

Don Bosco College(Co-Ed)
Yelagiri Hills
Department of Computer Science
Course Outcomes for 2021 Curriculum

CLT10-Tamil - I	
UNI T	Course Outcome
1	பாரதியார்> பாரதிதாசன்> அப்துல் ரகுமான்> போன்ற கவிஞர்களின் கவிதைகளில் வெளியாகும் வாழ்வியலை அறிந்துக் கொள்ளுதல்
2	உரைநடை இலக்கிய வாசிப்பை ஊக்குவித்தல் அதன் வழியாக நடப்பு வாழ்கையில் ஏற்படும் சிக்கல்களை அறிதல்
3	நாடக இலக்கியத்தினை மாணவர்களுக்கு அறிமுகம் செய்து வைத்தல் நாடகம் வாயிலாக பாமர மக்களின் அறிவை வளர்த்தல்
4	சிறுகதை இலக்கியம் குறித்து மாணவர்கள் அறிந்துக் கொள்ளுதல் நடப்பு உலகில் உள்ள மனித வாழ்வின் ஏற்றத் தாழ்வுகளை மாணவர்கள் அறிதல்
5	அடிப்படை இலக்கணமான பெயர்ச்சொல் வினைச்சொல் மற்றும் ல கர ள கர வேறுபாடுகளை அறிதல் மற்றும் பிழையின்றி எழுத கற்றுக் கொள்ளுதல்

CLE10-Communicative English I	
UNI T	Course Outcome
1	Developed effective communication skills, enabling them to introduce themselves and others, and listen for specific information.
2	Students have developed advanced listening and reading skills, including the ability to extract specific information, understand varying tones, and engage in effective communication
3	students will have gained the skills to provide and adhere to instructions, request and provide directions, and participate in discussions with linked ideas.
4	students will have excelled in expressing and responding to opinions while also displaying adeptness in both note-taking and narrative writing, showcasing their essay composition skills.
5	students will have gained proficiency in engaging in group discussions, advanced their ability to interpret diagrammatic information, and demonstrated comprehension of voice in the context of tense in grammar.

CES10-Environmental Studies	
UNIT	Course Outcome
1	Gain in-depth knowledge on natural processes that sustain life, and govern economy.
2	Predict the consequences of human actions on the web of life, global economy and quality of human life.
3	Develop critical thinking for shaping strategies (scientific, social, economic and legal) for environmental protection and conservation of biodiversity, social equity and sustainable development.
4	Acquire values and attitudes towards understanding complex environmental-economic social challenges, and participating actively in solving current environmental problems and preventing the future ones.
5	Adopt sustainability as a practice in life, society and industry

CCS11-Programming in C	
UNIT	Course Outcome
1	Identify and understand the working of key components of a computer system (hardware, software, firmware etc.), Understand computing environment, how computers work and the strengths and limitations of computers.
2	Identify and understand the representation of numbers, alphabets and other characters in computer system
3	Study, analyze and understand logical structure of a computer program, and different construct to develop a program in 'C' language & Write small programs related to simple/ moderate mathematical, and logical problems
4	Understand, analyze and implement software development tools like algorithm, pseudo codes and programming structure.
5	Ability to design programs using a variety of data structures such as stacks, queues, hash tables, binary trees, search trees, heaps, graphs, and B-trees.

CAMA15B-Mathematical Foundations I	
UNIT	Course Outcome
1	To make them to understand the concepts of symbolic logic.
2	To make them to understand the concepts of Venn diagram and properties of sets.
3	To make them to apply the mathematical principles in various contexts.
4	To understand the basics concepts of Differential equations.
5	To enhance students to learn problem solving problem solving skills in Straight lines, pair of straight lines, Circles, Parabola, Ellipse and Hyperbola.

CPE10-Professional English I	
UNIT	Course Outcome
1	Understand the logic for a given problem
2	Recognize and understand the syntax and construction of C programming code.
3	Gain experience of procedural language programming
4	Learn the methods of iteration or looping and branching
5	Understand sorting and searching technique, structure, union, and file

CPCS13-Programming in C Lab	
UNIT	Course Outcome
1	Understand the logic for a given problem
2	Recognize and understand the syntax and construction of C programming code.
3	Gain experience of procedural language programming
4	Learn the methods of iteration or looping and branching
5	Understand sorting and searching technique, structure, union, and file

CLT20-Tamil - II	
UNIT	Course Outcome
1	திருநாவுக்கரசர் அருளிச்செய்த கூற்றாயினவாறு பதிகம் மாணிக்கவாசகர் > திருமூலர் சைவ சமயம் சார்ந்த அடியார்களின் வழியாக மாணவர்களுக்கு பக்தி இலக்கியத்தின் சிறப்பை உணர்த்துத்தல்.
2	வைணவ இலக்கியத்தின் சிறப்பினை ஆண்டாள் > குலசேகர ஆழ்வார் > நம்மாழ்வார் போன்ற ஆழ்வார்களின் வழியாக மாணவர்களுக்கு உணர்த்துத்தல்.
3	சிறுநிலக்கியங்களின் வகைகளை மாணவர்களுக்கு அறிமுகம் செய்து வைத்தல் > சிறுநிலக்கிய வகையில் பக்தியை எவ்வாறு எடுத்தாளுகின்றனர் என்பதை மாணவர்கள் உணர்த்தல்.
4	பிற சமயங்களான கிறித்துவம் மற்றும் இசுலாம் சமயம் சார்ந்து எழுந்த இறையடியார்களின் பாடல்களை அவை தமிழுக்கு ஆற்றிய தொண்டினையும் மாணவர்கள் அறிந்துக்கொள்ளுதல்.
5	நேர்காணல் நாளிதழ்களுக்கு அறிக்கை தயாரித்தல் பாடப்பகுதியை ஒட்டிய இலக்கிய வரலாறு சைவ வைணவ கிறித்துவ இசுலாமிய இலக்கிய வரலாறுகள் பற்றி மாணவர்கள் அறிந்துக் கொள்ளுதல்

CLE20-Communicative English II

UNIT	Course Outcome
1	Students will effectively listen and respond to complaints in formal situations, demonstrating proficiency in problem-solving through informal discussions, while also enhancing their reading and writing skills
2	Students will develop their writing skills by crafting opinion pieces on various topics, including travel, food, and book/film reviews, as well as analyzing poetry.
3	Students will demonstrate advanced listening skills by engaging with Ted talks and delivering formal presentations with PowerPoint, while also honing their reading and writing abilities by composing complaint emails and reading aloud famous speeches, in addition to expanding their vocabulary through the exploration of one-word substitutions.
4	Participants will excel in both listening and speaking by actively participating in face-to-face and online meetings, engaging in courteous and opinionated discussions, and effectively presenting ideas during meetings, while also refining their reading and writing skills through the analysis of visual texts such as advertisements and drafting short assignments.
5	Students will showcase their proficiency in listening and responding during informal interviews for feature writing, as well as in formal interviews, while also refining their writing skills by composing letters of application, engaging in readers' theatre through script reading, and dramatizing everyday situations and social issues through skits.

CCS21-C++ and Data Structures

UNIT	Course Outcome
1	Creating class and objects in C++
2	Implementing inheritance, polymorphism and object relationship in C++.
3	Analyze a given problem and identify its members and methods and design a class diagram
4	Designing methods and procedures, Constructo and destructor programs
5	Implement searching and sorting algorithms in solving larger problems

CAMA25B-Mathematical Foundations II

UNIT	Course Outcome
1	To enhance the students develop their skills in the concept of Matrix.
2	To make them to understand Cramer's rule and Matrix inversion method.
3	To make them to apply matrix in various fields.
4	To understand the basic concepts on integration.
5	To make them to apply integration in various fields.

CSS20-Soft Skill

UNI T	Course Outcome
1	Develop effective communication skills (spoken and written).
2	Develop effective presentation skills.
3	Conduct effective business correspondence and prepare business reports which produce results.
4	Become self-confident individuals by mastering inter-personal skills, team management skills, and leadership skills.
5	Develop all-round personalities with a mature outlook to function effectively in different circumstances.

CGA20-Value Education

UNI T	Course Outcome
1	Full development of child's personality in its physical, mental, emotional and spiritual aspects.
2	Developing a democratic way of thinking and living
3	Developing respect for the dignity of individual and society.
4	Inculcation of a spirit of patriotism and national integration.
5	Inculcation of good manners and of responsible and cooperative citizenship.

CPE20-Professional English II

UNI T	Course Outcome
1	Able to implement classes, object, constructors and member functions for calculating area and perimeter of a circle
2	Able to implement function overloading, operator over loading, single, multiple, hierarchical inheritance
3	Able to implement sequential file operations using error handling functions
4	Able to implement various kinds of searching and sorting techniques
5	Able to implement data structures such as stacks, queues, Binary trees, and linked lists to solve various computing problems

CPCS22-C++ and Data Structure Lab

UNI T	Course Outcome
1	Able to implement classes, object, constructors and member functions for calculating area and perimeter of a circle
2	Able to implement function overloading, operator over loading, single, multiple, hierarchical inheritance
3	Able to implement sequential file operations using error handling functions
4	Able to implement various kinds of searching and sorting techniques
5	Able to implement data structures such as stacks, queues, Binary trees, and linked lists to solve various computing problems

CLT30-Tamil –III	
UNI T	Course Outcome
1	மாணவர்கள் திருக்குறளில் கூறப்படும்; அறத்துப்பால்> பொருட்பால்> இன்பத்துப்பால் ஆகிய செய்திகளையும் திருவள்ளுவரின் பெருமையும் அறிந்துக்கொள்கிறார்கள்> அவர்கள் அறம் சார்ந்த வாழ்க்கை வாழ்வதற்கு உதவுகிறது.
2	மாணவர்கள் இரட்டைக்காப்பியங்களான சிலப்பதிகாரத்தையும் மணிமேகலையும் தெரிந்துக்கொள்வதின் வாயிலாக நீதி தவறாது வாழ்வதற்கு கற்றுக்கொள்கிறார்கள்.
3	மாணவர்கள் சமண நூலான சீவகசிந்தாமணியில் யாழின் சிறப்பு வாசிக்கும் தன்மையும் துறவு வாழ்க்கையின் மேன்மையும்> வாலி இராமனின் உரையாடலின் மூலம் வாதத்திறமையை வளர்த்துக்கொள்கிறார்கள்.
4	மாணவர்கள் நபிகள் நாயகத்தின் வாழ்க்கையும்> சூசையப்பரின் வாழ்க்கையும் இப்பகுதியின் வாயிலாக அறிந்துக்கொள்கிறார்கள்.
5	மாணவர்கள் அலுவலக கடிதம்> எழுதவும் நிகழ்ச்சி நிரல் தயாரித்தல் குறித்த செய்திகளை இப்பகுதியின் வாயிலாக எழுதப் பயிற்சிப் பெறுகிறார்கள்.

CLE30-English-III	
UNIT	
1	To enhance students to learn and enjoy literary values
2	To expose students to different writing styles of eminent writers
3	To make them understand the implied irony and humour in the prescribed text
4	To make them relish the beauty of Shakespearian poem and other literary works
5	To understand the basic grammar and learn to write sentences

CCS31-Programming in JAVA	
UNI T	Course Outcome
1	Use the syntax and semantics of java programming language and basic concepts of OOP
2	Develop reusable programs using the concepts of inheritance, polymorphism, interfaces and packages
3	Apply the concepts of Multithreading and Exception handling to develop efficient and error free codes
4	Develop java application to interact with database by using relevant software component
5	Design event driven GUI and web related applications which mimic the real word scenarios

CACS32-Statistical Methods and their Applications I	
UNIT	Course Outcome
1	Acquiring knowledge of basic Data classification and limitations
2	Identify the Arithmetic mean, median, mode, geometric mean and Harmonic mean
3	Applying the Karl Pearson"s, Bowley"s, and kelly"s and co-efficient of Skewness and kurtosis based on moments.
4	Understand the types of Karl Pearson"s, Bowley"s, and kelly"s and co-efficient of Skewness and kurtosis based on moments.
5	Evaluating the Correlation of Karl Pearson ,Spearman"s Rank correlation . Regression Analysis Simple Regression Equations

CSCS33-Digital Logic Design and Computer Organization	
UNIT	Course Outcome
1	Students will accurately represent numbers in the binary system, demonstrating proficiency in converting integers, fractions, and alphanumeric characters.
2	Participants will achieve optimized circuit designs through the application of simplification techniques, reducing the number of gates and improving overall circuit performance.
3	Students will demonstrate the ability to design effective combinational logic circuits, incorporating Boolean expressions and logic gates to meet specific functionality requirements.
4	Students will achieve a comprehensive understanding of processor architecture, enabling them to analyze and comprehend the operation of the central processing unit in a computer.
5	Students will demonstrate the ability to efficiently interact with input devices, configuring and managing their settings for seamless communication with the computer.

CNBA37-Management Concepts	
UNIT	Course Outcome
1	Demonstrate knowledge of management concepts, including roles and functions within a business context.
2	Apply their knowledge to enhance managerial skills, specifically in planning and decision-making.
3	Apply their knowledge to effectively organise programmes, showcasing practical application in project management.
4	Exhibit a deep understanding of critical management components such as communication, leadership, controlling, motivation, and delegation.
5	Synthesise their knowledge and skills to master control and coordination, demonstrating the ability to efficiently manage and coordinate organisational activities.

CPCS35-Programming in JAVA Lab

UNIT	Course Outcome
1	The student will be able to implement Concepts of Java
2	The student will be able to implement GUI using Applets and Swing.
3	The student will be able to build an application for Game using Graphics.
4	The student will be able to develop a program for file allocation strategies.
5	The student will be able to write a program incorporating external database and connections

CLT40-Tamil –IV

UNIT	Course Outcome
1	சங்க இலக்கியங்களில் உள்ள எட்டுத்தொகை நூல்களான நற்றிணை குறுந்தொகை > ஐங்குறுநூறு ஆகிய நூல்களின் வழியாக மக்களின் அக வாழ்க்கையை மாணவர்கள் அறிந்துகொள்ளுதல்.
2	புற நூல்களான புறநானூறு பதிற்றுப்பத்து ஆகிய நூல்களின் வழியாக மக்களின் புற வாழ்க்கையை மாணவர்கள் அறிந்துகொள்ளுதல்.
3	சங்க இலக்கியங்களான கலித்தொகை பரிப்பாடல் ஆகிய நூல்களின் வழியாக வரலாற்றுச் செய்திகளை மாணவர்கள் அறிதல்.
4	பத்துப்பாட்டு நூல்களுள் ஒன்றான குறிஞ்சிப்பாட்டின் வழியாக தமிழின் சிறப்புகளையும் அகவாழ்வு எவ்வாறு சித்தரிக்கப்படுகின்றது என்பதை மாணவர்கள் அறிந்துக் கொள்ளுதல்.
5	சங்க இலக்கியங்களின் வரலாற்றினையும் மக்களின் வாழ்க்கையினையும் மாணவர்கள் அறிந்துக் கொள்ளுதல்.

CLE40-English-IV

UNIT	Course Outcome
1	To enhance students to understand literary values
2	To expose students to different writing styles of eminent writers
3	To make them understand the implied irony and humour in the prescribed text
4	To make them relish the lyrical beauty of Tagore's poem and other literary works
5	To understand the basic grammar rules and use it correctly

CCS41-Relational Database Management Systems

UNIT	Course Outcome
1	Explain the basic concepts of database and models
2	Design conceptual model of a database using relational algebra
3	Criticize a database and improve the design by normalization
4	Create and Retrieve any type information from database using SQL Commands
5	Basic of Database protection & Distributed databases.

CACS42-Statistical Methods and their Applications II

UNIT	Course Outcome
1	Acquiring knowledge of basic Data classification and limitations
2	Identify the Arithmetic mean, median, mode, geometric mean and Harmonic mean
3	Applying the Karl Pearson"s, Bowley"s, and kelly"s and co-efficient ofSkewness and kurtosisbasedonmoments.
4	Understand the types of Karl Pearson"s, Bowley"s, and kelly"s and co-efficient of Skewness and kurtosis based on moments.
5	Evaluating the Correlation of Karl Pearson ,Spearman"s Rank correlation . Regression Analysis Simple Regression Equations

CSCS43-Wireless Data Communication

UNIT	Course Outcome
1	Understand fundamental wireless communication principles, including modulation and signal propagation.
2	Explain differences among wireless standards like Wi-Fi, Bluetooth, and cellular networks.
3	Use theoretical concepts to design wireless systems considering modulation and interference.
4	Assess wireless network performance via simulations or experiments.
5	Develop innovative strategies to enhance wireless network efficiency and security.

CNBA47-Training and Development

UNIT	Course Outcome
1	Recall and comprehend the basic concepts of training, showcasing knowledge in identifying training needs and understanding the functions of a training department.
2	Apply their knowledge by assessing and selecting on-the-job and off-the-job training techniques suitable for different training scenarios.
3	Demonstrate understanding by explaining and interpreting concepts related to career planning and development.
4	Understanding various techniques in management development and interpreting their significance for improving leadership and managerial skills
5	Recall information about different management training institutes in India, showcasing knowledge and awareness of available resources for continuous Course and professional growth.

CPCS45-RDBMS Lab

UNIT	Course Outcome
1	Describe the fundamental elements of relational database management systems
2	Explain the basic concepts of relational data model, entity-relationship model, relational database design, relational algebra and SQL
3	Improve the database design by normalization
4	Design ER-models to represent simple database application scenarios
5	Familiar with basic database storage structures and access techniques: file and page organizations, indexing methods including B tree, and hashing

CPCS46-Statistics Practical

UNIT	Course Outcome
1	Acquiring knowledge of basic Data classification and limitations
2	Identify the Arithmetic mean, median, mode, geometric mean and Harmonic mean
3	Applying the Karl Pearson"s, Bowley"s, and kelly"s and co-efficient of Skewness and kurtosis based on moments.
4	Understand the types of Karl Pearson"s, Bowley"s, and kelly"s and co-efficient of Skewness and kurtosis based on moments.
5	Evaluating the Correlation of Karl Pearson ,Spearman"s Rank correlation . Regression Analysis Simple Regression Equations

CCS51-Mobile Application Development

UNIT	Course Outcome
1	Able to install android studio software and its package.
2	Able to work with Android Studio Tool and with its Services in order to create a Mobile Application
3	Able to know the Android Activity.
4	Able to know difference services with its usages
5	Able to work with Input Controls

CCS52-Operating System

UNIT	Course Outcome
1	Identify the role of Operating System. To understand the design of control unit.
2	Apply CPU Scheduling, Synchronization, Deadlock Handling and Comparing CPU Scheduling Algorithms. Solve Deadlock Detection Problems.
3	Calculate efficiency of different memory management techniques
4	Describe the role of paging, segmentation, Page Replacement Algorithms and virtual memory in operating systems
5	Defining I/O systems, Device Management Policies and Secondary Storage Structure and Evaluation of various Disk Scheduling Algorithms

CCS53-Design and Analysis of Algorithms

UNIT	Course Outcome
1	Design and analyze programming problem statement
2	Choose appropriate data structures and algorithms, understand the ADT/libraries, and use it to design algorithms for a specific problem.
3	Understand the necessary mathematical abstraction to solve problems
4	come up with analysis of efficiency and proofs of correctness
5	Comprehend and select algorithm design approaches in a problem specific manner.

CECS54B-Information Security

UNIT	Course Outcome
1	Recall fundamental concepts of information security, including encryption methods, authentication protocols, and common cyber threats.
2	Explain the principles behind various security measures such as firewalls, intrusion detection systems, and access control mechanisms.
3	Apply security frameworks and best practices to analyze and mitigate potential vulnerabilities in different information systems and networks.
4	Evaluate the effectiveness of security strategies by conducting risk assessments and analyzing real-world case studies of security breaches
5	Develop comprehensive information security plans tailored to specific organizational needs, integrating encryption, authentication, and incident response strategies.

CSCS55-Software Engineering

UNIT	Course Outcome
1	Identify the minimum requirements for the development of application
2	Develop, maintain, efficient, reliable and cost effective software solutions
3	Critically thinking and evaluate assumptions and arguments by using variant software architectural styles & software process models
4	Explain the software testing approaches such as unit testing and integration testing
5	Classify on quality control and how to ensure good quality software

CPCS56-Mobile Applications Development Lab

UNIT	Course Outcome
1	Install and configure Android application development tools.
2	Apply Layout Management and Multi layout definition techniques to create adaptable User Interface
3	Deploy the application in mobile phones
4	The student will be able to develop an android application
5	Develop user interface for mobile Application using widgets with event handling

CPCS57-Operating System Lab

UNI T	Course Outcome
1	The student will be able to implement Process system calls
2	The student will be able to implement scheduling algorithm
3	The student will be able to build an application for semaphores and memory management
4	The student will be able to develop a program for file allocation strategies
5	The student will be able to write a program using shell commands

CCS61-Open Source Software

UNI T	Course Outcome
1	Implement interactive web page(s) using HTML, CSS and JavaScript.
2	Understanding of best practices and standards using Linux and their application.
3	Design a responsive web site using HTML5 and CSS3 and demonstrate Rich Internet Application.
4	Develop simple web application using server side PHP programming and Database Connectivity using MySQL.
5	Analyze and solve various database tasks using the PHP language

CCS62-Python Programming

UNI T	Course Outcome
1	Attain a solid grasp of Python fundamentals, including syntax, variables, and basic control structures, enabling the development of simple programs.
2	Gain mastery over control flow mechanisms, allowing for the implementation of decision-making and iterative processes in Python scripts.
3	Students will be able to implement functions in Python, encapsulating specific tasks or operations within well-defined and reusable blocks of code.
4	Participants will gain practical experience in utilizing built-in list methods for common tasks, such as sorting, searching, and manipulating list elements.
5	Acquire effective debugging skills by identifying, catching, and handling exceptions, facilitating the development of more reliable and maintainable Python code.

CECS63C-Digital Image Processing

UNI T	Course Outcome
1	The students will be able to know the basics of Digital Image and techniques
2	The students will understand various image enhancement ideas
3	The students will understand image restoration techniques like filters, morphological process and segmentations
4	The students are able to understand degrees of image resolution and compression methods
5	The students are able to understand concepts of image representation and recognition

CECS64C-Cloud Computing

UNIT	Course Outcome
1	Articulate the main concepts, key technologies, History, Architecture, strengths, and limitations of cloud computing.
2	Explain the different type of Cloud Services.
3	Use and propose different cloud computing services.
4	Choose the appropriate cloud player, Programming Models and approach.
5	Address the core issues of cloud computing such as security, privacy and interoperability.

CPCS66-Python Programming Lab

UNIT	Course Outcome
1	Attain a solid grasp of Python fundamentals, including syntax, variables, and basic control structures, enabling the development of simple programs.
2	Gain mastery over control flow mechanisms, allowing for the implementation of decision-making and iterative processes in Python scripts.
3	Students will be able to implement functions in Python, encapsulating specific tasks or operations within well-defined and reusable blocks of code.
4	Participants will gain practical experience in utilizing built-in list methods for common tasks, such as sorting, searching, and manipulating list elements.
5	Acquire effective debugging skills by identifying, catching, and handling exceptions, facilitating the development of more reliable and maintainable Python code.

CPCS67-Open Source Programming Lab

UNIT	Course Outcome
1	Implement various applications using HTML & CSS
2	Understand the installation of various packages in open source operating systems
3	Create simple applications using JavaScript and PHP
4	Understand the kernel configuration and virtual environment
5	Able to write a program using shell commands

CEA 60 EXTENSION ACTIVITIES

UNIT	Course Outcome
1	Understand the community in which they work
2	Identify the needs and problems of the community and involve them in problem-solving
3	Develop among themselves a sense of social and civic responsibility
4	Utilize their knowledge in finding practical solutions to individual and community problems
5	Acquire leadership qualities and democratic attitudes