

List of Multi-disciplinary Minor (Departmental)

Offered by Department	Sr.No.	Course category	Course code & Title	Semester
Civil Engineering	1	Multi-disciplinary Minor - 01	CE3314: Basic civil engineering	III
	2	Multi-disciplinary Minor – 02	CE3414: Building materials	IV
	3	Multi-disciplinary Minor – 03	CE3515: Building planning and drawing	V
	4	Multi-disciplinary Minor Lab – 03	CE3511: Building planning and drawing lab	V
	5	Multi-disciplinary Minor – 04	CE3616: Building services	VI
	6	Multi-disciplinary Minor – 05	CE3715: Smart building I	VII
	7	Multi-disciplinary Minor - 06	CE3815: Smart building II	VIII
Mechanical Engineering	1	Multi-disciplinary Minor - 01	ME3314: Material Science	III
	2	Multi-disciplinary Minor – 02	ME3415: Analysis of Mechanical elements	IV
	3	Multi-disciplinary Minor – 03	ME3515: Thermal Engineering	V
	4	Multi-disciplinary Minor Lab – 03	ME3515: Mechanical Engineering Lab	V
	5	Multi-disciplinary Minor – 04	ME3616: Manufacturing Engineering	VI

	6	Multi-disciplinary Minor – 05	ME3715: Energy Conservation and Management	VII
	7	Multi-disciplinary Minor - 06	ME3815: Mechanical System Design	VIII
Electrical Engineering	1	Multi-disciplinary Minor - 01	DC Machines and Transformers	III
	2	Multi-disciplinary Minor – 02	AC Machines	IV
	3	Multi-disciplinary Minor – 03	Basics of Power System	V
	4	Multi-disciplinary Minor Lab – 03	Electrical Machine Lab	V
	5	Multi-disciplinary Minor – 04	Electrical Drives	VI
	6	Multi-disciplinary Minor – 05	Switchgear and Protection	VII
	7	Multi-disciplinary Minor - 06	Energy Management and Audit /Electrical Vehicle	VIII
Information Technology	1	Multi-disciplinary Minor - 01	IT3305: Basics of Data Structure	III
	2	Multi-disciplinary Minor – 02	IT3404:Software Essentials (OS and Application Software)	IV
	3	Multi-disciplinary Minor – 03	IT3505:Database Management Systems	V

	4	Multi-disciplinary Minor Lab – 03	IT3511:Database Management Systems Lab	V
	5	Multi-disciplinary Minor – 04	IT3604:Basics of AI and ML	VI
	6	Multi-disciplinary Minor – 05	IT3705:Python Programming	VII
	7	Multi-disciplinary Minor - 06	IT3805:Web Technology	VIII
Electronics & Telecommuni- cations Engineering	1	Multi-disciplinary Minor - 01	EX3304: Analog Circuit	III
	2	Multi-disciplinary Minor – 02	EX3404: Digital Electronics	IV
	3	Multi-disciplinary Minor – 03	EX3505: Signals & Systems	V
	4	Multi-disciplinary Minor Lab – 03	EX3510: Signals & Systems Laboratory	V
	5	Multi-disciplinary Minor – 04	EX3606: Communication System	VI
	6	Multi-disciplinary Minor – 05	EX3706: Microprocessor & Microcontroller	VII
	7	Multi-disciplinary Minor - 06	EX3805: Mobile Communication	VIII

List of Multi-disciplinary Minor (Institute Level-Industrial)

Stream/Technology	Sr.No.	Course category	Course code & Title	Semester
Electrical Vehicle (Electrical perspective Institute Level-Industrial)	1	Multi-disciplinary Minor - 01	IMI3311: Foundation of EV and Hybrid Vehicle	III
	2	Multi-disciplinary Minor – 02	IMI3412: EV Battery Technology and Powertrain Development	IV
	3	Multi-disciplinary Minor – 03	IMI3513: EV Power Electronics and Embedded System	V
	4	Multi-disciplinary Minor Lab – 03	IMI3514: Electric Vehicle Lab	V
	5	Multi-disciplinary Minor – 04	IMI3615: EV Charging Infrastructure, Vehicle Testing & Homologation	VI
	6	Multi-disciplinary Minor – 05	IMI3716: EV Vehicle Design & Analysis	VII
	7	Multi-disciplinary Minor - 06	IMI3817: EV PCB Design & Data Analytics	VIII

Image Processing (Institute Level- Industrial)	1	Multi-disciplinary Minor - 01	IMI3321:Fundamentals of Image.	III
	2	Multi-disciplinary Minor – 02	IMI3422: Basics of Image Processing for Healthcare	IV
	3	Multi-disciplinary Minor – 03	IMI3523:Particle Size Analysis using Image Processing	V
	4	Multi-disciplinary Minor Lab – 03	IMI3524: Particle Size Analysis using Image Processing Lab	V
	5	Multi-disciplinary Minor – 04	IMI3625: Particle Characterization in Healthcare	VI
	6	Multi-disciplinary Minor – 05	IMI3726:Particle Characterization in Formulation and Reverse Engineering	VII
	7	Multi-disciplinary Minor - 06	IMI3827:Project	VIII
Electrical Vehicle (Mechanical perspective Institute Level-Industrial)	1	Multi-disciplinary Minor - 01	IMI3331:Foundation of EV and Hybrid Vehicle	III
	2	Multi-disciplinary Minor – 02	IMI3432:Automotive Mechanics for EV	IV
	3	Multi-disciplinary Minor – 03	IMI3533:EV Design, Development	V

			and Analysis	
	4	Multi-disciplinary Minor Lab – 03	IMI3534:3D modelling and simulation Lab	V
	5	Multi-disciplinary Minor – 04	IMI3635:EV Product Development, Homologation and Hydrogen FCEV	VI
	6	Multi-disciplinary Minor – 05	IMI3736:EV FEA ANALYSIS	VII
	7	Multi-disciplinary Minor - 06	IMI3837:CYBER SECURITY AND DATA ANALYSIS	VIII

List of Multi-disciplinary Minor (Institute Level-Other Discipline)

Offered by Department	Sr.No.	Course category	Course code & Title	Semester
Law	1	Multi-disciplinary Minor - 01	IMO3311: Constitutional Law	III
	2	Multi-disciplinary Minor – 02	IMO3412: Human Rights & International Law	IV
	3	Multi-disciplinary Minor – 03	IMO3513: Environmental Law	V
	4	Multi-disciplinary Minor Lab – 03	IMO3514: Environmental Law Field Study	V
	5	Multi-disciplinary Minor – 04	IMO3615: Civil Procedure Code (CPC)	VI
	6	Multi-disciplinary Minor – 05	IMO3716: Intellectual Property Law	VII
	7	Multi-disciplinary Minor - 06	IMO3817: Cyber Law	VIII
Management & Finance	1	Multi-disciplinary Minor - 01	IMO3321: Microeconomics	III
	2	Multi-disciplinary Minor – 02	IMO3422: Corporate Social	IV

			Responsibility	
	3	Multi-disciplinary Minor – 03	IMO3523: Principles of Accounting	V
	4	Multi-disciplinary Minor Lab – 03	IMO3524: Principles of Accounting Lab	V
	5	Multi-disciplinary Minor – 04	IMO3625: Business Intelligence	VI
	6	Multi-disciplinary Minor – 05	IMO3726: Marketing Research	VII
	7	Multi-disciplinary Minor - 06	IMO3827: Corporate Governance and Business Ethics	VIII

Civil Engineering Department

List of Open Elective (Offline Mode)

Open Elective	Course Code	Course Title
Open Elective-I	CE3306	Environmental Chemistry
Open Elective-I lab	CE3311	Environmental Chemistry Lab
Open Elective-II	CE3405	Project Management
Open Elective-III	CE3506	Environmental Impact Assessment

List of Open Elective (MOOCs Mode)

Open Elective	Course Code	Course Title
Open Elective-I	CE3316	Environmental Chemistry
Open Elective-I lab	CE3321	Environmental Chemistry Lab
Open Elective-II	CE3415	Project Management
Open Elective-III	CE3516	Environmental Impact Assessment

Mechanical Engineering Department

List of Open Elective (Offline Mode)

Open Elective	Course Code	Course Title
Open Elective-I	ME3315	Industrial Instrumentation
Open Elective-I lab	ME3416	Industrial Safety
Open Elective-II	ME3516	Entrepreneurship Development
Open Elective-III		

List of Open Elective (MOOCs Mode)

Open Elective	Course Code	Course Title
Open Elective-I	ME3325	Control systems
Open Elective-I lab	ME3426	Industrial Safety
Open Elective-II	ME3526	Entrepreneurship
Open Elective-III		

Electrical Engineering Department

List of Open Elective (Offline Mode)

Open Elective	Course Code	Course Title
Open Elective-I	EE3305	Sustainable Energy Systems
Open Elective-I lab	EE3310	Sustainable Energy Systems Lab
Open Elective-II	EE3405	Robotics and Automation
Open Elective-III	EE3506	Optimization Techniques or Electrical vehicle system

List of Open Elective (MOOCs Mode)

Open Elective	Course Code	Course Title
Open Elective-I		
Open Elective-I lab		
Open Elective-II		
Open Elective-III		

Electronics & Telecommunications Engineering Department

List of Open Elective (Offline Mode)

Open Elective	Course Code	Course Title
Open Elective-I	EX3315	Digital System Design
Open Elective-I lab	EX3310	Digital System Design Laboratory
Open Elective-II	EX3415	Microcontroller and Interfacing
Open Elective-III	EX3516	Embedded Systems and RTOS

List of Open Elective (MOOCs Mode)

Open Elective	Course Code	Course Title
Open Elective-I	EX3325	Digital Electronics
Open Elective-I lab	EX3320	Digital Electronics Laboratory
Open Elective-II	EX3425	Microprocessor and Microcontroller
Open Elective-III	EX3526	Embedded Systems

Information Technology Department

List of Open Elective (Offline Mode)

Open Elective	Course Code	Course Title
Open Elective-I	IT3316	Internet of Things
Open Elective-I lab	IT3311	Internet of Things Lab
Open Elective-II	IT3415	Robotics and Automation
Open Elective-III	IT3516	Augmented Reality and Virtual Reality

List of Open Elective (MOOCs Mode)

Open Elective	Course Code	Course Title
Open Elective-I	IT3326	Sensors and Internet of Things
Open Elective-I lab	IT3321	Sensors and Internet of Things Lab
Open Elective-II	IT3425	Robotics and Automation
Open Elective-III	IT3526	Multimedia and Reality

Institute Level- Industrial orientated Open Elective

Artificial Intelligence, Data Science & Machine Learning (AIDSML)

Open Elective	Course Code	Course Title	Sem
Open Elective-I	IOE3311	Foundations of AI, Data Science, and Data Engineering”	III
Open Elective-I lab	IOE3312	Foundations for AI, Data Science, and Data Engineering Lab”	III
Open Elective-II	IOE3413	Advanced AI Integration	IV
Open Elective-III	IOE3514	AI Applications and Emerging Technologies	V

Artificial Intelligence of Things (AIOT)

Open Elective	Course Code	Course Title	Sem
Open Elective-I	IOE3321	IoT Hardware and Sensors	III
Open Elective-I lab	IOE3322	IoT Hardware and Sensors lab	III
Open Elective-II	IOE3423	Fundamentals of AIoT	IV
Open Elective-III	IOE3524	Cloud Services for IoT	V

Augmented Reality and Virtual Reality (ARVR)

Open Elective	Course Code	Course Title	Sem
Open Elective-I	IOE3331	AR/VR Application Development	III
Open Elective-I lab	IOE3332	AR/VR Application Development lab	III
Open Elective-II	IOE3433	Fundamentals of Real-time Rendering	IV
Open Elective-III	IOE3534	Game Development with Unreal Engine	V

Enterprise Resource Planning - Systems, Applications & Products (ERP-SAP)

Open Elective	Course Code	Course Title	Sem
Open Elective-I	IOE3341	ABAP Programming for SAP HANA	III
Open Elective-I lab	IOE3342	ABAP programming in Eclipse LAB	III
Open Elective-II	IOE3443	SAP HANA	IV
Open Elective-III	IOE3544	SAP PEOJECT	V