Title	**Syllabus Distribution (CBCS)**
Session	**2018-19 (Even Semester)**
Department	**B.Sc General in Mathematics**
Institution Name	**Hiralal Bhakat College, Nalhati, Birbhum, W.B.**
Coordinator	**Dr. Banshidhar Sahoo, Assistant Professor in Mathematics**

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×(4+2)=72	Theory+Tuitorial 12×(5+1)=72	12×75=900
2.	Elective Course DSE (6 Papers)	6×(4+2)=36	6×(5+1)=36	6×75=450
3	Ability Enhancement Core Course (AECC) AECC-1 (ENVS) AECC-2 (English/MIL)	 4×1=4 2×1=2	 4×1=4 2×1=2	 100 50
4.	SEC (4 Papers)	4×2=8	4×2=8	4×50=200
	Total Credit:	122	122	1700

B.Sc. Mathematics 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 (Mathematics) or SEC-3 (Physics)
VI		DSE1B (Mathematics) DSE2B (Physics) DSE3B (Computer Sc.)		SEC-4 (Mathematics) or SEC-4 (Physics)

Semester-II

Core Course (CC 1B): Differential Equation (Marks: 75)

Syllabus	Number of Lecture	Name of Teacher
First order exact differential equations, Integrating factor. First order higher degree equation. Solvable for x, y, p. Methods for solving higher-differential equations. Basic Theory of differential equations. Wronskian and its Properties.	**20 L**	**Dr. Banshidhar Sahoo**
Linear homogeneous equations with constant coefficients. Linear non-homogeneous equations. Methods of variable of parameters. Cauchy-Euler equation. Simultaneous differential equation.	**16 L**	
Order and degree of partial differential equations. Concept of linear and non-linear partial differential equations. Formation of first order partial differential equations. Linear partial differential equation of first order. Lagrange's method. Charpit's method.	**15 L**	
Classification of second order partial differential equations into elliptic, parabolic and hyperbolic through illustration only.	**9 L**	

Reference book:

1. **S.L. Ross: Differential Equation, 3rd Ed., John Wiley and Sons, 1984**
2. **I. Sneddon: Elements of Partial Differential equations, McGraw-Hill, International Edition, 1967.**
3. **M.D. Raisinghania: Ordinary and Partial Differential Equation, S. Chand (20th Edition).**
4. **J.G. Chakraborty and P.R.Ghosh: Differential Equation, U.N. Dhur & Sons Pvt. Ltd.**

Head
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