



Pimpri Chinchwad Education Trust's
Pimpri Chinchwad College of Engineering & Research Ravet, Pune
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IQAC PCCOER



2025-26 CO Statements

Second Year CO Statements Semester -I

Course Name: Data Structures & Algorithms

Course Code: PCC-201-ITT

Subject Name	CO Number	CO Statement
DSA	PCC-201-ITT.1	To study data structures and their implementations and applications.
	PCC-201-ITT.2	To understand and apply appropriate data structures to implement stack and queue.
	PCC-201-ITT.3	Strategically select and apply appropriate data structures and algorithms for effectively solving problems that can be modeled using tree & graph
	PCC-201-ITT.4	To learn different file organizations.
	PCC-201-ITT.5	To learn and apply advanced algorithmic techniques such as Divide and Conquer, Greedy Method, and Dynamic Programming for problem solving

Course Name: Object Oriented Programming

Course Code: PCC-202-ITT

Subject Name	CO Number	CO Statement
OOP	PCC-202-ITT.1	Understand OOP concepts like classes, objects, inheritance, and polymorphism.
	PCC-202-ITT.2	Use methods, constructors, and memory management.
	PCC-202-ITT.3	Apply inheritance and polymorphism for code reuse.
	PCC-202-ITT.4	Handle exceptions and use generics with collections.
	PCC-202-ITT.5	Perform file handling and implement basic design patterns.

Course Name: Basics of Computer Network Course Code: PCC-203-ITT		
Subject Name	CO Number	CO Statement
Basics of Computer Network	PCC-203-ITT.1	Student will able to learn about the principles of data communication and network components.
	PCC-203-ITT.2	Student will able to learn about how computer networks are organized with the concept of layered approach
	PCC-203-ITT.3	Student will able to learn about how signals are used to transfer data between nodes.
	PCC-203-ITT.4	Student will able to learn about how packets on the Internet are delivered.
	PCC-203-ITT.5	Student will able to learn about how routing protocols work and applications of OSI/TCP-IP Model
Course Name: Data Structures Laboratory Course Code: PCC-204-ITT		
Subject Name	CO Number	CO Statement
Data Structures & Algorithms Lab	PCC-204-ITT.1	To study data structures and their implementations and applications.
	PCC-204-ITT.2	To understand and apply appropriate data structures to implement stack and queue.
	PCC-204-ITT.3	Strategically select and apply appropriate data structures and algorithms for effectively solving problems that can be modeled using tree & graph
	PCC-201-ITT.4	To learn different file organizations.
	PCC-201-ITT.5	To learn and apply advanced algorithmic techniques such as Divide and Conquer, Greedy Method, and Dynamic Programming for problem solving
Course Name: Object Oriented Programming Lab Course Code:PCC-205-ITT		
Subject Name	CO Number	CO Statement
OOPL	PCC-205-ITT.1	Apply fundamental constructs like control statements, for implementing an application
	PCC-205-ITT.2	Implement java programs using, class, objects, constructors in Java, arrays, managing I/O.
	PCC-205-ITT.3	Apply object-oriented features like Inheritance, Polymorphism, Dynamic binding for implementing an application.

	PCC-205-ITT.4	Apply concepts of exception handling, multi-threading for implementing an application
Course Name: Digital Marketing Course Code: OEL-220C		
Subject Name	CO Number	CO Statement
Digital Marketing	OEL-220C.1	Understand the basic Concepts of Digital marketing
	OEL-220C.2	Apply digital marketing tools for suitable applications
	OEL-220C.3	Examine the various social media and design Advertising campaigns
	OEL-220C.4	Learn search engine optimization (SEO) techniques and apply it for suitable application to increase page views.
	OEL-220C.5	Analyse social media advertising platforms
Course Name: Digital Electronics and Logic Design Course Code: MDM-230-ITT		
Subject Name	CO Number	CO Statement
DELD	MDM-230-ITT.1	Perform Binary Arithmetic and Logical Operations and code conversions.
	MDM-230-ITT.2	Design and Implement Combinational Circuits.
	MDM-230-ITT.3	Differentiate combinational and sequential circuits and use flip flops for various applications
	MDM-230-ITT.4	Design and Implement Sequential Circuits.
	MDM-230-ITT 5	Explain Organization and Architecture of Computer systems
Course Name: Principles of Management & Entrepreneurship Course Code: EEM-231-ITT		
Subject Name	CO Number	CO Statement
PME	EEM-231-ITT.1	Articulate core management functions, planning, and decision-making.
	EEM-231-ITT.2	Analyze organizational structure, staffing, and leadership in tech teams.
	EEM-231-ITT.3	Explain motivation and control systems in management.

	EEM-231-ITT.4	Demonstrate understanding of entrepreneurship and its development.
	EEM-231-ITT.5	Evaluate small-scale industries, support agencies, project reporting, and industrial ownership.
Course Name: UHV&PE Course Code: VEC-232-ITT		
Subject Name	CO Number	CO Statement
Universal Human Values And Professional Ethics	VEC-232-ITT.1	Understand the significance of universal human values and ethical human conduct.
	VEC-232-ITT.2	Apply the concepts of harmony in self and relationships in real-life scenarios
	VEC-232-ITT.3	Evaluate the interconnection between individual, society, and nature from a holistic perspective.
	VEC-232-ITT.4	Develop commitment to self-exploration, self-regulation, and social responsibility
Course Name: Community Engagement Project Course Code: CEF-241- ITT		
Subject Name	CO Number	CO Statement
Community Engagement Project	CEF-241- ITT.1	Apply their engineering knowledge to analyze communities' need based on real-world environmental problems.
	CEF-241- ITT.2	Design and Implement real-world applications using suitable tools and technology by considering suitable requirements.
	CEF-241- ITT.3	Work in a team while making individual contributions to the development of the project and effectively communicate and demonstrate technical information through reports, presentations, and interactions with community members and mentors.
Third Year CO Statements Semester -I		
Course Name: Theory of Computation Course Code: 314441		
Subject Name	CO Number	CO Statement
	C314441.1	Construct finite automata and its variants to solve computing problems
	C314441.2	Write regular expressions for the regular languages and finite automata.

	C314443.6	Apply fundamental concepts of ANN.
Course Name: Human Computer Interaction		Code: 314444
Subject Name	CO Number	CO Statement
Human Computer Interaction	C314444.1	Explain the importance of HCI study and principles of user-centered design (UCD) approach.
	C314444.2	Develop understanding of human factors in HCI design.
	C314444.3	Develop understanding of models, paradigms, and context of interactions.
	C314444.4	Design effective user-interfaces following a structured and organized UCD process.
	C314444.5	Evaluate usability of a user-interface design.
	C314444.6	Apply cognitive models for predicting human-computer-interactions.
Course Name Elective-I- Advanced Database Management System		Course Code: 314445(B)
Subject Name	CO Number	CO Statement
Advanced Database Management System	C314445(B).1	Understand relational and object-oriented databases.
	C314445(B).2	Learn and understand parallel & distributed database architectures.
	C314445(B).3	Learn the concepts of NoSQL Databases.
	C314445(B).4	Understand data warehouse and OLAP technologies.
	C314445(B).5	Apply data mining algorithms and to learn various software tools.
	C314445(B).6	Learn emerging and enhanced data models for advanced applications.
Course Name: Operating Systems Lab		Course Code: 314446
Subject Name	CO Number	CO Statement
	C314446.1	

Operating Systems Lab	314446 .1	Apply the basics of Linux commands
	314446 .2	Build shells cripts for various applications.
	314446 .3	Implement basic building blocks like processes, threads under Linux.
	314446 .4	Develop various system programs for the functioning of OS concepts in user space like concurrency control, CPU Scheduling, Memory Management and Disk Scheduling in Linux
	314446 .5	Develop system programs for Inter Process Communication in Linux
Course Name: Human Computer Interaction- Lab Course Code: 314447		
Subject Name	CO Number	CO Statement
Human Computer Interaction- Lab	314447.1	Differentiate between good design and bad design.
	314447.2	Analyze creative design in the surrounding.
	314447.3	Assess design based on feedback and constraint.
	314447.4	Design paper-based prototypes and use wire frame.
	314447.5	Implement user-interface design using web technology
	314447.6	Evaluate user-interface design using HCI evaluation techniques.
Course Name: Laboratory Practice-I (ML) Course Code: 314448		
Subject Name	CO Number	CO Statement
Laboratory Practice-I (ML)	C314448.1	Implement different supervised earning algorithms.
	C314448.2	Implement different unsupervised learning algorithms.
	C314448.3	Evaluate performance of machine learning algorithms for real-world applications.
Course Name: Laboratory Practice-I (ADBMS) Course Code: 314448B		
Subject Name	CO Number	CO Statement
	C314448B.1	Understand Advanced Database Programming Languages.
	C314448B.2	Master the basic concepts of NoSQL Databases.

Laboratory Practice-I (ADBMS)	C314448B.3	Install and configure database systems.
	C314448B.4	Populate and query a database using MongoDB commands.
	C314448B.5	Design data warehouse schema of any one real-time: CASE STUDYC
	C314448B.6	Develop a small application with NoSQL Database for back-end.

Course Name: Seminar	Course Code: 314449
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Subject Name	CO Number	CO Statement
Seminar	314449.1	Understand, interpret and summarize technical literature.
	314449.2	Demonstrate the techniques used in the paper.
	314449.3	Distinguish the various techniques required to accomplish the task.
	314449.4	Identify intended future work based on the technical review.
	314449.5	Prepare and present the content through various presentation tools and techniques in effective manner.
	314449.6	Keep the audience engaged through improved interpersonal skills.

Final Year CO Statements Semester -I

Course Name: Information and Storage Retrieval	Course Code: 414441
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Subject Name	CO Number	CO Statement
Information and Storage Retrieval	414441.1	Understand the concept of Information retrieval and to apply clustering in information retrieval.
	414441.2	Use an indexing approach for retrieval of text and multimedia data.
	414441.3	Evaluate performance of information retrieval systems.
	414441.4	Apply the concepts of multimedia and distributed information retrieval.
	414441.5	Use appropriate tools in analyzing the web information
	414441.6	Simulate the working of a search engine and recommender system.

Course Name: Software Project Management	Course Code: 414442
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Subject Name	CO Number	CO Statement
Software Project Management	414442.1	Apply the practices and methods for successful Software Project Management
	414442.2	Create Design and Evaluate Project
	414442.3	Analyze Project Schedule and calculate Risk Management with help of tools.
	414442.4	Demonstrate different tools used for Project Tracking, Monitoring & Control.
	414442.5	Identify Staff Selection Process and the issues related to Staff Management.
	414442.6	Discuss and use modern tools for Software Project Management.

Course Name: Deep Learning

Course Code: 414443

Subject Name	CO Number	CO Statement
Deep Learning	414443.1	Understand the theoretical foundations, algorithms, and methodologies of Deep Learning.
	414443.2	Apply the concepts of Convolution Neural Networks and use of popular CNN architectures.
	414443.3	Compare Feed Forward Neural Network and Recurrent Neural Network and learn modeling the time dimension using RNN and LSTM.
	414443.4	Elaborate unsupervised deep learning algorithms like Autoencoders.
	414443.5	Explore Representation Learning and Transfer Learning techniques using variants of CNN architecture.
	414443.6	Evaluate the performance of deep learning algorithms and to provide solution for various real-world applications

Course Name: Elective III- Mobile Computing**Course Code: 414444A**

Subject Name	CO Number	CO Statement
Mobile Computing	414444A.1	understand the basic concepts of mobile computing, MAC and different multiplexing technics.
	414444A.2	understand Protocols, Connection Establishment, Frequency Allocation, Routing of mobile telecommunication system like GSM, GPRS, UMTS.
	414444A.3	understand the Generations of Mobile Communication Technologies
	414444A.4	learn mobile IP , Adhoc – Network, Reactive Routing protocols, Multicast Routing.
	414444A.5	obtaining knowledge of transport layer protocol TCP, File System, and different application layer protocols.

	414444A.6	gain knowledge about different mobile platforms, operating Systems, Software Development Kit, Security Issues.
Course Name: Elective IV - Wireless Communications		Course Code: 414445D
Subject Name	CO Number	CO Statement
Wireless Communi cations	414445.1	Articulate the fundamental concept of cellular system.
	414445.2	Analyse the fundamentals of cellular systems.
	414445.3	Illustrate multiple access technique for effective utilization of spectrum.
	414445.4	Design and analyse the WAP Programming Model in networking environment.
	414445.5	Learn and understand security issues, challenges and tools in wireless communication.
	414445.6	
Course Name: Laboratory Practice III		Course Code: 414446
Subject Name	CO Number	CO Statement
Laboratory Practice III	414446.1	Understand the concept of Information retrieval and to apply clustering in information retrieval.
	414446.2	Use appropriate indexing approach for retrieval of text and multimedia data. Evaluate performance of information retrieval systems.
	414446.3	Apply appropriate tools in analyzing the web information.
	414446.4	Map the concepts of the subject on recent developments in the Information retrieval field.
Course Name: Laboratory Practice IV		Course Code:414447
Subject Name	CO Number	CO Statement
	414447.1	Learn and Use various Deep Learning tools and packages.

Laboratory Practice IV	414447.2	Build and train deep Neural Network models for use in various applications.
	414447.3	Apply Deep Learning techniques like CNN, RNN Auto encoders to solve real word Problems.
	414447.4	Evaluate the performance of the model build using Deep Learning.
Course Name: Project Stage -I Course Code: 414448		
Subject Name	CO Number	CO Statement
Project Stage -I	414448.1	To apply knowledge of mathematics, science, and engineering to formulate the Problem statement.
	414448.2	To design and conduct experiments, as well as to analyze and interpret data.
	414448.3	Understand the professional and ethical responsibility.
	414448.4	To communicate effectively.
	414448.5	Get broad education which is necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
	414448.6	Recognition of the need for, and an ability to engage in life-long learning.
	414448.7	To use the techniques, skills, and modern engineering tools necessary for engineering practices.
	414448.8	To design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.