

2018-19

Title	Syllabus Distributions
Session	2018-19 (Even 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-II

Core Course (CC 3B): Database Management Systems

SEMESTER – II

Course code	Course title	Credit	No of Hours		
			L	T	P
CC-1B	Database Management Systems	4-0-2=6	4	0	4
	Discipline 2	6			
	Discipline 3	6			
	AECC 2: ENG/MIL	2			
		20			

Syllabus	Number of Lecture	Course	Name of Teacher
Introduction to Database Management Systems: Characteristics of database approach, data models, DBMS architecture and data independence.	10 L	CC	Sk Abdul Hanif
Entity Relationship and Enhanced ER Modeling: Entity types, relationships, SQL- 99: Schema Definition, constraints, and object modeling.	15 L		
Relational Data Model: Basic concepts, relational constraints, relational algebra, SQL queries.	15 L		
Database design: ER and EER to relational mapping, functional dependencies, normal forms up to third normal form. .	20L		
DDL Commands • Create table, alter table, drop table DML Commands • Select , update, delete, insert statements • Condition specification using Boolean and comparison operators (and, or, not,=,<>,>,<,>=,<=) • Arithmetic operators and aggregate functions(Count, sum, avg, Min, Max) • Multiple table queries (join on different and same tables) • Nested select statements • Set manipulation using (any, in, contains, all, not in, not contains, exists, not exists, union, intersect, minus, etc.) • Categorization using group by.....having • Arranging using order by		Practical	Sk Abdul Hanif

Reference Books:

1. R. Elmasri, S.B. Navathe, Fundamentals of Database Systems 6th Edition, Pearson Education, 2010.
2. Database System Concepts - Henry F. Korth
3. R. Ramakrishnan, J. Gehrke, Database Management Systems 3rd Edition, McGraw-Hill, 2002.
4. A. Silberschatz, H.F. Korth, S. Sudarshan, Database System Concepts 6th Edition, McGraw Hill, 2010.
5. R. Elmasri, S.B. Navathe Database Systems Models, Languages, Design and application Programming, 6th Edition, Pearson Education, 2013.



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