision measuring techniques to validate design and manufacturing applications for parts and assemblies.
- Interpret and apply American National Standards Institute (ANSI) standards to produce detailed working drawings used in contemporary manufacturing industries.
- Demonstrate appropriate work relationships and habits, communication, and computational skills used in contemporary technical industries.

## Program Outcomes

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

- Demonstrate basic three-dimensional (3D) Computer Aided Design (CAD) software commands, in a related pedagogical sequence to generate geometric constructs to create