

TECHNOLOGY EDUCATION

Course Title: Computer Applications

Grade Placement: 9-12

Prerequisite: None

Credit: 1 Unit

A course designed to explore the use of computers in the communication, construction, transportation, and manufacturing fields. Activities include computer-aided design and drafting, computer numerical control, telecommunications, and desktop publishing. Emphasis is placed on using professional level graphics and design software. Strong math skills are recommended for entry into this class. Students are responsible for the cost of materials used in products they take home. **This course satisfies the technology applications graduation requirement.**

Course Title: Architectural Graphics

Grade Placement: 10-12

Prerequisite: Computer Applications

Credit: 1 Unit

A laboratory oriented course related to construction drawings which emphasizes lettering practices and styles; relationship between points, lines, and planes through multi-views of buildings; size and shape description; depiction of construction methods for style, energy efficiency, safety, security, and human engineering; computer aided drafting; local, state and national building standards and codes; and reproduction media. Students are responsible for the cost of materials used in products they take home.

Course Title: Engineering Graphics

Grade Placement: 10-12

Prerequisite: Computer Applications

Credit: 1 Unit

A laboratory oriented course related to manufacturing drafting which emphasizes lettering practices and styles, sketching, problem solving, relationship between points and lines, shape and size description, geometric tolerancing, computer aided drafting, and reproduction media. Students are responsible for the cost of materials used in products they take home.

**Course Title: Computer Multimedia and Animation
Technology**

Grade Placement: 11-12

**Prerequisite: Computer Applications and either
Architectural Graphics or Engineering
Graphics and District Guidelines**

Credit: 1 Unit

A technical course which develops advanced knowledge and skills in the use of computers for multimedia presentations and digital animation. Course introduces students to 3-D modeling and rendering techniques and resources. This hands-on course allows students to create, edit, and render characters, vehicles, scenes or objects; and to design and produce multimedia presentations that use images, video, and audio resources to deliver a message. Students are responsible for the cost of materials used in products they take home. **This course satisfies the technology applications graduation requirement.**

Course Title: Research, Design and Development **Grade Placement: 11-12**
Prerequisite: Computer Applications and either **Credit: 1 Unit**
Architectural Graphics or Engineering
Graphics and District Guidelines

A research activity course designed to provide an opportunity for research, design, and development activities in one or more of the technology systems of communication; computer applications; construction; energy, power, and transportation; and manufacturing. Students pursue new knowledge and solve real-world problems. Activities include research data collection, problem solving, designing and developing prototypes and working models. Students are responsible for the cost of materials used in products they take home.

Course Title: Construction Systems **Grade Placement: 9-12**
Prerequisite: None **Credit: 1 Unit**

An exploratory course which addresses construction and manufacturing processes. Students study and use common construction tools, machines, and materials. Experience in planning, drafting, designing, and controlling construction systems and projects allows students to explore the organizational structures and management strategies in construction and manufacturing. Students are responsible for the cost of materials used in products they take home. This course is offered at Klein Forest High School.

Course Title: Architectural Construction **Grade Placement: 10-12**
Prerequisite: Computer Applications and either **Credit: 1 Unit**
Architectural Graphics or Engineering
Graphics and District Guidelines

A technical course that focuses on the use of tools, equipment, and materials used for the construction of residential and light commercial structures. Student activities may include the design, drafting, and construction of residential structures. Students are responsible for the cost of materials used in products that they take home.

Course Title: Principles of Technology I **Grade Placement: 10-12**
Prerequisite: One Course in Science and Algebra I **Credit: 1 Science Unit**

An applied physics course designed to provide a study in force, work, rate, resistance, energy, power, and force transformers as applied to mechanical, fluid, thermal, and electrical energy that comprise simple and technological devices and equipment. The course reinforces the mathematics applications a student needs to understand and apply the principles being studied. Students are responsible for the cost of materials used in products that they take home. This course is offered at Klein Forest High School.

Statewide Articulation and Tech Prep college credit are available through community colleges throughout Texas. In addition, a local agreement with the North Harris Montgomery Community College District is available to earn college credit.

