National Education Policy 2020

Siddharth University Kapilvastu

Syllabus Minor Course : Computer Science

Ordnance:

1. This syllabus shall come with effect from Academic Season 2021.
2. This paper will be a part of a minor optional course of University Bachelor's Degree Course.
3. Any student of BSc courses may opt this paper as minor Course in Computer Science.
4. The student opting this paper shall be required to pass it only in any of the semester of his/ her First Year or Second Year of Bachelor's degree Course but the option for this paper shall not be available in Third Year of the Bachelor's degree course.
5. This paper will carry 4 credits. The paper shall be divided in 4 units and each unit shall carry one credit as 25% of the maximum marks.
6. A minimum of 60 lectures in a single semester shall be required for teaching this paper

Scheme of Evaluation

1. This paper shall carry the maximum marks are Hundred and the duration of the examination will be three hours.
2. Standard of Passing: minimum marks required to pass the examination will be 40.
3. The student who fails in this paper at any semester examination shall be allowed to reappear in the semester examination of the subsequent academic session in accordance with the general policy and examination ordinance of the university.

Programme/Class: MINOR COURSE	**Year: FIRST**	**Semester: First/Second**
Subject: Computer Science		
Course Code: BMCCS101T	**Course Title: Computer Fundamental**	

Course outcomes:

CO 1: Develops basic understanding of computers and its applications.

CO 2: Develops the ability to work with computers using various networks/Internet.

Credits: **4**	**Elective as MINOR COURSE**
Max. Marks: **100**	Min. Passing Marks: **40**

Total No. of Lectures-Tutorials-Practical (in hours per week): **4-0-0**

Unit	Topic	No. of Lectures
I	**INTRODUCTION:** Introduction to computer, Basics of computers and its operation, History of computer, Capabilities and limitations of computers, Types of computers, Hardware & Software, various storage devices.	15
II	**WINDOWS OPERATING SYSTEM:** Basics of Operating System, The User Interface (Task Bar, Icons, Menu, running an application), File and Directory Management (Creating and renaming of files and directories), Operating System Simple Setting (Changing System Date and Time, Changing Display Properties, To Add or Remove a Windows Component, Changing	15

	Mouse Properties).	
III	**UNDERSTANDING WORD PROCESSING AND SPREAD SHEET:** Word Processing Basics, Opening and closing Documents, Text Creation and manipulation, Formatting the Text, Elements of Electronic Spread Sheet, Manipulation of Cells.	**15**
IV	**COMPUTER NETWORKS & INTERNET:** Data communication, Computer Network, Internet, popular web browsing software, search engines, Web page, Website, URL, e-mail, Applications of Internet.	**15**

Programme/Class: MINOR COURSE	**Year: SECOND**	**Semester: Third/Fourth**
Subject: Computer Science		
Course Code: BMCCS201T	**Course Title: C Language for Programming**	

Course outcomes:

CO 1: To learn how to solve common types of computing problems.

CO 2: To learn basic understanding of various computer programming languages and develops the ability to work with C Programming Language.

Credits: **4**	**Elective as MINOR COURSE**
Max. Marks: **100**	Min. Passing Marks: **40**

Total No. of Lectures-Tutorials-Practical (in hours per week): **4-0-0**

Unit	Topic	No. of Lectures
I	Introduction: Evolution of Programming Languages; Programming Approaches: Top-down Approach, Bottom-up Approach; Algorithm; Flowchart; Source Code; Object Code; Executable File.	**15**
II	C–Introduction, Data Types- Primitive Data types, Derived Data types, User-Defined Data Types; Operators: Different Types of Operators, Precedence of Operators, Expression and Statements; Token: Variables, Constants, Literals, Identifiers, Keyword, Escape Sequence; Types of Conversion: Typecasting, Conversion	**15**
III	Decision Control Statements: IF, IF-ELSE, Nested IF, IFELSE ladder, Switch-case; Iterative statements: FOR loop, WHILE loop, DO-WHILE loop; Jump Statements: Break, Continue.	**15**
IV	Arrays & Function: Array: Declaration of an Array, Initialization of Array, Types of Array: Single Dimension Array, Two-Dimensional Array User-Defined Functions; Function Declaration; Types of Arguments: Actual Arguments, Formal Arguments; Function Definition; Methods to Call a Function: Call by Value, Call by Reference; Passing Arrays as Parameters, Recursion.	**15**