Curriculum plan (Odd Semester 2025-26)

Teacher Name: Chetan Kumar

Paper name:Introductory Mathematical Methods for Economics

Class type: BA (Hons) Economics Sem-1

Paper shared with: NA

Unit to be taken	Month wise schedule to be followed	Tests/Assignments/ Revision/Presentations etc
Unit 1 Preliminaries: Logic and proof techniques; sets and set operations; relations; functions and their properties; number systems.	August (Week 1- Week 4)	Internal Assessment (IA): 30 Marks ● Two class test (12 marks each), and ● 6 marks for attendance
Unit 2 Functions of one real variable: Graphs; elementary types of functions: quadratic, polynomial, power, exponential, logarithmic; sequences and series: convergence, algebraic properties	September (Week 1 - 4)	
UNIT 2: 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;	October (Week 1-week 4)	Continuous Assessment (CA): 40 Marks
Unit 3 Single-variable optimization Geometric properties of functions: convex functions, their characterisation and applications; local and global optima: geometric and calculus-based characterisation, applications.	November (Week 1-week 4)	● assignments will be periodically provided to the students 35 marks towards the overall assessment -5 marks for attendance

Readings

1. Sydsaeter, K., Hammond, P. (2002). Mathematics for economic analysis. Pearson Educational.