

## 2nd Minor options provided at WCE to all UG Programs

### 2nd Minor courses offered by the Department of Civil Engineering to all UG Programs except UG Civil Engg.

Semester	Code	Course Name	L	T	P	Hr	Cr	MSE/LA1	ISE/LA2	ESE	OE	
IV	7MCV221	Building Planning and Construction	3			3	3	30	20	50		
V	7MCV301	Waste Management and Pollution Control	3			3	3	30	20	50		
VI	7MCV321	Infrastructure Planning and Development	4			4	4	30	20	50		
VII/VIII (B)	7MCV401	Irrigation and Watershed Management	2			2	2	30	20	50		
VII/VIII (B)	7MCV451	Field Studies			2	4	2	30	30	40		
VII/VIII (B)	7MCV402	Construction Project Management	3			3	3	30	20	50		
VII/VIII (B)	7MCV452	Construction Project Management Lab			1	2	1	30	30	40		
							18					

### 2nd Minor courses offered by the Department of Mechanical Engineering to all UG Programs except UG Mech. and Robotics ar

Semester	Code	Course Name	L	T	P	Hr	Cr	MSE/LA1	ISE/LA2	ESE	OE	
IV	7MME221	Fundamentals of CAD/CAM	3	0	0	3	3	30	20	50		
IV	7MME271	CAD/CAM Lab	0	0	2	2	1	30	30	40		
v	7MME301	Additive Manufacturing	3	0	0	3	3	30	20	50		
v	7MME351	Product Development Lab	0	0	2	2	1	30	30	40		
VI	7MME321	Smart Manufacturing	3	0	0	3	3	30	20	50		
VI	7MME322	Digital Twin Modelling	2	0	0	2	2	30	20	50		
VII	7MME421	Industry 4.0	3	0	0	3	3	30	20	50		
VII	7MME422	AIML in Mechanical engineering	2	0	0	2	2	30	20	50		
							18					

### 2nd Minor courses offered by the Department of Electrical Engineering to all UG Programs except UG Electrical, UG Electronic

Semester	Code	Course Name	L	T	P	Hr	Cr	MSE/LA1	ISE/LA2	ESE	OE
IV	7MEL221	Electrical Machines	3	0	0	0	3	30	20	50	

IV	7MEL222	Power System Engineering	3	0	0	0	3	30	20	50	
v	7MEL301	Power Electronics Drives	4	0	0	0	4	30	20	50	
v	7MEL302	Industrial Automation	4	0	0	0	4	30	20	50	
VI	7MEL321	Solar and Wind Power	3	0	0	0	3	30	20	50	
VI	7MEL371	Mini-project	0	0	2	2	1	30	30	40	

18

**2nd Minor courses offered by the Department of Electronics Engineering to all UG Programs except UG Electronics, UG Electr**

Semester	Code	Course Name	L	T	P	Hr	Cr	MSE/LA1	ISE/LA2	ESE	OE
IV	7MEN221	Electronics Devices and Circuits	3	0	0	3	3	30	20	50	
V	7MEN301	Digital Electronics System	3	0	0	3	3	30	20	50	
VI	7MEN321	Microprocessors and Microcontrollers	3	0	0	3	3	30	20	50	
VI	7MEN371	MDM Lab	0	0	2	2	1	30	30	40	
VII	7MEN401	Communication Engineering	3	0	0	3	3	30	20	50	
VII	7MEN402	Automotive Electronics	4	0	0	4	4	30	20	50	
VII	7MEN445	Mini Project	0	0	2	2	1	30	30	40	

18

**2nd courses offered by the Department of Computer Science & Engineering to all UG Programs except UG CSE, UG IT and UG AI M**

**Emerging Minor in Blockchain Technology**

Semester	Code	Course Name	L	T	P	Hr	Cr	MSE/LA1	ISE/LA2	ESE	OE
5	7MCS301	Introduction to Cryptography	3	0	0	3	3	30	20	50	
5	7MCS351	Introduction to Cryptography Lab	0	0	2	2	1	30	30	40	
6	7MCS321	Introduction to Blockchain	3	0	0	3	3	30	20	50	
6	7MCS371	Introduction to Blockchain Lab	0	0	2	2	1	30	30	40	
6	7MCS345	Seminar	0	0	2	2	1	30	30	40	

7	7MCS401	Blockchain use cases and Cryptocurrency	3	0	0	3	3	30	20	50	
7	7MCS451	Blockchain use cases and Cryptocurrency	0	0	2	2	1	30	30	40	
7	7MCS445	Mini Project	0	0	4	4	2	30	30	40	
8	7MCS421	NPTEL Course					3	30	20	50	
							18				

**2nd Minor courses offered by the Department of Information and Technology to all UG Programs except UG IT , UG CSE and U**

Semester	Code	Course Name	L	T	P	Hr	Cr	MSE/LA1	ISE/LA2	ESE	OE
4	7MIT221	Maths for AI	3	0	0	3	3	30	20	50	
4	7MIT271	Python Lab	0	0	2	2	1	30	30	40	
5	7MIT301	Data Structure & Algorithm	3	0	0	3	3	30	20	50	
5	7MIT351	Data Structure & Algorithm Lab	0	0	2	2	1	30	30	40	
6	7MIT321	Fundamentals of AI	3	0	0	3	3	30	20	50	
6	7MIT371	AI programming	0	0	2	2	1	30	30	40	
7	7MIT401	Machine Learning basics	3	0	0	3	3	30	20	50	
7	7MIT451	Machine Learning tools	0	0	2	2	1	30	30	40	
8	7MIT491	Project	0	0	4	8	2	30	30	40	
							18				

**2nd Minor courses offered by the Department of AIML to all UG Programs except UG IT , UG CSE and UG AI ML**

Semester	Code	Course Name	L	T	P	Hr	Cr	MSE/LA1	ISE/LA2	ESE	OE
4	7MAI221	Maths for AI	3	0	0	3	3	30	20	50	
4	7MAI271	Python Lab	0	0	2	1	1	30	30	40	
5	7MAI301	Data Structure & Algorithm	3	0	0	3	3	30	20	50	
5	7MAI351	Data Structure & Algorithm Lab	0	0	2	1	1	30	30	40	
6	7MAI321	Fundamentals of AI	3	0	0	3	3	30	20	50	
6	7MAI371	AI programming	0	0	2	1	1	30	30	40	
7	7MAI401	Machine Learning basics	3	0	0	3	3	30	20	50	

