South Dakota CTE

Ag Metal Fabrication Technology (18404) (2022)

Apply safety practices in metal fabrication. AMF 1	1	**Demonstrate safe operation and knowledge of metal fabrication tools and equipment.** AMF 1.1
	2	**Demonstrate workplace/worksite safety procedures and protocols.** AMF 1.2
Demonstrate the basics of metal fabrication. AMF 2	1	**Demonstrate knowledge of metal fabrication techniques and related technologies.** AMF 2.1
	2	**Prepare various metals for welding.** AMF 2.2
	3	**Create plans for a metal project.** AMF 2.3
	4	**Create a metal fabrication project.** AMF 2.4
Demonstrate the principles of Shielded Metal Arc Welding (SMAW) and the correct operation of SMAW equipment. AMF 3	1	**Perform Shielded Metal Arc Welding (SMAW) techniques.** AMF 3.1
Demonstrate the principles of Metal Inert Gas (MIG) welding, also known as Gas Metal Arc Welding (GMAW), and the correct operation of MIG equipment. AMF 4	1	**Perform metal inert gas (MIG) welding techniques.** AMF 4.1
Understand the correct operation of oxyacetylene equipment. AMF 5	1	**Explore oxyacetylene welding, cutting, and brazing.** AMF 5.1
Explore advanced we 6	1	**Investigate and explain principles of advanced welding processes (e.g. Tungsten nert Gas (TIG) welding, plasma cutting (hand or table))** AMF 6.1

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Develop employability skills related to the Power, Structural, and Technical Systems Pathway. AMF 7	1 **Develop soft skills to enhance employability.** AMF 7.1 2 **Investigate careers related to metal fabrication.** AMF 7.2
Implement an individual project for career development through a Supervised Agriculture Experience/Work based Experience. AMF 8	1 **Develop an individual project plan with goals and timeline.** AMF 8.1 2 **Explore opportunities within AFNR industries.** AMF 8.2 3 **Apply concepts of financial management appropriate to agricultural projects and personal finances.** AMF 8.3 4 **Develop and document knowledge and skills to ensure workplace safety regarding personal health and environmental management.** AMF 8.4 5 **Research and analyze how public policy, laws, and advocacy impact agricultural systems and agricultural literacy.** AMF 8.5