Program Description - Through project-based learning, students receive the exposure and training they need to compete for the engineering, architecture and design jobs of the future. AutoCAD Software gives students access to a wide range of design tools that allow them to apply 3D modeling and visualization skills to a variety of design disciplines. Students studying architecture, interior design, mechanical engineering, manufacturing, civil engineering, geographic information systems, industrial design, and urban and rural planning, all benefit from exposure to AutoCAD professional tools.

Architectural Drafting (AutoCAD)

Technical Drafting	Introduction to Auto CAD	Architecture
NAME OF COURSE: Technical Drafting CIP: 15.1300.10 LENGTH OF COURSE: 2 semesters GRADE LEVEL 10, 11, 12 PREREQUISITE: Career Exploration COURSE DESCRIPTION: This course is an introduction to the career of drafting. Decision-making, educational planning and researching the drafting industry. Topics include analyzing personal career interests, values, and aptitudes in relationship to drafting. Course is designed for students with little or no drafting background. Course content includes careers in drafting/engineering, use of drafting equipment, drafting techniques, lettering, geometric construction, multi-view and isometric drawings, sectional and auxiliary views, and basic dimensioning. College credit may be granted through Eastern Arizona College inter-governmental agreements with San Carlos High School.	NAME OF COURSE: Introduction to Auto CAD CIP: 15.1300.20 LENGTH OF COURSE: 2 Semesters GRADE LEVEL 11 & 12 PREREQUISITE: Must complete Technical Drafting with a C or better, or with teacher approval. COURSE DESCRIPTION: Drafting is a universal language understood by engineers and technical workers throughout the world. This course offers a study of standardized drafting practices including freehand lettering, geometry of drafting, understanding views of objects, dimensioning, pictorial drawing and working assembly drawings. Students will gain hands-on experience using AutoCAD computer drafting software. Emphasis is placed on the integration of 3D solid modeling and 2D drafting output. These skills will include all aspects of drafting, problem solving skills, safety knowledge terms and safe work habits. College credit may be granted through Eastern Arizona College inter-governmental agreements with San Carlos High School.	NAME OF COURSE: Architecture CIP: 15 1300 25 LENGTH OF COURSE: 2 Semesters GRADE LEVEL 12 PREREQUISITE: Must complete at least one course from a selected program (i.e., business, nursing, construction etc. etc.). COURSE DESCRIPTION: The class will participate in more advanced hands-on, constructivist activities through a variety of engineering activities and challenges. Students will be instructed in residential architecture drafting techniques required to design and draft floor plans, exterior and interior details, and structural representations. The course will use architectural CAD software to develop a full set of residential house plans. ***Architectural Forces:*** In designing architectural structures, the physical forces acting upon the structure must be analyzed. Students will do hands-on studies and activities related to the forces of: o Tension o Compression o Twisting o shearing College credit may be granted through Eastern Arizona College inter-governmental agreements with San Carlos High School.

Created By: Cindy Barnes