CITE 10003 – Disasters, Failures & Other Dangerous Things – Fall 2016 Syllabus

Textbook and Other Support

The academic material for the course (as opposed to the administrative material) is located on TCU Online.

Objective and Overview

This course focuses on how we can develop technological solutions to problems by applying the scientific method to the study of major technological accidents and failures. The lecture material will be augmented by laboratory experiences where the student will be able to experiment with some common everyday complex systems and study their failures under carefully controlled conditions.

Outcomes

Students will demonstrate a basic understanding of:
1) The investigation methodologies, computer models and simulation methods used by engineers and scientists in the development of modern technologies.
2) The engineering, and the underlying natural science, behind a set of modern technologies.
3) How the engineering and the underlying natural science behind modern technologies control not only what we can do, but how society must deal with both the positive and negative effects of a technology.

Grades

All grades in this course will be posted in TCU Online https://tcu.brightspace.com/d2l/login.

<table>
<thead>
<tr>
<th>The course grade will be calculated as follows:</th>
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<tbody>
<tr>
<td>A = 90 - 100</td>
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<tr>
<td>B = 80 - 89</td>
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<tr>
<td>C = 70 - 79</td>
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<td>D = 60 - 69</td>
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<td>F = 0 - 59</td>
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<table>
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<tr>
<th>The total grade for this course will be determined as follows:</th>
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<tbody>
<tr>
<td>Labs .................................................................................. 40%</td>
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<tr>
<td>Lab Quiz .............................................................................. 10%</td>
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<tr>
<td>Unit Quizzes ....................................................................... 40%</td>
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<td>Final Exam ........................................................................... 10%</td>
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Final grades in this course will be the traditional letter grades. There will be no +/- distinctions.

Quizzes

Normally, eleven unit quizzes will be administered during the course. These will usually be given on the dates listed in the course schedule. If class attendance starts to drop off, the instructor may either, 1) randomly select the quiz date, 2) divide the unit quiz into two shorter quizzes given on two different days, and/or 3) give additional pop quizzes.

A student who has an Official University Approved Absence must contact the professor via e-mail prior to the absence to be eligible to take the scheduled make-up of any quiz that will be missed. An absence due to other unforeseen, exceptional circumstances may possibly be considered as excused as well but final determination of whether an absence is excused rests with your professor.

Normally a quiz will consist of 10 multiple-choice questions. Occasionally this format may be changed to include fill in the blank or short essay questions.

The lowest quiz grade will be dropped; the rest will count 4 points each. Please remember that the reason for dropping one quiz grade is to allow you to better handle an unexpected absence or an inability to properly prepare for one quiz. In our experience with this course, not preparing for quizzes and completely missing quizzes due to lack of attendance are some of the major factors causing students to receive final course grades below what they either expected or desired.

Lecture Final

Your lecture final exam will be comprehensive and count 10 percent of your grade. There are two possible final formats, 1) a final made up of multiple choice and/or short answer questions taken directly from the unit quizzes, and 2) a final containing 5 essay questions (20 points each). Most students will be given a final using format number one. However, each professor can at their discretion give all students in their class that have missed more than 4 quizzes or have an overall quiz average below 60 a final using format number two. Make-up finals, regardless of the reason for taking it at a different time, will (for reasons of fairness) normally use format number two.

Lab Quiz

The lab introduction will include some practice calculations to prepare you for the work to be performed in the labs and for a standard calculator quiz (lab quiz) based on the Unit 1 material. The lab quiz will consist of short answers and some discussion questions. It is worth 10 percent of your grade.
Laboratories
The laboratory experience will reinforce the lecture material by giving the student a chance to discover how the scientific method is used in the design of complex products/systems and study of technologies. Laboratories will be completed in teams of two (or more) at the assigned laboratory time. A write up (mostly fill-in-the-blank) for each lab will be due at the end the scheduled lab.

A student who has an Official University Approved Absence must contact the professor one week before any such absence to schedule make-up of any lab that will be missed. A lab that will be missed due to an Official University Approved Absence must be rescheduled in another lab section during the same week.

The lowest lab grade will be dropped; the rest will count 5 points each. Please remember that the reason for dropping one lab grade is to allow you to better handle an unexpected absence. In our experience with this course, completely missing labs due to lack of attendance is one of the major factors causing students to receive final course grades below what they either expected or desired.

Class Attendance
It is expected that you show up to every class. You are responsible for all material covered in class. If you fail to obtain the material that you miss, it could adversely affect your performance in this course. It is your responsibility to obtain the missed material without the aid of the professor.

Class Schedule
The schedules provided for this class should only be viewed as a guide. The first version is given on a separate link in TCU Online. I will attempt to keep the schedule updated as best I can, but each professor is free to deviate from the schedule as he/she sees fit.

Professor Availability
Name: Professor Farmer  Office Location: TUC 337. E-mail address: b.farmer@tcu.edu.
Office hours are MTWR 10:30 — 11:00, MW 4:30 — 5:00, and TR 11:50 — 12:20.

Every effort will be made to be available during office hours; however, committee meetings and other campus obligations may take precedence. Therefore, if you wish to ensure that your professor will be available at a specific time, please contact me via e-mail or, better yet, speak to me at the end of class or lab to establish an appointment. Also, when necessary, appointments can be made for times other than those listed.

Disability Services Statement
Texas Christian University complies with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973 regarding students with disabilities. Eligible students seeking accommodations should contact the Coordinator of Student Disabilities Services in the Center for Academic Services located in Sadler Hall, 1010. Accommodations are not retroactive, therefore, students should contact the Coordinator as soon as possible in the term for which they are seeking accommodations. Further information can be obtained from the Center for Academic Services, TCU Box 297710, Fort Worth, TX 76129, or at (817) 257-6567.
Academic Conduct Policy

The Computer Science Department takes academic dishonesty quite seriously. Any act that violates the spirit of the academic conduct policy of the university is considered academic misconduct and will not be tolerated. The details of the academic conduct policy are listed in the TCU catalog.

Academic Misconduct

Any act that violates the spirit of the academic conduct policy is considered academic misconduct. Specific examples include, but are not limited to:

A. Cheating. Includes, but is not limited to:
   1. Copying from another student's test paper, laboratory report, other report, or computer files and listings.
   2. Using in any academic exercise or academic setting, material and/or devices not authorized by the person in charge of the test.
   3. Collaborating with or seeking aid from another student during an academic exercise without the permission of the person in charge of the exercise.
   4. Knowingly using, buying, selling, stealing, transporting or soliciting in its entirety or in part, the contents of a test or other assignment unauthorized for release.
   5. Substituting for another student, or permitting another student to substitute for oneself, in a manner that leads to misrepresentation of either or both students’ work.

B. Plagiarism. The appropriation, theft, purchase or obtaining by any means another's work, and the unacknowledged submission or incorporation of that work as one's own offered for credit. Appropriation includes the quoting or paraphrasing of another's work without giving credit therefore.

C. Collusion. The unauthorized collaboration with another in preparing work offered for credit.

D. Abuse of resource materials. Mutilating, destroying, concealing or stealing such materials.

E. Computer misuse. Unauthorized or illegal use of computer software or hardware through the TCU Computer Center or through any programs; terminals; or freestanding computers owned, leased or operated by TCU or any of its academic units for the purpose of affecting the academic standing of a student.

F. Fabrication and falsification. Unauthorized alteration or invention of any information or citation in an academic exercise. Falsification involves altering information for use in any academic exercise. Fabrication involves inventing or counterfeiting information for use in any academic exercise.

G. Multiple submission. The submission by the same individual of substantial portions of the same academic work (including oral reports) for credit more than once in the same or another class without authorization.

H. Complicity in academic misconduct. Helping another to commit an act of academic misconduct.

I. Bearing false witness. Knowingly and falsely accusing another student of academic misconduct.
TCU Online

Student Online Tutorial
If you are not familiar with TCU Online, it is recommended that you visit the Student Online Tutorial course to learn about TCU Online and how to navigate the platform. You can also view videos for students by visiting: https://www.youtube.com/watch?v=3L7D1qlT5J8&list=PLxHabmZzFY6mtggGZAitZ61kmpS-pMIaM

How to Login
All TCU users will access TCU Online at http://d2l.tcu.edu. You will use your TCU user name and password to login. This is the same username and password that you use when you login into my.tcu.edu.

Recommended apps you should download and use with TCU Online:

Pulse
Pulse is a phone app which gives you access to the course calendar, assignments, grades, and announcements. This app provides a graph that can help you manage your time. Based on the number of assignments and events on the course calendar for your classes, the graph will display busy times for class work in the upcoming week. You can use this app to manage your daily workload. Students can download Pulse from the Google Play or Apple Store. Students can learn more and download Pulse here.

Binder
Binder is an app used to select, save, and read course content outside of TCU Online (aka offline). For example, if you are traveling for a school activity—such as a sporting event or competition—you would use the Binder App to select course content you want to read while on the bus and without Wi-Fi access. Binder is available in a web version and iPad/Android app version. Select this link to learn more about Binder. Content such as video and audio files and links are not compatible with Binder.