

Standards and Competencies for Introduction to Engineering Design (PLTW) (Course # 5793)

	Begin-End Yr
Standard 1 - Students will demonstrate leadership, citizenship, and teamwork skills required for success in the school, community, and workplace.	2009 -
1.1 - Exhibit positive leadership skills.	2009 -
1.2 - Participate in SkillsUSA as an integral part of classroom instruction.	2009 -
1.3 - Assess situations and apply problem-solving and decision-making skills to particular client relations in the community, and workplace.	2009 -
1.4 - Demonstrate the ability to work cooperatively with others in a professional setting.	2009 -
Standard 2 - Students will demonstrate proficiency in creating manual two-dimensional scale drawings.	2009 -
2.1 - Create accurate and complete manual scale drawings of two-dimensional objects and two-dimensional plans.	2009 -
2.2 - Apply drawing dimensioning rules using basic measurement systems.	2009 -
Standard 3 - Students will demonstrate proficiency in creating manual three-dimensional scale drawings.	2009 -
3.1 - Create complete orthographic projections of simple three-dimensional objects.	2009 -
3.2 - Create complete orthographic projections of complex three-dimensional objects.	2009 -
Standard 4 - Students will use the basic functions of a CAD software program to draw two-and three-dimensional objects.	2009 -
4.1 - Perform basic CAD software operations.	2009 -
4.2 - Use standard templates and create new templates for CAD drawing	2009 -
4.3 - Use a CAD program to draw and dimension simple two-dimensional objects.	2009 -
4.4 - Use a CAD program to draw and dimension orthographic projections of three-dimensional objects.	2009 -
Standard 5 - Students will demonstrate proficiency in creating sectional and pictorial drawings using a CAD software program.	2009 -
5.1 - Create sectional views of moderately complex solid objects.	2009 -
5.2 - Create pictorial drawings of a group of objects using a CAD program.	2009 -
Standard 6 - Students will use CAD software skills to produce complete sets of project drawings.	2009 -
6.1 - Draw individual components of a project using a CAD program.	2009 -
6.2 - Make assembly drawings including exploded assemblies, for a project, using a CAD program.	2009 -
6.3 - Create a bill of materials for a project using a CAD program.	2009 -
Standard 7 - Students will take personal responsibility for the safety of themselves, their co-workers, and bystanders.	2009 -
7.1 - Determine safe and correct procedures for working with computer equipment. Follow Occupational Safety & Health Administration (OSHA), Environmental Protection Agency (EPA) regulations, and manufactures' specifications according to the computer aided drafting industry. Comprehend the importance of a	2009 -
7.2 - Pass with 100 % accuracy a written examination relating specifically to the computer aided drafting industry	2009 -
7.3 - Pass with 100% accuracy a performance examination relating specifically to the computer aided drafting industry.	2009 -
7.4 - Maintain a portfolio record of written safety examinations and equipment examinations for which the student has passed an operational checkout by the instructor.	2009 -