PROGRAM SPECIFIC OUTCOMES

PSO 1. Demonstrate a comprehensive understanding of fundamental concepts, principles, and technologies in information technology.

PSO 2. Apply system analysis and design methodologies to analyze and address complex problems.

PSO 3. Design, implement, and manage relational databases to store and retrieve information effectively.

PSO 4. Understand and implement computer networks, protocols, and security measures.

PSO 5. Develop web applications using a variety of technologies and programming languages.

PSO 6. Apply project management principles to plan, execute, and deliver IT projects.

PSO 7. Stay informed about and adapt to emerging technologies in the IT field.

PSO 8. Analyze and solve complex IT problems using critical thinking skills.

PSO 9. Effectively communicate technical information to diverse audiences, both orally and in writing.

PSO 10. Demonstrate ethical behavior and professionalism in all aspects of the IT profession.

PSO 11. Adhere to ethical standards and legal considerations related to information technology.

FY BSC.IT (SEMESTER-1) AS PER NEP

PROGRAMMING WITH C

COURSE OUTCOMES

After Completion of this course the outcomes will be as follows

OC 1. Students can build flowcharts, pseudocode for C programs.

OC 2. Students can use C language syntax and semantics in their programs.

OC 3. Students can implement loops and decision making.

OC 4. Students can use different types of data structures in their programs.

OC 5. Students can write well-structured, readable, and maintainable C code and debug programs if there are any errors.

DATABASE MANAGEMENT SYSTEM

COURSE OUTCOMES

After Completion of this course the outcomes will be as follows

OC 1. Define and describe the fundamental elements of relational database management system.

OC 2.To relate the basic concepts of relational data model, entity-relationship model, relational database

OC 3. Design ER-models to represent simple database application scenarios.

OC 4. Understand the normalization and its role in the database design process

OC 5. Transform the ER-model to relational tables, populate relational database and formulate SQL.

OFFICE TOOLS FOR DATABASE MANAGEMENT

COURSE OUTCOMES

After Completion of this course the outcomes will be as follows

OC 1. Participants can explain normalization importance, identify table relationships, and justify database design choices.

OC 2. Participants create well-structured MS Access databases with proper relationships, data types, and normalization.

OC 3. Participants execute advanced queries in MS Access, retrieving specific information based on diverse criteria.

OC 4. Participants design intuitive MS Access forms, incorporating controls for an efficient and user-friendly data entry experience.

OC 5. Participants produce insightful MS Access reports, organizing and presenting data effectively for analysis.

Elementary Statistical Techniques for Economics-I

COURSE OUTCOMES

After Completion of this course the outcomes will be as follows

OC 1. Focuses on summarizing and presenting economic data using tools like mean, median, mode, range, and standard deviation.

OC 2. Covers types of data: primary vs secondary, quantitative vs qualitative.

OC 3. Basics of time series: trend analysis, seasonal variations, and their use in forecasting economic behavior.

OC 4. Measures the strength and direction of relationships between economic variables.

Elementary Statistical Techniques for Economics-II

COURSE OUTCOMES

After Completion of this course the outcomes will be as follows

OC 1. Basics of probability: types (classical, empirical, subjective).

OC 2. Methods like random sampling, stratified sampling, and systematic sampling used in economic surveys and research.

OC 3. Basic testing procedures using Z-test, T-test, and Chi-square test for economic decision-making.

OC 4. Understanding variance among group means.

INTRODUCTION TO COMMUNICATION SKILLS

COURSE OUTCOMES

After Completion of this course the outcomes will be as follows

OC 1. Definition, importance, and elements of communication.

OC 2. Sender → Message → Medium → Receiver → Feedback.

OC 3. Importance of active listening and techniques to improve it.

OC 4. Basics of writing emails, letters, memos, and reports.

INTRODUCTION TO SPORTS,LITERACY,HEALTH&FITNESS AND YOGA

COURSE OUTCOMES

After Completion of this course the outcomes will be as follows

OC 1. The curriculum would enable the pass out students to be entrepreneur(to start their own fitness center, gym,studio etc) and device appropriate fitness program for different genders and age groups at all level.

OC 2. Student will learn the knowledge of nutrition and diet.

OC 3. The student learn to plan, organize and execute sports events.

OC 4. Students acquire the knowledge of physical education, sports and yoga and understand the purpose and its development.

OC 5. Students will understand and learn different dimension of active life cycle

INDIAN KNOWLEDGE SYSTEM

COURSE OUTCOMES

After Completion of this course the outcomes will be as follows

OC 1. Learner will understand and appreciate the rich Indian Knowledge Tradition.

OC 2. Learner will understand the contribution of Indian in various fields.

OC 3. Learner will experience increase subject-awareness and self-esteem.

OC 4. Learner will development a comprehensive understanding of how all knowledge is ultimately intertwined.

FUNDAMENTAL OF PEOPLE'S SKILLS

COURSE OUTCOMES

After Completion of this course the outcomes will be as follows

OC 1. Demonstrate ethical behaviour coupled with integrity.

OC 2. Will generate new ideas and create a business plan.

OC 3. Will be able to develop good listening skills which are vital for demonstrating good team qualities.

OC 4. Will build sensitivity about social and cultural differences and illustrate good etiquettes.

FY BSC.IT (SEMESTER-2) AS PER NEP

Object Oriented Programming using C++

COURSE OUTCOMES

After Completion of this course the outcomes will be as follows

OC 1. Students can explain the key concept of OOP and their application in software development.

OC 2. Students can Design and implement classes and objects to model real world entities.

OC 3. Students can apply the concepts of polymorphism, virtual functions, inheritance and exception handling in program.

OC 4. Students can apply operator overloading, runtime polymorphism, generic Programming

OC 5. Students can implement file handling concepts in program

WEB DESIGNING

COURSE OUTCOMES

After Completion of this course the outcomes will be as follows

OC 1. Learners will be able to use the HTML programming language

OC 2. Learners will be able to execute web pages designed using HTML

OC 3. Describe the concepts of World Wide Web, and the requirements of effective web design

OC 4. List various tags in html and use these to create web page

OC 5 . Gain necessary skills for designing and developing web applications

FOUNDATION OF BEHAVIOURAL SKILLS

COURSE OUTCOMES

After Completion of this course the outcomes will be as follows

OC 1. Ability to express ideas clearly and confidently in both oral and written forms.

OC 2. Development of interpersonal skills to work efficiently in diverse and multidisciplinary teams.

OC 3. Encourages logical reasoning, analysis, and innovative thinking to solve real-life problems.

OC 4. Understanding and practicing integrity, empathy, and respect for others.

OC 5 . Promotes accountability and responsible decision-making in both personal and professional contexts.

COMMUNICATION SKILLS

COURSE OUTCOMES

After Completion of this course the outcomes will be as follows

OC 1. Students will be able to express ideas clearly, confidently, and effectively in both spoken and written forms across various professional and social contexts.

OC 2. Learners will enhance their active listening abilities, improving their understanding, interpretation, and response to verbal messages.

OC 3. Students will apply correct grammar and vocabulary in communication to improve clarity, accuracy, and tone in different formats such as emails, reports, and presentations.

OC 4. Students will utilize modern communication tools and digital platforms to convey messages efficiently in academic and professional environments.

CONTENT WRITING

COURSE OUTCOMES

After Completion of this course the outcomes will be as follows

OC 1. Students will be able to create content for blogs, websites, social media, articles, and other digital/print platforms, tailored to specific audiences and purposes.

OC 2. Learners will incorporate clarity, coherence, grammar, and style in writing, ensuring the message is effectively conveyed.

OC 3. Students will learn to gather information from reliable sources, avoid plagiarism, and create unique, fact-based, and engaging content.

OC 4. Learners will develop the skills to review and refine written work for grammar, punctuation, structure, and readability, ensuring high-quality final output.

FOUNDATION AND EXPLORATION OF PERFORMING AND FINE ARTS

COURSE OUTCOMES

After Completion of this course the outcomes will be as follows

OC 1. Students will gain knowledge of the origin, development, and cultural significance of performing and fine arts in Indian and global contexts.

OC 2. Learners will be able to recognize different forms of dance, music, theatre, painting, sculpture, and other visual and performing arts.

OC 3. Students will develop foundational practical skills in one or more art forms, enhancing creative expression and confidence.

OC 4. Learners will critically examine and interpret works of art to understand artistic intent, symbolism, and aesthetics.

OC 5. Students will nurture creative thinking and innovation through experiential learning and exploration of artistic mediums.

OC 6. Learners will understand the interconnection between arts and other fields like literature, history, philosophy, and media, promoting holistic education.

INTRODUCTION OF THE CAPITAL MARKET OF INDIA

COURSE OUTCOMES

After Completion of this course the outcomes will be as follows

OC 1. Students will gain knowledge about the role, components, and functioning of primary and secondary capital markets.

OC 2. Learners will understand the functions of regulatory institutions such as SEBI (Securities and Exchange Board of India), RBI, and Stock Exchanges.

OC 3. Students will be able to distinguish between equity, debt, derivatives, and mutual funds, and understand their relevance in investment decisions.

OC 4. Learners will develop insights into IPOs, FPOs, book building, listing, and trading mechanisms in the Indian stock market.

OC 5. Students will learn how to analyze market indices like BSE Sensex and NSE Nifty, and correlate them with macroeconomic indicators.

OC 6. Learners will be introduced to investment planning, risk-return trade-off, and portfolio diversification within the capital market framework.

DESCRIPTIVE STATISTICS

COURSE OUTCOMES

After Completion of this course the outcomes will be as follows

OC 1. Students will be able to explain key statistical terms and concepts such as population, sample, variables, and data types.

OC 2. Learners will develop the ability to classify, tabulate, and represent data using tables, charts, and diagrams for clear communication of information.

OC 3. Students will calculate and interpret mean, median, and mode to summarize and describe data sets.

OC 4. Learners will understand and compute range, quartile deviation, standard deviation, and coefficient of variation to analyze data variability.

OC 5. Students will assess the shape and symmetry of data distribution using skewness and kurtosis for better decision-making.

OC 6. Learners will apply statistical tools to interpret data in business, economics, and social science contexts for informed conclusions.

PROGRAM SPECIFIC OUTCOMES

PSO 1. Implement functions, strings, lists, tuples and directories

PSO 2. Identify and distinguish data structure classification, data types, their complexities

PSO 3. Identify various data communication standards, topologies and terminologies

PSO 4. Configure IP addresses using TCP/IP protocol suite

PSO 5. Use the different types of Operating System and their services.

PSO 6. Apply virtual memory concepts.

PSO 7. Find the Laplace transform of a function and Inverse Laplace transform of a function using definition also solve ordinary differential equations using Laplace transform.

PSO 8. Create event driven programs using java.

PSO 9. Discuss the characteristics and quality attributes of embedded systems

PSO 10. Perform Test of Hypothesis as well as calculate confidence interval for a population parameter for single sample and two sample cases. Understand the concept of p-values

PSO 11. Discuss various approaches to verification and validation of software including testing, measurements and estimation of software products

SY BSC.IT (SEMESTER-3)

PYTHON PROGRAMING

COURSE OUTCOMES

After Completion of this course the outcomes will be as follows

OC 1. Aware of the variables, expressions, looping and conditions used in Python programming.

OC 2. Implement functions, strings, lists, tuples and directories

OC 3. Create GUI forms and add widgets.

OC 4. Use MySQL to store data.

OC 5. Apply the programming skillset learnt here into various domains by having advance programming skillset of Python and usage of libraries.

DATA STRUCTURES

COURSE OUTCOMES

After Completion of this course the outcomes will be as follows

CO1: Identify and distinguish data structure classification, data types, their complexities

CO2: Implement array, linked list, stack and queue.

CO3: Implement trees, various hashing techniques and graph for various applications

CO4: Compare various sorting and searching techniques

COMPUTER NETWORKS

COURSE OUTCOMES

After Completion of this course the outcomes will be as follows

CO1: Identify various data communication standards, topologies and terminologies

CO2: Describe how signals are used to transfer data and communication aspects between nodes

CO3: Configure IP addresses using TCP/IP protocol suite

CO4: Use different application layer protocols

OPERATING SYSTEM

COURSE OUTCOMES

After Completion of this course the outcomes will be as follows

CO1: Role of Operating System Computer System.

CO2: Use the different types of Operating System and their services.

CO3: configure process scheduling algorithms and synchronization techniques to achieve better performance of a computer system.

CO4: Apply virtual memory concepts.

CO5: Effectively use and manage secondary memory.

APPLIED MATHEMATICS

COURSE OUTCOMES

After Completion of this course the outcomes will be as follows

CO 1: Solve the matrix operations, identify the linear dependence and independence of a vectors.

CO 2: Familiar with the various forms and operations of a complex number.

CO 3: Find the Laplace transform of a function and Inverse Laplace transform of a function using definition also solve ordinary differential equations using Laplace transform.

CO 4: Evaluate the multiple integrals in Cartesian, Polar coordinates, change the order of the integral

CO 5: Apply integration methods to calculate the areas and volumes of solids.

CO 6: Evaluate the Beta, Gamma, Differentiation Under integral sign and error functions

SY BSC.IT (SEMESTER-4)

JAVA PROGRAMMING

COURSE OUTCOMES

After Completion of this course the outcomes will be as follows

CO1: Learn the architecture of Java

CO2: Identify data types, control flow, classes, inheritance, exceptions and event handling

CO3: Use object-oriented concepts for problem solving real-life applications

CO4: Build GUI programs

CO5 : Create event driven programs using java.

INTRODUCTION TO EMBEDED SYSTEM

COURSE OUTCOMES

After Completion of this course the outcomes will be as follows

CO1: Differentiate between general purpose and embedded systems

CO2: Discuss the characteristics and quality attributes of embedded systems

CO3: Use different types of sensors for appropriately

CO4: Design and develop embedded systems

COMPUTER ORIENTED STATISTICAL TECHNIQUES

COURSE OUTCOMES

After Completion of this course the outcomes will be as follows

CO 1: To calculate and apply measures of central tendencies and measures of dispersion -- grouped and ungrouped data cases.

CO 2: To calculate the moments, skewness and kurtosis by various methods.

CO 3: How to apply discrete and continuous probability distributions to various business problems.

CO 4: Perform Test of Hypothesis as well as calculate confidence interval for a population parameter for single sample and two sample cases. Understand the concept of p-values

CO 5: Apply simple linear regression and correlation model to real life examples.

SOFTWARE ENGINEERING

COURSE OUTCOMES

After Completion of this course the outcomes will be as follows

CO1: Understand software engineering

CO2: Apply software engineering principles

CO3: Discuss various approaches to verification and validation of software including testing, measurements and estimation of software products

CO4: Create software using different software development models

COMPUTER GRAPHICS AND ANIMATION

COURSE OUTCOMES

After Completion of this course the outcomes will be as follows

CO 1. Understand the basics of computer graphics, different graphics systems and applications of computer graphics

CO 2. Compare various algorithms for scan conversion and filling of basic objects

CO 3. Use of geometric transformations on graphics objects and their application in composite form.

CO 4. Extract scene with different clipping methods and its transformation to graphics display device.

CO 5. Explore projections and visible surface detection techniques for display of 3D scene on 2D screen.

CO 6. Render projected objects to naturalize the scene in 2D view and use of illumination models

CO 7. Understand the core concepts and mathematical foundations of computer graphics

CO 8. Know the fundamental computer graphics algorithms and data structures

CO 9. Understand an overview of different modeling approaches and methods

CO 10. Apply basic shading and texture mapping techniques

CO 11. Understand light interaction with 3D scenes

CO 12. Explain the applications, areas, and graphic pipeline, display and hardcopy technologies.

CO 13. Apply and compare the algorithms for drawing 2D images also explain aliasing, antialiasing and half toning techniques.

CO 14. Discuss OpenGL application programming Interface and apply it for 2D & 3D computer graphics.

CO 15. Analyze and apply clipping algorithms and transformation on 2D images.

CO 16. Solve the problems on viewing transformations and explain the projection and hidden surface removal algorithms.

CO 17. Apply basic ray tracing algorithm, shading, shadows, curves and surfaces and also solve the problems of curves.

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PROGRAM SPECIFIC OUTCOMES

PSO 1. Apply project estimation and evaluation techniques to real world problem

PSO 2. Explain the concept of the Internet of Things and its applications in real-life scenarios.

PSO 3. ASP.NET Web Development Essentials: Tracing, Debugging, and State Management Techniques

PSO 4. Demonstrate proficiency in implementing and analyzing various search algorithms, utilizing both uninformed and informed strategies to solve complex problems efficiently.

PSO 5. Proficient in understanding and designing applications using Java Server Pages (JSP), enabling dynamic and interactive web content creation.

PSO 6. Proficient in understanding and designing applications using Java Server Pages (JSP), enabling dynamic and interactive web content creation.

PSO 7. Learners analyze and comprehend the use of modern software testing tools and procedures for their projects testing.

PSO 8. Gain comprehensive knowledge of various testing levels and methodologies to ensure thorough software quality assurance from requirements to system testing stages.

PSO 9. Comprehending the evolution of information security.

PSO 10. Analyzing Strategic Information Management: Enhancing Decision-Making Across Marketing, Logistics, and Production

PSO 11. understand the legal principles governing digital contracts and jurisdictional challenges in the cyber world.

TY BSC.IT (SEMESTER-5)

SOFTWARE PROJECT MANAGEMENT

COURSE OUTCOMES

After Completion of this course the outcomes will be as follows

CO1: Describe the basic concepts of software project management with its life cycle

CO2: Apply project estimation and evaluation techniques to real world problem

CO3: Apply Key project management system techniques like PERT, CRM

CO4: Identify project risk, monitor and track project deadlines

CO5: Work in teams to evaluate the different modes of communication among people.

INTERNET OF THINGS

COURSE OUTCOMES

After Completion of this course the outcomes will be as follows

CO1. Explain the concept of the Internet of Things and its applications in real-life scenarios.

CO2. Apply design principles to create user-friendly and connected devices.

CO3. Understand the communication protocols of the internet and design efficient web-connected devices.

CO4. Prototype embedded devices and create their physical design using various tools and techniques.

CO5. Understand the business models and funding options available for startups in the Internet of Things domain and apply them to real-life scenarios.

ADVANCED WEB DEVELOPMENT

COURSE OUTCOMES

After Completion of this course the outcomes will be as follows

CO1: Learner will explore the foundations of .NET Development, .NET Ecosystem, C# and Fundamental Concepts

CO2: Comprehensive Understanding and Practical Application using controls.

CO3: ASP.NET Web Development Essentials: Tracing, Debugging, and State Management Techniques

CO4: Mastering Data Access in ASP.NET: ADO.NET Essentials and Azure Integration

CO5: Securing ASP.NET Applications: Authentication, Authorization, and Advanced Techniques with Ajax and Bootstrap

ARTIFICAL INTELLIGENCE AND APPLICATION

COURSE OUTCOMES

After Completion of this course the outcomes will be as follows

CO1: Articulate the historical development and current trends in Artificial Intelligence, demonstrating a comprehensive understanding of its foundations and principles.

CO2: Demonstrate proficiency in implementing and analyzing various search algorithms, utilizing both uninformed and informed strategies to solve complex problems efficiently.

CO3: Apply adversarial search techniques to decision-making in competitive environments, including games, and effectively manage uncertainty and partial observability.

CO4: Demonstrate competency in logical reasoning and inference, utilizing propositional and first-order logic to represent and solve real-world problems in AI applications.

CO5: Gain practical experience in planning algorithms and generative AI techniques, enabling them to design and implement AI systems capable of planning actions and generating novel content autonomously.

ADVANCED JAVA TECHNOLOGIES

COURSE OUTCOMES

After Completion of this course the outcomes will be as follows

CO1: Proficiently understand and apply servlets and database connectivity concepts to develop dynamic web applications.

CO2: Demonstrate the ability to develop applications capable of managing cookies, sessions, and performing file operations effectively.

CO3: Proficient in understanding and designing applications using Java Server Pages (JSP), enabling dynamic and interactive web content creation.

CO4: Adept at comprehending and designing applications utilizing Enterprise Java Beans (EJB), facilitating the development of scalable and distributed enterprise-level applications.

CO5: Possess a thorough understanding of persistence concepts, Hibernate framework, and the ability to develop Java Persistence API (JPA) and Hibernate applications proficiently.

SOFTWARE TESTING AND QUALITY ASSURANCE

COURSE OUTCOMES

After Completion of this course the outcomes will be as follows

CO1: Learners understand various software testing methods.

CO2: Learners can identify defects and manage those defects for improvement in quality.

CO3: Learners analyze and comprehend the use of modern software testing tools and procedures for their projects testing.

CO4: Understand and apply methods for verifying and validating software to ensure it meets requirements and functions correctly.

CO5: Gain comprehensive knowledge of various testing levels and methodologies to ensure thorough software quality assurance from requirements to system testing stages.

INFORMATION NETWORK AND SECURITY

COURSE OUTCOMES

After Completion of this course the outcomes will be as follows

CO1: Understanding the importance of information protection.

CO2: Comprehending the evolution of information security.

CO3: Utilize established methodologies for implementing and managing security

CO4: Analysing Intrusion Detection and Prevention Systems, Voice over IP(VoIP) and PBX security

CO5: Understanding the security considerations for virtual machines and security aspects of cloud computing

BUSINESS INTELLIGENCE

COURSE OUTCOMES

After Completion of this course the outcomes will be as follows

CO1: Learners can explore the concepts of Strategic Decision Support and Harnessing Data for Informed Business Decisions

CO2: Application used for Data-Driven Mathematical Models and Data Mining for Informed Decision Making

CO3: Managing data through Advanced Data Analysis Techniques: Classification, Clustering, and Model Evaluation

CO4: Analyzing Strategic Information Management: Enhancing Decision-Making Across Marketing, Logistics, and Production

CO5: Fact findings using Strategic Organizational Intelligence: Bridging Gaps, Cultivating Knowledge, and Embracing Artificial Intelligence

FUNDAMENTAL OF GIS

COURSE OUTCOMES

After Completion of this course the outcomes will be as follows

CO1: Understanding the importance of Geographical Information System

CO2: Comprehending the Data Management and Processing Systems.

CO3: Understanding Spatial Referencing and Positioning

CO4: Analysing GIS capabilities

CO5: Understanding Data visualization

CYBER LAW

COURSE OUTCOMES

After Completion of this course the outcomes will be as follows

CO1: Gain a detailed understanding of the legal procedures and enforcement mechanisms for cybercrimes, including arrest without warrant, penalties, adjudication, and appeals under the IT Act, 2000.

CO2: understand the legal principles governing digital contracts and jurisdictional challenges in the cyber world.

CO3: Equipped with knowledge of legal remedies and strategies to combat cyber squatting and protect copyrights in the digital world.

CO4: Understand the complexities of e-commerce taxation and the significance of digital signatures, certifying authorities, and e-governance in modern digital transactions.

CO5: Comprehend the interplay between the Indian Evidence Act of 1872 and the Information Technology Act of 2000, and gain insights into the legal safeguards for cyber consumers in India.

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