EASTERN MEDITERRANEAN UNIVERSITY
Faculty of Engineering
Department of Electrical and Electronic Engineering

EEE 474 – Software Engineering

Year and Semester : 4, Spring
Credit Hour : (4,1) 4
Pre/Co-requisite(s) : EEE 212 (Algorithms & Data Structures)
Academic Term : Spring 2005-06

Catalog Description:

Prerequisite by Topic:
Algorithm design and representation. Developing and running computer programs. It is preferable that the student has taken the EEE212 (or EE413) Data Structures and/or the EE415 Structured Programming and Programming Tools course(s).

Instructor:
Dervis Z. Deniz
Lecture days: Monday and Thursday  Lecture hours: 10:30-12:30
Office Hours: Monday 13:30 - 14:30 Thursday 9:30 – 10:30
e-mail: dervis.deniz@emu.edu.tr  Tel: x1301

Lab Assistant:
Cafër Elgin  Room: EE240  Tel: x1093

Textbooks:

References:

Course Objectives:
A student who successfully fulfills the course requirements will have demonstrated:

i. an understanding of the main issues facing a software engineer,

ii. an understanding of software paradigms, development processes, methods and the tools used,

iii. an ability to carry out data modeling, database design, and object modeling.

iv. an ability to analyze and design reasonably complex software systems using at least one methodology.

COURSE OUTLINE and Organization

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<tr>
<th>WK #</th>
<th>DATES</th>
<th>HRS</th>
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<tbody>
<tr>
<td>1</td>
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<td>Registration Week</td>
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<td>2-3</td>
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<td>6</td>
<td>1. Introduction to software engineering: (1 1/2 weeks) Software engineering: software characteristics, components and applications. Software engineering paradigm. Definition and software life-cycle. Types and evolution of software. Software project management. The software crises. Documentation, contractual obligations, legal aspects, ethics, professionalism.</td>
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3. Requirements analysis methods and data modeling: (3 weeks)

9-10
1. Midterm Exams

10-11 8
4. Software design: (2 weeks)

12 4

13-14 8
6. Software testing: (2 weeks)
Software testing: definition, classification, methods and tools. Software maintenance.

15 2
7. The Object Oriented Approach: (2 hrs)

16-18 (4)
8. Case studies on the term projects: (1 week)
Equivalent of 1 week of discussions on case studies of term projects throughout the semester.

16-18 48
FINAL EXAMS

Design Component:
Engineering Science Credit: 1
Engineering Design Credit: 3

Computer Usage:
Students have access to computer facilities in two ways: during laboratory hours and free-times. Each student has a separate computer and hence is expected to work individually on program design, development, testing, running and results collection. Students are encouraged to use the internet to search for various topics, including contents of similar courses offered elsewhere. Students can reach teaching material, solved problems, data sheets etc. on the allocated Web sites. Students are encouraged to submit homework and lab-work using the computer network.

Teaching Techniques: Power point presentation/over-head projector and/or whiteboard is used in the class-rooms. Remote access to network and facilities are also desirable. Tutorials are organized to establish a closer contact with students.

Laboratory: Laboratory sessions are organized in parallel to theoretical study given in classrooms. Students have to complete all laboratory study/exercises and submit homework and attend quizzes.

GRADING POLICY
Midterm1 : 25-20%
Project (or MT2) : 25-30%
Course Work + Lab : 10%
Final : 40%

N.B.: This is a project based course and projects necessitate class/group discussions. Students are required to follow the attendance guidelines throughout the semester. NG grade will be given to students with bad exam and other evaluation results as well as low class/laboratory attendances (< 70% attendance).