KIET Group of Institutions, Ghaziabad

Department of Computer Applications (NBA Accredited)

(An ISO – 9001: 2015 Certified & 'A' Grade accredited Institution by NAAC)

Course Outcomes and Mapping of CO-PO, AY 2024-25

Subject Code: KCA301			
Subject Name: Artificial Intelligence			
Tagging COs with BLs & KCs			
CO	CO Statement	Bloom Level	Knowledge Category
CO-1	Describe knowledge of the building blocks of AI as presented in terms of intelligent agents.	2	C
CO-2	Sketch the problem as state space graph with various searching techniques to solve a specific problem.	3	P
CO-3	Demonstrate knowledge and its representation in real world with logical reasoning steps.	3	P
CO-4	Construct AI algorithm for real world problems with different machine learning techniques.	3	P
CO-5	Illustrate knowledge about state-of-the-art algorithms used in pattern recognition area.	3	P

Subject Code: KCA 301													
Subject Name: Artificial Intelligence													
CO-PO/APO Matrix													
CO	PO1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	APO 1	APO2
CO1	3	-	-	-	-	-	-	-	-	-	-	-	-	-
CO2	3	3	2	3	-	-	-	-	-	-	-	-	2	-
CO3	3	3	2	2	2	-	-	-	-	-	-	-	-	-
CO4	3	3	2	2	2	-	-	-	-	-	-	-	2	-
CO5	3	3	3	2	2	-	-	-	-	-	-	-	1	-
PO Target	3	3	2.25	2.25	2	-	-	-	-	-	-	-	1.67	-

Dr. Akash Rajak
Associate Head, DOC

Dr. Arun Kr. Tripathi
Head, CA

KIET Group of Institutions, Ghaziabad

Department of Computer Applications (NBA Accredited)

(An ISO – 9001: 2015 Certified & 'A' Grade accredited Institution by NAAC)

Course Outcomes and Mapping of CO-PO, AY 2024-25

Subject Code: KCA302			
Subject Name: Software Engineering			
Tagging of COs with BLs and KCs			
CO	Statement	BL	KC
		(1,2,3,4,5,6)	(F,C,P,M)
CO1	Describe Software Engineering Concepts and SDLC models.	2	C
CO2	Prepare Software Requirement Specification (SRS) with modelling tools and Quality standards.	3	C
CO3	Analyse design concepts to software development with software metrics methods.	4	P
CO4	Explore software testing techniques and its implementation.	4	P
CO5	Explain Software project management activities with its parameters such as cost, efforts, schedule and duration.	3	C

Subject Code: KCA302													
Subject Name: Software Engineering													
CO-PO/APO Matrix													
CO	PO1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	APO 1	APO2
CO1	2	2	2	-	-	-	1	-	-	-	1	-	-	1
CO2	2	2	2	-	-	1	2	-	2	-	2	-	-	2
CO3	3	3	1	-	-	-	2	-	1	-	2	-	-	2
CO4	-	-	1	-	-	-	2	-	-	-	1	-	-	1
CO5	-	1	1	1	2	-	3	2	-	-	-	-	-	1
PO Target	2.3	2	1.4	1	2	1	2	2	1.5	-	1.5	-	-	1.4

Dr. Akash Rajak
Associate Head, DOC

Dr. Arun Kr. Tripathi
Head, CA

KIET Group of Institutions, Ghaziabad

Department of Computer Applications (NBA Accredited)

(An ISO – 9001: 2015 Certified & 'A' Grade accredited Institution by NAAC)

Course Outcomes and Mapping of CO-PO, AY 2024-25

Subject Code: KCA303			
Subject Name: Computer Network			
Tagging of COs with BLs and KCs			
CO	Statement	BL	KC
		(1,2,3,4,5,6)	(F,C,P,M)
CO1	Describe communication models TCP/IP, ISO-OSI model, network topologies along with communicating devices and connecting media.	2	C
CO2	Apply knowledge of error detection, correction and learn concepts of flow control along with error control.	3	P
CO3	Apply IP addressing techniques, subnetting along with network routing protocols and algorithms.	3	P
CO4	Explore transport layer protocols and their layout along with congestion control to maintain Quality of Service.	3	P
CO5	Understand applications-layer protocols and elementary standards of cryptography & network security.	2	C

Subject Code: KCA303														
Subject Name: Computer Network														
CO-PO/APO Matrix														
CO	PO1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	APO 1	APO2
CO1	3	-	-	-	-	-	2	-	-	-	-	-	-	-
CO2	3	2	-	-	-	-	1	-	-	-	-	-	-	-
CO3	3	2	-	-	-	-	2	-	-	-	-	-	-	-
CO4	2	1	-	-	-	1	1	-	-	-	-	-	-	-
CO5	2	1	-	-	-	1	1	-	-	-	-	-	-	-
PO Target	2.6	1.5	-	-	-	1	1.4	-	-	-	-	-	-	-

Dr. Akash Rajak
Associate Head, DOC

Dr. Arun Kr. Tripathi
Head, CA

KIET Group of Institutions, Ghaziabad

Department of Computer Applications (NBA Accredited)

(An ISO – 9001: 2015 Certified & 'A' Grade accredited Institution by NAAC)

Course Outcomes and Mapping of CO-PO, AY 2024-25

Subject Code: KCA351			
Subject Name: Artificial Intelligence Lab			
Tagging COs with BLs & KCs			
CO	CO Statement	BL	KC
		(1,2,3,4,5,6)	(F,C,P,M)
CO1	Develop AI Game problems using Python such as Water-Jug and Missionaries-Cannibal	3	P
CO2	Analyse AI searching algorithms such as BFS & DFS using python	4	P
CO3	Implement Knowledge representation techniques using Pytholog library	3	P
CO4	Demonstrate machine learning algorithms of Classification & Clustering techniques	3	P

Subject Code: KCA351													
Subject Name: Artificial Intelligence Lab													
CO-PO/APO Matrix													
CO	PO1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	APO 1	APO2
CO1	1	2	–	–	2	–	–	–	–	–	1	–	2	–
CO2	1	2	–	–	2	–	–	–	–	–	1	–	2	–
CO3	1	2	–	–	2	–	–	–	–	–	1	–	2	–
CO4	1	2	1	1	2	–	–	–	–	–	2	–	2	–
PO Target	1	2	1	1	2	–	–	–	–	–	1.25	–	2	–

Dr. Akash Rajak
Associate Head, DOC

Dr. Arun Kr. Tripathi
Head, CA

KIET Group of Institutions, Ghaziabad

Department of Computer Applications (NBA Accredited)

(An ISO – 9001: 2015 Certified & 'A' Grade accredited Institution by NAAC)

Course Outcomes and Mapping of CO-PO, AY 2024-25

Subject Code: KCA352			
Subject Name: SE LAB			
Tagging of COs with BLs and KCs			
CO	Statement	BL	KC
		(1,2,3,4,5,6)	(F,C,P,M)
CO1	Prepare a SRS document in line with the IEEE recommended standards.	3	M
CO2	Sketch the graphic representation of various UML diagrams using designing tools.	3	M
CO3	Prepare test cases for given problem.	4	M

Subject Code: KCA352														
Subject Name: SE LAB														
CO-PO/APO Matrix														
CO	PO1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	APO 1	APO2
CO1	2	3	–	–	–	–	–	–	3	–	2	–	–	2
CO2	3	3	2	1	2	–	–	–	3	–	2	–	–	2
CO3	2	1	2		2	–	3	–	3	–	2	3	–	3
PO Target	2.33	2.33	2	1	2	–	3	–	3	–	2	3	–	2.33

Dr. Akash Rajak
Associate Head, DOC

Dr. Arun Kr. Tripathi
Head, CA

KIET Group of Institutions, Ghaziabad

Department of Computer Applications (NBA Accredited)

(An ISO – 9001: 2015 Certified & 'A' Grade accredited Institution by NAAC)

Course Outcomes and Mapping of CO-PO, AY 2024-25

Subject Code: KCA014			
Subject Name: Cloud Computing			
Tagging of COs with BLs and KCs			
CO	Statement	BL	KC
		(1,2,3,4,5,6)	(F,C,P,M)
CO1	Illustrate the concepts of Cloud Computing, key technologies, strengths, and limitations of cloud computing.	3	P
CO2	Apply cloud computing driven commercial systems such as AWS and other business cloud applications in real life.	3	P
CO3	Analyze the knowledge and applications of cloud computing in business, education and in personal.	4	P
CO4	Connect with the concept of virtualization in cloud computing.	4	P
CO5	Discuss the security and privacy issues in cloud computing	2	C

Subject Code: KCA014													
Subject Name: Cloud Computing													
CO-PO/APO Matrix													
CO	PO1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	APO 1	APO2
CO1	–	–	1	–	1	–	1	–	–	–	–	1	–	1
CO2	–	–	1	–	1	–	2	–	–	–	–	2	–	2
CO3	–	–	2	–	2	–	2	–	–	–	–	2	–	2
CO4	–	–	1	–	1	–	2	–	–	–	–	1	–	1
CO5	–	–	2	–	3	–	2	–	–	–	–	3	–	3
PO Target	–	–	1.4	–	1.6	–	1.8	–	–	–	–	1.8	–	1.8

Dr. Akash Rajak
Associate Head, DOC

Dr. Arun Kr. Tripathi
Head, CA

KIET Group of Institutions, Ghaziabad

Department of Computer Applications (NBA Accredited)

(An ISO – 9001: 2015 Certified & 'A' Grade accredited Institution by NAAC)

Course Outcomes and Mapping of CO-PO, AY 2024-25

Subject Code: KCA021			
Subject Name: Web Technology			
Tagging of COs with BLs and KCs			
CO	Statement	BL	KC
		(1,2,3,4,5,6)	(F,C,P,M)
CO1	Construct static web pages using HTML and CSS.	Apply	C,P
CO2	Develop interactive web page using JavaScript.	Apply	C,P
CO3	Develop dynamic web applications using servlet and JSP.	Apply	C,P
CO4	Illustrate Spring-based Java applications using Java configuration, XML configuration, annotation-based configuration, beans and their scopes, and properties.	Analyze	C,P
CO5	Test web services using Spring Boot and REST API	Evaluate	C,P

Subject Code: KCA021														
Subject Name: Web Technology														
CO-PO/APO Matrix														
CO	PO1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	APO 1	APO2
CO1	3	–	2	3	3	1	2	2	1	2	3	2	–	3
CO2	3	2	3	3	3	–	3	1	1	1	3	2	–	3
CO3	3	2	3	3	3	–	3	1	1	1	3	2	–	3
CO4	3	2	3	3	3	–	3	1	1	1	3	2	–	3
CO5	2	–	1	–	–	2	1	–	2	2	1	–	–	1
PO Target	2.8	2	2.4	3	3	1.5	2.4	1.25	1.2	1.4	2.6	2	–	2.6

Dr. Akash Rajak
Associate Head, DOC

Dr. Arun Kr. Tripathi
Head, CA

KIET Group of Institutions, Ghaziabad

Department of Computer Applications (NBA Accredited)

(An ISO – 9001: 2015 Certified & 'A' Grade accredited Institution by NAAC)

Course Outcomes and Mapping of CO-PO, AY 2024-25

Subject Code: KCA 353			
Subject Name: Mini Project			
Tagging COs with BLs & KCs			
CO	Statement of Course Outcome	BL	KC
		(1,2,3,4,5,6)	(F,C,P,M)
CO1	Demonstrate the software project using life cycle models.	3	P
CO2	Plan the SRS document as per project requirements.	4	P
CO3	Apply suitable design technique for designing software	3	P
CO4	Analyse the project by using a programming language.	4	P
CO5	Design report and able to present their work	3	P

Subject Code: KCA 353													
Subject Name: Mini Project													
CO-PO/APO Matrix													
CO	PO1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	APO 1	APO2
CO1	1	2	2	–	–	–	3	–	1	–	–	3	–	3
CO2	1	2	1	–	–	–	3	–	3	–	–	3	–	3
CO3	2	2	2	–	–	–	3	–	2	–	–	3	–	3
CO4	3	2	2	–	–	–	3	–	2	–	–	3	–	3
CO5	1	1	2	–	–	–	3	–	3	–	–	3	–	3
PO Target	1.6	1.8	1.8	–	–	–	3	–	2.2	–	–	3	–	3

Dr. Akash Rajak
Associate Head, DOC

Dr. Arun Kr. Tripathi
Head, CA

KIET Group of Institutions, Ghaziabad

Department of Computer Applications (NBA Accredited)

(An ISO – 9001: 2015 Certified & 'A' Grade accredited Institution by NAAC)

Course Outcomes and Mapping of CO-PO, AY 2024-25

Subject Code: KCA-054			
Subject Name: Machine Learning			
Tagging of COs with BLs and KCs			
CO	Statement	BL (1,2,3,4,5,6)	KC (F,C,P,M)
CO1	Understand the machine learning along with their real time application.	2	C
CO2	Understand the various types of learning algorithms along with their application in real time problem solving.	2	C
CO3	Sketch the problem with handcraft features and understand the decision tree learning and instance-based learning technique.	3	P
CO4	Illustrate knowledge about artificial neural networks and deep learning.	3	P
CO5	Demonstrate the knowledge of reinforcement learning and its application.	3	P

Subject Code: KCA054													
Subject Name: Machine Learning													
CO-PO/APO Matrix													
CO	PO1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	APO 1	APO2
CO1	1	-	-	-	-	-	-	-	-	2	-	-	-	-
CO2	2	1	1	1	-	-	1	–	-	1	1	2	2	-
CO3	2	2	2	1	-	-	2	1	-	-	2	-	2	-
CO4	2	2	1	2	2	-	1	2	-	2	1	1	-	-
CO5	1	1	1	2	2	-	1	2	-	1	-	-	2	1
PO Target	1.6	1.5	1.2	1.5	2.0	-	1.2	1.6	-	1.5	1.3	1.5	2.0	1.0

Dr. Akash Rajak
Associate Head, DOC

Dr. Arun Kr. Tripathi
Head, CA

KIET Group of Institutions, Ghaziabad

Department of Computer Applications (NBA Accredited)

(An ISO – 9001: 2015 Certified & 'A' Grade accredited Institution by NAAC)

Course Outcomes and Mapping of CO-PO, AY 2024-25

Subject Code: KCA051			
Subject Name: Mobile Computing			
Tagging of COs with BLs and KCs			
CO	Statement	BL (1,2,3,4,5,6)	KC (F,C,P,M)
CO 1	Understand the fundamentals of mobile computing.	2	P
CO 2	Explain wireless networking protocols, applications and environment.	2	P
CO 3	Elaborate data management issues in mobile computing.	2	P
CO 4	Review security and Transaction issues in mobile computing environment.	2	P
CO 5	Examine MANET routing protocols.	4	P

Subject Code: KCA051														
Subject Name: Mobile Computing														
CO-PO/APO Matrix														
CO	PO1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	APO 1	APO2
CO1	3	-	-	-	-	-	2	-	-	-	-	-	-	-
CO2	3	2	-	-	-	-	1	-	-	-	-	-	-	-
CO3	3	2	-	-	-	-	2	-	-	-	-	-	-	-
CO4	2	1	-	-	-	1	1	-	-	-	-	-	-	-
CO5	2	1	-	-	-	1	1	-	-	-	-	-	-	-
PO Target	2.6	1.5	-	-	-	1	1.4	-	-	-	-	-	-	-

Dr. Akash Rajak
Associate Head, DOC

Dr. Arun Kr. Tripathi
Head, CA

KIET Group of Institutions, Ghaziabad

Department of Computer Applications (NBA Accredited)

(An ISO – 9001: 2015 Certified & 'A' Grade accredited Institution by NAAC)

Course Outcomes and Mapping of CO-PO, AY 2024-25

Subject Code: KCA031			
Subject Name: Privacy and Security in Online Social Media			
Tagging of COs with BLs and KCs			
CO	Statement	BL (1,2,3,4,5,6)	KC (F,C,P,M)
CO1	Understand working of online social networks.	2	C
CO2	Describe trust management in online social media.	2	C
CO3	Compare counter measures to control information sharing in Online social networks.	2	C
CO4	Explain knowledge of identity management in Online social networks.	2	C
CO5	Apply privacy and security issues of OSN such as Facebook, Instagram, twitter and LinkedIn.	3	C

Subject Code: KCA031													
Subject Name: Privacy and Security in Online Social Media													
CO-PO/APO Matrix													
CO	PO1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	APO 1	APO2
CO1	–	1	–	2		–	–	1	–	–	–	–	–	–
CO2	–	2	–	3	2	–	2	1	–	2	–	–	–	–
CO3	–	2	–	3	2	–	2	1	–	2	–	–	–	–
CO4	–	2	–	3	2	–	2	1	–	2	–	–	–	–
CO5	–	2	–		2	–	2	–	3	–	–	–	–	–
PO Target	–	1.8	–	2.75	2	–	2	1	3	2	–	–	–	–

Dr. Akash Rajak
Associate Head, DOC

Dr. Arun Kr. Tripathi
Head, CA

KIET Group of Institutions, Ghaziabad

Department of Computer Applications (NBA Accredited)

(An ISO – 9001: 2015 Certified & 'A' Grade accredited Institution by NAAC)

Course Outcomes and Mapping of CO-PO, AY 2024-25

Subject Code: KCA043			
Subject Name: Internet of Things			
Tagging of COs with BLs and KCs			
CO	Statement	BL (1,2,3,4,5,6)	KC (F,C,P,M)
CO1	Discuss the architecture and components of Internet of Things.	2	C
CO2	Discuss IoT enable Technologies, their challenges and paradigm.	2	C
CO3	Explore Transport layer protocols & communication models of IoT.	3	C
CO4	Analyse the pin diagram of Arduino and Raspberry Pi along with sensors and their interfaces.	4	P
CO5	Examine python programming modules and packages for communication among IoT Devices.	4	P

Subject Code: KCA043													
Subject Name: Internet of Things													
CO-PO/APO Matrix													
CO	PO1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	APO 1	APO2
CO1	2	–	–	3	–	–	2	–	–	–	–	–	–	–
CO2	2	3	2	3	–	2	2	–	–	2	–	–	–	–
CO3	3	–	–	1	–	–	1	–	–	–	–	–	–	–
CO4	3	1	1	–	3	–	3	–	–	1	1	2	–	3
CO5	3	3	1	3	3	–	3	–	–	1	1	2	–	3
PO Target	2.6	2.33	1.33	2.5	3	2	2.2	–	–	1.33	1	2	–	3

Dr. Akash Rajak
Associate Head, DOC

Dr. Arun Kr. Tripathi
Head, CA

KIET Group of Institutions, Ghaziabad

Department of Computer Applications (NBA Accredited)

(An ISO – 9001: 2015 Certified & 'A' Grade accredited Institution by NAAC)

Course Outcomes and Mapping of CO-PO, AY 2024-25

Subject Code: KCA451			
Subject Name: Project			
Tagging of COs with BLs and KCs			
CO	Statement	BL (1,2,3,4,5,6)	KC (F,C,P,M)
CO1	Apply emerging technology trends to identify their relevance and potential impact on the project domain.	3	C
CO2	Illustrate the concept of SDLC	3	C
CO3	Demonstrate effective use of written/verbal communication through Documentation and Report Writing as per University & Industry standards.	3	C
CO4	Create a project with consideration of customer requirements and the goals	6	P
CO5	Evaluate the project with proper testing techniques.	4	P

Subject Code: KCA451													
Subject Name: Project													
CO-PO/APO Matrix													
CO	PO1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	APO 1	APO2
CO1	–	–	–	2	3	3	1	–	–	–	–	1	1	1
CO2	–	–	–	3	1	3	2	–	–	3	–	1	3	3
CO3	–	–	–	2	1	3	–	3	3	3	–	1	2	1
CO4	–	–	–	1	–	3	3	–	–	–	–	1	–	–
CO5	–	–	–	–	–	3	–	–	–	–	–	3	–	–
PO Target	–	–	–	2	1.67	3	2	–	–	–	–	1.4	2	1.6

Dr. Akash Rajak
Associate Head, DOC

Dr. Arun Kr. Tripathi
Head, CA