

Expected Learning Outcomes (ELOs) of M.Eng. ECE Curriculum and ELOs Mapping

Expected Learning Outcomes of Master Program (Master of Engineering in Electrical and Computer Engineering)

Plan A1, A2, and B
Subjected Specific ELOs
1. Explain phenomena in Electrical and Computer Engineering by referring theories in Electrical and Computer Engineering
2. Analyze and find reasons to explain relationships between experimental results and theory in Electrical and Computer Engineering
3. Apply stem knowledge (science, technology, engineering and mathematics) for conducting researching and solving problems in Electrical and Computer Engineering
4. Build or adapt models for solving problems including conducting research toward building new knowledge in Electrical and Computer Engineering
5. Design and build electrical circuits, systems, or software using specific knowledge in Electrical and Computer Engineering that are applicable, follows safety principles in Electrical and Computer Engineering and relevant industry standards
Generic ELOs
6. Demonstrate self-reliance for defining and solving specific problems in Electrical and Computer Engineering
7. Demonstrate skills of interpersonal communication and presenting works in Electrical and Computer Engineering to publics
8. Read and comprehend contents in international academic books, documents and research articles in Electrical and Computer Engineering
9. Indicate and show good attitude and professional ethics in Electrical and Computer Engineering

ELOs Mapping

Course		Credit	Expected Learning Outcome (ELO)									
			ELO1 (S)	ELO2 (S)	ELO3 (S)	ELO4 (S)	ELO5 (S)	ELO6 (G)	ELO7 (G)	ELO8 (G)	ELO9 (G)	
090245001	Industrial Research Methodology	3(3-0-6)		●	●				●	●	●	●
090245005	Seminar in Electrical and Computer Engineering	3(3-0-6)							●	●		●
090245099	Industrial Internship	4	●						●	●	●	●
090245098	Master Thesis	12	●	●	●	●	●	●	●	●	●	●
090245097	Master Thesis	40	●	●	●	●	●	●	●	●	●	●
090245096	Master Project	6	●	●	●	●	●	●	●	●	●	●
Electives (A2, B)												
090245122	Mobile Radio Networks	3(3-0-6)	●		●					●	●	
090245124	Antenna Engineering	3(3-0-6)	●		●		●					



Course		Credit	Expected Learning Outcome (ELO)								
			ELO1 (S)	ELO2 (S)	ELO3 (S)	ELO4 (S)	ELO5 (S)	ELO6 (G)	ELO7 (G)	ELO8 (G)	ELO9 (G)
090245135	Electromagnetic Field Theory for Smart Sensing Applications	3(3-0-6)	●	●	●		●			●	
090245136	Microwave Components and Circuit Design	3(3-0-6)	●	●	●		●			●	
090245137	Communication Protocols	3(3-0-6)	●		●		●				
090245138	Broadband Wireless Communication Systems	3(3-0-6)	●	●	●				●		
090245139	Introduction to Radar Technology	3(3-0-6)	●	●	●		●			●	
090245204	Testing and Condition Diagnostic of High Voltage Equipment	3(3-0-6)		●		●		●		●	
090245223	Electrical Transients in Electrical Power Systems	3(3-0-6)		●		●		●		●	
090245224	Battery Storage Systems	3(3-0-6)		●		●		●		●	



Course		Credit	Expected Learning Outcome (ELO)									
			ELO1 (S)	ELO2 (S)	ELO3 (S)	ELO4 (S)	ELO5 (S)	ELO6 (G)	ELO7 (G)	ELO8 (G)	ELO9 (G)	
090245229	Asset Management of Electrical Power System	3(3-0-6)		●		●			●		●	
090245234	Electric Drive System	3(3-0-6)		●		●			●		●	
090245332	Machine Vision	3(3-0-6)	●						●			
090245334	Digital Image Processing	3(3-0-6)	●	●	●	●			●		●	
090245336	Embedded Software	3(3-0-6)	●						●			
090245337	Machine Learning	3(3-0-6)	●		●				●		●	
090245339	Advanced Computer Architecture	3(3-0-6)	●	●	●			●				
090245340	Principles of Data Mining	3(3-0-6)	●	●	●			●	●		●	
090245349	Applications of Digital Image Processing	3(3-0-6)	●	●	●	●			●		●	



Course		Credit	Expected Learning Outcome (ELO)								
			ELO1 (S)	ELO2 (S)	ELO3 (S)	ELO4 (S)	ELO5 (S)	ELO6 (G)	ELO7 (G)	ELO8 (G)	ELO9 (G)
090245350	Efficient Algorithms	3(3-0-6)	●	●			●				
090245351	Hardware and System Software Architectures	3(3-0-6)		●	●		●	●	●		
090245352	Advanced Software Engineering	3(3-0-6)	●				●	●	●		●
090245424	Internet of Things	3(3-0-6)	●				●	●	●		●
090245429	Advanced Wireless Communications and Metering Infrastructure	3(3-0-6)	●	●	●				●		
090245430	Data Management and Analysis	3(3-0-6)	●	●			●	●	●		