Foundations of Engineering II

Catalog Description

Topics include, depending on the major: emphasis on computer applications and programming and solids modeling using CAD tools or other software; fundamentals of engineering science; advanced graphic skills. Prerequisites: ENGR 1211 - Foundations of Engineering I

Course Description

This course will be geared toward communicating effectively through the use of graphical design. The use of 2D and a little 3D drawing will be used for this objective. Besides learning how to use the CAD software presented (AutoCAD), the need to follow appropriate principals and standards is even more important. The course covers the following topics: introduction to engineering design and 2D to 3D visualization and vice-versa; geometric construction; graphical projection, sketching, & dimensioning. A project is assign for students to apply the graphical drawing techniques typical of industry for mechanical drawings.

Learning Objectives

- Understand the Mechanical Drawing Process.
- Understand projection, pictorials, orthographic, auxiliary views, and sectional views.
- Learn drawing standards as is: dimensioning, tolerancing, and geometric tolerances.
- Develop drawing skills using 2D CAD software.
- Develop an appreciation for 3D CAD software.
- Effective communication through the development of technical drawings and presentation of a design project.

Required or Recommended Readings

Required Textbook:


Supplemental Reading:


Website: https://bb9.tamucc.edu .This will be used primarily for student interface with information and assignments. I recommend checking it daily for new information.
Major Course Requirements

**Quizzes**
Periodic short quiz may be asked without notice that covers previous lecture(s).

**Assignments**
Lab work will be assigned every week as related to the topics in class. They are to be worked during the lab time and are due at the end of lab session; therefore attendance is essential. *Late assignments will NOT be accepted; if you have a special circumstance let me know without delay. One lowest grade assignment will be dropped.* In the event that you prove (after seeking different sources of help, including instructor) to have difficulty with an assignment, an extension may be obtained and granted by instructor.

**Projects**
A team based (2 students) projects will be assigned. It is to be presented towards during the last lab period. Detail information will be discussed and updated during the semester.

**Exams**
Two Midterm and a Final exam will be given. Some exams may be composed of two parts: written and lab test parts.

**Evaluation and Grade**
- Homework and Quizzes: 12%
- Laboratory Exercises: 25%  
  *Note: You must have a passing grade for your Labs to pass the course.*
- Project: 13%
- Midterm exams (2): 20%
- Final exam: 25%
- Attendance/Participation: 5%
- Course Folder: 2% Bonus


**Course Policies**

**Attendance/tardiness**
Absences are not recommended in general. Scheduled exam absences or No-show on projects presentation will not be accepted unless there exists legitimate excuses (illness, death in the family, etc.) and adequate documentation is furnished. However, it is the student's responsibility to obtain class notes, handout materials, if any, etc. when a scheduled lecture is missed. Grading for Attendance will be deducted after the first absence. Starting with the second absence a 1% deduction will apply. If you accumulate 6 absences you have a zero for this grading category.

**Academic Integrity/Plagiarism.**
University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, falsification, forgery, complicity or plagiarism. (Plagiarism is the presentation of the work of
another as one’s own work.) In this class, academic misconduct or complicity in an act of academic misconduct on an assignment or test will result in Grade F.

Preferred methods of scholarly citations

Classroom/professional behavior

Texas A&M University-Corpus Christi, as an academic community, requires that each individual respect the needs of others to study and learn in a peaceful atmosphere. Under Article III of the Student Code of Conduct, classroom behavior that interferes with either (a) the instructor’s ability to conduct the class or (b) the ability of other students to profit from the instructional program may be considered a breach of the peace and is subject to disciplinary sanction outlined in article VII of the Student Code of Conduct. Students engaging in unacceptable behavior may be instructed to leave the classroom. This prohibition applies to all instructional forums, including classrooms, electronic classrooms, labs, discussion groups, field trips, etc.

ACADEMIC HONESTY

University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, falsification, forgery, complicity or plagiarism. (Plagiarism is the presentation of the work of another as one’s own work.) The instructor reserves the right not to grade, or grade only partially any of the submitted assignment. During an assignment you are allowed to have only what is permitted by instructor, anything else (cell, notebook, book etc) encounter in your possession will be considered cheating and a proceeding to penalized and document such an act will take place.

Grade Appeals*

A student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is on the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details on the process, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, consult Texas A&M University-Corpus Christi University Procedure 13.02.99.C2.01 Student Grade Appeal Procedures (http://www.tamucc.edu/provost/university_rules/index.html), and the College of Science and Engineering Grade Appeals webpage (http://sci.tamucc.edu/students/GradeAppeal.html). For assistance and/or guidance in the grade appeal process, students may contact the chair or director of the appropriate department or school or the College of Science and Engineering Dean’s Office.

Disabilities Accommodations*

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please call or visit Disability Services at (361) 825-5816 in Driftwood 101. If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on campus, please contact the Disability Services office for assistance at (361) 825-5816.
### TENTATIVE WEEKLY SCHEDULE*

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<th>WK</th>
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<td>Ch1, 2</td>
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Final Exam Date: TBD  

**Any Changes will be announced in class.**

* **Exam 1, & 2 Dates are tentatively given within that week, not necessarily on Monday.** Exact day of Exam is given one week in advance. No exam makeup is given unless for legitimate cause (a scheduled vacation is not a legitimate cause).

**NOTE1:** Campus is closed for Spring Break 3/10–3/14  
**NOTE2:** Last day to drop a class with an automatic grade of “W” is 4/11/14  
**NOTE3:** Last day of classes is 5/6/14

**Dropping a Class**

I hope that you never find it necessary to drop this or any other class. However, events can sometimes occur that make dropping a course necessary or wise. Please consult with me before you decide to drop to be sure it is the best thing to do. Should dropping the course be the best course of action, you must initiate the process to drop the course by going to the Student Services Center and filling out a course drop form. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class.