ENGR 1211 Introduction to Engineering  
Department of Engineering  
Fall 2020

A. COURSE INFORMATION

Course number/section: ENGR-1211.001/201  
Class meeting time: M 12:00-12:50 pm. (lecture), M 03:00-04:50 pm. (lab)  
Class location: CI 126 (lecture), EN 316 (lab)  
Course Website: https://bb9.tamucc.edu/

Rotating F2F (Hybrid; half of class present at one time); also requests F2F room for the midterm and final exams. Rotating attendance depends on the COVID capacity of the computer lab (EN 316). For example, half of the students can attend a F2F lab session and the rest of the students can remotely attend the lab session via online. The next week, students who attended online will attend a F2F lab session, and the rest of the students will attend via online. Day of attendance for each student to be determined.

B. INSTRUCTOR INFORMATION

Instructor: Jangwoon Park  
Office location: EN 320 (a virtual meeting [Webex or Zoom] would be preferable)  
Office hours: TR 9:00 am -12:00 pm (appointment only)  
Telephone: (361) 825-2874  
e-mail: jangwoon.park@tamucc.edu  
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 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

1
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/exercises, quizzes, two exams, and a final exam. The distribution of points is as follows
I. COURSE CONTENT/SCHEDULE

TENTATIVE WEEKLY SCHEDULE (subject to change)*

<table>
<thead>
<tr>
<th>WK</th>
<th>Readings</th>
<th>Topics</th>
<th>Lecture</th>
<th>LAB</th>
<th>Exams</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ch 1</td>
<td>General Information Engineering, Technology Career Choices</td>
<td>TBA</td>
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<tr>
<td>2</td>
<td>Ch 2</td>
<td>Engineering Ethics</td>
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<td>3</td>
<td>Ch 3</td>
<td>Design and Teamwork</td>
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<td>4</td>
<td>Ch 4</td>
<td>Engineering Communication</td>
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<tr>
<td>5</td>
<td>Ch 5</td>
<td>Estimation</td>
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<tr>
<td>6</td>
<td>Ch 7</td>
<td>Fundamental Dimensions and Base Units</td>
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<td>Mid 1</td>
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<td>7</td>
<td>Ch 8</td>
<td>Universal Units</td>
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<tr>
<td>8</td>
<td>Ch 10</td>
<td>Excel Workbooks</td>
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<tr>
<td>9</td>
<td>Ch 11</td>
<td>Graphical Solutions</td>
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<td>10</td>
<td>Ch 12</td>
<td>Mathematical Models</td>
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<tr>
<td>11</td>
<td>Ch 14</td>
<td>Elementary Statistics</td>
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<td>Mid 2</td>
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<tr>
<td>12</td>
<td>Ch 15 – 16</td>
<td>Introduction to MATLAB #1 - basic calculation</td>
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<td>13</td>
<td>Ch 17 – 18</td>
<td>Introduction to MATLAB #2 - programming</td>
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<td>14</td>
<td>Ch 19 – 20</td>
<td>Introduction to MATLAB #2 - GUI</td>
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<tr>
<td>15</td>
<td>Open / Review</td>
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Final Exam: the exam date and location will be announced

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

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).

- August 17 Faculty Start Date
- August 19 Classes begin Regular Fall & 1st 7-week session
- August 26 Last day to late register or add a class
- September 3 12th Class Day Census
- September 7 Labor Day Holiday - Campus Closed

<table>
<thead>
<tr>
<th>Points</th>
<th>Total Score</th>
<th>Tentative Grade</th>
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<tbody>
<tr>
<td>Homework</td>
<td>5</td>
<td>≥ Top 25%</td>
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<tr>
<td>Quizzes</td>
<td>15</td>
<td>&lt; 25% ≤ 50%</td>
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<tr>
<td>Lab reports</td>
<td>30</td>
<td>&lt; 50% ≤ 75%</td>
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<tr>
<td>Midterm Exam I</td>
<td>15</td>
<td>&lt; 75%</td>
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<td>Midterm Exam II</td>
<td>15</td>
<td>Missing mid-term or final exams more than 2 times</td>
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<tr>
<td>Final Exam</td>
<td>20</td>
<td></td>
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<tr>
<td>TOTAL</td>
<td>100</td>
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J. COURSE POLICIES

COVID-19
Face Coverings— TAMUCC-Face Coverings (cloth face covering, surgical mask, etc.) must be properly worn in all non-private spaces including classrooms, teaching laboratories, common spaces such as lobbies and hallways, public study spaces, libraries, academic resource and support offices, and outdoor spaces where 6 feet of physical distancing is difficult to reliably maintain. Extra masks will be made available if needed.

- Self-monitoring—Students should follow CDC recommendations for self-monitoring. **Students who have a fever or exhibit symptoms of COVID-19 should participate in class remotely and should not participate in face-to-face instruction.**
- Face Coverings—Face coverings (cloth face covering, surgical mask, etc.) must be properly worn in all non-private spaces including classrooms, teaching laboratories, common spaces such as lobbies and hallways, public study spaces, libraries, academic resource and support offices, and outdoor spaces where 6 feet of physical distancing is difficult to reliably maintain.
- Physical Distancing—Physical distancing must be maintained between students, instructors, and others in course and course-related activities.
- Classroom Ingress/Egress—Students must follow marked pathways for entering and exiting classrooms and other teaching spaces. Leave classrooms promptly after course activities have concluded. Do not congregate in hallways and maintain 6-foot physical distancing when waiting to enter classrooms and other instructional spaces.
- To attend a face-to-face class, students must wear a face covering (or a face shield if they have an exemption letter). If a student refuses to wear a face covering, the instructor should ask the student to leave and join the class remotely. If the student does not leave
the class, the faculty member should report that student for sanctions. Additionally, the faculty member may choose to teach that day’s class remotely for all students.

**Attendance/Tardiness**
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.

- **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.C0.03, 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 required 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.C0.03, Student Grade Appeal Procedures. These documents are accessible through the University Rules website at [http://academicaffairs.tamucc.edu/rules_procedures/assets/13.02.99.c0.03_student_grade_appeals.pdf](http://academicaffairs.tamucc.edu/rules_procedures/assets/13.02.99.c0.03_student_grade_appeals.pdf). 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/

• **Civil Rights Complaints**
  Texas A&M University-Corpus Christi is committed to fostering a culture of caring and respect that is free from discrimination, relationship violence and sexual misconduct, and ensuring that all affected students have access to services. For information on reporting Civil Rights complaints, options and support resources (including pregnancy support accommodations) or university policies and procedures, please contact the University Title IX Coordinator, Sam Ramirez (Samuel.ramirez@tamucc.edu) or Deputy Title IX Coordinator, Rosie Ruiz (Rosie.Ruiz@tamucc.edu) x5826, or visit website at Title IX/Sexual Assault/Pregnancy.

**Limits to Confidentiality.** Essays, journals, and other materials submitted for this class are generally considered confidential pursuant to the University's student record policies. However, students should be aware that University employees, including instructors, are not able to maintain confidentiality when it conflicts with their responsibility to report alleged or suspected civil rights discrimination that is observed by or made known to an employee in the course and scope of their employment. As the instructor, I must report allegations of civil rights discrimination, including sexual assault, relationship violence, stalking, or sexual harassment to the Title IX Coordinator if you share it with me.

These reports will trigger contact with you from the Civil Rights/Title IX Compliance office who will inform you of your options and resources regarding the incident that you have shared. If you would like to talk about these incidents in a **confidential** setting, you are encouraged to make an appointment with counselors in the University Counseling Center.

• **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.

I. 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.