



**Cluster Overview:**  
Jobs in the manufacturing career cluster involve planning, managing, and performing the processing of materials into intermediate or final products and related professional and technical support activities, such as production planning and control, maintenance, and manufacturing/process engineering.

- Pathway Options:**
- Production
  - Manufacturing & Production Process Development
  - Maintenance, Installation and Repair
  - Quality Assurance
  - Logistics and Inventory Control
  - Health, Safety and Environmental Assurance

**Occupation Examples:**  
Assembler, MIG Welder, TIG Welder, Machine Operator, Sheet Metal Worker, Mechanical Engineer, Industrial Engineer, Quality Control Technician, Safety Technician, Safety Engineer, Dispatcher, Production Manager, Purchasing Agent, Logistician

*For a complete listing, go to:*  
<http://online.onetcenter.org/find/career?c=13&q=Go>

## MONTANA POSTSECONDARY OPPORTUNITIES

*Montana University System Degree and Program Inventory:* <http://www.homepage.montana.edu/~mus/drginv/>  
*Your Guide to Montana's Certificate and Associate Degree Programs:* <http://mus.edu/twoyear/YourGuide.html>

**MSU Two Year Colleges and Programs:**  
City College MSUB—Billings (CC); Great Falls College MSU—Great Falls (GFC); Helena College UM—Helena (HC) Highlands College MT Tech—Butte(HC-Tech); Missoula College UM—Missoula (MC); Gallatin College MSU—Bozeman(GC)

**Community Colleges:**  
Dawson Community College (DCC)  
Flathead Valley Community College (FVCC)  
Miles Community College (MCC)

**Tribal Colleges:** Aaniiih Nakoda College (ANC);Blackfeet Community College(BCC); Chief Dull Knife College (CDKC);Fort Peck Community College (FPCC);Little Big Horn College (LBHC);Stone Child College (SCC);Salish Kootenai College (SKC)

**Four Year Colleges/Universities:**  
MSU—Bozeman; MSUB—Billings; MSUN—Havre; MT Tech—Butte; UM—Missoula; UMW—Dillon

## HELENA COLLEGE UNIVERSITY OF MONTANA PROGRAMS

<http://www.umhelena.edu>

<b>PROFESSIONAL CERTIFICATE</b>	<ul style="list-style-type: none"> <li>• Requires diploma or HiSET</li> <li>• Industry-recognized certification requires state or national exam</li> <li>• Typically non-credit</li> <li>• Complete in one year or less</li> </ul>	OSHA 510: Occupational Safety and Health Standards for Construction OSHA 511: Occupational Safety and Health Standards for General Industry OSHA 500 and 501: Trainer courses for OSHA
<b>APPRENTICESHIP</b>	<ul style="list-style-type: none"> <li>• Requires diploma or HiSET</li> <li>• Must be at least 18</li> <li>• Minimum 2,000 hours of supervised experience</li> </ul>	Sheet Metal Apprenticeship with AAS
<b>CERTIFICATE OF APPLIED SCIENCE</b>	<ul style="list-style-type: none"> <li>• Requires diploma or HiSET</li> <li>• 39 credits; including 9 general education credits</li> <li>• Complete in one year</li> </ul>	Welding Technology Machine Tool Technology
<b>ASSOCIATE OF APPLIED SCIENCE DEGREE</b>	<ul style="list-style-type: none"> <li>• Requires diploma or HiSET</li> <li>• 69-71 credits; includes 9 general ed credits</li> <li>• Complete in two years (<i>if prepared academically in math and English</i>)</li> </ul>	Computer-Aided Manufacturing Industrial Welding and Metal Fabrication Metals Technology
<b>BACCALAUREATE DEGREE</b>	<ul style="list-style-type: none"> <li>• Requires 4-year college prep for admission</li> <li>• 128 credits (approximately)</li> <li>• Complete in four years</li> </ul>	Industrial Engineering, Construction Engineering Technology, Technology Education: Montana State University Etc.