



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

List of SWAYAM MOOCS Courses as Electives for AY 2025-26

(July – December 2025 Semester)

R22 B.Tech. III Year I Semester

Name of the Dept.	MOOCS Course (s) (Professional Elective – I)	MOOCS Course (s) (Professional Elective – II)
Civil Engg.	--	--
EEE	Fiber Optic Communication Technology (IITM 12W)	--
Mech. Engg.	--	--
ECE	1. Computer Architecture and Organization (IITKGP 12W) 2. 5G Wireless Standard Design (IITK 12W) 3. Electrical Measurement and Electronic Instruments (IITKGP 12W)	--
EIE	1. Electrical Measurement and Electronic Instruments (IITKGP 12W) 2. Real-Time Systems (IITKGP 12W) 3. Introduction to Internet of Things (IITKGP 12W)	--
AI & DS	1. Multi-Core Computer Architecture (IITG 12W) 2. Digital Image Processing (IITKGP 12W)	--
CE (Software Engg.)	1. Artificial Intelligence: Search Methods for Problem Solving (IITM 12W) 2. Digital Image Processing (IITKGP 12W) 3. Computer Vision (IITKGP 12W)	Introduction to Internet of Things (IITKGP 12W)

CSBS	Social Networks (IIT Ropar 12W)	Cloud Computing (IITKGP 12W)
CSD	1. Design & Implementation of Human-Computer Interfaces (IITG 12W) 2. Digital Image Processing (IITKGP 12W)	1. Real-Time Systems (IITKGP 12W) 2. Introduction to Large Language Models (LLMs) (IITD 12W)
CSE	1. Multi-Core Computer Architecture (IITG 12W) 2. Digital Image Processing (IITKGP 12W)	1. Computer Vision (IITKGP 12W) 2. Real-Time Systems (IITKGP 12W)
CSE (AI&ML)/ AI&ML	1. Digital Image Processing (IITKGP 12W) 2. Second Level Algorithms (IITKGP 12W)	--
CSE (Cyber Security)	1. Artificial Intelligence: Search Methods for Problem Solving (IITM 12W) 2. Cloud Computing (IITKGP 12W)	1. Advanced Distributed Systems (IITD 12W) 2. Introduction to Industry 4.0 and Industrial Internet of Things (IITKGP 12W)
CSE(DS)	1. Artificial Intelligence: Search Methods for Problem Solving (IITM 12W) 2. Digital Image Processing (IITKGP 12W)	1. Software Project Management (IITKGP 12W) 2. Computer Vision (IITKGP 12W)
CSE (IOT)	1. Introduction to Industry 4.0 and Industrial Internet of Things (IITKGP 12W) 2. Introduction to Algorithms and Analysis (IITKGP 12W)	--
CSE (Networks)	1. Multi-Core Computer Architecture (IITG 12W) 2. Advanced Distributed Systems (IITD 12W)	1. Digital Image Processing (IITKGP 12W) 2. Introduction to Internet of Things (IITKGP 12W)
CSIT	1. Multi-Core Computer Architecture (IITG 12W) 2. Digital Image Processing (IITKGP 12W)	1. Computer Vision (IITKGP 12W) 2. Advanced Distributed Systems (IITD 12W)
IT	1. Multi-Core Computer Architecture (IITG 12W) 2. Digital Image Processing (IITKGP 12W)	1. Computer Vision (IITKGP 12W) 2. Advanced Distributed Systems (IITD 12W)

R22 B.Tech. IV Year I Semester

Name of the Dept.	MOOCS Course(s) (Professional Elective – II)	MOOCS Course(s) (Professional Elective – III)	MOOCS Course(s) (Professional Elective – IV)	MOOCS Course(s) (Professional Elective – V)
Civil Engg.	1. Introduction to Engineering Seismology (IISc 12W) 2. Finite Element Method and Computational Structural Dynamics (IITR 12W) 3. Advanced Structural Analysis (IIT Bhubaneswar 12W)	Ground Improvement (IITKGP 12W)	Sustainable Groundwater Management (IITM 12W)	--
EEE	--	1. Probability Foundations for Electrical Engineers (IITM 12W) 2. Fundamentals of Nano and Quantum Photonics (IIT Hyd 12W)	1. Linear Systems Theory (IITM 12W) 2. Economic Operations and Control of Power Systems (IITK 12W)	--
Mech. Engg.	1. Fundamentals of Additive Manufacturing Technologies (IITG 12W) 2. Automation in Manufacturing (IITG 12W) 3. Fundamentals of Artificial Intelligence (IITG 12W)	Solar Energy Engineering and Technology (IITG 12W)	Computational Fluid Dynamics (IITKGP 12W)	--
ECE	--	1. Principles and Techniques of Modern Radar Systems (IITKGP 12W) 2. Analog VLSI Design (IITK 12W) 3. Machine Learning and Deep Learning -	1. Cyber Security and Privacy (IITM 12W) 2. Biomedical Instrumentation (IITM 12W)	--

		Fundamentals and Applications (IITG 12W)		
EIE	--	1. Biomedical Instrumentation (IITM 12W) 2. Fabrication Techniques for MEMs-based Sensors: Clinical Perspective (IISc 12W)	1. Computer Vision (IITKGP 12W) 2. 5G Wireless Standard Design (IITK 12W) 3. Machine Learning and Deep Learning - Fundamentals and Applications (IITG 12W)	--
AI & DS	--	--	Cloud Computing (IITKGP 12W)	--
CE (Software Engg.)	--	--	Software Project Management (IITKGP 12W)	1. Cloud Computing (IITKGP 12W) 2. Software Testing (IIIT Bangalore 12W)
CSBS	--	--	Social Network Analysis (IITD 12W)	1. Artificial Intelligence: Search Methods for Problem Solving (IITM 12W) 2. Deep Learning for Computer Vision (IIT Hyd 12W)
CSD	--	--	1. Foundations of Virtual Reality (IIT Madras & University of Oulu 12W) 2. Cloud Computing (IITKGP 12W)	Software Project Management (IITKGP 12W)
CSE	--	--	1. Cyber Security and Privacy (IITM 12W)	1. Parameterized Algorithms (IIT Gandhinagar IMSc 12W)


			2. Cloud Computing (IITKGP 12W)	2. Software Project Management (IITKGP 12W)
CSE (AI&ML), AI & ML	--	--	1. Reinforcement Learning (IITM 12W) 2. Algorithmic Game Theory (IITKGP 12W)	--
CSE (Cyber Security)	--	--	1. Privacy and Security in Online Social Media (IIIT Hyd 12W) 2. Deep Learning (IIT Ropar 12W)	Cyber Security and Privacy (IITM 12W)
CSE (DS)	--	--	1. Introduction to Large Language Models (LLMs) (IITD 12W) 2. Introduction to Internet of Things (IITKGP 12W)	Cloud Computing (IITKGP 12W)
CSE (IOT)	--	--	1. Foundations of Virtual Reality (IIT Madras & University of Oulu 12W) 2. Introduction to Wireless and Cellular Communications (IITM 12W)	--
CSE (Networks)	--	--	Deep Learning (IIT Ropar 12W)	Software Project Management (IITKGP 12W)
CSIT	--	--	1. Design & Implementation of Human -Computer Interfaces (IITG 12W) 2. Artificial Intelligence: Search Methods for	1. Real-Time Systems (IITKGP 12W) 2. Deep Learning (IIT Ropar 12W)

			Problem Solving (IITM 12W)	3. Software Project Management (IITKGP 12W)
IT	--	--	1. Design & Implementation of Human -Computer Interfaces (IITG 12W) 2. Artificial Intelligence: Search Methods for Problem Solving (IITM 12W)	1. Real-Time Systems (IITKGP 12W) 2. Deep Learning (IIT Ropar 12W) 3. Software Project Management (IITKGP 12W)

Note: Principals are requested to instruct the students not to repeat courses/subjects with the same title. **All Courses are of 12 Weeks duration only.**

A student has to take the approval of the allocated mentor (by the HOD) before finalization of MOOCS Courses. The mentor has to thoroughly verify and ensure that

1. All the pre-requisites for the MOOCS courses are satisfied,
2. The titles of the subjects in the forthcoming semesters are not similar to the subjects studied under MOOCS in the current semesters.


DIRECTOR
Academic and Planning