

Drafting/CAD I Syllabus

Instructor contact information

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Course Description

This course will consist of Mechanical drafting which is the graphic language used by engineers and technicians in high technical manufacturing environments. The basic drafting skills and knowledge necessary to communicate graphically are investigated through lecture and lab opportunities using both manual (board) drafting and computer aided drafting system (CAD).

General Objectives

Students will:

- Describe the role of drafters in the workplace.
- Utilize the tools and equipment used in current drafting and design environments.
- Solve geometry problems using geometric construction techniques.
- Visualize and identify 3D objects from orthographic drawings.
- Produce orthographic views of objects using hand drafting and a 3D CAD system.
- Produce section views and auxiliary views of surfaces on orthographic drawings using a 3D CAD system.

Course of Study

- Introduction to drafting and design and careers in the field
- Layout and lettering
- Technical sketching
- Tools and equipment used in current drafting and design environment
- Geometric construction techniques
- Orthographic projection and 3D visualization
- Introduction to computer aided drafting
- Dimensioning

Tracked Competencies will include:

- Line type usage
- Conformation to standards
- Dimensioning and accuracy
- Technique

All work will be evaluated for the competencies above along with a component for Overall Quality (Neat, Clean, Clear, Omissions, On Time).

Class Materials

- To save computer files for an electronic portfolio, students will need a 4 gigabyte flash drive, if desired.
- (OPTIONAL) For students that want to purchase a set of mechanical pencils they can purchase this set for \$15.50. This set usually retails for around \$30.00. This is a great deal and this set will last for a long time.

Assignments:

Assignments and projects will be given with the current objective. Due dates will be given for assignments and projects once they are assigned.

Technology Student Association (TSA)

All students have the opportunity to participate in Marshfield TSA activities. TSA activities include homecoming parade, state conferences, national conference, competitive events related to technology and many other fun activities. Marshfield TSA holds regular meetings to plan activities. TSA is a student run association that promotes technology education and leadership at local, state, and national levels. Mr. Veeneman is the chapter advisor.

Contests and Conferences

Students will have opportunities to participate in technology education conference and contest events.

- Missouri TSA Distinctions Leadership Conference, Missouri S&T University, Rolla, MO
- Missouri TSA State Conference, Jefferson City, MO
- TEAM Southwest District Contest and Expo, MSU, Springfield, MO
- TEAM State Contest and Expo, Lodge of the Four Seasons, Lake Ozark, MO

Student Expectations

Students will be expected to maintain desired conduct as outlined in the school policies. Interpretation of these guidelines specific to this class includes the following. Students are expected to:

- Be in their assigned classroom seat when the tardy bell sounds.
- Work on assigned task until class ends.
- Listen to and follow instructions. Ask questions when needed.
- Be responsible for their personal belongings and project materials.
- Respect your peers and their property. Obtain permission before handling others property.
- Respect others opinions and use non-offensive language to communicate to others.
- No food or drink allowed in the lab. All food and drink must be kept by the sink.
- Refrain from horseplay in the classroom. If you wheel your chair around or fall out of your wheeled chair due to horseplay, you will sit in a non-wheeled chair until the instructor gives you permission to use a wheeled chair again.
- Be held responsible for the purposeful damage or theft of classroom or lab equipment.
- Await dismissal at the end of class by the instructor.
- Make up class assignments and missed due to absence.

- There will be no cell phones or devices in class. You will not be given a warning. I will confiscate cell phones and devices upon first infraction.
- **Have passes to be excused from class signed by the teacher prior to leaving the classroom.**

Technology Use Agreement

Students that breach the technology use agreement will not be able to work on the computers in this class. Be smart on what you are doing on the computers.

Classroom discipline procedures

1. Upon observing inappropriate behavior, the instructor will issue a verbal warning.
2. If the same behavior continues, the instructor will have a conference with the student and consult with a parent/guardian.
3. If inappropriate behavior continues or if behavior is severe a referral form will be completed and sent to the assistant principal for further action.

Note: If a student incident occurs which is a violation of school disciplinary code that warrants in school or out of school suspension on the first offense, as outlined in the student handbook, or purposely creates an unsafe situation, placing the student and/or others in an unsafe situation, the student will be referred directly to the assistant principal.

Grades

Student's grades will be determined from the following:

- Written assignments, unit tests and quizzes
- Daily Lab and work grades
- Individual and group projects
- Semester final exam

Written assignments, unit tests and quizzes will include worksheets, study guides, safety tests, and unit quizzes.

Daily lab work grades will be recorded daily at the discretion of the instructor. Students' work habits and behavior will be evaluated and recorded on a 4 point scale.

Individual and group projects will be evaluated for accuracy, completeness, and craftsmanship. Safe working habits and lab work efficiency will be evaluated as well. Grades will be recorded at the announced due date of the project.

Semester final exams will be administered at the end of each semester. Exams will be a comprehensive test of the student's learning during the semester. Scores on the final exam will serve as 10% of the student's semester grade.

Letter grades for individual written assignments, tests, quizzes, and projects will be determined using the following percentage scale:

94%-100% . . . A

73%-76%C

90%-93% A-	70%-72% C-
87%-89% B+	67%-69% D+
83%-86% B	63%-66% D
80%-82% B-	60%-62% D-
77%-79% C+	Below 60% F

Make-up Work

Students who miss class are expected to make up missed class assignments and lab work. It is the student's responsibility to communicate with Mr. Zweerink before or after an absence to make up missed assignments.