Department of Electrical Engineering
School of Engineering, Gautam Buddha University

Course Structure of 2- Year M. Tech. Programme in Control & Robotics (2020-22) onwards

M.Tech. I Semester (Control and Robotics)					
S.N	**Subject Code**	**Course**	**L-T-P**	**Credit**	**Course Type**
THEORY					
1	EE-801	Control System Design	3-0-0	3	CC
2	EE-803	Drives for Control & Robotics	3-0-0	3	AEC-S
3	EE-805	Advance Process Control and PLC	3-0-0	3	CC
4	EE-807	Fundamental of Robotics	3-0-0	3	CC
5	EE	**Elective –I**	3-0-0	3	E-DE
6		**Open Elective**	3-0-0	3	E-OE
PRACTICAL					
7	EE-811	PLC and SCADA Lab	0-0-3	2	CC
8	EE- 597	Seminar	0-0-3	2	AEC-S
9	GP	General Proficiency	--	NC	
		TOTAL	**24 hr**	**22**	

M.Tech. II Semester (Control and Robotics)					
S.N	**Subject Code**	**Course**	**L-T-P**	**Credit**	**Course Type**
THEORY					
1	EE-802	Adaptive and Robust Control	3-0-0	3	CC
2	EE-804	Sensors for Engineering Applications	3-0-0	3	AEC-C
3	EE-806	ANN and Fuzzy Systems	3-0-0	3	AEC-S
4	EE-808	Robot Kinematics and Dynamics	3-0-0	3	CC
5	EE	**Specialized Elective - I**	3-0-0	3	E-DE
PRACTICAL					
5	EE-810	Robotics Lab	0-0-3	2	CC
6	EE - 598	Project	0-0-10	5	E-DP
7	GP	General Proficiency	--	NC	
		TOTAL	**28 hr**	**22**	

M.Tech. III Semester (Control and Robotics)					
S.N	**Subject Code**	**Course**	**L-T-P**	**Credit**	**Course Type**
THEORY					
1	EE-633	Digital and Non Linear Control System	3-0-0	3	CC
2	EE-823	Industrial Robotics	3-0-0	3	CC
3	EE-	Specialized Elective-II	3-0-0	3	E-DE
4	EE-	Specialized Elective-III	3-0-0	3	E-DE
PRACTICAL					
5	EE-667	Digital & Non-Linear Control Lab	0-0-2	1	CC
6	EE-699	Dissertation -I	6*-0-3	8	E-DP
7	GP	General Proficiency	--	NC	
		TOTAL	**23 hr**	**21**	

*Note: * This will not be a usual lecture session but this is one to one interactions of each student with the concerned faculty members.*

M.Tech. IV Semester (Control and Robotics)					
S.N	**Subject Code**	**Course**	**L-T-P**	**Credit**	**Course Type**
1	EE-698	Dissertation-II	0-0-16	22	E-DP
2	GP	General Proficiency	--	NC	
		TOTAL	**22 hr**	**22**	

List of Electives

Elective-I

1. EE-809: Linear system Theory
2. EE-813: Programming in Python
3. EE-815: Industrial Automation and Control
4. EE-817: Machine Learning for Robotics
5. Elective-I from M.Tech. (I&C, ISP, PS and PED) and Int. B.Tech.+M.Tech./MBA Elective

Specialized Elective-I

1. EE-812: Image Processing
2. EE-814: Artificial Intelligence
3. EE-816: DCS and SCADA
4. EE-818: Industrial Networks Protocols
5. Specialized Elective-I from M.Tech. (I&C, ISP, PS and PED)

Specialized Elective-II & III

1. EE-825: Model Predictive Control
2. EE-827: Wavelet Theory
3. EE-831: Intelligent Control
4. EE-833: Navigation Guidance and Control
5. EE-835: Robotics and Automation
6. EE-837: Model Order Reduction
7. EE-839: Robot Programming and Simulation
8. EE-841: IoT and Industrial IoT
9. Specialized Elective-II & III from M.Tech. (I&C, ISP, PS and PED)

Open Elective

1. Numerical Methods and Computer Programming
2. Advance Computer Concepts for Automation
3. Linear Algebra and Vector calculus for Engineers
4. Optimization Techniques in Engineering
5. Any other relevant subject offered from other department.