

Economic Application-Utility Maximization, Least Cost Combination. Solving a Nonlinear Program via the Kuhn-Tucker Conditions

The Calculus of Variations

The Euler Equation, Some Special Cases, Two Generalizations of the Euler Equation, Dynamic Optimization of a Monopolist, Trading Off Inflation and Unemployment.

Optimal Control Theory

The Simplest Problem of Optimal Control, The Maximum Principle, The Rationale of the Maximum Principle, Alternative Terminal Conditions, The Calculus of Variations and Optimal Control

Recommended Books:

- Brian S. Ferguson and G. C. Lim. (1998). Introduction to Dynamic Economic Models. Manchester University Press.
- Alpha C. Chang Fundamental Methods of Mathematical Economics. Latest Edition, McGraw-Hill.
- Alpha C. Chang. Elements of Dynamic Optimization. Latest Edition.
- D. L. Leonard and N. V. Long. (1992). Optimal Control Theory and Static Optimization in Economics. Cambridge University Press

Code: ECON-302

Title: Advanced Macroeconomics

Credit Hours: 03

Prerequisite: Intermediate Macroeconomics

Objectives:

The course is designed for senior level undergraduate students. The objective is to enhance their analytical skills and to clarify further their macroeconomic concepts with quantitative tools. They must have a strong theoretical foundation to understand the real problems of the economy with particular emphasis on inflation, unemployment, instability, deficit and debt etc. to which the developing countries are confronted at present.

Course Contents

Macroeconomics: The Classical Framework

Ingredients of the Classical model: The Says law of markets, The Quantity theory of money, The Marginal Productivity theory, Equilibrium in the goods and money markets, A critical appraisal of the Classical model, classical Dichotomy.

The Demand Management of the Economy

The Keynesian framework, Evolution of Keynesian Economics, Ingredients of Keynesian model, The consumption function, The liquidity preference theory, Wage rigidity in the labour market, The IS-LM model, Mathematical derivation of the IS and LM functions, The interaction of the goods and money markets in a closed economy, The role of public sector investment, The multiplier effects of fiscal and monetary actions, Derivation of the aggregate

demand curve/function, Stabilization and the relative effectiveness of fiscal and monetary policies, The Neoclassical critique of the Keynesian model: the Keynes effect, The Pigou effect, the Real Balances effect, The Keynesian-Neoclassical Synthesis.

The Supply Side Economics

Demand for and Supply of Labour, The wage rate determination, Rigidity versus flexibility of nominal wage rate, The short-run Production function, Derivation of Aggregate Supply under the Classical and Keynesian assumptions, The notions of full-employment and underemployment, Scarcity of raw material and energy, The supply side disturbances leading to stagflation, The problems of developing countries: shortage of supply vs. deficiency of demand, The scope for structural changes in developing economies.

The Open Economy Macroeconomics

Balance of Payments: Current and Capital account, The IS-LM-FB model due to Mundell and Fleming, The case of a small open economy with special reference to developing economies, The relative effectiveness of Fiscal and Monetary policies under the Fixed and Floating exchange rate regimes, The Managed exchange rates system, Determinants of the Exchange Rates, Devaluation and its impacts for developing countries, Perfect and imperfect capital mobility, Problems of stabilization in a global framework.

Macroeconomic Policy Debate

Policy Actions: Active or Passive, Ignorance, Expectations and the Lucas Critique, Conduct of Policy: Formula/Rule vs. Discretion, Distrust of Policy makers and Political Process, Macroeconomics Policy: the Fiscal, Monetary and Commercial policies, Policy formulation and implementation in a world of uncertainty, Seignorage and Inflation: Monetarists vs. Activists, the short-run and long-run analysis of the Phillips Curve, The expectation-augmented Phillips Curve, The Perfect Foresight and adjustment.

Growth and Business Cycles

The accumulation of capital, Acceleration principle and the concept of steady state growth path, The steady state conditions, The basic Neoclassical (Solow) growth model, Golden rule for consumption and investment (capital accumulation), The role of technical progress in growth, Introduction to the theory of Real Business Cycles: Labor market, Technology shocks, Household Behaviour, the persistence of output Fluctuations.

Recommended Books:

- Branson, William – Macroeconomics: Theory and Policy – Latest Edition, Harper and Row, New York.
- Froyen, R. Macroeconomics: Theories and Policies–Latest Edition. Prentice Hall
- Gupta, G. S. Macroeconomics: Theory and Applications- Latest Edition, Tata McGraw Hill Publishing Company, New Delhi
- Scarth, W. M. Macroeconomics: An Introduction to Advanced Methods-Latest Edition Dryden Press: Harcourt Brace & Company.
- Romer, D. Advanced Macroeconomics –Latest Edition. McGraw Hills, New York.
- Mankiw, Gregory- Macroeconomics- Latest Edition. Worth Publisher, New York.