B.A. (HONOURS) ECONOMICS

(Three Year Full Time Programme)

COURSE CONTENTS
(Effective from the Academic Year 2011-2012 onwards)

DEPARTMENT OF ECONOMICS
UNIVERSITY OF DELHI
DELHI – 110007.
<table>
<thead>
<tr>
<th>Semester I</th>
<th>Paper 01 – Introductory Microeconomics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Paper 02- Statistical Methods in Economics-I</td>
</tr>
<tr>
<td></td>
<td>Paper 03 - Mathematical Methods for Economics-I</td>
</tr>
<tr>
<td></td>
<td>Paper 04 - Concurrent – Qualifying Language</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester II</th>
<th>Paper 05 – Introductory Macroeconomics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Paper 06 – Statistical Methods in Economics-II</td>
</tr>
<tr>
<td></td>
<td>Paper 07 - Mathematical Methods for Economics-II</td>
</tr>
<tr>
<td></td>
<td>Paper 08 - Concurrent – Credit Language</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester III</th>
<th>Paper 09 – Intermediate Microeconomics-I</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Paper 10 – Intermediate Macroeconomics-I</td>
</tr>
<tr>
<td></td>
<td>Paper 11 - Economic History of India: 1857-1947</td>
</tr>
<tr>
<td></td>
<td>Paper 12 - Introductory Econometrics</td>
</tr>
<tr>
<td></td>
<td>Paper 13 - Concurrent – Interdisciplinary</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester IV</th>
<th>Paper 14- Intermediate Microeconomics-II</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Paper 15 - Intermediate Macroeconomics-II</td>
</tr>
<tr>
<td></td>
<td>Paper 16 – Economy, State and Society</td>
</tr>
<tr>
<td></td>
<td>Paper 17 - Indian Economic Development since 1947 - I</td>
</tr>
<tr>
<td></td>
<td>Paper 18 - Concurrent – Discipline Centered I</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester V</th>
<th>Paper 19- Indian Economic Development since 1947 - II</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Paper 20 – Development Theory and Experience-I</td>
</tr>
<tr>
<td></td>
<td>Paper 21 – Public Economics</td>
</tr>
<tr>
<td></td>
<td>Paper 22 – Option -I (any one from List of Group-I)</td>
</tr>
<tr>
<td>Group-I</td>
<td>22A - Economics of Health and Education</td>
</tr>
<tr>
<td></td>
<td>22B - Political Economy</td>
</tr>
<tr>
<td></td>
<td>22C - Topics in Microeconomics-I</td>
</tr>
<tr>
<td></td>
<td>22D - Advanced Macroeconomics</td>
</tr>
<tr>
<td></td>
<td>22 E - Money and Financial Markets</td>
</tr>
<tr>
<td>Semester VI</td>
<td>Paper 23 – International Economics</td>
</tr>
<tr>
<td>-------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td></td>
<td>Paper 24- Development Theory and Experience-II</td>
</tr>
<tr>
<td></td>
<td>Paper 25- Option-II (any one from List of Group-II)</td>
</tr>
<tr>
<td></td>
<td><strong>Group – II</strong></td>
</tr>
<tr>
<td></td>
<td>25A - Comparative Economic Development: 1850- 1950</td>
</tr>
<tr>
<td></td>
<td>25B - Applied Econometrics</td>
</tr>
<tr>
<td></td>
<td>25C - Topics in Microeconomics-II</td>
</tr>
<tr>
<td></td>
<td>25D - Financial Economics</td>
</tr>
<tr>
<td></td>
<td>25E - Environmental Economics</td>
</tr>
<tr>
<td></td>
<td>Paper 26 - Concurrent – Discipline Centered II</td>
</tr>
</tbody>
</table>
SEMESTER BASED UNDER-GRADUATE HONOURS COURSES

Distribution of Marks & Teaching Hours

The Semester-wise distribution of papers for the B.A. (Honours), B.Com. (Honours), B. Com., B.Sc. (Honours) Statistics and B.Sc. (Honours) Computer Science will be as follows:

<table>
<thead>
<tr>
<th>Type of Paper</th>
<th>Max. Marks</th>
<th>Theory Exam.</th>
<th>I.A.</th>
<th>Teaching per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Papers</td>
<td>100</td>
<td>75</td>
<td>25</td>
<td>5 Lectures 1 Tutorial</td>
</tr>
<tr>
<td>Concurrent Courses</td>
<td>100</td>
<td>75</td>
<td>25</td>
<td>4 Lectures 1 Tutorial</td>
</tr>
<tr>
<td>Credit Courses for B.Sc.(Hons.)</td>
<td>100</td>
<td>75</td>
<td>25</td>
<td>4 Lectures 1 Tutorial</td>
</tr>
<tr>
<td>Mathematics</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Size of the Tutorial Group will be in accordance with the existing norms.
- The existing syllabi of all Concurrent/Credit Courses shall remain unchanged.
- The existing criteria for opting for the Concurrent /Credit Courses shall also remain unchanged.
Paper 01: INTRODUCTORY MICROECONOMICS

Course Description

This course is designed to expose first-year students, who may be new to economics, the basic principles of microeconomic theory. The emphasis will be on thinking like an economist and the course will illustrate how microeconomic concepts can be applied to analyse real-life situations.

Course Outline

1. Exploring the subject matter of Economics
Why study economics? The scope and method of economics; scarcity and choice; questions of what, how and for whom to produce and how to distribute output; the basic competitive model; prices, property rights and profits; incentives and information; rationing; opportunity sets; economic systems; reading and working with graphs.

Individual demand and supply schedules and the derivation of market demand and supply; shifts in demand and supply curves; the role of prices in resource allocation; the concept of elasticity and its application; consumer and producer surplus; taxes and their efficiency costs

3. Households
The consumption decision: preferences and their representation with indifference curves; budget constraints; a consumer’s optimum choice; income and substitution effects; labour supply and savings decisions.

4. Firms and Perfect Market Structure
Behaviour of profit maximizing firms and the production process; short-run costs and output decisions; costs and output in the long run.

5. Imperfect Market Structure
Monopoly and anti-trust policy; government policies towards competition; imperfect competition.

6. Input Markets
Labour and land markets; concepts of derived demand, input productivity and marginal revenue product and input demand curves; competitive input markets and public policy.

Readings

Paper 02: STATISTICAL METHODS IN ECONOMICS –I

Course Description

This is the first of a two-part sequence on statistical methods. It begins with some basic concepts and terminology that are fundamental to statistical analysis and inference. It then develops the notion of probability, followed by probability distributions of discrete and continuous random variables. The semester concludes with a discussion of joint distributions.

Course Outline

1. Introduction and Overview
   The distinction between populations and samples and between population parameters and sample statistics; the use of measures of location and variation to describe and summarize data; population moments and their sample counterparts.

2. Elementary Probability Theory
   Sample spaces and events; probability axioms and properties; counting techniques; conditional probability and Bayes’ rule; independence.

3. Random Variables and Probability Distributions
   Defining random variables; probability distributions; expected values of random variables and of functions of random variables; properties of commonly used discrete and continuous distributions (uniform, binomial, normal, poisson and exponential random variables).

4. Random Sampling and Jointly Distributed Random Variables
   Density and distribution functions for jointly distributed random variables; computing expected values; covariance and correlation coefficients.

Readings:

Paper 03: MATHEMATICAL METHODS IN ECONOMICS –I

Course Description

This is the first of a compulsory two-course sequence. The objective of this sequence is to transmit the body of basic mathematics that enables the study of economic theory at the undergraduate level, specifically the courses on microeconomic theory, macroeconomic theory, statistics and econometrics set out in this syllabus. In this course, particular economic models are not the ends, but the means for illustrating the method of applying mathematical techniques to economic theory in general. The level of sophistication at which the material is to be taught is indicated by the contents of the prescribed textbook.

Course Outline

1. Preliminaries
   Logic and proof techniques; sets and set operations; relations; functions and their properties; number systems.

2. Functions of one real variable
   Graphs; elementary types of functions: quadratic, polynomial, power, exponential, logarithmic; sequences and series: convergence, algebraic properties and applications; continuous functions: characterizations, properties with respect to various operations and applications; differentiable functions: characterizations, properties with respect to various operations and applications; second and higher order derivatives: properties and applications.

3. Single-variable optimization
   Geometric properties of functions: convex functions, their characterizations and applications; local and global optima: geometric characterizations, characterizations using calculus and applications.

4. Integration of functions
   Areas under curves; indefinite integrals; the definite integral.

5. Difference equations
   First order difference equations.

Readings:

PAPER 04

CONCURRENT - QUALIFYING LANGUAGE
Paper 05: INTRODUCTORY MACROECONOMICS

Course Description

This course aims to introduce the first year students to the basic concepts of macroeconomics. Macroeconomics deals with the aggregate economy. This course discusses the preliminary concepts associated with the determination and measurement of aggregate macroeconomic variable like savings, investment, GDP, money, inflation, and the balance of payments.

Course Outline

1. Introduction to Macroeconomics and National Income Accounting
   Basic issues studied in macroeconomics; measurement of gross domestic product; income, expenditure and the circular flow; real versus nominal GDP; price indices; national income accounting for an open economy; balance of payments: current and capital accounts.

2. Money
   Functions of money; quantity theory of money; determination of money supply and demand; credit creation; tools of monetary policy.

3. Inflation
   Inflation and its social costs; hyperinflation.

4. The Closed Economy in the Short Run
   Classical and Keynesian systems; simple Keynesian model of income determination; IS-LM model; fiscal and monetary multipliers.

Readings:

Course Description

This is the second course in the two part sequence on statistical methods. It begins with a discussion on sampling techniques used to collect survey data. It introduces the notion of sampling distributions that act as a bridge between probability theory and statistical inference. It then covers topics in inference that include point estimation, statistical intervals and hypothesis testing. It concludes with a discussion of the simple linear regression model.

Course Outline

1. Sampling
   Principal steps in a sample survey; methods of sampling; the role of sampling theory; properties of random samples.

2. Point and Interval Estimation
   Estimation of population parameters using methods of moments and maximum likelihood procedures; properties of estimators; confidence intervals for population parameters.

3. Hypothesis Testing
   Defining statistical hypotheses; distributions of test statistics; testing hypotheses related to population parameters; Type I and Type II errors; power of a test; tests for comparing parameters from two samples.

4. Simple Linear Regression
   Estimation of the slope and intercept parameters; inference and prediction.

Readings:

Course Description

This course is the second part of a compulsory two-course sequence. This part is to be taught in Semester II following the first part in Semester I. The first course covered single variable functions and optimization and this course covers the essentials of linear algebra and optimization techniques required for the analysis of functions of several variables that are commonly used in economics.

Course Outline

1. Differential equations
First-order differential equations; integral curve, direction diagram and slope field; qualitative theory and stability.

2. Linear algebra
Vector spaces: algebraic and geometric properties, scalar products, norms, orthogonality; linear transformations: properties, matrix representations and elementary operations; systems of linear equations: properties of their solution sets; determinants: characterization, properties and applications.

3. Functions of several real variables
Geometric representations: graphs and level curves; differentiable functions: characterizations, properties with respect to various operations and applications; second order derivatives: properties and applications; the implicit function theorem, and application to comparative statics problems; homogeneous and homothetic functions: characterizations and applications.

4. Multi-variable optimization
Convex sets; geometric properties of functions: convex functions, their characterizations, properties and applications; further geometric properties of functions: quasiconvex functions, their characterizations, properties and applications; unconstrained optimization: geometric characterizations, characterizations using calculus and applications; constrained optimization with equality constraints: geometric characterizations, Lagrange characterization using calculus and applications; properties of value function: envelope theorem and applications.

Readings:

PAPER 08

CONCURRENT – CREDIT LANGUAGE
Course Description

The course is designed to provide a sound training in microeconomic theory. Since students are already familiar with the quantitative techniques in the previous semesters, mathematical tools are used to facilitate understanding of the basic concepts. This course looks at the behaviour of the consumer and the producer and also covers the behaviour of a competitive firm.

Course Outline

1. Consumer Theory
   Preference; utility; budget constraint; choice; demand; Slutsky equation; buying and selling; choice under risk and intertemporal choice; revealed preference.

2. Production, Costs and Perfect Competition
   Technology; isoquants; production with one and more variable inputs; returns to scale; short run and long run costs; cost curves in the short run and long run; review of perfect competition.

Readings:

Paper 10: INTERMEDIATE MACROECONOMICS - I

Course Description

This course introduces the students to formal modeling of a macro-economy in terms of analytical tools. It discusses various alternative theories of output and employment determination in a closed economy in the short run as well as medium run, and the role of policy in this context. It also introduces the students to various theoretical issues related to an open economy.

Course Outline

1. Aggregate Demand and Aggregate Supply Curves
   Derivation of aggregate demand and aggregate and supply curves; interaction of aggregate demand and supply.

2. Inflation, Unemployment and Expectations
   Phillips curve; adaptive and rational expectations; policy ineffectiveness debate.

3. Open Economy Models
   Short-run open economy models; Mundell-Fleming model; exchange rate determination; purchasing power parity; asset market approach; Dornbusch's overshooting model; monetary approach to balance of payments; international financial markets.

Readings:


Course Description

This course analyses key aspects of Indian economic development during the second half of British colonial rule. In doing so, it investigates the place of the Indian economy in the wider colonial context, and the mechanisms that linked economic development in India to the compulsions of colonial rule. This course links directly to the course on India’s economic development after independence in 1947.

Course Outline

1. Introduction: Colonial India: Background and Introduction
   Overview of colonial economy.

2. Macro Trends
   National Income; population; occupational structure.

3. Agriculture
   Agrarian structure and land relations; agricultural markets and institutions – credit, commerce and technology; trends in performance and productivity; famines.

4. Railways and Industry
   Railways; the de-industrialisation debate; evolution of entrepreneurial and industrial structure; nature of industrialisation in the interwar period; constraints to industrial breakthrough; labor relations.

5. Economy and State in the Imperial Context
   The imperial priorities and the Indian economy; drain of wealth; international trade, capital flows and the colonial economy – changes and continuities; government and fiscal policy.

Readings:


Background reading for students:

Paper 12: INTRODUCTORY ECONOMETRICS

Course Description

This course provides a comprehensive introduction to basic econometric concepts and techniques. It covers estimation and diagnostic testing of simple and multiple regression models. The course also covers the consequences of and tests for misspecification of regression models.

Course Outline

1. Nature and Scope of Econometrics
2. Statistical Concepts
   Normal distribution; chi-sq, t- and F-distributions; estimation of parameters; properties of estimators; testing of hypotheses.
3. Simple Linear Regression Model: Two Variable Case
   Estimation of model by method of ordinary least squares; properties of estimators; goodness of fit; tests of hypotheses; scaling and units of measurement; confidence intervals; Gauss-Markov theorem; forecasting.
4. Multiple Linear Regression Model
   Estimation of parameters; properties of OLS estimators; goodness of fit - R^2 and adjusted R^2; partial regression coefficients; testing hypotheses – individual and joint; functional forms of regression models; qualitative (dummy) independent variables.
5. Violations of Classical Assumptions: Consequences, Detection and Remedies
   Multicollinearity; heteroscedasticity; serial correlation.
6. Specification Analysis
   Omission of a relevant variable; inclusion of irrelevant variable; tests of specification errors.

Readings

PAPER 13

CONCURRENT – INTERDISCIPLINARY
Paper 14: INTERMEDIATE MICROECONOMICS - II

Course Description

This course is a sequel to Intermediate Microeconomics I. The emphasis will be on giving conceptual clarity to the student coupled with the use of mathematical tools and reasoning. It covers general equilibrium and welfare, imperfect markets and topics under information economics.

Course Outline

1. General Equilibrium, Efficiency and Welfare
Equilibrium and efficiency under pure exchange and production; overall efficiency and welfare economics.

2. Market Structure and Game Theory
Monopoly; pricing with market power; price discrimination; peak-load pricing; two-part tariff; monopolistic competition and oligopoly; game theory and competitive strategy.

3. Market Failure
Externalities; public goods and markets with asymmetric information.

Readings:

Course Description

This course is a sequel to Intermediate Macroeconomics I. In this course, the students are introduced to the long run dynamic issues like growth and technical progress. It also provides the micro foundations to the various aggregative concepts used in the previous course.

Course Outline

1. Economic Growth
   Harrod-Domar model; Solow model; golden rule; technological progress and elements of endogenous growth.

2. Microeconomic Foundations
   a. Consumption: Keynesian consumption function; Fisher’s theory of optimal intertemporal choice; life-cycle and permanent income hypotheses; rational expectations and random-walk of consumption expenditure.
   b. Investment: determinants of business fixed investment; residential investment and inventory investment.
   c. Demand for money.

3. Fiscal and Monetary Policy
   Active or passive; monetary policy objectives and targets; rules versus discretion: time consistency; the government budget constraint; government debt and Ricardian equivalence.

4. Schools of Macroeconomic Thoughts
   Classical; Keynesians; New-Classicals and New-Keynesians.

Readings:

Paper 16: ECONOMY, STATE AND SOCIETY

Course Description

Employing perspectives from alternative schools of thought, this course explores the development of the structure and institutions of capitalist economies and their relationship to social and political forces. Students are expected to read some classic texts as well as more recent commentaries.

Course Outline

1. Analysing Social Change in Historical Perspective
   The method of historical materialism; the transition from feudalism to capitalism; capitalism as a historical process – alternative perspectives.

2. Capitalism as an Evolving Economic System
   Basic features; accumulation and crisis; the modern corporation; monopoly capitalism—alternative perspectives.

3. The State in Capitalism
   The state and the economy – contestation and mutual interdependence; the state as an arena of conflict; imperialism – the basic foundations.

Readings:

Paper 17: INDIAN ECONOMIC DEVELOPMENT SINCE 1947 - I

Course Description

Using appropriate analytical frameworks, this course reviews major trends in economic indicators and policy debates in India in the post-Independence period, with particular emphasis on paradigm shifts and turning points.

Course Outline

1. Economic Development since Independence
   Major features of the economy at independence; growth and development under different policy regimes—goals, constraints, institutions and policy framework; an assessment of performance—sustainability and regional contrasts; structural change, savings and investment.

2. Population and Human Development
   Demographic trends and issues; education; health and malnutrition.

3. Growth and Distribution
   Trends and policies in poverty; inequality and unemployment.

4. International Comparisons

Readings:


23


PAPER 18

CONCURRENT – DISCIPLINE
CENTERED – I
**Course Description**

This course examines sector-specific policies and their impact in shaping trends in key economic indicators in India. It highlights major policy debates and evaluates the Indian empirical evidence.

**Course Outline**

1. **Macroeconomic Policies and Their Impact**  
   Fiscal Policy; trade and investment policy; financial and monetary policies; labour regulation.

2. **Policies and Performance in Agriculture**  
   Growth; productivity; agrarian structure and technology; capital formation; trade; pricing and procurement.

3. **Policies and Performance in Industry**  
   Growth; productivity; diversification; small scale industries; public sector; competition policy; foreign investment.

4. **Trends and Performance in Services**

**Readings:**

Paper 20: DEVELOPMENT THEORY AND EXPERIENCE - I

Course Description

This is the first part of a two-part course on economic development. The course begins with a discussion of alternative conceptions of development and their justification. It then proceeds to aggregate models of growth and cross-national comparisons of the growth experience that can help evaluate these models. The axiomatic basis for inequality measurement is used to develop measures of inequality and connections between growth and inequality are explored. The course ends by linking political institutions to growth and inequality by discussing the role of the state in economic development and the informational and incentive problems that affect state governance.

Course Outline

1. Conceptions of Development
Alternative measures of development, documenting the international variation in these measures, comparing development trajectories across nations and within them.

2. Growth Models and Empirics
The Harrod-Domar model, the Solow model and its variants, endogenous growth models and evidence on the determinants of growth.

3. Poverty and Inequality: Definitions, Measures and Mechanisms
Inequality axioms; a comparison of commonly used inequality measures; connections between inequality and development; poverty measurement; characteristics of the poor; mechanisms that generate poverty traps and path dependence of growth processes.

4. Political Institutions and the Functioning of the State
The determinants of democracy; alternative institutional trajectories and their relationship with economic performance; within-country differences in the functioning of state institutions; state ownership and regulation; government failures and corruption.

Readings

**Course Description**

Public economics is the study of government policy from the points of view of economic efficiency and equity. The paper deals with the nature of government intervention and its implications for allocation, distribution and stabilization. Inherently, this study involves a formal analysis of government taxation and expenditures. The subject encompasses a host of topics including public goods, market failures and externalities. The paper is divided into two sections, one dealing with the theory of public economics and the other with the Indian public finances.

**Course Outline**

1. **Public Economic Theory**
   - c. Externalities: the problem and its solutions, taxes versus regulation, property rights, the Coase theorem.
   - d. Taxation: its economic effects; dead weight loss and distortion, efficiency and equity considerations, tax incidence, optimal taxation.

2. **Indian Public Finances**
   - a. Tax System: structure and reforms
   - b. Budget, deficits and public debt
   - c. Fiscal federalism in India

**Readings:**

PAPER 22(OPTIONAL)

GROUP – I (ANY ONE FROM THE FOLLOWING)

22A ECONOMICS OF HEALTH AND EDUCATION

Course Description

The importance of education and health in improving well being is reflected in their inclusion among the Millennium Development Goals adopted by the United Nations member states, which include among other goals, achieving universal primary education, reducing child mortality, improving maternal health and combating diseases. This course provides a microeconomic framework to analyse, among other things, individual choice in the demand for health and education, government intervention and aspects of inequity and discrimination in both sectors. It also gives an overview of health and education in India.

Course Outline

1. Role of Health and Education in Human Development
   Importance in poverty alleviation; health and education outcomes and their relationship with macroeconomic performance.

2. Microeconomic Foundations of Health Economics
   Demand for health; uncertainty and health insurance market; alternative insurance mechanisms; market failure and rationale for public intervention; equity and inequality.

3. Evaluation of Health Programs
   Costing, cost effectiveness and cost-benefit analysis; burden of disease.

4. Health Sector in India: An Overview
   Health outcomes; health systems; health financing.

5. Education: Investment in Human Capital
   Rate of return to education: private and social; quality of education; signaling or human capital; theories of discrimination; gender and caste discrimination in India.

6. Education Sector in India: An Overview
   Literacy rates, school participation, school quality measures.

Readings:

Course Description

This course builds on the foundations of Course 13 (Economy, State and Society). It explores changes in the organisation of production, labour market institutions and corporate structure. It goes on to study the consequences of globalization, especially of financial flows, for the role of the state, economic performance, gender issues, environment, human welfare and development.

Course Outline

1. Introduction and Historical Overview
Perspective on political economy with a historical overview: capitalist development in the pre-second world war period, the ‘golden age’ and later.

2. Changing Dynamics of Capitalist Production, Organisational Form and Labour Process
Fordist and post-fordist production; changing dynamics of organisation of production, markets and labour process; the changing nature of job security and labour rights.

Globalisation and the limits of the welfare state, development and state autonomy.

4. The Changing Role of Finance
The changing role of finance in capital accumulation and corporate structure; finance and globalisation - financialisation, financial liberalisation and financial crisis.

5. The Social Dimension
Globalisation and uneven development – growth, inequality and exclusion.

6. New Perspectives
Gender in work, accumulation and globalisation; issues in environment and sustainability; alternatives ahead.

Readings:


Course Description

Game theory is an integral part of modern economic analysis. Topics in Microeconomics - I introduces the students to elementary game theory under complete information. This course introduces the basic concepts of game theory in a way that allows students to use them in solving simple problems. The course will deal with the solution concepts for normal form and extensive form games along with a variety of economic applications.

Course Outline

1. **Normal form games**
   The normal form; dominant and dominated strategies; dominance solvability; mixed strategies; Nash equilibrium; symmetric single population games; applications.

2. **Extensive form games with perfect information**
   The game tree; strategies; subgame perfection; backward induction in finite games; commitment; bargaining; other applications.

Reading:

Course Description

The course is intended to prepare the student for higher studies in economics. Some of the important areas of research in macroeconomics in the last few decades are introduced that have fundamentally altered our understanding of macroeconomic issues. Modern macroeconomics requires a basic understanding of systems of difference and differential equations and techniques of intertemporal optimization. The course provides an elementary introduction to these techniques through some models that use them. The emphasis is on developing formal models that are dynamic in nature. Special emphasis is placed on the role of expectations, information and implications of intertemporal optimization in macroeconomic models of labour markets, investment, exchange rates and growth.

Course Outline

1. Review of Aggregate Supply-Aggregate Demand Model
Aggregate labour market, adaptive expectations, nominal wage rigidities; aggregate demand: review of IS-LM model, effectiveness of fiscal and monetary policy; adaptive expectations hypothesis and stability in the AS-AD model.

2. Rational Expectations and Implications for Economic Policy
Rational expectations hypothesis, policy ineffectiveness proposition; overlapping wage contracts.

3. Introduction to Dynamic Models
Dynamic investment theory, investment subsidy, dynamic IS-LM model; open economy and international financial markets, Dornbusch overshooting model.

4. Economic Growth
Stylized facts; Solow-Swan model; Ramsey model: phase diagram, efficiency properties of the Ramsey model, fiscal policy in the Ramsey model; Ricardian equivalence, some reasons for non-equivalence; endogenous growth; some issues in growth for open economies.

5. Overlapping Generations Model
Diamond-Samuelson model: equilibrium, dynamics and stability, efficiency.

Readings:

22E  MONEY AND FINANCIAL MARKETS

Course Description

This course exposes students to the theory and functioning of the monetary and financial sectors of the economy. It highlights the organization, structure and role of financial markets and institutions. It also discusses interest rates, monetary management and instruments of monetary control. Financial and banking sector reforms and monetary policy with special reference to India are also covered.

Course Outline

1. Money
   Concept, functions, measurement; theories of money supply determination.

2. Financial Institutions, Markets, Instruments and Financial Innovations
   a. Role of financial markets and institutions; problem of asymmetric information – adverse selection and moral hazard; financial crises.
   b. Money and capital markets: organization, structure and reforms in India; role of financial derivatives and other innovations.

3. Interest Rates
   Determination; sources of interest rate differentials; theories of term structure of interest rates; interest rates in India.

4. Banking System
   b. Indian banking system: Changing role and structure; banking sector reforms.

5. Central Banking and Monetary Policy
   Functions, balance sheet; goals, targets, indicators and instruments of monetary control; monetary management in an open economy; current monetary policy of India.

Readings

Paper 23: INTERNATIONAL ECONOMICS

Course Description

This course develops a systematic exposition of models that try to explain the composition, direction, and consequences of international trade, and the determinants and effects of trade policy. It then builds on the models of open economy macroeconomics developed in courses 08 and 12, focusing on national policies as well as international monetary systems. It concludes with an analytical account of the causes and consequences of the rapid expansion of international financial flows in recent years. Although the course is based on abstract theoretical models, students will also be exposed to real-world examples and case studies.

Course Outline

1. Introduction
What is international economics about? An overview of world trade.

2. Theories of International Trade
The Ricardian, specific factors, and Heckscher-Ohlin models; new trade theories; the international location of production; firms in the global economy — outsourcing and multinational enterprises.

3. Trade Policy
Instruments of trade policy; political economy of trade policy; controversies in trade policy.

4. International Macroeconomic Policy
Fixed versus flexible exchange rates; international monetary systems; financial globalization and financial crises.

Readings:

Paper 24: DEVELOPMENT THEORY AND EXPERIENCE - II

Course Description

This is the second module of the economic development sequence. It begins with basic demographic concepts and their evolution during the process of development. The structure of markets and contracts is linked to the particular problems of enforcement experienced in poor countries. The governance of communities and organizations is studied and this is then linked to questions of sustainable growth. The course ends with reflections on the role of globalization and increased international dependence on the process of development.

Course Outline

1. Demography and Development
Demographic concepts; birth and death rates, age structure, fertility and mortality; demographic transitions during the process of development; gender bias in preferences and outcomes and evidence on unequal treatment within households; connections between income, mortality, fertility choices and human capital accumulation; migration.

2. Land, Labor and Credit Markets
The distribution of land ownership; land reform and its effects on productivity; contractual relationships between tenants and landlords; land acquisition; nutrition and labor productivity; informational problems and credit contracts; microfinance; inter-linkages between rural factor markets.

3. Individuals, Communities and Collective Outcomes
Individual behavior in social environments, multiple social equilibria; governance in organizations and in communities; individual responses to organizational inefficiency.

4. Environment and Sustainable Development
Defining sustainability for renewable resources; a brief history of environmental change; common-pool resources; environmental externalities and state regulation of the environment; economic activity and climate change.

5. Globalization
Globalization in historical perspective; the economics and politics of multilateral agreements; trade, production patterns and world inequality; financial instability in a globalized world.

Readings

PAPER 25(OPTIONAL)

GROUP –II (ANY ONE FROM THE FOLLOWING)

25A   COMPARATIVE ECONOMIC DEVELOPMENT: 1850-1950

Course Description

This course investigates selected issues in comparative historical perspective over the 19th century and the first few decades of the 20th century. The course focuses on a set of countries, which followed clearly diverse trajectories and patterns of growth to achieve their industrial transition and compares the outcomes of these diverse trajectories on sectoral change, inter-sectoral relations, labour processes and industrial relations and also compares the role of the state in facilitating the respective trajectories.

Course Outline

1. Introduction and Perspectives on Comparative Economic Development

2. An Overview of Economic Development of the countries selected for case studies

3. Agriculture
Agrarian surplus and the role of the peasantry in economic development.

4. Industry
The industrial revolution in Britain; Industrialisation in late industrialisers.

5. The Factory System and Making of the Industrial Working Class
Division of labour, structure of industrial authority, organisation of work and industrial production, relationship between workers and managers.

6. The Role of the State in Industrial and Developmental Transition

Readings:


Background readings for teachers:


Course Description

The aim of this course is to provide a foundation in applied econometric analysis and develop skills required for empirical research in economics. Topics include specification and selection of regression models, dynamic econometric models, advanced methods in regression analysis and panel data models. Since the emphasis is on application of methods, this course requires understanding of econometric software and computing skills.

Course Outline

1. Stages in Empirical Econometric Research

2. Regression Diagnostics and Specification
   Misspecification; functional forms; model selection.

3. Advanced Topics in Regression Analysis
   Selected Topics:
   Dynamic Econometric Models: distributed lag models; autoregressive models; instrumental variable estimation; simultaneous equation models.

4. Panel Data Models
   Methods of estimation; fixed effects model; random effects model.

5. Introduction to Econometric Software Package
   GRETL; E-VIEWS; STATA (any one).

Readings:

Course Description

This course deals with repeated games and games with incomplete information. Ideas related to asymmetric information among the interacting economic agents would be the main focus of this course. Students learn the concept of Bayesian and Perfect Bayesian equilibrium. The course ends with the application of game theory to analyse moral hazard, adverse selection and signaling problems.

Course Outline

1. Repeated Games.
Finitely repeated games and backward induction; infinitely repeated games; history dependent strategies; one-step deviation property; the repeated prisoners’ dilemma; idea of folk theorem.

2. Simultaneous move games with incomplete information (Bayesian games).
Strategies; Bayesian Nash equilibrium; auctions; other applications.

3. Extensive form games with imperfect information.
Strategies; beliefs and sequential equilibrium; applications.

4. Information economics.
Adverse selection; moral hazard; signalling games.

Readings:

25D    FINANCIAL ECONOMICS

Course Description

This course introduces students to the economics of finance. Some of the basic models used to benchmark valuation of assets and derivatives are studied in detail; these include the CAPM, and the Binomial Option Pricing models. The course ends with a brief introduction to corporate finance.

Course Outline

1. Investment Theory and Portfolio Analysis
   a. Deterministic cash-flow streams
      Basic theory of interest; discounting and present value; internal rate of return; evaluation criteria; fixed-income securities; bond prices and yields; interest rate sensitivity and duration; immunisation; the term structure of interest rates; yield curves; spot rates and forward rates.
   b. Single-period random cash flows
      Random asset returns; portfolios of assets; portfolio mean and variance; feasible combinations of mean and variance; mean-variance portfolio analysis: the Markowitz model and the two-fund theorem; risk-free assets and the one-fund theorem.
   c. CAPM
      The capital market line; the capital asset pricing model; the beta of an asset and of a portfolio; security market line; use of the CAPM model in investment analysis and as a pricing formula.

2. Options and Derivatives
   Introduction to derivatives and options; forward and futures contracts; options; other derivatives; forward and future prices; stock index futures; interest rate futures; the use of futures for hedging; duration-based hedging strategies; option markets; call and put options; factors affecting option prices; put-call parity; option trading strategies: spreads; straddles; strips and straps; strangles; the principle of arbitrage; discrete processes and the binomial tree model; risk-neutral valuation.

3. Corporate Finance
   Patterns of corporate financing: common stock; debt; preferences; convertibles; capital structure and the cost of capital; corporate debt and dividend policy; the Modigliani-Miller theorem.

Readings:

Course Description

This course focuses on economic causes of environmental problems. In particular, economic principles are applied to environmental questions and their management through various economic institutions, economic incentives and other instruments and policies. Economic implications of environmental policy are also addressed as well as valuation of environmental quality, quantification of environmental damages, tools for evaluation of environmental projects such as cost-benefit analysis and environmental impact assessments. Selected topics on international environmental problems are also discussed.

Course Outline

1. Introduction
What is environmental economics; review of microeconomics and welfare economics.

2. The Theory of Externalities
Pareto optimality and market failure in the presence of externalities; property rights and the coase theorem.

3. The Design and Implementation of Environmental Policy
Overview; pigouvian taxes and effluent fees; tradable permits; choice between taxes and quotas under uncertainty; implementation of environmental policy.

4. International Environmental Problems
Trans-boundary environmental problems; economics of climate change; trade and environment.

5. Measuring the Benefits of Environmental Improvements
Non-Market values and measurement methods; risk assessment and perception.

6. Sustainable Development
Concepts; measurement.

Readings:

PAPER 26

CONCURRENT-

DISCIPLINE CENTRED -II