PROGRAMME OUTCOMES BVoc-IT:

BVoc-IT programme has been designed to prepare graduates for attaining the following specific outcomes:

- An ability to apply knowledge of computer science and management in practice.
- An ability to enhance not only comprehensive understanding of the theory but its application too in diverse field.
- The program prepares the young professional for a range of computer applications, computer organization, techniques of Computer Networking, Software Engineering, Web development, Database management and Advance Java
- An ability to design a computing system to meet desired needs within realistic constraints such as safety, security and applicability in multidisciplinary teams with positive attitude.
- An ability to communicate effectively.
- In order to enhance programming skills of the young IT professionals, the program has introduced the concept of project development in each language/technology learnt during semester.

COURSE OUTCOMES:

Semester I

Upon completion of this course, students will be able to:

- Understand basic computer hardware architecture & be able to design fundamental logic circuits.
- Understand the fundamental hardware components that make up a computer's hardware and the role of each of these components.
- Understand the role of CPU and its components.
- Learn essential IT support skills including installing, configuring, securing and troubleshooting operating systems and hardware.
- Gain hands-on experience of working in Microsoft products such as: MS Word, MS Excel and MS PowerPoint.

Digital Logic design

Upon completion of this course, students will be able to:

- Convert between different number systems and describe some different codes.
- Understand the functions of basic digital combinatorial circuits and sequential circuits.
- Understand the concepts of Boolean algebra.

- Understand and design digital logic circuits.
- Understand and design adder, multiplexer etc.
- Flip-flop
- Counters

Programming in C Language

Upon completion of this course, students will be able to:

- Learn how to build by the algorithms for problems.
- Learn how to create pictorial representations of the program.
- Learn how to apply logic for problems.
- Enhance their programming skills.
- Learn about Loops, Conditional statements, Array, Pointers, File Handling, Structure, Unions etc.

Semester II

Data Structures

Upon completion of this course, students will be able to:

- Learn about how data can be stored in memory.
- Learn and implement Arrays and various operations on array.
- Learn and implement Stacks and Queues and various operations on them.
- Learn and implement the concept of Linked List.
- Learn and implement the concept of various types of Trees.
- Learn and implement various searching and sorting techniques along with their complexity.
- Learn and implement Graph and Graph traversal techniques.

Operating System

Upon completion of this course, students will be able to:

- Gain extensive knowledge on principles and modules of operating systems.
- Understand key mechanisms in design of operating systems modules.
- Understand process management, concurrent processes and threads, memory management, virtual memory concepts, deadlocks.
- Compare performance of processor scheduling algorithms - produce algorithmic solutions to process synchronization problems.

PC assembly and troubleshooting

Upon completion of this course, students will be able to:

- Know the historical background of Microprocessor and it's application.
- Learn in deep about 8085 microprocessor and it's architecture.
- Learn about Instruction cycle of 8085.
- Learn in deep about 8086 microprocessor and it's architecture.
- Learn about 8086 addressing modes.
- Learn about interrupts.
- Learn how to simulate 8085 and 8086 operations on a simulator.

Semester III

Introduction to Object Oriented Programming using C++

Upon completion of this course, students will be able to:

- Apply C++ features to program design and implementation.
- Explain object-oriented concepts and describe how they are supported by C++ including identifying the features and peculiarities of the C++ programming language.
- Use C++ to demonstrate practical experience in developing object-oriented solutions.
- Design and implement programs using C++.
- Analyse a problem description, design and build object-oriented software using good coding practices and techniques.
- Implement an achievable practical application and analyse issues related to object-oriented techniques in the C++ programming language

Introduction to Database Management Systems

Upon completion of this course, students will be able to:

- Understand the importance of Database.
- Understand the Architecture & Modeling of Database.
- Understand the concept of RDBMS.
- Learn brief introduction to Structured Query Language.
- Learn and implement Backup and Recovery of databases.
- Learn and implement the Database Security.
- Design Commercial database applications

Computer Networks

Upon completion of this course, students will be able to:

- Understand the data communication concepts.
- Understand the concept of Communication channel.
- Understand how the data is transmitted wirelessly.
- Understand the various layers of Network architecture.
- Understand and implement the switching techniques.
- Learn the need to create a Network.
- Learn about different layers and protocols present in those layers.
- Learn to configure the network devices.
- Learn about IP -Addressing.
- Learn about Network Security.

Semester IV

Introduction to Java

Upon completion of this course, students will be able to:

- Understand the concept of Internet.
- Learn about various protocols.
- Learn about working on Internet.
- Learn and work on various Internet Applications.
- Develop Java Applications, applets etc.

Linux

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Upon completion of this course, students will be able to:

- Learn History and various distributions of Linux.
- Learn and perform Installation of Red Hat Linux.
- Learn and operate Red Hat Linux.
- Learn and implement Linux System Administration.
- Learn and implement TCP/IP on Linux.

Basic of Acounting

Upon completion of this course, students will be able to:

- Understand basic accounting terms like debit, credit, journal, day book, trial balance etc.
- Prepare Journals, Day Books, Trial Balance, Profit & Loss statement, Balance Sheet etc.
- Understand Assets, Liabilities, Capital etc.
- Understand the overall Basics of Accounting.

SEMESTER V

Software Engineering

Upon completion of this course, students will be able to:

- Understand the process of Software development.
- Understand and plane the Software development.
- Understand and implement the Coding.
- Debug a software.
- Test a software.

Multimedia and Animation

Upon completion of this course, students will be able to:

Learn and implement basics of Multimedia & Animation.

- Learn and implement Text editing, Image editing etc.
- Learn basics of Computer Graphics.
- Learn and understand Digital audio, Digital video, animation and Special Effects.

Web Development Tools & Techniques

Upon completion of this course, students will be able to:

- To develop Webpages, Static Websites, Dynamic Websites.

- To use PHP as Server Side Scripting Language.
- To use jQuery, JavaScript.
- To understand database and it's connectivity with Server Side Scripting language.
- To develop Web Applications with MySQL/SQL as backen

Flash & Director Multimedia Tools

Upon completion of this course, students will be able to:

- Understand Communication and Interactive Communication.
- Learn about creation and execution of Multimedia project.
- Work and create Multimedia Project with Director 11.
- Work and create Multimedia Project with Adobe Flash.

Minor Project

SEMESTER VI

Adobe Photoshop

Major Project

PROGRAM SPECIFIC OUTCOME:

After completion of BOVC-IT course students will be able to work in IT industries, various public and private sectors etc. They will be able to work on different profiles like web developer, UI designers, testers, coders, SEO developers etc.