

M.Sc. (Computer Science) Part-I

(For Colleges Affiliated to Savitribai Phule Pune University) Choice Based Credit System Syllabus
Academic Year 2019-2020

Course Code: CSUT111 Course Name: Paradigm of Programming Language

Course Objectives:

To Prepare student to think about programming languages analytically:

- Separate syntax from semantics • Compare programming language designs
- Understand their strengths and weaknesses • Learn new languages more quickly
- Understand basic language implementation techniques
- Learn small programs in different programming Languages

Course Code: CSUT112 Course Name: Design and Analysis of Algorithm

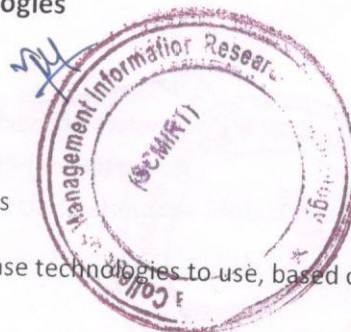
Course Objectives:

- To design the algorithms • To select the appropriate algorithm by doing necessary analysis of algorithms
- To learn basic Algorithm Analysis techniques and understand the use of asymptotic notation
- Understand different design strategies
- Understand the use of data structures in improving algorithm performance
- Understand classical problem and solutions
- Learn a variety of useful algorithms
- Understand classification of problems
- To provide foundation in algorithm design and analysis
- To develop ability to understand and design algorithms in context of space and time complexity.

Course Code: CSUT113 Course Name: Database Technologies

Course Objectives:

- Provide an overview of the concept of NoSQL technology
- Provide an insight to the different types of NoSQL databases
- Make the student capable of making a choice of what database technologies to use, based on their application needs.



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Course Code: CSDT114A Course Name: Cloud Computing

Course Objectives:

- To understand the principles and paradigm of Cloud Computing
- To appreciate the role of Virtualization Technologies
- Ability to design and deploy Cloud Infrastructure
- Understand cloud security issues and solutions

Course Code: CSDT114B Course Name: Artificial Intelligence

Course Objectives:

- To learn various types of algorithms useful in Artificial Intelligence (AI).
- To convey the ideas in AI research and programming language related to emerging technology.
- To understand the numerous applications and huge possibilities in the field of AI that goes beyond the normal human imagination.

Course Code: CSDT 114C Course Name: Web Services

Course Objectives:

- To understand the details of web services technologies like WSDL, UDDI, SOAP
- To learn how to implement and deploy web service client and server
- To explore interoperability between different frameworks
- To understand the concept of RESTful system.

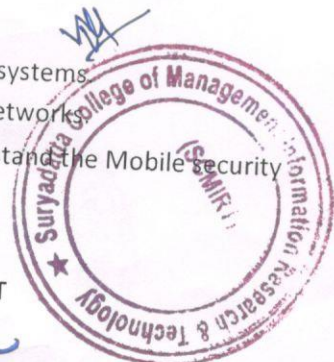
Course Code: CSUT122 Course Name: Mobile Technologies

Course Objectives:

- To impart basic understanding of the wireless communication systems
- To expose students to various aspects of mobile and ad-hoc networks
- Understand the issues relating to Wireless applications Understand the Mobile security

Course Code: CSUT123 Course Name: Software Project Management T

Course Objectives:



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- Software Metrics and Project Management covers skills that are required to ensure successful medium and large scale software projects.
- It examines Requirements Elicitation, Project Management, Verification & Validation and Management of Large Software Engineering Projects.
- Students learn to select and apply project management techniques for process modeling, planning, estimation, process metrics and risk management; perform software verification and validation using inspections, design and execution of system test cases.

Course Code: CSDT124B Course Name: Human Computer Interaction

Course Objectives:

- Design effective dialog for HCI.
- Design effective HCI for individuals and persons with disabilities.
- Assess the importance of user feedback.
- Explain the HCI implications for designing multimedia/ ecommerce/ e-learning Web sites.
- Develop meaningful user interface.

Course Code: CSDT124C Course Name: Soft Computing

Course Objectives:

- To introduce the ideas of soft computational techniques based on human experience.
- To generate an ability to design, analyze and perform experiments on real life problems using various Neural Learning Algorithms.
- To conceptualize fuzzy logic and its implementation for various real world applications.
- To apply the process of approximate reasoning using NeuroFuzzy Modeling.
- To provide the mathematical background to carry out optimization using genetic algorithms.

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