

**M. TECH. IN CONTROL AND INSTRUMENTATION SYSTEMS  
UNDER THE CHOICE BASE CREDIT SYSTEM (CBCS)  
Effective from July-2018**

**Category of Courses**

**DC:** Departmental core  
**CBCS:** Choice Based Credit System  
**SEC:** Skill Enhancement Courses  
**AECC:** Ability Enhancement Compulsory Course  
**DE:** Departmental electives

**Abbreviation**

**L** Lecture  
**T** Tutorial  
**P** Practical  
**CCA** Continuous Class Assessment  
**MSE** Mid Semester Evaluation

**I Year**

<b>First Semester</b>													
S. No	Course No.	Course Name	Type of Course	CREDIT	Periods Per week			Examination Scheme (Distribution of Marks)					
					L	T	P	Mid Semester Evaluation			End Semester Evaluation	Total Marks	
								CCA	MSE-1	MSE-2			
01	EEM-101	Intelligent Techniques	<b>CBCS</b>	4	3	1	-	10	15	15	60	100	
02	EEM-102	Instrumentation Systems	<b>DC</b>	4	3	1	-	10	15	15	60	100	
03	EEM-103	Optimal Control Theory	<b>DC</b>	4	3	1	-	10	15	15	60	100	
04	-	Elective I	<b>DE</b>	4	3	1	-	10	15	15	60	100	
05	-	Elective –II	<b>DE</b>	4	3	1	-	10	15	15	60	100	
<b>PRACTICAL (LAB.)</b>													
06	EEM-132	Instrumentation System Lab	<b>SEC</b>	2	-	-	4	30	-	-	20	50	
<b>Total</b>				<b>22</b>								<b>550</b>	
<b>Elective –I:</b> EEM-114 Communication Protocol/EEM-105 Robotics and Control/EEM-106 Applied Mathematics for Engineers													
<b>Elective –II:</b> EEM-107 Automation Systems/EEM-108 Process Control													
<b>Second Semester</b>													
01	EEM-201	Optimization Techniques	<b>CBCS</b>	4	3	1	-	10	15	15	60	100	
02	EEM-202	Adaptive and Robust Control	<b>DC</b>	4	3	1	-	10	15	15	60	100	
03	EEM-210	Biomedical Instrumentation	<b>AECC</b>	4	3	1	-	10	15	15	60	100	
04	-	Elective III	<b>DE</b>	4	3	1	-	10	15	15	60	100	
05	-	Elective –IV	<b>DE</b>	4	3	1	-	10	15	15	60	100	
<b>PRACTICAL (LAB.)</b>													
06	EEM-232	Advance Control System Lab	<b>SEC</b>	2	-	-	4	30	-	-	20	50	
07	EEM-240	Seminar	<b>SEC</b>	2	-	-	4	30	-	-	20	50	
<b>Total</b>				<b>24</b>								<b>Total</b>	<b>600</b>
<b>Elective –III:</b> EEM-204 Modelling and Simulation/ EEM-205 Advance Digital Signal Processing/EEM-216 Digital Communication / EEM-217 Image Processing													
<b>Elective –IV:</b> EEM-206 Smart sensors and Internet of Things/EEM-207 Embedded Systems/EEM-208 Digital Control System													

## II Year

Third Semester													
S. No	Course No.	Course Name	Type of Course	CREDIT	Periods Per week			Examination Scheme (Distribution of Marks)					
					L	T	P	Mid Semester Evaluation			End Semester Evaluation	Total Marks	
								CCA	MSE-1	MSE-2			
01	-	Elective –V	<b>SEC</b>	4	3	1	-	10	15	15	60	100	
02	-	Elective –VI	<b>CBCS</b>	4	3	1	-	10	15	15	60	100	
<b>PRACTICAL (LAB.)</b>													
06	EEM-350	Minor Project	<b>DC</b>	8	-	-	16	120	-	-	80	200	
07	EEM-351	Biomedical and Healthcare Lab		2	-	-	4	30	-	-	20	50	
<b>Total</b>				<b>18</b>								<b>450</b>	
<b>Elective –V:</b> EEM-301 Digital Instrumentation/EEM-302 Wireless Sensor Networks/ EEM-310 Transducer Technology <b>Elective –VI:</b> EEM-303 Multi Sensor Data Fusion/ EEM-311 Healthcare Technologies / EEM-305 Non Linear Control System/ EEM-306 Advanced Power Electronics													
Fourth Semester													
01	EEM-450	Dissertation	<b>DC</b>	12	-	-	24	180	-	-	120	300	
<b>Total</b>				<b>12</b>								<b>Total</b>	<b>300</b>

Total Credits (22+24+18+12)=76

