

Dept. of Mathematics
OEC: Mathematics for Social Sciences

Course Title: Mathematics for Social Sciences	Course code: 21BSCOEMA
Total Contact Hours: 42	Course Credits: 03
Internal Assessment Marks: 40	Duration of SEE: 3 hours
Semester End Examination Marks: 60	

Course Outcomes (CO's):

At the end of the course, students will be able to:

1. Understand the mathematical concept of sets and counting problems.
2. Understand the concept of Probability and its applications in social sciences.
3. Understand the concept of limits and continuity of functions and its applications in business and social sciences.

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nit	Description	Hours
1	Sets, counting, permutations, combinations, counting problems, binomial theorem and problems there on.	8
2	Probability – Introduction, sample space and assignment of probabilities, properties of the probability of an event, probability of equally likely events, conditional probability, Baye's formula and examples there on.	8
3	Limit and continuity, Derivative- interpretation, derivative formulas, general derivatives for differentiation, composite functions, higher order derivatives and problems there on.	9
4	Applications of the derivative – Relative maxima and Relative minima, Absolute maximum and Absolute minimum, Applied problems.	8
5	Concavity, Asymptotes, Marginal analysis, Models- Maximizing tax revenue, Optimal trade-in time, and minimizing inventory cost.	9

References:

1. Abe Mizrahi and Michael Sullivan, Mathematics for Business and Social Sciences and Applied Approach – Third Edition, Wiley.
2. Carl P. Simon and Lawrence Blume, Mathematics for Economists, Viva Books Private Limited, New Delhi, 2015.
3. L. Peccati, M. D'Amico and M. Cigola, Maths for Social Sciences, Springer.

Date

Course Coordinator

Subject Committee Chairperson