

	7	Hall Effect		√	√	√	√	√	√	√	√	√			
	8	Drift and diffusion current		√	√	√	√	√	√	√	√	√			
CO2 - Understanding the characteristics of the p-n junction	9	p-n junction, space-charge region and potential barrier	3	√	√	√	√	√	√	√	√	√			
	10	p-n junction biasing		√	√	√	√	√	√	√	√	√			
	11	temperature effects on the p-n junction currents		√	√	√	√	√	√	√	√	√			
	12	current components in p-n junction		√	√	√	√	√	√	√	√	√			
CO3 - Understanding the characteristics of the diode and the diode's application in electronic circuits	13	diode I-V characteristics	5	√	√	√	√	√	√	√	√	√			
	14	diode current		√	√	√	√	√	√	√	√	√			
	15	diode circuits : piecewise linear model		√	√	√	√	√	√	√	√	√			
	16	rectifying diodes		√	√	√	√	√	√	√	√	√			
	17	rectifier-filter		√	√	√	√	√	√	√	√	√			
	18	clipping and limiting diode circuits		√	√	√	√	√	√	√	√	√			
	19	clamping diodes		√	√	√	√	√	√	√	√	√			
CO4 - Understanding the characteristics of some special function diodes and the diode's application in electronic circuits	20	zener diode, zener breakdown, avalanche breakdown, temperature coefficient, zener diode application (regulator and limiter)	5	√	√	√	√	√	√	√	√	√			
	21	varactor, LED, photo, tunnel, laser, Schottky		√	√	√	√	√	√	√	√	√			
CO5 - Understanding the BJT	22	Introduction to BJTs and FETs – application and advantages of one over the other, differences between BJTs and FETs and JFETs with MOSFETs BJT types, symbols and operation	2	√	√	√	√	√	√	√	√	√			
	23	BJT currents in and parameters	1	√	√	√	√	√	√	√	√	√			
	24	BJT configurations	2	√	√	√	√	√	√	√	√	√			
	25	BJT modes of operation		√	√	√	√	√	√	√	√	√			
	26	BJT input and output I-V characteristics		√	√	√	√	√	√	√	√	√			
	27	BJT dc biasing – load line and Q-point and biasing circuits	1	√	√	√	√	√	√	√	√	√	√		

Chapter No.	Course Outcome	Text
1	Understanding the semiconductor physics of the intrinsic, p and n materials	ThomasL.Floyd , 'Electronic Devices', Sixth Edition, Prentice Hall – Chapter 1 S.M.Sze . "Semiconductor Devices, Physics and Technology," Second Edition, Wiley, 2002 – Chapters 2 and 3 Boylestad and Nashelsky , " Electronic Devices and Circuit Theory," Eighth Edition, Prentice Hall, 2002 – Chapter 1
2	Understanding the characteristics of the p-n junction	ThomasL.Floyd , 'Electronic Devices', Sixth Edition, Prentice Hall – Chapter 1 S.M.Sze . "Semiconductor Devices, Physics and Technology," Second Edition, Wiley, 2002 – Chapter 4 Boylestad and Nashelsky , " Electronic Devices and Circuit Theory," Eighth Edition, Prentice Hall, 2002 – Chapter 1
3	Understanding the characteristics of the diode and the diode's application in electronic circuits	ThomasL.Floyd , 'Electronic Devices', Sixth Edition, Prentice Hall – Chapter 2 Boylestad and Nashelsky , " Electronic Devices and Circuit Theory," Eighth Edition, Prentice Hall, 2002 – Chapter 2
4	Understanding the characteristics of some special function diodes and the diode's application in electronic circuits	ThomasL.Floyd , 'Electronic Devices', Sixth Edition, Prentice Hall – Chapter 3 Boylestad and Nashelsky , " Electronic Devices and Circuit Theory," Eighth Edition, Prentice Hall, 2002 – Chapter 2
5	Understanding the BJT	ThomasL.Floyd , 'Electronic Devices', Sixth Edition, Prentice Hall – Chapters 4 and 5 S.M.Sze . "Semiconductor Devices, Physics and Technology," Second Edition, Wiley, 2002 – Chapter 5 Boylestad and Nashelsky , " Electronic Devices and Circuit Theory," Eighth Edition, Prentice Hall, 2002 – Chapters 3 and 4
6	Understanding the JFET	ThomasL.Floyd , 'Electronic Devices', Sixth Edition, Prentice Hall – Chapter 7 S.M.Sze . "Semiconductor Devices, Physics and Technology," Second Edition, Wiley, 2002 – Chapter 6 Boylestad and Nashelsky , " Electronic Devices and Circuit Theory," Eighth Edition, Prentice Hall, 2002 – Chapters 5 and 6
7	Understanding the D-MOSFET	
8	Understanding the E-MOSFET	