

Name of School:

Name of Course: General Technology I

Instructor Information

Name:
E-mail address:
School phone number:
Web page address:
Best times to be reached:

Course Description

This course is for students interested in exploring current technology. In this term students will use computer workstations to study, practice, and/or design objects related to today's technology. These workstations are based on the four areas of Technology Education: Communication, Transportation, Production, and Energy & Power.

District Standards and Power Benchmarks

Power Standards

Students will be able to:

1. Practice employability skills including teamwork, communication, problem-solving, and quality workmanship.
2. Demonstrate technical reading skills.
3. Develop the skills needed for a variety of career fields.

Power Benchmarks

Students will be able to: (Identify the best power standard to put these power benchmarks under.)

1. Understand the basic framework of each module. - Orientation Module
2. Analyze CADD software to produce architectural and mechanical drawings. - CADD Module
3. Analyze the process of video graphic design by using computer software to create and produce graphics and an animated sequence. - Computer Graphics & Animation Module
4. Create computerized numerical control (CNC) graphics and text. – CNC Manufacturing Module
5. Solve an open-ended challenge by applying the steps of a problem-solving model. – Creative Solutions Module
6. Create video clips that include good editing principles, special effects, and manipulation of audio and video data. - Digital Video Module
7. Understand the basic elements and applications of electricity. - Electricity Module
8. Demonstrate a basic understanding of energy sources, the principles of power technology, and the concept of mechanical advantage and machines. - Energy Power Module
9. Understand the concepts and process involved in designing and constructing a truss-structured tower. - Engineering Towers Module (9)

10. Develop an understanding for two- and four-stroke engines. - Engines Module
11. Understand how ideas are communicated in a graphic format through drafting. - Graphic Communication Module
12. Understand concepts and usage of lights and lasers to create a clearer picture of the nature of light. - Lights & Lasers Module
13. Understand factors in designing packages based on appearance, practicality, and conservation of material. - Package Design Module
14. Understand the uses, characteristics, and molecular structures of polymers and monomers. - Plastics & Polymers Module
15. Develop skills needed to operate basic hand tools. - Practical Skills Module
16. Understand the importance of specifications, standards, and experimentation when designing/fabricating new products. - Research & Design Module
17. Investigate the history and operation of robots and their control programs. - Robotics Module

Course Information

Course length

Required/Elective course

Course Outline/Calendar

CADD

In the *CADD* Module, students use computer-aided drafting (CAD) software to explore the fundamentals of drafting.

Computer Graphics and Animation

In the *Computer Graphics & Animation* Module, students learn how the use of computers can enhance the products created by professional artists and animators.

Creative Solutions

In the *Creative Solutions* Module, students are confronted with problems to solve. They use software and kits to assemble models to solve problems.

CNC Manufacturing

In the *CNC Manufacturing* Module, students explore the manufacturing process and important inventions that have advanced these various processes.

Digital Video

In the *Digital Video* Module, students enter the world of digital editing and step into the creative role of editor.

Electricity

In the *Electricity* Module, students learn the principles of electricity and draw schematics of both parallel and series circuits.

Energy, Power & Mechanics

When students complete the *Energy, Power & Mechanics* Module, they will have a basic understanding of energy sources, the principles of power technology, and the concept of mechanical advantage and machines

Engineering Towers

Students utilize math, physics, and problem-solving skills in the *Engineering Towers* Module. They are given this challenge: build a tower that holds more weight than the towers built by their classmates.

Engines

In the *Engines* Module, students are introduced to the history, theory, and applications of engines.

Graphic Communications

In the *Graphic Communications* Module, students learn the fundamentals of drafting and communication of technical information.

Light & Lasers

In the *Light & Lasers* Module, students explore various aspects of light and lasers. Students also perform activities that provide examples of how technology can be used.

Package Design

In the *Package Design* Module, students design and construct a package for a specified product.

Practical Skills

In the *Practical Skills* Module, students learn to identify common tools and their uses.

Research & Design

In the *Research & Design* Module, students design, manufacture, and race a model CO₂-powered dragster car.

Robots

In the *Robots* Module, students learn about the fascinating role that robots play in their lives.

Additional activities may include problem-solving and hands-on projects.

Text/Other Required Materials/Resources

Students are responsible for bringing planners, notebook, and a writing utensil to class everyday. All materials and resources needed for activities completed on the modules are supplied by the district.

Instructional Procedures & Support

The basic method of delivery of instruction for the module workstations is computer driven, hands-on activities and team-work. Some demonstration and discussion will be also utilized in class. Students are expected to work cooperatively and a positive manner with their partner.

Classroom Management Procedures

Classroom behavior guidelines
Attendance and tardy procedures aligning with student handbook
Planner should be hall passes.

Assessment Plan

Progress report (include dates)
Multiple methods of assessment
 Research, Challenge & Assessment questions
 Assessment questions
 Post Test

Grading procedures (include explanation of how a grade is determined)

Participation	70	7 days x 10 points
Attendance	70	7 days x 10 points
Assessment	60	3 days x 20 points
RCAs	120	4 days x 30 points
<u>Post Test</u>	<u>100</u>	1 day x 100 points
Module Total	420	

Grading System

The Davenport Community Schools' district percentage grading scale is as follows:

A	92-100%
B	83-91%
C	68-82%
D	60-67%
F	0-59%
I	Incomplete

Note: Work that is below 68%. The "I" will stand until two weeks after the end of the term and then it will revert to the appropriate letter grade earned.

We have read the course syllabus and understand what is involved in the program and the expectations of the student.

Student Signature: _____

Grade: _____

Parent Signature: _____

Date: _____