



# Agni College of Technology

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai.  
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OMR, Thalambur, Chennai - 600130, www.act.edu.in



## Course Outcomes (CO) (R 2013) DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING(PG)

### Course Code: 101 Course Name:MA7155 APPLIED PROBABILITY AND STATISTICS

C101.1	Basic probability axioms and rules and the moments of discrete and continuous random variables.
C101.2	Consistency, efficiency and unbiasedness of estimators, method of maximum likelihood estimation and Central Limit Theorem.
C101.3	Use statistical tests in testing hypotheses on data.
C101.4	Perform exploratory analysis of multivariate data, such as multivariate normal density, calculating descriptive statistics, testing for multivariate normality.
C101.5	The students should have the ability to use the appropriate and relevant, fundamental and applied mathematical and statistical knowledge, methodologies and modern computational tools.

### Course Code: 102 Course Name:CP7102 ADVANCED DATA STRUCTURES AND ALGORITHMS

C102.1	Design data structures and algorithms to solve computing problems
C102.2	Design algorithms using graph structure and various string matching algorithms to solve real-life problems
C102.3	Apply suitable design strategy for problem solving
C102.4	To study about NP Completeness of problems
C102.5	To select and design data structures and algorithms that is appropriate for problems.

### Course Code: 103 Course Name:CP7103 MULTICORE ARCHITECTURES

C103.1	Identify the limitations of ILP
C103.2	Discuss the issues related to multiprocessing and suggest solutions
C103.3	Point out the salient features of different multicore architectures and how they exploit Parallelism
C103.4	Discuss the various techniques used for optimising the cache performance
C103.5	Design hierarchal memory system
C103.6	Point out how data level parallelism is exploited in architectures

### Course Code: 104 Course Name:CP7101 DESIGN AND MANAGEMENT OF COMPUTER NETWORKS

C104.1	Identify the components required to build different types of networks
C104.2	Choose the required functionality at each layer for given application
C104.3	Identify solution for each functionality at each layer
C104.4	Trace the flow of information from one node to another node in the network
C104.5	Demonstrate various types of routing techniques

### Course Code: 105 Course Name:CP7004 IMAGE PROCESSING AND ANALYSIS

C105.1	Design and implement algorithms for image processing applications that incorporates different concepts of medical Image Processing
C105.2	Familiar with the use of MATLAB and its equivalent open source tools
C105.3	Critically analyze different approaches to image processing applications
C105.4	Explore the possibility of applying Image processing concepts in various applications
C105.5	To appreciate the use of image processing in various applications

### Course Code: 106 Course Name:CP7009 MACHINE LEARNING TECHNIQUES

C106.1	Distinguish between, supervised, unsupervised and semi-supervised learning
C106.2	Apply the appropriate machine learning strategy for any given problem

C106.3	Suggest supervised, unsupervised or semi-supervised learning algorithms for any given problem
C106.4	Design systems that uses the appropriate graph models of machine learning
C106.5	Modify existing machine learning algorithms to improve classification efficiency

**Course Code: 107 Course Name:CP7111 DATA STRUCTURES LABORATORY**

C107.1	Design and implement basic and advanced data structures extensively.
C107.2	Design algorithms using graph structures
C107.3	Design and develop efficient algorithms with minimum complexity using design techniques.
C107.4	Design data structures and algorithms to solve computing problems
C107.5	Design and develop heap structures.

**Course Code: 108 Course Name:CP7112 CASE STUDY - NETWORK DESIGN (TEAM WORK)(**

C108.1	Identify the components required for designing a network
C108.2	Design a network at a high-level using different networking technologies
C108.3	Analyze the various protocols of wireless and cellular networks
C108.4	Discuss the features of 4G and 5G networks
C108.5	Experiment with software defined networks

**Course Code: 109 Course Name:CP7201 THEORETICAL FOUNDATIONS OF COMPUTER SCIENCE**

C109.1	To explain sets, relations, functions
C109.2	To conduct proofs using induction, pigeonhole principle, and logic
C109.3	To apply counting, permutations, combinations, and recurrence relations
C109.4	To apply recursive functions and lambda calculus
C109.5	To explain logic programming and functional programming principles

**Course Code: 110 Course Name:CP7202 ADVANCED DATABASES**

C110.1	To develop skills on databases to optimize their performance in practice.
C110.2	To analyze each type of databases and its necessity
C110.3	To design faster algorithms in solving practical database problems
C110.4	To understand the emerging databases like Mobile, XML, Cloud and Big Data
C110.5	To study the usage and applications of Object Oriented and Intelligent databases

**Course Code: 111 Course Name:CP7203 PRINCIPLES OF PROGRAMMING LANGUAGES**

C111.1	Describe syntax and semantics of programming languages
C111.2	Explain data, data types, and basic statements of programming languages
C111.3	Design and implement subprogram constructs
C111.4	Apply object-oriented, concurrency, and event handling programming constructs
C111.5	Develop programs in Scheme, ML, and Prolog

**Course Code: 112 Course Name:CP7204 ADVANCED OPERATING SYSTEMS**

C112.1	To explain the functionality of a large software system by reading its source
C112.2	To revise any algorithm present in a system.
C112.3	To design a new algorithm to replace an existing one
C112.4	To appropriately modify and use the data structures of the linux kernel for a different software system.
C112.5	To understand how program execution happens in Linux.

**Course Code: 113 Course Name:CP7014 SOFTWARE ARCHITECTURES**

C113.1	Explain key architectural drivers
C113.2	Explain the influence of architecture on business and technical activities
C113.3	Identify key architectural structures
C113.4	Adopt good practices for documenting the architecture
C113.5	Explain how to use formal languages to specify architecture

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**Course Code: 114 Course Name:IF7202 CLOUD COMPUTING**

C114.1	Employ the concepts of storage virtualization, network virtualization and its management
C114.2	Apply the concept of virtualization in the cloud computing
C114.3	Identify the architecture, infrastructure and delivery models of cloud computing
C114.4	Develop services using Cloud computing
C114.5	Apply the security models in the cloud environment

**Course Code: 115 Course Name:CP7211 ADVANCED DATABASES LABORATORY**

C115.1	Work on distributed databases
C115.2	Create and work on object oriented databases
C115.3	Create and work with parallel database
C115.4	Experiment on active database
C115.5	To work on weka tool for clustering and classification

**Course Code: 116 Course Name:CP7212 CASE STUDY - OPERATING SYSTEMS DESIGN**

C116.1	Develop assigned modules of operating systems design carrying out coding, testing, and documentation work involved.
C116.2	Describe team issues and apply suitable methods to resolve the same.
C116.3	Demonstrate individual competence in building medium size operating system components.
C116.4	Demonstrate ethical and professional attributes of a computer engineer
C116.5	Prepare suitable plan with clear statements of deliverables, and track the same.

**Course Code: 201 Course Name:CP7301 SOFTWARE PROCESS AND PROJECT MANAGEMENT**

C201.1	Explain software development life cycle
C201.2	Adopt a suitable process for software development
C201.3	Elicit functional and quality requirements
C201.4	Analyze, prioritize, and manage requirements
C201.5	Perform trade-off among conflicting requirements

**Course Code: 202 Course Name:CP7020 BIO-INSPIRED COMPUTING**

C202.1	Implement and apply bio-inspired algorithms
C202.2	Explain random walk and simulated annealing
C202.3	Implement and apply genetic algorithms
C202.4	Explain swarm intelligence and ant colony for feature selection
C202.5	Apply bio-inspired techniques in image processing.

**Course Code: 203 Course Name:CP7025 DATA MINING TECHNIQUES**

C203.1	Apply data mining techniques and methods to large data sets
C203.2	Use data mining tools
C203.3	Compare and contrast the various classifiers.
C203.4	Apply appropriate classification and clustering techniques for data analysis
C203.5	Apply frequent pattern and association rule mining techniques for data analysis

**Course Code: 204 Course Name:CP7029 INFORMATION STORAGE MANAGEMENT**

C204.1	Select from various storage technologies to suit for required application.
C204.2	Apply security measures to safeguard storage & farm.
C204.3	Analyse QoS on Storage
C204.4	Able to apply integrated themes and biodiversity, natural resources, pollution control and waste management.
C204.5	To learn security aspects of storage & data center

**Course Code: 205 Course Name:CP7411 PROJECT WORK**

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C205.1	Gather, organize, summarize and interpret technical literature with the purpose of formulating a project proposal.
C205.2	Write a technical report summarizing state-of-the-art on an identified topic.
C205.3	Present the study using graphics and multimedia techniques.
C205.4	Define intended future work based on the technical review.
C205.5	Select and apply modern tools and technologies.