



Course Overview

High School | Technology Education | CADD II - Last Updated on April 3, 2025

DESCRIPTION

K-12 Content Area | Mission & Philosophy Statement

- Young people are born investigators, with natural curiosities about the physical, biological, and social worlds they experience. Anchoring science, technology, engineering learning in real-world phenomena connects curiosities to core conceptual understandings.
- Students actively construct understanding through inquiry, experimentation, and analysis to develop science and engineering practices such as asking questions, planning and carrying out investigations, and constructing explanations and models.
- Integration of crosscutting concepts such as patterns, cause and effect, and systems thinking promote interdisciplinary understanding and sense-making of the natural world.
- The design process is central to the modern world. Architects, Engineers, Drafters, and Designers utilize technical tools to prototype, manufacture, and collaborate in the development of new products.

Course Description

This class will be a continuation and extension of the CADD 1 course. The introductory concepts taught in CADD 1 will be utilized to solve more advanced drafting problems as well as create more complex CAD drawings. Students will use knowledge of the design process from level 1 and apply their skills to develop solutions to more difficult problems. Content areas discussed will include section views, auxiliary views, advanced assemblies and utilization of a 3D printer to test CAD modeled solutions. Students will also have the opportunity to reverse-engineer objects and recreate them in CADD using precision measuring instruments.

STANDARDS

Pennsylvania Common Core - High School - Mathematics

CC.2.1.HS.F.2

CC.2.2.HS.C.8

CC.2.2.HS.C.9

CC.2.3.HS.A.1

CC.2.3.HS.A.3

CC.2.3.HS.A.7

CC.2.3.HS.A.12

CC.2.3.HS.A.13

CC.2.3.HS.A.14

CC.2.4.HS.B.5

Pennsylvania - Grade 10 - Science and Technology and Engineering

3.4.10.A3

3.4.10.B1

3.4.10.C1

3.4.10.C2

3.4.10.C3

3.4.10.D1

3.4.10.E4



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COURSE OBJECTIVES

The objective of the course is to meet the performance expectations, science and engineering practices and cross cutting concepts outlined in the Science, Technology and Engineering standards.

ASSESSMENT TYPES

The following assessment types will be used during the course:

- Curriculum-based Measures
- Formative Assessments
- Performance-based Assessments
- Summative Assessments

SUGGESTED METHODS OF INSTRUCTION

A technology education program demands the use of a variety of instructional strategies to foster design-based thinking. Below is a list of suggested strategies for high-quality instruction:

- Instructional components outlined in *The Framework for Teaching* by Charlotte Danielson
- Posing questions for investigation
- Cooperative learning and collaboration
- Inquiry, engineering, and design processes
- Developing models

RESOURCES

District Approved Program Resources	District Approved Supplemental Resources	District Approved Technology Resources
	Sketch Paper Isometric grid paper Grid paper Pencils, erasers, rulers Drawing boards Drawing kit boxes Objects to draw Color Inkjet paper	Autodesk Inventor software Desktop computers 3D printer 3D printer plastic filament Laser Printer