

**BACHELOR OF VOCATIONAL
MODERN COLLEGE**

(A DEGREE COURSE UNDER THE Aegis of UGC and NSQF)

Affiliated to MANIPUR UNIVERSITY

IT/ITeS (INFORMATION TECHNOLOGY)

PROGRAMME OUTCOME

- PO-1.** Develop ability to analyze a problem, identify and define the computing requirements, which may be appropriate to its solution.
- PO-2.** To prepare students to undertake careers involving problem solving using computer science and technologies.
- PO-3.** Develop ability to pursue advanced studies in computer science.
- PO-4.** To produce entrepreneurs who can innovate and develop software product.
- PO-5.** Give students an in-depth understanding of why computers are essential components in business, education and society.

SEMESTER 1

Course Title:-BVIT-103 : Basics of Computer Organisation and Networking

Course outcomes:

- CO:103-1 Understand the basic terminology of computers
- CO:103-2 Understand the fundamental hardware components that make up a computer's hardware and the role of each of these components
- CO:103-3 Understand the difference between an operating system and an application program, and what each is used for in a computer
- CO:103-4 Describe some examples of computers and state the effect that the use of computer technology has had on some common products
- CO:103-5 Identify the applications of computer in daily life

Course Title:-BVIT-104 : PC Software /Office Automation

Course outcomes:

- CO:104-1. Give students an in-depth understanding of why computers are essential components in business, education and society.
- CO:104-2. Introduce the fundamentals of computing devices and reinforce computer vocabulary,
- CO:104-3. Provide hands-on use of Microsoft Office applications Word, Excel and PowerPoint. Completion of the assignments will result in MS Office applications knowledge and skills.

Course Title:-BVIT-105 : C programming

Course outcomes

- CO:105-1. On successful completion of this subject the students have the programming ability in C Language.
- CO:105-2. Enhancing Logical Thinking and Reasoning Skills through Collaborative Learning in C Programming.
- CO:105-3. Students would be capable of developing various applications to solve real world problems. They can also learn to make system software as well as application software.
- CO:105-4. In many multinational companies they can work effectively in a group or team to achieve goals and can show initiative and leadership abilities.

SEMESTER II

Course Title:-BVIT-203 : Object Oriented Programming using C++

Course outcomes:

- CO:203-1. Able to understand the concept of object oriented programming.
- CO:203-2. Use the benefits of object oriented design and understand when it is an appropriate methodology to use.
- CO:203-3. Explain the difference between static and dynamic binding. Apply both techniques to solve problems.
- CO:203-4. Explain the top-down and bottom-up programming approach and apply bottom up approach to solve real world problems.
- CO:203-5. Discuss the generic data type for the data type independent programming which relates it to reusability.
- CO:203-6. Design object oriented solutions for small systems involving multiple objects.

Course Title:-BVIT-204 : Web Technology

Course outcomes:

- CO:204-1. Describe the concepts of markup languages, unordered list, table, formatting, linking and frames.
- CO:204-2. Discuss about the creation of cascading style sheets, backgrounds, media types and building a dropdown menu.
- CO:204-3. Explain the JavaScript, control structure, if structure, switch, do-while and logical operators.
- CO:204-4. Describe the javascript functions, javascript arrays and javascript objects.

Course Title:-BVIT-205 : Discrete Mathematics

Course outcomes

- CO:205-1. Understanding the concepts of discrete mathematics.
- CO:205-2. Learning applications of discrete structures in Computer Science.
- CO:205-3. Express a logic sentence in terms of predicates, quantifiers, and logical connectives.
- CO:205-4. Apply the operations of sets and use Venn diagrams to solve applied problems; solve problems using the principle of inclusion-exclusion.
- CO:205-5. Demonstrate different traversal methods for trees and graphs.
- CO:205-6. Model problems in Computer Science using graphs and trees.

SEMESTER III

Course Title:-BVIT-303 : Operating Systems

Course outcomes:

- CO:303-1. Understand the role of operating system as System software.
- CO:303-2. Able to compare the various algorithms and comment about performance of various algorithms used for management of memory, CPU scheduling, File handling and I/O operations.
- CO:303-3. Understand various concepts related with Deadlock to solve problems related with Resources allocation, after checking system in Safe state or not.
- CO:303-4. To understand role of Process synchronization towards increasing throughput of system.

Course Title:-BVIT-304 : Internet and Java Programming

Course outcomes:

- CO:304-1. To understand client server architecture.
- CO:304-2. Implement Server Side Scripting Language .
- CO:304-3. To know how to implement socket programming.
- CO:304-4. Understand to implement object oriented programming concepts.
- CO:304-5. Understand how to design graphical user interface in Java programs.
- CO:304-6. Understand how to design and develop applets.
- CO:304-7. Able to design User Interface using Swing and AWT.
- CO:304-8. Understand concept of packages and study how to implement them.

Course Title:-BVIT-305 : Visual Basic 6.0

Course outcomes

- CO:305-1. Explain the basic Concepts of Program building block control statements and the basic concepts of function and procedure.
- CO:305-2. Describe the functionality and properties of GUI based ActiveX Control with example programs
- CO:305-3. Discuss about graphics handling related control and properties.
- CO:305-4. Discuss about the fundamental functions and properties of Advanced ActiveX Control.
- CO:305-5. Describe the concepts of database handling using DAO, ADO and RDO control with data report concepts.

SEMESTER IV

Course Title:-BVIT-403 : Emerging Trends in Information Technology

Course outcomes:

- CO:403-1. Be able to effectively integrate IT- based solutions into the user environment
- CO:403-2. Be able to analyse the local and global impact of computing on individuals, organizations, and society
- CO:403-3. To let the student understand the latest techniques and trends using now a days globally

Course Title:-BVIT-404 : Computer Networks

Course outcomes:

- CO:404-1. Explain the local, metropolitan and wide area networks using the Standard OSI reference model.
- CO:404-2. Discussion of various networking technologies.
- CO:404-3. Explain the concepts of protocols, network interfaces and design of performance issues in local area networks and wide area networks.
- CO:404-4. Explain the analysis of different types of protocol and the comparison of number of data link, network and transport layer protocols.
- CO:404-5. Describe the functions of each layer in OSI and TCP/IP model.
- CO:404-6. Explain the types of transmission media with real time applications.

Course Title:-BVIT-405 : Web Programming with PHP and MySql

Course outcomes

- CO:405-1. Implement PHP, Server Side Scripting Language.
- CO:405-2. Able to develop simple web application using server side PHP programming and Database Connectivity using My SQL.
- CO:405-3. Will understand how to build well-formed PHP Document and implement Web Service
- CO:405-4. Will learn to implement PHP framework for effective design of web application.

SEMESTER V

Course Title:-BVIT-503 : Software Engineering

Course outcomes:

- CO:503-1. Explain the fundamental knowledge in science, mathematics, fundamentals of computer science, software engineering and multidisciplinary engineering to begin in practice as a software engineer.
- CO:503-2. Explain to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, manufacturability, sustainability, ethical, health and safety.
- CO:503-3. Describe the techniques, skills, and modern engineering tools necessary for engineering practice.
- CO:503-4. Explain the early careers will be capable of team and organizational leadership in computing project settings, and have a broad understanding of ethical application of computing-based solutions to societal and organizational problems.
- CO:503-5. Discuss about analyze, design and manage the development of a computing-based system, component or process to meet desired needs within realistic constraints in one or more application domains.

Course Title:-BVIT-504 : RDBMS(Realtional DataBase Management System)

Course outcomes:

- CO:504-1. Able to understand database concepts and database management system software.
- CO:504-2. Analyze and design a real database application.
- CO:504-3. Develop and evaluate a real database application using a database management system.
- CO:504-4. Able to develop applications using PL/SQL & front end tools.

Course Title:-BVIT-505 : Mini Project(Website design with PHP)

Course outcomes

- CO:505-1. Students will able to create report/documentation for real life projects.
- CO:505-2. Can apply their knowledge and understanding with a professional approach.
- CO:505-3. This pilot project is trial one after this they can come down to the real world

SEMESTER VI

Course Title:-BVIT-603 : Dot Net Technologies

Course outcomes:

- CO:603-1. Introduction to .Net IDE component frameworks
- CO:603-2. Programming concepts in .Net frameworks
- CO:603-3. Creating web pages using ASP.Net controls
- CO:603-4. Learn to create simple binding applications using ADO.Net connectivity
- CO:603-5. Learn to perform Database applications for Window Form and web application

Course Title:-BVIT-604 : Artificial Intelligence

Course outcomes:

- CO:604-1. Demonstrate fundamental understanding of the history of artificial intelligence (AI) and its foundations.
- CO:604-2. Apply basic principles of AI in solutions that require problem solving, inference, perception, knowledge representation, and learning.
- CO:604-3. Demonstrate awareness and a fundamental understanding of various applications of AI techniques in intelligent agents, expert systems, artificial neural networks and other machine learning models.
- CO:604-4. Demonstrate proficiency in applying scientific method to models of machine learning.
- CO:604-5. Demonstrate an ability to share in discussions of AI, its current scope and limitations, and societal implications.

Course Title:-BVIT-605 : Major Project(E-Commerce/PMS)

Course outcomes

- CO:605-1. Demonstrate a sound technical knowledge of their selected project topic
- CO:605-2. Undertake problem identification, formulation and solution.
- CO:605-3. Conduct the project in which people can use it.
- CO:605-4. Demonstrate the knowledge, skills and attitudes like a professional.