



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

Course Code: PCC-201-COM

Subject Name	CO Number	CO Statement
DS	P201.1	Analyze various types of data structures and algorithms.
	P201.2	Apply various sorting and searching algorithms for given problem.
	P201.3	Use of Stacks and Queues to solve the given problem.
	P201.4	Analyze different hashing techniques and collision resolution strategies.
	P201.5	Demonstrate basic operations on trees and graphs.

Course Name: Object Oriented Programming and Computer Graphics

Course Code:

PCC-202-COM

Subject Name	CO Number	CO Statement
OOPCG	P202.1	To apply fundamental programming constructs, object oriented constructs in Java for Implementing an application.
	P202.2	To apply fundamental object oriented constructs like class, objects, array of objects in Java for Implementing an application.
	P202.3	To apply object-oriented features like Inheritance, Polymorphism, Dynamic binding, Exception handling, multi-threading in Java for implementing an application.
	P202.4	To understand basic concepts in computer graphics and implement them by applying object oriented features.
	P202.5	To understand mathematical foundation in 2D, 3D Transformation, Projections and implement them by applying object oriented features.

Course Name: Operating System	Course Code: PCC-203-COM
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Subject Name	CO Number	CO Statement
Operating System	P203.1	To analyze the fundamentals of Operating Systems, including types, structures, system calls, and basic Linux commands
	P203.2	To apply process scheduling and synchronization to optimize CPU utilization in modern operating systems.
	P203.3	To Identify the mechanism for dealing with deadlocks and concurrency concerns.
	P203.4	To apply techniques of memory management to solve memory management problems
	P203.5	To illustrate I/O and file management policies.

Course Name: Data Structures Laboratory	Course Code: PCC-204-COM
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Subject Name	CO Number	CO Statement
Data Structures Laboratory	P204.1	Analyze basic searching and sorting algorithms to solve problems and evaluate their efficiency in different scenarios.
	P204.2	Make use of stacks and queue concepts to solve the given problem
	P204.3	Demonstrate various types of linked lists.
	P204.4	Demonstrate basic operations on trees and graphs and determine minimum spanning
	P204.5	Apply a suitable data structure for solving application-based problems.

Course Name: Object Oriented Programming & Computer Graphics Lab	Course Code: PCC-205-COM
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Subject Name	CO Number	CO Statement
OOPCGL	P205.1	To apply fundamental programming constructs in Java for implementing an application.
	P205.2	To apply fundamental object oriented constructs in Java for implementing an application.
	P205.3	To apply object-oriented features like Inheritance, Polymorphism, Dynamic binding, exception handling, multi-threading in Java for implementing an application.

Entrepreneurial Development	E240.3	Analyze and Develop a basic business model using tools like the Business Model Canvas through market research.
	E240.4	Apply basic marketing strategies for startups.
	E240.5	Demonstrate a concise business pitch using storytelling and effective communication techniques

Course Name: UHV&PE Course Code: VEC-250-COM

Subject Name	CO Number	CO Statement
Universal Human Values And Professional Ethics	VE250.1	Recognize the concept of self-exploration as the process of value education and see they have the potential to explore on their own right.
	VE250.2	Explore the human being as the coexistence of self and body to see their real needs basic aspirations clearly.
	VE250.3	Explain relationship between one self and other self as the essential part of relationship and harmony in the family.
	VE250.4	Interpret the interconnectedness,harmony and mutual fulfilment inherent in the nature and the entire existence.

Course Name: Community Engagement Project Course Code: CEF-260- COM

Subject Name	CO Number	CO Statement
Community Engagement Project	C260.1	Identify and Analyze local community needs and challenges by engaging with stakeholders and evaluating real-world problems.
	C260.2	Design and Implement practical, creative, and context-specific solutions using engineering principles to address community issues
	C260.3	Reflect and Evaluate the effectiveness of their interventions and articulate lessons learned through reports and presentations

Third Year CO Statements Semester -I

Course Name: Database Management Systems Course Code: 310241

Subject Name	CO Number	CO Statement
Management	C301.1	Design Database Management System using ER model
	C301.2	Use SQL and PLSQL for processing structured data

Sys	C303.6	To demonstrate memory organization and memory management policies
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Course Name: Computer Network & Security Course Code: 310244

Subject Name	CO Number	CO Statement
Computer Network & Security	C304.1	Summarize fundamental concepts of Computer Networks, architectures, protocols and technologies
	C304.2	Implement Error control and Flow control technique of data link layer
	C304.3	Analyze the working of different routing protocols and mechanisms
	C304.4	Implement client-server applications using sockets
	C304.5	Illustrate role of application layer with its protocols, client-server architectures
	C304.6	Comprehend the basics of Network Security

Course Name: Elective I- Human Computer Interfae Course Code: 310245(B)

Subject Name	CO Number	CO Statement
Human Computer Interface	C305B.1	Apply the different interaction models to design effective interfaces for all kind of users.
	C305B.2	Analyze the user-interface with respect to golden rules of interface.
	C305B.3	Analyze the different interaction styles.
	C305B.4	Design interactive designs for feasible data search and retrieval.
	C305B.5	Analyze the scope of HCI in various paradigms like ubiquitous computing, virtual reality, multi-media, and World wide web related environments.
	C305B.6	Analyze user models, user support, and stakeholder requirements of HCI systems.

Course Name: Database Management Systems Laboratory Course Code: 310246

Subject Name	CO Number	CO Statement
nt y	C306.1	Design E-R Model for given requirements and convert the same into database tables

Course Name: Seminar and Technical Communication **Course Code: 310249**

Subject Name	CO Number	CO Statement
STCL	C309.1	Analyze a latest topic of professional interest.
	C309.2	Enhance technical writing skills.
	C309.3	Identify an engineering problem, analyze it and propose a work plan to solve it.
	C309.4	Communicate with professional technical presentation skills.

Final Year CO Statements Semester -I

Course Name: Design and Analysis of Algorithms **Course Code: 410241**

Subject Name	CO Number	CO Statement
Design and Analysis of Algorithms	C401.1	Apply algorithmic and problem solving principles
	C401.2	Analyze the asymptotic performance of algorithms
	C401.3	Decide and apply algorithmic strategies to solve given problem
	C401.4	Find optimal solution by applying various methods
	C401.5	Analyze and Apply Scheduling and Sorting Algorithms.
	C401.6	Solve problems for multi-core or distributed or concurrent environments
	C405D.6	Apply tools necessary for efficient testing framework.

Course Name: Machine Learning **Course Code: 410242**

Subject Name	CO Number	CO Statement
Machine Learning	C402.1	Identify the needs and challenges of machine learning for real time applications.
	C402.2	Apply various data pre-processing techniques to simplify and speed up machine learning algorithms.

Machine Lear	C402.3	Select and apply appropriately supervised machine learning algorithms for real time applications.
	C402.4	Implement variants of multi-class classifier and measure its performance.
	C402.5	Compare and contrast different clustering algorithms.
	C402.6	Design a neural network for solving engineering problems.

Course Name: BT Course Code: 410243

Subject Name	CO Number	CO Statement
Blockchain Technology	C403.1	Interpret the fundamentals and basic concepts in Blockchain
	C403.2	Compare the working of different blockchain platforms
	C403.3	Use Crypto wallet for cryptocurrency based transactions
	C403.4	Analyze the importance of blockchain in finding the solution to the real-world problems.
	C403.5	Illustrate the Ethereum public block chain platform
	C403.6	Identify relative application where block chain technology can be effectively used and implemented.

Course Name: CSDF Course Code: 410244(C)

Subject Name	CO Number	CO Statement
Cyber Security and Digital Forensics	C404C.1	Analyze threats in order to protect or defend it in cyberspace from cyber-attacks.
	C404C.2	Implement appropriate security solutions against cyber-attacks
	C404C.3	Examine the need of digital forensic and role of digital evidences
	C404C.4	Explain rules and types of evidence collection
	C404C.5	Analyze, validate and process crime scenes
	C404C.6	Apply the methods to generate legal evidence and supporting investigation reports.

Course Name: STQA Course Code: 410245D		
Subject Name	CO Number	CO Statement
Software Testing and Quality Assurance	C405D.1	Describe fundamental concepts in software testing such as manual testing, automation testing and software quality assurance
	C405D.2	Design and Develop project test plan, design test cases, test data, and conduct test operations
	C405D.3	Apply recent automation tool for various software testing for testing software.
	C405D.4	Apply different approaches of quality management, assurance, and quality standard to software system.
	C405D.5	Apply and analyze effectiveness Software Quality Tools
	C405D.6	Apply tools necessary for efficient testing framework.
Course Name: Laboratory Practice III Course Code: 410246		
Subject Name	CO Number	CO Statement
Laboratory Practice III	C406.1	Apply preprocessing techniques on datasets and evaluate classification and clustering techniques.
	C406.2	Implement and evaluate linear regression and random forest regression models.
	C406.3	Implement an algorithm that follows one of the following algorithm design strategies: divide and conquer, greedy, dynamic programming, backtracking, branch and bound.
	C406.4	Analyze performance of the following algorithm design strategies: divide and conquer, greedy, dynamic programming, backtracking, branch and bound.
	C406.5	Understand and Apply the basic concepts in Blockchain technology using Ethereum.
	C406.6	Interpret the concepts in Blockchain technology and create its applications.
Course Name: Laboratory Practice IV Course Code: 410247		
Subject Name	CO Number	CO Statement
Laboratory Practice IV	C407.1	Demonstrate various vulnerabilities using various tools.

Laborat Practice	C407.2	Apply software testing tools to perform manual Testing
	C407.3	Apply software testing tools to perform Automation Testing
Course Name: Project Stage -I Course Code: 410248		
Subject Name	CO Number	CO Statement
Project Stage -I	C408.1	Solve real life problem by applying knowledge and skills keeping eye on current technologies and inculcating the practice of lifelong learning
	C408.2	Analyze alternative approaches, apply and use most appropriate one for feasible solution exhibiting project management skills.
	C408.3	Demonstrate effective communication at various levels and write precise reports and technical documents in a nutshell.
	C408.4	Participate effectively in multi-disciplinary and heterogenous teams exhibiting team work,inter-personal relationships,conflict management and leadership quality
	C408.5	Provide solution to problems considering social, safety, environmental, ethical and legal issues.