

S. Y. B. Tech
Instrumentation and Control Engineering

Semester - III

Sr. No.	Course Code	Course Title	L	T	P	S	Cr	Category
01	PCC-03	Sensors and Transducers	3	0	2	1	4	PCC
02	PCC-04	Analog Electronics	3	0	2	1	4	PCC
03	PCC-05	Signals and Systems	2	0	-	1	2	PCC
04	OE-01	Sensors and Actuators	2	0	0	1	2	OE
05	ES-07	Numerical Methods	0	1	2	0	2	ESC
06	HSMC-03	Indian language	2	0	0	-	2	HSMC
07	HSMC-05	Constitution of India	1	0	0	2	1	VEC
08	CEA-01	Community Engagement Activity (CEA)/Field Project	-	-	-	-	2	CEA
09	HSMC-05	Entrepreneurship	1	0	0	1	1	HSMC
Total			14	1	6	9	20	

Semester -IV

Sr. No.	Course Code	Course Title	L	T	P	S	Cr	Category
01	PCC-05	Microcontrollers and Applications	2	1	2	1	4	PCC
02	PCC-06	Automatic Control System	3	0	2	1	4	PCC
03	PCC-07	Digital Electronics	3	0	2	1	4	PCC
04	OE-02	Feedback control system	2	0	0	1	2	OE
05	HSMC-03	Economics	2	0	0	0	2	HSMC
06	HSMC-04	Environmental Studies	1	0	0	2	1	VEC
07	HSMC-05	Design Thinking	1	0	0	1	1	HSMC
08	MD M-01	Multidisciplinary Minor	3	-	-	1	3	VSEC
Total			18	0	06	8	21	

- Exit option to qualify for Diploma:
 - Calibration and Testing
 - Programmable Logic Controller

T. Y. B. Tech
Instrumentation and Control Engineering
Semester - V

Sr. No.	Course Code	Course Title	L	T	P	S	Cr	Category
01	PCC-08	Digital Signal Processing	2	1	2	1	4	PCC
02	PCC-09	Control System Design	3	0	2	1	4	PCC
03	PCC-10	Process Loop Components	2	0	2	1	3	PCC
04	PEC-01	Program Elective Course-1 1. Process Plant Operations 2. Statistics & Data Analytics 3. Anatomy and Physiology 4. Robotics and Automation	3	0	0	1	3	PEC
05	OE-03	Industrial Automation	2	0	0	1	2	OE
06	OJT-1	Internship	--	--	--	--	1	OJT
		Project stage 1			4		2	
07	MDM-02	Multidisciplinary Minor	3	0	2	1	4	MD M
Total			15	01	12	06	23	

Semester - VI

Sr. No.	Course Code	Course Title	L	T	P	S	Cr	Category
01	PCC-11	Power Electronics and Drives	2	0	2	1	3	PCC
02	PCC-12	Analytical Instrumentation	2	0	2	1	3	PCC
03	PCC-13	Industrial Automation	3	0	2	1	4	PCC
04	PCC-14	Instrument System and Design	2	0	2	1	3	PCC
05	PEC-02	Program Elective Course-2 1. Nonlinear control 2. Introduction to AIML 3. Medical Devices 4. Internet of Things	3	0	0	1	3	PEC
06	VSEC-02	Cornerstone Project-II (Project stage 2)	0	0	4	--	2	VSEC
07	MD M-04	Multidisciplinary Minor	3	0	2	1	4	MD M
Total			15	00	14	06	22	

- Exit option to qualify for B. Voc.:
 - Internship of 8 Weeks

Final Year B. Tech in Instrumentation and Control Engineering

Semester - VII

SN	CourseCode	Course Title	L	T	P	S	Cr	Category
01	PCC-15	Process Control	3	0	2	1	4	PCC
02	PCC-16	Project Engineering and Management	2	1	2	1	4	PCC
03	PEC-03	Program Elective Course-3 1. Building Automation 2. Biomedical Signal Processing 3. Industrial Cyber Security 4. Sliding mode control	3	0	0	1	3	PEC
04	PEC-04	Program Elective Course-4 1. Batch Process Control 2. Medical Image Processing 3. Industry xx 4. Applications of ML	3	0	0	1	3	PEC
05	RM	Research Methodology	2	0	0	--	2	RM
06	OJT-02	Internship	-	-	-	--	1	OJT
07	VSEC-03	Project stage 3			10		5	
08	MD M-05	Multidisciplinary Minor	3	0	0	1	3	MDM
Total			16	01	14	05	25	

Semester – VIII

Sr. No.	Course Code	Course Title	L	T	P	S	Cr	Category
01	PEC-05	MOOCs	3	0	0	0	3	PEC
02	PEC-06	MOOCs	3	0	0	0	3	PEC
03	OJT-03/ VSEC-03	Internship	-	-	-	-	3	OJT/VSEC
Total			06	00	00	00	09	