



Course Specifications

Program(s) on which this course is given:	Systems and Biomedical Engineering
Department offering the program:	Systems and Biomedical Engineering
Department offering the course:	Systems and Biomedical Engineering
Academic Level:	First Year
Date	2015-2016
Semester (based on final exam timing)	<input checked="" type="checkbox"/> Fall <input type="checkbox"/> Spring

A- Basic Information

1. Title:	Electrical Engineering		Code:	EPM 124A				
2. Units/Credit hours per week:	Lectures	3	Tutorial	2	Practical	1	Total	6

B- Professional Information

1. Course description:	After completing the course the students are expected to have acquired basic knowledge in: Electric Circuit Elements- Electric Circuit Variables- Resistive Circuits and Methods of Analyzing – Circuit Theorems- Energy Stored Elements- Response of RL, and RC Circuits- Response of Two Storage Elements circuits.
2. Intended Learning Outcomes of Course (ILOs):	a) Knowledge and Understanding
	1- Concepts of electrical engineering
	b) Intellectual Skills
	2- Select appropriate methods to analyze and solve electrical circuits.
	c) Professional and Practical Skills
	3- Perform laboratory experiments to verify various electric circuits' theories.
	d) General and Transferable Skills
	4- Work in small groups to perform basic electrical engineering experiments. 5- Prepare reports and present data.

3. Contents

Topic	Total hours	Lectures hours	Tutorial/ Practical hours
Electric circuit variables	5	2	2/1
Circuit elements	5	2	2/1
Resistive circuits	5	2	2/1
Methods of analysis of resistive circuits	6	4	2/0
Circuit theorems	5	2	2/1
Energy storage elements	4	2	2/0

The complete response of RL and RC circuits	7	4	2/1
The complete response of circuits with two energy storage elements	6	4	2/0
4. Teaching and Learning Methods	Lectures (*)	Practical Training/ Laboratory (*)	Seminar/Workshop ()
	Class Activity (*)	Case Study ()	Projects ()
	E-learning ()	Assignments /Homework ()	Other:
5. Student Assessment Methods			
• Assessment Schedule		Week	
-Assessment 1; Class work		Every week	
-Assessment 2; Lab work		Every lab	
-Assessment 3; Presentations			
-Assessment 3; Midterm Exam		To be defined by the department	
-Assessment 4; Final Exam		To be defined by the department	
• Weighting of Assessments			
-Mid-Term Examination		20	
-Final-term Examination		75	
- lab work		25	
-Class work (attendance)		5	
-Presentation			
-Total		125	
6. List of References			
R. C. Dorf and J. A. Svoboda,"Introduction to electrical circuits", 8th edition, John Wiley &sons, 2011.			
7. Facilities Required for Teaching and Learning			
- Classroom White board (*)			
- Classroom Laptop and data-show ()			
- Electronics Laboratory (*)			
- Computer Laboratory ()			
- Others ()			
Course Coordinator:	Dr. Mohamed Sherin A. K. Aly		
Head of Department:	Prof. Dr. Ahmed Badawi		