

B.C.A SEMESTER I

Problem-Solving and Programming Major I

Course Code: CSA-100

The students will be able to:

CO-1. Remember the basic concepts and terminologies of problem-solving, algorithms, flowcharts, pseudo-code, language syntax, and debugging.

CO-2. Understand basic computing concepts, algorithm design, flowchart design, pseudo-code, programming constructs, and debugging.

CO-3. Apply problem-solving and programming concepts and design solutions to simpler problems using algorithms, flowcharts, and pseudocode.

CO-4. Code, debug, and analyze well-structured programming logic using suitable Programming language/s.

Elementary Mathematics

Minor

Course Code: MAT-111

The student will be able to,

CO-1. Identify the truth and falsity of a statement.

CO-2. Comprehend the concept of Sets, Relations, and Functions.

CO-3. Evaluate basic limits, Identify discontinuous functions, and Apply the techniques of differentiation.

CO-4. Construct the polar form of complex numbers.

CO-5. Compute the gradient, curl, and divergence.

CO-6. Formulate and Solve differential equations.

Psychology of Adjustment

MC

Course Code: PSY-131

At the end of this course, the learner will be able to:

CO-1 Explain contemporary perspectives regarding psychology of life adjustment.

CO-2 Apply skills for effective adjustment in the modern world.

CO-3 Harness critical perspectives regarding questions of gender, sexuality, and intimate relationships.

CO-4 Develop values and competences for facing challenges at work and in families.

Communicative English: Spoken and Written AEC -

Course Code: ENG 151

The students will be able to:

CO-1: Elicit and show respect for the views of others as well as be culturally sensitive.

CO2: Display emotional stability and self-confidence.

CO-3: Apply critical thinking skills through decision- making and problem solving.

CO-4: Demonstrate effective written communication for an intended purpose and audience that follows genre/disciplinary conventions that reflect creation, organization, precision, and revision.

Python Programming SEC**Course Code: CSA-142**

The students will be able to:

- CO-1: Remember the basics of python programming
- CO-2: Understand the concepts and constructs of python programming.
- CO-3: Apply python library functions and data structures.
- CO-4 4. Analyse the implementation of python programming.

Environmental Studies II VAC**Course Code: VAC-101**

Students will be able to:

- CO-1: Understand the impact of pollution on human welfare
- CO-2: Appreciate ethical issues of environmental rights and duties
- CO-3: Undertake preliminary field analysis of environmental damage

Introduction to the Folktales of India VAC-**Course Code: VAC 109**

The students will be able to:

- CO-1: Identify and analyze the key features and characteristics of folktales.
- CO-2: Critically evaluate the role of folktales in shaping cultural identities, beliefs, and values.
- CO-3: Demonstrate an appreciation for the diversity and richness of global folktales and develop a deeper understanding of different cultures and traditions.
- CO-4: Apply their knowledge and skills to create their own folktales, based on the characteristics and themes of traditional tales, and share them with others.

B.C.A SEMESTER II

Foundational Mathematics

Major

Course Code: MAT-100

The student will be able to,

- CO-1. Infer the truth of various sentences and its equivalents and outline various properties of sets.
- CO-2. Examine and Identify the types of relations and functions.
- CO-3. Make use of the strong and weak induction.
- CO-4. Solve systems of linear equations.
- CO-5. Discuss the properties of determinants.

Computer System Fundamentals

Minor

Course Code: CSA-111

The students will be able to:

- CO-1: Remember the basics of computers, Computer Organization, Number Systems, process management, memory management, I/O Management, and File management concepts.
- CO-2: Understand the concepts of process management, memory systems, I/O devices, and File Management Systems
- CO-3: Apply the concepts of process management in handling deadlock situations.
- CO-4: Analyse an Appropriate type of memory for a given scenario.

Environmental Psychology

MC

Course Code: PSY-132

At the end of this course, the learner will be able to:

- CO-1: Understand various perspectives on human-environment interrelationships
- CO-2: Gain insight into the ways in which the environment influences feelings and experiences
- CO-3: Appreciate the nature connectedness.
- CO-4: Understand the impact of climate change and behaviour
- CO-5: Students will understand the role of the environment on health and quality of life

Digital Content Creation in English

AEC

Course Code: ENG-152

The student will be able to do upon completion of the course:

- CO-1: Create and deliver individual presentations using a variety of digital software.
- CO-2: Compose and present a digital story.
- CO-3: Identify and distinguish between different genres of writing.
- CO-4: Write a book/film review.
- CO-5: Interpret graphic data to arrive at an informed conclusion.

Data Analytics using Spreadsheets

SEC

Course Code: CSA-143

The students will be able to:

- CO-1: Demonstrate basic and advanced functions in spreadsheet applications.
- CO-2: Apply data analysis techniques and create visualizations using charts and pivot tables.
- CO-3: Implement data analysis tools and functions for practical applications.

E-Waste Management

VAC

Course Code: VAC-111

Students will be able to

- CO-1: Understand the environmental impacts of e-waste.
- CO-2: Describe the process recycling of e-waste.
- CO-3: Distinguish the role of various national and internal act and laws applicable for e-waste management and handling.
- CO-4: Analyse the e – waste management measures proposed under national and global legislations.

CO-1: Students will become aware of their way of communication and will improvise by practice their confidence and communication skills.

CO-2: Students will understand how their own emotions are tied to the breath and nervous system. They will experience how the Sudarshan Kriya™ affects emotions, memory and overall well-being.

CO-3: Students will understand how to manage their interpersonal relationships with acceptance and improved communication.

CO-4: They will be able to navigate the roles they play in life in a very effective manner

B.C.A SEMESTER III

Data Structures

Major

Course Code: CSA - 200

The students will be able to:

CO-1: Remember the basic concepts of data structure.

CO-2: Understand the concept of linear and non-linear data structures.

CO-3: Analyse various data structure types and its implementation.

Database Management Systems Major I

Course Code: CSA-201

The students will be able to:

CO-: Remember the basic concepts and terminologies of DBMS, ERD, Normalization, and Transaction Processing.

CO-2: Understand ER diagrams, normalization, relational schema design, relational operations, transaction processing, and SQL concepts.

CO-3: Apply & discuss the concepts of ER Diagram, relational model and normalization.

CO-4: Design relational database and formulate queries on the database and data using different SQL constructs mentioned in the syllabus.

Reasoning Techniques Minor I

Course Code: CSA-211

The students will be able to:

CO-1: Remember basics rules of logic and reasoning

CO-2: Understand various logic and reasoning concepts & techniques.

CO-3: Apply the suitable reasoning techniques to solve real world problems.

CO-4: Analyze the obtained solution with suitable and relevant logic / reasoning.

Relationship Psychology MC

Course Code: PSY-231

At the end of this course, the learner will be able to:

CO-1. Demonstrate a thorough grasp of fundamental relationship concepts, including the significance and lasting impact of early relationships;

CO-2. Understand the key theoretical perspectives;

CO-3. Apply prominent relationship theories (social exchange, attachment, social penetration) to interpret determinants of friendship, attraction, marriage stages, and professional dynamics;

CO-4. Develop practical skills in effective communication and collaboration .

CO-5. Apply emotional intelligence to navigate challenges and understand relationship breakdowns in diverse contexts.

सम्प्रेषण कौशल (Communication Skill) AEC

Course Code: HIN-251

CO-1: संप्रेषण कौशल और नेतृत्व की क्षमता का विकास होगा।

CO-2: रोज़गार के अच्छे अवसर प्राप्त कर सकेंगे।

CO-3: भाषा में प्रभावशाली ढंग से विचारों का आदान-प्रदान कर सकेंगे।

CO-4: सामूहिक संघ की भावना बढ़ेगी।

Multimedia Applications SEC

Course Code: CSA-241

The students will be able to:

CO-1: Remember the Multimedia elements

CO-2: Understand methods for integrating different types of media seamlessly into multimedia projects

CO-3: Apply design principles specific to multimedia, ensuring visually appealing and effective communication

CO-4: Implement and execute multimedia projects applying design principles ensuring practical application of visual and interactive design concepts.

B.C.A SEMESTER IV

Web App Development Major

Course Code: CSA-202

The students will be able to:

CO-1: Understand and utilize JavaScript for dynamic web behaviours, including DOM manipulation and event handling.

CO-2: Apply a client-side framework for responsive, mobile-first web design components, and grid system to deliver visually appealing and user-friendly web experiences across various devices and screen sizes

CO-3: Compare and setup web hosting environments, generate and install SSL certificates, and integrate them with their websites.

CO-4: Design dynamic and interactive web applications to process user requests, interact with databases, manage server-side logic, and generate dynamic content.

Agile Methodologies Major

Course Code: CSA-203

The students will be able to:

CO-1: Remember the practices and philosophies of Agile methodologies.

CO-2: Understand agile development and testing techniques.

CO-3: Apply best practices of agile methodologies for software development and testing.

Object-Oriented Concepts Major

Course Code: CSA-204

The students will be able to:

CO-1: Remember Object-Oriented Programming concepts.

CO-2: Understand object-oriented paradigms: abstraction, encapsulation, inheritance, polymorphism, and apply them in problem-solving.

CO-3: Apply object-oriented solutions for real-world problems.

CO-4: Implement appropriate OO concepts in applications.

Web Technology Major

Course Code: CSA-205

The students will be able to:

CO-1: Learn the fundamentals of web technology, scripting languages and web publication.

CO-2: Explain the concepts of creating dynamic and interactive web experiences using client-side scripting language.

CO-3: Apply client and server-side programming language that can be used to create websites and web applications.

CO-4: Analyse MVC Architecture for dynamic and interactive user interfaces using views and templates.

Digital Marketing Minor

Course Code: CSA 221

The students will be able to:

CO-1: Understand digital landscape and build a case to leverage online channels

CO-2: Analyze online campaigns successfully and develop and design Online Advertising campaigns, AdWords Campaign Management and Campaign Basics across search.

CO-3: Evaluate organic traffic through Search Engine Optimization and 4. Apply advance concept of Search Engine Optimization to capture the right intent.

संभाषण कला (Sambhashan kala) AEC

Course Code: HIN-252

- CO-1: संभाषण के स्वरूप से अवगत होंगे:
- CO-2: संभाषण कला के विभिन्न रूपों से परिचित होंगे:
- CO-3: संभाषण कला कौशल की उपयोगिता को समझेंगे:
- CO-4: संभाषण कला संवर्धन करेंगे:

COURSE OUTCOMES UNDER CBCS

B.C.A SEMESTER V

Web Technology CC

Course Code: CAC-117

- On completion of this course the learners will be able to :
- LO1:** Design user friendly websites using HTML and CSS.
 - LO2:** Design dynamic web pages using client side scripting language
 - LO3:** Explain the fundamentals of designing and developing websites and web applications along with the security aspects governing the internet.

Information Systems CC

Course Code: CAC-118

- On completion of the course learners will be able to :-
- LO1 Explain the role of Information Systems in organizational Management to know knowledge, its classifications; capturing, storing and utilizing it in an organization
 - LO3 Describe the characteristics of decision making, decision making models and tools
 - LO4 Describe the concept of Office Automation Systems, Expert System and Executive Expert System
 - LO5 Compare different information systems such as ERP, SCM and CRM.

Web Technology Laboratory CC

Course Code: CAC-119

- On completion of the course learners will be able to:-
- LO1: Design complete and functional web applications.
 - LO2: Design client and server side scripts.
 - LO3: Design responsive and dynamic websites.
 - LO4: Demonstrate hosting of websites

Mobile Application Development DSE

Course Code: CAD-103

- On completion of the course learners will be able to:-
- LO1. Describe the requirements for mobile applications
 - LO2. Demonstrate their understanding and usability skills of the Android OS
 - LO3. Develop software with reasonable complexity on mobile platform.
 - LO4. Demonstrate their ability to deploy software to mobile devices

Computer Animation DSE

Course Code: CAD-104

- On completion of the course learners will be able to:-
- LO1. Define terminologies and aspects of computer animations
 - LO2. Use different tools and techniques of animating graphics
 - LO3. Implement the concepts of colors, shapes and digital imagery,
 - LO4. Design and develop 2D and 3D animations using different tools.

B.C.A SEMESTER VI

Multimedia Technology CC

Course Code: CAC-120

On completion of this course learners will be able to :-

LO1 : Explain the different types and forms of multimedia.

LO2 : Describe the issues and principles in design and use of Multimedia.

LO3 : Explain the concepts of graphic media and colour modes

LO5 : Design 3D models

LO6 : Choose the best suitable file formats of graphic media, with focus on its storage and representation

E-Commerce Applications CC

Course Code: CAC-121

On completion of the course students will be able to :-

LO1. Describe the basics of e-commerce.

LO2. Explain the design principles of e-commerce websites.

LO3. Explain the different models of e-commerce.

LO4. Describe the different electronic payment systems.

LO5. Explain the security issues, security mechanism and threats to ecommerce applications.

Multimedia Technology Laboratory CC

Course Code: CAC-122

On completion of the course students will be able to :-

LO1: Explain the various image editing features on images.

LO2: Design and edit audio streams

LO3: Capture videos and apply different editing effects on videos

LO4: Design 2D, 3D animations

Internet of Things DSE

Course Code: CAD-109

On completion of the course student will be able to

LO1 : Explain the concepts of Internet of Things and gain knowledge to design IoT applications

LO2 : Describe the various components involved in IoT design methodology.

LO3 : Design an IoT device to work with a Cloud Computing infrastructure.

LO4 : Use IoT protocols for communication.

Content Management Systems DSE

Course Code: CAD-112

On completion of this course the learners will be able to :

LO1: Create dynamically manageable CMS

LO2: Configure and use Word Press CMS

LO 3: Work with SocailGo CMS

LO4: Design quality CMS sites using CSS

LO5: Configure and maintain a Wiki site, Wix and moodle

LO6: Design websites using Joomla



Manat
Dr. Manasvi M. Kamat
Principal
M.E.S. Vasant Joshi College of Arts & Commerce
Zuarinagar-Goa.