2020/2021 Student Competency Record
Technical Drawing and Design
8435 - 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% 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

8435 36 weeks		Technical Drawing and Design 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.		
		Introducing the Design Process		
Required	39	Describe the design process.		
Required	40	Apply the design process.		
Required	41	Analyze design solutions.		
Required	42	Refine the design solution.		
		Exploring Technical Drawing Foundations		
Required	43	Define *technical drawing*.		
Required	44	Compare architectural and civil engineering drawings.		
Required	45	Describe the history of drawing and design.		
Required	46	Maintain a reference library of technical data.		
Required	47	Maintain drawing equipment.		
Required	48	Select drawing-related media and materials to effectively communicate a solution for a design problem.		

Required	49	Apply geometric construction principles.		
Required	50	Apply mathematical calculations to technical drawings.		
Required	51	Apply English and metric measuring devices and systems to technical drawings.		
Required	52	Interpret technical documentation.		
Required	53	Apply principles of dimensioning, annotation, and lettering.		
Required	54	Create a title block.		
		Producing Technical Drawings		
Required	55	Apply technical drawing and design standards.		
Required	56	Develop 2-D patterns from 3-D objects.		
Required	57	Prepare technical sketches.		
Required	58	Revise drawings.		
Required	59	Prepare multiview drawings, using orthographic projections.		
Required	60	Prepare sectional view drawings.		
Required	61	Prepare pictorial drawings.		
Required	62	Prepare a set of architectural drawings.		
Required	63	Create solutions, using computer-aided drafting and design (CADD).		
		Producing Prototypes		
Required	64	Construct a prototype.		
Required	65	Produce a prototype, using a 3-D printer.		
		Locally Developed Tasks/Competencies		