Work Plan (Odd Semester 2025-26) **Teacher Name: Phunchok Dolker**

Paper name: Optimization Methods for Economic Analysis

Class type: B.A. (Prog.) with Economics as Major (Sem-III)

Paper shared with: NA

<table>
<tr><th>Unit to be taken</th><th>Month wise schedule to be followed</th><th>Tests/Assignments/ Revision/Presentations etc</th></tr>
<tr><td>UNIT I: Comparative-Static Analysis (5 hours)
Derivatives, Slopes, Limit Theorem
Ref: Chiang, A and Wainwright, K. (2005). Fundamental methods of mathematical economics.
Boston, Mass. McGraw-Hill/Irwin. (Chapters: 6)</td><td>August (1st week) - (3rd week) August</td><td rowspan="2">a. Internal Assessment (IA): 30 Marks
● Three class test, one for each unit(12 marks each), (Best of 2 would be considered))
● 1st test - 19th sep
● 2nd test - last week of october
● 3rd test - last week of november
● 6 marks for attendance
b. Continuous Assessment (CA): 40 Marks
● Presentation and Viva- 20 marks
● Solutions note book - 15 Marks
● 5 marks for tutorial attendance
-Revision and preparation Break -24th November
-Examination- 27th December</td></tr>
<tr><td>UNIT II: Differentials and its role in Comparative static analysis (15 hours)
Ref: Chiang, A and Wainwright, K. (2005). Fundamental methods of mathematical economics. Boston, Mass. McGraw-Hill/Irwin. (Chapters: 7 & 8)</td><td>August (4th week) - (4th week) September</td></tr>
</table>

UNIT III: Optimisation Problems (25 hours) Unconstrained and constrained optimisation with single and multiple variables, Lagrangian functions, quasi- concavity and convexity, envelope theorem Ref: Chiang, A and Wainwright, K. (2005). Fundamental methods of mathematical economics. Boston, Mass. McGraw-Hill/Irwin. (Chapters: 9.1 to 9.4, 11 (except 11.4) & 12)	(1 week) October - (3rd Week) November	

Books used:

- **Chiang, A and Wainwright, K. (2005)**. Fundamental methods of mathematical economics. Boston, Mass. McGraw-Hill/Irwin.