

**Revised UG Course Curriculum**

**Effective for 2020-24 and 2021-25**

## Second Year First Semester

Sl.No.	Subject Code	Subject Name	Category	Type	Contact L-T-P	Credit	Marks
1.	FET/BS/B/Math/T/211	Mathematics III	BS	B	2-1-0	3	100
2.	IEE/PC/B/T/212	Circuit Theory	PC	B	3-1-0	4	100
3.	IEE/PC/B/T/213	Fundamentals of Instrumentation	PC	B	3-0-0	3	100
4.	IEE/PC/B/T/214	Electronic Circuits	PC	B	3-1-0	4	100
5.	IEE/PC/B/T/215	Digital Electronics	PC	B	3-1-0	4	100
6.	IEE/ES/B/T/216	Applied Fluid Mechanics	ES	B	3-0-0	3	100
7.	IEE/PC/B/S/211	Digital Circuits Lab	PC	B	0-0-3	1.5	100
8.	IEE/PC/B/S/212	Electronic & Instrument Workshop	PC	B	0-0-3	1.5	100
9.	IEE/PS/B/S/213	Seminar	PS	B	0-0-3	1.5	100
					<b>17-4-9</b>	<b>25.5</b>	<b>900</b>

## Second Year Second Semester

Sl. No.	Subject Code	Subject Name	Category	Type	Contact L-T-P	Credit	Marks
1.	IEE/PC/B/IT/T/221	Data Structure, Algorithms & OOPs	PC	B	3-0-0	3	100
2.	IEE/PC/B/T/222	Analog Integrated Circuits	PC	B	3-1-0	4	100
3.	IEE/PC/B/T/223	Industrial Instrumentation	PC	B	3-1-0	4	100
4.	IEE/PC/B/T/224	Linear Control Systems	PC	B	3-1-0	4	100
5.	IEE/PC/B/T/225	Digital Signal Processing	PC	B	3-0-0	3	100
6.	IEE/PC/B/T/226	Measurements & Electronic Instrumentation	PC	B	3-0-0	3	100
7.	IEE/PC/B/S/221	Analog Electronics Laboratory	PC	B	0-0-3	1.5	100
8.	IEE/PC/B/S/222	Computing Software Laboratory	PC	B	0-0-3	1.5	100
					<b>18-3-6</b>	<b>24</b>	<b>800</b>

### Third Year First Semester

Sl. No.	Subject Code	Subject Name	Category	Type	Contact L-T-P	Credit	Marks
1.	IEE/PC/B/ T/311	Analytical Instrumentation	PC	B	3-0-0	3	100
2.	IEE/PC/H/IT/T/312	Comp Organization, Architecture & Networking	PC	H	3-1-0	4	100
3.	IEE/PC/B/T/313	Process Instrumentation	PC	B	3-0-0	3	100
4.	IEE/PC/B/T/314	Microcontrollers	PC	B	3-0-0	3	100
5.	IEE/PC/B/T/315	Process Dynamics and Control	PC	B	3-0-0	3	100
6.	IEE/PC/B/T/316	Signal Transmission & Communication Systems	PC	B	3-0-0	3	100
7.	IEE/PC/B/S/311	Control Systems Laboratory	PC	B	0-0-3	1.5	100
8.	IEE/PC/B/S/312	Sensor & Signal Conditioning Laboratory	PC	B	0-0-3	1.5	100
9.	IEE/PS/B/S/313	Mini Project (Electronic Design Laboratory)	PS	B	0-0-3	1.5	100
					<b>(15+3H)-1H-9</b>	<b>19.5+4H</b>	<b>800+100H</b>

### Third Year Second Semester

Sl. N	Subject Code	Subject Name	Category	Type	Contact L-T-P	Credit	Marks
1.	IEE/PC/H/T/321	Advanced Process Control	PC	H	3-1-0	4	100
2.	IEE/PC/H/T/322	Power Electronics	PC	H	3-1-0	4	100
PROGRAM ELECTIVE I (Students to opt for any one of the courses listed below)							
3	IEE/PE/B/T/323A	Industrial Automation Systems	PE	B	3-0-0	3	100
	<b>IEE/PE/B/T/323B</b>	<b>MOOC /NPTEL 1</b>	<b>PE</b>	<b>B</b>		<b>3</b>	<b>100</b>
PROGRAM ELECTIVE II (Students to opt for any one of the courses listed below)							
4	IEE/PE/B/T/324A	Analog MOS Circuit Design	PE	B	3-0-0	3	100
	<b>IEE/PE/B/T/324B</b>	<b>MOOC /NPTEL 2</b>	<b>PE</b>	<b>B</b>		<b>3</b>	<b>100</b>
5.	IEE/PC/B/S/321	Digital Signal Processing Laboratory	PC	B	0-0-3	1.5	100
6.	IEE/PC/B/S/322	Process Control Laboratory	PC	B	0-0-3	1.5	100
7.	IEE/PS/B/S/323	Mini Project (Microcontroller Laboratory)	PS	B	0-0-3	1.5	100
8.	IEE/PS/B/S/324	Mini Project (Automation Laboratory)	PS	B	0-0-6	3	200
9.	IEE/PS/B/S/325	Mini Project (FPGA Laboratory)	PS	B	0-0-3	1.5	100
					<b>(6+6H)- 2H-18</b>	<b>15+8H</b>	<b>800+200H</b>

## Fourth Year, First Semester

Sl. No.	Subject Code	Subject Name	Category	Type	Contact L-T-P	Credit	Marks
1.	IEE/PC/H/ T/411	Telemetry and Remote Control	PC	H	3-1-0	4	100
2.	IEE/HS/B/Eco/T/412	Economics	HS	B	3-0-0	3	100
3	PROGRAM ELECTIVE III (Students to opt for any one of the courses listed below)						
	IEE/PE/B/T/413A	Digital Image Processing	PE	B	3-0-0	3	100
	IEE/PE/B/T/413B	Power Plant Instrumentation	PE	B	3-0-0	3	100
	IEE/PE/B/T/413C	Embedded System	PE	B	3-0-0	3	100
	<b>IEE/PE/B/T/413D</b>	<b>MOOC /NPTEL 3</b>	<b>PE</b>	<b>B</b>		<b>3</b>	<b>100</b>
4	PROGRAM ELECTIVE IV (Students to opt for any one of the courses listed below)						
	IEE/PE/B/T/414A	Intelligent Control Systems	PE	B	3-0-0	3	100
	IEE/PE/B/T/414B	VLSI Design	PE	B	3-0-0	3	100
	<b>IEE/PE/B/T/414C</b>	<b>MOOC /NPTEL 4</b>	<b>PE</b>	<b>B</b>		<b>3</b>	<b>100</b>
5.		Open Elective Course 1	OE	B	3-0-0	3	100
6.	IEE/PC/H/S/411	Power Electronics Laboratory	PC	H	0-0-4	2	100
7.	IEE/PC/H/S/412	Telemetry & Remote Control Laboratory	PC	H	0-0-4	2	100
8.	IEE/PS/B/S/413	Project	PS	B	0-0-6	3	200
					<b>(12+3H)-1H-(6+8H)</b>	<b>15+8H</b>	<b>600+300H</b>

## Fourth Year, Second Semester

Sl. No.	Subject Code	Subject Name	Category	Type	Contact L-T-P	Credit	Marks
PROGRAM ELECTIVE V (Students to opt for any one of the courses listed below)							
1	IEE/PE/B/T/421A	Instrumentation in Space Technology	PE	B	3-0-0	3	100
	IEE/PE/B/T/421B	Data Analysis for Instrumentation System	PE	B	3-0-0	3	100
PROGRAM ELECTIVE VI (Students to opt for any one of the courses listed below)							
2	IEE/PE/B/T/422A	Electronic Olfaction & Taste Sensing	PE	B	3-0-0	3	100
	IEE/PE/B/T/422B	Industrial IoT	PE	B	3-0-0	3	100
3.		Open Elective Course 2	OE	B	3-0-0	3	100
4.		Open Elective Course 3	OE	B	3-0-0	3	100
5.	IEE/HS/B/Prod/T/423	Industrial Management	HS	B	3-0-0	3	100
6.	IEE/PS/B/S/421	Project	PS	B	0-0-9	4.5	300
					<b>15-0-9</b>	<b>19.5</b>	<b>800</b>

## Credit Summary

Year	Basic							Honours	Total
	HS	BS	ES	PC	PE	PS	OE		
1 <sup>st</sup> Year, 1 <sup>st</sup> Semester	--	4	17	--	--	--	--	--	21
1 <sup>st</sup> Year, 2 <sup>nd</sup> Semester	3	12	5.5	--	--	--	--	--	20.5
2 <sup>nd</sup> Year, 1 <sup>st</sup> Semester	--	3	3	18	--	1.5	--	--	25.5
2 <sup>nd</sup> Year, 2 <sup>nd</sup> Semester	--	--	--	24	--	--	--	--	24
3 <sup>rd</sup> Year, 1 <sup>st</sup> Semester				18		1.5		4	23.5
3 <sup>rd</sup> Year, 2 <sup>nd</sup> Semester				3	6	6		8	23
4 <sup>th</sup> Year, 1 <sup>st</sup> Semester	3			0	6	3	3	8	23
4 <sup>th</sup> Year, 2 <sup>nd</sup> Semester	3				6	4.5	6		19.5
<b>Total</b>	<b>9</b>	<b>19</b>	<b>25.5</b>	<b>63</b>	<b>18</b>	<b>16.5</b>	<b>9</b>	<b>20</b>	<b>180</b>