GOVERNMENT GENERAL DEGREE COLLEGE, RANIBANDH

Vill. + P.O.: Rautara *P.S.: Barikul *Dist.: Bankura *Pin Code: 722135 *West Bengal *India

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DEPARTMENT OF MATHEMATICS
PROGRAMME OFFERED: B.Sc. (GENERAL) in MATHEMATICS
UNDER CBCS

Model Reference: Syllabus for Mathematics (General), Bankura Univerity,
With effect from 2017-2018

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The main components of this syllabus are as follows:

1. Core Course

2. Elective Course

3. Ability Enhancement Course

1. Core Course (CC)

A course that should compulsorily be studied by a candidate as a core requirement is termed as a core course.

2. Elective Course

2.1 Discipline Specific Elective (DSE) Course: A course, which may be offered by the main discipline/subject of study, is referred to as Discipline Specific Elective.

2.2 Generic Elective (GE) Course: An elective course, chosen generally from an unrelated discipline/subject of study with intention to seek an exposure, is called a Generic Elective Course.

3. Ability Enhancement Course (AEC)

The Ability Enhancement Course may be of two kinds:

3.1 Ability Enhancement Compulsory Course (AECC)

3.2 Skill Enhancement Course (SEC)

Details of Courses of B.A./B.Sc. (Programme) under CBCS

Course	Course Name	Course Outcome
SH/MTH/ 103/GE-1	Calculus, Geometry & Differential Equation (GE T1)	CO1: Mainly recapitulation of what a student learnt in +2 level about each of the topics in this course CO2: Applications of Calculus in studying the properties of plane curves are shown through examples CO3: Study the properties of elementary plane curves in two dimensions and those of surfaces in three dimensions

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		CO4: Introductory knowledge in Ordinary Differential Equations CO5: Use of software for studying curves and surfaces and solutions of Differential Equations
SH/MTH/ 203/GE-2	Real Analysis (GE T3)	CO1: Thorough and rigorous study of Real analysis begins with this course CO2: Foundation of Real Number System CO3: Introductory knowledge in sequence of real numbers CO4: Introductory knowledge in series of real numbers giving special attention to convergence tests which are required for future courses
SH/MTH / 304/GE-3	Algebra (GET2)	CO1: Introduction to Classical Algebra, Number Theory and Linear algebra CO2: Understanding basics of Algebra of Complex Numbers, solutions of polynomial equations and inequalities each of which is required for future courses CO3: Foundational knowledge in Classical Number Theory giving stress on some important results which will be used in futures courses CO4: Elementary Knowledge in Linear Algebra is developed through problem solving and geometric interpretations of basic ideas
SH/MTH /404/GE-4	Differential Equations and Vector	CO1: Advancement of the previous course in Ordinary Differential Equations through theoretical aspects and applications of them

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	Calculus (GET4)	CO2: Applications of Ordinary Differential equations in designing and solving problems in various branches of science CO3: Using software to demonstrate the solutions of the equations studied in the course CO4: Introductory course in Vector Calculus

PROGRAMME OUTCOME (PO):

PO1: Choice Based Credit System (CBCS) was introduced in the session 2017-2018

PO2: CBCS has brought a radical change in the undergraduate teaching and learning

PO3: A student gets ample scope to pursue his/her areas of interest

PO4: Besides Mathematics as core subject a student can choose tow elective courses of his/her choice as generic courses which help broaden his/her knowledge

PO5: In each semester students have to take 4/5 courses so that they can learn the subjects in a relaxed manner

PO6: Students have to take a compulsory course in Environmental Science so that they become aware of the major environmental issues

PO7: Students' language skills are nurtured in a compulsory language course

PO8: The holistic approach of the programme Enables a student to acquire theoretical as well as practical knowledge in his/her area of interest and also makes him/her a responsible citizen

PROGRAMME SPECIFIC OUTCOME (PSO):

PSO1: Foundation in basic Mathematics namely Algebra, Geometry and Analysis and their applications in various fields of knowledge are the main focus of the programme

PSO2: Instil analytical thinking

PSO3: Appreciation of interconnections among different branches of Mathematics

PSO4: Strengthen theoretical understanding through problem solving

PSO5: Acquire sufficient knowledge for pursuing higher studies in mathematics as well as other branches of science.