

Department of Electrical Engineering
School of Engineering, Gautam Buddha University
Course structure of 2 Year M. Tech. Programme in Instrumentation and Signal Processing
(2020-22) onwards

SEMESTER-I					Course Type
S. No.	Subject Code	Courses	L-T-P	Credit	
THEORY					
1.	EE765/ EE751	Optimization Techniques in Engineering/ Modelling & Simulation	3-1-0	4	EGE-IS1
2.	EE753	Advanced Industrial and Electronic Instrumentation	3-0-0	3	C-IS1
3.	EE755	Digital Signal and Image Processing	3-0-0	3	C-IS2
4.	EE757	Bioelectric Signals and Processing	3-0-0	3	C-IS3
5.	-	Elective-I	3-0-0	3	EDSE-IS1
6.	-	Open Elective	3-0-0	3	OE-IS1
PRACTICALS/PROJECT					
7.	EE-553	Adv. Instrumentation and Signal Processing Lab	0-0-3	2	C-I4
8.	EE-597	Seminar	0-0-3	2	SEC1
9.	GP	General Proficiency	-	NC	
Total				23	
Total Contact Hours			25		

Open Elective: Course offered from other School/Department

SEMESTER-II					Course Type
S. No.	Subject Code	Courses	L-T-P	Credit	
THEORY					
1.	EE765/ EE751	Optimization Techniques in Engineering/ Modelling & Simulation	3-1-0	4	EGE-IS2
2.	EE752	Smart Sensors and MEMS	3-0-0	3	C-IS5
3.	EE534	Biomedical Instrumentation	3-0-0	3	C-IS6
4.	EE754	Medical Image and Signal Analysis	3-0-0	3	C-IS7
5.		Specialized Elective- I	3-0-0	3	EDSE-IS2
PRACTICALS/PROJECT					
	EE598	Project	0-0-10	5	EDP-IS1
7.	EE548	Biomedical & Virtual Instrumentation Lab	0-0-3	2	C-IS8
8.	GP	General Proficiency	-	NC	
Total				23	
Total Contact Hours			29		

SEMESTER-III					Course Type
S. No.	Subject Code	Courses	L-T-P	Credit	
		THEORY			
1.	EE771	Telemetry and SCADA	3-1-0	4	C-IS9
2.	EE773	Advances in Signal and Image Processing	3-0-0	3	C-IS10
3.		Specialized Elective-II	3-0-0	3	EDSE-IS3
4.		Specialized Elective-III	3-0-0	3	EDSE-IS4
5.		PRACTICALS/PROJECT			
6.	EE777	Advance Signal Processing Lab	0-0-2	1	CIS-11
	EE699	Dissertation-I	6*-0-3	8	EDP-IS2
7.	GP	General Proficiency	-	NC	
8.		Total	-	22	
		Total Contact Hours	24		

**This will not be a usual lecture session, but this is one to one interaction of each student with the concerned faculty member*

SEMESTER-IV					Course Type
S. No.	Subject Code	Courses	L-T-P	Credit	
		PRACTICALS/PROJECT			
1.	EE698	Dissertation-II	-	22	EDP-IS 3
2.	GP	General Proficiency	-	NC	
		Total	-	22	
		Total Contact Hours	22		

Grand Total Credits = 90

List of Electives for M. Tech. (Instrumentation and Control)

Elective-I:

1. EE759: Analog Signal Processing
2. EE761: Advanced Sensing Techniques
3. EE763: Real-Time Signal Processing
4. EE547: Industrial Instrumentation & Control
5. EE589: Wavelet Methods in Engineering
6. EE767: Machine Learning for Signal Processing
7. M. Tech. (PS, PED, I&C, CR and RES)-I Sem, Electives

Specialized Elective-I

1. EE758: Ultrasonic and Laser Instrumentation
2. EE760: Wireless Sensors and Networks
3. EE762: Computational Methods and Algorithms in Signal Processing
4. EE764: Data Communication Systems
5. EE766: Distributed Signal Processing in Sensor Networks
6. EE768: Adaptive Systems and Signal Processing
7. EE770: Intelligent and Virtual Instrumentation
8. Specialized Electives-I M. Tech. (PS, PED, I&C, CR and RES)

Specialized Elective-II

1. EE631 Digital Instrumentation
2. EE779: Microprocessor Based Medical Instruments
3. EE637: Ultrasonic Instrumentation & Sensors
4. EE641: Advance Sensors and Biomaterials
5. EE645: Data Acquisition & Signal Conditioning
6. EE651: Medical Image Processing
7. EE681: Soft Computing Techniques
8. EE841: IoT and Industrial IoT
9. Specialized Electives-II of M. Tech. (PS, PED, I&C, CR & RES)

Specialized Elective-III

1. EE775: Machine Learning
2. EE797: Advanced Digital System Design
3. EE781: Advanced Computer Controlled Systems
4. EE783: VLSI for Tele-Communication
5. EE653: Digital Image Processing
6. EE661: PLC and SCADA Based Measurements
7. EE665: Research Techniques and Methodology
8. Specialized Electives-III of M. Tech. (PS, PED, I&C, CR & RES)