

Instrumentation & Electronics Engineering UG Course Curriculum

OECs offered by IEE:

FET/OE/IEE/T101 : Industrial Electronics, STUDENT INTAKE 50

FET/OE/IEE/T102 : Analysis of Measurement Data, STUDENT INTAKE 50

FET/OE/IEE/T201 : Basic Measurements and Instrumentation, STUDENT INTAKE 50

FET/OE/IEE/T202: Electronic Measurements: Principles and Systems, STUDENT INTAKE 50

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 II	B		3-0-0	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
					18-3-9	25.5	900

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 Circuit	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
					18-3-6	24	800

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
					(15+3H)- 1H-9	19.5+4H	800+100H

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
3	PROGRAM ELECTIVE I (Students to opt for any one of the courses listed below)						
	IEE/PE/B/T/323A	Artificial Intelligence & Machine Learning	PE	B	3-0-0	3	100
	IEE/PE/B/T/323B	Bio Medical Instrumentation	PE	B	3-0-0	3	100
	IEE/PE/B/T/323C	MOOC /NPTEL 1	PE	B		3	100
4	PROGRAM ELECTIVE II (Students to opt for any one of the courses listed below)						
	IEE/PE/B/T/324A	Analog MOS Circuit Design	PE	B	3-0-0	3	100
	IEE/PE/B/T/324B	MOOC /NPTEL 2	PE	B		3	100
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
					(6+6H)- 2H-18	15+8H	800+200H

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
PROGRAM ELECTIVE III (Students to opt for any one of the courses listed below)							
3	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
	IEE/PE/B/T/413D	MOOC /NPTEL 3	PE	B		3	100
PROGRAM ELECTIVE IV (Students to opt for any one of the courses listed below)							
4	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
	IEE/PE/B/T/414C	MOOC /NPTEL 4	PE	B		3	100
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
					(12+3H)-1H-(6+8H)	15+8H	600+300H

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
	IEE/PE/B/T/421C	MOOC /NPTEL 5	PE	B		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	MOOC /NPTEL 6	PE	B		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/425	Industrial Management	HS	B	3-0-0	3	100
6.	IEE/PS/B/S/421	Project	PS	B	0-0-9	4.5	300
					15-0-9	19.5	800

Credit Summary

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