Hashemite University
College of Engineering
Department of Electrical Engineering
EE 341-Electronics 2 (3 Credit Hours/Dept. Compulsary)

Instructor

Dr. Hadi Al- Ithawi	
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Office hours:	S,M,T,W : 12:30 - 1:30

Grading info

Test 1	40%
Course works	20%
Final	40%

Class Info

Days	Sun/Mon/Tue/ Wed
Time	(1) 9:30 - 11 (2) 11 - 12:30
Location	

Course

Course Number:	110409341
Prerequisite:	Electronics 1 (110409240), covering the following topics: - Analysis and design of BJTs D.C circuits. - Analysis and design of MOSFETs D.C circuits
Textbook:	**"Microelectronics circuits Analysis and Design"**, 4th edition, Donald A. Neamen, McGraw- Hill, 2010.
Course Description:	The analysis and design of (BJTs) and(MOSFETs) amplifiers are investigated.This include: configuratios, structures, design parameters and frequency response ,Op-Amps.,ideal and non-ideal c/cs.and applications will be studied .Amplifier frequency response analysis and design will also be studied.
Specific Outcomes of Instruction (Course Learning Outcomes):	1. Demonstrate general knowledge of BJT & MOSFET Amplifiers (a, e) 2. Analyze amplifier circuits and calculate amplifier parameters (a, e) 3. Design Amplifiers with certain specifications (c) 4. Understand Op-Amp. characteristics ,Analyze and design Op-Amp circuits (a,e.c) 5. Demonstrate general knowledge of Amplifier frequency response,Analyze and design of amplifier frequency response (a,c,e)
Important material	- Lecture notes - References -

References:

- **"Electronic Devices and Circuit Theory"**, Robert L Boylested, McGraw-Hill, 2010.
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Major Topics Covered and Schedule in Weeks:

Topic	# Weeks	# Contact hours*
BJT amplifiers: A.C analysis of single-stage and multi-stage amplifies.calculate amplifer parameters (voltage-gain,current-gain,input resistance and output resistance)	2	12
MOSFET amplifiers: A.C analysis of single-stage and multi-stage amplifies.calculate amplifer parameters (voltage-gain,current-gain,input resistance and output resistance)	1.5	9
Op-Amp.chracteristics,linear and non-linear applications,circuits design	2	12
Amplifier frequency response : Low-,Medium – and high-frequency analysis of amplifier .Design of an amplifier with certain frequency response.	1.5	9
Total	**7**	**42**

Course Policy

Student Outcomes (SO) Addressed by the Course:

#	*Outcome Description*	*Contribution*
	General Engineering Student Outcomes	
(a)	An ability to apply knowledge of mathematics, science, and engineering	***M***
(b)	An ability to design and conduct experiments, 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	***M***
(d)	An ability to function on multidisciplinary teams	
(e)	An ability to identify, formulate, and solve engineering problems	***M***
(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)	A knowledge of contemporary issues	
(k)	An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice	

H=High, **M**= Medium, **L**=Low

- If you miss class, there won't be a makeup test, quiz, etc. and you WILL get a zero unless you have a valid excuse.
- If you miss more than 15% of classes you will automatically fail the class.