DEPARTMENT OF COMPUTER SCIENCE WITH DATA SCIENCE

2024-2025

COURSE OUTCOMES

YEAR/ SEM: I/I – 100L1A - TAMIL - I

NO.	COURSE OUTCOME
C101.1	சங்க இலக்கியத்தில் காணப்பெறும் வாழ்வியல் சிந்தனைகளை அறிந்து கொள்வர்.
C101.2	அற இலக்கியம் மற்றும் தமிழ் காப்பியங்களின்வழி வாழ்வியல் சிந்தனை பெறுவர்.
C101.3	பக்தி இலக்கியங்களைக் கற்பதன் மூலம் பக்திநெறியினையும், பகுத்தறிவு இலக்கியங்களைக் கற்பதன் வழி நல்லிணக்கதையும் தெரிந்து பின்பற்றுவர்.
C101.4	மொழியறிவோடு சிந்தனைத்திறனைப் பெறுவர்.
C101.5	மொழிப்பயிற்சிக்குத் தேவையான இலக்கணங்களைக் கற்பர்.

YEAR/ SEM: I/I - 100L1E - HINDI - I

NO.	COURSE OUTCOME
C102.1	Explains the nature, features, elements of prose forms and Functional Hindi
C102.2	Understand the theme, aim of lessons and obtain application skills
C102.3	Evaluate the thought, ideology, expressional and artistic skills of writers
C102.4	Obtain skills of critical analysis of Literary forms and drafting skills of personal letters, business letters, noting and drafting skills
C102.5	Learn to Employ the obtained skills in enriching the bright future

YEAR/ SEM: I/I – 100L1Z - ENGLISH - I

NO.	COURSE OUTCOME
C103.1	Acquire self awareness and positive thinking required in various life situations
C103.2	Acquire the attribute of empathy
C103.3	Acquire creative and critical thinking abilities
C103.4	Learn basic grammar
C103.5	Development and integrate the use of four language skills i.e., listening, speaking, reading and writing

YEAR/ SEM: I/I – 127C1A – PYTHON PROGRAMMING

NO.	COURSE OUTCOME
C104.1	Develop and execute simple Python programs
C104.2	Write simple Python programs using conditionals and looping for solving problems
C104.3	Decompose a Python program into functions
C104.4	Represent compound data using Python lists, tuples, dictionaries etc.
C104.5	Read and write data from/to files in Python programs

YEAR/ SEM: I/I – 127C11 – PYTHON PROGRAMMING PRACTICAL

NO.	COURSE OUTCOME
C105.1	To understand the problem solving approaches
C105.2	To learn the basic programming constructs in Python
C105.3	To practice various computing strategies for Python-based solutions to real world problems
C105.4	To use Python data structures - lists, tuples, dictionaries
C105.5	To do input/output with files in Python

YEAR/ SEM: I/I – 127E1A - MATHEMATICS - I

NO.	COURSE OUTCOME
C106.1	Understand the concepts of Summation of Series
C106.2	Understand the concepts of Cayley Hamilton Theorem and inverse matrices
C106.3	Understand the concepts of finite differences
C106.4	Understand the knowledge about expansions, hyperbolic and inverse hyperbolic functions
C106.5	Understand the concept of Leibnitz theorem and functions of two variables

YEAR/ SEM: I/I – 127S1A – OFFICE AUTOMATION

NO.	COURSE OUTCOME
C107.1	Understand the basics of computer systems and its components
C107.2	Understand and apply the basic concepts of a word processing package
C107.3	Understand and apply the basic concepts of electronic spreadsheet software
C107.4	Understand and apply the basic concepts of database management system
C107.5	Understand and create a presentation using PowerPoint tool

YEAR/ SEM: I/I – 100S1A – BASIC TAMIL - I

NO.	COURSE OUTCOME
C108.1	தமிழ் உயிரெழுத்து வடிவங்களையும், மெய்யெழுத்து வடிவங்களையும் அறிந்து கொள்வர்.
C108.2	உயிர், மெய், உயிர்மெய்த் துணைக் குறியீடுகளை அறிந்து அவற்றை எழுதும் திறன் பெறுவர்.
C108.3	ஒரு எழுத்துக்கு ஒரு ஒலி, ஒரு ஒலிக்கு ஒரு எழுத்து என்ற தமிழின் உச்சரிப்பு - வரிவடிவத் தொடர்பை உணர்வர்.
C108.4	சில அடிப்படையான மொழி இலக்கண விதிகளை அறிந்து பயன்படுத்துவர்.
C108.5	தமிழ்நாட்டுச் சூழலில் அன்றாடத் தேவைகளை நிறைவேற்றிக்கொள்ள ஏற்ற மொழிப் பயன்பாடுகளை அறிவர்.

YEAR/ SEM: I/I – **127B1A** – FUNDAMENTALS OF COMPUTERS

NO.	COURSE OUTCOME
C109.1	Fundamental concepts of computer
C109.2	Fundamental mathematical techniques and how they relate to computer
C109.3	The architecture of processing and file storage in a computer system
C109.4	Basic operations of operating systems
C109.5	A variety of software packages applicable to an academic, software development and business environment

YEAR/ SEM: I/II – 100L2A - TAMIL - II

NO.	COURSE OUTCOME
C110.1	சிற்றிலக்கியங்களின்வழி இலக்கியச் சுவையினையும் பண்பாட்டு அறிவினையும் பெறுவர்.
C110.2	புதுக்கவிதை வரலாற்றினை அறிந்து கொள்வர்.
C110.3	திராவிட இயக்க இலக்கியங்களைக் கற்பதன் மூலம் மொழி உணர்வு, இன உணர்வு, சமத்துவம் சார்ந்த சிந்தனைகளைப் பெறுவர்.
C110.4	தமிழ்மொழியைப் பிழையின்றி எழுதவும், புதிய கலைச்சொற்களை உருவாக்கவும் அறிந்து கொள்வர்.
C110.5	போட்டி தேர்வுகளில் வெற்றி பெறுவதற்குத் தமிழ்ப் பாடத்தினைப் பயன்கொள்ளும் வகையில் பயிற்சி பெறுவர்.

YEAR/ SEM: I/II – 100L2E - HINDI - II

NO.	COURSE OUTCOME
C111.1	Identifies the nature, features, elements of One Act Plays and Short Stories and skills of Translation
C111.2	Understand the theme, aim of lessons and obtain skills of Evaluation
C111.3	Evaluate the thought, ideology, expressional and artistic skills of writers and contextual meanings
C111.4	Obtain skills of summarizing, evaluating and critical study
C111.5	Employ the techniques and skills of Literature and Translation

YEAR/ SEM: I/II – 100L2Z - ENGLISH - II

NO.	COURSE OUTCOME
C112.1	Realize the importance of resilience
C112.2	Become good decision-makers
C112.3	Imbibe problem-solving skills
C112.4	Use tenses appropriately
C112.5	Use English effectively at the work place

YEAR/ SEM: I/II – 127C2A - JAVA PROGRAMMING

NO.	COURSE OUTCOME
C113.1	Understand the basic Object-oriented concepts. Implement the basic constructs of Core Java
C113.2	Implement inheritance, packages, interfaces and exception handling of Core Java
C113.3	Implement multi-threading and I/O Streams of Core Java
C113.4	Implement AWT and Event handling
C113.5	Use Swing to create GUI

YEAR/ SEM: I/II – 127C21 – JAVA PROGRAMMING PRACTICAL

NO.	COURSE OUTCOME
C114.1	Code, debug and execute Java programs to solve the given problems
C114.2	Implement multi-threading and exception-handling
C114.3	Implement functionality using String and StringBuffer classes
C114.4	Demonstrate Event Handling
C114.5	Create applications using Swing and AWT

YEAR/ SEM: I/II – 127E2A - MATHEMATICS - II

NO.	COURSE OUTCOME
C115.1	Understand the various concepts of Bernoulli's and Reduction Formula
C115.2	Understand the concepts of Fourier Series
C115.3	Understand the concepts of Non-Homogenous and Partial Differential Equations
C115.4	Understand the Laplace Transforms
C115.5	Understand the concepts of Vector Differentiation

YEAR/ SEM: I/II – 127S21 – OFFICE AUTOMATION PRACTICAL

NO.	COURSE OUTCOME
C116.1	Understand the basics of computer systems and its components
C116.2	Understand and apply the basic concepts of a word processing package
C116.3	Understand and apply the basic concepts of electronic spreadsheet software
C116.4	Understand and apply the basic concepts of database management system
C116.5	Understand and create a presentation using PowerPoint tool

YEAR/ SEM: I/II – 100S2A – BASIC TAMIL - II

NO.	COURSE OUTCOME
C117.1	தமிழ்மொழியைப் பேசவும் பிறர் பேசுவதைப் புரிந்துகொள்ளவும் திறன் பெறுதல். தமிழைப் படிக்கவும் எழுதவும் கற்றுக்கொள்வர்.
C117.2	கடிதம், விண்ணப்பம், நிகழ்ச்சிக் குறிப்பு எழுதுதல், தகவல் தொடர்புச் சாதனங்களில் தகவல் எழுதுதல் என அன்றாட வாழ்வில் தமிழ்ப் பயன்பாட்டைக் கற்றுக்கொள்வர்.
C117.3	தமிழின் இலக்கிய வளத்தோடு தமிழரின் அறக் கோட்பாடுகளையும்தமிழரின் வரலாற்று - பண்பாட்டுச் செழுமையையும் புரிந்துகொள்வர்.

PRINCE SHRI VENKATESHWARA ARTS AND SCIENCE COLLEGE

Gowrivakkam, Chennai-600073.

Affiliated to University of Madras, ISO 9001:2015 Certified Institution
Recognized by UGC under section 2(f) of UGC Act 1956

C117.4	தமிழறிஞர்களையும் படைப்பாளிகள், அரசியல் தலைவர்கள், சிறந்த ஆளுமைகளைப் பற்றி அறிந்து கொள்வர்.
C117.5	தமிழர் கலை, பண்பாடு, பழக்கவழக்கங்கள், விளையாட்டுகள், விழாக்கள், தமிழரின் தனித்த அடையாளங்கள், சிறப்புகள் ஆகியவற்றை அறிவதோடு, அவரவர் மண்ணுக்குரிய கலைப் பண்பாட்டோடு ஒப்பிட்டுப் புரிந்து கொள்வர்.

YEAR/ SEM: I/II – 127S2A – QUANTITATIVE APTITUDE

NO.	COURSE OUTCOME
C118.1	To gain knowledge on LCM and HCF and its related problems
C118.2	To get an idea of age, profit and loss related problem solving
C118.3	Able to understand time series simple and compound interests
C118.4	Understanding the problem related to probability, and series
C118.5	Able to understand graphs, charts

YEAR/ SEM: II/ III – 200L3A - TAMIL - III

NO.	COURSE OUTCOME
C201.1	தமிழக வரலாற்றை அறிந்து கொள்வர்.
C201.2	தமிழரின் வாழ்வியல் தொன்மையை அறிவர்.
C201.3	தமிழரின் பண்பாட்டுக் கூறுகளை அறிந்து கொள்வர்.
C201.4	பிற பண்பாட்டுத் தாக்கம் மற்றும் அணுகுமுறைகளை அறிவர்.
C201.5	மொழிப்பயிற்சிக்குத் தேவையான இலக்கணங்களைக் கற்பர்.

YEAR/ SEM: II/III – 200L3E - HINDI - III

NO.	COURSE OUTCOME
C202.1	Identifies the Ancient Poets their works, and impact of contemporary conditions of society and ancient History of Hindi Literature
C202.2	Understand the theme, message, expressional and artistic skills
C202.3	Evaluate the thought, ideology, expressional and artistic skills of writers and contextual meanings and literary trends of Ancient History
C202.4	Obtain skills of summarizing, evaluating and critical study and of poems
C202.5	Employ the techniques of interpretation and contextual meaning of texts

YEAR/ SEM: II/III – 200L3Z – ENGLISH - III

NO.	COURSE OUTCOME
C203.1	Listen actively
C203.2	Develop interpersonal relationship skills
C203.3	Acquire self-confidence to cope with stress
C203.4	Master grammar skills
C203.5	Carry out business communication effectively

YEAR/ SEM: II/III – 227C3A – DATA STRUCTURES

NO.	COURSE OUTCOME
C204.1	To introduce the concepts of Data structures and to understand simple linear data structures
C204.2	Learn the basics of stack data structure, its implementation and application
C204.3	Use the appropriate data structure in context of solution of given problem and demonstrate a familiarity with major data structures
C204.4	To introduce the basic concepts of algorithms
C204.5	To give clear idea on algorithmic design paradigms like Divide and conquer and Backtracking

YEAR/ SEM: II/III – 227C31 – DATA STRUCTURES PRACTICAL

NO.	COURSE OUTCOME
C205.1	Implement data structures using Java
C205.2	Implement various types of linked lists and their applications
C205.3	Implement Tree Traversals
C205.4	Implement Search Operations in Graphs
C205.5	Implement various algorithms in Java

YEAR/ SEM: II/III – 227E3B - STATISTICS - I

NO.	COURSE OUTCOME
C206.1	Know the uses of statistics in society
C206.2	Organize, manage and present data
C206.3	Analyze the statistical data graphically using frequency distribution and cumulative frequency distribution
C206.4	Analyze statistical data using measures of central tendency, dispersion and location
C206.5	To understand correlation between continuous variables and association between categorical variables

YEAR/ SEM: II/III – 227S31 – WEB PAGE DESIGN PRACTICAL

NO.	COURSE OUTCOME
C207.1	Define the principle of Web page design
C207.2	Define the basics in web design
C207.3	Visualize the basic concept of HTML
C207.4	Recognize the elements of HTML
C207.5	Introduce basics concept of CSS

YEAR/ SEM: II/III – 227S32 – DESKTOP PUBLISHING PRACTICAL

NO.	COURSE OUTCOME
C208.1	Understand basics of computer and its related terminology
C208.2	Write, Edit & Print documents using MS-WORD & EXCEL
C208.3	Understand various software used for Desktop Publishing
C208.4	Create and design documents with text and graphics like newspaper ad, wedding cards, visiting cards, greeting cards etc.
C208.5	Using PageMaker, CorelDraw & Photoshop. Understand Color concept in Printing

YEAR/ SEM: II/IV – 200L4A – TAMIL - IV

NO.	COURSE OUTCOME
C209.1	தாய்மொழி வழியாக அறிவியல் பற்றிச் சிந்திக்கும் திறன் பெற்றிருப்பர்.
C209.2	அறிவியல் கலைச்சொல்லாக்கம் பற்றிய விதிகள், நுணுக்கங்களைத் தெரிந்திருப்பர்.
C209.3	அறிவியல் தமிழ் வளர்ச்சியில் மொழிபெயர்ச்சியின் பங்கு குறித்து அறிந்திருப்பர்.
C209.4	மொழியறிவோடு சிந்தனைத்திறனைப் பெறுவர்.
C209.5	மொழிப்பயிற்சிக்குத் தேவையான இலக்கணங்களைக் கற்பர்.

YEAR/ SEM: II/IV – 200L4E – HINDI - IV

NO.	COURSE OUTCOME
C210.1	Evaluate the poetic skills of poets and their poems
C210.2	Identify the conditions inspire the poets and writers
C210.3	Enumerate the literary trends and different literary forms
C210.4	Understand the human, social, ethical and literary values
C210.5	Obtain the knowledge to evaluate and critical analysis of literary works

YEAR/ SEM: II/IV – 200L4Z – ENGLISH - IV

NO.	COURSE OUTCOME
C211.1	Determine their goals
C211.2	Identify the value of integrity
C211.3	Deal with emotions
C211.4	Frame grammatically correct sentences
C211.5	Write cohesive reports

YEAR/ SEM: II/IV – 227C4A – DATA SCIENCE ESSENTIALS

NO.	COURSE OUTCOME
C212.1	Understand the fundamental concepts of data science
C212.2	Evaluate the data analysis techniques for applications handling large data and Demonstrate the data science process
C212.3	Understand the concept of machine learning used in the data science process
C212.4	Visualize and present the inference using various tools
C212.5	Learn to think through the ethics surrounding privacy, data sharing

YEAR/ SEM: II/IV – 227C41 – DATA SCIENCE USING PYTHON PRACTICAL

NO.	COURSE OUTCOME
C213.1	Demonstrate proficiency in handling of loops and creation of functions
C213.2	Identify the methods to create and manipulate lists, tuples and dictionaries
C213.3	Interpret the concepts of Object-Oriented Programming as used in Python
C213.4	Discover the commonly used operations involving regular expressions and file System
C213.5	Implementing Data Aggregation and Group-wise Operations

YEAR/ SEM: II/IV – 227E4B – STATISTICS - II

NO.	COURSE OUTCOME
C214.1	To understand the basic concept of Probability
C214.2	To identify the characteristics of different discrete and continuous distributions.
C214.3	To identify the type of statistical situation to which different distributions can be applied. comprehend the Sampling distributions.
C214.4	To understand how to apply statistical tests to get information from data
C214.5	To test the significant difference between means

YEAR/ SEM: II/IV – 227S4A – EMOTIONAL INTELLIGENCE

NO.	COURSE OUTCOME
C215.1	Understand Emotional Intelligence Benefits and Importance
C215.2	Understand Personality Analysis such as Listening and Will power
C215.3	Understand Negative Traits such as Anger management and Adapting to Loneliness
C215.4	Understand Positive Traits such as Humor and Happiness
C215.5	Understand about Self-Analysis

YEAR/ SEM: II/IV – 227S4B – TECHNICAL WRITING

NO.	COURSE OUTCOME
C216.1	Learn to analyze communication-related problems
C216.2	Learn to develop solutions through the composition of technical documents from a number of genres and within several settings (i.e., print, web, interactive software) and contexts (e.g., academic, corporate, non-profit, governmental)
C216.3	Explore theoretical and professional strategies in order to discover how to clearly identify and address audiences and stakeholders, organizational contexts, and ethical concerns in the act of communication
C216.4	Understand the roles and responsibilities of writers, editors, etc.
C216.5	Understand different stages of Technical Writing

YEAR/ SEM: II/IV – 227V4A – ENVIRONMENTAL STUDIES

NO.	COURSE OUTCOME
C217.1	To know the scope and importance of environmental studies and to create public awareness for environmental protection
C217.2	To Elucidate the problems created by the over utilization of resources and to suggest alternate energy to meet our energy crisis/demand
C217.3	To give a neat sketch explanation of ecosystem, ecological succession, ecological pyramid, food chain and food web
C217.4	To know the different methods of biodiversity conservation
C217.5	To analyse the effects of pollution and the role of individual for pollution control programme

YEAR/ SEM: III/ V – - OPERATING SYSTEMS

NO.	COURSE OUTCOME
C301.1	Understand the structure and functions of Operating System
C301.2	Compare the performance of Scheduling Algorithms
C301.3	Understand Process Synchronization
C301.4	Analyze memory management techniques
C301.5	Understand I/O Systems

YEAR/ SEM: III/V – - COMPUTER NETWORKS

NO.	COURSE OUTCOME
C302.1	Analyze different network models
C302.2	Understand Different Transmission Media
C302.3	Analyse Data Link Layer Protocol
C302.4	Analyse Network Layer Protocol
C302.5	Analyse Transport Layer Protocol

PRINCE SHRI VENKATESHWARA ARTS AND SCIENCE COLLEGE

Gowrivakkam, Chennai-600073.

Affiliated to University of Madras, ISO 9001:2015 Certified Institution
Recognized by UGC under section 2(f) of UGC Act 1956

YEAR/ SEM: III/V –   – DATA VISUALIZATION

NO.	COURSE OUTCOME
C303.1	Design and create data visualizations and Conduct exploratory data analysis using visualization
C303.2	Craft visual presentations of data for effective communication and Use knowledge of perception and cognition to evaluate visualization design alternatives
C303.3	Design and evaluate color palettes for visualization based on principles of perception
C303.4	Apply data transformations such as aggregation and filtering for visualization
C303.5	Use Python to develop interactive visualizations

YEAR/ SEM: III/V –   – DATA VISUALIZATION LAB

NO.	COURSE OUTCOME
C304.1	Describe the main concepts of data visualization
C304.2	Create ad-hoc reports, data visualizations, and dashboards using Tableau Desktop
C304.3	Identifying stories and insights in data
C304.4	Preparing data for visualization
C304.5	Creating several different charts using Tableau

YEAR/ SEM: III/V –   – MOBILE APPLICATION DEVELOPMENT FOR MACHINE LEARNING

NO.	COURSE OUTCOME
C305.1	Android App Development with Machine Learning
C305.2	Analyse Anatomy of an Android Application
C305.3	Targeted user behavior patterns
C305.4	Provide suggestions as well as recommendations for search requests
C305.5	Suggest apps which will reduce human interference

YEAR/ SEM: III/V –   - MOBILE APPLICATION DEVELOPMENT FOR MACHINE LEARNING LAB

NO.	COURSE OUTCOME
C306.1	Develop components and different Layouts for mobile application development framework for android
C306.2	Develop Simple GUI application with the Use of Built in components and widgets
C306.3	Create databases to store application data locally
C306.4	Test and Show the results on emulators or on physical handheld devices
C306.5	Develop TensorFlow Regression App

YEAR/ SEM: III/V –   – VALUE EDUCATION

NO.	COURSE OUTCOME
C307.1	Understand the purpose and significance of Value education in the present world
C307.2	Understand the salient features of life
C307.3	Understand about the Human Rights
C307.4	Understand the Environmental and Ecological Balance
C307.5	Understand the Social Evils

YEAR/ SEM: III/VI –   – INTRODUCTION TO CLOUD COMPUTING

NO.	COURSE OUTCOME
C308.1	Learn theTypes of Cloud
C308.2	Understand Data Store in Cloud
C308.3	Identify the Risks in Cloud Computing
C308.4	Analyse the Cloud Computing Security
C308.5	Learn about the different Cloud Computing Applications

YEAR/ SEM: III/VI –   – IOT AND ITS APPLICATIONS

NO.	COURSE OUTCOME
C309.1	Use of Devices, Gateways and Data Management in IoT
C309.2	Understand the Architectural Overview of IoT
C309.3	Design IoT applications in different domain and be able to analyze their performance
C309.4	Identify the different Applications of IoT in various fields
C309.5	Implement basic IoT applications on embedded platform

YEAR/ SEM: III/VI –   – MACHINE LEARNING

NO.	COURSE OUTCOME
C310.1	Implement different machine learning algorithm techniques
C310.2	Apply the algorithms to a real-world problem
C310.3	Optimize the models learned and report on the expected accuracy that can be achieved by applying the models
C310.4	Apply appropriate data sets to the Machine Learning algorithms
C310.5	Identify and apply Machine Learning algorithms to solve real world problems

YEAR/ SEM: III/VI –   – MACHINE LEARNING LAB

NO.	COURSE OUTCOME
C311.1	Design and evaluate the unsupervised models through python in built functions
C311.2	Evaluate the machine learning model algorithms by python programming
C311.3	Design various reinforcement algorithms
C311.4	Apply the various reinforcement algorithms to solve real time complex problems
C311.5	Design and develop the code for the recommender system using Natural Language processing

PRINCE SHRI VENKATESHWARA ARTS AND SCIENCE COLLEGE

Gowrivakkam, Chennai-600073.
Affiliated to University of Madras, ISO 9001:2015 Certified Institution
Recognized by UGC under section 2(f) of UGC Act 1956

YEAR/ SEM: III/VI –   – BLOCK CHAIN TECHNOLOGY

NO.	COURSE OUTCOME
C312.1	State the basic concepts of block chain
C312.2	Paraphrase the list of consensus
C312.3	Demonstrate and Interpret working of Hyper ledger Fabric
C312.4	Implement SDK composer too
C312.5	Explain the Digital identity for government

YEAR/ SEM: III/VI –   – MINI PROJECT

NO.	COURSE OUTCOME
C313.1	Understand the real time software development environment
C313.2	Efficient in Modularization and Integration
C313.3	Gain a thorough knowledge in the problem, he/she has selected
C313.4	Gain a thorough knowledge in the language / software, he/she is using
C313.5	Able to work in team to meet the stated objectives of the project