DEPARTMENT OF COMPUTER SCIENCE

2019-2020

COURSE OUTCOMES

M.Sc. COMPUTER SCIENCE

YEAR/ SEM: I/I–PSD1A – DESIGN AND ANALYSIS OF ALGORITHMS

NO.	COURSE OUTCOME
C101.1	To analyse the asymptotic performance of algorithms.
C101.2	To write rigorous correctness proofs for algorithms.
C101.3	To demonstrate a familiarity with major algorithms and data structures.
C101.4	To apply important algorithmic design paradigms and methods of analysis.
C101.5	Synthesize efficient algorithms in common engineering design situations

YEAR/ SEM: I/ I–PSD1B – ADVANCED JAVA PROGRAMMING

NO.	COURSE OUTCOME
C102.1	To use the syntax and semantics of java programming language and basic concepts of OOP.
C102.2	To develop reusable programs using the concepts of inheritance, polymorphism, interfaces and packages.
C102.3	To apply the concepts of Multithreading and Exception handling to develop efficient and error free codes
C102.4	To design event driven GUI and web related applications which mimic the real word scenarios.
C102.5	To implement exception handling techniques and multithreading.

YEAR/ SEM: I/I–PSD1C – SYSTEM SOFTWARE

NO.	COURSE OUTCOME
C103.1	Distinguish architecture of SIC and SIC/XE machine.
C103.2	To write the object code for SIC and SIC/XE machine programs
C103.3	To list loaders types and explain the relocation.
C103.4	Imagine editing process and write the debugging functions and capabilities of a text
C103.5	To apply regular expressions and develop programs using LEX and YACC tools.

YEAR/ SEM: I/I– PSD11 – PRACTICAL I ALGORITHMS LAB

NO.	COURSE OUTCOME
C104.1	To able to Argue the correctness of algorithms usinginductive proofs andanalyse worst-case runningtimes of algorithms using asymptotic analysis.
C104.2	To able to explain important algorithmic design paradigms and apply when an algorithmic design situation calls for it.
C104.3	Able to Explain the major graph algorithms and employ graphs to model engineering problems,when appropriate.
C104.4	Able to Compare between different data structuresand pick an appropriate data structure for a designsituation
C104.5	To Describe the classes P, NP, and NP-Complete and be able to prove that a certain problem is NP-Complete.

YEAR/ SEM: I/I– PSD12 – PRACTICAL II ADVANCED JAVA LAB

NO.	COURSE OUTCOME
C105.1	To list and explain the features Java programming Language.
C105.2	To apply applet and event handling mechanisms in application programs.
C105.3	To analyze and develop java programs using threads, Swings and JDBC Connectivity concepts.
C105.4	To design and develop distributed applications using RMI and web applications using servlets and JSP.
C105.5	To implement reusable software components using Enterprise Java Beans.

YEAR/ SEM: I/I– PED1A – THEORETICAL FOUNDATIONS OF COMPUTER SCIENCE

NO.	COURSE OUTCOME
C106.1	To Evaluate Counting Principles and to express a logical sentence in terms of Arguments, Quantifiers and Logical Equivalence and to Demonstrate an understanding of Mathematical Induction, Fundamental Theorem of Arithmetic.
C106.2	To Understand the Major Algebraic system in Mathematics and to Understand the concepts of Paths, reachability, connectedness matrix representation of Graphs, Trees.
C106.3	To outline the concept of Finite Automata and Regular Expression and to Illustrate the design of Context Free Grammar for any language set.
C106.4	To demonstrate the push down automaton model for the given language and to solve the simple problems.
C106.5	To explain decidability or undesirability of various problems.

YEAR/ SEM: I/I–PSSEA- LANGUAGE AND COMMUNICATION

NO.	COURSE OUTCOME
C107.1	To revise language skills.
C107.2	To build fluency
C107.3	To learn the principles of LSRW
C107.4	To know to take notes and be aware of one's body languages while communicating
C107.5	To Develop and Expand Writing Skills through Controlled and Guided Activities

YEAR/ SEM: I/II–PSD2A – COMPUTER NETWORKS

NO.	COURSE OUTCOME
C108.1	To understanding network models.
C108.2	To understand different network technologies.
C108.3	To understand the effects of using different networking topologies
C108.4	To update with different advanced network technologies that can be used to connect different networks.

| C108.5 | To familiar with various hardware and software that can help protect the network, layers of OSI model and their functionality. |

YEAR/ SEM: I/II– PSD2B – DIGITAL IMAGE PROCESSING

NO.	COURSE OUTCOME
C109.1	To explain the fundamentals of digital image and its processing
C109.2	To perform image enhancement techniques in spatial and frequency domain.
C109.3	To elucidate the mathematical modeling of image restoration and compression
C109.4	To apply the concept of image segmentation.
C109.5	To describe object detection and recognition techniques

YEAR/ SEM: I/II– PSD21 – PRACTICAL III RDBMS LAB

NO.	COURSE OUTCOME
C110.1	To ability to design and implement a database schema for given problem.
C110.2	To apply the normalization techniques for development of application software to realistic problems.
C110.3	To formulate the queries using SQL DML/DDL/DCL commands
C110.4	To enable the students to practice the concepts learnt in the subject DBMS by developing a database.
C110.5	To practice the designing, developing and querying a database.

YEAR/ SEM: I/II– PSD22 – PRACTICAL IV IMAGE PROCESSINGUSING JAVA LAB

NO.	COURSE OUTCOME
C111.1	To apply the fundamental concepts of a digital image processing using java
C111.2	To evaluate the techniques for image enhancement and image restoration.
C111.3	To analyze the utility of wavelet decompositions and their role in image processing system
C111.4	Tointerpret image segmentation and representation techniques.

| C111.5 | To design algorithms to solve image processing problems design specifications |

YEAR/ SEM: I/II–PSDEC – COMPUTER GRAPHICS

NO.	COURSE OUTCOME
C112.1	To understand the foundations of Computer graphics
C112.2	To understand the concept of Geometric mathematical and algorithmic concepts necessary for programming computer graphics
C112.3	To understand the comprehension of window clipping and view port object representation in relation to images displayed on screen.
C112.4	To understand the concepts of geometric and composite transformations on objects.
C112.5	To understand the concepts of shading, surface Elimination on the objects.

YEAR/ SEM: I/II–PED2A – OBJECT ORIENTED ANALYSIS AND DESIGN

NO.	COURSE OUTCOME
C113.1	To understand the Object-based view of Systems
C113.2	To develop robust object-based models for Systems
C113.3	To analyse and model software specifications.
C113.4	To abstract object-based views for generic software systems.
C113.5	To deliver robust software components.

YEAR/ SEM: I/II–PSSEB – SPOKEN AND PRESENTATION SKILLS

NO.	COURSE OUTCOME
C114.1	To learn to perfect oral and written skills.
C114.2	To learn the etiquettes of public speaking
C114.3	To improve the skill of business presentation
C114.4	To prepare for interviews in an effective way

C114.5	To master the concepts business presentations

YEAR/ SEM: I/II–PSSEC – LIFE AND MANAGEMENT SKILLS

NO.	COURSE OUTCOME
C115.1	To increase one's knowledge and awareness of emotional competency and emotional intelligence at place of study/work.
C115.2	To provide opportunity for realizing one's potential through practical experience
C115.3	To develop interpersonal skills and adopt good leadership behaviour for empowerment of self and others.
C115.4	To set appropriate goals, manage stress and time effectively
C115.5	To manage competency- mix at all levels for achieving excellence with ethics.

YEAR/ SEM: II/III– PSD3A – PRINCIPLES OF COMPILER DESIGN

NO.	COURSE OUTCOME
C201.1	To realize basics of compiler design and apply for real time applications.
C201.2	To introduce different translation languages
C201.3	To understand the importance of code optimization
C201.4	To know about compiler generation tools and techniques
C201.5	To learn working of compiler and non-compiler applications

YEAR/ SEM: II/III– PSD3B –INFORMATION SECURITY

NO.	COURSE OUTCOME
C202.1	To gain an understanding of information security concepts and acquire knowledge.
C202.2	Identify and analyze security threats and vulnerabilities in various computing environments.
C202.3	Design and implement database security strategies to protect sensitive information.
C202.4	Understand and apply authentication protocols to ensure secure access to systems and data.

C202.5	Develop and implement security policies tailored to organizational needs and compliance requirements.

YEAR/ SEM: II/III– PSD3C – ARTIFICIAL INTELLIGENCE

NO.	COURSE OUTCOME
C203.1	To understand the informed and uninformed problem types and apply search strategies to solve them.
C203.2	To apply difficult real-life problems in a state space representation so as to solve them using AI techniques like searching and game playing.
C203.3	To design and evaluate intelligent expert models for perception and prediction from intelligent environment
C203.4	To formulate valid solutions for problems involving uncertain inputs or outcomes by using decision making techniques.
C203.5	To examine the issues involved in knowledge bases, reasoning systems and planning

YEAR/ SEM: II/III– PSDEE - CRYPTOGRAPHY

NO.	COURSE OUTCOME
C204.1	To identify and analyze network security attacks and counter measures to prevent those attacks
C204.2	To analyze the applications of discrete mathematics and understand their implementation in cryptography.
C204.3	To apply the knowledge of existing encryption and decryption techniques to provide security solutions.
C204.4	To assess impact of public key cryptosystems and key management to ensure secure exchange of information
C204.5	To Investigate the security requirements and solutions for maintaining Data integrity using modern techniques for data transmission

YEAR/ SEM: II/III– PSDEJ – CLOUD COMPUTING

NO.	COURSE OUTCOME
C205.1	To understand the fundamental principles of distributed computing.
C205.2	To understand how the distributed computing environments known as Grids can be built from lower level services
C205.3	To understand the importance of virtualization in distributed computing and how this has enabled the development of Cloud Computing.
C205.4	To analyze the performance of Cloud Computing.

C205.5	To understand the concept of Cloud Security.

YEAR/ SEM: II/III– PSD31 – MINI PROJECT

NO.	COURSE OUTCOME
C206.1	To able to do some innovative work with applying the knowledge gained from various courses undergone in the earlier years.
C206.2	To able to exhibit both analytical and synthetically skills.
C206.3	To able to know the complete project life cycle and the project time estimation & its management.
C206.4	To able to gain knowledge of various simulation tools.
C206.5	To able to culture working in a team.

YEAR/ SEM: II/III – PSSEN – CONTEMPORARY AWARENESS

NO.	COURSE OUTCOME
C207.1	To describe the nature of different types of managerial approaches adopted by organizations in contemporary time
C207.2	To understand the purpose of different types of contemporary managerial approaches
C207.3	To examine the different ways that organizations can implement these contemporary managerial approaches in the workplace.
C207.4	To develop ideas of the basic characteristics of Indian economy, its potential on natural recourses
C207.5	To understand the importance, causes and impact of population growth and its distribution, translate and relate them with economic development.

YEAR/ SEM: II/III – PSSEQ - INTERNSHIP

NO.	COURSE OUTCOME
C208.1	To construct the company profile by compiling the brief history, management structure, products / services offered, key achievements and market performance for his / her organization of internship
C208.2	To assess its Strengths, Weaknesses, Opportunities and Threats (SWOT).
C208.3	To determine the challenges and future potential for his / her internship organization in particular and the sector in general.

C208.4	To test the theoretical learning in practical situations by accomplishing the tasks assigned during the internship period.
C208.5	Toanalyse the functioning of internship organization and recommend changes for improvement in processes

YEAR/ SEM: II/IV-PSD4Q – PROJECT & VIVA - VOCE

NO.	COURSE OUTCOME
C209.1	To identify the real-world Computer Science Problems
C209.2	To analyse the engineering problem requirements
C209.3	To design the solution methodologies for the problem
C209.4	To apply modern engineering tools/techniques for developing a system
C209.5	To write technical project report and publish the thesis into an article