CATALOG YEAR _2006-2008_____
(Please use separate form for each add/change)

COLLEGE: ____Arts and Sciences_____

Current Catalog Page(s) Affected ____p. 300_____

Course: SENG 4330 Add: __X___ Delete: _____ Change: Number ____ Title _____
(check all that apply) SCH _____ Description _____ Prerequisite _____

If new, provide Course Prefix, Number, Title, SCH Value, Description, prerequisite, and lecture/lab hours if applicable. If in current catalog, provide change and attach page with changes in red and provide a brief justification.

SENG 4330 *Operations Research II.* Three semester hours.
Introduction to the fundamental probabilistic analytical methods and their applications to industrial and systems engineering. Modeling and decision making with uncertainties. Methods include Markov chains, Poisson processes, renewal theories and queuing systems with application to production systems and inventory controls. Prerequisites: SENG 3330 and SENG 3380.

Justification: New elective course for students wanting to deepen their knowledge on Operations Research.
This course will be part of the Systems Engineering degree when approved.
Program: Add: _____ Change: _____ Attach new/changed Program of Study description and 4-year plan. If in current catalog, provide change and attach page with changes in red.

Minor: Add: _____Delete: _____ Change: _____ Attach new/changed minor.
If in current catalog, provide change and attach page with changes in red.

Faculty: Add: _____ Delete: _____ Change: _____ Attach new/changed faculty entry. If in current catalog, provide change and attach page with changes in red.

College Introductory Pages: Add information: _____ Change information: _____ .Attach new/changed information. If in current catalog, provide change and attach page with changes in red.

Approvals:	Signature	Date
Chair Department Curriculum Committee	Eduardo Chappa Digitally signed by Eduardo Chappa DN: CN = Eduardo Chappa, C = US, O = Texas A&M international University, OU = Department of Mathematical and Physical Sciences Reason: I am approving this document Date: 2007.02.21 12:32:15 -06'00'	
Chair Department	Carol Waters Digitally signed by Carol Waters DN: CN = Carol Waters, C = US, O = TAMIU, OU = COAS Date: 2007.02.22 07:54:24 -06'00'	
Chair College Curriculum Committee	Neal McReynolds Digitally signed by Neal McReynolds DN: CN = Neal McReynolds, C = US, O = TAMIU, OU = Department of Biology and Chemistry Date: 2007.03.26 13:35:56 -06'00'	
Dean	Dr. Nasser Momayezi - Dean Digitally signed by Dr. Nasser Momayezi - Dean DN: CN = Dr. Nasser Momayezi - Dean, C = US, O = Texas A&M International University, OU = C.O.A.S. - Dean's Office Reason: I have reviewed this document Date: 2007.03.26 14:26:22 -05'00'	

SENG 4330 Operation Research II

Description

Introduction to the fundamental probabilistic analytical methods and their applications to industrial and systems engineering. Modeling and decision making with uncertainties. Methods include Markov chains, Poisson processes, renewal theories and queuing systems with application to production systems and inventory controls.
Prerequisites: SENG 3330, SENG 3380.

Class schedule
TBA

Office hours
TBA

Students' learning outcomes
Upon completion of the course, the student will be able to

1. Use probabilistic tools to model general manufacturing and services systems.
2. Solve manufacturing issues using queuing models including M/G/1 and G/M/1.
3. Understand the discrete and continuous Markov chains and their application scopes
4. Understand the concepts of Poisson processes and renewal theories and their applications for manufacturing systems and product warranty services.

Textbook

To be determined

Grading
Your grade will be comprised of homework sets and one mid term, course project, and one in-class final examination. The grade breakdown is as follows:

- Homework assignments and quizzes: 20%
- Project: 25%
- Midterm tests: 20%
- Final exam: 35%

Assignment grading
- A: 90-100
- B: 80-89
- C: 70-79
- D: 60-69
- F: 0-59

General Guidelines

Classroom Behavior

The College of Arts and Sciences encourages classroom discussion and academic debate as an essential intellectual activity. It is essential that students learn to express and defend their beliefs, but it is also essential that they learn to listen and respond respectfully to others whose beliefs they may not share. The College will always tolerate diverse, unorthodox, and unpopular points of view, but it will not tolerate condescending or insulting remarks. When students verbally abuse or ridicule and intimidate others whose views they do not agree with, they subvert the free exchange of ideas that should characterize a university classroom. If their actions are deemed by the professor to be disruptive, they will be subject to appropriate disciplinary action, which may include being involuntarily withdrawn from the class.

Copyright Restrictions

The Copyright Act of 1976 grants to copyright owners the exclusive right to reproduce their works and distribute copies of their work. Works that receive copyright protection include published works such as a textbook. Copying a textbook without permission from the owner of the copyright may constitute copyright infringement. Civil and criminal penalties may be assessed for copyright infringement. Civil penalties include damages up to $ 100,000; criminal penalties include a fine up to $ 250,000 and imprisonment.

Copyright laws do allow students and professors to make photocopies of copyrighted materials under strict conditions. You may not copy most, much less all, of a work, but you may copy a limited portion of a work, such an article from a journal or a chapter from a book. These copies must be for your own personal academic use or, in the case of a professor, for personal, limited classroom use. In general, the extent of your copying should not suggest that the purpose or the effect of your copying is to avoid paying for the materials. And, of course, you may not sell these copies for a profit. Thus, students who copy textbooks to avoid buying them or professors who provide photocopies of textbooks to enable students to save money are both violating the law.

Plagiarism and Cheating

Plagiarism is the presentation of someone else's work as one's own. Recently, the Internet has complicated the picture. Getting something from the Internet and presenting it as one's own is still plagiarism. Copying another student's paper or a portion of the paper - is usually called "copying". Neither plagiarism nor copying will be tolerated. Should a faculty member discover that a student has committed plagiarism, the students will receive a grade of "F" in that course and the matter may, if necessary, be referred to the Associate Vice President for Student Affairs for possible disciplinary action.

Students with Disabilities

Texas A& M International University seeks to provide reasonable accommodations for all qualified persons with disabilities. This University will adhere to all applicable federal, state, and local laws, regulations and guidelines with respect to providing reasonable accommodations as required to afford

equal education opportunity. It is the student's responsibility to register with the Disabilities Services Coordinator and to contact the faculty member in a timely fashion to arrange for suitable accommodations.

Incomplete Grade Assignments
Incompletes are discouraged and are assigned only under extenuating circumstances. To qualify for an Incomplete, the student must be passing the course and have completed 85-90\% of the requirements at the time the Incomplete is approved. In fairness to those students who complete the course as scheduled, only under extremely exceptional conditions will an Incomplete ("I") be changed to an "A".

Independent Study Courses
Independent Study (IS) courses are offered only under exceptional circumstances. The chair of the department is to determine whether the IS will be offered on the basis of the student's and the University's needs, as certified by the University Registrar. No student will take more than one IS course per semester. Moreover, IS courses are limited to seniors and graduate students. Summer IS course must continue through both summer sessions.

Student Responsibility for Dropping a Course
It is the responsibility of the STUDENT to drop the course before the drop date. Faculty are not responsible for dropping students who suspend class attendance".

Final Examination
Final Examinations must be comprehensive and must be given on the day specified.

Student E-mail Address
All students must obtain a TAMIU e-mail address.