G.S.Mandal's

Maharashtra Institute of Technology, Aurangabad
Electronics and Computer Engineering Department

Final Year (2024-2025)

Course Outcome

Course Name: ECE431: Professional Elective-II (Big Data Computing) Year of Study: 2024-2025

ECE431.1	Identify various big data processing frameworks and tools such as HDFS, YARN, and MapReduce.
ECE431.2	Explain the challenges and applications of big data in different industries.
ECE431.3	Describe enabling technologies and the big data stack, including platforms like Spark, Kafka, and MongoDB.
ECE431.4	Compare various big data processing frameworks and tools such as HDFS, YARN, and MapReduce.

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
ECE431.1	2	1												1	
ECE431.2	1													1	
ECE431.3	1		1											1	
ECE431.4		1	1	2											1
ECE431	1.3	1	1	2										1	1

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

Course Coordinator Module coordinator Program coordinator

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Maharashtra Institute of Technology, Aurangabad
Electronics and Computer Engineering Department

Final Year (2024-2025)

Course Outcome

Course Name: ECE434: Professional Elective-III (Information Security) Year of Study: 2024-2025

ECE434.1	Describe information security aspects.
ECE434.2	Elaborate various ciphers and their features.
ECE434.3	Illustrate hash models.
ECE434.4	Interpret web and network security principles.

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
ECE434.1	2		1												1
ECE434.2	2		1												1
ECE434.3	2		1												1
ECE434.4	2		1												1
ECE434	2		1												1

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

Course Coordinator Module coordinator Program coordinator

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Maharashtra Institute of Technology, Aurangabad
Electronics and Computer Engineering Department

Final Year (2024-2025)

Course Outcome

Course Name: ECE439 Professional Elective-IV (Artificial Intelligence) Year of Study: 2024-2025

ECE439.1	Explain the foundational concepts and history of AI, including intelligent agents and their environments
ECE439.2	Apply search strategies like Bread-first and heuristic-based searches to solve AI problems effectively.
ECE439.3	Analyze knowledge representation techniques and reasoning methods, including predicate logic and probabilistic inference.
ECE439.4	Evaluate expert systems and and generative AI tools, understanding their structure, working and societal 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
ECE439.1	2														
ECE439.2		2													
ECE439.3		2													
ECE439.4	2														
	2	2													

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

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Maharashtra Institute of Technology, Aurangabad
Electronics and Computer Engineering Department

Final Year (2024-2025)

Course Outcome

Course Name: ECE441: **Open Elective-IV (Augmented Reality/Virtual Reality) Year of Study: 2024-2025**

ECE441.1	Describe the concepts related to Virtual Reality.
ECE441.2	Identify the parameters of computer vision related to virtual reality.
ECE441.3	Explain the basic architecture of any real-world virtual reality application.
ECE441.4	Classify the various sectors in which virtual reality is implemented or can be implemented.
ECE441.5	Demonstrate the concepts and know the devices related to augmented reality used to implement virtual reality applications.

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
ECE441.1	3	1											3		
ECE441.2		3				2							3		
ECE441.3		3	1			1							3	2	
ECE441.4		1		3		3								3	1
ECE441.5		3	2		1									3	

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

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Maharashtra Institute of Technology, Aurangabad
Electronics and Computer Engineering Department

Final Year (2024-2025)

Course Outcome

Course Name: ECE442 Open Elective-V Electronic Waste Management Year of Study: 2024-2025

ECE442.1	State key terms of E-waste
ECE442.2	Apply various concept learned under e waste management hierarchy
ECE442.3	Distinguished the role of various national and internal act and laws applicable for e-waste management and handling
ECE442 .4	Analyze the e waste management measures proposed under national and global legislations.

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
ECE442.1						2	2								-
ECE442.2						2	2								-
ECE442.3						2	2								-
ECE442.4						2	2								-
ECE442						2	2								-

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

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Electronics and Computer Engineering Department

Final Year (2024-2025)

Course Name: ECE421 Lab-I: PC (Modern Communication Techniques) **Year of Study: 2024-2025**

ECE421.1	Analyze techniques of modulation and multiplexing in telecommunications.
ECE421.2	Demonstrate practical knowledge of fiber optic communication systems and mobile phone circuitry.

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
1. ECE421.1	1	1	2									1	1		
2. ECE421.2	1	1	2									1			2

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

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Maharashtra Institute of Technology, Aurangabad
Electronics and Computer Engineering Department

Final Year (2024-2025)

Course Name: PC ECE422: Lab-II: Embedded System Design Year of Study: 2024-2025

ECE422.1	To design system using basic peripherals such as LCD, led,7 segment, motors
ECE422.2	To design system using advanced peripherals like GLCD, heart sensor, TFT

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
ECE422.1					2									1	
ECE422.2					2									1	

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

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Electronics and Computer Engineering Department

Final Year (2024-2025)

Course Outcome

Course Name: ECE423 (Major Project-II) **Year of Study: 2024-2025 Part-I**

After the completion of the course, the student will be able to

ECE424.1	Integrate and or Customize techniques and or tools related to project development.
ECE424.2	Demonstrate the effective use of oral, written and visual communication skills.
ECE424.3	Implement project planning in their project completion.
ECE424.4	Practice skills such as teamwork, safe and ethical practices and lifelong learning.

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
ECE424.1					3										3
ECE424.2										3				1	
ECE424.3											3			1	
ECE424.4								2	2			2			1
Avg					3			2	2	3	3	2		1	2

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

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Maharashtra Institute of Technology, Aurangabad
Electronics and Computer Engineering Department

Final Year (2024-2025)

Course Outcome

Course: Minor Course-1 ECE904: Artificial Intelligence and Data Analytics Year of Study: 2024-25

ECE904.1	Describe artificial Intelligence, its foundation and principles.
ECE904.2	Explain types of AI Search methods
ECE904.3	Describe Logical reasoning ,learning Methods
ECE904.4	Identify Appropriate machine learning models for problem solving

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
ECE904.1	2		2												
ECE904.2	2		2												
ECE904.3	2		2												
ECE904.4	2		2												

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

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Maharashtra Institute of Technology, Aurangabad
Electronics and Computer Engineering Department

Final Year (2024-2025)

Course Outcome

Course Name: ECED904: Privacy & Security in IoT (Honors) Year of Study: 2024-2025

ECED904.1	Describe security requirements in the Internet of Things
ECED904.2	Identify vulnerabilities, attacks, and threats in the Internet of Things
ECED904.3	Illustrate different cryptographic techniques.
ECED904.4	Interpret Cloud security architecture.

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
ECED904.1	2														
ECED904.2	2														
ECED904.3		2											2		
ECED904.4	2														
ECED904	2	2											2		

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

Course Coordinator Module coordinator Program coordinator