

Student Competency Record
Aerospace Technology II
8488 - 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**

8488 36 weeks	Aerospace Technology 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.		
Understanding Aircraft Operations				
Required	39	Identify the licenses required to become a pilot		
Required	40	Complete a preflight checklist.		
Required	41	Simulate flight operations and maneuvers.		
Required	42	Plan a flight.		
Required	43	Simulate the navigation of aircraft, using instrumentation.		
Designing Aircraft				
Required	44	Apply the design process to aircraft design.		
Required	45	Construct an airfoil.		
Required	46	Test an airfoil.		
Required	47	Analyze airfoil test results.		
Required	48	Describe factors that affect aircraft design.		

Required	49	Construct an aircraft.		
Required	50	Identify emerging aircraft technologies.		
Required	51	Explain the importance of following a periodic aircraft maintenance schedule.		
Required	52	Identify aircraft maintenance and repair concerns.		
Required	53	Identify flight-line safety protocols when performing aircraft maintenance.		
Required	54	Identify flight-line safety equipment.		
	Examining Aviation Flight Safety			
Required	55	Identify flight crew safety protocols.		
Required	56	Research an aviation accident.		
Required	57	Identify flight safety equipment and safety protocols.		
Required	58	Describe the air traffic control (ATC) system.		
Required	59	Describe the responsibilities of ATC.		
	Working with Model Rockets			
Required	60	Model an extraterrestrial surface exploration vehicle.		
Required	61	Describe extra-orbital space exploration systems.		
Required	62	Design a device to solve a potential problem in space exploration.		
Required	63	Research trends in the space industry.		
Required	64	Design a multistage rocket.		
Required	65	Construct a multistage rocket.		
Required	66	Operate a multistage rocket.		
Required	67	Discuss advanced space travel theories and concepts.		
	Exploring sUAS Technology			
Required	68	Identify types of sUAS.		
Required	69	Research the evolution of UAS.		
Required	70	Analyze the commercial operations of sUAS.		
Required	71	Describe the recreational use of sUAS.		
Required	72	Describe regulations and requirements for sUAS.		
Required	73	Complete a flight simulation.		
Required	74	Plan a flight mission.		
Required	75	Construct a UAS.		
Required	76	Troubleshoot sUAS.		
Required	77	Operate an sUAS.		
Required	78	Research careers that use sUAS.		

