

Design and Technology: Course Syllabus

Instructor: Mr. Oakley

Email contact: boakley@parkwayschools.net

Course Description

This is the first course in a two semester sequence of courses that provides opportunities for students to explore technologies in communications, design engineering, power, energy and transportation. Students will explore the fundamentals of Computer Aided Design Software and its application in the design process. Students will develop the necessary skills in design and problem solving to enable them to undertake a variety of problem solving and design tasks.

Core Conceptual Objectives

Explore the systems of technology.

Know the methods of communication used in a technological society

Know the development, application, and practical uses of power and energy

Know the safe and proper use of equipment and materials related to current technical processes.

What You Can Expect of Your Instructor

The course instructor serves more as a facilitator of learning than as a traditional lecturer. The instructor is sensitive to the needs of new learners of sophisticated computer applications and has an understanding of the challenges associated with teaching and learning software applications.

Classroom, Lab, Tardy Policy – follows student handbook

Respect other students in the classroom

Destruction of equipment will not be tolerated

No food or drink in the classroom

Computers - Do not change any settings, do not download anything from the Internet (Instant Messenger, games, etc), and only use the Internet for approved activities from the instructor.

NO CELL PHONES in the Lab

Units Covered

Design and Problem Solving Process

Course Outline Design & Technology Describe design and the design process; define technology and how it is used both to as the means and ends of design. Illustrate through activities and projects.

Technical Reports and Documentation

Engineers Notebook Portfolios

Technical Writing & Specifications

Technical Documentation Information Graphics

Units Covered continued

Engineering Design Use engineering design process to develop and prototypes. Use equipment to test performance of prototypes and suggest re-engineering solutions.

Electrical System Design – Time Permitting
Direct & Alternating Currents System Inputs
System Processors System Outputs

Assessment

Grading is based on all student work, including computer assignments, lab participation, and written assignments or tests. Due dates will be given and excessively late work will be penalized. Class participation, attendance, promptness, attitude, and initiative will be considered during the evaluation process. If you miss a day or more and cannot make up the work during class time, you will need to make arrangements with me to come in and make up the work.

NO LATE WORK WILL BE ACCEPTED AFTER THE START OF THE FINAL 3 WEEKS OF ANY SEMESTER WITHOUT THE INSTRUCTOR'S PRIOR APPROVAL.

The grading scale used will be the following:

A 90.0% and above B 80.0 – 89.9% C 70.0 – 79.9% D 60.0 – 69.9% F below 60.0%

- Lab Grade – This grade is based on student attendance, attitude and effort.
- Projects & Tests – Projects are essentially longer term activities, so this grade is based on the output of a student. Most of this will be done in class.
- Final Exam – A cumulative test over the semester's material.
- Progress Report Grades – The current grade shown in Infinite Campus at the end of assignments due by the end of a marking period will be included in that six-weeks grade. The only grade that carries over is the semester grade.
- Late Work – Due dates for assignments are typically generous, so late work is not accepted. Exceptions may be made at the discretion of the teacher, typically for illness or other situations out of the student's control.
- Cheating is defined as turning in any work that is not your own, including copying down someone else's homework. Cheating will warrant a zero on the assignment plus additional disciplinary action.