Excel HIGH SCHOOL

Electrical Engineering - Course Syllabus (.5 Credit)

Description:
This introductory Electrical Engineering course provides the student with a broad overview of electrical basics. Topics include the electric circuit, solving circuits, measuring electricity, and electricity standards. Specific laws and theorems are studied, such as Ohm's Law, Kirchhoff's Law, Thévenin's Theorem, Norton's Theorem, Superposition Theorem, and Millman's Theorem. Basic, everyday items and how they use electricity, are also discussed.

Textbook: Electrical Engineering - © Excel Education Systems, Inc. - 2020

Course objectives:
Throughout the course, you will meet the following goals:

- Describe why electricity is important to modern day life.
- Explain the basic operation of an electrical circuit.
- Describe basic electrical applications, such as the light bulb, magnets, and heat.
- Explain the significance of Ohm's Law and Kirchhoff's Law on the study of electricity.
- Describe the laws and theorems that allow circuits to be solved.
- Discuss how electric circuits are described and analyzed.
- Explain how everyday items use electricity.
- Describe direct and alternating current motors and the worldwide Electric Standards.

Contents:
Module 1: Electricity Basics
Module 2: The Electric Circuit
Module 3: Electrical Applications
Module 4: Advanced Circuitry
Module 5: Solving Circuits
Module 6: Measuring Electricity
Module 7: How Does That Work? (Part 1)
Module 8: How Does That Work? (Part 2)
Module 9: Electric Standards

Grading Scale
A = 90-100%
B = 80-89%
C = 70-79%
D = 60-69%
F = under 59%

Grade Weighting

Quizzes……	**70%**
Final Exam…….	**30%**
	100%