

**EE 4340 001 Spring 2016 Mon-Wed-Fri 2:00 p.m. – 2:50 p.m. NH111
Concepts and Exercises in Engineering Practice**

SYLLABUS (v1 for SP16, subject to modifications)

- Instructor:** George V. Kondraske, Ph.D.
- Office:** Room 215 Nedderman Hall; also Room 241 Nedderman Hall (lab)
- Office Phone:** 817-272-3473 (Note: email is preferred and likely to provide a more rapid response)
- Email Addresses:** kondraske@uta.edu
To be determined ?? (GTA)
Please include “EE4340_SP16_(specific topic)” on the subject line of all emails.
- Faculty Profile:** <https://www.uta.edu/profiles/george-kondraske>
- Office Hours:** **Approx.** one hour before and one hour after scheduled class times (with some exceptions) and by appointment scheduled via email. Please check Rm NH 241, my lab, also. Unscheduled meetings immediately after class often work best for students with complex schedules.
- Please notify me ASAP by e-mail if you feel that a meeting is necessary, providing information about the nature of the meeting and phone contact info. We will either schedule a meeting or resolve an issue in a more timely manner via e-mail or phone whenever feasible.
- Section Information:** EE4340 Sec 001
- Class Time and Place:** MWF 2:00 – 2:50 p.m., NH111
- Description of Course:** 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 Outcomes:** 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, as applied to research, product development, and design contexts.
- Required Textbook/
Materials:**
- No specific textbook required.
 - Complete review and understanding of all material provided on – or posted to - the course website is REQUIRED.
 - For Assignments 3 and 4 (SDPP – see below) – All materials described on or posted to the EE4349 website are REQUIRED materials.

- Other materials are assignment dependent – and students either have the opportunity to define (Assignments 1 and 2) – or they will be assigned - a topic (for Course Assignments 3 and 4 – as related to the Senior Design Project). Students will be expected to be resourceful and identify and utilize all relevant materials that will support successful completion of assignments.

**Major Assignments
And Examinations:**

There are four major assignments (considered to be “challenges”) and one Quiz. See the syllabus section on Grading and detailed descriptions of assignments provided on the course website. There are no examinations as such, other than one brief Quiz. A competency evaluation will be administered. This will not contribute to the course grade, but may affect continuation in the course.

Detailed descriptions of each assignment, along with checklists used in grading, will be posted on the class web site. You should use checklists to evaluate your assignments prior to submission!

Attendance:

Attendance will be randomly checked and documented. It is not included as a *direct factor* that determines the course grade. However, attendance information will be used at the discretion of the instructor in the determination of final letter grades especially when students are near (either above or below) thresholds for different letter grades. Furthermore, experience shows that attendance in THIS COURSE plays a significant role – especially because of the team nature of assignments and the incorporation of peer evaluations. YOUR TEAM MEMBERS EXPECT YOU TO “SHOW UP”! If you do not, *it is likely to SHOW UP* in your peer evaluations. Any efforts to falsifying attendance certifications will result in all involved students being dropped from the course.

Attendance for certain class sessions (e.g, oral presentations) is considered MANDATORY and procedures are incorporated such that missing those classes will have a direct impact on your grade associated with specific assignments.

Other Requirements:

Course Prerequisites: COMS 3302, ECON 2305, EE 3444, EE 3318, EE 3308, EE 3330, and Professional Standing in EE Program (check the EE degree plan that you are following; there are variations that could be in effect).

Expectations from Students: 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, to maximize your chances for obtaining the best possible grade, and to develop a good professional demeanor:

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 and useful notes – and work to improve your note taking skills,
8. Review and work to understand material outside of class - between classes,
9. Ask questions about things you don’t understand,
10. **PARTICIPATE**
11. Use good judgment when speaking. When you are about to speak, consider it an opportunity to show your engineering design skills! Assess the room and determine

- what volume and clarity is necessary for EVERYONE to hear and comprehend. 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. NOTE that we make a considerable effort to check for plagiarism on assignment (cutting and pasting key suspicious phrases into Google, for example). Refer to class discussions on this topic. ALL STUDENTS WILL BE REQUIRED TO EXPRESS THEIR UNDERSTANDING OF WHAT CONSTITUTES PLAGIARISM PRIOR TO THE SUBMISSION OF THE FIRST ASSIGNMENT – AND THERE WILL BE SUFFICIENT OPPORTUNITY TO SEEK CLARIFICATION. THEREFORE, “LACK OF UNDERSTANDING” WILL NOT BE ACCEPTED AS A SUITABLE DEFENSE.

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: You 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.

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.

Grading;

The course is based on four assignments or “challenges”, with weightings for grading purposes as shown here:

Attendance (it matters!)	10%
Research Proposal (Team of 4, nominally)	
- Abstract (for candidate proposals)	5%
- Written Document	10%
- Oral Presentation	10%
(Individual grades to be assigned. See below.*)	

Product Development Proposal (Team of 4, nominally)	
- Abstract	5%
- Written Document	10%
- Oral Presentation	10%
(Individual grades to be assigned. See below.*)	
Senior Design Project – Abstract/Summary	5%
Senior Design Project Plan – V1 (Team of 3 or 4)	15%
(Individual grades to be assigned. See below.*)	
Senior Design Project Plan – V2 (Team of 3 or 4)	15%
(Individual grades to be assigned)	
Special Topic Material – Quiz (Individual Grade)	5%

Detailed descriptions of each assignment, along with checklists used in grading, will be posted on the class web site. You should use checklists to evaluate your assignments prior to submission!

Team and Individual Grades: Even though all assignments 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 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 an “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 1.25 (0.5 indicates a very weak contribution, 1.25 indicates a strong contribution). Using the method established, it is *possible* for all team members to receive a contribution factor of 1.0. The final individual written and oral 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 (45% weight) and instructor (%55 weight) 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 $83 \times 0.95 = 78.9$. 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. The cumulative score will then be adjusted (a constant, never more than 9.9 pts, will be added to the cumulative score for each student; the same value is used to adjust all students) and a final letter grade will be determined (A, B, C, D, or F) using the standard mapping of numerical scores to letter grades (i.e., $\geq 90 = A$, etc.). The adjustment constant will be made based on overall class performance and expectations of class performance on a criteria referenced scale determined from previous course offerings. Note the impact of the adjustment factor: An adjustment of 8 pts to the cumulative score is equivalent to adding 40 pts to a single assignment that contributes 20% of the cumulative score. Details regarding requirements for each of the assignments listed above are provided via the course web site.

The instructor reserves the right to reduce the adjustment factor that is added to the cumulative score based on attendance or frequent tardiness that is disruptive to the class (see “Attendance” elsewhere in this document).

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). Even in this instance, assignments must be submitted prior to the return of graded assignments.

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 class session. For example, submitting an assignment on the next class after the due date will result in a 10 pt penalty (i.e., the assignment will first be graded normally and then 10 pts will be subtracted to determine the final grade). No assignments will be accepted between class sessions. **NOTE:** Assignments are “due” at the beginning of class on the stated date. Thus, assignments submitted after the beginning of class – on the due date – are considered late by one class period. The same threshold applies to assignments submitted late by more than one class period.

Due to the need to compute and submit final grades, the last assignment must be submitted no more than 48 hours after the due date and will be subject to a “one class late” penalty. Any submissions beyond that limit will receive a grade of zero unless the student contacts the instructor to discuss the possibility of receiving a overall course grade of “incomplete”.

Grading Grievances:

In attempting to resolve any student grievances regarding grades, it is the student’s obligation first to make a serious effort to resolve the matter with the individual with whom the grievance originated. Individual course instructors retain primary responsibility for assigning grades. The instructor’s judgment is final unless compelling evidence shows discrimination, preferential treatment or procedural irregularities. If students wish to appeal, their request must be submitted in writing—on an appeal form available in departmental or program offices—to the department chair or program director. The student has one calendar year from the date the grade is assigned to initiate the grievance.

The normal academic channels are department chair or program director and then academic dean. However, before considering a grievance, the department chair or program director will refer the issue to a departmental or program committee of faculty. If the student does not find the committee's decision acceptable, the student may appeal to the academic dean. The decision of the dean is final. Information specific to the procedures to be followed in each academic unit is available in the office of the academic dean.

The dean of the college or school in which a student is enrolled, or the Executive Director of University College if the student has not declared a pre-major or major, has jurisdiction over the student's program of study, degree requirements and all other academic matters including grievances. However, students taking a course in a college or school other than the one in which they are primarily registered are subject to the dean of the college or school in which the course is offered concerning the course and academic grievances regarding the course. For issues involving scholastic dishonesty, see the Academic Dishonesty entry in this section of the catalog.

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 they do 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/ao/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:

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.

UT Arlington faculty members 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: 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 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 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, which is located immediately outside the WH404 room door and to the stairwell that is slightly to the right. 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.

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

Course Schedule: A course schedule follows. Please note that dates and topics are subject to adjustment based on enrollment. This is necessary due to the large number of oral presentations by students that must be factored into scheduling.

(The course schedule will be distributed via email and inserted here by reference).

