

MEMORANDUM OF UNDERSTANDING
BETWEEN
THE GEORGIA DEPARTMENT OF EDUCATION
AND
THE TECHNICAL COLLEGE SYSTEM OF GEORGIA
REGARDING
ARTICULATED CREDIT FOR THE WELDING PROGRAM

This Memorandum of Understanding (“MOU” or “Agreement”) is made and entered into by and between the Georgia Department of Education (“GaDOE”) and the Technical College System of Georgia (“TCSG”) (individually a “Party” and collectively as the “Parties”) regarding the Articulation of Credit Agreement for the Welding Program (“Initiative”).

WHEREAS the purpose of the Initiative is to provide students with the opportunity to receive specified college credit as a result of the successful completion of specified high school courses taken in a pathway and an external assessment or credential; and

WHEREAS this Initiative will allow students to receive credentialing in the specified field more quickly and without duplication of coursework between high school and college curriculum; and

WHEREAS GaDOE and TCSG are the primary providers of these curricula, articulation between the two agencies will facilitate the goals of the Initiative.

NOW, THEREFORE, inconsideration of the mutual promises exchanged herein, the Parties, with acknowledgement that the policies for awarding credit vary from one technical college to another and is within the sole discretion of the technical college, hereby agree as follows:

1. TCSG agrees that colleges, upon the evaluation of a student’s coursework and assessments, may award coursework for the following courses:

A. Introduction to Welding Technology (WELD 1000) **and** Oxyfuel and Plasma Cutting (WELD 1010) provided that the enrolling student has successfully completed the following:

I. Three (3) GaDOE Welding courses with a final grade of “C” or better

GaDOE Welding Course Number	GaDOE Welding Course Name
46.54500	Industry Fundamentals and Occupational Safety
48.58100	Introduction to Metals
48.55100	Welding I

II. American Welding Society (“AWS”) SENSE Level I exam *or* College designated assessment which may include demonstration.

2. The Parties agree that they shall safeguard the confidentiality of student data as required by the Federal Family Educational Rights and Privacy Act (FERPA, 20 U.S.C. § 1232g, 34 C.F.R. § 99.33(a)) and all other applicable laws and regulations.
3. The Parties acknowledge and agree that neither Party shall be responsible for any loss, injury, or other damage to the person or property of anyone participating in the Initiative unless such loss, injury, or damage results from the negligence or willful conduct of that party, its agents, officers, or employees.
4. This relationship is intended solely for the mutual benefit of the parties hereto, and there is no intention, express or otherwise, to create any rights or interest for any party or person other than the parties; without limiting the generality of the forgoing, no rights are intended to be created for any student, parent, or guardian of any student, spouse, next of kin, employer, or prospective employer of any participant of the Initiative.
5. Each Party shall designate a single point of contact to address and resolve any issues or concerns with anything related to this Agreement. Each Party shall notify the other party in writing within fourteen (14) calendar days of any change of the point of contact. The following individuals are designated by their respective Party as the initial point of contact:

GaDOE:

Barbara M. Wall, Ed.D.
Director of Career, Technical, and Agricultural Education
Suite 2053 Twin Towers East
205 Jesse Hill, Jr. Drive
Atlanta, Georgia 30334
Cell: 404-387-1666
bwall@doe.k12.ga.us

TCSG:

Name
Title
Street Address
City
Phone #
Email address

6. This Agreement shall become effective upon date of last signature and shall end on August 23, 2022.
7. The Parties may renew this Agreement with a mutually signed written agreement for successive one (1) year terms up to four (4) additional years.
8. The terms and conditions of this Agreement shall be periodically reviewed by the Parties. Each Party agrees to inform the other regarding curriculum or assessment changes that may impact the terms of this Agreement.
9. No modifications or alterations of this Agreement will be valid or effective unless each modification or alteration is made as an Amendment to the Agreement and signed by both parties.
10. This Agreement may be terminated by either Party without reason or cause by providing to the other party written notice not less than thirty (30) calendar days in advance of the desired termination date.
11. Each party represents that there is no litigation or proceeding pending, or to its knowledge, threatened against it having a material adverse effect on the right of the Party to secure this Agreement or the ability of the Party to comply with any of its obligations under this Agreement.
12. No Party will be deemed to have waived any provisions of this Agreement unless such waiver is made explicit in writing and signed by the Party waiving such provision. No waiver shall be deemed to be a continuing waiver unless so stated in writing.
13. This Agreement shall not be assigned or transferred unless consented to in writing by the Department.
14. If any provision of the Agreement is determined to be invalid or unenforceable, such determination shall not affect the validity or enforceability of any other part or provision of the Agreement. Further, if any provision of the Agreement is determined to be unenforceable by virtue of its scope but may be made enforceable by a limitation of the provision, the provision shall be deemed to be amended to the minimum extent necessary to render it enforceable under the applicable law.
15. This Agreement shall be governed by, construed, and applied in accordance with the laws of the State of Georgia. Any action brought by one Party to this Agreement against the other shall be brought in the Superior Court of Fulton County.
16. This Agreement may be executed in one or more counterparts which, when taken together, will constitute one agreement. Copies of this Agreement will be equally binding as originals and faxed or scanned and emailed counterpart signatures will be sufficient to evidence execution.

IN WITNESS WHEREOF, the parties state and affirm that they are duly authorized to bind the respected entities designated below as of the day and year indicated.

GEORGIA DEPARTMENT OF EDUCATION

MATT JONES, Chief of Staff and Designee

Date

TECHNICAL COLLEGE SYSTEM OF GEORGIA

GREG DOZIER, Commissioner

Date

Welding GaDOE/TCSG Crosswalk Form

Information	
Pathway Name	Welding Pathway
TCSG Technical Certificate of Credit	TCC – Basic Shielded Metal Arc Welder (FS31)
Credentials of Value	

Alignment Analysis			
TCSG - WELD 1010-Oxyfuel and Plasma Cutting	GADOE Courses		
	Industry Fundamentals and Occupational Safety - 46.54500	Introduction to Metals - 48.58100	Welding I - 48.55100
Safety Procedures			
• Demonstrate safe handling of cylinders	AC-1FOS-2	AC-1M-3	AC-W1-2
• Identify protection procedures of regulator seats, gauges, hoses and fittings torches and tips		AC-1M-6	AC-W1-2
• Demonstrate personal safety procedures by wearing gloves, suitable body protection, adequate shade or eye protection, and/or high-top shoes or boots	AC-1FOS-2	AC-1M-3	AC-W1-2
• Remove flammable materials from cutting area	AC-1FOS-2	AC-1M-3	AC-W1-2
Metal Heating and Cutting Techniques			
• Define rapid oxidation		AC-1M-6	AC-W1-3
• Demonstrate reaction of preheated steel and pur oxygen		AC-1M-6	AC-W1-3
• Select equipment that will produce preheat flame and oxygen jet for cutting		AC-1M-6	AC-W1-3
• Assemble cutting equipment		AC-1M-6	AC-W1-3
• Identify protection procedures of regulator seats and gauges, hoses and fittings, torches and tips		AC-1M-6	AC-W1-3
• Set up equipment		AC-1M-6	AC-W1-3
• Determine when preheat temperature is reached		AC-1M-6	AC-W1-3
• Describe safe and appropriate metal cutting techniques		AC-1M-6	AC-W1-3
Manual and Automatic Oxyfuel Cutting Techniques			

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<ul style="list-style-type: none"> Demonstrate manual cuts free hand with guide, pierce holes, bevel, thin metal circular cuts, and gauging 		AC-1M-6	AC-W1-3
<ul style="list-style-type: none"> Set up equipment 		AC-1M-6	AC-W1-3
<ul style="list-style-type: none"> Demonstrate aligning machine with metal to be cut, set travel speed; make straight cuts and bevels 		AC-1M-6	AC-W1-3
Oxyfuel Pip Cutting			
<ul style="list-style-type: none"> Layout line on pipe to make a bevel cut 			
<ul style="list-style-type: none"> Demonstrate cuts as laid out for configured pipe joints 			
<ul style="list-style-type: none"> Demonstrate bevel cuts on pipe 			
Plasma Torch and Theory			
<ul style="list-style-type: none"> Define plasma torch theory 			AC-W1-8
<ul style="list-style-type: none"> Identify plasma torch parts 			AC-W1-8
Plasma Machine Set Up and Operation			
<ul style="list-style-type: none"> Select proper equipment, gas/air pressure, and demonstrate set up for ferrous/non-ferrous and material thickness 			AC-W1-8
Plasma Cutting Techniques			
<ul style="list-style-type: none"> Executive ferrous/non-ferrous straight cuts and pattern and bevel cuts 			AC-W1-8

Welding GaDOE/TCSG Crosswalk Form

Information	
Pathway Name	Welding Pathway
TCSG Technical Certificate of Credit	TCC – Basic Shielded Metal Arc Welder (FS31)
Credentials of Value	

Alignment Analysis			
TCSG - WELD 1040 – Flat Shielded Metal Arc Welding	GADOE Courses		
	Industry Fundamentals and Occupational Safety - 46.54500	Introduction to Metals - 48.58100	Welding I - 48.55100
SMAW Safety and Health Practices			
<ul style="list-style-type: none"> • Identify safe practices associated with shielded metal arc welding in the lab and industrial environment. 	AC-1FOS-2	AC-1M-6 AC-1M-3	AC-W1-2
Fundamental SMAW Theory			
<ul style="list-style-type: none"> • Identify and define the fundamental principles of SMAW as welding in performed. 		AC-1M-6	AC-W1-6
Basic Electrical Principles			
<ul style="list-style-type: none"> • Define the basic principles of electricity and its conversion to the SMAW application. 		AC-1M-6	AC-W1-6
SMAW Machines and Set Up			
<ul style="list-style-type: none"> • List the different power sources common to the SMAW process. 		AC-1M-6	AC-W1-6
<ul style="list-style-type: none"> • Identify duty cycles and general operational procedures of SMAW equipment. 		AC-1M-6	AC-W1-6
Electrode Identification and Selection			
<ul style="list-style-type: none"> • List the three basic groups of mild steel electrodes. 		AC-1M-6	AC-W1-6
<ul style="list-style-type: none"> • Identify mild steel electrodes as defined by the AWS. 		AC-1M-6	AC-W1-6
Materials Selection and Preparation			
<ul style="list-style-type: none"> • Describe proper pre-weld preparation and selection. 		AC-1M-6	AC-W1-6
<ul style="list-style-type: none"> • Demonstrate proper tack welding techniques, relieving welding distortion, and post weld cleaning. 		AC-1M-6	AC-W1-6
<ul style="list-style-type: none"> • Demonstrate the ability to make exact measurements 	AC-1FOS-3	AC-1M-6	AC-W1-6

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Production of Beads and Joints in the Flat Position			
<ul style="list-style-type: none"> Adjust amperage and select welding current for producing surfacing welds in the flat position using appropriate AWS coded "fill freeze" electrodes. 			AC-W1-6
<ul style="list-style-type: none"> Produce satisfactory welds on butt (closed and open), lap, tee joints. 			
<ul style="list-style-type: none"> Pass fillet weld soundness test (break test). 			AC-W1-5 AC-W1-6
<ul style="list-style-type: none"> Adjust amperage and select welding current for producing surfacing welds in the flat position using appropriate AWS coded "fast freeze" electrodes. 		AC-1M-6	AC-W1-6
<ul style="list-style-type: none"> Produce satisfactory welds on butt (closed and open), lap, tee (single and multipass). 			
<ul style="list-style-type: none"> Pass fillet weld soundness test (break test). 		AC-1M-6	AC-W1-6
<ul style="list-style-type: none"> Adjust amperage and select welding current for producing surfacing welds in the flat position using appropriate AWS coded "fast fill" electrodes. 			
<ul style="list-style-type: none"> Produce satisfactory welds on butt (closed and open), lap, tee (single and multipass). 			
<ul style="list-style-type: none"> Pass fillet weld soundness test (break test). 			
<ul style="list-style-type: none"> Adjust amperage and select welding current for producing surfacing welds in the flat position using low hydrogen electrodes. 			AC-W1-6
<ul style="list-style-type: none"> Produce satisfactory welds on butt, lap, tee joints. 			
<ul style="list-style-type: none"> Pass guided bend or side bend test on vee groove with or without backing. 			

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Information	
Pathway Name	Welding Pathway
TCSG Technical Certificate of Credit	TCC – Basic Shielded Metal Arc Welder (FS31)
Credentials of Value	

Alignment Analysis			
	GADOE Courses		
	Industrial Fundamentals and Occupational Safety - 46.54500	Introduction to Metals- 48.58100	Welding I – 48.55100
TCSG- Weld 1000 – Introduction to Welding Technology			
Industrial Safety and Health Practices			
<ul style="list-style-type: none"> • Identify gas cylinder hazards and their prevention. 	AC-1F08-2	AC-1M-3	AC-W1-2
<ul style="list-style-type: none"> • Identify electrical shock hazards and their prevention 	AC-1F0S-2	AC-1M-3	AC-W1-2
<ul style="list-style-type: none"> • Identify health hazards in a welding lab 	AC-1F0S-2	AC-1M-3	AC-W1-2
<ul style="list-style-type: none"> • Develop and exhibit good safety and health practices 	AC-1F0S-2	AC-1M-3	AC-W1-2
<ul style="list-style-type: none"> • Identify exists used in fire drill 	AC-1F0S-2	AC-1M-3	
<ul style="list-style-type: none"> • Identify the types of fire extinguishers and their use 	AC-1F0S-2	AC-1M-3	
<ul style="list-style-type: none"> • Locate and identify first aid station 	AC-1F0S-2	AC-1M-3	
<ul style="list-style-type: none"> • Practice established laboratory operating and safety procedures 	AC-1F0S-2	AC-1M-3	AC-W1-2
<ul style="list-style-type: none"> • Identify the types of welding power sources and identify the type of current they produce 	AC-1F0S-2		AC-W1-2
<ul style="list-style-type: none"> • Determine the operating capacity of a welding machine 	AC-1F0S-2		AC-W1-2
Hand Tool and Power Machine Use			
<ul style="list-style-type: none"> • Demonstrate the ability to safely use and operate hand and power tools 	AC-1F0S-4	AC-1M-4	
Measurement			
<ul style="list-style-type: none"> • Demonstrate the ability to make exact measurements using the English system 	AC-1F0S-3	AC-1M-5	AC-W1-4

Welding GaDOE/TCSG Crosswalk Form

<ul style="list-style-type: none"> Demonstrate the ability to make exact measurements using the metric system 	AC-1F0S-3	AC-1M-5	AC-W1-4
Welding Career Potentials			
<ul style="list-style-type: none"> Discover the potentials of a welding career 	AC-1F0S-9	AC-1M-1.6	AC-W1-1.6
Oxyacetylene Welding Safety and Use			
<ul style="list-style-type: none"> Discuss the history of oxyacetylene welding and cutting 		AC-1M-2	
<ul style="list-style-type: none"> List and explain the terms used in oxyacetylene welding and cutting 			AC-W1-3
<ul style="list-style-type: none"> List and explain the chemical reaction that takes place in oxyacetylene welding 		AC-1M-6	AC-W1-3
<ul style="list-style-type: none"> Demonstrate industry recognized work habit and dress code requirements. 	AC-1F0S-1	AC-1M-1	AC-W1-1
<ul style="list-style-type: none"> Apply all workplace safety rules 	AC-1F0S-1	AC-1M-1	AC-W1-1
<ul style="list-style-type: none"> Apply all special precautions in oxyacetylene welding 		AC-1M-6	AC-W1-3
<ul style="list-style-type: none"> Identify all working parts and functions of each regulator 	AC-1F0S-2		AC-W1-3
<ul style="list-style-type: none"> Describe cylinder construction 	AC-1F0S-2		
<ul style="list-style-type: none"> Demonstrate proper storage procedures for cylinders and regulators 	AC-1F0S-2	A C-1M-3	AC-W1-2
<ul style="list-style-type: none"> Identify the working parts of oxyacetylene torches and cutting heads 		AC-1M-6	AC-W1-3
<ul style="list-style-type: none"> Identify and compare tip sizes 		AC-1M-6	AC-W1-3
<ul style="list-style-type: none"> Demonstrate the proper use and care of hoses and tools used in welding repairs 		AC-1M-6	AC-W1-3
Oxyacetylene Welding practices			
<ul style="list-style-type: none"> Demonstrate torch correct torch angle and/or pattern 			
<ul style="list-style-type: none"> Demonstrate the ability to run torch patterns 			
<ul style="list-style-type: none"> Demonstrate the ability to weld joints 			
<ul style="list-style-type: none"> Demonstrate the ability to control the puddle 			
<ul style="list-style-type: none"> Demonstrate the ability to run uniform beads in a straight line with penetration 			
<ul style="list-style-type: none"> Demonstrate the ability to weld filler rod joints 			

Welding GaDOE/TCSG Crosswalk Form

<ul style="list-style-type: none"> • Demonstrate the ability to weld butt joints 			
<ul style="list-style-type: none"> • Demonstrate the ability to weld an open butt joint 			
<ul style="list-style-type: none"> • Demonstrate the ability to weld a lap joint in any position 			
Brazing			
<ul style="list-style-type: none"> • Compare and contrast brazing, braze welding, bronze welding, and silver brazing 			
<ul style="list-style-type: none"> • List the proper temperatures for brazing 			
<ul style="list-style-type: none"> • List the various forms of fluxes 			
<ul style="list-style-type: none"> • Explain shear, tensile, and ductility of metals 			
<ul style="list-style-type: none"> • Demonstrate the ability to manipulate a torch without causing distortion 			
<ul style="list-style-type: none"> • Identify brazing alloys 			
<ul style="list-style-type: none"> • Demonstrate the ability to braze joints 			