FOUNDATIONS OF ENGINEERING II – ENGR 1312-003
Engineering
Spring 2015

A. COURSE INFORMATION
Course number/section: ENGR 1312-003, ENGR 1312-203 (lab)
Class meeting time: 11:00 A.M. to 12:50 P.M., T & 11:00 A.M. to 12:50 P.M. R)
Class location: EN316
Course Website: https://bb9.tamucc.edu/webapps/portal/frameset.jsp, then go to the
appropriate course section

B. INSTRUCTOR INFORMATION
Instructor: Ronald J. Carlson
Office location: EN 219
Office hours: To be announced
Telephone: (361) 825-3272
e-mail: Ronald.carlson@tamucc.edu
Appointments: email, call, or visit with instructor to make a appointment

C. COURSE 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.

D. PREREQUISITES AND COREQUISITES
Prerequisites
None
Corequisites
None

E. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES
Required Textbook(s)
Engineering Graphics with AutoCAD 2013

Optional Textbook(s) or Other References
"Foundation of Engineering " 2nd Edition By Holtzapple & Reece Published by
"The Essentials of Engineering Design Graphics" By Gerald Vinson. Published by
"Engineering Design Graphics " 11th Edition By James H. Earle. Published by Prentice
Hall 2003.
F. STUDENT LEARNING OUTCOMES AND ASSESSMENT

Assessment is a process used by instructors to help improve learning. Assessment is essential for effective learning because it provides feedback to both students and instructors. A critical step in this process is making clear the course’s student learning outcomes that describe what students are expected to learn to be successful in the course. The student learning outcomes for this course are listed below. By collecting data and sharing it with students on how well they are accomplishing these learning outcomes students can more efficiently and effectively focus their learning efforts. This information can also help instructors identify challenging areas for students and adjust their teaching approach to facilitate learning.

By the end of this course, students should be able to:

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

G. INSTRUCTIONAL METHODS AND ACTIVITIES

Instruction will be via lectures and demonstrations in the class room followed by students practicing the ideas covered in the lecture.

MAJOR COURSE REQUIREMENTS AND GRADING

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 during the last lab class. Detail information will be discussed and updated during the semester.

Exams
Midterm and final exam will be given. Each exam is composed of two parts: written and lab test parts.

Evaluation and Grade

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>% of FINAL GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exams</td>
<td>55</td>
</tr>
<tr>
<td>Quizzes</td>
<td>10</td>
</tr>
<tr>
<td>Homework</td>
<td>30</td>
</tr>
<tr>
<td>Presentations</td>
<td>0</td>
</tr>
<tr>
<td>Lab Reports</td>
<td>0</td>
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<tr>
<td>Papers</td>
<td>0</td>
</tr>
<tr>
<td>Attendance/Participation</td>
<td>5</td>
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H. COURSE CONTENT/SCHEDULE

<table>
<thead>
<tr>
<th>DATE (BY DAY OR WEEK)</th>
<th>TOPIC</th>
<th>CHAPTER(S)</th>
<th>ASSIGNMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/21</td>
<td>Basics of AutoCAD</td>
<td>1 and 2</td>
<td>Read chap. 1&amp;2</td>
</tr>
<tr>
<td>2/2</td>
<td>Hand sketching</td>
<td>4</td>
<td>Reade chap. 4</td>
</tr>
<tr>
<td>2/9</td>
<td>Advanced command</td>
<td>3</td>
<td>Read chap. 3</td>
</tr>
<tr>
<td>2/16</td>
<td>Orthographic Views</td>
<td>5</td>
<td>Read chap. 5</td>
</tr>
<tr>
<td>3/2</td>
<td>Exam 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3/9</td>
<td>Sectional and Auxiliary Views</td>
<td>6 &amp; 7</td>
<td>Read chap. 6&amp;7</td>
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<tr>
<td>3/16</td>
<td>Spring Break – No classes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3/30</td>
<td>Dimensioning and Tolerancing</td>
<td>8 &amp; 9</td>
<td>Read chap. 8&amp;9</td>
</tr>
<tr>
<td>4/13</td>
<td>Exam 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/20</td>
<td>Project</td>
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Note: Changes in this course schedule may be necessary and will be announced to the class by the Instructor. The assignments and exams shown are directly related to the Student Learning Outcomes described in Section F.

I. COURSE POLICIES

**Attendance/Tardiness**
Regular attendance is expected. Missing class will prevent students from exposure and opportunity to practice concepts covered during the lectures and example period.

**Late Work and Make-up Exams**
Late work may be accepted at the professor’s discretion. Notify the professor as soon as possible if work will be late or you cannot attend an exam when scheduled.

**Extra Credit**
There will be no extra credit.

**Cell Phone Use**
Cell phone use in the class room is prohibited.

**Laptop Use**
Use of laptops is acceptable. AutoCAD is available for students for three years free.

**Food in Class**
There is to be no food or drinks in the class room. The computers can be damaged.

**Missed Exam**
A missed exam may be made up if a valid reason is provided and notification to the professor is made as soon as practical after learning the exam will be missed.

**Participation**
Students are expected to participate in class by working example problems and sharing their knowledge.

**Others**

J. COLLEGE AND UNIVERSITY POLICIES

- **Academic Integrity (University)**
  It is expected that university students will demonstrate a high level of maturity, self-direction, and ability to manage their own affairs. Students are viewed as individuals who possess the qualities of worth, dignity, and the capacity for self-direction in personal behavior.
  See Full University Policy at [http://catalog.tamucc.edu/content.php?catoid=10&navoid=313#Academic_Integrity](http://catalog.tamucc.edu/content.php?catoid=10&navoid=313#Academic_Integrity)

- **Classroom/Professional Behavior**

- **Deadline for Dropping a Course with a Grade of W (University)**
The grade of W will be assigned to any student officially dropping a course by Friday, April 10, 2015. No student is eligible to receive a W without completing the official drop process by this deadline. Visit the Office of the University Registrar for the Course Drop Form that must be submitted. After April 10, 2015 a student will not be allowed to drop a course.

- **Grade Appeals (College of Science and Engineering)**
  As stated in University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures, 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 upon 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, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules website at [http://www.tamucc.edu/provost/university_rules/index.html](http://www.tamucc.edu/provost/university_rules/index.html), and the College of Science and Engineering Grade Appeals webpage at [http://sci.tamucc.edu/students/GradeAppeal.html](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, the Office of the College of Science and Engineering Dean, or the Office of the Provost.

- **Disability Services**
  Disability Services (DS) is the hub for coordinating services and accommodations to ensure accessibility and utilization of all programs for all Texas A&M University-Corpus Christi students with disabilities. Our services are designed to meet the unique educational needs of enrolled students with documented permanent or temporary disabilities. DS provides intake and consultation services to students seeking to register with our office. DS reviews an individual’s documentation of disability and assesses eligibility for services and the determination of reasonable accommodations. For more information visit the Disability Services Office at 116 Corpus Christi Hall or go to [http://disabilityservices.tamucc.edu/](http://disabilityservices.tamucc.edu/)

- **[Other important policies]**
  Students will treat others with respect.

### K. OTHER INFORMATION

**GENERAL DISCLAIMER**

I reserve the right to modify the information, schedule, assignments, deadlines, and course policies in this syllabus if and when necessary. I will announce such changes in a timely manner during regularly scheduled lecture periods.