



ST. JOSEPH'S COLLEGE (ARTS & SCIENCE)

Affiliated to University of Madras | 2(f) Status of UGC Act, 1956

ISO 9001 : 2015 Certified Institution

Kovur, Chennai – 600 128

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COURSE OUTCOMES (CO):

SEMESTER I

SUBJECT NAME: - : PYTHON PROGRAMMING

SUBJECT CODE: 125C1A

CO1	Develop and execute simple Python programs
CO2	Write simple Python programs using conditionals and looping for solving problems
CO3	Decompose a Python program into functions
CO4	Represent compound data using Python lists, tuples, dictionaries etc.
CO5	Read and write data from/to files in Python programs

SUBJECT NAME: CORE- II PYTHON PROGRAMMING PRACTICAL

SUBJECT CODE: 125C11

CO1	To understand the problem solving approaches
CO2	To learn the basic programming constructs in Python
CO3	To practice various computing strategies for Python-based solutions to real world problems
CO4	To use Python data structures - lists, tuples, dictionaries.
CO5	To do input/output with files in Python.

SUBJECT NAME: ALLIED I – MATHEMATICS–I

SUBJECT CODE: 125E1A

CO1	To acquire the basic knowledge about numerical methods.
CO2	To understand the concept of matrices.
CO3	To get the knowledge about the series.
CO4	To know the usage of trigonometric functions
CO5	To know the concepts of differentiation



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SUBJECT NAME: PHYSICS-I **SUBJECT CODE: 125E1C**

CO 1	Explore the fundamental concepts of physics
CO 2	Import knowledge about the importance of material properties, heat, sound, optics, atomic and nuclear physics.
CO 3	Understand the energy involved in nuclear reaction
CO 4	Carry out the practical by applying these concepts
CO 5	Get depth knowledge of physics in day today life

SUBJECT NAME: OFFICE AUTOMATION **SUBJECT CODE: 125S1A**

CO 1	Understand the basics of computer systems and its components.
CO 2	Understand and apply the basic concepts of a word processing package.
CO 3	Understand and apply the basic concepts of electronic spreadsheet software.
CO 4	Understand and apply the basic concepts of database management system
CO 5	Understand and create a presentation using PowerPoint tool.

SUBJECT NAME: FUNDAMENTALS OF COMPUTERS **SUBJECT CODE: 125B1A**

CO 1	Fundamental concepts of computer
CO 2	Fundamental mathematical techniques and how they relate to computer
CO 3	The architecture of processing and file storage in a computer system
CO 4	Basic operations of operating systems
CO 5	A variety of software packages applicable to an academic, software development and business environment



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SEMESTER II

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SUBJECT NAME: TAMIL - I1 SUBJECT CODE: 100L2A	
CO 1	சுற்றிலக்கியங்கின் வழி இலக்கியச்சுவையினையும் பண்பாட்டு அறிவினையும் பெறுவர்
CO 2	புதுக்கவிதை வரலாற்றினை அறிந்து கொள்வர்
CO 3	திராவிட இயக்க இலக்கியங்களைக்கற்பதன் மூலம் மொழி உணர்வு, இன உணர்வு, சமத்துவம் சார்ந்த சிந்தனையும் பெறுவர்
CO 4	தமிழ் மொழியைப் பிழையின்றி எழுதவும், புதிய கலைச்சொற்களை உருவாக்கவும் அறிந்து கொள்வர்
CO 5	போட்டித் தேர்வுகளில் வெற்றி பெறுவதற்கு தமிழ்ப் பாடத்தினைப் பயன்கொள்ளும் வகையில் பயிற்சி பெறுவர்

SUBJECT NAME: ENGLISH – I1 SUBJECT CODE: 100L2Z	
CO 1	Realize the importance of resilience
CO 2	Become good decision-makers
CO 3	Imbibe problem-solving skills
CO 4	Use tenses appropriately
CO 5	Use English effectively at the work place.

SUBJECT NAME: INTRODUCTION TO COMPUTER ARCHITECTURE AND MICROPROCESSOR SUBJECT CODE: 125C2A	
CO1	Remember the Basic binary codes and their conversions. Binary concepts are used in Microprocessor programming and provide a good understanding of the architecture of 8085.
CO2	Understanding the 8085 instruction set and their classifications, enables the students to write the programs easily on their own using different logic.
CO3	Applying different types of instructions to convert binary codes and analysing the outcome. The instruction set is applied to develop programs on multibyte arithmetic operations.
CO4	Analyse how peripheral devices are connected to 8085 using Interrupts and DMA controller.



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SUBJECT NAME: ALLIED - MATHEMATICS – II SUBJECT CODE: 125E2A

CO1	To acquire the basic knowledge on Integral Calculus.
CO2	To understand the concept of Fourier series
CO3	To understand the concept of Ordinary differential equations and Partial Differential equations.
CO4	To facilitate the understanding of the concept Laplace transforms and its inverse
CO5	To understand various techniques in vector differentiation

SUBJECT NAME: INTRODUCTION TO COMPUTER ARCHITECTURE AND MICROPROCESSOR PRACTICAL SUBJECT CODE: 125C21

CO1	Remember the Basic binary codes and their conversions. Binary concepts are used in Microprocessor programming and provide a good understanding of the architecture of 8085.
CO2	Understanding the 8085-instruction set and their classifications, enables the students to write the programs easily on their own using different logic.
CO3	Applying different types of instructions to convert binary codes and analysing the outcome. The instruction set is applied to develop programs on multibyte arithmetic operations
CO4	Analyse how peripheral devices are connected to 8085 using Interrupts and DMA controller.

SUBJECT NAME: PHYSICS-II SUBJECT CODE: 125E2C

CO 1	Acquire knowledge on elementary ideas of electricity and magnetism
CO 2	Emphasize the significance of laws involved in electric circuits
CO 3	Understand the basics of operational amplifier
CO 4	Apply the principles of electronics in day to life
CO 5	Apply the characteristics of electronic devices in practical.



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SUBJECT NAME: QUANTITATIVE APTITUDE

SUBJECT CODE: 125S2A

CO 1	To gain knowledge on LCM and HCF and its related problems
CO 2	To get an idea of age, profit and loss related problem solving
CO 3	Able to understand time series simple and compound interests
CO 4	Understanding the problem related to probability, and series
CO 5	Able to understand graphs, charts

SUBJECT NAME: PROBLEM SOLVING TECHNIQUES

SUBJECT CODE: 125S2B

CO 1	Understand the systematic approach to problem solving
CO 2	Know the approach and algorithms to solve specific fundamental problems
CO 3	Understand the efficient approach to solve specific factoring-related problems
CO 4	Understand the efficient array-related techniques to solve specific problems.
CO 5	Understand the efficient methods to solve specific problems related to text processing. Understand how recursion works

SEMESTER III

SUBJECT NAME: TAMIL - I11

SUBJECT CODE: 100L3A

CO1	தமிழக வரலாற்றை அறிந்துகொள்வர்.
CO2	தமிழரின் வாழ்வியல் தொன்மையை அறிவர்.
CO3	தமிழரின் பண்பாட்டுக் கூறுகளை அறிந்துகொள்வர்.
CO4	பிற பண்பாட்டுத் தாக்கம் மற்றும் அணுகுமுறை அறிவர்.
CO5	மொழிப்பயிற்சிக்குத் தேவையான இலக்கணங்களைக் கற்பர்.



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SUBJECT NAME: ENGLISH – 111 SUBJECT CODE: 100L3Z

CO1	Determine their goals.
CO2	Identify the value of integrity.
CO3	Frame grammatically correct sentences.
CO4	Master grammar skills.
CO5	Write cohesive reports.

SUBJECT NAME: JAVA PROGRAMMING SUBJECT CODE: 225C3A

CO1	Understand the basic Object-oriented concepts. Implement the basic constructs of Core Java
CO2	Implement inheritance, packages, interfaces and exception handling of Core Java.
CO3	Implement multi-threading and I/O Streams of Core Java
CO4	Implement AWT and Event handling.
CO5	Use Swing to create GUI.

SUBJECT NAME: ALLIED III-STATISTICS-I SUBJECT CODE: 225E3B

CO1	Know the uses of statistics in society
CO2	Organize, manage and present data
CO3	Analyze the statistical data graphically using frequency distribution and cumulative frequency distribution.
CO4	Analyze statistical data using measures of central tendency, dispersion and location
CO5	To understand correlation between continuous variables and association between categorical variables



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SUBJECT NAME: JAVA PROGRAMMING PRACTICAL SUBJECT CODE: 225C31

CO1	Code, debug and execute Java programs to solve the given problems
CO2	Implement multi-threading and exception-handling
CO3	Implement functionality using String and StringBuffer classes
CO4	Implement functionality using String and StringBuffer classes
CO5	Create applications using Swing and AWT

SUBJECT NAME: CORE PRACTICAL – IV- WEB PAGE DESIGN PRACTICAL SUBJECT CODE: 225S31

CO1	Define the principle of Web page design
CO2	Define the basics in web design
CO3	Visualize the basic concept of HTML.
CO4	Recognize the elements of HTML.
CO5	Introduce basics concept of CSS.

SUBJECT NAME: DESKTOP PUBLISHING PRACTICAL SUBJECT CODE: 225S32

CO 1	Understand basics of computer and its related terminology.
CO 2	Write, Edit & Print documents using MS-WORD & EXCEL
CO 3	Understand various software used for Desktop Publishing and would be able to create and design documents with text and graphics like newspaper ad, wedding cards, visiting cards, greeting cards etc
CO 4	Using PageMaker, CorelDraw & Photoshop. Understand Colour concept in Printing



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SEMESTER IV

SUBJECT NAME: TAMIL - I11
SUBJECT CODE: 100L4A

CO1	தாய்மொழி வழியாக அறிவியல் பற்றிச் சிந்திக்கும் திறன் பெற்றிருப்பர்.
CO2	அறிவியல் கலைச் சொல்லாக்கம் பற்றிய விதிகள், நுணுக்கங்களைத் தெரிந்திருப்பர்
CO3	அறிவியல் தமிழ் வளர்ச்சியில் மொழிபெயர்ப்பின் பங்கு குறித்து அறிந்திருப்பர்.
CO4	மொழியறிவோடு சிந்தனைத்திறனைப் பெறுவர்.
CO5	மொழிப்பயிற்சிக்குத் தேவையான இலண்கங்களை கற்பர்.

SUBJECT NAME: ENGLISH – I11
SUBJECT CODE: 100L4Z

CO1	Listen actively.
CO2	Develop interpersonal relationship skills.
CO3	Acquire self-confidence to cope with stress.
CO4	Master grammar skills.
CO5	Carry out business communication effectively.

SUBJECT NAME: DATA STRUCTURES AND ALGORITHMS
SUBJECT CODE: 225C4A

CO1	To introduce the concepts of Data structures and to understand simple linear data structures.
CO2	Learn the basics of stack data structure, its implementation and application
CO3	Use the appropriate data structure in context of solution of given problem and demonstrate a familiarity with major data structures.
CO4	To introduce the basic concepts of algorithms
CO5	To give clear idea on algorithmic design paradigms like Divide and conquer and Backtracking,



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SUBJECT NAME: ALLIED IV - STATISTICS-II SUBJECT CODE: 225E4B

CO1	Understand Probability and its properties
CO2	Learn characteristics of different discrete and continuous distributions.
CO3	Know situation to which different distributions can be applied.
CO4	Comprehend the Sampling distributions.
CO5	Learn how to apply statistical tests to get information from data

SUBJECT NAME: DATA STRUCTURES AND ALGORITHMS PRACTICAL SUBJECT CODE: 225C41

CO1	Implement data structures using Java
CO2	Implement various types of linked lists and their applications
CO3	Implement Tree Traversals
CO4	Implement various algorithms in Java
CO5	Implement different sorting and searching algorithms

SUBJECT NAME: EMOTIONAL INTELLIGENCE SUBJECT CODE: 225S4A

CO1	After Completion of Subjects students understand and application of Emotional Intelligence.
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SUBJECT NAME: TECHNICAL WRITING SUBJECT CODE: 225S4B

CO1	Students will learn to analyse communication-related problems and 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)
CO2	Students will explore rhetorical 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



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SEMESTER V

SUBJECT NAME: COMPUTER NETWORK

SUBJECT CODE: 325E5A

CO1	To Understand the basics of Computer Network architecture, OSI and TCP/IP reference models
CO2	To gain knowledge on Telephone systems and Satellite communications
CO3	To impart the concept of Elementary data link protocols
CO4	To analyse the characteristics of Routing and Congestion control algorithms
CO5	To understand network security and define various protocols such as FTP, HTTP, Telnet, DNS

SUBJECT NAME: OPERATING SYSTEM

SUBJECT CODE: 325C5A

CO1	Understand the structure and functions of Operating System
CO2	Compare the performance of Scheduling Algorithms
CO3	Analyze resource management techniques
CO4	To learn the Process Management and Scheduling Algorithms
CO5	To gain insight on I/O and File management techniques

SUBJECT NAME: RELATIONAL DATABASE MANAGEMENT SYSTEM

SUBJECT CODE: 325C5B

CO1	Describe basic concepts of database system
CO2	Design a Data model and Schemas in RDBMS
CO3	Competent in use of SQL
CO4	Analyze functional dependencies for designing robust Database
CO5	Apply Normalization techniques to normalize a database.



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SUBJECT NAME: CORE PRACTICAL – V OPERATING SYSTEM PRACTICAL SUBJECT CODE: 325C51

CO1	Understand the process management policies and scheduling process by CPU.
CO2	Analyze the memory management and its allocation policies.
CO3	To evaluate the requirement for process synchronization.
CO4	To learn Process management and scheduling.
CO5	To understand the concepts and implementation of memory management policies.

SUBJECT NAME: RELATIONAL DATABASE MANAGEMENT SYSTEM PRACTICAL SUBJECT CODE: 325C52

CO1	Implement the DDL , DML Commands and Constraints
CO2	Create, Update and query on the database
CO3	Design and Implement simple project with Front End and Back End.
CO4	Learn the various DDL and DML commands
CO5	Understand queries in SQL to retrieve information from data base

SUBJECT NAME: SOFTWARE ENGINEERING SUBJECT CODE: 325E5D

CO1	The students should be able to specify software requirements, design the software using tools
CO2	To write test cases using different testing techniques.
CO3	To introduce the software development life cycles
CO4	To introduce concepts related to structured and objected oriented analysis & design
CO5	To provide an insight into UML and software testing techniques



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SEMESTER VI

SUBJECT NAME: PROGRAMMING IN ASP.NET

SUBJECT CODE: 325C6A

CO 1	To identify and understand the goals and objectives of the .NET framework and ASP.NET with C# language
CO 2	To develop web application using various controls
CO 3	To analyse C# programming techniques in developing web applications
CO 4	To assess a Web application using Microsoft ADO.NET.
CO 5	To develop a software to solve real-world problems using ASP.NET

SUBJECT NAME: PROGRAMMING IN ASP.NET PRACTICAL

SUBJECT CODE: 325C61

CO 1	To identify and understand the goals and objectives of the .NET framework and ASP.NET with C# language.
CO 2	To develop web application using various controls.
CO 3	To analyse C# programming techniques in developing web applications
CO 4	To assess a Web application using Microsoft ADO.NET
CO 5	To develop a software to solve real-world problems using ASP.NET

SUBJECT NAME: PROJECT WITH VIVA VOCE

SUBJECT CODE: 325C62

CO 1	Project Reports: Evaluation based on completeness, clarity, and adherence to guidelines.
CO 2	Presentations: Assessment of communication skills and ability to convey complex ideas.
CO 3	Contributions: Peer evaluations and self-assessments to gauge collaboration.
CO 4	Final Deliverables: Quality of the final product, including functionality and user experience
CO 5	Create applications using Swing and AWT



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SUBJECT NAME: INTRODUCTION TO DATA SCIENCE

SUBJECT CODE: 325E6B

CO1	Clean and reshape messy datasets
CO2	Use exploratory tools such as clustering and visualization tools to analyze data
CO3	Perform linear regression analysis
CO4	Use methods such as logistic regression, nearest neighbours, decision trees, support vector machines, and neural networks to build a classifier
CO5	Apply dimensionality reduction tools such as principal component analysis

SUBJECT NAME: CLOUD COMPUTING

SUBJECT CODE: 325E6D

CO1	To understand the concepts and technologies involved in Cloud Computing.
CO2	To understand the concepts of various cloud services and their implementation in the Amazon, Microsoft and Google cloud computing platforms.
CO3	To understand the aspects of application design for the Cloud.
CO4	To understand the concepts involved in benchmarking and security on the Cloud.
CO5	To understand the way in which the cloud is used in various domains.

SUBJECT NAME: PROFESSIONAL COMPETENCY SKILL COURSE ADVANCED EXCEL

SUBJECT CODE: 325S61

CO1	Handle large amounts of data
CO2	Aggregate numeric data and summarise into categories and subcategories
CO3	Filtering, sorting, and grouping data or subsets of data
CO4	Create pivot tables to consolidate data from multiple files
CO5	Presenting data in the form of charts and graphs