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## Electronics 2

Teacher: Mr. Bushard  
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Daily 9:33am – 11:05am

Room 105

Office Hours: 7:15am – 7:45am & 2:15pm – 3:00pm

### Course Overview

This course is intended to teach basic industry skills needed for an internship or career in Electronics. Topics such as tool and hardware Identification and usage, electronic component identification, basic wiring, soldering, electronics workplace familiarity, intro to electronics theory, and microcontrollers.

### Outline – Topics by Quarter

#### **Quarter 3 – Electronics Technician Skills**

- Schematics and Block Diagrams
- Electronic Component Identification
- Circuit Design
- Soldering
- Electronics Technician Workplace
- Basic Hardware and Hand Tools
- Cables and Wiring

#### **Quarter 4 – Electronic Theory and Arduino Microcontrollers**

- Intro to Electronic Theory
- Intro to Arduino Programming
- Arduino Project
  - Project planning
  - Presentation of Project

### Grading

Grading will be on a points based system including Assignments, Quizzes, Tests, and Projects.

### Class Expectations

- All MTCHS Handbook policies will be followed
- Students are responsible for checking due dates in PowerSchool
- Students will respect the equipment in the Electronics Lab and consider safety first at all times

### Competencies

The following assessments are competencies. Students must achieve a score of 70% or better in order to pass a competency. If a student fails any one of the following competencies, the student fails this course.

- Soldering Test
- Electronic Theory Test

## **Late Work, Make-Up, and Redo Policy**

### ***Late Work***

Students may receive no more than 70% for any late assignment. Any missing or late assignment may be submitted up to two (2) school business days after the assignment is marked missing in PowerSchool.

Exceptions to this policy may be requested by the student in writing or email. The instructor will make the final determination on extension requests and will inform the student of the decision in writing or email.

### ***Make-Up Work***

Students may be allowed up to two days per unexpected absence to complete make-up work. Unexpected absences are those due to sudden illness, injuries or death in a family. Assignments or tests, which were assigned prior to the date of the absence, are due upon return.

### ***Redos***

If a student receives below a 70% on an assignment, a student may redo that assignment for a grade up to 70%. Individual teachers will determine due dates on make-up/redo assignments and which assignments can be made up. Any incomplete work may not be redone for credit.

## **Arduino Project and Costs**

An Arduino based project will be completed during the fourth quarter. This project has been designed to require the use of a microcontroller and multiple skills learned during this course. This project will be peer reviewed and will require a detailed final presentation. Most of the parts required for this project are already provided by the school. If a student wishes to purchase extra materials for his/her project, the cost of these materials will be covered by the student. Due to donations, we have many extra materials which are available to all students. Therefore, these projects should be able to be completed with materials on hand.