

**Autonomous Program Structure of
Final Year B. Tech. Eighth Semester
(Instrumentation & Control Engineering)
Academic Year: 2023-2024
onwards**

Course Code	Course Title	Teaching Scheme Hours /Week			Examination Scheme				Marks	Credit
		Lecture	Tutorial	Practical	In Semester	End Semester	Oral	Practical		
20IN801	Process Data Analytics	3	0	0	50	50	0	0	100	3
20PEIN801	Program Elective-IV	3	0	0	50	50	0	0	100	3
20PEIN802	Program Elective-V	3	0	0	50	50	0	0	100	3
20OE801	Open Elective-III	3	0	0	50	50	0	0	100	3
20OE802	Open Elective-IV*	3	0	0	50	50	0	0	100	3
20IN801L	Process Data Analytics lab	0	0	2	25	0	25	0	50	1
20PEIN801L	Program Elective-IV Lab	0	0	2	25	0	25	0	50	1
	Total	15	0	4	300	250	50	0	600	17
	Grand Total	19			600				600	17

Programme Elective-IV 20PEIN801A Process Modelling and Optimization 20PEIN801B Artificial Intelligence and Machine Learning 20PEIN801C Medical Device Technology	Programme Elective-IV Lab 20PEIN801LA Process Modelling and Optimization 20PEIN801LB Artificial Intelligence and Machine Learning 20PEIN801LC Medical Device Technology
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Programme Elective-V 20PEIN802A Safety Instrumentation Systems 20PEIN802B Computer Techniques and Operating Systems 20PEIN802C Environmental Instrumentation
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APPROVED BY

Secretary Governing Body

MKSSS's Cummins College of Engineering

Department of Instrumentation & Control Engineering

APPROVED BY

Chairman Governing Body

MKSSS's Cummins College of Engineering

For Women, Pune-411052

20OE801 Open Elective-III			Eligible Departments				
Sr. No.	Course Code	Course Title	EnTC	Comp	IT	Mech	Instru
1	20OE801A	Big Data and Analytics	Y	Y	Y	Y	Y
2	20OE801B	Cyber Physical Systems	Y	Y	Y	N	Y
3	20OE801C	Digital Control	Y	N	N	Y	Y
4	20OE801D	Industrial Engineering and Management	Y	Y	Y	Y	Y
5	20OE801E	Introduction to Cyber-crime and Forensics	Y	Y	Y	Y	Y
6	20OE801F	Instrumentation in Food and Agriculture	Y	Y	Y	Y	Y
7	20OE801G	Medical IoT	Y	Y	Y	N	Y
8	20OE801H	Quantum Computing	Y	Y	Y	N	Y
9	20OE801I	Renewable Energy Sources	Y	Y	Y	Y	Y
10	20OE801J	Soft Computing	Y	Y	Y	Y	Y
11	20OE801K	Software Testing and Quality Assurance	Y	Y	Y	Y	Y

20OE802 Open Elective-IV			Eligible Departments				
Sr. No.	Course Code	Course Title	EnTC	Comp	IT	Mech	Instru
1	20OE802A	Applied statistics with R Programming	Y	N	N	Y	Y
2	20OE802B	Automobile Engineering	Y	Y	Y	N	Y
3	20OE802C	Autonomous Robots	N	Y	Y	Y	N
4	20OE802D	Building Automation and Energy Audit	Y	Y	Y	Y	N
5	20OE802E	Data Analysis and Visualization	Y	N	Y	Y	Y
6	20OE802F	Data Science using Python	Y	N	Y	Y	Y
7	20OE802G	Industrial Drives and Control	Y	Y	Y	Y	N
8	20OE802H	Smart Sensors and Systems		Y	Y	Y	N
9	20OE802I	Wireless Networks		Y	Y	N	Y

