Material IDI: Coursel - Course Title: Agricultural Technology: Welding and Fabrication						
Strand Standard or Performance Skill Students will use communication skills to effectively	Curriculum	Module ID #	Module	Section 8, Page 8 or Asset where covered		Notes/Comments
communicate with others. - Understand when it is appropriate to listen and to speak. - Understand and follow verbal and written instructions for						
	Agricultural Technology: Welding and Fabrication	N/A	N/A	N/A		
Student will effectively use seamwork to respectfully work with others. - identify and understand different roles in working with a team.	Agricultural Technology: Welding and Fabrication	N/A	N/A	NGA		
Student will use critical thinking and problem-colving skills Analyze the cause of the problem. Design a solution to selface the problem.						
Impliement the plan. Variance the effectiveness of the plan. Variance the effectiveness of the plan. Use generally accepted industry standards to analyse, evaluate, troubleshoot and diagnose the challenges associated with a specific repair, maintenance, or						
evaluate, troubleshoot and diagnose the challenges associated with a specific repair, maintenance, or	Agricultural Technology:					
Student will be dependable, reliable, steady, trustworthy and consistent in parformance and habitude.	Welding and Fabrication	N/A	N/A	N/A		
 Set and meet goals on attendance and punctuality. 	Agricultural Technology: Walding and Enhanced on	N/A	N/A	NGA		
Trinitation just an insuring want to compete anogeneous and anoients on time Student will be accountable for results. Use an achievement chart for activities and behaviors in class that encourages a personal evaluation of classrooms performance.						
	Agricultural Technology:					
completion of assignments and projects Se familiar with the legal requirements and expectations of the course.	Welding and Fabrication	N/A	N/A	N/A		
the course. • In familiar with the course disclosure statement and all requirements for successful completion of the course. • Demonstrate workplace ethics, e.g. fair, honest,						
Demonstrate workplace ethics, e.g. fair, honest, disciplined	Agricultural Technology: Welding and Fabrication	N/A	N/A	N/A		
disciplined Student will demonstrate employability skills. - Use a career search network to find career choices. - Identify appropriate CTE Pathway for selected career						
choice. Write a recume including a list of demonstrated skills. Write a letter of application. Complete a job application.						
	Agricultural Technology: Ministine and Exherention	N/A	N/A	N/A		
And the control of th				Performance tasks give students opportunities to apply knowledge in real- world tasks. They are found throughout several modules in the AgTech Welding		
of the following areas; ownership/entrepreneurship, placement/internship, research, school-based	Agricultural Technology:			several modules in the AgTech Welding course.		
enterprise, and/or service-learning experiences. Student will develop a job portfolio specific to their selected work-based learning experience.	Welding and Fabrication	N/A	N/A			
Student will develop a job portfolio specific to their selected work-based learning experience. • Student will keep a pressoral reconf/journal/log of their work-based learning experience; including pictures, financial records, skills learned, hours associated	Agricultural Technology:					
with project soals reflection esc implement safety practices related to agricultural power, structural, and technical systems in learning and work	Welding and Fabrication	N/A	N/A	N/A		
iduation. Identify, elect, and properly use appropriate personal protective equipment (995). Verify that all equipment is in good operating condition.				Section 2.00 - Personal Protective		
Verify that all equipment is in good operating condition and that appropriate safety devices are in place.				Section 2.00 - Personal Protective Equipment Section 3.00 - Welding Safety Practices		
 every test, an experient is agreed operand or testing and that appropriate sarlery devices are in place and working (e.g., guards in place, sool next adjusted, etc.). Maintain next, well-organized, well-vertilated, and safe work ware. 	Agricultural Technology: Walding and Enterprise	99301	Welding Safety			
unov seaso Understand and demonstrate safety in agricultural power, structural, and rechnical systems. • identify safety hausards and the actions needed to minimize risk with agricultural power units,				Section 1.00 - The Welding Craft Section 2.00 - Personal Protective		
minimize risk with agricultural power units, machinery, and equipment.				section 2.00 - Personal Protective Equipment Section 3.00 - Welding Safety Practices		
emergencies, including the use of first aid and contact of emergency services.				Section 2.00 - Weiding Safety Practices Section 2.00 - Weiding Safety Practices - 2.1.0 Weiding Safety Hazards - 22.0 Work Area Safety - 2.2.0 Fire Safety and Hot Work		
mainture stax with agricultura power union, machinery, and equipment. I identify appropriate safely responses in accidents or energypooles, including the use of first and and contact of emergency services. Properly dispose of existen emarkeds to assure minimum environmental singuic. I identify the time parts of the fire strangle: fuel, oxygen	Agricultural Technology:			The work		
Assess the importance of proper preventive maintenance of	Welding and Fabrication	60301	Welding Safety			
internal combustion engines. Chemonatrato proper preventive maintenance to engine life and efficiency of operation. Libility operatori manuals to determine preventive maintenance schoolse and practices for quedic engines. I demotify, select, properly use, and maintain stools needed in preventive maintenance of internal coordinates are combustion engines.	1					
maintenance schedules and practices for specific engines.						
 sentify, select, properly use, and maintain tools needed in preventive maintenance of internal combustion engines. 	Agricultural Technology: Welding and Fabrication	N/A	N/A	NGA		
preventive maintenance of internal combustion sensines. Identity and distinguish the components and systems of internal combustion engines. Classify engines by fuel used, kind of ignition, and cycle of operation.						
operation. • Englain the functions of engine systems, including sir, fuel,						
operation. • Supins the functions of engine systems, including als, fuel, wabuss, ignition, subscission, and cooling. • Admits of the major components or structure of an engine, including engine blook, quinders, pistons, connecting ends, and crawhaths! • Describe the training of a four-stroke-cycle engine,						
connecting rads, and crankshaft. Describe the strakes of a four-strake-cycle engine, including the rale of combustion and heat.	Agricultural Technology: Walding and Enhanced on	N/A	N/A	NGA		
ionium ha mia of nonhumbra and hash Perform preventive maintenance on engine systems. • Perform air intake system maintenance on engines, including those with dry element filters, oil foam filters, and oil bath cleanes.						
filters, and oil bath cleaners. • Perform fuel system maintenance on an engine, including						
Perform lubrication system maintenance on an engine, including selecting and changing oil and						
replacing the filter. • Perform ignition system maintenance on an engine, including battery cleaning and hydrometer testing.						
Perform exhaust system maintenance on an engine, including checking for leaks and replacing worn or damaged reprocessor.						
Ellers, see of a later Centers. **Perform faul system minimiserance on an engine, including filter registerance. For registerance. **Control of the control of the contr	Agricultural Technology:					
Perform rectrical puttern maintenance on engines. Perform preventive maintenance on power units and implements.	Mendang and Fabrication	N/A	N/A	N/A		
Principle previous measurements of speakers, seeks, seek implements. - Cases all components, remarked years, must, dust, and stebe dist by using pressure washing, band wiping, or other apprepriate methods. - Assess the diverse trains for maintenance or repair. - Rosperty inflate ties. - The previous and hands societ to perform maintenance.						
Assess the drive train for maintenance or repair. Properly inflate tines. Use presenting and bands tools to perform maintenance.						
on power units. Lubricate the steering system, as appropriate.						
 Liss presumation and hands study to preform nutrierranse in power units. Adjust belts and classife for proper apperation. Adjust belts and classife for proper apperation. Adjust belts and provide appropriate service for the classift and brake. Architectural properties service on a hybridisc system, in festion appropriate service on a hybridisc system, in festion and properties are serviced. Architectural properties service on a hybridisc system, fluids as medical, therefore the service of the service properties of the service of the service of the service of the service of the service of the service of the fluids are medical, the service service service of the properties of the service of the service of the service. Adjust covers, shirtle, and extre selley devices. Adjust covers, shirtle, and extre selley devices. Adjust covers, shirtle, and extre selley devices. 						
Perform appropriate service on a hydraulic system, including checking fluid levels and replenishing fluids as needed, checking for leaks, and replacing or						
tightening faulty fluid conveyance components. Adjust covers, shields, and other safety devices.	Agricultural Technology:		Places Art Cutting: Air-Carbon Art	2.3.2 Basic Maintenance; 2.3.2 Basic		
 solution and review version traction and containing at monitor! Perform basic repair on power units and implements. Suplain the meaning and importance of troubleshooting maffercities. 	Agricultural technology: Walding and Enteriorism	93306: 93307	Fration and Counting	Maintenance		
 Explain the meaning and importance of troubleshooting mailunctions. Using the gauges and warning lights on the dashboard 						
Using the gauges and warning lights on the dashboard diagnose problems, take corrective actions, and test power units and darginements fallowing repair. Use metal fabrication skills in making selected repairs to	Agricultural Technology: Welding and Fabrication					
opeer units and implements identify power unit controls and instruments and their functions	Welding and Fabrication	N/A	N/A	N/A		
 Locate controls on a power unit, including starter button or key, threttle, dusch, brakes, lights, and others (depending on the unit), and explain and democstrate their functions. 						
demonstrate their functions. Locate instruments on a power unit, including oil pressure				3.2.2 Starting an Engine-Oriven Machine		
demonstrate their functions. Locate instruments on a power unit, including oil pressure gauge, temperature gauge, tachometer, fuel gauge, and others (depending on the unit), and discuss their functions.						
 Perform a pre-operation inspection according to the manufacturer's recommendations in the owner's 	Agricultural Technology:	603190	Challes - Consistence and C			
manual identify equipment controls for various agricultural power units and describe their functions.			and a support that set up			
manual bloomly equipment controls for various agricultural power units and describe their functions. - Compane and controls various agricultural power units and equipment. - Medical or attach equipment to a power unit or tractor following manufacturer's recommendations.				N/A		
following manufacturer's recommendations. • Coverate equipment following rafe and appropriate Explain the composition and characteristics of concrete. • Define concrete, and list advantages and disadvantages of	Agricultural Technology: Welding and Fabrication	N/A	N/A			
Define concrete, and list advantages and disadvantages of its use.						
Unime concrete, and set assuminges and disastrainings of its use. Identify important agricultural uses of concrete. Isolatin proportions and qualities of logradisest. Describe the qualities of properly placed and cured concrete.	Agricultural Technology		anta	***		
Place concrete. • Identify took and equipment used in placing concrete.	Welding and Extrication	and .	and a	200		
Number the qualities of properly planed and cured grounds. The control of the property planed and cured grounds. Number to the last equipment used in placing concerns. Number to the last equipment used in placing concerns. Calculates the amount of concerns seeked for a job. Calculates the amount of concerns seeked for a job. Calculates the amount of concerns seeked for a job. Seeked and the place of grounds, and design of grounds, and adjust the services and current Seeked and the place of grounds, and encountered of electromy. Seeked and the place of grounds and encountered of electromy. In this selection and density the kinds of current (DC and AC) used to appoint selection and density the kinds of current (DC and AC) used to appoint the place of the pla						
Demonstrate the placing of concrete, including striking off, finishing the surface and curing Explain the characteristics and measurement of elevation.	Agricultural Technology: Welding and Fabrication	N/A	N/A	N/A		
Describe safety practices with electricity. Define electricity and identify the kinds of current (DC and AC) used in perioditure.						
ohms watt, and wolt.	Aericultural Technologic					
Lessats vortage drop and its impact on electrical devices. Describe the meaning and use of circuits Install basic electrical circuits.	Agricultural Technology: Welding and Fabrication	69302	Welding Basics	2.2.0 Types of Welding Equipment		ļ
Describe the manning and as signal, as recording to the control to the contr						
Snergiae a simple circuit to set its workability. Use instruments to test and validate circuits. Egilain and demonstrate the installation of electrical.	Agricultural Tachnology					
Splain and demonstrate the installation of electrical boses splices and connections. Use thielded metal arc welding (SMAW) processes. Make 35 (vertical position-butt weld) welds on carbon.	Agricultural Technology: Welding and Fabrication	N/A	N/A	N/A	1	
Make 3F (vertical position-butt weld) welds on carbon steel. Make 3G (vertical position-groove-weld) welds on carbon.	Agricultural Technology:		Welding Basics; SMAW - Equipment and	3.2.0 Selecting Electrodes and Filler Metals		
make on personal photology over weat) which can be built and the plasma cutting processes. Ferform safety inspections of equipment and accessories. Ferform and make manual plasma cutting operations on	Welding and Fabrication	93302: 93310	Set up	1.00 Planma Arc Custine: 3 ft ft links - 5 ft		
Set up for and make manual plasma cutting operations on carbon steel. It is a manual provided of the set	Agricultural Technology: steiding and Fabrication	60306	Plasma Arc Cuttine	1.0.0 Plasma Arc Cutting; 3.0.0 Using PAC Equipment		
carbon state! Use gas metal arc welding (GMANN) processes. - Use Short Circuit Transfer welding process to make 26- (vertical position-fillet weld) welds on carbon				3.10 GM BW Ciller Marrols		
 Use Short Circuit Transfer welding process to make 3G (vertical position-groove weld) welds on carbon 	Agricultural Technology:		GMAW and FCAW - Equipment and Filler	and sentent riber Metals		
ized	Welding and Fabrication	92312	Metals			
Select materials for the project. Prepare a bill of materials for the project including a cost estimate.				Performance task, 2.2.0 Notes and fall of Materials; 4.0.0 Oxylael Cutting Procedures, Performance Tasks		
Measure, mark, and cut materials according to the plane. Complete project.			L	Procedures, Performance Tasks		
seasons and statute of page (see the seasons) and the seasons of page (see the seasons) and the seasons of page (see the seasons) and the seasons of the sea	Agricultural Technology: Welding and Extrication	93354: 93305	Reading Welding Detail Drawings; Chyfuel Cutting			-
completion of assignments and projects. • Student will keep a nemanal money for a second for a	Agricultural Technology: Welding and Fabrication	N/A	N/A	N/A		
 Student will keep a personal recons//purnal/log of their work-based learning experience; including pictures; financial records, will instrued, hours associated with project, goals, reflection, etc. 	Assignatured Trees					
with project, goals, reflection, etc. • Maintain nest, well-organized, well-ventilated, and safe work areas.	Agricultural Technology: Melding and Estrication	N/A	N/A	N/A		-
work areas. • Perform preventive maintenance on engine systems.	Agricultural Technology: studding and Eubernation Agricultural Technology:	69301	Welding Safety	3.0.0 Welding Safety Practices		
Description and the state of the state	Welding and Fabrication	N/A	N/A	N/A		ļ
	Agricultural Technology: Malifina and Esternation	N/A	N/A	N/A		
 Conduct a pre-operation inspection of a tractor or other agricultural power unit. 	Agricultural Technology: Welding and Fabrication Agricultural Technology:	N/A	N/A	N/A		<u> </u>
Demonstrate the placing of concrete, including striking off, finishing the surface and curing Sagilain and demonstrate the installation of electrical	Agricultural Technology: Welding and Fabrication Agricultural Technology:	N/A	N/A	N/A		
boses solices and connections	Wilding and Fabrication Agricultural Technology: Walding and Enbringing	N/A	N/A	N/A 4.0.0 Doyfuel Cutting Procedures		
a Grantenes will febricate a nucleot culture metal	maiding and Esteination	DM #05	Devituel Cutting		i.	