CMR UNIVERSITY
Private University Established in Karnataka State by Act No. 45 of 2013

School of Science Studies

BCA (Cloud Computing)

COURSE OUTCOMES :Batch [2021-24]

School of Science Studies

BCA (Cloud Computing) Programme

Semester 1

8CSPL1011: C PROGRAMMING AND DATA STRUCTURES

Course Outcomes: On successful completion of the course, Students will be able to,

CO1: Define and implement the algorithms and draw flowcharts for solving Mathematical problems.   (Level 2)

CO2: Demonstrate the understanding of computer programming language concepts.(Level 3)

CO3: Design and develop programs using decision making, and looping statements.(Level 4)

CO4: Define, develop and analyze the core concepts of C programming. (Level 4)

CO5: Design different data structures and its operations using C Programming.(Level 4)

8CSGC1031: DATABASE MANAGEMENT SYSTEMS

CO1: Understand the fundamentals of a database system. (Level 2)

CO2: Design and draw ER diagrams for real life problems. (Level 3)

CO3: Design relational models for a given application using schema definition and constraint. (Level 3)

CO4: Develop complex queries using SQL and PL/SQL to retrieve the required information from the
database.   (Level 4)

CO5: Apply suitable normal forms to normalize the given database (Level 2)

CO6: Determine the roles of transaction and concurrency control in database design.   (Level 3)

8MATH1011: DISCRETE MATHEMATICS

CO1: Solve problems in the language of sets and perform set operations, apply basic concepts and prove facts about ordinals and well ordered sets.   (Level 3)

CO2: Apply and interpret properties of linear systems and will be able to solve them by matrix techniques.
(Level 3)

CO3: Apply logical concepts in the field of Computer Science.   (Level 3)

CO4: Apply principles and concepts of Graph theory in practical situations and also will be able to formulate the concepts as a base for other related courses.   (Level 3)

8CSPL1021: C PROGRAMMING AND DATA STRUCTURES LAB

CO1: Define and implement the algorithms and draw flowcharts for solving Mathematical problems. (Level 2)

CO2: Demonstrate the understanding of computer programming language concepts.   (Level 3)

CO3: Design and develop programs using decision making and looping statements.   (Level 4)

CO4: Define, develop and analyze the core concepts of C programming.   (Level 4)

CO5: Design different data structures and its operations using C Programming.   (Level 4)

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8CSGC1021: DATABASE MANAGEMENT SYSTEMS LAB	
CO1: Apply the basic concepts of Database Systems and Applications.	(Level 3)
CO2: Construct queries using SQL in database creation and interaction.	(Level 3)
CO3: Create the procedures and Functions in PL/SQL.	(Level 6)
CO4: Design PL/SQL Triggers and Cursors.	(Level 3)

Semester 2

8CSPL1031: Python Programming

CO1: Understand basic fundamental programming concepts of Python.(L2)
CO2: Design and develop programs using decision making and looping statements.(L4)
CO3: Understand the different data structures and its operations .(L2)
CO4: Apply the concepts of Modules ,Packages and file handling (L3)
CO5 : Develop programs using Object Oriented Programming. (L4)

8CSGC1051: OPERATING SYSTEMS AND LINUX FOUNDATION

CO1: Identify the structure of the operating system, CPU scheduling with different scheduling algorithms (Level 2)
CO2: Identify the classic problems of Synchronization. (Level 2)
CO3: Analyze different methods of handling deadlocks , the memory management and its allocation policies.(Level 4)
CO4: Demonstrate file management, secondary storage structure and its various allocation methods.(Level 3)
CO5: Apply the concepts of Linux programming. (Level 3)

8STAT2021: STATISTICS AND PROBABILITY

CO1: Organize data and present it in the form of diagrams and graphs for better view.   (Level 3)
CO2: Apply/formulate the concepts and theories of measures of central tendency in the functional areas of business and research.   (Level 3)
CO3: Apply/formulate the concepts and theories of measures of Dispersion in the functional
     areas of business and research.   (Level 3)
CO4: Identify the direction and degree of association between two variables and will be able
     to predict the future value with the help of previous data.   (Level 4)
CO5: Formulate the trend values which enables in predicting the future values with the help
     of previous data.   (Level 3)
CO6: Calculate probabilities by applying probability laws and theoretical results.   (Level 3)

8CSPL1061: Linux Foundation Lab

CO1: Demonstrate all types of commands in LINUX. (Level 3)
CO2: Explore files and directories. (Level 3)
CO3: Implement Shell programming that involves decision control, looping Statements (Level 3)
CO4: Demonstrate knowledge of the role and responsibilities of a Unix system administrator. (Level 3)
CO5: Create reports using reporting tools. (Level 3)

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8CSPL1041: PYTHON PROGRAMMING LAB
CO1: Apply basic constructs to create simple Python programs.(L3)
CO2: Design and develop programs using decision making and looping statements.(L4)
CO3: Understand the different data structures and its operations .(L2)
CO4: Apply the concepts of Modules ,Packages and file handling (L3)
CO5 : Develop programs using Object Oriented Programming. (L4)

Semester 3

8CSPL1051: OBJECT ORIENTED PROGRAMMING USING JAVA
CO1: Interpret various object oriented principles in the software design process. (Level 2)
CO2: Analyze the importance of classes and inheritance. (Level 4)
CO3: Impart the concepts of packages, threads ,interfaces and exception Handling .(Level 2)
CO4: Implement GUI using swings (Level 4).
CO5: Implement Database connectivity using JDBC.(Level 4)

8CSPL1081:WEB TECHNOLOGIES
CO1: Design a static website using HTML.(L3)
CO2: Apply styles to web pages using CSS.(L3)
CO3: Demonstrate JavaScript elements and the ways to use it with HTML.(L3)
CO4: Apply Client side validation scripts and additional functionalities (utility) to a web page.(L3)
CO5: Create a dynamic website using PHP with MySQL database. (L4)

8CSCC1031 : CLOUD COMPUTING AND VIRTUALIZATION FOUNDATION
CO1: Identify the significance of implementing virtualization techniques.(L3)
CO2: Interpret the various cloud computing models and services.(L2)
CO3: Recognize the architecture used to implement cloud stack . (L2)
CO4: Apply the cloud computing paradigms to various fields.(L2)
CO5: Appreciate the need of security mechanisms in the cloud.(L5)

8CSPL1071: OBJECT ORIENTED PROGRAMMING USING JAVA LAB
CO1: Interpret various object oriented principles in the software design process. (L2)
CO2: Analyze the importance of classes and inheritance. (L 4)
CO3: Impart the concepts of packages, threads ,interfaces cnd exception Handling .(L2)

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CO4: Implement GUI using swings (L4).
CO5: Implement Database connectivity using JDBC.(L 4)

8CSPL1091:WEB TECHNOLOGIES LAB
CO1: Design a static website using HTML. (L3)
CO2: Apply styles to web pages using CSS. (L3)
CO3: Demonstrate JavaScript elements and the ways to use it with HTML. (L3)
CO4: Apply Client side validation scripts and additional functionalities (utility) to a web page. (L3)
CO5: Create a dynamic website using PHP with MySQL database. (L4)

Semester 4

8CSGC1071: DATA COMMUNICATION AND NETWORKS
CO1: Identify the layered architecture of OSI (Open System Interconnection) model and TCP/IP (Transmission Control Protocol / Internet Protocol) model in the areas of Data Communication and Networking (L2)   **CO2:** Analyze how Physical layer transmits data as analog / digital signals using guided and unguided transmission medium (L3)   **CO3:** Demonstrate error detection and correction techniques to ensure flow control and error control of data at the receiving node. (L4)   **CO4:** Analyze the different protocols used at the data link layer to provide access to the medium (L3)   **CO5:** Apply different routing algorithms to calculate the optimum route to reach the destination node (L4)

8CSCC2041 : Cloud Services
CO1: Understand the basic concepts of Cloud Computing(L2)   **CO2**: understand the basic concepts of Various Service Models in Cloud (L 2)   **CO3**: Identify and apply deployment and management options of AWS Cloud Architecture (L 4)   **CO4**: Evaluate the deployment of web services from Cloud Architecture (L 4)

8CSGC2341: Computer Architecture
CO1: Identify the basic structure and functional units of a digital computer.(L2)   **CO2:** Analyze the effect of addressing modes at the execution time of a program.(L4)   **CO3:** Identify the pros and cons of pipelined implementation.(L2)   **CO4:** Analyze the parallel processing implementation of processors.(L4)   **CO5:** Analyze appropriate interfacing standards for I/O devices and memory organization.(L4)

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8CSGC1371 - DATA COMMUNICATION AND NETWORKS LAB
CO1: Demonstrate bit stuffing and byte stuffing operations in framing (L4) **CO2:** Analyze various error detection techniques (L3) **CO3:** Apply Leaky bucket algorithm to control congestion in networks (L3) **CO4:** Demonstrate File transfer between Client and Server nodes using Socket Programming (L4) **CO5:** Identify IP addresses of clients connected to servers (L2)

8CSCC2051 : Cloud Services Lab
CO1: To apply various services of AWS (L2) **CO2:** Design and deploy scalable, highly available, and fault-tolerant systems on AWS(L3) **CO3:** Select the appropriate AWS service based on data, compute, database, or security requirements (L3) **CO4:** To identify ,apply deployment and management options of AWS Cloud Architecture.(L4)

Semester 5

8CSAI3031: Internet of Things
CO1: Explain about IoT and its network architecture.(L2) **CO2**: Explain IoT things and various access technologies.(L2) **CO3**: Demonstrate various hardware and software components of IoT.(L3) **CO4**: Create codes for IoT . (L6) **CO5**: Illustrate Data and Analytics for IoT. (L4)

8CSGC1081- SOFTWARE ENGINEERING
CO1: Apply software engineering principles and techniques.(L3) **CO2**: Formulate and document the software requirements for solving given problems (L2). **CO3**: Demonstrate the design aspects and visually represent the system using various models / diagrams.(L3) **CO4**: Demonstrate various aspects, types of reuse and techniques for developing reliable systems. (L3) **CO5**: Evaluate the project using various testing strategies and assess its quality. (L5) **CO6**: Apply COCOMO model for estimating project cost.(L3)
8CSAI3041: Internet of Things Lab
CO1: Explain about IoT and its network architecture.(L2) **CO2**: Explain IoT things and various access technologies.(L2) **CO3**: Demonstrate various hardware and software components of IoT.(L3) **CO4**: Creating codes for IoT . (L6) **CO5**: Illustrate Data and Analytics for IoT. (L4)

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8CSGC3091 :NETWORK INFORMATION SECURITY

CO1:Explain the system security goals and concepts, classical encryption techniques. (L2)

CO2:Compare and apply different encryption and decryption techniques to solve problems related to confidentiality and authentication (L3)

CO3:Apply different digital signature algorithms to achieve authentication and design secure applications. (L3)

CO4:Use different network security protocols like SSL, IPSec, and PGP. (L4)

CO5: Analyze and apply system security concepts to recognize malicious code.(L4)

8CSGC3111: NETWORK INFORMATION SECURITY LAB

CO1: Demonstrate the process of operating on mobile security apps. (L2)

CO2: Outline the Connection Security Rules. (L3)

CO3:: Point out the limitations that exist in currently used protocols. (L4)

8CSPL2101: C# Programming

CO1: Identify the role of .Net framework in supporting multiple languages / applications under one environment (L2)

CO2: Demonstrate OOP concepts using C#.net (L3)

CO3: Design Windows forms applications using various drag and drop controls (L3)

CO4: Design dynamic websites using ASP.NET. (L3)

CO5: Analyze the features of ADO.NET and handle sql commands for data manipulation (L4)

8CSPL2111: C# Programming Lab

On successful completion of the course, Students will be able to,
CO1: Demonstrate OOP concepts in C# Console applications (L3)
CO2: Design windows applications using windows controls (L4)
CO3: Design websites and web services using ASP.NET (L4)
CO4: Judge the data using Validation controls (L4)
CO5: Apply the concept of ADO.NET with SQL commands (L3)

8CSPL2121 : Mobile Applications

CO1 : Identify various Platforms to build App for Mobile Devices and also to create a Basic app for Android OS using Eclipse and Android Studio IDE Tools (L2)

CO2 : Identify various user interface View and ViewGroups to build app for Android device.(L2)

CO3 : Create app using multimedia content like images, audio, video recording using camera.(L3)

CO4 : Create app which can store data using various data storing techniques and also create app which can send mail and SMS.(L3)

CO5 : Create app that can add widget, wallpapers to home screen, locate current location of the device, and finally

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deploy applications to the Android marketplace for distribution   (L3)

8CSPL2131: Mobile Applications Lab

CO1 : create an App that comprising of various view and ViewGroups(L3)

CO2: create an app comprising of alert boxes, WebView, Date and Timer Dialogs, etc (L3)

CO3 : create app which performs based on screen orientation (L3)

CO4 : create app to record audio, video, and take pictures (L3)

CO5 : create app that can store data in files and database (L3)

Semester 6

8CSCC3071: CLOUD SECURITY

CO1: Understand threats and vulnerabilities in cloud and security concepts(L2)

CO2: Understand Data center operations and provide security through encryption and key management(L2)

CO3: Familiarize with Identity and Access Management model in Cloud and provide identity services and authentication(L1)

CO4: Understand virtualization system security issues and providing solutions(L2)

CO5: Adopt and apply various technologies for providing data security in the cloud environment(L3)

8CSCC3101 : CLOUD SECURITY LAB

CO1: To Work with all the Security options available with AWS EC2(L4)

CO2: To Work with all the Security options available with AWS S3.(L5)

CO3: Apply deployment and management options of AWS Cloud Architecture (L4)

CO4: Evaluate the deployment of web services from Cloud Architecture (L4)

8CSCC3081 - OpenStack

CO1: Students can get a brief idea about what is virtualization and various concepts of virtualization

CO2: Students will get to analyze the basics of DevOps, and will learn the deployment of OpenStack.

CO3: Students will get to knowledge about the concepts of cluster and would learn how to compute in OpenStack

CO4: Students will understand types of storages in OpenStack

CO5: Students will get to analyze security and networks

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8CSCC3111:OpenStack Lab
CO1: Explain basic commands in openstack .(L2) **CO2**: Gain knowledge on image parameters (L2) **CO3**: Demonstrate cloud environment (L3) **CO4**: Creating instances and lists in OpenStack. (L6) **CO5**: Illustrate security group and router

8CSGC3161 : NOSQL Database with MONGODB
CO1: The student will be able to understand the difference between SQL and NOSQL.And also can analyze the types of NOSQL databases. (L2,L3) **CO2:** Understand the concepts of MongoDB and implement CRUD operations.(L2,L4) **CO3**: Create queries for real world problems using Aggregate and indexing in MongoDB.(L4) **CO4:** Understand the concept of Replication and sharding.(L2) **CO5**: Understand the concept of backup and security implementation in MongoDB.(L2,L4)

8CSGC3171 : NOSQL Database with MONGODB Lab
Course Outcomes: **On successful completion of the course, Students will be able to,** **CO 1:**Learn basic MongoDB functions and its implementation. **CO 2:**Implement various types of operations in MongoDB. **CO 3:**Implement the concepts of limit records and sort records. **CO 4:**Implement Indexing, Advanced Indexing and Hashing using MongoDB. **CO 5:**Analyze and apply aggregation and Map Reduction in MongoDB.

8CAPS4010:Capstone
CO1: Design and develop solutions (L6) CO2: Use various software tools/platforms (L3) CO3:Prepare project documentation (L2)

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Course Outcome (COs)

Academic Year 2022-25

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First Semester Syllabus

8CSPL1141: Problem Solving Techniques Using C
CO1: Define and implement the algorithms and draw flowcharts for solving Mathematical problems. (L3)
CO2: Demonstrate the understanding of computer programming language concepts.(L3)
CO3: Design and develop programs using decision making, and looping statements.(L4)
CO4: Define, develop and analyze the concepts like arrays, strings and user defined functions, structures, union and pointers using C language.(L4)
CO5: Develop programs using file concepts in simple data processing applications. (L4)

8CSPL1151: PYTHON PROGRAMMING WITH DATA STRUCTURE

CO1: Understand the basic programming concepts in Python (L2)

CO2: Analyze different collection data types (L4)

CO3: Apply different searching and sorting techniques (L3)

CO4: Develop python applications using Linear data structures (L4)

CO5: Develop python applications using Non-Linear data structures (L4)

8MATH1011: DISCRETE MATHEMATICS

CO1: Solve problems in the language of sets and perform set operations, apply basic concepts and prove facts about ordinals and well-ordered sets. (L 3)

CO2: Apply and interpret properties of linear systems and will be able to solve them by matrix techniques. (L3)

CO3: Apply logical concepts in the field of Computer Science. (L3)

CO4: Apply principles and concepts of Graph theory in practical situations and also will be able to formulate the concepts as a base for other related courses. (L3)

8CSPL1161: Problem Solving using C Lab

CO1 : Implement various concepts of C programming and demonstrate their execution.(L3)

CO2 : Design and debug simple to complex programs.(L4)

CO3 : Design and debug programs using various string functions (L4)

CO4 : Design and debug programs using arrays, structures and pointers. (L4)

CO5 : Design and debug simple file handling programs (L4)

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8CSPL1171: Python Programming with Data Structures Lab
Course Outcomes:
On successful completion of the course, Students will be able to,
CO1: Understand basic programming constructs to solve a given problem (L2)
CO2: Analyse various collections and its operations such as List, Dictionary, Tuple and Set. (L4)
CO3: Analyse and implement different searching and sorting techniques (L4)
CO4: Implement various operations on linear data structures(L3)
CO5: Implement various operations on non-linear data structures (L3)

Second Semester Syllabus

8CSPL1301: Web Development using Python and Django
CO1: Design a static website using HTML.(L3)
CO2: Apply styles to web pages using CSS.(L3)
CO3: Demonstrate JavaScript elements and the ways to use it with HTML.(L3)
CO4: Apply Client side validation scripts and additional functionalities (utility) to a web page.(L3)
CO5: Create a dynamic website using PHP with MySQL database. (L4)

8CSGC1031: DATABASE MANAGEMENT SYSTEMS
Course Outcomes: On successful completion of the course, Students will be able to,
CO1: understand the fundamentals of a database system.(Level 2)
CO2: Design and draw ER diagram for the real life problem.(Level 3)
CO3: Design relational models for a given application using schema definition and constraint.(Level 3)
CO4: Develop complex queries using SQL and PL/SQL to retrieve the required information from the database. (Level 4)
CO5: Apply suitable normal forms to normalize the given database(Level 2)
CO6: Determine the roles of transaction and concurrency control in database design.

(Level 3)

8STAT2031: PROBABILITY AND STATISTICS

CO1: Apply/formulate the concepts and theories of measures of central tendency in the functional areas of business and research. (L3)

CO2: Apply/formulate the concepts and theories of measures of Dispersion in the functional areas of business and research. (L3)

CO3: Identify the direction and degree of association between two variables and will be able to predict the future value with the help of previous data. (L4)

CO4: Calculate probabilities by applying probability laws and theoretical results.(L3)

8CSPL1311: Web Development Using Python and Django Lab

CO1: Design a static website using HTML. (L3)

CO2: Apply styles to web pages using CSS. (L3)

CO3: Demonstrate JavaScript elements and the ways to use it with HTML. (L3)

CO4: Apply Client side validation scripts and additional functionalities (utility) to a web page. (L3)

CO5: Create a dynamic website using PHP with MySQL database. (L4)

8CSGC1041: DATABASE MANAGEMENT SYSTEMS LAB

CO1: Apply the basic concepts of Database Systems and Applications.(Level 3)

CO2: Construct queries using SQL in database creation and interaction.(Level 3)

CO3: Create the procedures and Functions in PL/SQL.(Level 6)

CO4: Design PL/SQL Triggers and Cursors.(Level 3)

Third Semester Syllabus

8CSCC1031 : CLOUD COMPUTING AND VIRTUALIZATION FOUNDATION
CO1: Identify the significance of implementing virtualization techniques.(L3)   **CO2:** Interpret the various cloud computing models and services.(L2)   **CO3:** Recognize the architecture used to implement cloud stack . (L2)   **CO4:** Apply the cloud computing paradigms to various fields.(L2)   **CO5:** Appreciate the need of security mechanisms in the cloud.(L5)

8CSPL1051: OBJECT ORIENTED PROGRAMMING USING JAVA
Course Outcomes: On successful completion of the course, Students will be able to,
CO1: Interpret various object oriented principles in the software design process. (L2)   **CO2**: Analyze the importance of classes and inheritance. (L4)   **CO3**: Impart the concepts of packages, threads ,interfaces and exception Handling .(L2)   **CO4**: Implement GUI using swings (L4).   **CO5**: Implement Database connectivity using JDBC.(L4)

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8CSGC1081- SOFTWARE ENGINEERING
CO1: Apply software engineering principles and techniques.(L3)
CO2: Formulate and document the software requirements for solving given problems (L2).
CO3: Demonstrate the design aspects and visually represent the system using various models / diagrams.(L3)
CO4: Demonstrate various aspects, types of reuse and techniques for developing reliable systems. (L3)
CO5: Evaluate the project using various testing strategies and assess its quality. (L5)
CO6: Apply COCOMO model for estimating project cost.(L3)

8CSPL1071: OBJECT ORIENTED PROGRAMMING USING JAVA LAB

CO1: Interpret various object oriented principles in the software design process. (Level 2)
CO2: Analyze the importance of classes and inheritance. (Level 4)
CO3: Impart the concepts of packages, threads ,interfaces and exception Handling .(Level 2)
CO4: Implement GUI using swings (Level 4).
CO5: Implement Database connectivity using JDBC.(Level 4)

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8CSGC1381: Software Engineering and Testing Lab

CO1: Apply testing on basic constructs of programming Language.(L3)

CO2: Demonstrate Boundary-Value analysis.(L3)

CO3: Test a web application using Selenium IDE.(L5)

CO4: Create a test suite for testing web applications.(L6)

CO5: Identify web elements and perform validation using webdriver.(L2)

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Fourth semester

8CSGC1071: DATA COMMUNICATION AND NETWORKS
CO1: Identify the layered architecture of OSI (Open System Interconnection) model and TCP/IP (Transmission Control Protocol / Internet Protocol) model in the areas of Data Communication and Networking (L2) **CO2:** Analyze how Physical layer transmits data as analog / digital signals using guided and unguided transmission medium (L3) **CO3:** Demonstrate error detection and correction techniques to ensure flow control and error control of data at the receiving node. (L4) **CO4:** Analyze the different protocols used at the data link layer to provide access to the medium (L3) **CO5:** Apply different routing algorithms to calculate the optimum route to reach the destination node(L4)

8CSCC2041 : Cloud Services
CO1: Understand the basic concepts of Cloud Computing(L2) **CO2:** understand the basic concepts of Various Service Models in Cloud (L 2) **CO3**: Identify and apply deployment and management options of AWS Cloud Architecture (L 4) **CO4**: Evaluate the deployment of web services from Cloud Architecture (L 4)

8CSGC2061: DESIGN AND ANALYSIS OF ALGORITHMS
CO1: Design an efficient algorithm for any specific problem and to explain different methods   for computing space and time complexity of various types of algorithms.(L6)

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CO2: Describe the divide-and-conquer paradigm and compare various sorting techniques.(L1)

CO3: Generate optimal solution for different problems using Greedy approach.(L6)

CO4: Illustrate the dynamic-programming paradigm and explain the major graph algorithms and the analysis.(L2)

CO5: Demonstrate backtracking technique and implement a state space tree.(L2)

8CSCC2051 : Cloud Services Lab

CO1: To apply various services of AWS (L2)

CO2: Design and deploy scalable, highly available, and fault-tolerant systems on AWS(L3)

CO3: Select the appropriate AWS service based on data, compute, database, or security requirements (L3)

CO4: To identify ,apply deployment and management options of AWS Cloud Architecture.(L4)

8CSGC1371 Data Communication and Networks Lab

Course Outcomes:

On successful completion of the course, Students will be able to,

CO1: Demonstrate bit stuffing and byte stuffing operations in framing (L4)

CO2: Analyze various error detection techniques (L3)

CO3: Apply Leaky bucket algorithm to control congestion in networks (L3)

CO4. Demonstrate File transfer between Client and Server nodes using Socket Programming (L4)

CO5. Identify IP addresses of clients connected to servers (L2)

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Fifth Semester Syllabus

8CSAI3031: Internet of Things
CO1: Explain about IoT and its network architecture.(L2)
CO2: Explain IoT things and various access technologies.(L2)
CO3: Demonstrate various hardware and software components of IoT.(L3)
CO4: Create codes for IoT . (L6)
CO5: Illustrate Data and Analytics for IoT. (L4)

8CSCC3061: Blockchain Technology
CO1: Aims to provide basic concepts of block chain
CO2: Covers the definition and uses of block chain.
CO3: To understand the purpose of block chain technology.

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8CSAI3041: Internet of Things Lab
CO1: Explain about IoT and its network architecture.(L2)
CO2: Explain IoT things and various access technologies.(L2)
CO3: Demonstrate various hardware and software components of IoT.(L3)
CO4: Creating codes for IoT . (L6)
CO5: Illustrate Data and Analytics for IoT. (L4)

8CSGC3091 :NETWORK INFORMATION SECURITY
Course Outcomes: On successful completion of the course, Students will be able to,
CO1:Explain the system security goals and concepts, classical encryption techniques. (L2)
CO2:Compare and apply different encryption and decryption techniques to solve problems related to confidentiality and authentication (L3)
CO3:Apply different digital signature algorithms to achieve authentication and design secure applications. (L3)
CO4:Use different network security protocols like SSL, IPSec, and PGP. (L4)
CO5: Analyze and apply system security concepts to recognize malicious code.(L4)

8CSGC3111: NETWORK INFORMATION SECURITY LAB
CO1: Demonstrate the process of operating on mobile security apps. (L2)
CO2: Outline the Connection Security Rules. (L3)
CO3:: Point out the limitations that exist in currently used protocols. (L4)

8CSPL2101: C# Programming
CO1: Identify the role of .Net framework in supporting multiple languages / applications under one environment (L2)
CO2: Demonstrate OOP concepts using C#.net (L3)
CO3: Design Windows forms applications using various drag and drop controls (L3)
CO4: Design dynamic websites using ASP.NET. (L3)
CO5: Analyze the features of ADO.NET and handle sql commands for data manipulation (L4)

8CSPL2111: C# Programming Lab
CO1: Demonstrate OOP concepts in C# Console applications (L3)
CO2: Design windows applications using windows controls (L4)
CO3: Design websites and web services using ASP.NET (L4)
CO4: Judge the data using Validation controls (L4)
CO5: Apply the concept of ADO.NET with SQL commands (L3)

8CSPL2121: Mobile Applications
CO1 : Identify various Platforms to build App for Mobile Devices and also to create a Basic app for Android OS using Eclipse and Android Studio IDE Tools (L2)
CO2 : Identify various user interface View and ViewGroups to build app for Android device.(L2)
CO3 : Create app using multimedia content like images, audio, video recording using camera.(L3)
CO4 : Create app which can store data using various data storing techniques and also create app which can send mail and SMS.(L3)
CO5 : Create app that can add widget, wallpapers to home screen, locate current location of the device, and finally deploy applications to the Android marketplace for distribution (L3)

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8CSPL2131: Mobile Applications Lab

CO1 : create an App that comprising of various view and ViewGroups(L3)

CO2: create an app comprising of alert boxes, WebView, Date and Timer Dialogs, etc (L3)

CO3 : create app which performs based on screen orientation (L3)

CO4 : create app to record audio, video, and take pictures (L3)

CO5 : create app that can store data in files and database (L3)

Sixth Semester Syllabus

8CSCC3071: CLOUD SECURITY

CO1: Understand threats and vulnerabilities in cloud and security concepts(L2)

CO2: Understand Data center operations and provide security through encryption and key management(L2)

CO3: Familiarize with Identity and Access Management model in Cloud and provide identity services and authentication(L1)

CO4: Understand virtualization system security issues and providing solutions(L2)

CO5: Adopt and apply various technologies for providing data security in the cloud environment(L3)

8CSCC3101 : CLOUD SECURITY LAB

CO1: To Work with all the Security options available with AWS EC2(L4)

CO2: To Work with all the Security options available with AWS S3.(L5)

CO3: Apply deployment and management options of AWS Cloud Architecture (L4)

CO4: Evaluate the deployment of web services from Cloud Architecture (L4)

8CSGC3161 : NOSQL Database with MONGODB

CO1: The student will be able to understand the difference between SQL and NOSQL.And also can analyze the types of NOSQL databases. (L2,L3)

CO2: Understand the concepts of MongoDB and implement CRUD operations.(L2,L4)

CO3: Create queries for real world problems using Aggregate and indexing in MongoDB.(L4)

CO4: Understand the concept of Replication and sharding.(L2)

CO5: Understand the concept of backup and security implementation in MongoDB.(L2,L4)

8CSGC3171 : NOSQL Database with MONGODB Lab

CO 1: Learn basic MongoDB functions and its implementation.

CO 2: Implement various types of operations in MongoDB.

CO 3: Implement the concepts of limit records and sort records.

CO 4: Implement Indexing, Advanced Indexing and Hashing using MongoDB.

CO 5: Analyze and apply aggregation and Map Reduction in MongoDB.

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8CSCC3081 - OpenStack
CO1: Students can get a brief idea about what is virtualization and various concepts of virtualization
CO2: Students will get to analyze the basics of DevOps, and will learn the deployment of OpenStack.
CO3: Students will get to knowledge about the concepts of cluster and would learn how to compute in OpenStack
CO4: Students will understand types of storages in OpenStack
CO5: Students will get to analyze security and networks

8CSCC3111:OpenStack Lab
CO1: Explain basic commands in openstack .(L2)
CO2: Gain knowledge on image parameters (L2)
CO3: Demonstrate cloud environment (L3)
CO4: Creating instances and lists in OpenStack. (L6)
CO5: Illustrate security group and router

8CAPS4010:Capstone
CO1: Design and develop solutions (L6)
CO2: Use various software tools/platforms (L3)
CO3:Prepare project documentation (L2)

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COURSE OUTCOMES: Batch [2023-26]

SEMESTER I

8CSPL1321: Problem Solving Techniques Using C and Lab

CO1: Devise algorithms and draw flowcharts for solving problems problems (L3,L6)

CO2: Apply C programming syntax and semantics for problem solution(L3)

CO3: Design and develop programs using decision making and looping statements.(L6)

CO4: Define and develop problem solution using functions, structures, union and pointers (L6)

CO5: Develop programs using file concepts in simple data processing applications. (L6)

8CSGC1461: Database Management Systems and Lab

CO1: Gain knowledge on fundamentals of a database system.(L2)

CO2: Build relational model using Entity Relationship diagrams for real life systems(L3,L6)

CO3: Organize data by eliminating redundancy and inconsistencies by applying normalization.(L3)

CO4: Develop complex queries using SQL and PL/SQL to store,manipulate and data from database. (L3,L4,L6)

CO5: Gain knowledge on transaction processing and concurrency control in database design. (L2)

8MATH1031:Mathematical Foundation for Computer Science

CO1:   Solve problems in the language of sets and perform set operations, apply basic concepts and prove facts about ordinals and well ordered sets. (L3)

CO2: Apply and interpret properties of linear systems and will be able to solve them by matrix techniques. (L3)

CO3: Apply logical concepts in the field of Computer Science. (L3)

CO4: Apply principles and concepts of Graph theory in practical situations and also will be able to formulate the concepts as a base for other related courses. (L3)

Second Semester

8CSGC2391: Data Structures Using C and Lab

CO1: Select appropriate data structures as applied to specified problem definition.(L3)

CO2: Implement Linear and Non-Linear data structures.(L3)

CO3: Apply algorithms for sorting/searching technique for given problem.(L3)

CO4: Implement operations like searching, insertion, deletion, traversing on various data structures.(L4)

CO5: Implement the concept of Dynamic memory allocation.(L4)

CO6: Design advance data structure using Non Linear data structure.(L4)

8CSPL1331: OBJECT ORIENTED PROGRAMMING USING JAVA AND lAB

CO1: Interpret various object oriented principles in the software design process. (L2)

CO2: Analyze the importance of classes and inheritance. (L4)

CO3: Impart the concepts of packages, threads ,interfaces and exception Handling .(L 2)

CO4: Implement GUI using swings (L4).

CO5: Implement Database connectivity using JDBC.(L4)

8STAT2041: Statistics

CO1: Organize data and present it in the form of diagrams and graphs.(L3: Apply)

CO2: Solve the problems related to Measures of Central Tendency-Mean-Median-Mode. (L3)

CO3: Solve the problems related to Measures of Dispersion-Range-Quartile Deviation-Mean Deviation and Standard Deviation. (L3)

CO4: Solve the problems related to Correlation and Regression, interpret the direction and degree of association between two variables and also will be able to predict the value of one variable with the help of the known value of another variable. (L3)

CO5: Formulate the trend values which enables in predicting the future values with the help of previous data's. (L3: Apply)

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Third Semester

8CSPL1341: OPERATING SYSTEM AND LINUX FOUNDATION AND LAB
CO1: Identify the structure of the operating system, CPU scheduling with different scheduling algorithms (Level 2) **CO2:** Identify the classic problems of Synchronization. (Level 2) **CO3:** Analyze different methods of handling deadlocks , the memory management and its allocation policies. (Level 4) **CO4**: Demonstrate file management, secondary storage structure and its various allocation methods.(Level 3) **CO5:** Apply the concepts of Linux programming. (Level 3)

8CSPL1351:WEB TECHNOLOGIES AND LAB
CO1: Design a static website using HTML.(L3)
CO2: Apply styles to web pages using CSS.(L3)
CO3: Demonstrate JavaScript elements and the ways to use it with HTML.(L3)
CO4: Apply Client side validation scripts and additional functionalities (utility) to a web page.(L3)
CO5: Create a dynamic website using PHP with MySQL database. (L4)

8CSGC2151: Optimization Techniques
CO1:   Recall the theoretical foundations of various issues related to linear programming modeling to formulate real-world problems as a L P model using graphical and simplex methods
CO2: Demonstrate the optimized material distribution schedule using transportation model to minimize total distribution cost and find the appropriate algorithm for allocation of resources to optimize the process of assignment
CO3: implement the theoretical workings of network models to find shortest path for given network.
CO4: Solve the complex problem with different strategies using integer programming and game theory.
CO5: Develop a suitable queuing system to control important performance measures dynamically.

Semester 4

8CSCC3161: Cloud Computing and Lab
CO1: Identify the significance of implementing virtualization techniques.(L1)
CO2: Interpret the various cloud computing models and services.(L2)
CO3: Understanding the working methodologies for cloud based storage. (L3)
CO4: Apply deployment and management options of AWS Cloud Architecture (L3)
CO5: Evaluate the deployment of web services from Cloud Architecture (L3)

8CSGC1481: DATA COMMUNICATION AND NETWORKS AND LAB
CO1: Identify the layered architecture of OSI (Open System Interconnection) model and TCP/IP (Transmission Control Protocol / Internet Protocol) model in the areas of Data Communication and Networking (L2)
CO2: Analyze how Physical layer transmits data as analog / digital signals using guided and unguided transmission medium (L3)
CO3: Demonstrate error detection and correction techniques to ensure flow control and error control of data at the receiving node. (L4)
CO4: Analyze the different protocols used at the data link layer to provide access to the medium (L3)
CO5: Apply different routing algorithms to calculate the optimum route to reach the destination node(L4)

8CSGC2401 : Cyber Security
CO1: Understand the concept of cyber security and cyber law.(L2)
CO2: Apply the knowledge of cyber security safeguards in real time scenarios. (L3).
CO3: Analyzing the ethical rules to monitor hacking for cyber security. (L4)
CO4: Applying various roles of forensic investigator and auditing for management. (L3)
CO5: Recognizing the architecture of Cyberspace.(L2)

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COURSE OUTCOMES : Batch [2024-27]

SEMESTER I

8CSPL1321: Problem Solving Techniques Using C and Lab

CO1: Devise algorithms and draw flowcharts for solving problems problems (L3,L6)
CO2: Apply C programming syntax and semantics for problem solution(L3)
CO3: Design and develop programs using decision making and looping statements.(L6)
CO4: Define and develop problem solution using functions, structures, union and pointers (L6)
CO5: Develop programs using file concepts in simple data processing applications. (L6)

8CSGC1461: Database Management Systems and Lab

CO1: Gain knowledge on fundamentals of a database system.(L2)

CO2: Build relational model using Entity Relationship diagrams for real life systems(L3,L6)

CO3: Organize data by eliminating redundancy and inconsistencies by applying normalization.(L3)

CO4: Develop complex queries using SQL and PL/SQL to store,manipulate and data from database. (L3,L4,L6)

CO5: Gain knowledge on transaction processing and concurrency control in database design. (L2)

8MATH1031:Mathematical Foundation for Computer Science

CO1: Solve problems in the language of sets and perform set operations, apply basic concepts and prove facts about   ordinals and well ordered sets. (L3)

CO2: Apply and interpret properties of linear systems and will be able to solve them by matrix techniques. (L3)

CO3: Apply logical concepts in the field of Computer Science. (L3)

CO4: Apply principles and concepts of Graph theory in practical situations and also will be able to formulate the concepts as a base for other related courses. (L3)

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CPSSF1011: French –Level-1
CO1: Introduce themselves and others, and use common French salutations appropriately.(L1,L2)
CO2: Use polite expressions in French appropriately in social interactions. (L2)
CO3: Discuss daily activities with improved fluency and accuracy (L3)
CO4: Identify and use parts of speech correctly in sentences.

CPSSF1041: Spanish –Level-1
CO1: Introduce themselves and others, and use common Spanish salutations appropriately.(L1,L2)
CO2: Use polite expressions in Spanish appropriately in social interactions. (L2)
CO3: Discuss daily activities with improved fluency and accuracy (L3)
CO4: Identify and use parts of speech correctly in sentences.

FUNCTIONAL ENGLISH **Course Code: CPSAL1111 Batch:2024**
CO1: Define Social Values and Critical Thinking skills (L1)
CO2: Compare the poetical terms and integrate creative ideas in the English Language. (L2) CO3: Develop vocabulary and interpret in one academic and professional life.(L2)
CO4: Develop skills of comprehending and analytical to improve their language proficiency. (L3) CO5: Construct sentences to improve their Verbal Skills.(L3)

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BCA (CC) Programme

ಕನ್ನಡ ಕಲಿ-ನಲಿ	
Course Name: ಕನ್ನಡ	
Course Code: CPSAL1101	
A. Course Framework	
Credits: L-T-P-C: 2-0-0-2	Syllabus Version: 1
Contact Hours / Week: 2	Total Contact Hours: 30	Level: 100
Prerequisite: (If applicable)	

Course Learning Objectives:

CLO1: ಕನ್ನಡ ಅಕ್ಷರ ಮಾಲೆಯನ್ನು ಪರಿಚಯಿಸುವುದು.

CLO2: ಕನ್ನಡ ಅಕ್ಷರಗಳ ಉಚ್ಛಾರಣೆಯ ಬಗೆಗೆ ತಿಳಿಸುವುದು.

CLO3: ಕನ್ನಡ ಗುಣಿತಾಕ್ಷರಗಳ ರಚನೆಯ ಬಗ್ಗೆ ತಿಳಿಸುವುದು.

CLO4: ಕನ್ನಡ ಲಿಂಗ, ವಚನಗಳನ್ನು ಪರಿಚಯಿಸುವುದು.

CLO5: ಕನ್ನಡ ಭಾಷೆಯಲ್ಲಿ ಸರಳ ಪದ ರಚನೆ ಮತ್ತು ವಾಕ್ಯ ರಚನೆಯ ಬಗ್ಗೆ ತಿಳಿಸುವುದು.

Course Outcomes: On successful completion of the course, Students will be able to,

CO1: [Level2] ಕನ್ನಡ ಅಕ್ಷರ ಮಾಲೆಯ ಬಗ್ಗೆ ತಿಳಿದುಕೊಳ್ಳುತ್ತಾರೆ.

CO2: [Level 4] ಕನ್ನಡ ಅಕ್ಷರಗಳ ಉಚ್ಛಾರಣೆಯ ಬಗೆಗೆ ಅರಿತುಕೊಳ್ಳುತ್ತಾರೆ.

CO3: [Level 4] ಕನ್ನಡ ಗುಣಿತಾಕ್ಷರಗಳ ರಚನೆಯ ಬಗ್ಗೆ ತಿಳಿದುಕೊಳ್ಳುತ್ತಾರೆ.

CO4: [Level 5,6] ಕನ್ನಡ ಭಾಷೆಯಲ್ಲಿನ ಲಿಂಗ, ವಚನಗಳ ಸ್ವರೂಪವನ್ನು ಅರ್ಥೈಸಿಕೊಳ್ಳುತ್ತಾರೆ.

CO5: [Level4] ಕನ್ನಡ ಭಾಷೆಯಲ್ಲಿ ಸರಳ ಪದ ಮತ್ತು ವಾಕ್ಯ ರಚನೆಯನ್ನು ಪ್ರಯೋಗಿಸುತ್ತಾರೆ.

B. Syllabus	
Module:1: ಕನ್ನಡ ಅಕ್ಷರ ಮಾಲೆ	5 Hours
ಸ್ವರಗಳು, ವ್ಯಂಜನಗಳು, ಯೋಗವಾಹಕಗಳು, ವರ್ಗೀಯ ವ್ಯಂಜನಗಳು ಮತ್ತು ಅವರ್ಗೀಯ ವ್ಯಂಜನಗಳು	
Module:2: ಗುಣಿತಾಕ್ಷರಗಳು	8 Hours
ಕ-ಳ ಗುಣಿತಾಕ್ಷರಗಳ ಸ್ವರೂಪ	
Module:3: ಒತ್ತಕ್ಷರಗಳು	6 Hours
ಸ್ವಜಾತೀಯ ಒತ್ತಕ್ಷರಗಳು, ವಿಜಾತಿಯ ಒತ್ತಕ್ಷರಗಳು	
Module:4: ಕನ್ನಡ ಭಾಷೆಯಲ್ಲಿ ಲಿಂಗ ಮತ್ತು ವಚನಗಳು	6 Hours
ಪುಲ್ಲಿಂಗ, ಸ್ತ್ರೀಲಿಂಗ, ನಪುಂಸಕ ಲಿಂಗ, ಏಕವಚನ, ಬಹುವಚನ	
Module:5: ಸರಳ ಪದ ಮತ್ತು ವಾಕ್ಯ ರಚನೆ	5 Hours
ಎರಡು ಅಕ್ಷರಗಳ ಪದಗಳು, ಮೂರು ಅಕ್ಷರಗಳ ಪದಗಳು, ಸರಳ ವಾಕ್ಯ	

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BCA (CC) Programme

Course Code: CPSAD1013 Course Name: Design Thinking Process
CO1: Implement design thinking methodologies to identify and address complex problems.**(Level 3) CO2:** Empathize with users and stakeholders to understand their needs effectively.**(Level 2)**
CO3: Generate innovative ideas by engaging in ideation and prototyping processes**(Level 5) CO4:** Effectively communicate solutions using pitching techniques. **(Level 4)**

CKSAM1051: Indian Democracy, Participation & Social Change 2024
CO1: Study a particular event in Indian history and trace the impact that can be felt to the present day.
CO2: Understand the impact of the way a democracy is structured.
CO3: Understand the freedoms that a citizen of India has, and what those mean in daily life.
CO4: Understand the duties of an Indian citizen and how they translate to daily life.
CO5: Gain an understanding of the workings of the government in their residential locality.
CO6: Trace the impact of a single vote from their area of residence to the national scale.
CO7: Understand the Indian democratic process and their role in it.
CO8: Identify ways in which they can contribute to the progress of the country.

SEMESTER 2

8CSGC2391: Data Structures Using C and Lab
CO1: Select appropriate data structures as applied to specified problem definition.(L3)
CO2: Implement Linear and Non-Linear data structures.(L3)
CO3: Apply algorithms for sorting/searching technique for given problem.(L3)
CO4: Implement operations like searching, insertion, deletion, traversing on various data structures.(L4)
CO5: Implement the concept of Dynamic memory allocation.(L4)
CO6: Design advance data structure using Non Linear data structure.(L4)

8CSPL1341: OPERATING SYSTEM AND LINUX FOUNDATION AND LAB
CO1: Identify the structure of the operating system, CPU scheduling with different scheduling algorithms (Level 2) **CO2:** Identify the classic problems of Synchronization. (Level 2) **CO3:** Analyze different methods of handling deadlocks , the memory management and its allocation policies.(Level 4) **CO4**: Demonstrate file management, secondary storage structure and its various allocation methods.(Level 3) **CO5:** Apply the concepts of Linux programming. (Level 3)

8STAT2041: Statistics
CO1: Organize data and present it in the form of diagrams and graphs.(L3: Apply) **CO2**: Solve the problems related to Measures of Central Tendency-Mean-Median-Mode. (L3) **CO3**: Solve the problems related to Measures of Dispersion-Range-Quartile Deviation-Mean Deviation and Standard Deviation. (L3) **CO4:** Solve the problems related to Correlation and Regression, interpret the direction and degree of association between two variables and also will be able to predict the value of one variable with the help of the known value of another variable. (L3) **CO5:** Formulate the trend values which enables in predicting the future values with the help of previous data's. (L3: Apply)

CPSAL1061 : Hindi

A. Course Framework

Credit : L-T-P-C : 2 – 0 – 0 - 2		Total Crédit : 2
Contact Hours/Week : 2	**Direct Teaching Hour : 30**	**Total Contact Hour :30**

Course Learning Objectives : (सीखने का उद्देश्य)

CLO I : साहित्य के विविध पहलुओं का परिचय देने कहानी कविता और प्रायोगिक हिंदी पत्रकारिता संबंध सामग्री की गयी है |

CLO2 : पाठ्य सामग्री का चयन कुछ इस प्रकार किया गया है कि- विद्यार्थिय उसे अध्ययन करने के पश्चात् ऐसे मूल्य को जिस से राष्ट्रीय एवं सामाजिक एकता का भाव संपुटित हो सके |

CLO 3 : भाषा विकास के विविध पक्षों का अनुप्रयोग करने हेतु श्रवण -मौखिक एवं लिखित कुशलता का अभ्यास |

Course Outcome : On successful completion of the course, students will be able to, (इस पाठ्यक्रमके अध्ययन के बाद विद्यार्थी निम्न तथ्यों से अवगत होगें)

CO I : [Level] : इस सत्र के अंत तक विद्यार्थीयों को भाषायी कौशलता में उत्तरोत्तर विकास देखना |

CO 2 : [Level] हिंदी साहित्य की घनिष्ठता एवं उसकी विशदता का परिचय एवं उसका आश्वासन कराना

CO3 : बौद्धिक विकास के साथ -साथ निर्णयात्मक एवं सही गलत के बीच में अंतर परखने और उस पर दृढ़ता पूर्वक अपने विचारों को प्रकट करना एक मुख्य परिणाम होगा |

Course Name: ಕನ್ನಡ

Course Code: CPSAL1071

A. Course Framework

Credits: L-T-P-C: 2-0-0-2		Syllabus Version: 1
Contact Hours / Week: 2	Total Contact Hours: 30	Level: 100
Prerequisite: (If applicable)		

Course Learning Objectives:

CLO1: ಮಾನವನ ಸಂಬಂಧದಲ್ಲಿ ಪ್ರೀತಿಯ ಮಹತ್ವವನ್ನು ತಿಳಿಸುವುದು

CLO2: ಜಾಗತಿಕರಣದ ಪ್ರಭಾವದಿಂದ ನಾಶವಾಗುತಿರುವ ಮಾನವೀಯ ಮೌಲ್ಯಗಳನ್ನು ಪರಿಚಯಿಸುವುದು

CLO3: ಪ್ರಸ್ತುತ ರೈತರ ಸಮಸ್ಯೆಗಳನ್ನು ವಿವರಿಸುವುದು

CLO4: ಪ್ರಕೃತಿಯೊಂದಿಗೆ ಮನುಷ್ಯನ ಸಂಬಂಧ ಮತ್ತು ಆದರ ಆಗತ್ಯತೆಯನ್ನು ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ತಿಳಿಸುವುದು

CLO5: ಜಗತ್ತಿನಲ್ಲಿ ತಂದೆ–ತಾಯಿಗಳೇ ಪೂಜ್ಯನೀಯ ಎಂಬುದನ್ನು ತಿಳಿಸುವುದು.

Course Outcomes: On successful completion of the course, Students will be able to,

CO1: [Level2] ಬದುಕನ್ನು ಮೌಲ್ಯದೊಂದಿಗೆ ಸಾಗಿಸುವ ವಿಧಾನವನ್ನು ಕಲಿಯುತ್ತಾರೆ.

CO2: [Level 4] ಜೀವನದಲ್ಲಿ ದುಡ್ಡೆ ಮುಖ್ಯವಲ್ಲ ಮನುಷ್ಯತ್ವ ಮುಖ್ಯವೆಂಬುದನ್ನು ತಿಳಿದುಕೊಳ್ಳುತ್ತಾರೆ.

CO3: [Level 4] ಆಧುನಿಕದಲ್ಲಿ ಎಲ್ಲವನ್ನು ತಾಂತ್ರಿಕ ಸಹಾಯದಿಂದ ಸೃಷ್ಟಿಸಬಹುದು ಆದರೆ ಆಹಾರವನ್ನಲ್ಲ ಎಂಬುದನ್ನು ಅರಿತು ಆ ಮೂಲಕ ರೈತರ ಸಮಸ್ಯೆಗಳ ಬಗೆಗೆ ಚಿಂತಿಸುತ್ತಾರೆ.

CO4: [Level 5,6] ಇಂದಿಗೂ ಜೀವಂತವಾಗಿರುವ ಜಾತಿಪದ್ಧತಿಯನ್ನು ವೈಜ್ಞಾನಿಕವಾಗಿ ಅರ್ಥಮಾಡಿಕೊಳ್ಳುತ್ತಾರೆ.

CO5: [Level4] ತಾಯಿಯ ಮಹತ್ವ ಮತ್ತು ತಾಯಿಯ ವಾತ್ಸಲ್ಯವನ್ನು ಅರಿತುಕೊಳ್ಳುತ್ತಾರೆ.

B. Syllabus

Module:1: ಪ್ರೀತಿ ಇಲ್ಲದ ಮೇಲೆ – ಜಿ.ಎಸ್ ಶಿವರುದ್ರಪ್ಪ	4 Hours

ಕವಿ ಪರಿಚಯ, ಪ್ರೀತಿಯ ವಿವಿಧ ಆಯಾಮಗಳನ್ನು ಪರಿಚಯಿಸುವುದು, ಬದುಕಿನ ಚೈತನ್ಯವಾಗಿ ಪ್ರೀತಿ, ಆಧುನಿಕ ಜಗತ್ತಿನಲ್ಲಿ ಪ್ರೀತಿಯ ಅಸ್ತಿತ್ವವನ್ನು ಪರಿಚಯಿಸುವುದು, ಪ್ರಕೃತಿ ಮತ್ತು ಮನುಷ್ಯನ ನಡುವಿನ ಪ್ರೀತಿಯ ಸಂಬಂಧವನ್ನು ತಿಳಿಸುವುದು

Module:2: ಬಸವಣ್ಣನವರ ವಚನಗಳು	6 Hours

ವಚನ ಸಾಹಿತ್ಯದ ಪರಿಚಯ, ಕನ್ನಡ ಸಾಹಿತ್ಯದಲ್ಲಿ ವಚನಗಳ ಮಹತ್ವ, ಪ್ರಮುಖ ವಚನಕಾರರ ಪರಿಚಯ, ವಚನ ಸಾಹಿತ್ಯ ಪ್ರಮುಖ ಅಂಶಗಳ ಬಗೆಗೆ ತಿಳಿಸುವುದು, ವಚನ ಸಾಹಿತ್ಯದಲ್ಲಿ ಇರುವ ಜೀವನ ಮೌಲ್ಯಗಳ ಬಗೆಗೆ ವಿಶ್ಲೇಷಣೆ, ಬಸವಣ್ಣನವರ ಪರಿಚಯ, ಬಸವಣ್ಣನವರ ಜೀವನದ ಪ್ರಮುಖ ಘಟನೆಗಳ ಬಗೆಗೆ ವಿವರಣೆ, ಬಸವಣ್ಣನವರ ವಚನಗಳ ತಾತ್ವಿಕ ವಿಚಾರದ ಬಗೆಗೆ ಚರ್ಚೆ.

Module:3: ಧನ್ವಂತರಿ ಚಿಕಿತ್ಸೆ – ಕುವೆಂಪು	8 Hours

ಕತೆಯ ಲೇಖಕರ ಪರಿಚಯ, ಪುರಾಣಗಳ ಪರಿಚಯ, ಪುರಾಣ ಪಾತ್ರಗಳ ವಿವರಣೆ, ಕತೆಯ ವಿವರದೊಂದಿಗೆ ರೈತರ ಇಂದಿನ ಸಮಸ್ಯೆಗಳ ವಿಶ್ಲೇಷಣೆ, ಕತೆಯ ಪ್ರಸ್ತುತ ಸ್ಥಿತಿಯನ್ನು ವಿವರಿಸುವಲ್ಲಿ ಯಶಸ್ವಿಯಾಗಿದೆ ಎಂಬುದನ್ನು ತಿಳಿಸುವುದು, ಧನ್ವಂತರಿ ಕತೆಯ ಆಶಯವನ್ನು ವಿವರಿಸುವುದು, ರೈತರ ಸಮಸ್ಯೆಗಳಿಗೆ ಹೊಸ ಬಗೆಯ ಪರಿಹಾರಗಳನ್ನು ಕುರಿತು ಚಿಂತನೆಗೆ ಕೊಡಗುವುದು.

School of Science and Computer Studies

BCA (CC) Programme

Course Code: CPSAL1081
English:
(SOM/SOEC/SOSSH/SOSS/SOD/SOA)
Batch-2024
CO1: Define Critical Thinking skills (L1)
CO2: Compare the poetical terms and integrate creative ideas in the English Language. (L2)
CO3: Interpret meaningful connectivity on the basis of characters with the plot.(L2)
CO4: Develop Narrative skills to improve their writing proficiency. (L3)
CO5: Construct sentences to improve their Verbal Skills.(L3)

Oral and Written Communication (4 group Schools)
Course Code: CPSAL2032
Batch:2024
CO1: Apply different listening techniques to effectively engage with diverse speakers and situations. (L3)
CO2:Demonstrate proficiency in both oral and written communication, effectively expressing ideas, opinions, and information in a clear and coherent manner. (L3)
CO3: Use the different methods and strategies of reading. (L3)
CO4: Apply acquired knowledge in writing using appropriate tone and structure. (L3)
CO5: Analyze and interpret grammatical structure in texts to enhance communication skills in various contexts, including academic writing, professional correspondence, and interpersonal communication. (L2, L3)

GR Course Syllabus

GPSDR1091 : Personality Development
CO1:Identify their personal strengths, weaknesses, and interests to develop a practical career plan. [Level 3]
CO2: Develop a well defined career objective aligned with their chosen career trajectory [Level 3]

CO3: Demonstrate their own understanding of 21st century skills critically, to identify their areas of strengths and weaknesses, and work on them consciously [Level-3].

CO4: Compare and contrast different strategies for regulating and managing emotions and evaluate the impact of emotions on personal and professional relationships [Level-4].

Preparing for Aptitude Tests [UG-1/3]

CO1: Determine the calculation techniques for quick calculations and manipulation of numbers.

CO2: Apply the concepts of percentages, exponents, ratios, proportions, and averages for computing simple, compound interests and to calculate class /set relationships.

CO3: Solve problems of various arrangements (Circular and Linear).

CO4: Analyze the different graphs and interpret their specific components by solving

problems.

CO5: Improve their grasp of English grammar to understand problems relating to verbal

ability.