Fall 2018 - Syllabus
Concepts and Exercises in Engineering Practice
(Subject to Minor Modifications including Assignment Due Dates)

Instructor: David A. Wetz, Ph.D.
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Course Time: Monday and Wednesday 2:30 P.M. – 3:50 P.M.

Course Location: TBD

Course website: http://www-ee.uta.edu/hpi/EE_4340/

Section Information: EE4340 - 002

Instructor website: http://www.uta.edu/ee/powerlab

Course Prerequisites: COMS 3302, ECON 2305, EE 3444, EE 3318, EE 3308, EE 3330, EE 3310, and Professional Standing in EE Program

Required Textbook: No textbook

Course Description: Integration of technical knowledge and skills with project planning, teamwork, and communication skills (written and oral). A project-oriented approach is used including the preparation of literature-based research reports, research proposals, product development proposals, and project management plans. Supporting topics: technical information resources, ethics, safety, intellectual property. Students will begin their engineering capstone design experience, including team formation, project selection, background research, and preparation of a preliminary project plan.

Learning Goals: This course is intended to provide a set of skill developing experiences similar to what might be encountered in an industry environment and also to provide preparation for the Senior Design Project course. Emphasis is placed on management of individual activities as well as those of small teams. Students are expected to demonstrate an increased ability to explain their work (orally and written), and to propose/manage a time- and cost-effective plan for carrying out system-level and other development activities.
Policies:
Most of this document deals with what you can expect from me and from this course. In addition, I strongly recommend that each of you adopt the following policies in order to optimize your experience in the course (and to maximize your chances for obtaining the best possible grade!):
1. Treat everyone involved with respect,
2. Come to class and come on-time, nearly all the time,
3. Remain in the class for the duration of the class,
4. Make efforts with other classmates to fill in gaps for the occasional class that circumstances force you to miss,
5. Read carefully and follow instructions accurately,
6. Work to improve not only your understanding of the subject matter, but also your learning skills,
7. Take careful notes,
8. Review material outside of class between classes,
9. Ask questions about things you don’t understand,
10. PARTICIPATE
11. Use good judgment when speaking; speak in a voice that is loud and clear enough for everyone to hear,
12. Have a good learning attitude, and
13. Be academically honest: No plagiarizing or cheating. Penalties range from receiving a grade of zero for an assignment to being dropped from the course and reported to university officials.

Drop Policy:
As per University guidelines. See the UTA website for drop dates. University policies will be adhered to with regard to grade determination (e.g., W or F). A grade of incomplete (X) will be given only in unusual cases that can be well justified. Students should submit a written request stating the justification.

SDP Policy:
EE4340 and EE4349 (Senior Design Project, or SDP) are linked courses. As part of EE4340, you will receive your SDP assignment (project and team members). You will also begin work on your SDP. It is therefore required that you agree to enroll in EE4349 in the next spring or fall semester. Should you successfully complete EE4340 and then not enroll EE4349 in the immediately next long semester, you will affect your assigned SDP team. You will be required to participate in a significant way in the EE4340 offering that takes place immediately prior to the semester that you plan to take EE4349. You will be assigned to a new team and a new project and you will be required to participate in any EE4340 assignments related to that SDP. Your performance in the phases of the SDP that occur during EE4340 will be evaluated and will impact your grade in EE4349.

Computer Usage:
Your will use web-based resources, library resources, and e-mail extensively. Word processing and Microsoft (or equivalent) drawing tools for use in the preparation of presentation materials. Spreadsheet tools for presentation of budgets, basic resource allocation optimizations, and general documentation of engineering projects.

List Server:
At present, there are no plans to use a List Server for course communications. Periodic e-mail distributions are planned.
Course Schedule / Due Dates (Tentative)

Mock FE Exam (Individual)
10/24 In class Mock FE Exam

Senior Design Assignment (Senior Design Group Submission)
8/31 Senior Design Selection Form Due via Blackboard
9/28 Senior Design PPT 1 Due via Blackboard
9/28 SDP Peer Review 1 (by 11:59PM to Blackboard)
10/12 Senior Design PPT 2 Due via Blackboard
10/15, 10/17, & 10/22 Senior Design Group Presentation based off PPT 2 (in Class)
10/28 Senior Design Review PPT 3 Due via Blackboard
10/28 SDP Peer Review 2 (by 11:59PM via Google Form)
11/20 Senior Design Final Report Due via Blackboard
11/20 Senior Design Final PPT (PPT 4) Due via Blackboard
11/20 SDP Peer Review 3 (by 11:59PM via Google Form)
11/21, 11/26 & 11/28 Senior Design Group Presentation based off PPT 4 (in Class)

Design of Experiments (DoE) Assignment (Group of 2 Group Submission)
10/5 DoE Power Point and Short Report Due via Blackboard
10/5 DoE Peer Review (Due via Google Form)

Product Development Proposal (PDP) Assignment (Senior Design Group Submission)
11/2 Product Proposal Power Point and Short Report Due via Blackboard
11/2 PDP Peer Review (Due via Google Form)

Grading (SUBJECT TO CHANGE AND WILL BE ANNOUNCED AHEAD OF TIME IF IT DOES)

Mock FE Exam (Individual) - 25%
DoE Assignment (Group of 2 Submission) - 12.5% total
- DoE Power Point Presentation 6.25%
- DoE Written Report 6.25%
- Peer Review can significantly impact grades by as much as 50%
Product Development Proposal (Senior Design Team Submission) – 12.5 % total
- PDP Power Point Presentation 6.25%
- PDP Written Report 6.25%
- Peer Review can significantly impact grades by as much as 50%
Senior Design Project Plan (Senior Design Team Submission) – 50 % total
- PPT 1 5%
- PPT 2 5%
- PPT 3 5%
- Final PPT (PPT 4) 17.5%
  This Group Grade will be multiplied by a Design Readiness Factor
  – Final Report 17.5%
  This Group Grade will be multiplied by a Design Readiness Factor
  – Peer Reviews can significantly impact grades by as much as 50%

(Individual grades to be assigned. See below.*)

Design Readiness Factor: By the end of the EE4340 semester, it is expected that your group will have a completed design that is ready to have parts ordered so that the build, test, and documentation phase can begin immediately at the start of the EE4349 semester. Ideally this factor is either 0% (your group is not fully ready) or 100% (your group is fully ready) meaning that it is possible to fail the EE4340 class simply by not being ready to begin the build, test, and document phase by the end of the semester. The instructor will determine how ready your group is and reserves the right to vary the scale anywhere between 0% and
100% based on his/her subjective opinion of the groups progress. There are enough updates and instructor/GTA feedback provided through the semester that you should always know where you stand.

Detailed descriptions of each assignment will be posted on the class' Blackboard site. You should use the description and any checklists provided to evaluate your assignments prior to submission!

*Team and Individual Grades:* Even though all assignments, with the exception of the Mock FE Exam, are team assignments, each student will receive an individual grade. Looking across all assignments, individual grades will be determined based on a combination of evaluations by the instructor, by the GTA's, by the class as whole (for oral presentation components), and by a given student's team members. Given the nature of the assignments and relatively unique aspects of the grading process utilized, details of grading deserves your careful consideration.

Team grades will be determined for assignments by the instructor using input from the GTA, grading checklists (which will be initially completed by the GTA and then reviewed by the instructor when the instructor reviews the submitted materials), and instructor evaluation of submitted materials. Team members will also evaluate their teammates and these evaluations will be used to determine a “contribution factor” using an objective formula based on the statistical average and variance of team member performance evaluations. This factor will typically range from about 0.5 to 1.5 (0.5 indicates a very weak contribution, 1.5 indicates an incredibly strong contribution). Using the method established, it is possible for all team members to receive a contribution factor of 1.0. The final individual assignment grades are determined by multiplying the respective team grade by the contribution factor for a given team member. Note that your evaluations of your team members are considered as “inputs” to my grading process. I ultimately am responsible for all grades and I reserve the right to over-ride evaluation of team members, at my sole discretion, if I perceive anything but a sincere and honest evaluation process. (Based on experience, this has been necessary only for a small percentage of cases.)

Assignments with an Oral Presentation Component: For assignments including an oral presentation aspect, each member of the class not involved in a given presentation will complete an evaluation form for each oral presentation. In addition, the instructor will also evaluate each presentation. The final grade for a given oral presentation will be based on a combination of the class and instructor evaluations.

Given the basic grading process for oral presentations, it is essential that all class members be present for all oral presentations. To encourage this, an additional component to the oral presentation grading process is incorporated. Specifically, YOUR ORAL PRESENTATION GRADE will be “adjusted” based on the number of other oral presentations that you were present to evaluate. An adjustment factor will be determined based on the number of oral presentations (other than your own) that you DO NOT evaluate as follows: 1 missed: 98%, 2 missed 95%, 3 missed – 90%, 4 or more missed – 85%. For example, if the grade for your oral presentation (determined as described above) was 83 – and you did not submit oral presentation evaluations for two other oral presentations, your final oral presentation grade would be 83 x 0.95 = 78.9. The instructor reserves the right to over-ride this requirement based on special circumstances (e.g., documented medical situations).

Final Letter Grade Determination: A cumulative score will be computed based on the scores for individual course assignments.

Late Assignments:
Late assignments may be accepted without penalty only in the case of medical emergencies and if the instructor is informed as soon as practically possible (prior to due date is best).

In all other instances, late assignments will be accepted up to four class meetings beyond the due date, with a 10 point (out of 100%) penalty assessed per day it is late. NOTE: Assignments are “due” as defined by the schedule above unless otherwise stated in class or via email communication from the instructor.
 Returning of Grades:
Grading of this course is subjective and reading intensive so please be patient with the instructor as time is taken to grade and provide feedback. Grades will be posted to the Blackboard site ASAP.

Attendance:
Attendance: At The University of Texas at Arlington, taking attendance is not required. Rather, each faculty member is free to develop his or her own methods of evaluating students’ academic performance, which includes establishing course-specific policies on attendance. As the instructor of this section, attendance is expected but not mandatory. It will be randomly checked both formally and informally. Poor attendance will be taken into account in the determination of grade adjustment factors along with the Peer Reviews.

Policy Regarding EE4340 and EE4349:
EE4340 and EE4349 (Senior Design Project, or SDP) are linked courses. As part of EE4340, you will receive your SDP assignment (project and team members). You will also begin work on your SDP. It is therefore required that you, along with your designated team members, agree to enroll in EE4349 in the next spring or fall semester. Should you successfully complete EE4340 and then not enroll EE4349 in the “immediately next” long semester, you will adversely impact your assigned SDP team. You will be required to participate in a significant way in the EE4340 offering that takes place immediately prior to the semester that you plan to take EE4349. You will be assigned to a new team and a new project and you will be required to participate in any EE4340 assignments related to that SDP. Your performance in the phases of the SDP that occur during EE4340 will be evaluated and will impact your grade in EE4349.

Writing Center:
The Writing Center offers FREE tutoring in 15-, 30-, 45-, and 60-minute face-to-face and online sessions to all UTA students on any phase of their UTA coursework. Register and make appointments online at https://uta.mywconline.com. Classroom visits, workshops, and specialized services for graduate students and faculty are also available. Please see www.uta.edu/owl for detailed information on all our programs and services.

Student Feedback Survey:
At the end of each term, students enrolled in face-to-face and online classes categorized as “lecture,” “seminar,” or “laboratory” are directed to complete an online 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 via the SFS database is aggregated with that of other students enrolled in the course. Students’ anonymity will be protected to the extent that the law allows. UT Arlington's effort to solicit, gather, tabulate, and publish student feedback is required by state law and aggregate results are posted online. Data from SFS is also used for faculty and program evaluations. For more information, visit http://www.uta.edu/sfs.

Americans with Disabilities Act:
The University of Texas at Arlington is on record as being committed to both the spirit and letter of federal equal opportunity legislation; reference Public Law 93112 – The Rehabilitation Act as amended. With the passage of new federal legislation entitled Americans with Disabilities Act – (ADA), pursuant to section 504 of The Rehabilitation Act, there is renewed focus on providing this population with the same opportunities enjoyed by all citizens.

As a faculty member, I am required by law to provide “reasonable accommodation” to students with disabilities, so as not to discriminate on the basis of that disability. Student responsibility primarily rests with informing faculty at the beginning of the semester and in providing authorized documentation through designated administrative channels.
Title IX:
The University of Texas at Arlington ("University") is committed to maintaining a learning and working environment that is free from discrimination based on sex in accordance with Title IX of the Higher Education Amendments of 1972 (Title IX), which prohibits discrimination on the basis of sex in educational programs or activities; Title VII of the Civil Rights Act of 1964 (Title VII), which prohibits sex discrimination in employment; and the Campus Sexual Violence Elimination Act (SaVE Act). Sexual misconduct is a form of sex discrimination and will not be tolerated. For information regarding Title IX, visit www.uta.edu/titleIX or contact Ms. Michelle Willbanks, Title IX Coordinator at (817) 272-4585 or titleix@uta.edu

Non-Discrimination Policy:
The University of Texas at Arlington does not discriminate on the basis of race, color, national origin, religion, age, gender, sexual orientation, disabilities, genetic information, and/or veteran status in its educational programs or activities it operates. For more information, visit uta.edu/eos.

Academic Dishonesty:
Students enrolled all UT Arlington courses 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.

UT Arlington faculty members may employ the Honor Code in their courses by 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. Additional information is available at https://www.uta.edu/conduct/. Faculty are encouraged to discuss plagiarism and share the following library tutorials http://libguides.uta.edu/copyright/plagiarism and http://library.uta.edu/plagiarism/.

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.

Student Support Services Available:
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 [http://www.uta.edu/studentsuccess/success-programs/programs/resource-hotline.php](http://www.uta.edu/studentsuccess/success-programs/programs/resource-hotline.php)

**Lab Safety Training:**
Students registered for this course may be asked to complete a required lab safety training prior to entering the lab and undertaking any activities. Once completed, Lab Safety Training is valid for the remainder of the same academic year (i.e., Fall through Summer II) and must be completed anew in subsequent years. There are no exceptions to this University policy. Failure to complete the required training will preclude participation in any lab activities, including those for which a grade is assigned.

**Electronic Communication Policy:**
The University of Texas at Arlington has adopted the University "MavMail" address as the sole official means of communication with students. MavMail is used to remind students of important deadlines, advertise events and activities, and permit the University to conduct official transactions exclusively by electronic means. For example, important information concerning registration, financial aid, payment of bills, and graduation are now sent to students through the MavMail system. All students are assigned a MavMail account. **Students are responsible for checking their MavMail regularly.** Information about activating and using MavMail is available at [http://www.uta.edu/oit/email/](http://www.uta.edu/oit/email/). There is no additional charge to students for using this account, and it remains active even after they graduate from UT Arlington.

To obtain your NetID or for logon assistance, visit [https://webapps.uta.edu/oit/selfservice/](https://webapps.uta.edu/oit/selfservice/). If you are unable to resolve your issue from the Self-Service website, contact the Helpdesk at helpdesk@uta.edu.

**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, which is located on the laboratory door. 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.

**Active Shooter Information:**
[https://police.uta.edu/crime-prevention/active-shooter-resources.php](https://police.uta.edu/crime-prevention/active-shooter-resources.php)

**Campus Carry:**
Effective August 1, 2016, the Campus Carry law (Senate Bill 11) allows those licensed individuals to carry a concealed handgun in buildings on public university campuses, except in locations the University establishes as prohibited. Under the new law, openly carrying handguns is not allowed on college campuses. For more information, visit [http://www.uta.edu/news/info/campus-carry/](http://www.uta.edu/news/info/campus-carry/)

**The IDEAS Center:**
(2nd Floor of Central Library) offers free tutoring to all students with a focus on transfer students, sophomores, veterans and others undergoing a transition to UT Arlington. To schedule an appointment with a peer tutor or mentor email [IDEAS@uta.edu](mailto:IDEAS@uta.edu) or call (817) 272-6593.

**The English Writing Center (411LIBR):**
The Writing Center offers free tutoring in 20-, 40-, or 60-minute face-to-face and online sessions to all UTA students on any phase of their UTA coursework. Our hours are 9 am to 8 pm Mon.-Thurs., 9 am-3 pm Fri. and Noon-6 pm Sat. and Sun. Register and make appointments online at [http://uta.mywconline.com](http://uta.mywconline.com). Classroom Visits, workshops, and specialized services for graduate students are also available. Please see [www.uta.edu/owl](http://www.uta.edu/owl) for detailed information on all our programs and services.
The Library’s 2nd floor Academic Plaza offers students a central hub of support services, including IDEAS Center, University Advising Services, Transfer UTA and various college/school advising hours. Services are available during the library’s hours of operation. http://library.uta.edu/academic-plaza

Librarian to Contact: http://www.uta.edu/library/help/subject-librarians.php
Library: The Library’s website address is http://www.uta.edu/library.
The following is a list of commonly used library resources:
Library Home Page http://www.uta.edu/library
Subject Guides http://libguides.uta.edu
Subject Librarians http://www-test.uta.edu/library/help/subject-librarians.php
Database List http://www-test.uta.edu/library/databases/index.php
Course Reserves http://pulse.uta.edu/vwebv/enterCourseReserve.do
Library Catalog http://discover.uta.edu/
E-Journals http://utalink.uta.edu:9003/UTAlink/az
Library Tutorials http://www.uta.edu/library/help/tutorials.php
Connecting from Off- Campus http://libguides.uta.edu/offcampus
Ask A Librarian http://ask.uta.edu