



**Jordan University of Science and Technology**  
**Faculty of Engineering**  
**Biomedical Engineering Department**

BME212 Electric Circuit Analysis

Summer Semester 2019-2020

**Course Catalog**

3 Credit Hours. Units and definitions, Basic laws and simple circuits, Useful techniques of circuit analysis, inductance and capacitance, RL, RC and RLC circuits, Sinusoids and Phasors, Sinusoidal steady-state analysis.

**Text Book**

<b>Title</b>	Engineering Circuit Analysis
<b>Author(s)</b>	Hayt, W. H., Kimmerly, J. E., and Durbin, S. M.
<b>Edition</b>	8th Edition
<b>Short Name</b>	Text book
<b>Other Information</b>	

**Course References**

Short name	Book name	Author(s)	Edition	Other Information
Ref 1	Introduction to Electric Circuits	Dorf, R.C. and J.A Svoboda	7th Edition	
Ref 2	Fundamentals of Electric Circuits	Alexander, C. K. and M. N. Sadiku	5th Edition	
Ref 3	The Analysis and Design of Linear Circuits	Thomas, R. E. and A. J. Rosa	2nd Edition	

**Instructor**

Name	Dr. SARI KHATALIN
Office Location	E1L3
Office Hours	
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Class Schedule & Room
Section 2: Lecture Time: Sun, Mon, Tue, Wed : 10:00 - 11:30 Room: منصة الكترونية

Prerequisites		
Line Number	Course Name	Prerequisite Type
921020	PHY102 General Physics (2)	Prerequisite / Study
902030	MATH203 Ordinary Differential Equations	Prerequisite / Study

Tentative List of Topics Covered		
Weeks	Topic	References
Week 1	Introduction to Circuit Analysis and Design	From <b>Text book</b>
Week 2	Basic Components and Electric Circuits	From <b>Text book</b>
Week 3	Voltage and Current Laws	From <b>Text book</b>
Weeks 4, 5, 6	Basic Nodal and Mesh Analysis	From <b>Text book</b>
Weeks 6, 7, 8	Circuit Analysis Techniques	From <b>Text book</b>
Week 9	Capacitors and Inductors	From <b>Text book</b>
Weeks 10, 11, 12	Basic RL and RC Circuits	From <b>Text book</b>
Week 13	The RLC Circuit	From <b>Text book</b>
Week 14	Sinusoids and Phasors	From <b>Text book</b>
Weeks 15, 16	Sinusoidal Steady-State Analysis	From <b>Text book</b>

Mapping of Course Outcomes to Program Student Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Ability to apply basic circuit laws and rules. [1A, 1K]	25%	
Understand and apply circuit theorems. [1A, 1E, 1K]	25%	
Ability to analyze first and second order transient circuits. [1A, 1E, 1K]	25%	
Ability to analyze steady-state sinusoidal circuits [1A, 1E, 1K]	25%	

Relationship to Program Student Outcomes (Out of 100%)																					
A	B	C	D	E	F	G	H	I	J	K	L	M	SLO1	SLO2	SLO3	SLO4	SLO5	SLO6	SLO7		
37.50				25						37.50											

<b>Evaluation</b>	
<b>Assessment Tool</b>	<b>Weight</b>
First Exam	30%
Second Exam	30%
Final exam	40%

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