**IE 3312 Economics for Engineers**

**Tuesday & Thursday 7:00PM – 8:20 PM, WH 402**

**Class Syllabus – Fall 2013**

**Instructor:** Dr. Neal N. McCollom, PE

**Office Location:** Adjunct office 420V - WH

**Office Hours:** Tuesday & Thursday 5:30 pm to 6:45 pm (other times by appointment and by phone/e-mail)

**Phone:** 817-272-7592 **Email:** nnmc@uta.edu , **Cell**: 817-235-8064 (**text me** during the work day if you really need to contact me, call my cell after working hours but before 9:00PM in the evenings!!)

**Required text:** Basics of Engineering Economy, 2nd Edition - Leland Blank, Anthony Tarquin, 2014©

**Course Description:** Methods used for determining the comparative financial desirability of engineering alternatives.

**Course Goals/Learning Objectives:** To provide the student with the basic decision making tools required to analyze engineering project alternatives in terms of their worth and cost, an essential element of engineering practice. The student is introduced to the concept of the time value of money and the methodology of basic engineering economy techniques. It is also a goal to provide the student with the background to enable them to pass the Engineering Economy portion of the Fundamentals of Engineering exam. This is also a class which has many applications in personal life.

**Topics Covered:**

* Introduction to Engineering Economics and time value of money
* Interest factors and equivalence of projects/selections
* Evaluation of a single investment (internal rate of return, net present value, cash flows, etc.)
* Cost comparisons – cost/benefit, annual worth, breakeven analysis
* Replacement analysis
* Cost estimating
* Depreciation and depreciation models and impact on project selection
* Tax considerations

**Attendance and Drop Policy:** You are responsible for the material presented in class when you are absent. You ***must*** provide advanced notice if you will be out for an exam. You may drop this course through the University published last day to drop. Attendance won’t be taken, but the exams will be based on the lectures and materials presented.

***Tentative* Key Schedule Dates:**

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| Sept 24 | Exam 1 (Ch 1-4) |
| Oct 29 | Exam 2 (Ch 5-8) |
| Oct 30 | Last day to drop course (undergraduate students) |
| Nov 19 | Project and oral presentations due |
| Dec 3 | Last normal IE 3312-02 class session |
| Dec 5 | Exam 3 (Ch 9, 11, 12 & 13) – not comprehensive – 1 hr 20 min |

**Course Evaluation & Final Grade:**

* Examinations: Three exams counting 75% (25% each) of total grade.
* Project: 10% of total grade (due at the beginning of class). This must be completed in order to receive a grade in the class. It is a “key assignment”.
* Quizzes/homework. (15%) Homework and/or reading will be assigned for each chapter. Homework will be collected the next class session and/or a pop quiz may be given over the assigned material. Name and student ID must be **printed** on any papers handed in. The assignments may not be current on the IE Web. It’s your responsibility to get them in class or from another student if you miss class. “Pop” quizzes will be given at random times at the beginning of class.
* Missed exam: There is a single comprehensive makeup exam at the end of the semester if one exam is missed by an **excused** absence. You must notify me before the exam if you are unable to take it on the scheduled date.
* Missed daily quizzes/homework: No makeup for daily quizzes or homework. One or two daily quizzes/homework with the lowest score(s) will be dropped.
* Late homework/project: Once the class starts, late homework or project assignments that come in during the class will have a minimum of 20% docked. Late homework will not be accepted after the next class period past the due date. A late project, past the due date, will lose a minimum of one grade (10+ points). Not submitting the project will result in an ‘incomplete’ grade for the course.

**General Policies/Guidelines:**

* If you require an accommodation based on disability, please meet with me in the privacy of my office, during the first week of the semester, to make sure you are properly accommodated.
* All tests and quizzes are open book, closed notes (1 formula sheet 8.5 x 11” is allowed for tests). The formula sheet may not include worked problems. You must turn in your formula sheet with your exam.
* Students must work alone on tests and quizzes. No sharing of any materials may occur during tests and quizzes including books, calculators, formula sheets, etc.
* Selected exercises from the text will be assigned as homework. All homework will be collected and graded. Recommendation: Do the homework – and more – it will help you learn and prepare for the tests.
* Students need to individually turn in homework assignments, e.g. one assignment turned in per student with your name on it. However, homework can be worked jointly with other students.
* If you miss an exam, **you must have an approved** excuse (i.e. from a medical doctor with contact information indicating you were too ill to sit for an exam or have received permission from the instructor at least a couple of days in advance of the exam).
* Cell Phones / pagers / etc. should be turned off or set to vibrate during class. Any necessary calls and communication should be made outside the class. Please be courteous to the instructor and your fellow classmates.

**Key Assignment:**

During the semester the one major project assignment will be designated as a **key assignment**. To pass this class you must successfully complete all key assignment requirements. Key assignments and their respective grading criteria will be announced in each particular course. Late **key assignments** will be accepted for completing the class but may not be accepted for the course grade depending on the instructor policy. In summary, if you do not successfully complete the **key assignment**, you will receive an incomplete (X) in the class.

**Student Evaluation of Teaching:**

The instructor will show you a copy of the form that we use and explain that you will be asked to complete this IMSE form at the end of the semester. Please fill in the on-line evaluation. I do pay attention to your feedback!

**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 of 1973 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**.

**Academic Dishonesty:**

It is the philosophy of The University of Texas at Arlington that academic dishonesty is a completely unacceptable mode of conduct and will not be tolerated in any form. All persons involved in academic dishonesty will be disciplined in accordance with University regulations and procedures. Discipline may include suspension or expulsion from the University.

Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts. (Regents Rules and Regulations, Part One, Chapter VI, Section 3, Subsection 3.2, Subdivision 3.22).

**Inclement Weather Policy:**

If the University is closed, this class will not meet. Any scheduled assignments or examinations will be rescheduled to the next class period that the class meets. You can get information by dialing 817-272-8821 or 972-601-2049.

**UTA Student Support:**

The University of Texas at Arlington supports a variety of student success programs to help you connect with the University and achieve academic success. These include learning assistance, developmental education, advising and mentoring, admission and transition, and federally funded programs. Students requiring assistance academically, personally, or socially should contact the Office of Student Success Programs at 817-272-6107 for more information and appropriate referrals.