AFRICAN ECONOMIC RESEARCH CONSORTIUM (AERC)

COLLABORATIVE PHD PROGRAMME (CPP) IN ECONOMICS FOR SUB-SAHARAN AFRICA

MICROECONOMICS
COURSE OUTLINE
(Revised: February, 2014)
ECON 601: MICROECONOMICS I

I. Consumer Theory (18 hours)
II. Theory of Production and Supply (6 hours)
III. Theory of Market Structure (4 hours)
IV. General Equilibrium Theory (9 hours)
V. Economic Choice under Uncertainty (5 hours)
VI. Game Theory (18 hours)

ECON 602: MICROECONOMICS II

I. Information Economics (18 hours)
II. Welfare Economics and Social Choice (11 hours)
III. Market Failure (9 hours)
IV. Market Structure Revisited (12 hours)
V. Other Topics in Microeconomics (10 hours)
ECON 601: MICROECONOMICS I

A. INTRODUCTION

The main objective of the course is to provide participating graduate students with a comprehensive understanding of advanced microeconomic theory so that at the end of the course they will be acquainted with the state of the art in microeconomic analysis. The students will be equipped to apply microeconomic concepts and tools in the African environment. The course is designed for one-semester and will treat microeconomic issues at an advanced level. The topics covered will include: consumer theory; theory of production and supply; theory of market structure; general equilibrium theory; choice under uncertainty and game theory.

Core Texts:

Mas-Colell, A., M. D. Whinston, and J.R. Green (1995), Microeconomic Theory, New York, Oxford University Press. (Henceforth referred to as MWG)


Supplementary Texts:


The following textbooks cover the mathematical prerequisites for this course.


Sydsaeter Knut, Peter Hammond J. & Arne Strom (2014), Further Mathematics for Economic Analysis, Pearson Education/Prentice Hall


(+) below denotes compulsory reading materials while other references are optional reading.
B. DETAILED COURSE OUTLINE

1. THEORY OF CONSUMER BEHAVIOUR

1.1. Preferences, Utility and Demand (4 hours)

+ J & R Ch. 1
+ MWG Ch. 1 and 3


1.2 Indirect Utility, Expenditure Functions and Duality Theory (4 hours)

+ J & R Ch 1 and 2
+ MWG Ch. 3


### 1.3 Revealed Preference (2 hours)

+ J & R Ch 2: 86-92

+MWG Ch 2


1.4 Evaluation of Welfare Changes (4 hours)

Consumer Surplus, Compensating and Equivalent Variation, Price and Quantity Indices

+ MWG Ch. 3 (3.1)

+ J&R Ch. 4: 166-175


1.5. **Consumer Behaviour under Rationing** (2 hours)


1.6 **Labour Supply and Inter-temporal Choice** (2 hours)


+ Gravelle and Rees Ch. 15.


II. THEORY OF PRODUCTION AND SUPPLY

2. Production sets, Profit maximization and cost minimization, Duality, Aggregation, Efficiency (6 hours)

+ J &R Ch 3.

+MWG Ch. 5


Varian Ch. 1-6


III. MARKET STRUCTURE

3.1. Perfect Competition (1 hour)

+J&R Ch 4

+MWG Ch 10

Varian Ch. 13


3.2 Monopoly and Monopolistic Competition (3 hours)

Monopoly Equilibrium, Price Discrimination, Welfare; Monopolistic Competition

+J&R Ch. 4: 158-165

+MWG Ch. 12: 384-387

+Tirole Ch. 1-3

Varian Ch. 14


IV. GENERAL EQUILIBRIUM THEORY

4.1 Pure Exchange Economy, Production Economy and Welfare (3 hours)

+J&R Ch 5  
+MWG Ch. 15-17.  
Varian, Ch. 17-18  
Gravelle and Rees.  

4.2 Existence, Uniqueness and Stability of Equilibria (3 hours)

+J&R Ch 5  
+MWG Ch. 17.  
Varian Ch 17 and 18.  
Gravelle and Rees Ch. 16.  
Debreu, G (1959), Theory of Value. New York: John Wiley & Sons  
Hildenbrand W. and A. Kirman (1988), Equilibrium Analysis, Amsterdam, North Holland, chs. 1, 2, 3*, 6 and Appendices.  

4.3 Core and Equilibria (2 hours)

+J&R Ch 5

+MWG Ch. 18

+Hildenbrand, W. and A. Kirman (1988), Equilibrium Analysis, Amsterdam, North Holland, chs. 4 and 5

Varian Ch. 21.


4.4 Applied General Equilibrium Models (1 hour)


V. ECONOMIC CHOICE UNDER UNCERTAINTY

5. Expected Utility, Risk Aversion, Prospect Theory, Stochastic Dominance & State Dependent Utility (5 hours)

+J&R Ch 2

+MWG Ch 6


Varian Ch 11:5-11:7.

Gravelle and Rees Ch 19-21.


**VI. GAME THEORY**


### 6.1. Static Games of Complete Information

(4 hours)

*Strategic independence and the concept of a game; players; rules of the game; payoffs; outcome and strategies; strategic (normal) form representation; dominance, randomized choices, pure strategy, mixed strategy.*

+ Gibbons Ch. 1

+ J&R Ch. 7

+ MWG Ch. 7-8.
Collaborative PhD Programme

Gintis Ch. 1-4
Kreps Ch. 11

6.2 Dynamic Games of Complete Information (4 hours)
Extensive form representation; backward induction, subgame perfection
+Gibbons Ch. 2
+J&R Ch 7
+MWG Ch. 9.
Gintis, H Ch. 6
Kreps Ch. 11-15

6.3 Static Games of Incomplete Information (4 hours)
Bayes Rule; Bayesian Nash Equilibrium; Trembling-hand perfection, Bayesian updating, subgame perfection.
+Gibbons Ch. 3
+J&R Ch 7
+MWG Ch. 8
Kreps Ch. 14

6.4 Dynamic Games of Incomplete Information (4 hours)
Sequential rationality, Reasonable beliefs and forward induction, Bargaining, auctions and repeated games.
+Gibbons 4
+J&R Ch. 7
6.5 Evolutionary Game Theory (2 hours)


ECON 602: MICROECONOMICS II

A. INTRODUCTION

The main objective of the course is to provide participating graduate students with a comprehensive understanding of advanced microeconomic theory so that at the end of the course they will be acquainted with the state of the art in microeconomic analysis. The students will be equipped to apply the microeconomic concepts and tools in the African environment. The course is designed for one-semester and will treat microeconomic issues at an advanced level. The topics covered will include: information economics; welfare economics and social choice; market failures; market structure and other topics in microeconomics.

Core Texts:


Supplementary texts:


B. DETAILED COURSE OUTLINE

I. INFORMATION ECONOMICS

1.1 Asymmetric Information and Incomplete Markets (2 hours)

+ J&R, Ch 8
+ MWG Ch. 13, 14
+ Kreps Ch. 16-18


1.2 Adverse selection; signalling (2 hours)

+ J&R, Ch 8
+ MWG, Ch 13 A-C
+ Kreps, Ch 25.9-11
+ Bardhan and Udry, Ch 7


**1.3 Adverse selection; screening (2 hours)**

+J&R Ch 8.

+MWG, Ch 13 D.

+Kreps, Ch 17.2

Bardhan and Udry (relevant chapters)


**1.4 Moral Hazard (4 hours)**

+J&R, Ch 8
+MWG, Ch 14
+Kreps, Ch.16


+ Bowles, S (2003), Microeconomics: Behaviour, Institutions, and Evolution, Princeton University Press Ch. 8 and 9


Bardhan and Udrey. Ch. 7.


1.5 Auctions and Mechanism Design (4 hours)

+J&R, Ch 9
+Kreps, Ch 18
+MWG, Ch 23


1.6 Topics in Contract Theory (2 hours)


II. WELFARE ECONOMICS AND SOCIAL CHOICE

2.1 Social Choice (5 hours)

+J & R Ch. 6

+MWG Ch. 21


### 2.2 Preferences Revisited (4 hours)

+ J & R Ch. 6

+ MWG Ch. 21


+ Camerer, C & Fehr, E “Measuring social preferences” [http://www.unizh.ch/iew/wp](http://www.unizh.ch/iew/wp)


2.3 Welfare Measurement (2 hours)


III. MARKET FAILURE

3.1 Public Goods and Externalities (7 hours)
+ Bowles, S (2003), Chs 1&4

+ MWG Ch. 11.

Varian, Ch. 23-24

Bardhan and Udry, Ch 10


3.2 Generalised Increasing Returns (2 hours)


Durlauf, S and Young, P (2001), Social Dynamics, Brookings Institution


IV. MARKET STRUCTURE REVISITED

4.1 Firms as Institutions (2 hours)


+Gravelle and Rees Ch 6 and 13.


+Coase, R (1937), The Nature of the Firm, Economica. 4, pp.386-405


**4.2 Imperfect Competition (Oligopoly) (5 Hours)**

+J&R Ch.3

+MWG Ch. 12

+Kreps Ch. 10-12

Varian Ch. 15 and 16


**4.3 The Economics of Regulation and Deregulation** (3 hours)


**4.4 The Economics of Information Technology** (2 hours)


V. OTHER TOPICS IN MICROECONOMICS

5.1. Intra-Household Allocation of Resources (4 hours)


5.2 **Risk, Uncertainty and Social Networks**


Economies,” World Development, 23(5), pp.767-86.


Hoff, K., Braverman, A. and J.E. Stiglitz (eds.) (1993) The Economics of Rural Organization:


5.3 Behavioural Economics (3 hours)


