

ELECTRONICS ROBOTICS 2010

Instructor: Mr. French
E-mail chris_french@bcisd.org
Office Phone 242- 5024

COURSE OUTLINE

Units of Study

- safety
- basic electricity
- series circuits
- parallel circuits
- parts and symbols
- power sources
- ohm's law
- electrical measurement
- resistance / resistive circuits
- electrical power and energy
- magnetism
- alternating current
- direct current
- circuit board design
- robotics
- careers in electronics

Methodology

- discussion
- demonstration
- presentations
- reading assignments
- experiments
- projects

Grading

Percent of Final Grade:

Quizzes and Tests*.....	20%
Projects.....	70%
Electronic Notebook.....	10%

* Quizzes and Tests will check knowledge based on discussions, demonstrations, presentations, reading assignments and experiments.

Please no eating or drinking in the computer lab.

General Information

- be seated at the beginning of the period so attendance can be taken
- do not begin work until the instructor tells you to do so
- bring a pencil to class each day
- leave laboratory equipment alone until instructor gives you permission to use it
- ask questions when in doubt
- safety will be stressed

Safety Rules

- Behavior that involves horse-play and rough-housing will not be tolerated.
- Be careful of hot soldering irons. Keep them off cords and use holders when they are idle.
- Safety glasses must be worn at all times.
- Use equipment only when the instructor has indicated you may do so.
- Use equipment only if you have been instructed on how to use it during this semester.
- Always keep water and other fluids away from electrical equipment and components.
- Before plugging in/using any piece of equipment, inspect it for possible safety hazard such as:
 - loose connections
 - abraded cords
 - exposed wires
- When working on electrical circuits, work with one hand at a time when possible.
- When using etching solution, always have safety goggles on and be careful not to splash it on your skin or clothes. This etchant is an acid.
- Do not work if you are tired or drowsy due to medications or lack of sleep.
- Be sure that safety guards and shields are in place when using equipment.
- Assume that all electrical circuits could be on and check to make sure they are not on before working on them.
- If any situation arises that appears to be potentially dangerous, to you or anyone else, contact the instructor immediately.
- Install only the proper components into any device or circuit. If you do not know if the component you have picked is the right one, then assume it is the wrong one.
- In the event of a fire in the laboratory, inform the instructor at once and follow his/her instructions.

