

ATTACHMENT 5.

Kingdom of Saudi Arabia

**The National Commission for Academic Accreditation &
Assessment**

**T6. Course Specifications
(CS)**

Course Specifications

Institution : Najran University	Date: 24/4/1438H
College/Department : Faculty of Engineering / Electrical Engineering Department	

A. Course Identification and General Information

1. Course title and code: Computer Programming for Electrical Engineering 351EE 3		
2. Credit hours : 3(3,0,1)		
3. Program(s) in which the course is offered. (If general elective available in many programs indicate this rather than list programs)		
4. Name of faculty member responsible for the course : Dr Yousfi Khemissi		
5. Level/year at which this course is offered : 8		
6. Pre-requisites for this course (if any) 204GE 3 Computer programming for Engineers		
7. Co-requisites for this course (if any) No Co-requisite materials		
8. Location if not on main campus		
9. Mode of Instruction (mark all that apply)		
a. traditional classroom	<input checked="" type="checkbox"/>	What percentage? <input type="text" value="100%"/>
b. blended (traditional and online)	<input type="checkbox"/>	What percentage? <input type="text"/>
c. e-learning	<input type="checkbox"/>	What percentage? <input type="text"/>
d. correspondence	<input type="checkbox"/>	What percentage? <input type="text"/>
f. other	<input type="checkbox"/>	What percentage? <input type="text"/>
Comments:		

B Objectives

1. What is the main purpose for this course?

By the completion of this course, the student should be able to:

1. Use different Matlab systems and its applications .
2. Solve Problem solution techniques and algorithm design
3. Understand LabView front panels and block diagrams.
4. Use built in VIs.

2. Briefly describe any plans for developing and improving the course that are being implemented. (e.g. increased use of IT or web based reference material, changes in content as a result of new research in the field)

C. Course Description (Note: General description in the form used in Bulletin or handbook)

Course Description:

Introduction to MATLAB system , generate matrices and perform, plot data, annotate graphs, create scripts and functions, construct and manipulate data structures, set up a basic data analysis. How Simulink Software Interacts with the MATLAB, Creating a Simulink Model, Modeling a Dynamic Control System

Introduction to LabView, virtual instruments, LabView environments, creating, editing and debugging a VI, creating a sub VI, loops and charts, Arrays, graphs, clusters, case and sequence structures, formula node.

1. Topics to be Covered

List of Topics	No. of Weeks	Contact hours
Introduction to MATLAB system	1	4
Generate matrices and perform	2	8
Plot data, annotate graphs,	2	8
Construct and manipulate data structures	3	12
Set up a basic data analysis	2	8
Creating a Simulink Model, Modeling a Dynamic Systems.	2	8
Introduction to LabView, virtual instruments, LabView environments,	2	8
Creating, editing and debugging a VI, creating a sub VI, loops and charts.	1	4

2. Course components (total contact hours and credits per semester):						
	Lecture	Tutorial	Laboratory or Studio	Practical	Other:	Total
Contact Hours	45	15				60
Credit	3	1				3

3. Additional private study/learning hours expected for students per week.	15
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4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategy			
On the table below are the five NQF Learning Domains, numbered in the left column.			
<p>First, insert the suitable and measurable course learning outcomes required in the appropriate learning domains (see suggestions below the table). Second, insert supporting teaching strategies that fit and align with the assessment methods and intended learning outcomes. Third, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each course learning outcomes, assessment method, and teaching strategy ought to reasonably fit and flow together as an integrated learning and teaching process. (Courses are not required to include learning outcomes from each domain.)</p>			
Code #	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	Knowledge		
1.1	Describe the components of the MATLAB package.	Lectures and Problem solving.	In class quizzes , Test and Final exam.
1.2			
2.0	Cognitive Skills		
2.1	Analyze and plot data in Matlab environment.	<ul style="list-style-type: none"> Offering extra tutorials for students Encourage class participation Making field trips to help students understand various concepts of the course topics 	<ul style="list-style-type: none"> Class participation Quizzes Midterm exams . Final Exams at the end of the semester.

2.2	Analyze a scripts and functions symbolically.	<ul style="list-style-type: none"> Offering extra tutorials for students Encourage class participation Making field trips to help students understand various concepts of the course topics 	<ul style="list-style-type: none"> Class participation (Quizzes) Midterm exams . Final Exams at the end of the semester.
2.3	Apply Simulink and Matlab toolboxes.	<ul style="list-style-type: none"> Making field trips to help students understand various concepts of the course topics 	<ul style="list-style-type: none"> Final Exams at the end of the semester.
2.4	Practice LabView..	<ul style="list-style-type: none"> Making field trips to help students understand various concepts of the course topics 	<ul style="list-style-type: none"> Final Exams at the end of the semester.
3.0	Interpersonal Skills & Responsibility		
3.1			
3.2			
4.0	Communication, Information Technology, Numerical		
4.1			
4.2			
5.0	Psychomotor		
5.1	Not Applicable	Not Applicable	Not Applicable
5.2			

5. Map course LOs with the program LOs. (Place course LO #s in the left column and program LO #s across the top.)

Course LOs #	Program Learning Outcomes (Use Program LO Code #s provided in the Program Specifications)								
	1.1	1.2		2.1		3.2		4.1	
Describe the components of the MATLAB package.	√								

Analyze and plot data in Matlab environment.		√							
Analyze a scripts and functions symbolically.			√						
Apply Simulink and Matlab toolboxes.				√					
Practice LabView.					√				

6. Schedule of Assessment Tasks for Students During the Semester

	Assessment task (e.g. essay, test, group project, examination, speech, oral presentation, etc.)	Week Due	Proportion of Total Assessment
1	Class participation, attendance, and assignment	Every weeks	0 %
2	Quizzes	Every two Outcomes	15 %
3	Mid-Term exam	Every four Outcomes	25 %
4	Final Term exam Lab	Every two weeks	15 %
5	Final Term exam	Every two weeks	45 %
6			

D. Student Academic Counseling and Support

1. Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice. (include amount of time teaching staff are expected to be available each week)

E Learning Resources

1. List Required Textbooks

- Matlab 2010 with Simulink Software. www.mathworks.com
- LabView 2011 , Course manual, Course software version 2011, www.ni.com/LabView

2. List Essential References Materials (Journals, Reports, etc.)
<ul style="list-style-type: none"> Holly Moore, MATLAB for Engineers, 3/E, ISBN-10: 0132103257, ISBN-13: 9780132103251, Prentice Hall, 2012. Ronald W. Larsen, LabVIEW for Engineers, ISBN-10: 0136094295, ISBN-13: 9780136094296, Prentice Hall, 2011.
3. List Recommended Textbooks and Reference Material (Journals, Reports, etc)
<ul style="list-style-type: none"> IEEE spectrum http://spectrum .ieee.org/. IEEE Potentials magazine Electronic Materials, Web Sites (kayousfi-Najran University)
4. List Electronic Materials (eg. Web Sites, Social Media, Blackboard, etc.)
Electronic Materials, Web Sites www.mathworjs.com
5. Other learning material such as computer-based programs/CD, professional standards or regulations and software.
None

F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (i.e. number of seats in classrooms and laboratories, extent of computer access etc.)
1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)
Lecture room with a maximum 15 seats
2. Computing resources (AV, data show, Smart Board, software, etc.)
3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list)
None

G Course Evaluation and Improvement Processes

1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching
<ul style="list-style-type: none"> Complete course evaluation questionnaire by the students. Open discussion for the students to touch their weak and strong points in the subject. Feedback from the mid-term exam records.
2 Other Strategies for Evaluation of Teaching by the Instructor or by the Department

Seminars for the teacher, to show his lectures arrangement and progress in front of all the staff members in the department.
3 Processes for Improvement of Teaching
4. Processes for Verifying Standards of Student Achievement (e.g. check marking by an independent member teaching staff of a sample of student work, periodic exchange and remarking of tests or a sample of assignments with staff at another institution) Re-check the final term exams for some random students by another faculty member in the same field subject inside the department.
5 Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement. Re-improve for the subject course contents by an external committee members in the same field of study in another institution.

Name of Instructor: **Dr Yousfi Khemissi**

Signature: _____

Date Report Completed: **24/4/1438H**

Name of Course Instructor _____

Program Coordinator: _____

Signature: _____

Date Received: _____