

Course Syllabus

EGCI 312 Professional Practice I

1. **Program of Study** Bachelor of Engineering Program in Computer Engineering (International Program)
2. **Course Code/Title** EGCI 312 Professional Practice I
3. **Number of Credits** 1 (0-2-1) Credit (Lecture-Lab-Research)
4. **Prerequisites** None
5. **Type of Course** Major Course (Required Major)
6. **Session / Academic year**
This course will be offered every first semester, starting with the academic year 2008.
7. **Course Conditions** Class size will be in the range of 5-40 students.

8. Course Description

Software and/or hardware practice in current computer engineering technologies, for example, the use of a modern operating system, operating system programming environment, database management system, and the use of program development tools and networking tools; basic network cabling and installation; small project assignments.

9. Course Objectives-

After successful completion of this course, students will be able to

9.1 Develop mathematical models for simple scientific and engineering problems.

9.2 Express computational problems in Matlab language.

9.3 Use Matlab environment for engineering needs like numerical calculations and plotting.

10. Course Outline

Week	Topics	Hours	
		Lecture	Lab
01	Introduction to programming in Matlab (programming environment, commands, operations, variables, scripts, scripting files, functions)	1	1
02	Arrays and array operations	1	1
03	Mathematical and statistical functions	1	1
04	Plotting and graphics handling	1	1
05	Conditions (if-else) and loops (for, while)	1	1
06	Midterm Examination	2	
07	Linear algebra	1	1
08	Statistical analysis	1	1
09	Polynomials, interpolation	1	1
10	Ordinary differential equations	1	1
11	Optimization	1	1
	Final Examination		
	Total		22

11. Teaching Method

Lecture, group discussion, and oral presentation.

12. Teaching Media

Lecture handouts, transparency notes, multimedia, CAI, etc.

13. Measurement and Evaluation of Student Achievement

Evaluate student's achievement from:

- 13.1 Class work
- 13.2 Home works and assignments
- 13.3 Midterm and final exams.

Student's achievement will be evaluated according to the faculty and university standard, using the symbols: A, B, B+, C, C+, C, D+, D and F.

Weight:

1. Midterm, final exam	70 %
2. Assignments, laboratory works	30 %
Total	100 %

14. Course Evaluation

- 14.1 Evaluate as indicated in number 13 above.
- 14.2 Evaluate student's satisfaction towards teaching and learning of the course using a questionnaire.

15. References

- 1. Rudra Pratap, "Getting Started with MATLAB: A Quick Introduction for Scientists and Engineers", Oxford University Press, USA, 2009.
- 2. Edward B. Magrab, "An Engineers Guide to MATLAB, (3rd Edition)", Prentice Hall; January 17, 2010.
- 3. The MathWorks, Inc., "Introduction to MATLAB", <http://www.mathworks.com/moler/intro.pdf>.

16. Instructors

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17. Course Coordinator

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