

FYUGP 2020

Programme Outcomes (PO's)

PO1. The programme will expose students to a variety of intriguing and practical concepts that will help them in their preparation for a variety of mathematics-oriented jobs in industry, government, business, commerce, finance, and research.

PO2. Learner will be able to develop new technologies, solve practical problems and informed decisions.

Programme Specific Outcomes (PSO's)

BA/ BSc Mathematics

PSO1. Students will be able to describe the real-world problems using mathematical tools.

PSO2. The programme aims to increase students' skill in maths as well as other cross-disciplinary subjects like commerce, physics, computer sciences, economics, and statistics etc.

PSO3. The programme also aims to develop new mathematical theories and methods and to evolve the new branches of mathematics with co-exist of other branches of science and humanities.

PSO4. Learner will be able to get better computational knowledge which helps them to get better insight and interest in mathematics.

Course Outcomes (CO's)

BSc/BA Mathematics (Major)

BSc/BA-I

MTHC1 (Calculus and Classical Algebra)

CO1. To fill the gap and to make the transfer from classical algebra to advanced course of analytical structures as smooth as possible.

CO2. To get deeper knowledge in development of generalized notions of trigonometry and to learn efficient techniques to simplify higher trigonometric expressions.

CO3. Students will learn different aspects of applications of the notions of the system of linear equations, differential calculus, and trigonometric functions.

BSc/BA Mathematics (Minor)

BSc/BA-I

MINMTH1 (Differential Calculus)

CO1. Students will be able to differentiate functions, find tangent, normal, curvature, asymptotes etc., of a given curve.

CO2. Learner will be able to address the criteria of changing functions.

BSc/BA Mathematics (GEC)

BSc/BA-I

GECMTH1A (Foundation in Mathematics-I)

CO1. Students will be able to use the critical and rational approach for the solution of a problem.

CO2. Learner will be able to identify mathematical objects to describe social and physical system, apply calculus in real life problems.

GECMTH1B (History of Mathematics)

CO1. Learner will be able to explain how mathematics evolved in India that can helps to analyse and critically reflect on ancient and modern mathematical issues.

CO2. Students will be able to get knowledge some of mathematical concepts developed in ancient time and evaluate the relevance in modern mathematics and sciences.

BSc/BA Mathematics (SEC)

BSc/BA-I

SEC115 (Computer Laboratory-I)

CO1. Students will be able to learn the basic knowledge about MATLAB or Mathematica through command window or creating programming files.

BSc/BA Mathematics (Major)

BSc/BA-II

MTHC2 (Real Analysis and Differential Equations)

CO1. The learner will be able to identify the properties of the number system, describe various analytical properties of the real number system.

CO2. Students will be able to use the techniques to solve differential equations and apply these techniques in various mathematical models used in real life problems.

BSc/BA Mathematics (Minor)

BSc/BA-II

MINMTH2 (Real Analysis)

CO1. Students will be able to analyse the properties of the number line.

CO2. Learner will be able to describe analytical properties of the real number system.

BSc/BA Mathematics (GEC)

BSc/BA-II

GECMTH2A (Foundation in Mathematics-II)

CO1. Students will be able to build up a strong foundation of the basic mathematical tools.

CO2. Learner will be able to identify mathematical objects to describe social and physical system, apply calculus in real life problems.

GECMTH2B (Business Mathematics)

CO1. Learner will be able to explain how mathematics used in business decision making.

BSc/BA Mathematics (SEC)

BSc/BA-II

SEC214 (Computer Laboratory-II)

CO1. Students will be able to learn how to use MATLAB or Mathematica through command window or creating programming files for solving various mathematical modelling problem.

BSc/BA Mathematics (Major)

BSc/BA-III

MTHC3 (Theory of Real Functions)

CO1. Students will be able to investigate limit, continuity, and differentiability of real valued functions.

CO2. Students will be able to expand functions in series and different form of remainders.

MTHC4 (Group Theory I)

CO1. Learner will be able to describe various group structures on sets.

CO2. Students will be able to identify the group structures present in different branches of sciences.

BSc/BA Mathematics (Minor)

BSc/BA-III

MINMTH3 (Differential Equations)

CO1. Learner will be able to address various methods for solving differential equations.

BSc/BA Mathematics (GEC)

BSc/BA-III

GECMTH3A (Mathematical Finance)

CO1. Students will be able to use mathematical models in financial/ industrial problems.

CO2. Learner will be able to use mathematical tools to market economy.

GECMTH3B (Combinatorial Mathematics)

CO1. Learner will be able to use combinatorial approach in solving algebraic problems.

CO2. Students will be able discuss and apply counting principles.

BSc/BA Mathematics (AEC)

BSc/BA-III

AECMTH3 (Mathematical Ability)

CO1. Students will be able to examine the truth and falsity of a logical statement.

CO2. Learner will be able to differentiate between a logical statement and ordinary statement. Also, they will be able to define and describe various properties of sets.

BSc/BA Mathematics (SEC)

BSc/BA-III

SEC315 (Mathematical Logic)

CO1. Students will be able to solve the problem based on critical thinking with logic and reasoning.

CO2. Learner will be able to use basic mathematics for solving real life problems.

CO3. Students will be able to learn basic mathematics that helps them in competitive examinations.