

G.S.Mandal's

**Maharashtra Institute of Technology, Aurangabad
Electronics and Computer Engineering Department**

Second Year (2024-2025) NEP

Course Outcome

Course Name: ECE 201 Engineering Mathematics III: Year of Study: 2024-2025

ECE201.1	Recall Probabilities, Properties & Theorem of Laplace & inverse Laplace transform and Z -Transform & its inverse Z-Transform. (BL-1)
ECE201.2	Express the functions into Fourier integral. (BL-3)
ECE201.3	Solve linear differential equation and difference equation by using short methods, Variation of parameter, Laplace transform and its inverse, Z-transform and its inverse. (BL-3)
ECE201.4	Utilize the concept of Probability distribution and differential equation in engineering problems. (BL-3)

CO PO and PSO Mapping

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2	PSO3
ECE201.1	2	2											1		
ECE201.2	2	2											1		
ECE201.3	2	2											1		
ECE201.4	2	2											1		
ECE201	2	2											1		

1: Slight (Low)

2: Moderate (Medium)

3: Substantial (High)

Course Coordinator

Module coordinator

Program coordinato

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Course Outcome

Course Name: ECE202 Electronics Design Technology Year of Study: 2024-2025

ECE202.1	Design small signal amplifier.
ECE202.2	Design IC based power amplifier and special purpose amplifier.
ECE202.3	Design of DC power supply.
ECE202.4	Describe different types of sensors and design PCB for electronic circuit.

CO PO and PSO Mapping

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2	PSO3
ECE202.1			2										1		
ECE202.2			2										1		
ECE202.3			2	1									1		
ECE202.4	2			1									1		

Course Name: ECE232 Lab-I: Electronic Design Technology Year of Study: 2024-2025

ECE232.1	Design motor and relay drivers.
ECE232.2	Simulate electronics circuits using Proteus/Eagle.

CO PO and PSO Mapping

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2	PSO3
ECE232.1			2		1					1			1		
ECE232.2				1						1				1	

1: Slight (Low)

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Course Outcome

Course Name: ECE203 Data Structure & Algorithm Year of Study: 2024-2025

ECE203.1	Sensibly select appropriate Data Structure as well as Algorithm and justify their choice. (Knowledge)
ECE203.2	Explain data arrays, stack and queue, Tree and Graph. (Understand)
ECE203.3	Apply a sorting algorithm and Construct a Binary search tree. (Apply)
ECE203.4	Correlate linked organization with sequential organization data structure, hashing with B tree and b+tree .(Analyze)

CO PO and PSO Mapping

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2	PSO3
ECE203.1		2													
ECE203.2	1	1													
ECE203.3		1	1												
ECE203.4	1	2													

Course Name: ECE223: Data Structure & Algorithm Lab Year of Study: 2024-2025

ECE233.1	Develop a program using array, union, stack and queue, tree and linked lists.
ECE233.2	Implement sorting techniques, linear search and binary search using a program.

CO PO and PSO Mapping

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2	PSO3
ECE233.1			2												
ECE233.2					1										

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Second Year (2024-2025)NEP

Course Outcome

Course Name: MDM201: Multidisciplinary Minor Course -1 Power Electronics Year of Study: 2024-2025

MDM201.1	Be conversant with the operating principle and characteristics of semiconductor power electronic switches
MDM201.2	Imbibe concepts of various types of power converters
MDM201.3	Mastery of ac phase control methods to control output power
MDM201.4	Proficiency to select different switching methods for rectifiers and voltage controllers.

CO PO and PSO Mapping

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2	PSO3
MDM201.1	2					1							1	1	
MDM201.2	2		1										1	1	
MDM201.3		2											1	1	
MDM201.4	3													1	

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Course Outcome

Course Name: HSM201 Innovation & Entrepreneurship Year of Study: 2024-2025

HSM201.1	Explain the basic concepts of entrepreneurship and identify different types of entrepreneurs.
HSM201.2	Compare different types of innovation and how they affect entrepreneurship.
HSM201.3	Create a plan for starting a business, including innovative solutions and understanding local challenges.
HSM201.4	Access different models of social entrepreneurship and suggest ways to improve their impact.

CO PO and PSO Mapping

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2	PSO3
HSM201.1	1	1											1		
HSM201.2		2											1		
HSM201.3		1			2										
HSM201.4		1		1										1	

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Course Outcome

Course Name: VEC202: Environment Studies Year of Study: 2024-2025

VEC272.1	Memorize different natural resources and need to conserve them.
VEC272.2	Illustrate growing food and energy needs by maintaining land resources.
VEC272.3	Interpret different types of ecosystems and their functions.
VEC272.4	Relate Biogeographical classification to conservation of biodiversity in India.
VEC272.5	Identify Cause, effects and control measures of Environmental Pollution.
VEC272.6	Evaluate the role of public awareness in sustainable development.

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2	PSO3
CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2	PSO3
VEC272.1						1						1			
VEC272.2	1				2	1							1		
VEC272.3			1			1	2								1
VEC272.4	1	2			1	1							1	2	
VEC272.5					2	1									

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Course Outcome

Course Name: ELC221: Community Engagement Project Year of Study: 2024-2025

ELC221.1	Identify and analyze socio-economic issues in the community.
ELC221.2	Apply engineering principles to propose and implement solutions to community problems.
ELC221.3	Work effectively in teams to achieve project goals.
ELC221.4	Communicate project findings and solutions effectively in written and oral forms.
ELC221.5	Reflect on the social impact of their projects and their role as engineers in society.

CO PO and PSO Mapping

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2	PSO3
ELC221.1						3							2		
ELC221.2						3							2		
ELC221.3									3				2		
ELC221.4										3			2		
ELC221.5						3							2		

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Course Outcome

Course Name: Double Minor -ECE901 Statistical Foundation in Data Science Year of Study: 2024-2025

ECE202.1	Discuss the key terminology, concepts tools and techniques used for statistical analysis & explain the terminology of probability.
ECE202.2	Discuss basic ideas of linear Regression and principal component analysis.
ECE202.3	Describe various classification methods for data analysis.
ECE202.4	Apply various graph techniques for data analysis.

CO PO and PSO Mapping

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2	PSO3
ECE202.1	2													1	
ECE202.2		1												1	
ECE202.3		1												1	
ECE202.4		1												1	

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Course Outcome

Course Name: Honor Course-1 ECE801 Embedded Internet of Things Course code:

H-ECE905.1	Summarize the concept, classification, characteristics, architecture of Embedded Systems and concept of operating system.
H-ECE905.2	Develop and interface IoT Systems Using Development Boards
H-ECE905.3	Identify needs and challenges in industry 4.0
H-ECE905.4	Design and implement interconnection and integration of sensors to embedded board.

CO PO and PSO Mapping

CO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2	PSO3
H-ECE905.1		2													2
H-ECE905.2		2													2
H-ECE905.3		2													2
H-ECE905.4		2													2

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