

# Computer Aided Drafting and Design/Applied Robotic Engineering (CADD/ARE)

## Montgomery Village Middle School

### COURSE DESCRIPTION (OVERVIEW)

Students will develop a fundamental understanding of Engineering Design through the application of Computer Aided Drafting/Design (CADD) and Robotics Technology. Included is a practical study of the cultural, social, economic, environmental and political effects of technology; the role of society in the development and use of technology; and the influence of technology on history. Students will engineer, design and strengthen their ability to troubleshoot systems, research and develop, invent and be innovative, and experiment using models to problem solve while learning to use and maintain technological system. Students will also be taught the importance of safety in the lab as well as safe usage of the finish product.

### Units of Study

- Drafting and Design Basics
- Basic Electronics (Police Alarm)
- Transportations (Maglev Train)
- Testing and Analysis
- Robotics Engineering
- Urban Planning/Development

### GRADING POLICY

Students' grades will be based on mastery of specific course standards. Students will be assessed through the use of a variety of assignments and projects. Work not attempted will be recorded as a Z and calculated as zero.

### Grade Breakdown by Category w/Percentage:

Category	Percentage of Total Grade
Homework for Practice & Preparation *	5%
Formative Assessments	75%
Summative Assessments	20%

\*MVMS uses the "raw score conversion to percentage" method to calculate grades. Therefore, the # of points a particular assignment is worth does not impact its weight within a category (18/20 carries the same weight as 36/40). However, assignments may be still be weighted within categories by assigning assignment weights.

\* There is typically no homework assigned in this class. This category will be used for short or quick assignments such as exit cards that typically check for student understanding.

**Learning Skills:** Non-academic indicators that influence student achievement are reported as C (consistently), O (often), S (sometimes), R (rarely), NI (not enough information).

- Participation: asking questions, giving ideas, using feedback, engaging in learning
- Task completion: completing homework and class work.

### Grade Updates

Assignments turned in on time will be graded in a timely manner (usually a couple of days) and entered into my electronic gradebook immediately. Grades are automatically uploaded to Edline on a nightly basis. Both students and parents should log into Edline regularly to check grades and missing assignments. Students are expected to know their grades, and what, if any, work is missing at all times. There should be no surprises in this class to students or parents. Edline Activation codes for parents new to MVMS will be mailed during the first week of school. Others needing activation should contact [alice\\_marable@mcpsmd.org](mailto:alice_marable@mcpsmd.org).

### **LATE WORK AND MISSING WORK**

- Each assignment will have a due date. This is the date by which you are expected to submit the assignment. Your grade may drop one letter grade if it is not turned in by the due date.
- The deadline is the last day an assignment will be accepted for a grade. I am typically very lenient regarding deadlines as long as the student is attempting to complete the assignment.

### **RETEACH and REASSESS**

- Re-teaching occurs when teachers or students determine that students are not meeting learning goals.
- Assessed tasks may be revised to receive a higher grade until the end of a lesson sequence.
  - The original student work, along with the teacher comments and/or rubric, must accompany the revised work in order to be re-graded.

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- Alternative forms of assessment may be used for reassessment.
- Quizzes may be taken a second time, with the second score taking precedence over the first.
- In accordance with MCPS policy, summative assessments cannot be reassessed.

## HOMEWORK

There will no assigned homework in this class. However, students will be required to complete work by given due dates. Students who cannot meet these deadlines in class, or who are absent, must complete their work outside of class. I am available during lunch and after school most days, and the media center is open after school for computer use. Students may also email work home, or copy it to flash drives, to complete at home if they have the necessary software.

## MAKE UP POLICY (A Student's Guide to rights and responsibilities in MCPS)—

"You are responsible for making up any work you miss during absence, regardless of the reason for the absence. If the absence is unexcused, your teacher does not have to help you make up the work you missed, give you a retest, or give you an extension on work that was due." **You are required to make up work in this class and it is your responsibility to check with the teacher about missed work.** Work must be made up in a timely manner.

## COMMUNICATION

One of the most useful ways we have to communicate is your child's data notebook. Please check this daily for information. I can also be reached by email (John\_J\_Griffith@mcpsmd.org) or by calling the school (301-840-4660). In addition, please check Edline regularly to know if you are missing work.

## HALL PASSES

In order to successfully complete this course and meet timelines, you will need to be in class. Therefore, hall passes will be issued for emergencies only. Please make every effort to go to the bathroom and get a drink during the break between classes. This is school policy and it will be enforced in this classroom.

## INTERNET USE

Students are allowed to use the Internet for school purposes. Students taking advantage of this policy will be warned. Repeated offenses will result in revocation of computer or Internet privileges. Loss of Internet or computer privileges in a computer class makes it very difficult to successfully complete the class. Students who lose privileges will still be responsible for completing work, but will be required to complete it outside of class.

**Students may temporarily lose access during 1 or more class periods if they are missing assignments or are caught abusing their privileges. If this becomes a problem the parents will be notified.**

## LAB RULES

Complete lab rules were issued in class need to be reviewed, but the following needs special attention:

- **Food and drink:** We are asking you to respect the equipment provided by MVMS by not eating or drinking *anything* in the lab. Any drink, food or candy seen in the lab will be confiscated. Repeat offenses will result in consequences. Gum chewing is not allowed at MVMS, and this is strictly enforced in computer labs. **All computer labs are NO GUM ZONES.**
- **Computers:** All students will be assigned to a computer. That computer is your responsibility and therefore is the **ONLY** computer you should be using or touching. When helping a classmate, help with words.

## WORK FOR OTHER CLASSES IN COMPUTER CLASS

Students are expected to spend 100% of each class period working on their class work. Working on other class work or using other materials will not be allowed, unless you have my permission prior to doing the work. Any unauthorized materials will be confiscated until Friday afternoon of that week. Not following this procedure constitutes a lack of participation and could result in further consequences, as assigned by the teacher.

**~A very important concept in working with computer technology is the importance of saving and backing up work at regular intervals.** You will be strongly encouraged to develop these fundamental skills while working in class. Therefore, if you neglect to save and 40 minutes into the period we have a power surge, you need to understand that it will be your responsibility to make up the work if the necessary procedures were not followed. ~

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Teacher: J. J. Griffith

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Content Specialist

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Content Administrator

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Principal