



Course Weekly Outline

Course Name:

Course Instructor	SAIF SAAD HAMEED				
E-mail	Dove_white84@uoanbar.edu.iq				
Title	Digital Circuits				
Course Coordinator					
Course Objective	Understand the basics of semiconductors. Understand the theory and stats of PN junction diode. Understanding of small and large signal and diode signal models and the ability to analyze diode circuits. Understand the theory and models of DC, and the biasing of bipolar junction transistors. Understand the theory and models of DC, and clamping effect transistors.				
Course Description	To familiarize the student with the principles and techniques of electronic circuits To understand how electronic circuits work That the student understand how to flow and control electronic circuits				
Textbook	Electronic Circuits				
References	Authors- L.K. MAHESWARI, M.M.S.ANAND. 2009 Author – Jacob Millman. Christos C. Halkias				
Course Assessments	Term Tests	Laboratory	Quizzes	Project	Final Exam
	25 %	15 %	5 %	5 %	50 %
General Notes	-				

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Week	Date	Topics Covered	Lab. Experiment Assignments	Notes
1	Week 1	Diode Applications: (Load-Line Analysis Diode Approximations Series Diode Configurations with DC Inputs		
2	Week 2	Parallel and Series-Parallel Configurations , Sinusoidal Inputs ; Half-Wave Rectification		
3	Week3	Full-Wave Rectification , Zener Diodes		
4	Week4	Clampers , Clippers		
5	Week5	Transistor Construction , Transistor Operation		
6	Week6	Common-Base Configuration , Common-Emitter Configuration Common-Collector Configuration		
7	Week7	operating Point , Fixed-Bias Circuit , Emitter-Stabilized Bias Circuit		
8	Week8	Voltage-Divider Bias , DC Bias with Voltage Feedback , PNP Transistors		
9	Week9	Construction and characteristics of JFETs , Depletion-Type MOSFET		
10	Week10	Enhancement-Type MOSFET , VMOS and CMOS		
11	Week11	Transition and Diffusion Capacitance , Reverse Recovery Time		
12	Week12	Diode Equivalent Circuit , Extrinsic Materials n-and p-Type		
13	Week13	Energy levels ,		
14	Week14	Amplification in AC Domain		
15	Week15	BJT Transistor Modeling		

Instructor Signature:

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