

Computer Aided Design

Technical Drawing and Design	9-12 Grade
Architectural Drawing and Design*	10-12 Grade
Engineering Drawing and Design*	10-12 Grade
Advanced Drawing and Design	11-12 Grade
*Denotes Prerequisite	Seniors may take Architecture without Prerequisite

Technical Drawing and Design

853000 Grade(s): 9-11

Credit: 1

Prerequisite: None

In this foundation course, students learn the basic language of technical drawing and design, and they design, sketch, and make technical drawings, models, or prototypes of real design problems. The course is especially recommended for future engineering and architecture students.

This course counts as an elective credit.

Engineering Drawing and Design

853500 Grade(s): 10-12

Credit: 1

Prerequisite: Technical Drawing and Design

Students explore the engineering design process and use a graphic language for product design, technical illustration, assembly, patent, and structural drawings. They increase their understanding of drawing and the design process and

techniques learned in the prerequisite course. Students use computers, calculators, and descriptive geometry and adhere to established standards to solve design problems.

This course counts as an elective credit.

Architectural Drawing and Design

854000 Grade(s): 10-12

Credit: 1

Prerequisite: Technical Drawing and Design

Students learn the principles of architecture and increase understanding of working drawings and construction techniques learned in the prerequisite course. Experiences include residential and commercial building designs, rendering, model development, and structural details. Students use computer-aided drawing and design (CADD) equipment and established standards or codes to prepare models for presentation. The course is especially beneficial to future architects, interior designers, or home builders.

This course counts as an elective credit.

Advanced Drawing and Design

854500 Grade(s): 11-12

Credit: 1

Prerequisite: Engineering Drawing & Design or Architectural Drawing and Design

Students use a graphic language for product design and technical illustration to increase their understanding of drawing techniques learned in the prerequisite courses. Students research design-related fields while identifying the role of advanced drawing and design in manufacturing and construction industry processes. They apply the design process, analyze design solutions, reverse engineer products, create 3-D solid models using CADD, construct physical models, and create multimedia presentations of finished designs. Students will complete a work portfolio based on a chosen graphic project.

This course counts as an elective credit.