

FYUGP CURRICULAR FRAMEWORK FOR BACHELORS PROGRAMME WITH INFORMATION TECHNOLOGY AS MAJOR- 2023

SEMESTER	COURSE CODE	TYPE OF COURSE	TITLE OF COURSE	CREDITS	
				THEORY	PRACTICAL / TUTORIAL
I	BIT122J	CT-1	INFORMATION TECHNOLOGY: BASIC COMPUTING	4	2
II	BIT223J	CT-1	INFORMATION TECHNOLOGY: COMPUTER ARCHITECTURE AND ORGANISATION	4	2
III	BIT323J	CT-1	INFORMATION TECHNOLOGY: C - PROGRAMMING	4	2
IV	BIT422J1	CT-1	INFORMATION TECHNOLOGY: OOPS USING C++	3	1
	BIT422J2	CT-2	INFORMATION TECHNOLOGY: OPERATING SYSTEMS	4	2
	BIT422J3	CT-3	INFORMATION TECHNOLOGY: SOFTWARE ENGINEERING	4	2
V	BIT522J1	CT-1	INFORMATION TECHNOLOGY: DOT NET	3	1
	BIT522J2	CT-2	INFORMATION TECHNOLOGY: DATABASE MANAGEMENT SYSTEM	4	2
	BIT522J3	CT-3	INFORMATION TECHNOLOGY: DATA STRUCTURES USING 'C'	4	2
VI	BIT622J1	CT-1	INFORMATION TECHNOLOGY: SYSTEM ANALYSIS AND DESIGN	3	1
	BIT622J2	CT-2	INFORMATION TECHNOLOGY: CORE JAVA PROGRAMMING	4	2
	BIT622J3	CT-3	INFORMATION TECHNOLOGY: CYBER SECURITY	4	2
FOR FYUGP HONOURS					
VII	BIT722J1	CT-1	INFORMATION TECHNOLOGY: MOBILE COMPUTING	3	1
	BIT722J2	CT-2	INFORMATION TECHNOLOGY: DATA COMMUNICATIONS AND NETWORKS	4	2
	BIT722J3	CT-3	INFORMATION TECHNOLOGY: PYTHON PROGRAMMING	4	2
VIII	BIT822J1	CT-1	INFORMATION TECHNOLOGY: MACHINE LEARNING	3	1
	BIT822J2	CT-2	INFORMATION TECHNOLOGY: COMPUTER GRAPHICS	4	2
	BIT822J3	CT-3	INFORMATION TECHNOLOGY: MICROPROCESSOR	4	2
FOR FYUGP HONOURS WITH RESEARCH					
VII	BIT722J1	CT-1	INFORMATION TECHNOLOGY: INTRODUCTION TO INNOVATION AND ENTREPRENEURSHIP TECHNOLOGY	3	1
	BIT722J2	CT-2	INFORMATION TECHNOLOGY: DATA COMMUNICATIONS AND NETWORKS	4	2
	BIT722J3	CT-3	INFORMATION TECHNOLOGY: PYTHON PROGRAMMING	4	2
VIII	BIT822J1	CT-1	INFORMATION TECHNOLOGY: MACHINE LEARNING	3	1
	BIT822RP	PROJE CT	INFORMATION TECHNOLOGY: PROJECT WITH DISSERTATION	-	12

DIRECTOR IT&SS / CONVENOR BOUGS

**BACHELORS WITH INFORMATION TECHNOLOGY AS MAJOR
1st SEMESTER**

BIT122J: INFORMATION TECHNOLOGY _ BASIC COMPUTING

CREDITS: THEORY: 4; PRACTICAL: 2

UNIT I

Introduction to Computing-Computer Systems, Components of a computer system, Hardware and software, Evolution and generations of computers, and Classification of computers on the basis of capacity, purpose, and generation.

Data representation in digital computer. Number System: Bit, byte, binary, decimal, octal systems and hexadecimal conversion from one system to the other, representation of characters, integers and fractions. Binary Arithmetic: Addition, subtraction and multiplication. Computer Codes-BCD, Gray Code, ASCII and Unicode.

UNIT II

Problem Solving approaches top-down and bottom-up programming. Representation of Algorithm, Flowchart, Pseudo code and Source Code with examples. Transformation of Algorithms into source code. The Role of Algorithms in Computing, Algorithms as a technology, analyzing algorithms, Designing algorithms, Growth of Functions.

Computer languages - Machine language, assembly language, higher level language, 4GL. Translator Programs - Compiler, Interpreter, Assembler.

UNIT III

Operating Systems-Introduction, Features, Functions- Process Management, Memory Management, File Management, Device Management etc. Introduction to different Operating Systems. Different types and classification of Operating Systems.

Data, Information and Knowledge. Database, database management system, database System, Database Applications. Structured and Unstructured data. Big Data. Different kinds of databases.

UNIT IV

Internet, History of Internet, Features and uses of Internet. Internet Architecture, IP Address, Domain Name. Managing the Internet. Introduction to WWW, Web browsers, Websites, Email, Search Engine etc.

Connecting to the Internet, Internet Connections, Internet Address, Internet Services, Uses of Internet, Introduction to Internet of Things (IoT) and Cloud Computing. Introduction to E-commerce, E-governance, E-government, Smart homes with relevant examples like AMS, admissions systems etc.

TUTORIAL: (2-CREDITS)

Note: *The Tutorial Component shall be based on the Unit-I to Unit-IV*

REFERENCEBOOKS

1. Introduction to Information Technology, V Rajaraman, PHI
2. Introduction to Computers, Peter Norton, 7th Edition, McGraw Hill Education
3. Fundamentals of Computers, V. Rajaraman, PHI Publications
4. Computer Fundamentals, Anita Goel, Pearson Education India