DEPARTMENT OF COMPUTER SCIENCE

PALAMURU UNIVERSITY

M.Sc. Computer Science

SEMESTER-1

CS101T   Advanced Java Programming

Course Outcomes

1. Explain OOPs features and concepts

2. Write basic Java programs

3. Write I/O programs in Java

4. Use various built-in Java classes and methods

5. Create window based Java programs

CS102T   Operating Systems

Course Outcomes – Learners on completion of the course, be able to

1. Explain operating systems and Unix OS, illustrate the workings of various OS components.

2. Analyse the process, its states and process scheduling algorithms.

3. Demonstrate paging, demand paging, page replacement and segmentation with illustrations.

4. Elaborate the file access and allocation methods and mass storage structures.

5. Describe concrete implementations of Linux system and Windows 7.

CS103T   Software Engineering

Course Outcomes – Students will learn to

1. Apply software processes to solve software problem

2. Create SRS document and software architecture

3. Perform software planning in terms of staffing and scheduling

4. Create test cases and procedures

5. Re-engineer the developed software

CS104T　　Discrete Mathematics

Course Outcomes – Students will learn to

1. Solve logic problems

2. Represent the relations and functions

3. Create recurrence relation

4. Apply algebraic structures

5. Work on various graph and tree concepts

CS105P　　Advanced Java Lab

Course Outcomes

1. Be able to write simple java programs

2. Be able to write multithreaded programs

3. Be able to write I/O programs

4. Be able to write serialization programs

5. Be able to write URL class program

CS106P　　Operating Systems Lab

Course Outcomes

1. Be able to execute shell commands and write shell scripts

2. Be able to write programs on CPU scheduling

3. Be able to create memory management algorithms

4. Be able to execute programs to demonstrate synchronization problems

5. Be able to implement file allocation methods and be able to create disk scheduling algorithms

CS107P　　Software Engineering Lab

Course Outcomes:

1. Apply use case diagram, class and object diagram

2. Apply sequence and collaboration diagrams

3. Apply state-chart and activity diagrams

4. Apply component and deployment diagrams

SEMESTER-2

CS201T   Programming in Python

Course Outcomes

1. Explain the python data types, branching statements and loops

2. Write basic python programs

3. Write python programs using functions and modules

4. Explain the concepts of LISTS, TUPLE, DICTIONARY, SET

5. Problem Solving with Recursions

6. Creating GUI Programming in Pyhton

CS202T   Computer Networks

Course Outcomes - Upon completion of the course, students will be able to:

1. Elaborate the network model

2. Explain transmission media and functions of datalink layer

3. Create routing tables based on DVR and LSR

4. Describe TCP and UDP protocols

5. Explain application layer protocols

CS203T   Design and Analysis of Algorithms

Course Outcomes

1. Carry out algorithms time complexity

2. Explain divide and conquer approach

3. Illustrate greedy method

4. Elaborate dynamic programming

5. Explore backtracking

CS204T   Automata Theory

Course Outcomes

1.Acquire a fundamental understanding of the core concepts in automata theory and formal languages.

2. An ability to design grammars and automata (recognizers) for different language classes.

3. An ability to identify formal language classes and prove language membership properties.

4. An ability to prove and disprove theorems establishing key properties of formal languages and automata.

5. Acquire a fundamental understanding of core concepts relating to the theory of computation and computational models including (but not limited to) decidability and intractability.

CS205P   Python Lab

Course Outcome

1. Writing the basic python programs for the demonstration of Data Types, Input & Output, Loops and Decision Structures

2. Writing the Python Programs usings the recursive and non-recursive functions

3. Writing the program by using the List, Sets, Tuples, Dictionary concepts

4. Writing the program for File Concepts

5. Writing the Program for GUI and OOPs Concepts

CS206P   Computer Networks Lab

Course Outcome:

After completing the course the student able to:

1. To write the program for identification of IP-Addresses

2. To write the program for Socket pair system calls

3. to write the program for Echo Server

4. To Write the programs for TCP & UDP Protocols

5. To Write the Programs for Ping Services, shortest path routing, routing tracing, file transfer protocols.

6. to write the programs for Error Message Simulation and ARP.

CS207P   Design and Analysis of Algorithms Lab

Course Outcome:

After Completion of the course the student is able to:

1. Write the program for analysing the implanted algorithm code with Time and Space Complexity

2. Write the Program for Sorting and Searching Techniques

3. Write the Program for creating the Trees

4. Write the Program to find the Euler circuit and Hamiltonian Circuits

5. Write the Program to Solve the travelling salesman problem, knapsack problem, and to find the shortest network path

6. Write the program find the minimum spanning tree for a weighted graph

SEMESTER-3

CS301T   Programming in C#

Course Outcome:

1. Develop applications using classes and objects, console applications.

2. Develop programs using console applications and exception handlings.

3. Develop programs using text file handling and Windows applications.

4. Develop programs using ASP.NET and ADO.NET with web controls.

CS302T   Compiler Design

Course Outcome:

1.Be familiar with major concepts of language translation and compiler design.

2. Understand various phases of compiler and its use, code optimization techniques.

3. Be familiar with machine code generation and use of symbol table.

4. Acquire knowledge on parser by passing LL parser and LR parser.

CS303T(A)   Network Security

Course Outcome:

1. Explain the fundamentals of network security

2. Elaborate the concepts secret and public key cryptography

3. Elucidate the hash functions digital signatures

4. Describe the digital signatures and smart cards

5. Explain the applications of network security

CS303T(B)   Big Data Analytics

Course Outcome:

1.Be familiar with Big Data Concepts

2.Be familiar with Big Data Analytics

3.Be familiar with MapReduce fundamentals

4.Acquire knowledge on the usage of Big Data Analytics in social media

CS304T(A)   Object Oriented Analysis and Design

Course Outcome:

1. Acquire Knowledge on Software Complexity, Software Design Techniques

2. Acquire knowledge on UML Diagrams

3. Acquire knowledge on System Architecture

4. Acquire knowledge on Control Systems, Traffic Management

CS304T(B) Data Mining

Course Outcome:

1. Acquire knowledge on Data warehouse and OLAP operations.

2. Acquire knowledge on Data mining and generating association rules from Frequent Pattern sets using algorithms

3. Acquire knowledge on classification methods and cluster analysis methods

4. Acquire knowledge on outlier detection methods and data mining trends.

CS305P   C# Programming Lab

Course Outcome:

1. Understand the development of windows and web based applications with properties setting.

2. Understand to connect applications with different backends and with real time applications.

CS306P   Compiler Design Lab

Course Outcome:

1. Learn the Lexical Analyser Programs using Lex Tools

2. Writing the programs using YAAC

3. writing the programs to implement stack storage & Heap Storage allocation strategies.

4. Writing and implementing programs for code optimization techniques

CS307P(A)   Network Security Lab

Course Outcome:

1. Understand and to generate cipher text and recover the plaintext

2. Implement the Security Algorithms by using C/C++/Java (without using collection framework) language on Linux systems

3. Learn and implement the Encryption & Decryption Techniques

CS307(B)P   Big Data Analytics Lab

Course Outcome:

1.Familiar with No SQL and big data analysis with map reduce procedures.

2. Understand how to analyse big data in real world applications.

SEMESTER-4

CS401T   Computer Organization

1.Understand Basic structure of digital computer and its functions.

2.Understand digital components and micro operations

3.Understand Micro programming operations and CPU organization.

4.Understand Memory organization and I/O device processing.

CS402T   Cloud Computing

Course Outcome:

1. Be familiar with major concepts related to traditional computing and cloud computing.

2. Understand virtualization and different types of clouds.

3. Be familiar with workflow engine process and performance predictions.

4. Acquire knowledge on Security, privacy and legal issues related to cloud environment.

CS403T(A)   Mobile Computing

Course Outcome:

1. Be familiar with mobile environment structure and its types.

2. Understand wireless LAN and mobile network layer.

3. Be familiar with transport layer and different application protocols.

4. Acquire knowledge on WML and WAP 2.0 environment.

CS403T(B)   Distributed Systems

1. Explain the architecture, processes and communication of distributed system

2. Elaborate the naming and synchronization strategies

3. Describe the fault tolerance and distributed object based system

4. Discuss the distributed file system and distributed web based system

5. Explain distributed coordination based system and map reduce

CS404T(A)   Artificial Intelligence

1. Identify problems that are amenable to solution by AI method

2. Understand and analyze working of an AI technique

3. Formalize a given problem in the language/framework of different AI methods

CS404T(B) Internet of Things

1. Understand the various applications of IoT and other enabling technologies.

2. Comprehend various protocols and communication technologies used in IoT

3. Design simple IoT systems with requisite hardware and C programming software

4. Understand the relevance of cloud computing and data analytics to IoT

5. Comprehend the business model of IoT from developing a prototype to launching a product.

CS405P Project Work

Course Outcome: After completion of the course student able to:

1. Learn the skills of Problem definition and specification.

2. Conduct the Literature survey(familiarity with research journals).

3. Gain the Broad knowledge of available techniques to solve a particular problem.

4. Plan & Design the work, preparation of bar(activity) charts

5. Write the Project Report and gain the Presentation skills.