

2020/2021 Student Competency Record
Electricity II
8534 - 36 weeks, 280 hours

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% 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**

8534 36 weeks, 280 hours	Electricity 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 (IT) 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 Construction Safety Standards (Core Safety)				
Required	39	Comply with federal, state, and local safety legal requirements.		
Required	40	Maintain a safe working environment.		
Required	41	Explain safe working practices around electrical hazards.		
Required	42	Inspect course-specific hand and power tools to visually identify defects.		
Required	43	Report injuries.		
Required	44	Report personal, environmental, and equipment safety violations to the appropriate authority.		
Required	45	Pass safety exam.		

	Solving Mathematical Problems Related to the Electrical Field			
Required	46	Solve problems using direct and inverse relationships.		
Required	47	Solve electrical problems using calculators.		
Required	48	Convert metric prefixes to their numerical equivalents and vice-versa.		
	Applying Basic Electrical Theory			
Required	49	Troubleshoot series circuits.		
Required	50	Troubleshoot parallel circuits.		
Required	51	Wire series-parallel (combination) circuits.		
Required	52	Calculate series-parallel (combination) circuits.		
Required	53	Troubleshoot series-parallel (combination) circuits.		
Required	54	Explain nameplate specifications related to motors, generators, and transformers.		
	Applying the National Electrical Code (NEC) Book			
Required	55	Apply the NEC requirements for electrical installation.		
	Identifying and Installing Conduit and Raceways			
Required	56	Identify various conduits and raceways.		
Required	57	Select material and wiring support systems.		
Required	58	Install conduits.		
	Examining Lighting Systems			
Required	59	Install fixtures.		
Required	60	Explain functions, operation, and characteristics of single-phase power systems.		
Required	61	Install power devices.		
	Exploring Panelboards and Switchboards			
Required	62	Identify basic components of service entrance equipment.		
Required	63	Select OCPDs.		
Required	64	Install OCPDs.		
Required	65	Install various ground fault circuit interrupter (GFCI) and arc fault circuit interrupter (AFCI) devices.		
	Identifying and Installing Grounding Systems			
Required	66	Identify characteristics of grounding systems.		
Required	67	Illustrate sizing, layout, and installation of grounding systems.		
	Installing Transformers			
Optional	68	Install transformers.		

