ENGR 1211 Foundations of Engineering I  
Department of Engineering  
Fall 2017

A. COURSE INFORMATION

 Course number/section: ENGR-1211.071/271  
 Class meeting time: W 09:00-09:50 am. (lecture), R 02:00-03:50 pm. (lab)  
 Class location: CI 127 (lecture), EN 316 (lab)  
 Course Website: https://bb9.tamucc.edu/

B. INSTRUCTOR INFORMATION

 Instructor: Jangwoon Park  
 Office location: EN 320  
 Office hours: TR 9:00 am -12:00 pm  
 Telephone: (361) 825-2874  
 e-mail: jangwoon.park@tamucc.edu  
 Website: https://sites.google.com/site/tamuccjangwoon/  
 Appointments: Send an e-mail request for appointment, with proposed time as needed.

C. COURSE DESCRIPTION

 Catalog Course Description  
 Introduction to the engineering profession, ethics and disciplines; development of the skills in teamwork, problem solving and design; other topics include computer applications and programming, visualization; introduction to Excel, statistics, and Matlab programming skills.

D. PREREQUISITES AND COREQUISITES

 Prerequisites None.

E. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES


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 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

Lab-based lecture will be used in this course. Instructor will engage the lecture materials with practical engineering project closely. Through participating in several interesting engineering projects, students could learn the course knowledge much better.

H. MAJOR COURSE REQUIREMENTS AND GRADING

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

<table>
<thead>
<tr>
<th>Points</th>
<th>Total Score</th>
<th>Tentative Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>10</td>
<td>≥ Top 20%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>12</td>
<td>&lt; 20% ≥ 50%</td>
</tr>
<tr>
<td>Lab reports/Exercise/Project</td>
<td>15</td>
<td>&lt; 50 ≥ 80%</td>
</tr>
<tr>
<td>Midterm Exam I</td>
<td>15</td>
<td>&lt; 80%</td>
</tr>
<tr>
<td>Midterm Exam II</td>
<td>15</td>
<td>Missing class more than 3 times</td>
</tr>
<tr>
<td>Final Exam</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Attendance*</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Course Folder**</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Learning Community - Engineering Research Project</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>
**Course Folder**

This consists of a simple letter size two pocket folder where all graded and returned assignments will be placed. On the left side place Exams (1 & 2) followed by Quizzes (1 to ?), then HW (1 to ?). On the right side place your labs (1 to ?). It must be complete and organized for full credit.

I. COURSE CONTENT/SCHEDULE

**TENTATIVE WEEKLY SCHEDULE (subject to change)**

<table>
<thead>
<tr>
<th>WK</th>
<th>Week of</th>
<th>Readings</th>
<th>Lecture</th>
<th>LAB</th>
<th>Exams</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>9/4</td>
<td>Ch 1</td>
<td>General Information Engineering. Technology Career Choices</td>
<td>TBA</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>9/11</td>
<td>Ch 2</td>
<td>Ethics</td>
<td></td>
<td></td>
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<tr>
<td>3</td>
<td>9/18</td>
<td>Ch 3</td>
<td>Design and Teamwork</td>
<td></td>
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</tr>
<tr>
<td>4</td>
<td>9/25</td>
<td>Ch 4</td>
<td>Engineering Communication</td>
<td></td>
<td></td>
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<tr>
<td>5</td>
<td>10/2</td>
<td>Ch 5</td>
<td>Estimation</td>
<td></td>
<td></td>
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<tr>
<td>6</td>
<td>10/9</td>
<td>Ch 7</td>
<td>Fundamental Dimensions and Base Units</td>
<td>Mid 1</td>
<td></td>
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<tr>
<td>7</td>
<td>10/16</td>
<td>Ch 8</td>
<td>Universal Units</td>
<td></td>
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<tr>
<td>8</td>
<td>10/23</td>
<td>Ch 10</td>
<td>Excel Workbooks</td>
<td></td>
<td></td>
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<tr>
<td>9</td>
<td>10/30</td>
<td>Ch 11</td>
<td>Graphical Solutions</td>
<td></td>
<td></td>
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<tr>
<td>10</td>
<td>11/6</td>
<td>Ch 12</td>
<td>Mathematical Models</td>
<td></td>
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<tr>
<td>11</td>
<td>11/13</td>
<td>Ch 14</td>
<td>Elementary Statistics</td>
<td>Mid 2</td>
<td></td>
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<tr>
<td>12</td>
<td>11/20</td>
<td></td>
<td>(No class)</td>
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<tr>
<td>13</td>
<td>11/27</td>
<td>Ch 15 – 16</td>
<td>Introduction to MATLAB</td>
<td></td>
<td></td>
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<tr>
<td>14</td>
<td>12/4</td>
<td></td>
<td>Open / Review</td>
<td></td>
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<td></td>
<td></td>
<td>Final Exam: Monday December 11 @ 08:00 am – 10:30 am</td>
<td>FINAL</td>
</tr>
</tbody>
</table>

* Changes in this course schedule may be necessary and will be announced to the class by the Instructor.

- NOTE1: Labor day Holiday September 4 (Mon)
- NOTE2: Reading Day- No Class November 22 (Wed)
- NOTE3: Thanksgiving Holidays November 23-24 (Thur – Fri)
- NOTE4: Last day to drop a class November 27 (Mon)
- NOTE5: Reading Day- No Class December 7 (Thur)

* Exam dates are tentatively given before that week.

Exact day of Exam is given one week in advance. No exam makeup is given unless for legitimate cause (a scheduled vacation, wedding, or airline flight is not a legitimate cause).

J. COURSE POLICIES

**Attendance/Tardiness**

You must attend all lectures and laboratories. Grading for Attendance will be deducted after the
first absence without a legitimate excuse/cause. Starting with the second absence a $\frac{1}{2}$% deduction from attendance will apply.

You are responsible for any materials covered or handed out or announcements made in your absence, therefore make arrangements with classmates when this happens. Records of your attendance will be maintained. Tardiness without the prior consent of the instructor is not accepted and will be penalized. Being tardy consistently without consent can be basis to be removed from class or not be permitted to enter class. This is a disruption to other classmates, impolite and not of an ethical person.

**Late Work and Make-up Exams**
Late work, scheduled exam absences or No-show on lab/project will not be accepted unless there exists legitimate excuses (illness, death in the immediate family, etc.) and adequate documentation is furnished.

**Cell Phone Use**
Cell phone use is prohibited once class begins. They are to be silenced and put away where they are not seen. If a call is expected take it out of the class. Anyone that interrupts class due to cell phone will be asked to leave.

**Laptop Use**
Turn off the personal laptop. During the lecture time, the laptop is not needed. For the lab time, the personal laptop is allowed only when the instructor gives the permission.

**Food in Class**
Eating or drinking is NOT permitted in the classes. Students with food or drink will be asked to discard them, or leave the room.

**Missed Exam**
Missed exam will be scored as zero. No makeup exams are allowed without prior permission of the instructor (Very difficult to obtain).

**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. 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 which could include removal from University.

- **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)**
  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 your academic advisor, the Financial Aid Office, and me, before you decide to drop this course.* 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. Please consult the Academic Calendar ([http://www.tamucc.edu/academics/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](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**
  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/](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.

L. **OTHER INFORMATION**

- **Academic Advising**
  The College of Science & Engineering requires that students meet with an Academic Advisor as soon as they are ready to declare a major. The Academic Advisor will set up a degree plan, which must be signed by the student, a faculty mentor, and the department chair. Meetings are by appointment only; advisors do not take walk-ins. Please call or stop by the Advising Center to check availability and schedule an appointment. The College’s Academic Advising Center is located in Center for Instruction 350 or can be reached at (361) 825-3928.

**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.