

Name of School:

Name of Course: **Introduction to Electronics**

Instructor Information

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

Course Description

This course teaches an understanding of how electronic devices work, how they are built, and how they are repaired. Students learn how electricity works by performing lab experiments, building devices, and using a computer. They also learn how computer parts work. This course is a series of electronics offerings that include repair of computers. It is strongly recommended for students planning to take Vocational Electronics and Electronics.

District Standards and Power Benchmarks

Power Standards

Students will be able to:

1. Demonstrate the ability to use ohm's law and Kirchoff's law to solve problems.
2. Explain how Electricity is made and moved from place to place.
3. Draw, interpret, assemble, and build from a schematic diagram.

Power Benchmarks

Students will be able to:

1. Explain matter, using electron theory & law of static charges.
2. Identify components, schematic symbols.
3. Illustrate 5 ways of producing voltage.
4. Apply Ohm's Law correctly in problems.
5. Solder components using proper heat sinks.
6. Wire electrical outlets/switches with Romex in 2x4 walls.
7. Determine resistor's value, tolerance using color code.
8. Determine the E, I, R, of each component in series and parallel circuit.
9. Measure the E, I, R in a series/parallel DC circuit without damage.
10. Compare magnetism to electro-magnetism.

Course Information

Course Length - 2 terms Elective 1 Credits Prerequisite: Algebra or concurrent enrollment in Algebra

Course Outline/Calendar

Safety tests, lab projects, bookwork-notebook will be required
 Units of Study: Understanding Electricity, Circuits and power, Magnetism, Batteries Motors and Genertors, Alternating Current, Capacitors, House wiring, Meters and Test equipment, Basic Skills, and Digital Electronics.

Text/Other Required Materials/Resources

Text: Electricity/ Principles and Applications 4th edition Author Fowler
 Text: House Wiring/ Simplified Author Floyd Mix

Instructional Procedures & Support

The class consist of discussion, worksheets, hands-on activities, co-operative activities, test, and lab reports.

Classroom Management Procedures

Be to class on time.
 Have notebook & pencil every day.
 Stay on task.
 Treat others with respect at all times.

Assessment Plan

Grades will be given for: daily performance, written quizzes, tests, projects and notebook

Grading System

A	93 and above	Firm command of knowledge domain High level of skill development
A⁻	90 - 92	Exceptional preparation for later learning
B⁺	87 - 89	Command of knowledge beyond the basic concepts of knowledge Advanced development of most skills
B	83 - 86	Has prerequisites for later learning
B⁻	80 - 82	
C⁺	77 - 79	Command of the basic concepts of knowledge Demonstrates ability to use basic skills
C	73 - 76	Lacks a few prerequisites for later learning
C⁻	70 - 72	
I		The letter "I" indicates the student has not satisfactorily achieved the grade/course-level benchmarks and/or has missing work. "I" status is temporary and not a final grade. The letter "I" may affect athletic eligibility.
D⁺	67 - 69	Lacks knowledge of some fundamental ideas Some important skills not attained
D	63 - 66	Deficient in many of the prerequisites for later learning
D⁻	60 - 62	
F	59 and below	Most of the basic concepts and principles not learned Most essential skills have not been demonstrated Lacks most prerequisites needed for later learning

