



Hashemite University
College of Engineering
Department of Mechatronics Engineering
110406329 - Electronics
(3 Credit Hours)

Instructor**Grading info****Class Info**

Name	Dr. Mohammad Al Qaderi	Test 1	20	Days	S, M, T, W
Email:	Mohammadk_al@hu.edu.jo	Test 2	20	Time	
Office:	E3024	HW & Quizzes	20	Location	Online
Office hours:	TBA	Final	40		

Course

Course Number:	110406329
Prerequisite:	110409203 Electrical Circuit (2)
Textbook:	Microelectronics: Circuit Analysis and Design, Fourth Edition Author: Donald A. Neaman
Course Description (as in the catalog):	DC and AC analysis of electronic circuits; theory, circuits, and applications of diodes, bipolar junction transistors (BJT), field effect transistors (FET), operational amplifiers, power amplifiers and regulators; introduction to power electronics
Specific Outcomes of Instruction (Course Outcomes):	Apply DC Analysis of AC and DC electronic circuits; Define theory, circuits, and applications of diodes; Study of bipolar junction transistors (BJT) and domain of application; Analysis of operational amplifiers, power amplifiers and regulators. Introduction to power electronics.
Important material	

References: Ulaby, F. (2004 edition). Fundamentals of applied electromagnetics, PRINTCE HALL.

Major Topics Covered and Schedule in Weeks:

- Diodes and Applications of Diodes
- Transistors BJT and Applications of BJT
- Introduction to Operational Amplifiers , Inverting and non-inverting / instrumentation amplifiers
- Voltage-current/ current- voltage converter

Course Policy

-Discussion is expected
 -Engagement is expected -
 Understand, Analyze, and question?

All exams will be performed on those date:

First exam: 22/7/2020

Second exam : 5/8/2020

Final exam: Announced by registrar

Student Outcomes (SO) Addressed by the Course:

#	<i>Outcome Description</i>	<i>Contribution</i>
(a)	an ability to apply knowledge of mathematics, science, and engineering	<i>H</i>
(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	<i>M</i>
(d)	an ability to function on multidisciplinary teams	
(e)	an ability to identify, formulate, and solve engineering problems	<i>H</i>
(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