



*Career Cluster Connections Cover Page
Manufacturing*

Career Cluster: Manufacturing

Postsecondary Education Partnerships

Existing Postsecondary Education Partners:

- **Mitchell Technical Institute**
<https://www.mitchelltech.edu/programs>
- **Western Dakota Tech**
<https://www.wdt.edu/degree-programs/construction-and-manufacturing>
- **South East Technical Institute**
<http://www.southeasttech.edu/academics/degrees/>
- **Lake area Technical Institute**
<https://www.lakeareatech.edu/academics/welding-technology/>
<https://www.lakeareatech.edu/academics/precision-machining/>

Potential Postsecondary Education Partners:

- University of South Dakota <http://www.usd.edu/>
- South Dakota State University <https://www.sdstate.edu/>
- Northern State University <http://northern.edu/>
- Black Hill State University <http://www.bhsu.edu/>

Dual Credit Opportunities:

Please Refer to:

<http://apps.sd.gov/de68dual/index.html>

MTI: (Mitchell Technical Institute)

STI: (Southeast Technical Institute)

WDT: (Western Dakota Tech)

LATI (Lake Area Technical Institute)



Work-Based Learning

<p>Career Exploration:</p> <ul style="list-style-type: none"> • Construction awareness days • Guest Speakers • Career Fairs • Manufacturing Camps • Exploration days • http://www.sdagc.org/workforce-development/construction-awareness-days/
<p>Intermediate Experiences:</p> <ul style="list-style-type: none"> • Job shadowing at Industry Trade Shows • Interview a professional and post/publish the interview • Industry professionals mentor students on a project or competition entry • Industry professionals act as a virtual coach
<p>Capstone Experiences:</p> <ul style="list-style-type: none"> • Entrepreneurship Senior Project • Internship programs available at for-profit, non-profit, and academic institutions • Grant funded internship programs

Experiential Learning

<p>Career and Technical Student Organizations and Key Activities (competitions, events, etc.):</p> <ul style="list-style-type: none"> • Skills USA http://www.skillsusa.org <p><u>Trades Skills Contest</u> Additive Manufacturing (Design for 3D Printing, Scanning and Digital Manufacturing) Architectural Drafting Cabinetmaking Carpentry Customer Service Electrical Construction Wiring Heating, Ventilation, Air Conditioning</p>	<p>Course and CTE Standards Supported:</p> <ul style="list-style-type: none"> • http://doe.sd.gov/octe/careerclusters.aspx
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<p>and Refrigeration Job Skill Demonstration A Job Skill Demonstration Open Masonry Plumbing Principles of Engineering Related Technical Math (Test Only) Residential Systems Installation and Maintenance Sheet Metal T-Shirt Design Teamwork's - Team of 4 Technical Drafting</p> <p>Action Skills (Students with Disabilities ONLY) Building Maintenance (Students with Disabilities ONLY)</p> <p><u>Leadership Contests</u></p> <p>American Spirit Career Pathways Showcase Team of 3 Industrial and Engineering Technology</p> <p>Chapter Business Procedure Team of 6 Chapter Display Community Action Project (Team of 2) (Demonstration) Community Service Team of 3 Customer Service Employment Application Process Entrepreneurship Team of 4 Extemporaneous Speaking Job Interview Job Skill Demonstration A Job Skill Demonstration Open Opening and Closing Ceremonies Team of 7 Occupational Health and Safety (1-3 Individual and/or Team) Outstanding Chapter Prepared Speech Promotional Bulletin Board Quiz Bowl (Team of 5)</p>	
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<ul style="list-style-type: none"> • National Science Competition • ACE Mentoring Program for Architecture and Construction http://www.acementor.org 	
<p>Service Learning Opportunities/Organizations: Community service based in your area.</p> <ul style="list-style-type: none"> • Habitat for Humanity • SD My Life activities • Various church projects 	<p>Course and CTE Standards Supported: http://doe.sd.gov/octe/careerclusters.aspx</p>
<p>Additional Experiential Learning Opportunities:</p> <ul style="list-style-type: none"> • _____ Awareness Camps • Employability Youth Internships • World of Work 	<p>Course and CTE Standards Supported: http://doe.sd.gov/octe/careerclusters.aspx</p>

Certification and Credentials

Certification/Credential	Recommended Prerequisite Courses	Pertinent Details (location of assessment, cost, test prep, etc.)
NCCER	General High School Courses	Check local resources
OSHA 10		Check local resources
ADDA	Intro to Drafting Design, Architectural Drafting	Check local resources
Solid Works	Intro to Drafting, Mechanical Drafting	Check local resources
CPR/First Aid		Check local resources
American Welding society AWS Welding Certification	Welding Technology Advanced Welding	Check local resources



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