

Student Competency Record
Welding II
8673 - 36 weeks

_____ Student	_____ School Year
_____ School	_____ Teacher Signature

Traditional letter or numerical grades do not provide adequate documentation of student achievement in competency-based education; therefore, the Virginia Standards for CBE require a recording system to provide information about competencies achieved to employer, student-employee, and teacher. The Student Competency Record provides a means for keeping track of student progress. Ratings are assigned by the teacher for classroom competency achievement and by the teacher-coordinator in conjunction with the training sponsor when competence is evaluated on the job.

Tasks/competencies designated "Required" are considered essential statewide and are required of all students. In some courses, all tasks/competencies have been identified as required. Tasks/competencies marked "Optional" are considered optional; they and/or additional tasks/competencies may be taught at the discretion of the school division. Tasks/competencies marked with an asterisk (*) are considered sensitive, and teachers should obtain approval by the school division before teaching them. Student competency records should be kept as long as the student is enrolled in the school and for five years after the student graduates/leaves the school.

Note: Students with an Individualized Education Program (IEP) or an Individualized Student Alternative Education Plan (ISAEP) will be rated, using the following scale, only on the competencies identified in their IEP or ISAEP.

Students will be expected to achieve a **satisfactory rating** (one of the three highest marks) on the Student Competency Record (SCR) rating scale on at least 80 percent of the required (essential) competencies in a CTE course.

...RATING SCALE...

- 1 - Can teach others**
- 2 - Can perform without supervision**
- 3 - Can perform with limited supervision**
- 4 - Can perform with supervision**
- 5 - Cannot perform**

8673 36 weeks	Welding II TASKS/COMPETENCIES		Date	Rating
	Demonstrating Personal Qualities and Abilities			
Required	1	Demonstrate creativity and innovation.		
Required	2	Demonstrate critical thinking and problem solving.		
Required	3	Demonstrate initiative and self-direction.		
Required	4	Demonstrate integrity.		

Required	5	Demonstrate work ethic.		
Demonstrating Interpersonal Skills				
Required	6	Demonstrate conflict-resolution skills.		
Required	7	Demonstrate listening and speaking skills.		
Required	8	Demonstrate respect for diversity.		
Required	9	Demonstrate customer service skills.		
Required	10	Collaborate with team members.		
Demonstrating Professional Competencies				
Required	11	Demonstrate big-picture thinking.		
Required	12	Demonstrate career- and life-management skills.		
Required	13	Demonstrate continuous learning and adaptability.		
Required	14	Manage time and resources.		
Required	15	Demonstrate information-literacy skills.		
Required	16	Demonstrate an understanding of information security.		
Required	17	Maintain working knowledge of current information-technology systems.		
Required	18	Demonstrate proficiency with technologies, tools, and machines common to a specific occupation.		
Required	19	Apply mathematical skills to job-specific tasks.		
Required	20	Demonstrate professionalism.		
Required	21	Demonstrate reading and writing skills		
Required	22	Demonstrate workplace safety.		
Examining All Aspects of an Industry				
Required	23	Examine aspects of planning within an industry/organization.		
Required	24	Examine aspects of management within an industry/organization.		
Required	25	Examine aspects of financial responsibility within an industry/organization.		
Required	26	Examine technical and production skills required of workers within an industry/organization.		
Required	27	Examine principles of technology that underlie an industry/organization.		
Required	28	Examine labor issues related to an industry/organization.		
Required	29	Examine community issues related to an industry/organization.		
Required	30	Examine health, safety, and environmental issues related to an industry/organization.		
Addressing Elements of Student Life				
Required	31	Identify the purposes and goals of the student organization.		
Required	32	Explain the benefits and responsibilities of membership in the student organization as a student and in professional/civic organizations as an adult.		
Required	33	Demonstrate leadership skills through participation in student organization activities, such as meetings, programs, and projects.		

Required	34	Identify Internet safety issues and procedures for complying with acceptable use standards.		
Exploring Work-Based Learning				
Required	35	Identify the types of work-based learning (WBL) opportunities.		
Optional	36	Reflect on lessons learned during the WBL experience.		
Required	37	Explore career opportunities related to the WBL experience.		
Optional	38	Participate in a WBL experience, when appropriate.		
Applying Basic Safety Standards				
Required	39	Comply with federal, state, and local safety requirements, including the Occupational Safety and Health Administration (OSHA), Virginia Occupational Safety and Health (VOSH) Program, and Environmental Protection Agency (EPA) regulations.		
Required	40	Maintain a safe working environment.		
Required	41	Explain safe working practices around electrical hazards.		
Required	42	Identify emergency first aid procedures.		
Required	43	Identify the types of fires and the methods used to extinguish them.		
Optional	44	Demonstrate the use of a fire extinguisher.		
Required	45	Identify personal protective equipment (PPE) requirements.		
Required	46	Inspect PPE to determine whether it is safe to use.		
Required	47	Describe ventilation requirements and regulations pertaining to welding.		
Required	48	Inspect hand and power tools to visually identify defects.		
Required	49	Demonstrate lifting and carrying techniques.		
Required	50	Identify types of ladders.		
Optional	51	Demonstrate safe laddering techniques for various types of ladders		
Required	52	Describe safe scaffolding techniques.		
Required	53	Report injuries.		
Required	54	Report personal, environmental, and equipment safety violations to the appropriate authority.		
Required	55	Pass the safety exam.		
Working with Documents and Drawings				
Required	56	Interpret elements of a drawing or sketch.		
Required	57	Interpret welding symbol information.		
Required	58	Convert metric system measurements to and from U.S. customary (standard) system measurements.		
Required	59	Apply basic measuring skills to welding operations.		
Required	60	Calculate dimensions from a drawing with incomplete dimensions.		
Required	61	Follow the instructions on a job specifications sheet.		
Required	62	Interpret dimensions from a drawing with incomplete dimensions.		
Required	63	Fabricate simple parts from a drawing or a sketch.		
Oxyfuel Gas Cutting (OFC Track Burner)				
Required	64	Describe the theories behind machine OFC track burner.		

Optional	65	Perform safety inspections of all equipment and accessories.		
Optional	66	Identify minor external repairs to all equipment and accessories.		
Optional	67	Set up for machine OFC track burner operations on carbon steel.		
Optional	68	Operate machine OFC track burner equipment.		
Optional	69	Perform straight-cutting operations on carbon steel.		
Optional	70	Perform bevel-cutting operations on carbon steel.		
Demonstrating Thermal Cutting for Oxyfuel, Plasma, and Carbon Arc Cutting				
Required	71	Describe the theories behind thermal cutting processes.		
Required	72	Explain why one form of cutting is preferable to another.		
Required	73	Perform safety inspections of all equipment and accessories.		
Required	74	Identify minor external repairs to all equipment and accessories.		
Required	75	Set up for manual OFC operations and base metal preparation on carbon steel.		
Required	76	Operate manual OFC equipment.		
Required	77	Set up for plasma arc operations and base metal preparation on various metals.		
Required	78	Operate plasma arc equipment.		
Required	79	Set up for manual air carbon arc cutting (CAC-A) equipment.		
Required	80	Operate carbon arc equipment.		
Optional	81	Perform metal removal operations on carbon steel.		
Demonstrating Gas Tungsten Arc Welding (GTAW)				
Required	82	Describe the theories behind GTAW.		
Required	83	Perform safety inspections of all equipment and accessories.		
Required	84	Identify minor external repairs to all equipment and accessories.		
Required	85	Set up for GTAW operations and base metal preparation on ferrous and non-ferrous materials.		
Required	86	Operate GTAW equipment.		
Required	87	Perform 1F and 2F fillet welds on various materials.		
Required	88	Perform 1G-groove welds on carbon steel, limited thickness.		
Required	89	Perform 1F–2F welds on aluminum.		
Required	90	Perform 1G welds on aluminum.		
Required	91	Perform 1F–2F welds on stainless steel.		
Required	92	Perform 1G–2G welds on stainless steel.		
Demonstrating Shielded Metal Arc Welding (SMAW)				
Required	93	Perform single-pass and multi-pass fillet welds on carbon steel in various positions.		
Required	94	Perform groove welds on carbon steel, limited thickness, in various positions.		
Demonstrating Gas Metal Arch Welding (GMAW)				
Required	95	Perform single and multi-pass pass welds on carbon steel, limited thickness, in various positions.		
Required	96	Perform groove welds on carbon steel, limited thickness, using various modes of transfer and in various positions.		
Demonstrating Visual Examination				

