

market; Monopoly in product market and monopsony in factor market; Bilateral monopoly; Pricing of fixed factor.

4. **General Equilibrium:** Economic interdependence: general equilibrium; Existence of equilibrium; Uniqueness of equilibrium; Stability of equilibrium; Walrasian (2X2X2) general equilibrium model; Completeness of the Model.

5. **Welfare economics:** Normative issues in economics; Problems of value judgment; Welfare criteria; Optimality in production; Overall optimality; Social welfare function; Optimality of competitive equilibrium; Welfare Maximization; Market failure.

### Basic Text

Varian, H. R. (2019). *Intermediate Microeconomics: A Modern Approach*. New York: W. W. Norton and Company.

### Books Recommended

1. Browning, E. K., & Zupan, M. A. (2011). *Microeconomic Theory & Applications*. Hoboken, N.J: Wiley.
2. Harendra K. D. *Vyashtik Arthoniti: Tattva O Proyog*, Rural Economics Programme, Economics Department, Chittagong University.
3. Hirshleifer, J., & Sproul, M. (1988). *Price Theory and Applications*. Englewood Cliffs, N.J: Prentice Hall.
4. Islam, M. S. *Microeconomics with Simple Mathematics*, UGC, Dhaka
5. Koutsoyiannis, A. (2005). *Modern Microeconomics*. Palgrave Macmillan.
6. Lancaster, K. (1983). *Introduction to Modern Microeconomics*. Tunbridge Wells, Kent: Costello.
7. Lipsey, R. G., Courant, P. N., Purvis, D. D., & Steiner, P. O. (1993). *Economics*. New York, NY: HarperCollins Publishers.
8. Ryan, W. J. L., & Pearce, D. W. (1977). *Price Theory*. London: Macmillan.

## **ECON 302: Advanced Macroeconomic Theory**

**Credit Hours: 04**

**Rationale:** In modern times economies are interlinked through both goods market and money market. As a result, the effects of a business cycle in a country tend to propagate to other countries. Formulation of macroeconomic policies thus requires the knowledge of the nature of international dependence. Understanding the causes of business cycles and long-run economic growth makes economic policies more effective.

**Prerequisite:** Principles of Macroeconomics

**Course Objective:** The purpose of this course is to learn how economic shocks and policies originating in one region affect economic outcomes in other regions. Investigation of the effectiveness of policies under various economic environments is also an objective of this course.

**Intended Learning Outcomes:** After successful completion of the course, students will be able to:

1. understand the causes of economic fluctuations;
2. design policies to smooth out business cycles;
3. understand the theoretical debate among macroeconomists concerning the shape of the aggregate supply curve;
4. comprehend real business cycles and its implications for policies; and
5. understand the sources of wage rigidities.

### Course Content:

1. **The Open Economy Model:** Market for foreign exchange; Exchange rate regimes; Balance of Payments; Capital mobility; derivation of the BoP curve; Policy debates.
2. **Demand for Money:** Quantity Theory; Friedman's new quantity theory; Portfolio Theory.
3. **Supply of Money:**  $M_1$ ,  $M_2$ ,  $M_3$ ,  $M_4$ .

#### 4. The New Classical School

- a. Three Underlying Hypotheses: Rational expectations; Continuous market clearing; Aggregate supply hypothesis.
- b. Important Policy Conclusions: Policy ineffectiveness proposition; Real costs of disinflation; Dynamic time inconsistency; Credibility and monetary rules; Lucas' critique of econometric policy evaluation.
- c. An Overall Assessment of the New Classical Models

#### 5. The Real Business Cycle School

- a. Theoretical and Empirical Weaknesses of the New Classical Models: From monetary to real business cycle theory; Cycles vs. random walks; Supply side shocks; Technological shocks; Intertemporal labor substitution; Real business cycle AD and AS model; Econometric vs. calibration method.
- b. Policy Implications of RBC Theory

#### 6. The New Keynesian Economics

- a. Core Propositions
- b. Nominal wage and price rigidity; Real rigidities and their sources; New Keynesian business cycle theory; Hysteresis and Unemployment
- c. Criticisms and assessment

#### 7. The Economy in the Very Long Run

Overview of long-run economic growth, Growth accounting, Solow growth model, Harrod-Domar model.

#### **Basic Text**

Branson, W. H. (2006). *Macroeconomic Theory and Policy*. New Delhi: A.I.T.B.S.

#### **Books Recommended**

1. Dornbusch, R., Fischer, S., & Startz, R. (2018). *Macroeconomics*. New York: McGraw-Hill Education.
2. Phelps, E. S. (2015). *Seven Schools of Macroeconomic Thought*. Oxford: Oxford University Press.
3. Greenaway, D. (1992). *Current Issues in Macroeconomics*. Basingstoke: MacMillan.
4. Snowdon, B., Vane, H., Wynarczyk, P., & Sesselmeier, W. (January 01, 1995). A Modern Guide to Macroeconomics. *Kyklos; Internationale Zeitschrift Für Sozialwissenschaften*, 48, 4, 624.
5. Leslie, D. (1993). *Advanced Macroeconomics: Beyond IS/LM*. London: McGraw-Hill.
6. Heijdra, B. J., & Ploeg, F. V. D. (2009). *The Foundations of Modern Macroeconomics*. Oxford: Oxford University Press.
7. Romer, D. (2012). *Advanced Macroeconomics* (4<sup>th</sup> ed.). New York: McGraw Hill.

### **ECON 303: Mathematical Economics**

**Credit Hours: 04**

**Rationale:** Tools learned in mathematical economics help present economic theories in elegant ways. Optimizing behavior of households and firms, both from static and dynamic viewpoints, cannot be understood well without proper knowledge of mathematical economics.

**Prerequisite:** Mathematics for Economists

**Course Objectives:** The purpose of this course is to introduce a variety of mathematical concepts used in economic analysis including integration, difference and differential equations, linear and non-linear programming, calculus of variations and set theory.

**Intended Learning Outcomes:** After successful completion of the course, students will be able to:

1. solve constrained optimization problems faced by both households and firms;
2. apply rules of integration to recover the parent function from a given function;
3. solve dynamic economic problems involving difference and differential equations;