Department of Economics,
Delhi School of Economics
University of Delhi

Minutes of Meeting

Subject   :   B.A. (H) Economics ECON009

Semester   :   III

Course   :   Advanced Mathematical Methods for Economics – ECON009

Date   & Time :   13-May at 11.30 AM

Venue   :   Department of Economics

Chair   :   Prof. Sudhir Shah and Dr. Sandip Datta

The meeting was attended by the following teachers

1	Shruti Singh	Dyal Singh College (M)
2	Akanksha Mann	Lady Shri Ram College
3	Sandeep Kanyal	ARSD college
4	Ankur Jain	Ramjas
5	Shubhra Suman	Maitreyi college
6	Aastha Arora	Maitreyi College
7	DEEPANSHU YADAV	Shaheed bhagat singh college

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, teaching hours and topic-wise reading references will be as follows:**

UNIT I: **Multivariate Optimization with constraints (19 hours)**
Constrained optimisation with equality and inequality constraints: geometric characterisation, Lagrange characterisation using calculus and applications; properties of value function: envelope theorem, applications.

Sydsaeter, K., Hammond, P. (2002). *Mathematics for economic analysis*. Pearson Educational. (Chapter 18.1 to 18.9 & 18.3 (The statement only))

UNIT II: **Linear programming (6 hours)**
Introduction, graphical solution, matrix formulation, duality, economic interpretation.

Sydsaeter, K., Hammond, P. (2002). *Mathematics for economic analysis*. Pearson Educational. (Chapter 19)

UNIT III: **Integration, differential equations, and difference equations (20 hours)**
Definite integrals, indefinite integrals and economic applications; first order and second order difference equations, equilibrium and its stability; first order differential equations, phase diagrams and stability; second order differential equations.

Sydsaeter, K., Hammond, P. (2002). *Mathematics for economic analysis*. Pearson Educational. (Chapter 10, 20 and 21 (except 21.9))

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:
    a. Internal Assessment (IA):   30 Marks
        ● Two class test (12 marks each), and
        ● 6 marks for attendance
    b. Continuous Assessment (CA):   40 Marks
        ● The designated faculty member will develop a question bank, sourcing questions from both within and outside the reference book. These assignments will be periodically provided to the students, with the frequency determined by the respective faculty. This activity will contribute 35 marks towards the overall assessment.
        ● 5 marks for attendance
    c. 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.