一、課程目標Course objectives:

This course focus on some selective topics on microeconomics intended for third-year students and above. Building upon the concepts introduced in the intermediary microeconomics, we will discuss some standard topics at an advanced level. More specifically, throughout this course we will examine the following topics: mathematical methods for optimization, consumers’ optimization problem, producers’ optimization problem, game theory and its applications.

二、師生晤談時間及地點Instructor office hours:

Tuesdays 4-6pm 管院5103室

Phone: 049-2910960 ext. 4619

Email: [hhchiu@ncnu.edu.tw](mailto:hhchiu@ncnu.edu.tw)

三、授課方式Teaching approach:

Lectures and classroom discussions

四、評量方式Grading criteria:

Homework 25 %

Midterm 35 %

Final 40 %

五、參考書目Textbook & references:

（一） 教科書 N/A

（二）參考書

Chiang, A.C., and Wainwright, K. (2005) Fundamental Methods of Mathematical Economics, McGraw-Hill.

Silberberg, E., & Suen, W. C. (2001). *The structure of economics: a mathematical analysis*: McGraw-Hill.

**Varian, Hal (2006) *Intermediate Microeconomics: A Modern Approach*, 7th edition, W.W. Norton 科大文化**

六、教學進度（週次、授課主題、教學活動、評量方式/作業、章節）

Course schedule (week, topic, activities, evaluation/assignment, text, etc.):

1. Mathematical methods for optimization problems (4 weeks)

1. Unconstrained optimization (C&W ch9, 10)
2. Constrained optimization with equality constraints (C&W ch 12)

2. Produce’s problem (6 weeks)

profit maximization, cost minimization, duality (S&S ch 4, 6, 7, 8)

3. Consumers’ problem (4 weeks)

utility maximization, demand function (S&S ch10, 11)

4. Game theory and its application (3 weeks)

introduction to game theory (Varian ch 28, 29), firm’s behavior in oligopoly market (Varian ch 27).

七、TA協助事項Teaching Assistant tasks

協助作業與試卷之批改

八、備註Remarks:

九、本課程可培養學生之核心能力與教學活動及評量方法對應表

教學活動：

1.課堂討論（含個案討論）

2.書面報告、作業、作品、實驗

3.學生口頭報告

4.課程規劃之校外參訪及實習

5.證照/檢定

6.參與課程規劃之校內外活動及競賽

7.課外閱讀

8.其他

評量方法:

1.紙筆考試或測驗

2.實作評量﹙含口頭、書面報告、實習、表現評量﹚

3.其他表現

培養學生具備完整而有系統的經濟學知識之教學活動: 1, 2, 8

培養學生具備完整而有系統的經濟學知識之評量方法: 1, 2, 3

培養學生具備數理分析與理論應用的能力之教學活動: 1, 2, 7, 8

培養學生具備數理分析與理論應用的能力之評量方法: 1, 2, 3