Introduction to Engineering Syllabus
BE 1104, CE 1104, CSE 1104, EE 1104, IE 1104, MAE 1104
Spring Semester 2014
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
CE Department instructor: Dr. Jim Williams jimwilliams@uta.edu
CSE Department instructor: Dr. Linda Barasch barasch@uta.edu
EE Department instructor: Dr. Samir Iqbal smiqbal@uta.edu
IE Department instructor: Dr. Bonnie Boardman boardman@uta.edu
MAE Department instructor: Dr. Nancy Michael michael@uta.edu

Website: **http://elearn.uta.edu** See this website for recap of assignments & class materials.

Course Description: Introduction to basic engineering concepts. Students will become familiar with engineering and its many sub-fields, 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 in multi-disciplinary teams to design and create a device to accomplish a stated goal

Tentative Course Topics:

Week 1: 1/13 &1/14 – Class Introduction
No classes 1/20 & 1/21
Week 2: 1/27 & 1/28 - Focus on catalog issues, the engineering profession
Week 3: 2/3 & 2/4 - Team Building Exercise
Week 4: 2/10 & 2/11 –Leadership and Teamwork
Week 5: 2/17 & 2/18 – Team Activity
Week 6: 2/24 & 2/25 – Engineering Design Process
Week 7: 3/3 & 3/4- Engineering and Student Ethics
Spring Break
Week 8: 3/17 & 3/18- Engineering ethics case studies
Week 9: 3/24 & 3/25- Senior student panel
Week 10: 3/31 & 4/1 - Introduction to COE; Introduction to industrial engineering
Week 11: 4/7 & 4/8 - Team Activity
Week 12: 4/14 & 4/15- Introduction to electrical engineering and computer science & engineering
Week 13: 4/21 & 4/22- Introduction to civil engineering; introduction to bioengineering
Week 14: 4/28& 4/29– Introduction to mechanical and aerospace engineering; wrap-up
Week 15: 5/7 & 5/8 - Finals held according to University's Final Exam Schedule
See Page 126 for exact dates and times of final exam

Required Texts:

1. Studying Engineering, A Road Map to a Rewarding Career; Raymond B. Landis; ISBN:978-0-9793487-4-7; Available printed or in eBook format.
2. Introduction to Engineering Class Materials
   Available from the UTA bookstore.

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 lose 4 points off your final point total for each absence, and 2 points for each tardy/early departure. 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.

In-Class Activities – Many class periods will include graded in-class activities. You will not be able to make up the activities that were completed in class if you are absent from class. In-class activities will count as 70 points (29% of your course grade).

Homework Menu – There is a menu of outside of class homework assignments in this course. The homework menu is due every other week. A maximum of 20 points can be earned from each menu. The menu items change each period and only items from the current menu can be turned in during the corresponding period. All homework problems from the current menu must be stapled together with the current cover sheet (available on Blackboard) and turned in at the same time. Each menu packet must be turned in during class on the day it is due. Homework must be handed in before class starts; no late homework will be accepted; no emailed homework will be accepted; no homework will be accepted in a professor's office. The homework menu will count as 120 points of your final point total (50% of your course grade).

Examinations – There will be only one exam, a final, given during this course. There will be no make-up examinations. The final will count as 50 points (21% of your course grade).

Grade Allocation: Course letter grades will be earned based on the following criteria (based on 240 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 240 points total over the semester.

Homework Menu Assignments	120 points
In-class Activities	70 points
Final	50 points

Points will be subtracted for absences and tardies.

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 or by calling the Office for Students with Disabilities at (817) 272-3364.

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, or view the information at 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.