Curriculum Plan (Odd Semester 2025-26)

**Teacher Name: Rachit Saini**

**Paper Name: Basic Mathematics for Economic Analysis**

**Class type: B.A. (Prog) Economics Major, Semester-I**

**Paper shared with: None**

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| **Unit** | **Month wise schedule to be followed** | **Tests/Assignments/ Presentation/Revision etc.** |
| **Unit- 1 Economic Models**  1. Ingredients of mathematical models - variables, constants, parameters, equations, and identities; Real number system; Sets and functions; relations and their properties; types of functions; functions of more than one variable | August (Week 1 – 3) | **Internal Assessment (IA) 30 marks**  **Two class tests (12 marks each), and**  **6 marks for attendance**   * Test 1 – September Week 2 * Test 2 – October Week 2 * Test 3 – November Week 2   **Continuous Assessment (CA) 40 Marks**  **Overall Assessment (35 marks), and 5 marks for attendance**   * Assignment – September Week 3 * Quiz/Assignment – October Week 2 * Problem Set – November Week 1 |
| 2. Limit, sequences, and series: convergence, algebraic properties, and applications; | August (Week 4) and September (Week 1) |
| 3. Continuous functions: characterization, properties with respect to various operations and applications; Differentiable functions: characterization, properties with respect to various operations and applications; second and higher order derivatives: properties and applications. | September (Week 2-4) |
| **Unit 2: Equilibrium Analysis in Economics**  Meaning of equilibrium; partial market equilibrium - linear and non-linear models; General market equilibrium | October (Week 1-2) |
| **Unit 3: Linear Models and Matrix Algebras and their Applications in Economics**  Matrix operations, Determinants, and Cramer’s Rule and their applications | October (Week 2-4) and November (Week 1-3) | **Revision:**  November – Week 3 |

**References**

1. Chiang, A. and Wainwright, K. (2005). Fundamental Methods of Mathematical Economics (4th ed.). McGraw Hill.
2. Sydsaeter, K. and Hammond, P. (2002). Mathematics for Economic Analysis. Pearson.