

APPLIED TECHNOLOGY

The mission of the department is to develop student potential in a comprehensive knowledge and activity based educational program ranging from the college-bound student to technical employment after high school. By focusing on applying knowledge, creativity and problem solving, this program will provide the student with an understanding of the impact of technology on individuals, society and the environment. Through the use of computers and other high tech tools of instruction, students learn to work effectively as individuals and as team members to select the appropriate technology to solve problems.

CAD ARCHITECTURE 1 — 1/2 Unit of credit Freshmen, Sophomores, Juniors, Seniors

Prerequisite: None

The student will learn to design a home, draw leisure time projects, and gather information to make a good home purchase in the future. Topics include: the AutoCAD drafting program, drafting techniques, floor plan development, principles of good design, construction principles, interior design, and real estate investing.

CAD ARCHITECTURE 2 — 1 Unit of credit Sophomores, Juniors, Seniors

Prerequisite: CAD Architecture 1

An expansion of Architectural Drafting 1, this course will focus on the working representations of basic floor plans, presentation drawings, and floor plan portfolios using the most recent form of AutoCAD and Architectural 3D. Topics include: building codes, reading blueprints, designing commercial buildings, client additions, 3D perspectives, and construction technology.

CAD ARCHITECTURE 3 — 1 Unit of credit Juniors, Seniors

Prerequisite: CAD Architecture 2

A continuation of Architectural Drafting 1 and 2, students will gain a broader understanding of the role of an architect through research, responsibility and an in depth study of working floor plans. Topics include: working floor plans, detail plans, client portfolios, door and window schedules, cost estimates, material lists, and scale models.

CAD ENGINEERING — 1/2 Unit of credit Freshmen, Sophomores, Juniors, Seniors

Prerequisite: None

This course provides students with an understanding of the features, limitations, and considerations required in the operation of the CAD system. Students will gain hands-on experience using the newest CAD software, computers and output devices available. Topics include: drawing commands and techniques, orthographic viewing, engineering concepts, design, problem solving, and career opportunities in CAD.

ADVANCED CAD ENGINEERING HONORS — 1 Unit of credit Sophomores, Juniors, Seniors

Prerequisite: CAD Engineering

In this course students will gain an understanding and apply both basic and advanced principles associated with design and engineering. Students will work through several engineering design problems where they will research and calculate outcomes for each problem before testing working prototypes developed in class. Students will use advanced Computer Aided Drafting software, civil engineering simulation software, 3 Dimensional Printers and prototype development. Engineering topics to be explored include; mechanical, civil, electrical, aeronautical, marine, thermal and automotive. 10

HOME IMPROVEMENT AND DESIGN – 1/2 Unit of credit Freshmen, Sophomores, Juniors, Seniors

Prerequisite: None

This semester long course will cover a variety of topics such as the safe use of tools, electrical house wiring, small engine maintenance and repair, principles of real estate, construction techniques, drywall installation/repair, plumbing, the use of fastening and measuring devices, interior finishing and decorating design principles. This course may be repeated for credit.

WOODCRAFT 1 — 1/2 Unit of credit Freshmen, Sophomores, Juniors, Seniors

Prerequisite: None

Woodcraft 1 is designed for the student who wants to gain skills in the fabrication of wooden furniture and other wooden articles. The content of this course includes: safety in the use of woodworking machines and hand tools, simple joinery and gluing, surface preparation and finishing. Students are required to design and build a Clock project and table as their first projects in woodworking. Students will also be introduced to Computer Aided Manufacturing design and processes such as a CNC Router and Laser Engraving. Additional free choice projects may then be done as time allows.

WOODCRAFT 2 — 1/2 Unit of credit Freshmen, Sophomores, Juniors, Seniors

Prerequisite: Woodcraft 1

This course is designed for the student who would like to develop more complex woodworking skills. In this class the student will design individual projects of increased complexity from previous ones. Project emphasis will be on complex joinery and panel door construction. Students will also use Computer Assisted Design (CAD) software to develop projects to be produced on a Computer Numeric Controlled (CNC) Router and Laser Engraver.