J. K. COLLEGE, PURULIA

Department of Mathematics

Attainment of Program Outcomes, Program Specific Outcomes

Programmed Name	Programmed Outcomes	Programmed Specific Outcomes

B.Sc. Honours in Mathematics	➢ B.Sc. Math Honours is an undergraduate Mathematics degree program. Mathematics is the branch of structure, space, quantity, and change.
	
	➢ B.Sc. Math Honours course provides in-depth knowledge about geometry, analysis, algebra and numerous other theories in Mathematics or respective disciplines, for example, computer science or statistics additionally to study of the normal Bachelor of Science subjects such as Physics and Chemistry.
	
	➢ To demonstrate core knowledge of Mathematics and application of it in major Science subjects.
	
	➢ To critically analyse engineering and mathematical models in different fields.
	
	➢ To demonstrate responsible ideas of Mathematical thinking.
	
	➢ To orient the newly admitted students to get momentum for the challenging courses of higher studies and research in the area of Mathematical Sciences.
		Sem – I :
		    To orient the newly admitted students for the challenging courses of higher Mathematics to provide a basic knowledge in calculus, algebra and geometry.
		
		Sem – II :
		    To impart the knowledge of mathematics which has developed logical reasoning and quantitative calculation.
		    To understand the basic knowledge of analysis, algebra, vector and differential equation.
		
		Sem – III :
		    To develop the fundamental of higher mathematics like Real Analysis, Algebra, Geometry-3D, Vector Analysis, Logic & Sets, and acquaint with the students of the principles and techniques of this subject.
		Sem – IV :
		    To understand the advance level of mathematics like Dynamics of Particle, Partial Differential Equation, Laplace Transform, Tensor Analysis, Real Analysis, Graph Theory etc.
		
		Sem – V :
		To understand the advance level of pure mathematics like Metric Space, Modern Algebra etc.
		    In continuation with the above, there are departmental specific courses which provides

➢ B.Sc. Math Honours course provides in-depth knowledge about geometry, analysis, algebra and numerous other theories in Mathematics or respective disciplines, for example, computer science or statistics additionally to study of the normal Bachelor of Science subjects such as Physics and Chemistry.
 	
➢ This course builds up a comprehension of analytical skills and purposeful abilities and competencies in Mathematics. The program deals with the comprehension of fundamental applications of mathematical strategies that are applied to general concepts outside the extent of theoretical mathematics.
 	
Skill development of the followings
  ▪ communicating mathematical ideas clearly and succinctly
  ▪ explaining mathematical ideas to others
  ▪ understanding complex mathematical texts
  ▪ working with abstract concepts
  ▪ thinking logically
  ▪ expressing problems in mathematical language
  ▪ constructing logical arguments
  ▪ working on open-ended problems
  ▪ finding solutions to problems
	in depth knowledge about Probability and Statistics, Operation Research.
	
	Sem – VI :
	
	In this semester the courses like Numerical methods, Computer oriented C-Program build up fundamental applications of mathematical strategies that are applied to general concepts outside the extent of theoretical mathematics.
	
	In addition the course offers the applicative mathematics in advance level of Mechanics.
	
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	Part-I
	    To orient the newly admitted students for the challenging courses of higher Mathematics to provide a basic knowledge in calculus, algebra and geometry.
	To impart the knowledge of mathematics which has developed logical reasoning and quantitative calculation.
	    To understand the basic knowledge of analysis, algebra, vector and differential equation.
	
	Part-II
	    To develop the fundamental of higher mathematics like Real Analysis, Algebra, Geometry-3D, Vector Analysis, Logic & Sets, and acquaint with the students of the principles and techniques of this subject.
	    To understand the advance level of mathematics like Dynamics of Particle, Partial Differential Equation, Laplace Transform, Tensor Analysis, Real Analysis, Graph Theory etc.

- interpreting mathematical results in real-world terms - analyzing / interpreting data - using professional and relevant software.	**Part-III** To understand the advance level of pure mathematics like Metric Space, Modern Algebra etc. In continuation with the above, there are departmental specific courses which provides in depth knowledge about Probability and Statistics, Operation Research. In this semester the courses like Numerical methods, Computer oriented C-Program build up fundamental applications of mathematical strategies that are applied to general concepts outside the extent of theoretical mathematics. In addition the course offers the applicative mathematics in advance level of Mechanics.