State of Oklahoma Welding Duty/Task Crosswalk

The following state of Oklahoma welding tasks, which are aligned to AWS standards, are covered in this publication. The first column identifies Oklahoma's task by name and number. The second column identifies the exact location by unit number and objective, assignment sheet, or job sheet in this MAVCC publication unless otherwise noted.

Occupation: Gas Metal Arc Welder	MAVCC Tasks
Duty A: Demonstrate Employability Skills	
A.18 Identify employment opportunities	*Fundamentals of Welding*, Unit 1, Objective 7—Job outlook for welders; Objective 9—Career opportunities for welders; Assignment Sheet 2—Compare employment opportunities in welding
A.19 Identify levels of training recommended for related careers	*Fundamentals of Welding*, Unit 1, Objective 8—What it takes to become a good welder
A.20 Understand salary, wages and benefits packages	*Fundamentals of Welding*, Unit 1, Objective 6—What welders earn
Safety	
A.26 Explain the purpose for safety policies	*Fundamentals of Welding*, Unit 2, Objective 4—Hazard communication; Assignment Sheet 1—Complete the student safety pledge form; Assignment Sheet 5—Identify and correct safety violations
A.27 Discuss the role of OSHA and EPA — Locate information in MSDS	*Fundamentals of Welding*, Unit 2, Objective 6—Purposes of material safety data sheets; Student Supplement 1—Guidelines for interpreting material safety data sheets; Assignment Sheet 2—Interpret a material safety data sheet
A.28 Participate in OSHA training, if possible — Lock Out/Tag Out	*Fundamentals of Welding*, Unit 2, Objective 8—Safety tags and their color coding; Objective 19—Instances when lockout devices should be used
— HAZCOM	*Fundamentals of Welding*, Unit 2, Objective 4—Hazard communication
– MSDS	*Fundamentals of Welding*, Unit 2, Objective 6—Purposes of MSDS; Student Supplement 1—Guidelines for interpreting MSDS; Assignment Sheet 2—Interpret a material safety data sheet

State of Oklahoma Welding Duty/Task Crosswalk

Occupation: Gas Metal Arc Welder	MAVCC Tasks
— Bloodborne Pathogens	*Fundamentals of Welding*, Unit 3, Objective 18—Basic first-aid procedures for various emergency situations
A.29 Explain the proper steps in reporting an accident or emergency	*Fundamentals of Welding*, Unit 3, Objective 16—General steps for handling any emergency situation; Objective 17—General guidelines for first aid emergencies; Assignment Sheet 1—Determine basic first aid measures for given emergency situations
A.30 Explain the hazards associated with specific types of equipment and tools	*Fundamentals of Welding*, Unit 2, Objective 3—General job and shop safety rules; Assignment Sheet 5—Identify and correct safety violations *GMAW/FCAW*, Unit 1, Objective 10—Rules for handling hollow casting or containers; Objective 11—Hazards associated with arc rays
A.31 Perform machine operator safety checks of equipment and accessories, when necessary	*Fundamentals of Welding*, Unit 2, Assignment Sheet 5—Identify and correct safety violations; Unit 4, Objective 21—Basic rules for safe use of power tools and equipment
A.32 Practice tool safety	*Fundamentals of Welding*, Unit 2, Objective 3d—Tool use, maintenance, and storage safety; Unit 3, Objective 9—Rules for handling welding cables and gas and coolant hoses; Unit 4, Objective 20—Rules for hand tool safety; Objective 21—Basic rules for safe use of power tools and equipment; Objective 22—Rules for tool and equipment maintenance
A.33 Describe the types of fire hazards found in the workplace	*Fundamentals of Welding*, Unit 2, Objective 10—Components of fire triangle; Objective 11—Types of fires and classifications; Objective 12—Types of fire extinguishers; Objective 13—Fire extinguisher markings and class of fire they represent; Objective 14—Fire extinguisher operating instructions that follow P-A-S-S; Student Supplement 2—Using Portable Fire Extinguishers; Assignment Sheet 4—Determine correct fire extinguishers to use for various situations; Job Sheet 1—Operate a fire extinguisher

Occupation: Gas Metal Arc Welder	MAVCC Tasks
A.34 Discuss electrical hazards	*Fundamentals of Welding*, Unit 2, Objective 3f—Electrical safety; Unit 3, Objective 19—Treating a victim of electrical shock *GMAW and FCAW*, Unit 1, Objective 7—Electrical safety requirements for GMAW
A.35 Demonstrate safe use of personal protective equipment	*Fundamentals of Welding*, Unit 2, Objective 20—Fall protection systems; Objective 21—Confined space entry; Objective 22—Environmental contaminants that would require you to use a respirator *GMAW and FCAW*—Unit 1, Objective 12—Types of welding hoods; Objective 13—Guidelines for selecting a safe lens shade for GMAW; Objective 14—Protective clothing required for GMAW welding; Objective 15—Environmental safety requirements; Objective 16—Safety guidelines for working with electrode wire
A.36 Demonstrate safe material handling techniques — Lifting — Transporting — Storing	*Fundamentals of Welding*, Unit 2, Objective 15—Causes of back injuries; Objective 16—Guidelines for lifting and moving items safely; Job Sheet 2—Lift a heavy object properly
A.37 Understand established first aid procedures	*Fundamentals of Welding*, Unit 3, Objective 16—General steps for handling any emergency situation; Objective 17—General guidelines for first aid emergencies; Objective 18—Basic first-aid procedures for various emergency situations; Student Supplement 2—A Systematic Look at First Aid; Assignment Sheet 1—Determine basic first aid measures for given emergency situations
A.38 Practice good housekeeping	*GMAW and FCAW*—All job sheets require students to clean up their work areas and return tools and equipment to proper storage.
A.39 Comply with company safety policies	*Fundamentals of Welding*, Unit 2, Assignment Sheet 1—Complete the student safety pledge form

State of Oklahoma Welding Duty/Task Crosswalk

Occupation: Gas Metal Arc Welder	MAVCC Tasks
Basic Academic Skills	
A.40 Apply mathematical operations involving whole numbers, fractions, decimals, percentages, mathematical word problems, ratios, etc., when necessary — Addition — Subtraction — Multiplication — Division	*Fundamentals of Welding*, Unit 6, Assignment Sheet 1—Add, subtract, multiply, and divide fractions; Assignment Sheet 2—Add, subtract, multiply, and divide decimal equivalents; Assignment Sheet 3—Convert fractions to decimal form, change fractions to a common denominator, and reduce fractions to lowest terms; Assignment Sheet 4—Write fractions as decimals and percents; Assignment Sheet 6—Write decimals as fractions and percents; Assignment Sheet 8—Make conversions with an inches-to-decimal conversion chart
A.41 Apply advanced mathematical operations, when necessary — Algebra — Geometry — Trigonometry — Calculus — Statistical Methods	*Fundamentals of Welding*, Unit 6, Objective 8, Terms used in geometry; Objective 9—Types of geometric figures; Objective 12—Area of geometric figures; Assignment Sheet 14—Calculate area of geometric figures; Job Sheet 1—Adjust a bevel square to a 45° angle using a framing square, a combination square, and a protractor; Job Sheet 2—Form 90° and 45° angles with a combination square and draw parallel lines on metal stock
A.42 Apply scientific principles, when necessary — Physics — Chemistry	*Fundamentals of Welding*, Unit 5, Objective 4—Metal identification tests; Objective 5—Mechanical properties of metals; Objective 6—Types of mechanical strengths; Objective 7—Physical properties of metals; Job Sheet 1—Conduct magnet tests to identify common metals used for welding; Job Sheet 2—Conduct chisel tests to identify common metals used for welding; Job Sheet 3—Conduct spark tests to identify common metals used for welding
A.43 Interpret charts, table, and graphs	*Fundamentals of Welding*, Unit 6, Assignment Sheet 7—Make conversions with a decimal equivalent chart; Assignment Sheet 8—Make conversions with an inches-to-decimal conversion chart
A.44 Apply reading and writing skills, when necessary	Most assignment sheets require the student to read and write.

Occupation: Gas Metal Arc Welder	MAVCC Tasks
Blueprint Reading	
A.50. Identify basic elements of blueprints — Terms — Components — Symbols	*Fundamentals of Welding*, Unit 7, "Welding Print Reading" *Fundamentals of Welding*, Unit 7, Objective 1—Terms related to print reading; Objective 2—Basic lines; Objective 13—Symbols
A.51 Discuss different types of drawings	*Fundamentals of Welding*, Unit 7, Objective 4—Isometric and oblique drawings
A.52 Interpret drawings — Bill of Materials — Revisions — Tolerances	*Fundamentals of Welding*, Unit 7, Objective 4—Isometric and oblique drawings; Objective 6—Tolerancing; Objective 15—Requirements for a formal bill of material; Objective 16—Requirements for an informal bill of material; Assignment Sheet 5—Interpret tolerance dimensions in decimals, fractions, and degrees; Unit 8, Assignment Sheet 5—Interpret a welding print and welding procedure specifications
A.53 Interpret symbols	*Fundamentals of Welding*, Unit 7, Objective 13—Symbols
Measurement Tools and Techniques	
A.54 Identify types of measuring instruments	*Fundamentals of Welding*, Unit 6, Objective 6—Types of rules and examples of their graduations
A.55 Use appropriate measurement instrument for a measurement task	*Fundamentals of Welding*, Unit 6, Job Sheet 2—Form 90° and 45° angles with a combination square and draw parallel lines on metal stock
A.56 Read measuring instruments	*Fundamentals of Welding*, Unit 6, Objective 7—Steps in reading a rule; Assignment Sheet 9—Measure distances with 1″, 1/2″ and 1/4″ graduations; Assignment Sheet 10—Measure distances with 1/4″ and 1/8″ graduations; Assignment Sheet 12—Measure distances with 1/16″ graduations; Job Sheet 1—Adjust a bevel square to a 45° angle using a framing square, a combination square, and a protractor; Job Sheet 2—Form 90° and 45° angles with a combination square and draw parallel lines on metal stock

State of Oklahoma Welding Duty/Task Crosswalk

Occupation: Gas Metal Arc Welder	MAVCC Tasks
A.57 Identify the appropriate formula and units for a measurement task	*Fundamentals of Welding*, Unit 6, Objective 11—Squares, rectangles, and triangles and their formulas for calculating their perimeters; Objective 12—Area of geometric figures
A.58 Differentiate between English and Metric measurement systems, when necessary	*Fundamentals of Welding*, Unit 6, Objective 13—English-metric conversion charts and how to use them; Assignment Sheet 13—Make conversions with an English-metric conversion chart
A.59 Communicate measurements using proper symbols or words	*Fundamentals of Welding*, Unit 6, Objective 10—Units of measure and their equivalents
Duty B: Interpret Drawing and Welding Symbols and Written Welding Procedures	
B.01 Interpret basic elements of drawing/sketch	*GMAW and FCAW*—Unit 2, Job Sheets 5 through 8, 10 through 18, 20 through 24, 27 through 36, 38 through 40, 42 through 44; *Fundamentals of Welding*, Unit 7—Welding Print Reading (entire unit)
— Structural members	*Fundamentals of Welding*, Unit 7, Objective 14—Structural shapes
— Sequence of assembly	*Fundamentals of Welding*, Unit 7, Assignment Sheet 8—Construct adjacent parts in an assembly section
— Dimensions and tolerances	*Fundamentals of Welding*, Unit 7, Objective 5—Dimensioning; Objective 7—Methods of dimensioning; Assignment Sheet 5—Interpret tolerance dimensions in decimals, fractions, and degrees
— Scale	*Fundamentals of Welding*, Unit 7, Objective 9—Reduction and enlargement scales
— View interpretation	*Fundamentals of Welding*, Unit 7, Objective 3—Basic views; Objective 12—Types of section views; Student Supplement 2—Orthographic projection; Assignment Sheet 1—Construct a top view; Assignment Sheet 2—Construct a front view; Assignment Sheet 3—Construct a right side view; Assignment Sheet 7—Make a three-view sketch

Occupation: Gas Metal Arc Welder	MAVCC Tasks
— List of materials	*Fundamentals of Welding*, Unit 7, Objective 15—Requirements for a formal bill of materials; Objective 16—Requirements for an informal bill of materials
B.02 Interpret welding symbol information — Type of weld required — Filler metal — Special details — Non-destructive testing requirements	*GMAW and FCAW*—Unit 2, Job Sheets 5 through 8, 10 through 18, 20 through 24, 27 through 36, 38 through 40, 42 through 44 *Fundamentals of Welding*, Unit 8, Basic Welding Joints and Symbols (entire unit)
B.03 Interpret written welding procedures — Procedure ID number cross-referencing to drawing — Appropriate welding process/base materials/filler materials — Appropriate machine settings	GMAW and FCAW—Unit 2, "GMAW Equipment, Applications, and Techniques"—All job sheets
Duty D: Perform Gas Metal Arc Welding (GMAW)	
D.01 Perform safety inspections of equipment and accessories — Protective clothing — Equipment, accessories, and hand tools — Single or mixed shielding gas supply — Work area — Communicate hazard warnings to others	*GMAW and FCAW,* Unit 2—All job sheets require students to practice safety precautions. *Fundamentals of Welding*, Unit 2, "General Safety" and Unit 3, "Welding Safety and First Aid" cover safety in detail.
D.02 Make minor external repairs to equipment and accessories (preventative maintenance only) — Manufacturer's recommendations — Company repair policy — Equipment troubleshooting – Birdnesting – Porosity – Gas leaks	*GMAW and FCAW,* Unit 2, Objective 11—Preventive maintenance requirements for wire feeders; Objective 25—Conditions that require special attention with GMAW; Objective 26—Possible causes and corrective actions for undercutting; Objective 27—Causes and corrective actions for porosity; Objective 28—Causes and corrective actions for incomplete fusion; Objective 29—Causes and corrective actions for incomplete joint penetration; Objective 30—Causes and corrective actions for excessive melt-through; Objective 33—Guidelines for troubleshooting GMAW problems; Student Supplement 7—GMAW/Microprocessor Troubleshooting

State of Oklahoma Welding Duty/Task Crosswalk

Occupation: Gas Metal Arc Welder	MAVCC Tasks
D.03 Set up for gas metal arc welding operations on plain carbon steel plate — ER70S-X electrodes — Filler metal selection — Proper hand tool selection — Adjust voltage and polarity — Set wire speed — Proper gas flow rate — Parts set up and preheated as necessary — Review appropriate weld — Base metal preparation	*GMAW and FCAW*, Unit 2, Job Sheet 1—Set up wire on a GMAW wire feeder; Job Sheet 2—Set up a flow meter and regulator for a GMAW shielding gas; Job Sheet 3—Set up GMAW equipment for short-circuit transfer on mild steel
D.04 Operate gas metal arc welding equipment — Short circuit transfer (flat, single pass, multi-pass, multi-directional) fillet weld of plain carbon steel in all positions	*GMAW and FCAW*, Unit 2, Job Sheet 6—Use short-circuit transfer to weld to specifications a fillet weld lap joint on mild steel in the flat position; Job Sheet 7—Use short-circuit transfer to weld to specifications a fillet weld T-joint on mild steel in the flat position; Job Sheet 10—Use short-circuit transfer to weld to specifications a fillet weld lap joint on mild steel in the horizontal position; Job Sheet 11—Use short-circuit transfer to weld to specifications a fillet weld T-joint on mild steel in the horizontal position; Job Sheet 13—Use short-circuit transfer to weld to specifications a fillet weld lap joint on mild steel in the vertical position; Job Sheet 14—Use short-circuit transfer to weld to specifications a fillet weld T-joint on mild steel in the vertical position; Job Sheet 16—Use short-circuit transfer to weld to specifications a fillet weld lap joint on mild steel in the overhead position; Job Sheet 17—Use short-circuit transfer to weld to specifications a fillet weld T-joint on mild steel in the overhead position
— Short circuit transfer (flat, single pass, multi-pass, multi-directional) groove weld of plain carbon steel in all positions	*GMAW and FCAW*, Unit 2, Job Sheet 8—Use short-circuit transfer to weld to specifications a V-groove butt joint on mild steel in the flat position; Job Sheet 12—Use short-circuit transfer to weld to specifications a V-groove butt joint on mild steel in the horizontal position; Job Sheet 15—Use short-circuit transfer to weld to specifications a V-groove butt joint on mild steel in the vertical position; Job Sheet 18—Use short-circuit transfer to weld to specifications a V-groove butt joint on mild steel in the overhead position

Occupation: Gas Metal Arc Welder	MAVCC Tasks
— Spray transfer (flat, single pass, multi-pass, and multi-directional) fillet weld of plain carbon steel plate	*GMAW and FCAW*, Unit 2, Job Sheet 20—Use spray transfer to weld to specifications a fillet weld lap joint on mild steel in the flat position; Job Sheet 21—Use spray transfer to weld to specifications a fillet weld T-joint on mild steel in the flat position; Job Sheet 22—Use spray transfer to weld to specifications a fillet weld lap joint on mild steel in the horizontal position; Job Sheet 23—Use spray transfer to weld to specifications a fillet T-joint on mild steel in the horizontal position
— Spray transfer (flat, single pass, multi-pass, and multi-directional) groove weld of plain carbon steel in 1G position	*GMAW and FCAW*, Unit 2, Job Sheet 24—Use spray transfer to weld to specifications a V-groove butt joint on mild steel in the flat position
Short Circuit Transfer	
D.05 Make fillet welds, all positions, on plain carbon steel in 2F position—flat, multiple pass, multi-directional, surfacing welds	See job sheets listed under D.04, short-circuit transfer fillet weld of plain carbon steel in all positions.
D.06 Make groove welds, all positions, on plain carbon steel plate with backing in 1G(R) without backing	See job sheets listed under D.04, short-circuit transfer groove weld of plain carbon steel in all positions.
Spray Transfer	
D.07 Make 1F-2F welds on plain carbon steel plate — Flat, multi-directional — .035 or .045 diameter E70S-X electrodes — Argon/2%–5% Oxygen shielding gas	See job sheets listed under D.04, spray transfer fillet weld of plain carbon steel plate.
D.08 Make 1G welds on plain carbon steel plate with backing	*GMAW and FCAW*, Unit 2, Job Sheet 24—Use spray transfer to weld to specifications a V-groove butt joint on mild steel in the flat position
Duty G: Perform Manual Oxyfuel (OF) Cutting—Refer to *Oxyacetylene Welding and Cutting* for this duty.	
Duty I: Perform Air Carbon Arc Cutting (Gouging)—Refer to *Shielded Metal Arc Welding* for this duty.	

State of Oklahoma Welding Duty/Task Crosswalk

Occupation: Gas Metal Arc Welder	MAVCC Tasks
Duty J: Perform Plasma Arc Cutting and Gouging—Refer to *Gas Tungsten Arc Welding and Plasma Arc Cutting,* Unit 3, "Plasma Arc Cutting," for this duty.	
Duty K: Perform Welding Inspection and Testing	
K.01 Examine cut surfaces and edges of prepared base metal parts — Appearance — Uniformity — Proper fit-up — Base metal preparation	Every job sheet in Unit 2 of *GMAW and FCAW* (with the exception of Job Sheets 1 through 4, Job Sheet 19, Job Sheets 25 and 26, Job Sheet 37, and Job Sheet 41) requires the student to prepare plates and inspect welds.
K.02 Examine tack, intermediate layers, and completed welds — Visual check for weld discontinuity and defects to an acceptable criteria — Destructive or non-destructive examination	*GMAW and FCAW*—Unit 2, Job Sheets 5 through 8, 10 through 18, 20 through 24, 27 through 36, 38 through 40, 42 through 44 *GMAW and FCAW*, Unit 2, Job Sheet 8—Use short-circuit transfer to weld to specifications a V-groove butt joint on mild steel in the flat position; Job Sheet 9—Perform a guided-bend test on a welded V-groove butt joint; Job Sheet 12—Use short-circuit transfer to weld to specifications a V-groove butt joint on mild steel in the horizontal position; Job Sheet 15—Use short-circuit transfer to weld to specifications a V-groove butt joint on mild steel in the vertical position; Job Sheet 18—Use short-circuit transfer to weld to specifications a V-groove butt joint on mild steel in the overhead position; Job Sheet 24—Use spray transfer to weld to specifications a V-groove butt joint on mild steel in the flat position; Job Sheet 38—Use pulsed-spray transfer to weld to specifications a V-groove butt joint on mild steel in the flat position; Job Sheet 39—Use pulsed-spray transfer to weld to specifications a V-groove butt joint on mild steel in the horizontal position; Job Sheet 40—Use pulsed-spray transfer to weld to specifications a V-groove butt joint on mild steel in the vertical position; Job Sheet 42—Use surface tension transfer to weld to specifications a V-groove butt joint on mild steel in the flat position; Job Sheet 43—Use surface tension transfer to weld to specifications a V-groove butt joint on mild steel in the horizontal position; Job Sheet 44—Use surface tension transfer to weld to specifications a V-groove butt joint on mild steel in the vertical position

Occupation: Flux-Cored Arc Welder	MAVCC Tasks
Duty A: Demonstrate Employability Skills—Refer to page xxi of this crosswalk for these tasks. **Safety**—Refer to page xxi of this crosswalk for these tasks. **Basic Academic Skills—**Refer to page xxiv of this crosswalk for these tasks. **Blueprint Reading**—Refer to page xxv of this crosswalk for these tasks. **Measurement Tools and Techniques**—Refer to page xxv of this crosswalk for these tasks.	
Duty B: Interpret Drawing and Welding Symbols and Written Welding Procedures	
B.01 Interpret basic elements of drawing/ sketch	*GMAW and FCAW*, Unit 3—Job Sheets 4 through 15 *Fundamentals of Welding*, Unit 7—Welding Print Reading (entire unit)
— Structural members	*Fundamentals of Welding*, Unit 7, Objective 14—Structural shapes
— Sequence of assembly	*Fundamentals of Welding*, Unit 7, Assignment Sheet 8—Construct adjacent parts in an assembly section
— Dimensions and tolerances	*Fundamentals of Welding*, Unit 7, Objective 5—Dimensioning; Objective 7—Methods of dimensioning; Assignment Sheet 5—Interpret tolerance dimensions in decimals, fractions, and degrees
— Scale	*Fundamentals of Welding*, Unit 7, Objective 9—Reduction and enlargement scales
— View interpretation	*Fundamentals of Welding*, Unit 7, Objective 3—Basic views; Objective 12—Types of section views; Student Supplement 2—Orthographic projection; Assignment Sheet 1—Construct a top view; Assignment Sheet 2—Construct a front view; Assignment Sheet 3—Construct a right side view; Assignment Sheet 7—Make a three-view sketch
— List of materials	*Fundamentals of Welding*, Unit 7, Objective 15—Requirements for a formal bill of materials; Objective 16—Requirements for an informal bill of materials
B.02 Interpret welding symbol information — Type of weld required — Filler metal — Special details — Non-destructive testing requirements	*GMAW and FCAW*—Unit 3, Job Sheets 4 through 15 *Fundamentals of Welding*, Unit 8, Basic Welding Joints and Symbols (entire unit)

State of Oklahoma Welding Duty/Task Crosswalk

Occupation: Flux-Cored Arc Welder	MAVCC Tasks
B.03 Interpret written welding procedures — Procedure ID number cross-referencing to drawing — Appropriate welding process/base materials/filler materials — Appropriate machine settings	GMAW and FCAW—Unit 3, "Flux-Cored Arc Welding"—All job sheets
Duty E: Perform Flux-Cored Arc Welding	
E.01 Perform safety inspections of equipment and accessories — Protective clothing — Equipment and hand tools — Equipment and accessories — Shielding gas equipment and accessories — Work area	*GMAW and FCAW,* Unit 3, Objective 16—Safety requirements for FCAW; All job sheets require students to practice safety precautions. *Fundamentals of Welding*, Unit 2, "General Safety" and Unit 3, "Welding Safety and First Aid" cover safety in detail.
E.02 Make minor external repairs to equipment & accessories (preventative maintenance only) — Manufacturer's recommendations — Company repair policy — Equipment troubleshooting – Birdnesting – Worm-holing – Porosity – Gas leaks	*GMAW and FCAW,* Unit 3, Objective 11—Guidelines for using drive rolls and guide tubes; Objective 17—Guidelines for troubleshooting FCAW problems; Student Supplement 4—FCAW Troubleshooting
E.03 Set up for flux cored arc welding operations on plain carbon steel plate — Mixed (75% argon/25% CO_2) or single (CO_2) shielding gas supply — E71T-X (gas-shielded) and E71T-X (self-shielded) electrodes (.045 minimum) — Review appropriate weld procedures — Base metal preparation — Filler metal selection — Proper hand tool selection — Adjust voltage — Set wire speed — Proper gas flow rate — Parts set up and preheated as necessary	*GMAW and FCAW*, Unit 3, Job Sheet 1—Set up or replace wire on a flux-cored wire feeder; Job Sheet 2—Set up FCAW equipment for semiautomatic flux-cored welding; Job Sheet 3—Prepare mild steel for FCAW

Occupation: Flux-Cored Arc Welder	MAVCC Tasks
E.04 Operate flux cored arc welding equipment — Flat single pass surfacing welds — Flat multiple pass, multi-directional, surfacing welds — Workmanship	*GMAW and FCAW*, Unit 3, Job Sheets 4 through 15
E.05 Make fillet welds, 1F, 2F, 3F, on plain carbon steel plate	*GMAW and FCAW*, Unit 3, Job Sheet 4—Weld to specifications a fillet weld lap joint on mild steel in the flat position; Job Sheet 5—Weld to specifications a fillet weld T-joint on mild steel in the flat position; Job Sheet 6—Weld to specifications a fillet weld lap joint on mild steel in the horizontal position; Job Sheet 7—Weld to specifications a fillet weld T-joint on mild steel in the horizontal position; Job Sheet 8—Weld to specifications a fillet weld lap joint on mild steel in the vertical position; Job Sheet 9—Weld to specifications a fillet weld T-joint on mild steel in the vertical position
E.06 Make groove weld, 1G, 2G, and 3G positions, on plain carbon steel plate with backing	*GMAW and FCAW*, Unit 3, Job Sheet 12—Weld to specifications a V-groove butt joint on mild steel in the flat position; Unit 3, Job Sheet 13—Weld to specifications a V-groove butt joint on mild steel in the horizontal position; Unit 3, Job Sheet 14—Weld to specifications a V-groove butt joint on mild steel in the vertical position
Duty G: Perform Manual Oxyfuel (OF) Cutting—Refer to *Oxyacetylene Welding and Cutting* for this duty.	
Duty I: Perform Air Carbon Arc Cutting (Gouging)—Refer to *Shielded Metal Arc Welding* for this duty.	
Duty J: Perform Plasma Arc Cutting and Gouging—Refer to *Gas Tungsten Arc Welding and Plasma Arc Cutting,* Unit 3, "Plasma Arc Cutting," for this duty.	

State of Oklahoma Welding Duty/Task Crosswalk

Occupation: Flux-Cored Arc Welder	MAVCC Tasks
Duty K: Perform Welding Inspection and Testing	
K.01 Examine cut surfaces and edges of prepared base metal parts — Appearance — Uniformity — Proper fit-up — Base metal preparation	*GMAW and FCAW*, Unit 3, Job Sheets 4 through 15 require the student to prepare plates and inspect welds.
K.02 Examine tack, intermediate layers, and completed welds — Visual check for weld discontinuity and defects to an acceptable criteria — Destructive or non-destructive examination	*GMAW and FCAW*, Job Sheets 4 through 15