The University of Jordan

Faculty of Engineering and Technology

Computer Engineering Department

Fall Term 2014/2015

Course	Computer Applications Lab – 0907311 (1 Cr. – Core Lab)
Catalog Description	Computer packages for mathematical and symbolic manipulations (Matlab, Mathematical). Graphics packages. The internet and its use in literature survey and information acquisition. Library search via computer. Data processing and statistical packages. Computer Engineering packages for digital design.
Prerequisites by Course	Computer Skill II (1901102)
Prerequisites by Topic	Students are assumed to have had sufficient knowledge pertaining to Advanced Mathematics
Textbook	William J. Palm III, Introduction to Matlab 7 for Engineers, McGraw Hill, 2005.
References	1. Duane Hanselman and Bruce Littlefield, Mastering MATLAB 7, Pearson Prentice Hall, 2005. 2. Adrian Brian and Moshe Breiner, MATLAB for Engineers, Addison-Wesley, 1997. 3. **Useful websites:** http://www.mathworks.com
Lab Website	**www.driyad.ucoz.net**
Schedule & Duration	15 Weeks, 12 labs, 3 hr. each (including exams)
Student Material	Text book, class handouts, some instructor keynotes, and accessto a personal computer and the internet.
College Facilities	Lab with whiteboard and projection display facilities, personal computers, and server.
Lab Objectives	By the end of this course, the student should be familiar with the Mathworks package MATLAB basic functions and be familiar with system simulation.
Course Outcomes and Relation to ABET Program Outcomes	Upon successful completion of this lab, a student should be able to: 1. use and write programs in MATLAB.[a, b] 2. design graphical user interface **(**GUI) applications using Matlab [c] 3. use MATLAB to solve engineering problems [e]

Lab Schedule

Date (Week Start)	Event
1/2/2015	*Lab Preparations*
8/2/2015	**Exp 1:** syllabus distribution + Introduction to MATLAB
15/2/2015	**Exp 2**: Arrays in MATLAB
22/2/2015	**Exp 3**: Arithmetic Operations on Arrays
1/3/2015	**Exp 4**: Function and Script Files **(Quiz)**
8/3/2015	**Exp 5**: Programming with MATLAB
15/3/2015	**Exp 6**: Plotting
22/3/2015	*Midterm Exam* (Practical)
29/3/2015	**Exp 7**: Graphical User Interface Programming in MATLAB
5/4/2015	**Exp 8**: More on GUI Programming
12/4/2015	**Exp 9**: Probability, Statistics, and Interpolation
19/4/2015	**Exp 10**: Numerical Calculus and Symbolic Processing
26/4/2015	Project (Practical)
20/5/2015	*Final Exam*

Policies

- Preparation for each experiment is required before the lab time.
- Cheating will not be tolerated
- Class attendance is mandatory and will be taken. Absence from any lab session forces the student grade for the in-lab report and any possible quiz to zero. Absence for more than two lab sessions prevents the student from continuing the class. Making-up missed lab sessions in other sections is not allowed.
- There will be a quiz covers the material discussed in previous week, given at the beginning of lab and last for 15 minutes. Thus make sure that you come to the lab on time.
- There will be no make-up for the quiz and the midterm. In case of medical or other disabling emergencies, the instructor should be notified in advance and his approval for missing the quiz or the midterm should be obtained before the quiz/midterm date.
- Quiz and midterms are composed of written and practical parts. Thus, students should be ready to solve some of the quiz/midterm problems using the PC.

Assessments

Quizzes, exams, reports, and in-lab assessment

Grading policy

In-lab Assignments	10%
Short Exam (Practical)	10%
Midterm Exam (Practical)	30%
Project (Practical)	10%
Final Exam	40%

Instructors

Dr. Iyad Jafar / iyad.jafar@ju.edu.jo
Dr. Khalid Younes / kh.younis@gmail.com
Eng. Hanan Al-yasin / h.yasin@ju.edu.jo

Class Time and Location

Section 1: Sunday; 2:00 pm—5:00 pm, Computer Applications Lab
Section 2: Tuesday; 2:00 pm—5:00 pm, Computer Applications Lab
Section 3: Thursday; 2:00 pm—5:00 pm, Computer Applications Lab

Last Updated: February 1st , 2015

Program Outcomes (PO)

a	An ability to apply knowledge of mathematics, science, and engineering
b	An ability to design and conduct experiment as well as to analyze and interpret data.
c	An ability to design a system, component, or process to meet desired needs , within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
d	An ability to function on multidisciplinary teams
e	An ability to identify, formulate, and solve engineering problems
f	An understanding of professional and ethical responsibility.
g	An ability to communicate effectively
h	The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
i	A recognition of the need for, and an ability to engage in life-long learning
j	Knowledge of contemporary issues
k	An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice