ENGR 1211 Foundations of Engineering I  
School of Engineering and Computing Sciences  
Spring 2017

A. COURSE INFORMATION

Course number/section: ENGR 1211.002, CRN 22877, 22878  
Class meeting time: M 3:00-3:50 p.m. (lecture), Wed 3:00-4:50 p.m. (lab)  
Class location: EN107 (lecture), EN 316 (lab)  
Course Website: https://bb9.tamucc.edu/

B. INSTRUCTOR INFORMATION

Instructor: Jerry Hendrix  
Office location: EN 219  
Office hours: (M 2:00 – 3:00 p.m. or by Appointment)  
Telephone: (361) 825-4103  
e-mail: jerry.hendrix@tamucc.edu  
Appointments: Please send an email for making appointment if necessary

C. COURSE DESCRIPTION

Catalog Course Description  
Introduction to the engineering profession, ethics and disciplines; development of skills in teamwork, problem solving and design; other topics include computer applications and programming, visualization, orthographic drawings and CAD tools; introduction to electrical circuits, semiconductor devices, digital logic, signal processing, modern control, communications and their application in systems, Newton’s laws, unit conversion, statistics, Excel, and basic graphic skills.

D. PREREQUISITES AND COREQUISITES

Prerequisites  
None.  

Corequisites  
None.

E. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES

Required Textbook(s)  

Optional Textbook(s) or Other References  
Hall, 2014.

**Supplies**

None.

**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.

(a) an ability to apply knowledge of mathematics, science, and engineering

(b) an ability to identify, formulate, and solve engineering problems

(c) a recognition of the need for, and an ability to engage in life-long learning

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

1. Describe the roles and responsibilities of engineers and technologists, and what are expected of them.
2. Understand and use experimental and data collection procedures used in the technical laboratory.
3. Analyze and explain experiments and experimental data.
4. Identify and apply the basic principles of and the scientific method of problem solving and engineering problem solving.
5. Define professional and ethical responsibilities in the engineering profession
6. Demonstrate an ability to communicate effectively.

**G. INSTRUCTIONAL METHODS AND ACTIVITIES**

Lecture, hands-on labs and student assignment will be used in this course. Instructor will engage the lecture materials with practical engineering projects and discussions. Through participating in several interesting engineering lab projects, students will learn the course knowledge in a practical sense. In some cases, the student is asked to learn principals on their own by reading specified material that may not be covered in class but of which the student may be tested upon.
H. MAJOR COURSE REQUIREMENTS AND GRADING

Your course grade will be determined by your performance in the homework assignments, lab experiments/exercises, quizzes, exams, and a final exam. The distribution of points is as follows:

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>% of FINAL GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>In Progress Exams (Two)</td>
<td>30 (15% each)</td>
</tr>
<tr>
<td>Final Exam</td>
<td>20</td>
</tr>
<tr>
<td>Quizzes</td>
<td>5</td>
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<tr>
<td>Homework</td>
<td>25</td>
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<tr>
<td>Lab Reports</td>
<td>20</td>
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Note: The professor has the right to adjust the final grades on any Exam, Quiz, Homework, Lab, midterm or final grade. No adjustments will be made that are detrimental to the student.

Assignments for Lab and Homework are due as assigned. Work WILL NOT be accepted late. The turning in of assignments is a critical part of learning time management. Completion of tasks and time management are important to being successful throughout engineering.

EXTRA CREDIT: No grades will be adjusted after posting. The students will be given the possibility to increase their final grade by up to 2 full points by successfully completing 2 extra credit assignments. Bartering or negotiating with the professor is not allowed.

I. COURSE CONTENT/SCHEDULE

Two In-Progress Exams are scheduled during scheduled class time and the professor will clearly identify what is covered by the exams. The final exam is comprehensive and is due as scheduled by the university. **The final exam may be a take home exam.**

<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>01/18</td>
<td>Review of Syllabus; General Information</td>
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<tr>
<td>01/23</td>
<td>Engineering/Technology Career Choices</td>
<td>1</td>
<td></td>
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<tr>
<td>02/01</td>
<td>Ethics and Professionalism; Engineer</td>
<td>2</td>
<td>Assignment 1A</td>
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<td></td>
<td>Expectations, Goals</td>
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<tr>
<td>02/08</td>
<td>Solving Engineering Problems</td>
<td>3,6</td>
<td>Assignment 1A</td>
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<td></td>
<td>(Engineering Problem Solving, Scientific</td>
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<td>Method);Design and</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 instructor may cancel classes or may have special assignments if he is not available to support a class. The assignments and exams shown are directly related to the Student Learning Outcomes described in Section F. **We will not have class the week of 3/13-3/17 to observe Spring Break**

J. **COURSE POLICIES**

**Attendance/Tardiness**
Attendance is required since the student will be responsible for all materials that are covered in class. If you miss a class due to unavoidable circumstances, you should copy class notes from another student in the class. Attendance is mandatory for exams and the final exams. Repeated tardiness will not be tolerated.

**Late Work and Make-up Exams**
Work will not be accepted late. No makeup exams are allowed without prior permission of the instructor.
Cell Phone Use
Turn off your cell phone during class.

Laptop Use
Your laptop can be used during lecture time and can always be used during lab.

Food and Drink in Class
Eating is NOT permitted in the classes. Students with food will be asked to discard them, or leave the room. Drinking alcohol free drinks is allowed but cups, cans, etc. must be thrown away after class. If the class doesn’t honor this privilege it will be taken away.

K. COLLEGE AND UNIVERSITY POLICIES

• Academic Integrity (University)
  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 a failing grade.

• 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.

• Statement of Civility
  Texas A&M University-Corpus Christi has a diverse student population that represents the population of the state. Our goal is to provide you with a high quality educational experience that is free from repression. You are responsible for following the rules of the University, city, state and federal government. We expect that you will behave in a manner that is dignified, respectful and courteous to all people, regardless of sex, ethnic/racial origin, religious background, sexual orientation or disability. Behaviors that infringe on the rights of another individual will not be tolerated.

• Deadline for Dropping a Course with a Grade of W (University)
April 7, 2017 is the last day to drop the class. The grade of W will be assigned to any student officially dropping a course. Please consult with the instructor before you decide to drop to be sure it is the best thing to do. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class. Should dropping the course be the best course of action, visit the Office of the University Registrar for the Course Drop Form that must be submitted. No student is eligible to receive a W without completing the official drop process by this deadline. Please consult the Academic Calendar (http://www.tamucc.edu/academics/calendar/) for the last day 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, and the College of Science and Engineering Grade Appeals webpage at 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.

Final grades will be posted by May 12, 2017.

- Disability Services
  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 (361) 825-5816 or visit Disability Services in Corpus Christi Hall 116.

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.

http://disabilityservices.tamucc.edu/

- Statement of Academic Continuity
In the event of an unforeseen adverse event, such as a major hurricane and classes could not be held on the campus of Texas A&M University–Corpus Christi; this course would continue through the use of Blackboard and/or email. In addition, the syllabus and class activities may be modified to allow continuation of the course. Ideally, University facilities (i.e., emails, web sites, and Blackboard) will be operational within two days of the closing of the physical campus. However, students need to make certain that the course instructor has a primary and a secondary means of contacting each student.

**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. This may happen periodically considering other duties that I perform.