



# SRI MALOLAN COLLEGE OF ARTS AND SCIENCE

(Affiliated to University of Madras)

(Promoted by Sri Ahobila Mutt)

## 2.6.1 PSOs and COs 2023 Onwards

Programme Specific Outcomes and Course Outcomes

Department	Programme Specific Outcomes
BCA	<b>PSO1:</b> To get students sufficient knowledge and skills enabling them to undertake further studies in Computer Applications and Information Technology
	<b>PSO2:</b> Students Understood formulate and develop programming model with logical approaches to Address issues arising in social science, business and other contexts
	<b>PSO3:</b> Students Acquired good knowledge and understanding to solve specific theoretical and applied problems in advanced areas of Computer science and Industrial statistics
	<b>PSO4:</b> Students are developed a range of generic skills helpful in employment, internships& societal activities



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Programme Name: BCA		Programme Code: UGCA008	
Subject Code and Subject Name	Course Outcomes		
<b>I Year - I Semester</b>			
<b>100L1A</b> <b>பொதுத்தமிழ்-I</b>	<b>CO1:</b> சங்கஇலக்கியத்தில் காணப்பெறும் வாழ்வியல் சிந்தனைகளை அறிந்துகொள்வர்		
	<b>CO2:</b> அறஇலக்கியம் மற்றும் தமிழ்காப்பியங்களின் வழிவாழ்வியல் சிந்தனைகளைப் பெறுவர்		
	<b>CO3:</b> பக்தி இலக்கியங்களைக் கற்பதன் மூலம் பக்தி நெறியினையும், பகுத்தறிவு இலக்கியங்களைக் கற்பதன்வழி நல்லிணக்கத்தையும் தெரிந்து பின்பற்றுவர்		
	<b>CO4:</b> மொழியறிவோடு சிந்தனைத் திறனைப் பெறுவார்		
	<b>CO5:</b> மொழிப்பயிற்சிக்குத் தேவையான இலக்கணங்களைக் கற்பர்		
<b>100L1G</b> <b>Sanskrit-I</b>	<b>CO1:</b> Remember the usage of grammatical tenses in constructing sentences in dialogue		
	<b>CO2:</b> Apply the rules of usage in practice exercises and identify errors		
	<b>CO3:</b> Explain the nuances in the usage of various grammatical tenses and aspects		
	<b>CO4:</b> Demonstrate knowledge of various expressions of opinion, emotions, cause, effect, purpose, and hypothesis in French		
	<b>CO5:</b> Communicate in French and summarize the given text		
<b>100L1Z</b> <b>General English-I</b>	<b>CO1:</b> Acquire selfawareness and positive thinking required in various life situations		
	<b>CO2:</b> Acquire the attribute of empathy		
	<b>CO3:</b> Acquire creative and critical thinking abilities		
	<b>CO4:</b> Development and integrate the use of four language skills i.e., listening, speaking, reading and writing		
	<b>CO5:</b> Learn basic grammar		
<b>120C1A</b> <b>Python Programming</b>	<b>CO1:</b> Develop and execute simple Python programs		
	<b>CO2:</b> Write simple Python programs using conditionals and looping for solving problems		
	<b>CO3:</b> Decompose a Python program into functions		
	<b>CO4:</b> Represent compound data using Python lists, tuples, dictionaries etc.		
	<b>CO5:</b> Read and write data from/to files in Python programs		

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<b>120C11</b> <b>Python Programming</b> <b>Practical</b>	<b>CO1:</b> To understand the problem-solving approaches
	<b>CO2:</b> To learn the basic programming constructs in Python
	<b>CO3:</b> Practice various computing strategies for Python-based solutions to real world problems
	<b>CO4:</b> To use Python data structures - lists, tuples, dictionaries
	<b>CO5:</b> To do input/output with files in Python
<b>120E1A</b> <b>Mathematics-I</b>	<b>CO1:</b> Understand the concepts of Summation of Series
	<b>CO2:</b> Understand the concepts of Cayley Hamilton Theorem and inverse matrices
	<b>CO3:</b> Understand the concepts of finite differences
	<b>CO4:</b> Understand the knowledge about expansions, hyperbolic and inverse hyperbolic functions
	<b>CO5:</b> Understand the concept of Leibnitz theorem and functions of two variables
<b>120B1A</b> <b>Fundamentals of</b> <b>Computers</b>	<b>CO1:</b> Fundamental concepts of computer
	<b>CO2:</b> Fundamental mathematical techniques and how they relate to computer
	<b>CO3:</b> The architecture of processing and file storage in a computer
	<b>CO4:</b> Basic operations of operating systems
	<b>CO5:</b> A variety of software packages applicable to an academic, software development and business environment
<b>120S1A</b> <b>Office Automation</b>	<b>CO1:</b> Understand the basics of computer systems and its components
	<b>CO2:</b> Understand and apply the basic concepts of a word processing package
	<b>CO3:</b> Understand and apply the basic concepts of electronic spreadsheet software
	<b>CO4:</b> Understand and apply the basic concepts of database management system
	<b>CO5:</b> Understand and create a presentation using PowerPoint tool
<b>100L1M</b> <b>Advanced Tamil -I</b>	<b>CO1:</b> சமகால இலக்கியங்களின் நோக்குகள் -போக்குகள் குறித்து மாணவர்கள் அறிந்து கொள்வர்
	<b>CO2:</b> நாட்டுப்புற மக்களின் வாழ்வியல்-அறிவாற்றல் இன்றைய நிலை குறித்து சிந்திப்பர்
	<b>CO3:</b> தங்கள் கற்பனை வளத்தை மாணவர்கள் பெருக்கிக் கொள்வர்
	<b>CO4:</b> மொழியில் பிழைகள் நேர வண்ணம் எழுத கற்றுக்கொள்வதோடு திறனாய்வு செய்யும் ஆற்றல் பெறுவர்
	<b>CO5:</b> திரைப்படம், சின்னத்திரை, தொலைக்காட்சி உள்ளிட்ட ஊடகங்களில் பாடல், இசை, எழுத்து என பல்வேறு வேலை வாய்ப்புகள் பெறுவர்

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I Year - II Semester	
<b>100L2A</b> <b>பொதுத்தமிழ்- II</b>	<b>CO1:</b> புதுகவிதை வரலாற்றினை அறிந்துகொள்ளுதல்
	<b>CO2:</b> சிற்றிலக்கியங்களின்வழி இலக்கிய சுவையினையும் பண்பாட்டு அறிவினையும் பெறுவர்
	<b>CO3:</b> தமிழ்மொழியினை பிழையின்றி எழுதவும் புதிய கலைச்சொற்களை உருவாக்கவும் அறிந்துகொள்வர்
	<b>CO4:</b> போட்டித் தேர்வுகளில் வெற்றி பெறுவதற்குத் தமிழ்ப்படத்தினைப் பயன்கொள்ளும் வகையில் பயிற்சி பெறுவர்
<b>100L2G</b> <b>Sanskrit-II</b>	<b>CO1:</b> Understand and apply grammatical concepts in drafting sentences and paragraphs
	<b>CO2:</b> Apply the rules and regulations in handling usage of Lrtlakara and Asmad Sabdah, practice exercises and identify errors
	<b>CO3:</b> Form an idea of the aesthetic expressions that make Sanskrit composition get the position of pride in world literature
	<b>CO4:</b> Demonstrate knowledge of various expressions of opinion, emotions, cause, effect, purpose, and hypothesis in Sanskrit
	<b>CO5:</b> Appreciate the art of employment of Alankaras in a prose form of poetry
<b>100L2Z</b> <b>English-II</b>	<b>CO1:</b> Realize the importance of resilience
	<b>CO2:</b> Become good decision-makers
	<b>CO3:</b> Imbibe problem-solving skills
	<b>CO4:</b> Use tenses appropriately
	<b>CO5:</b> Use English effectively at the work place
<b>120C2A</b> <b>Object Oriented Programming using C++</b>	<b>CO1:</b> Explain the various basic concepts of Object-orientation
	<b>CO2:</b> Write programs to implement static binding
	<b>CO3:</b> Write programs to implement inheritance and dynamic binding
	<b>CO4:</b> Write programs to implement templates and exception handling and learn how to use STL class library
	<b>CO5:</b> Write programs implementing File and Stream I/O
<b>120C21</b> <b>Object Oriented Programming using C++ Practical</b>	<b>CO1:</b> Design and create classes. Implement Stream I/O as appropriate
	<b>CO2:</b> Design appropriate data members and member functions
	<b>CO3:</b> Implement functions, friend functions, static members, constructors and compile-time polymorphism
	<b>CO4:</b> Implement inheritance, run-time polymorphism and destructors
	<b>CO5:</b> Implement templates and exceptions. Use STL class library. Implement File I/O

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<b>120E2A</b> <b>Mathematics-II</b>	<b>CO1:</b> Understand the various concepts of Bernoulli's and Reduction Formula
	<b>CO2:</b> Understand the concepts of Fourier Series
	<b>CO3:</b> Understand the concepts of Non-Homogenous and Partial Differential Equations
	<b>CO4:</b> Understand the Laplace Transforms
	<b>CO5:</b> Understand the concepts of Vector Differentiation
<b>120S21</b> <b>Office Automation</b> <b>Practical</b>	<b>CO1:</b> Understand the basics of computer systems and its components
	<b>CO2:</b> Understand and apply the basic concepts of a word processing package
	<b>CO3:</b> Understand and apply the basic concepts of electronic spreadsheet software
	<b>CO4:</b> Understand and apply the basic concepts of database management system
	<b>CO5:</b> Understand and create a presentation using PowerPoint tool
<b>120S2A</b> <b>Quantitative Aptitude</b>	<b>CO1:</b> To gain knowledge on LCM and HCF and its related problems
	<b>CO2:</b> To get an idea of age, profit and loss related problem solving
	<b>CO3:</b> Able to understand time series simple and compound interests
	<b>CO4:</b> Understanding the problem related to probability and series
	<b>CO5:</b> Able to understand graphs, charts
<b>100L2M</b> <b>Advanced Tamil - II</b>	<b>CO1:</b> உரைநடை இலக்கியங்களின் பெருமைகளை உணர்ந்து, அதனை அன்றாட வாழ்வில் பயன்படுத்தும் திறன் பெறுவர்
	<b>CO2:</b> பண்டை தமிழ் இலக்கியங்கள் காட்டும் சமூக, பண்பாட்டு, வாழ்வியல் முறைகளை அறிந்து கொள்வர்
	<b>CO3:</b> காப்பிய கட்டமைப்புகளை இன்றைய புதினம் திரைப்படங்கள் ஆகியவற்றுடன் ஒப்பிட்டு காணும் அறிவை பெறுவர்
	<b>CO4:</b> தமிழ் இலக்கிய மரபினையும் மாற்றங்களையும் ஆய்ந்து உணரும் ஆற்றல் பெறுவர்
<b>II Year - III Semester</b>	
<b>200L3A</b> <b>பொதுத்தமிழ்- III</b>	<b>CO1:</b> தமிழக வரலாற்றை அறிந்துகொள்வர்
	<b>CO2:</b> தமிழரின் வாழ்வியல் தொன்மையை அறிவர்
	<b>CO3:</b> தமிழரின் பண்பாட்டு கூறுகளை அறிந்துகொள்வர்
	<b>CO4:</b> பிற பண்பாட்டுத்தாக்கம் மற்றும் அணுகு முறைகளை அறிவர்
	<b>CO5:</b> மொழிப்பயிற்சிக்குத் தேவையான இலக்கணங்களைக் கற்பர்
<b>200L3G</b> <b>Sanskrit-III</b>	<b>CO1:</b> Be familiar with the style of the great Sanskrit Dramatist Bhasa

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	<p><b>CO2:</b> Be able to appreciate the aesthetical, social, political, cultural, etc., values expressed in prescribed composition</p> <p><b>CO3:</b> Understand the structural patterns of Sanskrit dramatic composition</p> <p><b>CO4:</b> Develop the finer and minor nuances of Nataka form of drama</p> <p><b>CO5:</b> Analyze the literary texts</p>
<b>20013Z General English-III</b>	<p><b>CO1:</b> To make them active listeners</p> <p><b>CO2:</b> To enhance the interpersonal relationship skills</p> <p><b>CO3:</b> To embolden them to cope with stress</p> <p><b>CO4:</b> To master grammar skills</p> <p><b>CO5:</b> To help them to use English effectively in a business environment</p>
<b>220C3A Data Structures</b>	<p><b>CO1:</b> To introduce the concepts of Data structures and to understand simple linear data structures</p> <p><b>CO2:</b> Learn the basics of stack data structure, its implementation and application</p> <p><b>CO3:</b> Use the appropriate data structure in context of solution of given problem and demonstrate a familiarity with major data structures</p> <p><b>CO4:</b> To introduce the basic concepts of algorithms</p> <p><b>CO5:</b> To give clear idea on algorithmic design paradigms like Divide and conquer and Backtracking</p>
<b>220C31 Data Structures Practical</b>	<p><b>CO1:</b> Implement data structures using C ++</p> <p><b>CO2:</b> Implement various types of linked lists and their applications</p> <p><b>CO3:</b> Implement Tree Traversals</p> <p><b>CO4:</b> Implement various algorithms in C++</p>
<b>220E3B Statistics-I</b>	<p><b>CO1:</b> Know the uses of statistics in society</p> <p><b>CO2:</b> Organize, manage and present data</p> <p><b>CO3:</b> Analyze the statistical data graphically using frequency distribution and cumulative frequency distribution</p> <p><b>CO4:</b> Analyze statistical data using measures of central tendency, dispersion and location</p> <p><b>CO5:</b> To understand correlation between continuous variables and association between categorical variables</p>
<b>220S31 Web Page Design Practical</b>	<p><b>CO1:</b> Define the principle of Web page design Visualize the basic concept of HTML</p> <p><b>CO2:</b> Define the basics in web design</p> <p><b>CO3:</b> Visualize the basic concept of HTML</p> <p><b>CO4:</b> Recognize the elements of HTML</p>

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<b>220S32</b> <b>Desktop Publishing</b> <b>Practical</b>	<b>CO1:</b> Understand basics of computer and its related terminology
	<b>CO2:</b> Write, Edit & Print documents using MS-WORD & EXCEL
	<b>CO3:</b> 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.
	<b>CO4:</b> Using PageMaker, CorelDraw & Photoshop. Understand Colour concept in Printing
<b>II Year - IV Semester</b>	
<b>200L4A</b> <b>பொதுத்தமிழ்-IV</b>	<b>CO1:</b> தாய்மொழி வழியாக அறிவியல் பற்றிச் சிந்திக்கும் திறன் பெற்றிருப்பர்
	<b>CO2:</b> அறிவியல்கலைச் சொல்லாக்கம் பற்றிய விதிகள், நூணுக்கங்களைத் தெரிந்திருப்பர்
	<b>CO3:</b> அறிவியல்தமிழ் வளர்ச்சியில் மொழிபெயர்ப்பின் பங்குகுறித்து அறிந்திருப்பர்
	<b>CO4:</b> மொழி அறிவோடு சிந்தனைத் திறனைப்பெறுவர்
	<b>CO5:</b> மொழி பயிற்சிக்கு தேவையான இலக்கணங்களைக் கற்பர்
<b>200L4G</b> <b>Sanskrit- IV</b>	<b>CO1:</b> Apply the usage of compound words
	<b>CO2:</b> Differentiate the alankaras
	<b>CO3:</b> Translate the prose passages prescribed
	<b>CO4:</b> Identify and apply different grammatical tenses of “Mahabharata” related translation
	<b>CO5:</b> Analyze and critically assess the literary texts
<b>200L4Z</b> <b>General English- IV</b>	<b>CO1:</b> To help learners imbibe goal-setting attitude
	<b>CO2:</b> To enable them to understand the value of integrity
	<b>CO3:</b> To help them deal with emotions
	<b>CO4:</b> To teach the learners to frame sentences using tenses
	<b>CO5:</b> To enhance reporting skills
<b>220C4A</b> <b>Java Programming</b>	<b>CO1:</b> Understand the basic Object-oriented concepts. Implement the basic constructs of Core Java
	<b>CO2:</b> Implement inheritance, packages, interfaces and exception handling of Core Java
	<b>CO3:</b> Implement multi-threading and I/O Streams of Core Java.
	<b>CO4:</b> Implement AWT and Event handling
	<b>CO5:</b> Use Swing to create GUI
<b>220C41</b> <b>Java Programming</b> <b>Practical</b>	<b>CO1:</b> Code, debug and execute Java programs to solve the given problems
	<b>CO2:</b> Implement multi-threading and exception-handling
	<b>CO3:</b> Implement functionality using String and String Buffer classes

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	CO4: Demonstrate Event Handling
	CO5: Create applications using Swing and AWT
<b>220E4B Statistics II</b>	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
<b>220S4A Emotional Intelligence</b>	CO1: After completion of the subject, students understand the application of Emotional Intelligence
	CO2: To enable the students to understand the concepts of emotional intelligence
	CO3: To teach the students on aspects relating to personality Analysis Self-analysis, Positive and Negative traits
<b>220S4B Technical Writing</b>	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 and contexts
	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
	CO3: This course is designed to guide students towards rhetorical, professional, and compositional competencies necessary to ethically and effectively create and analyse technical documents and communication.
<b>III Year - V Semester</b>	
<b>320C5A Operating System</b>	CO1: Understand the structure and functions of Operating System
	CO2: Compare the performance of Scheduling Algorithms.
	CO3: Analyse resource management techniques
<b>320C5B Relational Database Management System</b>	CO1: Describe basic concepts of database system
	CO2: Design a Data model and Schemas in RDBMS
	CO3: Competent in use of SQL
	CO4: Analyse functional dependencies for designing robust Database
<b>320C5C Web Technology</b>	CO1: Understand the general concepts of PHP scripting language for the development of Internet websites
	CO2: Learn the relationship between the client side and the server-side scripts
	CO3: Understand the basic functions of MySQL database program and XML concepts





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<b>320C51 Web Technology Practical</b>	<b>CO1:</b> On the completion of this laboratory course the students ought to the program
	<b>CO2:</b> Obtain knowledge and develop application programs using Python
	<b>CO3:</b> Create dynamic Web applications such as content management, user registration, and ecommerce using PHP and to understand the ability to post and publish a PHP website
	<b>CO4:</b> Develop a MySQL database and establish connectivity using MySQL
<b>320E5B Software Engineering</b>	<b>CO1:</b> How to apply the software engineering lifecycle by demonstrating competence in communication, planning, analysis, design, construction, and deployment
	<b>CO2:</b> The students should be able to specify software requirements, design the software using tools
	<b>CO3:</b> To write test cases using different testing techniques
<b>320E5E Big Data Analytics</b>	<b>CO1:</b> Work with big data tools and its analysis techniques
	<b>CO2:</b> Analyse data by utilizing clustering and classification algorithms
	<b>CO3:</b> Learn and apply different mining algorithms and recommendation systems for large volumes of data
<b>III Year - VI Semester</b>	
<b>320C6A R-Programming</b>	<b>CO1:</b> To understand the problem solving
	<b>CO2:</b> To learn the basic programming constructs in R Programming
	<b>CO3:</b> To learn the basic programming constructs in R Programming
	<b>CO4:</b> To use R Programming data structures - lists, tuples, dictionaries
	<b>CO5:</b> To do input/output with files in R Programming
<b>320C61 R-Programming Practical</b>	<b>CO1:</b> To understand the problem-solving approaches.
	<b>CO2:</b> To learn the basic programming constructs in R Programming
	<b>CO3:</b> To practice various computing strategies for R Programming -based solutions to real world problems
<b>320C6B Advanced Networking</b>	<b>CO1:</b> To Understand the basics of Computer Network architecture, OSI and TCP/IP reference models
	<b>CO2:</b> To gain knowledge on Telephone systems and Satellite communications
	<b>CO3:</b> To impart the concept of Elementary data link protocols
	<b>CO4:</b> To analyze the characteristics of Routing and Congestion control algorithms
	<b>CO5:</b> To understand network security and define various protocols such as FTP, HTTP, Telnet, DNS
<b>320E6B Data Mining and Warehousing</b>	<b>CO1:</b> To know the concepts of Data mining system architectures
	<b>CO2:</b> To analyse the principles of association rules
	<b>CO3:</b> To Gain knowledge on Cluster analysis and its methods.

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# SRI MALOLAN COLLEGE OF ARTS AND SCIENCE

(Affiliated to University of Madras)

(Promoted by Sri Ahobila Mutt)

	CO4: To get analytical idea on Classification.
<b>320E6D</b> <b>Internet of Things and its Applications</b>	CO1: Use of Devices, Gateways and Data Management in IoT
	CO2: Design IoT applications in different domain and be able to analyse their performance
	CO3: Implement basic IoT applications on embedded platform
	CO4: To gain knowledge on Industry Internet of Things
	CO5: To Learn about the privacy and Security issues in IoT
<b>320S61</b> <b>Mini Project</b>	CO1: Planning implementation, and testing
	CO2: Execution: Follow a structured development process with clear milestones
	CO3: Define project scope, objectives, and required functionalities
	CO4: Documentation: Maintain a detailed report covering methodology, design