EDG 1211
Engineering Graphics I
Course Syllabus

Professor: Randy Emert
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Course Description
This course is a broad introduction to mechanical design using Computer-Aided Design (CAD) tools and freehand sketching fundamentals. Emphasis is placed on a thorough understanding of projection principles and the visualization of exact space conditions relevant to 3D modeling. The concept of 3D problem solving techniques using CAD is stressed. There are no prerequisites for this course.

Procedures and Requirements
The course consists of lectures and laboratory sessions, with new subject areas covered through reading assignments, lectures, and demonstrations. Each lecture is followed by drawing assignments using the theory and principles of the subject areas. Students are required to attend the class during the assigned times. Open lab sessions scheduled throughout the week are also available for the student to complete assignments. These open labs are monitored and are available on a “first come, first served basis. Students may use the graphics labs only to work on specific assignments from the MET department.

Attendance is expected and required during all class and lab periods. If you miss a class, it is your responsibility to get the assignments for that day and to have your homework turned in on time. Any student needing additional help should make an appointment with his/her professor. Also, there are ample open lab sessions available for the student to complete assigned work.

ADA/504 Compliance
Students with disabilities who believe that they may need accommodations in this class are encouraged to contact the ATTIC counselor working with disabilities at (678) 915-7361 as soon as possible to better ensure that such accommodations are implemented in a timely fashion.

Grading Policy
The course grade is broken down as follows:

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<thead>
<tr>
<th>Component</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Drawings</td>
<td>30%</td>
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<tr>
<td>Quizzes</td>
<td>20%</td>
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<tr>
<td>Midterm</td>
<td>25%</td>
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<tr>
<td>Final Exam</td>
<td>25%</td>
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<tr>
<td>TOTAL</td>
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<table>
<thead>
<tr>
<th>Total Score</th>
<th>Grade</th>
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<tbody>
<tr>
<td>90-100</td>
<td>A</td>
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<tr>
<td>80-89</td>
<td>B</td>
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<td>70-79</td>
<td>C</td>
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<td>60-69</td>
<td>D</td>
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<tr>
<td>Below 60</td>
<td>F</td>
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**Drawings**

All assigned drawings are to be turned in at the beginning of the class period on the announced due date. Any drawing turned in after the beginning of the class period will be considered late and will lose 5pts out of a possible 10pts. Drawings are graded on technical accuracy, layout, and professional appearance. One drawing grade will be dropped before the final grade is computed.

**Quizzes**

Quizzes are given without prior notice. They are based on the reading assignment for that day and previous lecture material. Quizzes are given at the beginning of the class period and cannot be made up. One quiz grade will be dropped before the final grade is computed.

**Exams**

A mid-term exam will be given. Also, a final exam or final project will be given or assigned. Each exam will be comprehensive and will include previous reading assignments, lectures, and drawings. There is a time limit on each exam. Exams can only be made up with a legitimate excuse and at the professors discretion. A grade of zero will be assigned to any missed exam. No exam will be dropped.

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**Student Conduct**

Academic dishonesty and non-academic misconduct, in any form, is not tolerated in the classroom. This includes, but is not limited to, cheating, plagiarism, and disorderly conduct. Please refer to sections in the Undergraduate Catalog on Disruptive Behavior and Academic Dishonesty.

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**Course Outcomes**

At the end of this course the student will be able to:

1. freehand letter consistent with the standards of engineering graphics.
2. read and use the architect’s, engineer’s, and metric scale.
3. create and manage CAD files.
4. apply geometric construction techniques to solve graphical problems.
5. properly create multi-view orthographic drawings by hand sketching and CAD.
6. properly apply and produce sectional views.
7. properly dimension and annotate engineering drawings per ANSI standards.

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**Course Outline**

This outline covers the major concepts taught in this course. Your professor may apply these areas in a different order. Also, other subject areas may be added to the list.

1. Lettering
2. Scales
3. Multi-view Orthographic Projection
4. Introduction to CAD
5. Geometric Constructions
6. Sectional Views
7. Dimensioning
8. Auxiliary Views
Equipment List

2. 8.5" X 11" paper with light blue grids, either eight or ten grids per inch.

3. Pencils - Good quality mechanical or #2

4. White Vinyl Eraser

5. Calculator with trigonometric functions

6. Flash Drive or other appropriate storage device