

Gautam Buddha University

School of Engineering

Course Structure of Integrated M. Tech. Program (Instrumentation & Control)

SEMESTER-VII				
Sr. No.	Subject Code	Courses	L-T-P	Credits
THEORY				
1.	MEE505/MA402	Operation Research/Modeling & Simulation	3 1 0	4
2.	EIC 501	Advanced Instrumentation	3 0 0	3
3.	EIC 503	Advanced Control Theory	3 0 0	3
4.	EIC 505	Optimal Control Theory	3 0 0	3
5.		Elective – I	3 0 0	3
PRACTICALS				
6.	EIC 531	Adv. Instrumentation & Control Lab	0 0 3	2
7.	EIC 533	Seminar	0 0 3	2
8.	GP 501	General Proficiency	-	1
Total				21
Total Contact Hours			22	

SEMESTER-VIII				
Sr. No.	Subject Code	Courses	L-T-P	Credits
THEORY				
1.	MEE505/MA402	Operation Research/Modeling & Simulation	3 1 0	4
2.	EIC 502	Robust and Adaptive Control	3-0-0	3
3.	EIC 504	Biomedical Instrumentation	3-0-0	3
4.	EIC 506	Transducer & Sensors	3-0-0	3
5.		Specialized Elective – I	3-0-0	3
PRACTICAL				
6.	EIC 530	Biomedical and Virtual Instrumentation Lab	0-0-4	3
	EIC 532	Minor Project	0-0-10	5
8.	GP 601	General Proficiency	-	1
Total				25
Total Contact Hours			30	

SEMESTER-IX				
Sr. No.	Subject Code	Courses	L-T-P	Credits
THEORY				
1.	EIC 601	Digital Instrumentation	3-1-0	4
2.	EIC 603	Advance Process Control	3-0-0	3
3.	EIC 605	Digital & Non-Linear Control	3-0-0	3
4.		Specialized Elective – II	3-0-0	3
5.		Specialized Elective – III	3-0-0	3
PRACTICALS				
6.	EIC 651	Digital & Non Linear Control Lab	0-0-2	1
	EIC 653	Dissertation (Part I)	2**-0-3	4
8.	GP 601	General Proficiency	-	1
Total				22
Total Contact Hours				

** One to one interaction of each student with the concerned faculty member.

SEMESTER-X				
Sr. No.	Subject Code	Courses	L-T-P	Credits
	EIC 602	Dissertation (Part II)		21
	GP 601	General Proficiency	-	1
Total				22

LIST OF ELECTIVES

Total Program Credits: 90

Elective-I

1. EIC 507:Calibration and Testing
2. EIC 509: Nanomaterials & Applications
3. EIC 511:Hydraulic and Pneumatic Control
4. EIC 513:Embedded System
5. EIC519:Digital Signal Processing
6. EIC515: Industrial Instrumentation & Control
7. EIC 517:Advance Microprocessors and Interfacing
8. EE409/EIC 521 Introduction to MEMS

Specialized Elective-I

1. EIC 510:Mechatronics
2. EIC512: Wavelet Methods for Engineers
3. EIC514: Computer Aided Design of Instrumentation System
4. EIC522:Intelligent Instrumentation
5. EIC 524:Virtual Instrumentation
6. EIC 526 Environmental Instrumentation & Control

Specialized Elective-II

1. EIC 607:Stochastic Control
2. EIC 609:Ultrasonic Instrumentation & Sensors
3. EIC 613:Digitized Automation and Control
4. EIC 615:Advanced Sensors and Biomaterials
5. EIC 617:Transducer Technology
6. EIC 619:Data Acquisition & Signal Conditioning
7. EIC 621/EEP615:Soft Computing Techniques
8. EIC 623 Artificial Intelligence & Neural Networks

Specialized Elective-III

1. EIC 631:Digital Image Processing
2. EIC633: Parallel Process & Real Time Systems
3. EIC 635:Opto-Electronics based Instrumentation
4. EIC637: Research Methodology
5. EIC639:Robotics
6. EIC641:SCADA Based Measurements
7. EIC643: Energy Management
8. EIC645:Optimization Techniques