

2018-19

Title	Syllabus Distribution
Session	2018-19 (Odd Semester)
Department	B.Sc General in Computer Science
Institution Name	Hiralal Bhakat College, Nalhati, Birbhum, W.B.
Coordinator	Sk Abdul Hanif, SACT in Computer Science

Details of Courses of B.Sc. General under CBCS

Sl.	Course	Credit		Marks
1.	Core Course (12 Papers) 4 core papers each in 3 disciplines of choice	Theory+Practical $12 \times (4+2) = 72$	Theory+Tutorial $12 \times (5+1) = 72$	$12 \times 75 = 900$
2.	Elective Course DSE (6 Papers)	$6 \times (4+2) = 36$	$6 \times (5+1) = 36$	$6 \times 75 = 450$
3	Ability Enhancement Core Course (AECC) AECC-1 (ENVS) AECC-2 (English/MIL)	$4 \times 1 = 4$ $2 \times 1 = 2$	$4 \times 1 = 4$ $2 \times 1 = 2$	100 50
4.	SEC (4 Papers)	$4 \times 2 = 8$	$4 \times 2 = 8$	$4 \times 50 = 200$
	Total Credit:	122	122	1700

B.Sc. Computer Science General Course Structure

Semester	Course Course (CC)	Discipline Specific Elective (DSE)	Ability Enhancement Course	
			AECC (2)	SEC (4)
I	CC1A (Mathematics) CC2A (Physics) CC3A (Computer Sc.)		AECC-1	
II	CC1B (Mathematics) CC2B (Physics) CC3B (Computer Sc.)		AECC-2	
III	CC1C (Mathematics) CC2C (Physics) CC3C (Computer Sc.)			SEC-1 (Mathematics) or SEC-1 (Computer Sc.)
IV	CC1D (Mathematics) CC2D (Physics) CC3D (Computer Sc.)			SEC-2 (Mathematics) or SEC-2 (Computer Sc.)
V		DSE1A (Mathematics) DSE2A (Physics) DSE3A (Computer Sc.)		SEC-3 (Computer Science) or SEC-3 (Physics)
VI		DSE1B (Mathematics) DSE2B (Physics) DSE3B (Computer Sc.)		SEC-4 (Computer Science) or SEC-4 (Physics)

Semester-I

Core Course (CC 3A): Problem Solving using Computer

SEMESTER – I

Course code	Course title	Credit	No of Hours		
			L	T	P
CC-1A	Problem solving Using Computer	4-0-2=6	4	0	4
	Discipline 2	6		-	
	Discipline 3	6			
	AECC1:Environmental studies	4			
		22			

Syllabus	Number of Lecture	Course	Name of Teacher
Introduction to Computers: Characteristics of Computers, Uses of computers, Types and generations of Computers. Basic Computer Organization: Units of a computer, CPU, ALU, memory hierarchy, registers, I/O devices. Concept of problem solving, Problem definition, Program design, Debugging, Types of errors in programming, Documentation.	10 L	CC	Sk Abdul Hanif
Flowcharting, decision table, algorithms, Structured programming concepts, Programming methodologies viz. top-down and bottom-up programming. Structure of a Python Program, Elements of Python. Python Interpreter, Using Python as calculator, Python shell, Indentation. Atoms, Identifiers and keywords, Literals, Strings, Operators (Arithmetic operator, Relational operator, Logical or Boolean operator, Assignment,	16L		
Input and Output Statements, Control statements (Looping- while loop, for loop , loop Control, Conditional Statement, if...else , Difference between break, continue and pass). Numbers, Strings, Lists, Tuples, Dictionary, Date & Time, Modules, Defining Functions, Exit function, default arguments.	20 L		
Objects and Classes, Inheritance, Regular Expressions, Event Driven Programming, GUI Programming.	14L		
Section: A (Simple programs). Section: B (Visual Python):		Practical	Sk Abdul Hanif

Reference Books:

1. P. K. Sinha & Priti Sinha , —Computer Fundamentalsll, BPB Publications, 2007.
2. Python Programming- Reema Thareja
3. Dr. Anita Goel, Computer Fundamentals, Pearson Education, 2010.
4. T. Budd, Exploring Python, TMH, 1st Ed, 2011
5. Python Tutorial/Documentation www.python.org 2010
6. Allen Downey, Jeffrey Elkner, Chris Meyers , How to think like a computer scientist : learning with Python , Freely available online.2012
7. <http://docs.python.org/3/tutorial/index.html>
8. <http://interactivepython.org/courselib/static/pythonds>
9. <http://www.ibiblio.org/g2swap/byteofpython/read/>



**Coordinator
Science Wing
Hiralal Bhakat College**



**Head
Department of *Comp. Science*
Hiralal Bhakat College
Nalhati, Birbhum**



**Signature,
Teacher-in-Charge
Hiralal Bhakat College
Nalhati, Birbhum.**

Teacher-in-Charge
**Hiralal Bhakat College
Nalhati, Birbhum**

