

**MOUNT VERNON HIGH SCHOOL  
COURSE DESCRIPTION**

**Computer Aided Drawing**

**Instructor: Mr. Voigt**

**Semester/Year: 2nd/2024-2025**

**Period: 3rd**

**Room: 150**

**COURSE DESCRIPTION**

Students will learn basic rules and conventions used to make technical drawings in the Autodesk AutoCAD (2D), Autodesk Inventor (3D), Autodesk Revit (Architectural), and SketchUp environments.

Each area of emphasis is taught with exercises to be completed for practice, quizzes to check for skill development, and a unit capstone project to integrate the learned skills into a more organic setting of assessment.

**STANDARDS & LEARNING TARGETS**

The learning in this course is organized around three standards. Two of those standards have one learning target and one has two.

STANDARDS	1. Technical Skills and Knowledge Development	2. Employability
LEARNING TARGETS	I can identify, describe, and apply terminology, facts, and skills necessary to construct technical drawings used in building and manufacturing.	I consistently demonstrate employability skills in the classroom.

**PROFICIENCY SCALE**

The codes 1, 2, 3, 4, and M below will be used to communicate student progress in each learning target.

4	3	2	1	M	INC	NE
Mastery (Exceeds Proficiency)	Meets Proficiency	Approaching Proficiency	Beginning Proficiency	Missing Evidence (can be made up)	Students turned in evidence that was not complete (can be made up)	Missing Evidence (can not be made up)

**PERFORMANCE ASSESSMENTS**

All assessment of student learning will be based on the above standards. Not all work or actions of students will be directly and formally evaluated. Some activities are aimed at teaching students how to do things by promoting practice with feedback (these are called formative assessments). Students will always know when things they are being asked to do will be formally assessed as part of their grade and they will always have had a chance to learn and practice before these assessments (these are called summative assessments).

All summative assessments will show up in the gradebook and are used to determine the grades of students. Only some of the formative assessments will be entered in the gradebook, and these will not count towards student grade determination and are only there so students can track if they have done the work/practice to prepare for the summative assessments.

## SPECIFIC COURSE TOPICS OF STUDY

<b>Computer Aided Drafting</b>	2D drawing conventions including: Line Types, Scale, Title Blocks, Layers, etc.... Creating a unique 2D drawing suitable for use with a CNC machine 3D drawing conventions including: Parts, Assemblies, Presentations, Coils, Sweeps, Lofts, and Threads. Create a unique 3D drawing suitable for use with a 3D printer Architectural Drawing conventions including: Foundation Plan, Floor Plan, Section, Detail, Electrical Plan, Plumbing Plan, Schedules. Create a unique Architectural drawing to be printed on a wide paper printer.
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## REQUIRED RESOURCES

<b>Google Classroom</b>	All classroom materials will be distributed via Google Classroom(GC). Students must sign up for this class in this application per given instructions.
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## MAKEUP POLICY

Assessments that are missed will be marked missing “M” or Incomplete “Inc” in the gradebook until completed. Students must work out how and when they will make up work with Mr. Voigt in a timely manner. Missing and Incomplete assessments can eventually become No Evidence “NE” of the student’s understanding and may cause a student to fail under certain circumstances.

## GRADE DETERMINATION

PowerSchool will house all assessments used as evidence towards a final letter grade.

<b>The semester letter grade will be informed by the student’s learning proficiencies over the semester-long body of work with consideration to retained proficiencies and growth over time. Mastery of learning targets leads to mastery of course standards which in turn leads to mastery of the course.</b>	
<b>Semester Letter Grade</b>	Exceeds Mastery (4) Demonstrates Mastery (3) Approaching Mastery (2) Developing Foundational Skills (1) <b>Trends in Proficiency Levels on Course Standards</b>
A	All standards achieved at “3” or “4” levels
B	All standards achieved at “2”, “3” or “4” levels with at most one standard at “2” level
C	All standards achieved at “2”, “3” or “4” levels with two or more standards at “2” level
D	All standards achieved at “1”, “2”, “3” or “4” levels with at most one standard at “1” level
F	All standards achieved at “1”, “2”, “3” or “4” levels with two or more standards at “1” level
<b>Important Note: If a student has missing evidence in the form of M (can be made up) or N (cannot be made up) in any amount, then the student runs the risk of failing the course. In these cases, there may not be enough evidence to determine target proficiency nor a course grade.</b>	

## SCALED LEARNING TARGETS

Students will be given feedback on their level of proficiency towards mastery in each learning target using the gradations below.

### STANDARD - Technical Skills and Knowledge Development

TARGET - Students can find and/or learn skills, and apply those skills to projects in the lab.			
<u>Exceeds Proficiency (4)</u>  I can independently identify, describe, and apply terminology, facts, and skills to construct accurate and detailed technical drawings used in building and manufacturing. I can also evaluate and improve technical drawings as needed.	<u>Meeting Proficiency (3)</u>  <b>I can identify, describe, and apply terminology, facts, and skills necessary to construct technical drawings used in building and manufacturing.</b>	<u>Approaching Proficiency (2)</u>  I can understand most basic knowledge of terminology, facts, and skills related to technical drawings but require considerable guidance to apply this knowledge effectively in constructing technical drawings.	<u>Beginning Proficiency (1)</u>  I can attempt to understand and apply the terminology, facts, and skills related to technical drawings. I need significant assistance when constructing technical drawings.

### STANDARD - Employability

TARGET - Employability: Students can exhibit skills that are conducive to a positive and productive working environment and apply them consistently in the classroom.			
<u>Exceeds Proficiency (4)</u>  I consistently demonstrate employability skills in the classroom while modeling for and/or leading others.	<u>Meeting Proficiency (3)</u>  <b>I consistently demonstrate employability skills in the classroom.</b>	<u>Approaching Proficiency (2)</u>  I demonstrate employability skills in the classroom with light guidance.	<u>Beginning Proficiency (1)</u>  I demonstrate employability skills in the classroom with heavy guidance.