



# THE UNIVERSITY OF THE WEST INDIES

MONA CAMPUS

Department of Economics

Kingston 7

Jamaica, W.I.

## **ECON9001: Advanced Microeconomics I**

**Year:** Semester I, 2019

**Lecturer:** Patrice Whitely

**Office hours:** Tuesdays 2-4 Thursdays 1-2, and by appointment

### **Course Description**

This course introduces students to Microeconomic Theory at a Ph. D. level of analysis. Microeconomics is the study of individual agents in the economy and the choices that they make. At its foundation is the acknowledgement of the fact that resources are limited. Therefore individuals have to make choices about how best to allocate these resources. This course builds the mathematical and theoretical foundations of the constrained optimization problem. It is the first of two graduate Microeconomic theory courses. We start by assuming that markets are perfectly competitive. This assumption will be relaxed in Microeconomic Theory II. Topics to be covered include consumer preferences and choice, classical demand theory, producer theory and general equilibrium.

### **Learning Outcomes**

At the end of the course students should be able to:

1. Determine whether a consumer's preference satisfy standard assumptions.
2. Determine the first and second order conditions for profit and utility maximization.
3. Determine the first and second order conditions for cost minimization.
4. Derive the firm's profit function, factor demand function and cost function.
5. Derive the consumer's Marshallian demand function, Hicksian demand function, expenditure function, the money metric utility function and indirect utility function.
6. Derive and identify the properties of the different functions.
7. Find the competitive equilibrium given initial endowments and information about consumer preferences.
8. Find the pareto efficient allocation.
9. Identify pareto improving allocations.
10. Distinguish between the first and second theorem of welfare economics.
11. Explain the Robinson Crusoe model.
12. Explain the pure exchange economy.
13. Apply the envelope theorem.
14. Apply the Kuhn-Tucker conditions.
15. Apply the weak axiom of profit maximization.

16. Apply the weak axiom of revealed preferences.
17. Apply Shepard's lemma.
18. Explain the assumptions made about preferences.
19. Apply Roy's identity.
20. Apply the Slutsky equation.
21. Apply Walras' Law.
22. Think like a classical micro-economist.

### **Modes of Delivery**

Three lecture hours per week.

### **Assessment**

Final Exam	50%
Mid-term Exam	30%
Graded Assignments	20%

### **Syllabus**

1. Theory of the Consumer – MWG chapters 1-3, Varian chapters 7-9.
  - 1.1 Preference and Choice
  - 1.2 Consumer Choice
  - 1.3 Classic Demand Theory
2. Theory of the Firm – MWG chapter 5, Varian chapters 1-6.
  - 2.1 Production
  - 2.2 Profit Maximization
  - 2.3 Cost Minimization
3. General Equilibrium Theory – MWG chapters 10, 15, and 16, Varian chapters 13, 17-18.
  - 3.1 The Pure Exchange Economy
  - 3.2 The Single Consumer, Single Producer Model
  - 3.3 The Several Producer, Several Consumer Model

## **Resources**

### **Required Textbook**

*Microeconomic Theory* by Andreu Mas-Colell, Michael D. Whinston and Jerry R. Green  
(Referred to as MWG)

### **Recommended Textbooks**

*Mathematics for Economic Analysis* by Knut Sydsaeter and Peter Hammond (Referred to as SH)

*Microeconomic Analysis* by Hal Varian (Referred to as Varian)