

DEPARTMENT OF INSTRUMENTATION AND CONTROL ENGINEERING, MIT Manipal

M.Tech in EMBEDDED CONTROL and AUTOMATION

Program Structure (Applicable to 2022 admission onwards)

YEAR	FIRST SEMESTER					SECOND SEMESTER						
	SUB CODE	SUBJECT NAME	L	T	P	C	SUB CODE	SUBJECT NAME	L	T	P	C
I	MAT ****	APPLIED LINEAR ALGEBRA AND PROBABILITY	4	0	0	4	ICE ****	ROBOTICS CONTROL AND AUTOMATION	4	0	0	4
	HUM ****	RESEARCH METHODOLOGY AND TECHNICAL COMMUNICATION	1	0	3	2	ICE ****	INDUSTRIAL AUTOMATION AND DRIVES	4	0	0	4
	ICE ****	EMBEDDED CONTROL SYSTEMS	4	0	0	4	ICE ****	ELECTIVE I	4	0	0	4
	ICE ****	ADVANCED CONTROL THEORY	3	1	0	4	ICE ****	ELECTIVE II	4	0	0	4
	ICE ****	SYSTEM MODELING AND IDENTIFICATION	4	0	0	4	ICE ****	ELECTIVE III	4	0	0	4
	ICE ****	PROCESS DYNAMICS AND CONTROL	4	0	0	4	ICE ****	OPEN ELECTIVE	3	0	0	3
	ICE ****	EMBEDDED CONTROL SYSTEMS LAB	0	0	3	1	ICE ****	INDUSTRIAL AUTOMATION LAB	0	0	3	1
	ICE ****	PROCESS DYNAMICS LAB	0	0	3	1	ICE ****	EMBEDDED SENSING SYSTEMS AND NETWORKS LAB	0	0	3	1
	ICE ****	SYSTEM MODELING AND SIMULATION LAB	0	0	3	1						
	<b>Total</b>			<b>20</b>	<b>1</b>	<b>12</b>	<b>25</b>			<b>23</b>	<b>0</b>	<b>6</b>

**THIRD AND FOURTH SEMESTER**

II	ICE 6098	PROJECT WORK	0	0	0	25
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PROGRAM ELECTIVES		OPEN ELECTIVES	
ICE ****	ADVANCED SENSOR TECHNOLOGY	ICE ****	ROBUST CONTROL
ICE ****	ARTIFICIAL INTELLIGENCE	ICE ****	VIRTUAL INSTRUMENTATION
ICE ****	COMPUTER NETWORKS		
ICE ****	FPGA BASED SYSTEM DESIGN		
ICE ****	HYBRID DYNAMICAL SYSTEMS		
ICE ****	SYSTEM ON CHIP		
ICE ****	ADAPTIVE AND OPTIMAL CONTROL		
ICE ****	NAVIGATION, GUIDANCE AND CONTROL		
ICE ****	REALTIME OPERATING SYSTEMS		
ICE ****	AI and ML FOR CONTROL SYSTEM APPLICATIONS		
ICE ****	SMART SENSOR DESIGN AND INTERFACING		
ICE ****	WIRELESS SENSOR NETWORKS		
ICE ****	MODELING AND CONTROL OF UAV AND DRONES		

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FLIGHT DYNAMICS AND CONTROL