

Department of Economics
University of Delhi, Delhi

Minutes of Meeting

Subject : B.A. (H) ECON002
Semester : I
Course : Introductory Mathematical Methods for Economics
Date & Time: 16-May at 11.00 AM
Venue : Department of Economics
Chair : Sandip Datta and Sourav Sarkar

The meeting was attended by the following teachers

S.NO.	NAME	COLLEGE
1	Akanksha	Daulat Ram College
2	Deepanshi Rajput	Janki Devi Memorial College
3	Dheerendra Pratap Singh	Kirori Mal College
4	Dr. Anjali Bansal Gupta	Kalindi college
5	Manavi Jain	Miranda House
6	Preeti Mann	Kamala Nehru College
7	Renu Kumari Verma	Motilal Nehru College Evening

The meeting involved a comprehensive discussion of different aspects of the course itself, including teaching and the evaluation process for the current semester. The committee reached a consensus on the following points

1. The syllabus and reading list for the course in the current semester will remain as they are. The primary textbook for this course will be Chapters 1 to 9 from "*Mathematics for Economic Analysis*" (2nd Edition) by Sydsaeter and Hammond.
2. A diverse range of topics related to the evaluation process were extensively discussed. The assessment process comprises three distinct parts, and the ensuing pattern will be adhered to:
 - I. Internal Assessment (IA): 30 Marks
 - Two class test (12 marks each), and
 - 6 marks for attendance
 - II. Continuous Assessment (CA): 40 Marks
 - 1 Problem Solving for 10 marks

- At least 2 quizzes/assignments, adding up to total 25 marks.
 - 5 Marks for attendance.
- III. The end semester exam: 90 Marks
- There will **not** be multiple sections.
 - There will be 10 questions (each of 10 marks), out of which 9 must be answered. A question may have no more than 2 sub-parts.
 - The coverage of material in the exam will roughly correspond to the unit-wise weights in terms of teaching times.
 - The exam-setter should meet the department moderators before setting the exam in order to discuss the pattern of questions and leave ample time for moderation after the draft exam is prepared.

The syllabus, teaching hours and topic-wise reading references

Unit 1 Preliminaries: (10 hours)

Logic and proof techniques; sets and set operations; relations; functions and their properties; number systems.

Ref: Sydsaeter, K., Hammond, P. (2002). *Mathematics for economic analysis*. Pearson Education. (Chapter - 1)

Unit 2 Functions of one real variable: (25 hours)

Graphs; elementary types of functions: quadratic, polynomial, power, exponential, logarithmic; sequences and series: convergence, algebraic properties and applications; continuous functions: characterisation, properties with respect to various operations and applications; differentiable functions: characterisation, properties with respect to various operations and applications; second and higher order derivatives: properties and applications.

Ref: Sydsaeter, K., Hammond, P. (2002). *Mathematics for economic analysis*. Pearson Education. (Chapter – 2 to 8)

Unit 3 Single-variable optimization (10 hours)

Geometric properties of functions: convex functions, their characterisation and applications; local and global optima: geometric and calculus-based characterisation, applications.

Ref: Sydsaeter, K., Hammond, P. (2002). *Mathematics for economic analysis*. Pearson Education. (Chapter – 9)