

FOLSOM CORDOVA UNIFIED SCHOOL DISTRICT

**Course Outline
Computer Aided Drafting (CAD)**

Date: May 2002

Proposed Grade Level(s): 10 - 12

Grading: A-F

Prerequisites: Engineering Design With 'B' Grade Or Better

Subject Area: Technology

Course Length: 1 Year

Number of Credits: 5/Semester

COURSE DESCRIPTION:

This is an advanced course in Computer Aided Design. Students will become familiar with computer hardware, software, CAD management, and CAD language used in industry. Mechanical 2-D, 3-D, multiple part assemblies, and full sets of working drawings enhance students' previous drafting skills. All students will benefit from this course regardless of their respective learning styles, learning rates, or gender.

GENERAL GOALS/PURPOSES:

To increase the number of students who pursue engineering and engineering technology programs requiring a four or two-year college degree.

Students will create, represent, and interpret ideas through drawing.

Students will demonstrate an understanding of the principles of drafting equipment, CAD, materials, and procedures.

Students will demonstrate effective communication of information and solutions in a variety of contexts, including the preparation and presentation of information in different settings.

Students will develop the interpersonal skills; work habits, and acquires information that will lead to employment.

STUDENT READING COMPONENT:

Students will locate, understand, and interpret written information in documents such as manuals, graphs, and textbooks.

STUDENT WRITING COMPONENT:

Students will communicate thoughts, ideas, information, and messages in writing through letters, directions, reports, graphs, and flowcharts.

STUDENT ORAL COMPONENT:

Students will communicate orally in giving directions to a project and short presentations.

STUDENT MATH COMPONENT:

Students will perform basic and algebraic computations and approaches to practical problems by choosing appropriately from a variety of mathematical techniques.

DETAILED UNITS OF INSTRUCTION:

1. Engineering Careers
2. CAD software overview
3. Advanced Assembly Drawings
4. Fasteners
5. Presentation of full working drawings
6. Advanced 3-D CAD techniques
7. Architectural Mechanical Systems

THIS COURSE WILL PREPARE STUDENTS FOR THE HSEE AND/OR THE FCUSD EXIT EXAMS:

Math, Reading, Writing

LAB FEE IF REQUIRED: \$20 per year

SUBJECT AREA CONTENT STANDARDS TO BE ADDRESSED:

Industrial and Technology Education Content and Performance Standards 1996:

- Standard 1 Drafting
- Standard 2 Computer Aided Drafting

DISTRICT ESLR'S TO BE ADDRESSED:

When students complete an Industrial and Technology Education course, they will be:

1. **Self-directed Learners** who will be able to solve engineering problems;
2. **Effective Communicators** who can express technology concepts to others effectively;
3. **Quality Producers** who can solve technology problems in a neat and organized manner;
4. **Constructive Thinkers** who are able to approach complex technology problems in a organized, logical, and systematic fashion;
5. **Collaborative Workers** who can work in teams to accomplish a task; and
6. **Responsible Citizens** who accept responsibility for their actions.