

Comparison of 2014 and 2018 Regulations

Science & Humanities Courses:

S.No.	2014 Regulation		2018 Regulation	
	Course	Credits	Course	Credits
1.	Communicative English	3	Biology for Engineers	3
2.	Environmental Studies	3	Environmental Science	0
3.	English Communication and Skills Laboratory	2		
4.	Professional Ethics and Human Values	3	Humanities – 1 (Education Technology and society)	3
5.	Soft Skills Laboratory	2		
6.	Business Communications and Presentation Skills Lab	1	Education Technology and Society	3
	Total	14		

Basic Science Courses:

S.No.	2014 Regulation		2018 Regulation	
	Course	Credits	Course	Credits
1.	Engineering Mathematics-I	4		
2.	Engineering Physics-I	3		
3.	Engineering Chemistry-I	3		
4.	Chemistry Laboratory	2		
5.	Engineering Mathematics-II	4		
6.	Engineering Physics-II	3		
7.	Engineering Chemistry-II	3		
8.	Engineering Mathematics-III	3	Mathematics-III	4
9.	Engineering Mathematics-IV	3	Mathematics-IV	3
10.	Workshop	2		
	Total	30		

Engineering Science Courses:

2014 Regulation			2018 Regulation	
S.No.	Course	Credits	Course	Credits
1.	Engineering Graphics	4		
2.	Basic Electrical and Electronics Engineering	3		
3.	Engineering Mechanics	4		
5.	Hardware Lab	2		
6.	Circuit Theory	4	Network Theory	4
7.	Problem Solving with Programming Lab	2		
8.	Data Structures using C	3		
9.	Elements of Mechanical Engineering	3	Elements of Mechanical Engineering	3
10.	Data Structures Lab	2		
11.	Electronic Devices Lab	2	Electronic Devices Lab	3
12.	Electronic Devices	3	Electronic Devices	3
13.	Electrical Technology	3	Electrical Technology	3
	Total	32		

Program Core Courses:

2014 Regulation			2018 Regulation	
S.No.	Course	Credits	Course	Credits
1.	Electronic Circuits-I	3	Analog Electronic Circuits – 1	4
2.	Microprocessors and Interfacing	3	Microcontrollers	3
3.	Electrical & Electronics Measurements	4	Electrical & Electronic Measurements	4
4.	Signals & Systems	4	Signals & Systems	4
5.	Electronic Circuits-I Lab	2	Analog Electronic Circuits-1 Lab	1
6.	Measurements Lab	2	Measurements Lab	1
7.	Microprocessors and Interfacing Lab	2	Micro Controllers Lab	1.5
8.	Linear Integrated Circuits	4		
9.	Electronic Circuits-II	3	Analog Electronic Circuits – II	3
10.	Analog and Digital Communications	3		
11.	Pulse & ICs Lab	2	Digital Signal Processing	3
12.	Pspice and Signal Simulation Lab	2		
13.	Industrial Instrumentation	4	Industrial Instrumentation	3
14.	Digital Signal Processing	3		
15.	Process Control	4	Process Control	3
16.	Object Oriented Programming with	3		

	JAVA			
17.	Process Control Lab	2	Process Control Lab	1
18.	Biomedical Instrumentation	4		
19.	Analytical Instrumentation	4		
20.	Optoelectronics and Laser Instrumentation	4		
21.	AI & BMI Lab	2		
22.	VI Lab	2		
23.	Computer Control of Process	2		
24.	VLSI Design	2		
25.	Verilog HDL Lab	2	Simulation Lab (Control Systems)	2
26.	Transducers Lab	2	Transducers Lab	1.5
27.	Linear Control Systems	4	Control Systems (Linear)	4
28.	DSP & OOPS Lab	2	Digital Signal Processing Lab	1
29.	Digital Electronics	4	Digital Electronics	3
30.	Digital Electronics Lab	2	Digital Electronics Lab	1.5
31.	Transducers	3	Transducers	3
		-	Simulation Lab (Networks)	1
	Total	86		48.5

Professional Elective Courses:

S.No.	2014 Regulation		2018 Regulation	
	Course	Credits	Course	Credits
1.	Pulse and Switching Circuits	3	Pulse switching Circuits	3
2.	Electromagnetic Fields Theory		Noise and interference in instrumentation	
3.	Computer Organization		Intelligent sensors and instrumentation	
4.	OOPS and Operating Systems		Telemetry and SCADA	
5.	Adaptive Control Systems	3	Digital Control Systems	3
6.	Advanced Computer Architectures		Advanced Digital System Design	
7.	Programmable Logic Controllers		Robotics and Automation	
8.	Embedded Systems		Measurement errors and Statistical Analysis	
9.	Robotics and Automation	3	Biomedical Instrumentation	3
10.	Advanced Sensors		Instrumentation in petro chemical industries	
11.	Computer Networks		Computer applications in medical engineering	
12.	Wireless Sensor Networks		Hospital informatics and safety measures.	
13.	PC Based Instrumentation	4	Optoelectronics and laser Instrumentation	3
14.	Telemetry & Tele Control		Embedded Systems	
15.	Power Plant Instrumentation		Optimization Techniques.	
16.	Instrumentation in Aerospace and Navigation		Non Linear and Robust Control	

17.	Neural networks	3	Data Communications	3
18.	Digital Image Processing		Medical Imaging	
19.	Artificial Intelligence		Microprocessor based medical instruments	
20.	Instrumentation in Petro Chemical Industries		Wireless Sensor Networks.	
			Virtual instrumentation	3
			Instrumentation for Aerospace and Navigation	
			Bio signal processing	
			rogrammable Logic Controllers	
Total		16		18

Open Electives offered by the Department:

2014 Regulation					
Department	Course	Credits	Department	Course	Credits
Chemical Engineering	Industrial Pollution and Control	3	Chemical Engineering	Refrigeration and Air conditioning	3
	Energy Engineering				
Civil Engineering	Air Pollution & Control		Civil Engineering	Remote sensing and GIS	3
	Remote Sensing & GIS				
Computer Science & Engineering	Database Management Systems		Computer Science & Engineering	Computer Organization	3
	Java Programming			Operating Systems	
				OOPS with JAVA	
				Fuzzy logic systems.	
Electrical & Electronics Engineering	Optimization Techniques		Electrical & Electronics Engineering	Power System Instrumentation	3
	Non-Conventional Energy Sources			Renewable energy sources.	
Electronics & Communication Engineering	Consumer Electronics	Electronics & Communication Engineering	VLSI	3	
			Electromagnetic Field Theory		
			Digital Image Processing		
	Embedded Systems		Analog and Digital Communications		

Electronics & Instrumentation Engineering	Virtual Instrumentation using LabView		Electronics & Instrumentation Engineering	Advanced computer control systems	3
				Power Plant Instrumentation	
				Introduction to MEMS	
	Sensors & Transducers				
Information Technology	Mobile Application Development		Information Technology	Web Programming	3
				Internet of Things	
	Web Technologies		Big data Analytics.		
Mechanical Engineering	Automobile Engineering		Mechanical Engineering	Automobile Engineering	3
	Refrigeration & Air Conditioning		Bosch Rexroth Centre	Automation Technology	3
Bosch Rexroth Centre	Automation Technology				
	Total	3		Total	15 (5 Open Electives)