

(B) Minor Courses to be offered by the Department for students of other Departments of Social Science

Sl. No.	Sem	Type of Course	Name of Course	Credits	Marks
1.	I	MIC-1	Introductory Microeconomics	3	100
2.	II	MIC-2	Mathematical Methods in Economics	3	100
3.	III	MIC-3	Introductory Macroeconomics	3	100
4.	IV	MIC-4	Statistical Methods in Economics	3	100
5.	V	MIC-5	Intermediate Microeconomics 1	3	100
6.	V	MIC-6	Intermediate Macroeconomics	3	100
7.	VI	MIC-7	Indian Economy	3	100
8.	VI	MIC-8	Intermediate Microeconomics 2	3	100
9.	VII	MIC-9	Public Finance	4	100
10.	VIII	MIC-10	International Economics	4	100

Sub Total = 32

Note: The Department may reduce the syllabus of the Minor Courses as per the credit distribution. The Department concerned may also decide practical courses.

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Study

SEMESTER - II
MIC-2: MATHEMATICAL METHODS IN ECONOMICS
(Credit – 3)

Course Outcomes

After the completion of the course, the student will be able to:

- CO1:** Apply methods of various mathematical techniques to economic theory in general.
CO2: Understand and have a clear vision, related to various economic theories by the use of different testable propositions or formulas.
CO3: Learn Set and Set Operations.
CO4: Use Differential and Integral Calculus and its economic application

Unit	Topics to be covered	No. of Lectures
1	Preliminaries: Logic and proof techniques; Sets and Set Operations, Ordered pairs and Cartesian Products Functions and their Properties Number System Basic idea of Permutation and Combination Progression: Arithmetic, Geometric and Harmonic Progression.	16
2	Functions of One Variable a. Graphs; Elementary types of Functions: Quadratic, Polynomial, Power, Exponential and Logarithmic Functions. b. Sequences and Series: Convergence and Divergence, Algebraic Properties and Applications. c. Limit of a Function: Method to Evaluate the Limit of Algebraic, Logarithmic and Exponential Functions.	12
3	Rules of Differentiation: Differentiable Functions; Derivatives of Sum, Difference, Product and Quotient Functions; Second and higher order derivatives; Simple applications of differentiation in Economics – Concept of Marginal Cost, Marginal Revenue and Elasticity of Demand.	12
Total Lectures		40

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Suggested Readings:

1. Monga, G. S., *Mathematics and Statistics for Economists*, Vikas Publishing House, New Delhi
2. Mehta, B. C. & G. M. K. Madhani, *Mathematics for Economists*, Sultan Chand & Sons, Delhi, Agra
3. Sachdeva, S., *Quantitative Techniques*, Lukshmi Narain Agarwal Publication
4. Allen, R. G. D., *Mathematical Analysis for Economists*, Macmillan Press, London
5. Yamane, Taro, *Mathematics for Economists*, Prentice Hall of India, New Delhi.

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