Programme Specific Outcome for Department of Mathematics(UG)

Name of the Programme: B.Sc. Mathematics(H) (Under CBCS)
Year of Introduction: 2018

Programme Specific Outcome(PSO)

PSO 1. The students will entirely equipped with the knowledge of all branches of mathematics

PSO 2. this programme will provide a very strong foundation in mathematics

PSO 3. The students will have a strong understanding of using mathematical equation in Algebra and Calculus

PSO 4. The students will be equipped with mathematical skills and techniques which can be applied in both academic and non-academic areas in work

PSO 5. Students develop a comprehensive knowledge of all the classical and applied fields of sciences as well as mathematics

PSO 6.The students will have placement scope in academic areas include jobs as teaching faculties in schools

PSO 8. course helps them to prepare for competitive exams in the country and also for abroad to pursue higher studies

Course Outcome (CO)

CO of Semester I(Content provides Calculus, Geometry, Vector Algebra)

CO 1. The students will familiar with the basic knowledge calculus , Geometry and Vector algebra
    Tutorial classes will help the students by improving their basic conception of the said subjects
CO 2. This content provides the knowledge of complex number, theory of equation, inequalities, number theory matrices and their application
    From tutorial classes students will get to know about the application of mathematics in ISBN, ISSN, Credit Card Number etc

CO of Semester II(Content provides Real Analysis, Group Theory-I)

CO 3. the contents provide the detail understanding in real numbers, sequences, sub sequences and the idea of convergence of infinite series
    Corresponding tutorials help the students to acquire the knowledge of Graphical representation of sequence and series
CO 4, The students will learn about the Normal sub group, Homomorphism , Isomorphism of Groups and Quotient Group etc
    From tutorial classes students will know the practical application of Groups and Isomorphism and Cyclic group ,

CO of Semester III(Content provides Theory of Real Function, ODE & Multivariate Calculus-I, Ring Theory and Linear Algebra)

CO 5. due to the content students can upgrade their knowledge of Real analysis
Through the tutorial classes students can apply their knowledge in different branches of Mathematics

CO 6. It introduces for basic conception of modern and linear algebra of the students
Corresponding tutorials will help the students to apply the knowledge of abstract algebra in practical life

CO 7. the knowledge of ordinary differential equation and multivariate calculus is more essential of a students for foundation of more physical problems
From tutorial classes they will learn the students to construct the mathematical modeling of many physical phenomenon

CO of Semester IV(Contents are Riemann Integration, PDE & Multivariate-II, Mechanics)

CO 8. the knowledge of Riemann Integration is introduce here as a foundation of Pure Mathematics in higher classes
The students can increase their conception of Pure mathematics from the tutorial classes

CO 9. The method of solution of PDE and detail knowledge of multivariate calculus is the most effective foundation course in the branches of applied Mathematics
From the tutorial classes student can learn to construct the mathematical modeling of many physical phenomenon

CO 10. From branch of Mechanics ,the student can deal with the behavior of bodies under the influence of external forces,
From tutorial classes the students can familiar with Newtonian Mechanics as well as Quantum Mechanics

CO of Semester V(Content are Probability & statistics, Group Theory-II, Linear Algebra-II)

CO 11. The application of Probability in everyday life are risk assessment, environmental regulation and financial regulation.
From the tutorial classes, the students can learn to use the probability in risk of financial management.

CO 12. The deep knowledge of group theory can be found in geometry representing phenomenon such as symmetry and certain type of transformation.
From Tutorial Classes students can understand that group theory has application is Physics, Chemistry and Rubik's cube

CO of Semester VI(content provides Metric Space & Complex Analysis, Numerical Methods)

CO 13. In mathematics metric space is a set where a distance is defined between elements of a set. The metric space method have been employed for decades in various application for example in internet search engines, image classification etc.

CO 14. Numerical methods are used to solve complex heat transfer problems involving mechanisms such as conduction , convection , radiation.
There are various numerical methods available such as the finite element method, finite volume method, finite difference method and boundary element method.

Skill enhancement course and Discipline specific elective course:

CO 1. Skill Enhancement Courses and Discipline Specific Elective papers open up new avenues and job opportunities for the students.

CO 2. Students have to select one Skill Enhancement Course (SEC) from C – programming Language and object oriented programming in C ++ in Semester III and one from Mathematical Logic, Scientific computing with Sage Math & R in Semester-IV . They enhance skills on the applied aspects of Computer particularly in the industrial sector via skill enhancement courses.

CO 3. Students have to select two Discipline Specific Elective (DSE A and B) courses in fifth and sixth semesters. For Semester V students have to take one from Advanced Algebra, Bio Mathematics , industrial Mathematics as DSE-A and from Discrete mathematics, Linear Programming , Boolean Algebra& Automata as DSE- B. For 6th Semester students have to take one from Differential Geometry, Mathematical Modelling, Fluid Statics and elementary Fluid Dynsmics as DSE -A also take one from Point set Topology , Astronomy& space Science, Advanced Mechanics as DSE- B. Students learn to design and perform mathematical experiments independently and develop communication skills through presentations. These special courses helps to open up new avenues for the students. They acquire knowledge in the applied fields of Mathematics.

CO 4. These special courses enhance skills and develop entrepreneurship qualities, higher studies, research and job opportunities in applied aspects of Mathematics

Name of the Programme: B.Sc. Mathematics (General Course) (Under CBCS)
Year of Introduction: 2018

Programme Specific Outcome
PSO1 Students develop a comprehensive knowledge of the different fields of Mathematical sciences included in the general course of cbcs syllabus. They are also familiarized with the basic knowledge computer programming.
PSO2 Students develop a practical knowledge on the different domains of mathematics as well as computer
PSO3 The present course open up new avenues and job opportunities for the students. Students got motivation for higher studies and administrative jobs also. They develop individual and leadership qualities to work in a team and management skills to qualify.

Course Outcome
CO of Semester I:(Theory of Equation, Complex Number, Matrices, Real Numbers)
CO1 This content provides the knowledge of complex number, theory of equation, inequalities, number theory matrices and their application
  From tutorial classes students will get to know about the application of mathematics in ISBN, ISSN, Credit Card Number etc
CO2 The contents provide the detail understanding in real numbers, sequences, sub sequences and the idea of convergence of infinite series
   Corresponding tutorials help the students to acquire the knowledge of Graphical representation

of sequence and series

CO of Semester II:(Differential Equation, Multivariate Calculus, Algebra)

CO 1 The knowledge of ordinary differential equation and multivariate calculus is more essential of a students for foundation of more physical problems
    Tutorial classes will learn the students to construct the mathematical modeling of many physical phenomenon

CO 2 It introduces for basic conception of modern and linear algebra of the students
    Corresponding tutorials will help the students to apply the knowledge of abstract algebra in practical life

CO of Semester III:(Calculus, Geometry, Vector Algebra)

CO1 The students will familiar with the basic knowledge calculus , Geometry and Vector algebra
    Tutorial classes will help the students by improving their basic conception of the said subjects

CO2 Due to the content students can upgrade their knowledge of Real analysis
        Through the tutorial classes students can apply their knowledge in different branches of Mathematics

CO of Semester IV:(Group Theory, Probability)

CO1 The students will learn about the Normal sub group, Homomorphism , Isomorphism of Groups and Quotient Group etc
    From tutorial classes students will know the practical application of Groups and Isomorphism and Cyclic group ,

CO2 he application of Probability in everyday life are risk assessment, environmental regulation and financial regulation.
        From the tutorial classes, the students can learn to use the probability in risk of financial management.