# Introduction to Engineering Syllabus

**BE 1104, CE 1104, CSE 1104, EE 1104, IE 1104, MAE 1104**

**Spring Semester 2015**

**M 4:00 - 4:50pm; T 9:30 - 10:20am; T 4:00-4:50pm**

**100 Nedderman Hall**

## **Instructors**: BE Department instructor: Dr. Young-tae Kim [ykim@uta.edu](file:///C:\Users\boardman\Documents\IE%201231\1104\ykim@uta.edu)

## CE Department instructor: Dr. Ernest Crosby <ecrosby@uta.edu>

## CSE Department instructor: Dr. Linda Barasch [barasch@uta.edu](mailto:barasch@uta.edu)

## EE Department instructor: Dr. Samir Iqbal [smiqbal@uta.edu](file:///C:\Users\boardman\Documents\IE%201231\1104\smiqbal@uta.edu)

## IE Department instructor: Dr. Bonnie Boardman [boardman@uta.edu](mailto:boardman@uta.edu)

## MAE Department instructor: Dr. Dibesh Joshi [joshi@mavs.uta.edu](mailto:joshi@mavs.uta.edu)

**Website:** [**http://elearn.uta.edu**](http://elearn.uta.edu)See this website for class materials, assignments, and quizzes.

**Course Description**: Introduction to basic engineering concepts. Students will become familiar with engineering and its many sub-fields, professional communication, ethical responsibilities, creativity and design.

**Course Objectives:** This course focuses on familiarizing new College of Engineering students to engineering as a discipline in general and engineering at UTA in particular. The intention is to prepare class members to be successful students at UTA as well as successful engineers or computer scientists in their chosen professions.

**Student Learning Outcomes:**

Since 1104 is intended as an introductory course and is taken by all new students in the College of Engineering, at the completion of the course students will have gained the knowledge and skills to:

* List academic resources available on campus
* Explain UT-Arlington policies and procedures related to undergraduate students
* Describe curriculum, research areas and career types in the different engineering professions that you might enter after completing your BS degree at UT-Arlington
* Interact with current UT-Arlington engineering seniors
* Explain the basis for and importance of engineering ethics
* Critique several engineering case studies for ethical and unethical behavior
* Work and communicate with members of multi-disciplinary team to design and create a device to accomplish a stated goal

**Tentative Course Topics:**

Week 1: 1/20 & 1/26 – Class Introduction

Week 2: 2/2 & 2/3 - Resources Day

Attendance: 3 points

Reading Assignment: Catalog Information

Weekly Quiz: Catalog Information - 10 points

Week 3: 2/9 & 2/10 - Team Building Exercise

Attendance: 3 points

In-Class Assignment: Team Building Exercise – 10 points

Reading Assignment: Plagiarism Tutorial

Weekly Quiz: Plagiarism Quiz - 10 points

Week 4: 2/16 & 2/17 – Leadership, Teamwork and Communication

Attendance: 3 points

In-Class Assignment: Team Building Reflection – 10 points

Reading Assignment: Teamwork Building

Weekly Quiz: Teamwork Quiz - 10 points

Week 5: 2/23 & 2/24 – Introduction to Bioengineering

Attendance: 3 points

Homework Assignment: Design Planning for Team Activity

Reading Assignment: Bioengineering Highlights

Weekly Quiz: Bioengineering Quiz - 10 points

Week 6: 3/2 & 3/3 – Team Activity

Attendance: 3 points

In-Class Assignment: Team Design Activity – 20 points

Reading Assignment: Engineering Design

Weekly Quiz: Design Quiz - 10 points

Week 7: 3/16 & 3/17- Introduction to Civil Engineering

Attendance: 3 points

Reading Assignment: Civil Engineering Highlights

Weekly Quiz: Civil Engineering Quiz - 10 points

Week 8: 3/23 & 3/24- Introduction to Computer Science and Engineering

Attendance: 3 points

Reading Assignment: Computer Science and Engineering Highlights

Weekly Quiz: Computer Science and Engineering Quiz - 10 points

Week 9: 3/30 & 3/31- Introduction to Electrical Engineering

Attendance: 3 points

Reading Assignment: Electrical Engineering Highlights

Weekly Quiz: Electrical Engineering Quiz - 10 points

Week 10: 4/6 & 4/7 – Introduction to Industrial Engineering

Attendance: 3 points

Homework Assignment: Design Planning for Team Project

Reading Assignment: Industrial Engineering Highlights

Weekly Quiz: Industrial Engineering Quiz - 10 points

Week 11: 4/13 & 4/14 – Introduction to Mechanical and Aerospace Engineering

Attendance: 3 points

Homework Assignment: Preliminary Plan for Team Project

Reading Assignment: Mechanical and Aerospace Engineering Highlights

Weekly Quiz: Mechanical and Aerospace Engineering Quiz - 10 points

Week 12: 4/20 & 4/21- Team Project Demonstration

In-Class Assignment: Team Project and Preliminary Design– 20 points

Week 13: 4/27 & 4/28- Engineering and Student Ethics

Attendance: 3 points

In-Class Assignment: Team Project Reflection – 10 points

Reading Assignment: Engineering and Student Ethics

Weekly Quiz: Ethics Quiz - 10 points

Week 14: 5/4 & 5/5– Engineering Ethics Case Studies

Attendance: 3 points

In-Class Assignment: Degrading Your Degree Reflection – 10 points

Week 15: No final exam for this course

**Course Requirements**:

**Attendance** – Timely attendance in this class is expected. It is important that class be started on time and proceed with minimal interruptions. You will be required to swipe your UTA ID (MAV Express) card at the beginning of every class. You will also be required to sign out of class if you leave the classroom for any reason before the end of class. You will receive 3 points for each class to which you arrive on time or 2 points for each tardy/early departure. Arriving more than 10 minutes late will count as an absence. Problems with the attendance score must be brought to the attention of the responsible faculty member within two weeks of it being reported on Blackboard. Attendance will count for 36 points (15% of your course grade.)

**In-Class Assignments** – Many class periods will include graded in-class assignments. You will not be able to make up the assignments that are completed in class if you are absent from class. In-class assignments will count as 80 points (34% of your course grade).

**Event Reports –** Throughout the semester you must attend two outside of class approved events and turn in an Event Report Form the next week at the beginning of class. These events will be mostly on-campus seminars that the course faculty will deem appropriate for the level and scope of the course. The Event Report Form can be found on Blackboard and must be printed out and taken to the event to be signed by a seminar-sponsoring faculty member or student officer. Events approved for this assignment will be announced in class and posted on Blackboard. Event reports will count for 20 points. (9% of your course grade).

**Reading Quizzes**– There are outside of class readings required for the course. Each reading will also require a quiz that covers the reading. The quizzes will be completed on BlackBoard. Each quiz must be completed by 5:00 pm on the Sunday of the week for which the reading is assigned. Quizzes will not be available after that time. Be aware that BlackBoard and websites where the reading is located sometimes go down unexpectedly and we have no control over that. Do not wait until the last minute to complete the readings and quizzes. If you wait until the last minute and material is unavailable you will miss the opportunity to complete the quiz. Your one lowest scoring quiz will be dropped when calculating the final score. This drop is to account for unusual technical glitches. One and only one quiz grade will be dropped. There will be no retakes or restarts of quizzes for any student for any reason. The reading quizzes will count as 100 points of your final point total (42% of your course grade).

**Grade Allocation**: Course letter grades will be earned based on the following criteria (based on 236 total points): A = 90% and above, B = 80% - 89%, C = 70% - 79%, D = 60% - 69%, F = 0% - 59%. Students are expected to keep track of their performance throughout the semester and seek guidance from available sources (including the instructor) if their performance drops below satisfactory levels.

To summarize: you will have the opportunity to earn 236 points total over the semester.

Attendance 36 points

In-class Activities 80 points

Event Reports 20 points

Reading Quizzes 100 points

**Expectations for Out-of-Class Study**: As with all courses taken as a College of Engineering student, students enrolled in this course should expect to spend at least an additional 3 hours per week (3 \* 1 credit hour) of their own time in course related-activities beyond the time required to attend each class meeting. This would include reading required materials, completing assignments, preparing for exams, etc.

**Drop Policy:** Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if he/she does not plan to attend after registering. **Students will not be automatically dropped for non-attendance**. Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (<http://wweb.uta.edu/ses/fao>).

**Americans with Disabilities Act:** The University of Texas at Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including the *Americans with Disabilities Act (ADA)*. All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Any student requiring an accommodation for this course must provide the instructor with official documentation in the form of a letter certified by the staff in the Office for Students with Disabilities, University Hall 102. Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at [www.uta.edu/disability](http://www.uta.edu/disability) or by calling the Office for Students with Disabilities at (817) 272-3364.

**Title IX:** The University of Texas at Arlington is committed to upholding U.S. Federal Law “Title IX” such that no member of the UT Arlington community shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity. For more information, visit [www.uta.edu/titleIX](http://www.uta.edu/titleIX).

**Academic Integrity:** All students enrolled in this course are expected to adhere to the UT Arlington Honor Code:

*I pledge, on my honor, to uphold UT Arlington’s tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.*

*I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.*

Instructors may employ the Honor Code as they see fit in their courses, including (but not limited to) having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System *Regents’ Rule* 50101, §2.2, suspected violations of university’s standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student’s suspension or expulsion from the University.

**Student Support Services**:UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at 817-272-6107, send a message to [resources@uta.edu](mailto:resources@uta.edu), or view the information at [www.uta.edu/resources](http://www.uta.edu/resources).

**Electronic Communication:** UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at <http://www.uta.edu/oit/cs/email/mavmail.php>.

**Student Feedback Survey:** At the end of each term, students enrolled in classes categorized as lecture, seminar, or laboratory shall be directed to complete a Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student’s feedback enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlington’s effort to solicit, gather, tabulate, and publish student feedback is required by state law; students are strongly urged to participate. For more information, visit <http://www.uta.edu/sfs>.

**Final Review Week:** A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week *unless specified in the class syllabus*. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.

**Emergency Exit Procedures:** Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit, there are four in 100NH, two at the front and two in the rear of the room. When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist handicapped individuals.

**Writing Center.** **:** The Writing Center, 411 Central Library, offers individual 40 minute sessions to review assignments, *Quick Hits* (5-10 minute quick answers to questions), and workshops on grammar and specific writing projects. Visit [https://uta.mywconline.com/](https://owa.uta.edu/owa/luket@exchange.uta.edu/redir.aspx?C=jqplelmmw0KcvkWv1pRv_rHS8ofUUtFIXl_CWZTLffEmCPyZf3x4ncUbBmD9p3gSPROCbhSJj7U.&URL=https%3a%2f%2futa.mywconline.com%2f) to register and make appointments. For hours, information about the writing workshops we offer, scheduling a classroom visit, and descriptions of the services we offer undergraduates, graduate students, and faculty members, please visit our website at [www.uta.edu/owl/](http://www.uta.edu/owl/).

**Emergency Phone Numbers**: In case of an on-campus emergency, call the UT Arlington Police Department at **817-272-3003** (non-campus phone), **2-3003** (campus phone). You may also dial 911.