

# UNIVERSITY OF THE PUNJAB

## NOTIFICATION

It is hereby notified that the Vice-Chancellor has, in exercise of the powers vested in him under section 15 (3) of the University of Punjab Act, 1973 and in anticipation approval of the Syndicate, approved the recommendations of the Head, School of Economics duly forwarded by the Dean, Faculty of Business, Economics and Administrative Sciences regarding approval of BS 5<sup>th</sup> to 8<sup>th</sup> Semester Syllabus (in replacement of M.A Economics) in the subject of Economics for Affiliated Colleges with effect from the Academic Session 2021.

The Syllabus of BS 5<sup>th</sup> to 8<sup>th</sup> Semester in Economics is Attached herewith vide Annexure 'A'.

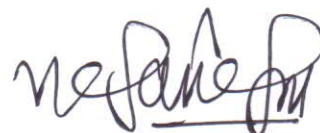
Admin. Block,  
Quaid-i-Azam Campus,  
Lahore

No. D/ 70 /Acad.

Sd/-  
Muhammad Rauf Nawaz  
Registrar

Dated: 06/01/2022

1. Pro-Chancellor,  
The Minister of Education/  
Govt. of the Punjab, Lahore.
2. Members of the Syndicate
3. Dean, Faculty of Business, Economics and Administrative Sciences
4. Head, School of Economics
5. Principals of Affiliated Colleges
6. Controller of Examinations
7. Director, Quality Enhancement Cell
8. Director, IT (for Uploading on website)
9. Deputy Registrar (Affiliation)
10. Deputy Registrar (General)
11. Secretary to the Vice-Chancellor
12. PS to Pro Vice-Chancellor
13. P.S to the Registrar
14. Admin Officer Syndicate (with file)
15. Assistant Syllabus



Assistant Registrar (Academic)  
for Registrar

**Department of Economics**  
**University of the Punjab, Lahore**

**BS (4 Years) Economics**  
**Scheme of Studies for BS 5<sup>th</sup> Semesters (Valid from 2021)**

<b>Semester V</b>		
Advanced Microeconomics	ECON-301	3
Research Methods-I	ECON-203	3
Major Issues in Pakistan's Economy	ECON-304	3
Econometrics-I	ECON-305	3
Development Economics-I	ECON-306	3
Advanced Mathematical Economics	ECON-307	3
<b>Semester's Total Credits</b>		<b>18</b>
<b>Semester VI</b>		
Advanced Macroeconomics	ECON-302	3
Monetary Economics	ECON-308	3
History of Economic Thought	ECON-309	3
Research Methods-II	ECON-303	3
Elective-I		3
Elective-II		3
<b>Semester's Total Credits</b>		<b>18</b>
<b>Semester VII</b>		
Public Sector Economics	ECON-401	3
Econometrics-II	ECON-405	3
Development Economics-II	ECON-406	3
Project Appraisal and Investment Analysis	ECON-409	3
Elective-III		3
Elective-IV		3
<b>Semester's Total Credits</b>		<b>18</b>
<b>Semester VIII</b>		
Growth Theories and Models	ECON-402	3
Applied Economics	ECON-403	3
International Trade	ECON-404	3
General Equilibrium and Welfare Economics	ECON-421	3
Elective-V		3
Elective-VI		3
<b>Semester's Total Credits</b>		<b>18</b>

\* The thesis of 6 credit hours is mandatory for every student that is to be completed in 7<sup>th</sup> and 8<sup>th</sup> semester. Every student has to complete internship of one month comprising of 32 hours at least (2 credit hours) before 7<sup>th</sup> semester.

**List of Elective Courses:**

<b>Sr. No.</b>	<b>Course Code</b>	<b>Course Name</b>
1	ECON-311	Population Economics
2	ECON-312	Comparative Economic System
3	ECON-313	Development Policy
4	ECON-314	Political Economy
5	ECON-315	Agricultural Economics
6	ECON-316	Human Resource Development
7	ECON-317	Money, Banking and Financial Institutions
8	ECON-318	Economic Principles, Strategies and Techniques of Marketing
9	ECON-407	Institutional Economics
10	ECON-408	Welfare and Happiness Economics
11	ECON-410	Environmental and Natural Resource Economics
12	ECON-411	Economic Dynamics
13	ECON-413	Managerial Economics
14	ECON-414	Experimental and Behavioral Economics
15	ECON-415	Regional Economics
16	ECON-416	Poverty and Income Distribution
17	ECON-417	Energy Economics
18	ECON-418	Islamic Banking and Finance
19	ECON-419	Monetary Theory and Policy
20	ECON-420	World Economic History

**Department of Economics**  
**University of the Punjab, Lahore**  
**BS (4 Years) Economics**  
**Detailed Scheme of Studies for BS 5<sup>th</sup> Semesters**  
**(Valid from 2021)**  
**Foundation Courses**

**Code: ECON-301**

**Title: Advanced Microeconomics**

**Credit Hours: 03**

**Prerequisite: Intermediate Microeconomics**

**Objectives:**

This course approaches microeconomic analysis at an advanced level, presenting some formal techniques used in economic research as well as critical perspectives and possible alternatives. The course covers the main topics of microeconomics from consumer and producer behavior, partial and general equilibrium, behavior under uncertainty, game theory and asymmetric information. The course is designed to make students comfortable with the tools and methods of microeconomic analysis and to teach how to structure and analyze problems on these areas from a quantitative perspective

**Course Contents**

**Choice under Uncertainty**

Gambles and Contingent Commodities, Applications of Contingent Commodities, Insurance, Diversification, Risk Spreading

**Game Theory**

Fundamentals of Game Theory, Payoff Matrix of a game, Nash Equilibrium, Mixed Strategies, Prisoner's Dilemma, Repeated Games, Application of Game Theory.

**Exchange**

The Edgeworth Box, Trade, Pareto Efficient Allocations, Market Trade, The Algebra of Equilibrium, Walras' Law, The Existence of Equilibrium, Equilibrium and Efficiency, The Algebra of Efficiency, Implications of the First Welfare Theorem, Implications of the Second Welfare Theorem

**Production**

The Robinson Crusoe Economy, Production and the First Welfare Theorem, Production and the Second Welfare Theorem, Production possibilities, Comparative Advantage, Pareto efficiency

**Welfare**

Aggregation of Preferences, Social Welfare Functions, Welfare Maximization, Individualistic

Social Welfare Functions, Fair Allocations, Envy and Equity

### **Asymmetric Information**

Problems Due to Asymmetric Information, Signaling and Screening, Education as a Signaling Model, Adverse Selection, Adverse Selection Problem in Insurance Markets and Labour Markets, Hidden Actions, Moral Hazard in Insurance Markets and Product Markets, Employer-Employee Relationships

### **Externalities and Public Goods**

Externalities, The Inefficiency of Competition with Externalities Supply-and-Demand Analysis, Cost-Benefit Analysis, Regulating Externalities Emissions Fees versus Standards under Uncertainty, Market Structure and Externalities Monopoly and Externalities Monopoly versus Competitive Welfare with Externalities, Taxing Externalities in Noncompetitive Markets, Allocating Property Rights to Reduce Externalities, Coase Theorem, Markets for Pollution, Open-Access Common Property, Overuse of Open-Access Common Property, Solving the Commons Problem, Public Goods, Types of Goods, Markets for Public Goods, Free Riding, Reducing Free Riding, Valuing Public Goods.

### **Recommended Books:**

- Perloff, J. M. (2013). Microeconomics: Theory & Applications with Calculus, 3rd Edition. Pearson Supplementary Texts
- Nicholson, W. & Snyder, C. (2009). Intermediate Microeconomics and Its Application, 11th Edition. Cengage Learning.
- Mas-Colell, A. (1995). Microeconomic Theory, Oxford University Press: New York.
- Mansfield, E., & Yoke, G. (2010), Microeconomics, 11th Ed. Viva Books: New York.
- Jehle, G. A. and Philip J. R. (2000). Advanced Microeconomic Theory, Second edition, Addison Wesley.
- Mas, Colell, A. Whinston, M. D. Green, J. R. (1995). Microeconomic Theory, Oxford University Press.

**Code: ECON-303**

**Title: Research Methods- II**

**Credit Hours: 03**

**Prerequisite: Research Methodology-I**

**Objectives:**

This course is designed to provide students, enrolled in the undergraduate program of Economics, with the skills required to understand different scientific research tools, used for academic as well as professional investigation of the information. Topics, which will be covered, are sampling; quantitative, qualitative, and mixed data collection techniques; data analysis and interpretation and research proposal development. With the help of existing literature, students will be enabled to find gaps and to identify core problems in different economic situations. The students will learn how to process data and conduct research analysis. At the end of semester, the students will enable to write a research report.

**Course Contents**

**Sampling**

Sampling vs Population, Sampling design, Probability sampling, Non probability sampling, Factors affecting choice of sample design, Sample size and factors affecting sample size, Sampling error and Non sampling error.

**Sampling Designs**

Census and sample surveys, Implication of a sample design, steps of sampling design, Criteria of selecting a sampling procedure, Characteristics of a good sampling design, Different types of a sampling design, Random sampling, Complex random sampling

**Data Collection**

Experiments, Survey design, Field study, Primary and secondary data collection

**Methods of Data Collection**

Methods of collecting primary and secondary data, quantitative data collection, qualitative data collection, mixed data collection techniques, Selection of appropriate method for data collection.

**Processing and Analysis of Data**

Processing operations, Elements/Types of analysis, Measure of central tendency, dispersion, Asymmetry, Simple, multiple and partial correlation, Simple and multiple regression analysis, Association in case of attributes.

**Parametric Test of Hypothesis**

Basic concepts and procedure for hypothesis testing, Power of a test, Test of hypothesis about mean and difference between means, Test of hypothesis about proportions and difference between proportions, Variance, Equality of variance, and Correlation coefficient, Limitations of test of hypothesis.

**Steps in Report Writing**

Meaning and need of report writing, Techniques, precautions and significance of report writing, steps in writing report, Layout of research reports, Types of reports, Oral presentation, Mechanics of writing a research report, Precautions for writing research reports.

### **Report Writing**

Abstract, Introduction, Literature review, Methods and data collection, Findings and interpretation, Conclusion and suggestions, References.

### **Recommended Books:**

- Kothari, C. R (2008). Research methodology: Methods and techniques. New Delhi, New Age International Publishers.
- Saunders, M. (2005). Research methods for business studies. Singapore, Pearson Education
- Monette D. R., Sullivan, T.J., & Dejong, C.R. (2010). Applied social research: A tool for the human services. Belmont, CA: Linda Schreiber-Ganster.

**Code: ECON-304**

**Title: Major Issues in Pakistan Economy**

**Credit Hours: 03**

**Prerequisite: Intermediate Microeconomics and Intermediate Macroeconomics**

**Objectives:**

This course is designed for the students to understand composition of Pakistan Economy and its management during different government regimes. They will also learn issues related to agriculture, manufacturing, and services sectors. They will also be familiarized with various issues like unemployment, inflation, poverty, and income distribution.

**Course Contents**

**Overview of Pakistan Economy**

Development Experience, Approaches, Policies, and Outcomes. Identification of Issues: The era of 1950s, 1960s, 1970s, 1980s, 1990s and 2000s. Structural Change and Sources of Growth. Emergence of Economic Issues, Human Resource Development, Unemployment, Poverty, Income Distribution, Debt, Deficit etc. Growth with limited development in Pakistan.

**Development Planning and Resource Mobilization**

Agricultural Development Policies and Priorities, Major Targets of Develop Plans and Emerging Issues; Neglects and Successes: Mobilization of Domestic Resources; Shortages, Deficits and Role of Foreign Aid. Agricultural vs. Industrial Development Debate. Agricultural Adequacy.

**Agriculture and Industrial Development: Emerging Issues**

Pattern of Agricultural and Industrial Development, Land Reforms and Its Impacts, the Role of Green Revolution and its Impacts: Present Status. Agricultural Price Policy and Income Tax. Sectoral Terms of Trade. Industrial Development Policies and Strategies. Development of Large and Small Industries. Value Added: Manufacturing Goods vs. Primary Goods Production. Agriculture vs. Industry: Development Debate.

**Sectoral Development, Employment Pattern and Unemployment**

Sectoral Priorities and Development Issues. Human Resource Development and Emerging Issues: Population Growth, Labour Force Participation Rate and Employment Pattern, Unemployment and Underemployment, Forecasting Manpower Needs and Employment. Strategies to combat unemployment. Criteria to Measure Unemployment / Underemployment: Time Criterion, Productivity Criterion and New Index of Unemployment: Application to Pakistan and Empirical Evidences. Good Governance, Social Action Plan and its Impact. Role of Institution in Development. Social Sectors development vs. High Return Sectors: Growth trade off.

**International Debt and Dependency**

Concepts of Foreign Aid and Debt. Borrowing vs. Domestic Reserve Mobilization (failure). Size of Foreign Debt, Debt Saving and its Impacts. Strategies to combat with High Debt:

Saving Policy, Foreign Trade Promotion, Cutting non-development Expenditures, Rescheduling and its Impacts. Debt Management in Pakistan and its Impacts. Debt Modeling and Future Implications.

### **Poverty and Income Distribution**

Pattern of Income Distribution: Rural and Urban. Definitions and Approaches to Measure Poverty: Income Approach, Expenditure Approach, Basic Needs Approach, Poverty of Participatory Index (POPI). How to Combat Poverty: Growth Strategy, Basic Needs, Labour Intensive Investment: Education / Training etc. and Social Action Plan (SAP), its Role and Critical Review, Evasion of Policies / Strategies to Combat Poverty and Improving Income Distribution: Critical Evaluation. Neglect of Human Resource Development. Child Labour. Factors Productivity Issues.

### **Inflation, Foreign Trade Deficit and Emerging Issues**

Sources of Inflation in Pakistan. Policies to Combat Inflation and their Impacts. Trade Performance, Instability and its Impacts. Policies to Combat Deficit and Trade Instability. WTO and its Impacts. Reforms and Further Needs. Expected Impacts of WTO and Challenges. Terms of Trade Issues, Market Access and Health Related Rates.

### **Recommended Books:**

- S. Akbar Zaidi, (2011). Issues in Pakistan's Economy, 2nd edition. Oxford University Press.
- Shahrukh Rafi Khan. (2004). Fifty Years of Pakistan's Economy: Traditional Topics and Contemporary Concerns, Karachi: Oxford University Press.
- Mahboob ul Haq, (1989). A Profile of Poverty in Pakistan, Oxford University Press for the Centre for Human Development (MHCHD).
- Mahboob ul Haq. (1999). Human Development in South Asia: The Crisis of Governance, Karachi: Oxford University Press for the Human Development Centre.
- World Bank, World Development Reports.

**Code: ECON-305**

**Title: Econometrics-I**

**Credit Hours: 03**

**Prerequisite: Elementary Statistics, Probability and Probability Distributions**

### **Objectives:**

This is a foundation course for enabling the students of Economics to analytically formulate and statistically estimate the economic problems for verifying the empirical validity of theoretical models. The course contents range from data transformation to the analyses of both latitudinal and longitudinal data. The analytical skill is supported by the usage of different Econometrics Software.

### **Lab work**

The students are required to devote at least two hours per week to computer laboratory. They have to attend classes to learn various Econometrics software for practical application of

Econometric models they have learnt so far.

## **Course Contents**

### **Introduction**

Definition and scope of Econometrics, Economic theory as the basis for empirical analysis, Mathematical and Econometric models, Application of Statistical techniques to Economic data, Ingredients of Econometric modeling: Specification, Estimation, Evaluation and Forecasting. Data Types and Sources, Cross-sectional data, time-series data and pool data, Data at current and constant prices, Sources of data.

### **The Simple Two-Variable Model**

Simple Regression function, population and regression function, linear regression function: linearity in variables and linearity in parameters, Simple Regression Analysis: Estimation, Method of Ordinary Least Squares (OLS), Estimation of regression equation using OLS, Standard error of estimates, Numerical properties of OLS estimators, Statistical properties of OLS estimators (BLUE), Classical Linear Regression Model (CLRM), Assumptions of CLRM, Estimation of the coefficient of determination, Interval estimation of regression coefficients, Classical Normal Linear Regression Model (CNLRM), Difference between CLRM and CNLRM, Properties of OLS estimates under CNLRM, Simple Linear Regression Analysis: Inference, Confidence interval approach for regression coefficients, Test of significance approach for regression coefficients, Analysis of variance (ANOVA), Test of the overall significance of the model, Simple Linear Regression Analysis: Extensions, Regression through the origin, Scaling and measurement of variables, Regression on standardized variables Functional Forms of Regression Function, Log linear models, Cobb Douglas production function Log-Lin models, The constant growth model, Estimating the growth rate, Lin-Log models, Engel curve, Reciprocal models.

### **The Multiple Linear Regression Model (MLRM)**

Multiple Regression Analysis, Difference between simple and multiple regression analysis, Interpretation of multiple regression function, Multiple Regression Analysis: Estimation, OLS estimation of multiple regression equation, Standard error of partial regression coefficients, Properties of OLS estimators, Coefficient of determination ( $R^2$ ),  $R^2$  and Adjusted  $R^2$ , Multiple Regression Analysis: Inference, Test of individual significance (t-test), Test of overall significance (F-test) Multiple Regression Function: Extensions, Testing the equality of parameters, Testing linear equality restriction, Testing for structural stability of regression models: The Chow test.

### **Deviation from the Classical Assumptions**

Assumptions of the classical model and economic reality, Relaxation of the assumptions and estimation issues, Brief introduction to the nature of problems and alternatives.

### **Multicollinearity**

Linear relationship between any two explanatory variables, Nature and severity of the problem, OLS estimation of regression equation in the presence of perfect multicollinearity, Causes of multicollinearity, Distinction between perfect and partial Multicollinearity, Detection of the problem and remedial measures.

## **Heteroskedasticity**

Meaning of Heteroskedasticity, The nature of the problem with reference to economic theory, Cross-section data and the problem of non-constant variances, Consequences for OLS estimators, Detection of the problem and remedial measures in brief, Introduction to the Generalized Least-Squares model (GLS).

## **Autocorrelation**

Autocorrelation and its causes, Time-series data and emergence of the problem with reference to economic theory, Serial Correlation, The AR (1) process, Consequences of Autocorrelation for OLS estimators, Detection of the problem and remedial measures.

## **Recommended Books:**

- Gujrati, D. J. Basic Econometrics – 4th Edition (2003) McGraw-Hill Company.
- Maddala, G. S. (1988) Econometrics – McGraw-Hill Company.
- Dougherty, C. (2002). Introduction to Econometrics–2nd edition Oxford University Press.
- Pindyck & Rubinfeld (1992). Econometric Models & Economic Forecasts- 3<sup>rd</sup> Edition, McGraw-Hill Inc.
- Stock H. J. and M. W. Watson (2003). *Introduction to Econometrics*, India: Pearson Education.

**Code: ECON-306**

**Title: Development Economics-I**

**Credit Hours: 03**

**Prerequisite: Intermediate Macroeconomics and Intermediate Microeconomics**

**Objectives:**

This is an intermediate course in development economics. This course will give the insight about the economics of low and middle income countries. The field of economic development is versatile and has much to contribute regarding differing scenarios. Thus the course also underlines common features exhibited by a majority of developing nations using the insights of the study of economic development.

**Course Contents**

**Theoretical Foundations**

The Nature of Development Economics, Why Study Development Economics? Some Critical Questions, The Important Role of Values in Development Economics, Economies as Social Systems: The Need to Go Beyond Simple Economics, Concepts/ definitions, development versus growth, development variables, scope and significance, recent measurements: PPP (purchasing power parity), PQLI (physical quality life index), human development index (HDI) and Governance index (GI). Characteristics of developing countries.

**Major theories of Development**

Vicious circle of poverty, Rostow's stages of economic growth. Big push theory, balanced versus unbalanced growth theory, Market friendly approach, Structuralist's view point. Dependency theory, Classical and endogenous growth Theory-Income convergence/ divergence hypothesis, Michael Kremer's O-Ring Theory of Economic Development, The International-Dependence Revolution, The Neoclassical Counterrevolution: Market Fundamentalism.

**Population Growth and Economic Development**

The Basic Issue: Population Growth and the Quality of Life, Population Growth: Past, Present, and Future, The Demographic Transition, The Causes of High Fertility in Developing Countries: The Malthusian and Household Models, The Consequences of High Fertility: Some Conflicting Perspectives.

**Agriculture versus Industry Debate**

Role of agriculture, Lewis model of surplus labor and its critical evaluation. Fei – Ranis model, Green Revolution with reference to any developing nation. Complementarities between agriculture and industry. Concept of dualism.

**Poverty**

Definitions and measurements of poverty. Economic Characteristics of High-Poverty Groups.

**Third World Foreign Debt Issues**

Rationale of borrowing, Debt cycle theory, Debt overhang and threat to growth. Causes of

third world debt crises: oil price shocks, exchange rate differences, low forex earnings, loose lending factor and mismanagement. Solutions to debt difficulties – Debt rescheduling, restructuring and non-conventional solutions.

### **Recommended Books:**

- Ray, D. (1998). Development economics. Princeton University Press.
- Todaro & Smith (2014). Development Economics, 11th or 12th Edition Pearson
- Herrick B. and Kindleberger C., (latest eds.). Economic Development. McMillan, New York.
- Jones H. G., An Introduction to Modern Theories of Economic Growth, (Latest Edition), McGraw Hills

**Code: ECON-307**

**Title: Advanced Mathematical Economics**

**Credit Hours: 03**

**Prerequisite: Calculus –I & Calculus -II**

### **Objectives:**

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 Course Contents of the prescribed textbook.

### **Course Contents**

#### **Higher Order Differential and Difference Equations**

Solution of Higher Order Differential Equations with Constant Coefficient and Constant Term. Convergence and the Routh Theorem. Higher Order Linear Difference Equations and their Solutions. Convergence and Schur Theorem.

#### **Simultaneous Differential and Difference Equations**

Solving Simultaneous Dynamic Equations, Dynamic Input-Output Models, Inflation-Unemployment Model, Two Variables Phase Diagrams

#### **Linear Programming**

Ingredients of linear Programming. Graphical approach, simplex method, economic application of linear programming. Concept of primal & dual. Duality theorems. Solving of Primal via dual. Economic interpretation of a dual

#### **Non-Linear Programming:**

The Nature of Non Linear Programming Non-Linearities in Economics. Kuhn Tucker Condition. Interpretation of Kuhn Tucker Condition. Kuhn Tucker Sufficiency Theorem: Concave Programming. Arrow Enthoven Sufficiency Theorem: Quasiconcave Programming.

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.

**Code: ECON-308**

**Title: Monetary Economics**

**Credit Hours: 03**

**Prerequisite: Intermediate Macroeconomics**

**Objectives:**

This course is intended to provide the students a thorough understanding of monetary theory, financial markets, importance of money and interest rates along with the conduct of monetary policy in closed and open economy. This course also introduces the alternative monetary policy stances. In addition, this includes the discussion of monetarists' and Keynesian views regarding inflation.

**Course Contents**

**Introduction and Development of Monetary Mechanism**

Evolution of Money and Payment System. Definition of Money, Function of Money & Measurement of Money, Demand for Money & Supply of Money. Definitions of Money, M1, M2, M3, etc. The Evolution of Monetary Thought, Quantity Theory of money, Keynesian Tradition, Monetarism and Modern Quantity Theory, Rational Expectation Theory

**Role of Money in the Economy**

Debate on neutrality and non-neutrality of Money. Classical Dichotomy and Keynesian Integration of Nominal and Real Sectors. Role of Money in the ISLM Framework. Money in Aggregate Demand & Aggregate Supply Analysis. Keynesian Vs. Monetarist views of Equilibrium Output, Employment and Prices

**Theory of Demand for Money**

Quantity Theory of Money. Transaction Theories of Demand for Money. Portfolio Theories of Demand for Money. Baumol – Tobin Model of Cash Management. Friedman's Restatement of Quantity Theory of Money: Empirical Evidence on the Demand for Money

**The Money Supply Process**

Monetary Base, Keynesian Liquidity Preference Framework, Friedman's Modern Quantity Theory of Money. Multiple Deposit Creation: Introducing the Money Supply Process. Determinants of the Money Supply: Exogenous and Endogenous. Understanding Movements in the Monetary Base, Money Multiplier. Velocity of Money and its variability. Explaining Depositor and Bank Behaviour: The Complete Money Supply Model. Regressive Expectation Model

**The Conduct of Monetary Policy: Central Bank**

Structure and Functions of Central Bank. Independence of Central Bank and its role in Economic Growth. Tool of Central Bank for Money Control. Monetary Base. The Conduct of Monetary Policy: Goals and Targets. Tools of Monetary Policy: Three Major Tools of Monetary Policy. Required Reserve Ratio, Discount Window Loans and Open Market

Operation. Advantages and Disadvantages and Impact Analysis of each Policy Tool. Central Bank as a lender of last Resort. Financial Intermediaries. Monetization of Public Debt. Ineffectiveness of Stabilization Policies. Targeting interest rate and inflation

### **Money & Interest Rates**

Determinants of interest rates. Kinds of Interest Rates. The Behavior of Interest Rates. Understanding & Measuring the Interest Rates. Real & Nominal Interest Rates, Theories of Interest Rate Determination. The Risk and Term Structure of Interest Rates. The Distinction Between Interest Rates and Returns. Maturity & Volatility of Bond Returns. Portfolio Choice: The Theory of Asset Demand

### **Money and Inflation**

What is Inflation & Causes of Inflation? Demand – pull Inflation, Cost – push Inflation, Stagflation & Hyperinflation. Inflation as a Monetary Phenomenon. The Philips Curve and Accelerating Inflation. Inflation in Pakistan: Sources and Managing Policies. Sources of Inflation in Pakistan: Spiraling Evidences. Policies to Combat Inflation in Pakistan

### **Monetary Policy in International Framework**

Money Demand and Empirical Evidences. Money in Growth Models. Inflationary Spiral. Current Issues in Monetary and Financial Sector Reforms. Conduct of Monetary Policy in Fixed and Flexible Exchange Rates. Perfect Mobility of Capital and Money Control, Effectiveness of Policy. Impact of Reserves on B.O.P and Exchange Rates. Targeting exchange rate. Managed Exchange Rate System and Monetary Policy. Targeting Inflation. Exchange Rate and Balance of Payment

### **Recommended Books:**

- Mishkin, Frederic S. (2001). the Economics of Money, Banking and Financial Markets. (Sixth edition). Addison Wesley, New York. Latest edition
- Bennett T. McCallum. (1989). Monetary Economics, Theory and Policy, McMillan. latest edition

### **Additional Readings:**

- Fredric S. Mishkin, (1995). Financial Markets and Money, Harper & Row Publishers.
- Laider, David E.W. (1996). The Demand for Money: Theories, Evidence and Problems (Fourth edition), Harper & Row, Publishers, New York.
- Miller, R. L. and David VanHose, (2001). Money, Banking & Financial Markets. South Western, Singapore.
- Vanish K. (2000). Monetary Theory. Vikas Publishing House, Delhi.
- Patinkin Don, Money, Interest and Prices, Harper and Row Publishers, (Latest Edition)
- Handa J. (2000). Monetary Economics, London: Routledge

**Code: ECON-309**

**Title: History of Economic Thought**

**Credit Hours: 03**

**Prerequisite: Intermediate Microeconomics and Intermediate Macroeconomics**

**Objectives:**

Objectives: The main objective of this course is to introduce students with different schools of thoughts in economics. This course surveys the main schools in the history of the development of economic thought, beginning with the Classical school and concludes with the recent work in the field of economics.

**Course Contents**

**Introduction**

Importance of Economic History: Approaches to Study the Subject. Overview of Ancient Greek, Roman and Medieval Economic Thought. Overview of Ancient and medieval thoughts, Quenssey's influential ideas, Feudalism, Mercantilism, Nature's Circular Flow, Process of modern theories and thoughts. Overview of Islamic thoughts: Ibne Khuldoon and thereafter. Overview of Salient Features of Muslim School of Thought.

**Mercantilists and the Physiocrats**

The Contributions of Mercantilists and the Physiocrats. A doctrine of economic process, transition to liberalization: Wage theory to natural price, the task of government. Overtime, Changing Role of Government.

**Classical School**

The Contributions of Classical School: Adam Smith, Malthus and Ricardo etc., The Labour Theory of Value. Bull in Debate. Ricardo's Monetary Thought. Evolutionists, Ricardo and Reformers of 18th Century. The Theory of Rent. Profit Concepts of Colonization.

**Socialism**

Socialism before Marx. English Socialists. Anarchism. Karl Marx's Contributions. The Class Struggle. Criticism on Marx. Challenges to Capitalism. German Historical School, Weber's contributions. The Marginalist School, Neo-Classical Economics. Jeans Inference. The concept of Welfare State. Chamberlin and Robinson. Australian School of thought. Veber and Galberith's Contribution.

**Keynesian and Post Keynesian Schools**

The Keynesian and Post Keynesian Schools, The Great Depression: Economic Policies and Capitalist Instability between the World Wars. The 20th Century Paradigms. The Growth of International Economy. The rise and fall of Post-World War II. The American economic history and lessons.

(i) The Emergence of Modern Economic Growth, Building Blocks, Industrial Revolution, Structuralist and Dependency School of thought; Sunkel, Amir Samer, Frank and others' contribution. Technological Change and Impacts. The Crisis of the 1970s and International Responses. Failure of Trickle down effects. Rational Expectation Revolution. Basic Needs

Approach and welfare. Emergence Famine and Poverty.

(ii) Modern Economic Thought. Comparison of Post Keynesian and Monetarist Thoughts. Supply side economics. Globalization, Liberalization and New Weave of Economic Growth and Welfare. New Growth Theory. Convergence and Divergence Debate. Future of Economics, Quality and International Trade and emergence of markets, New Regionalism, New directions of research. Environment and sustainable growth.

### **Recommended Books:**

- Robert Lekachman. (1976). A History of Economic Ideas, McGraw Hill Company.
- Economic Thought Before Adam Smith (2009), Murray N. Rothbard
- Economic Theory in Retrospect, Blaug, (1978). Cambridge University Press.
- Mark Blaug, Economic Theory in Retrospect, Cambridge University Press.
- Andre Gunder Frank. (1998). ReORIENT: Global Economy in the Asian Age, University of California Press.
- John D. Henery. (1992). The Future of Economics, Blackwell Publishers.
- Karl Marx and Frederick Engels. The Communist Manifesto, Peoples Publishing House, Moscow, Latest edition.
- Ingrid Rima. (2009). Development of Economic Analysis, 7th edition, Routledge, Taylor & Francis Group, London.

**Code: ECON-404**

**Title: International Trade**

**Credit Hours: 03**

**Prerequisite: Intermediate Microeconomics and Intermediate Macroeconomics**

### **Objectives:**

The main objective of the course is to offer a detailed introduction to the economics of international trade theory, international trade policy and balance of payments.

### **Course Contents**

#### **Introduction**

International Trade and Nations' Standard of Living and Current International Economic Problems.

#### **The Law of Comparative Advantage**

Introduction, The Mercantilists' Views on Trade, Trade Based on Absolute Advantage: Adam Smith, Trade Based on Comparative Advantage: David Ricardo, Comparative Advantage and Opportunity Costs, The Basis for and Gains from Trade Under Constant Costs.

#### **The Standard Theory of International Trade**

The Production Frontier with Increasing Costs, Community Indifference Curves, The Marginal Rate of Substitution, Equilibrium in Isolation, The Basis for and Gains from Trade with Increasing Costs, Trade based on Differences in Tastes.

#### **Demand and Supply, Offer Curves and Terms of Trade**

The Equilibrium-Relative Commodity Price with Trade-Partial Equilibrium Analysis, Offer Curves, The Equilibrium-Relative Commodity Price with Trade: General Equilibrium Analysis and Relationship Between General and Partial Equilibrium Analysis and Terms of Trade.

### **Factor Endowments and Heckscher-Ohlin Theory**

Assumption of the Theory, Factor Intensity, Factor Abundance and The Shape of Production Frontier, Factor Endowments and the Heckscher-Ohlin Theory and Empirical Tests of Heckscher Ohlin Theory.

### **Trade Restrictions: Tariffs**

Partial Equilibrium Analysis of a Tariff, The Theory of Tariff Structure, General Equilibrium Analysis of Tariff in a Small Country, General Equilibrium Analysis of a Tariff in a Large Country and The Optimum Tariff.

### **Non-Tariff Trade Barriers and the New Protectionism**

Import Quotas, Other Non-Tariff Trade Barriers and The New Protectionism, The Political Economy of Protectionism, Strategic Trade and Industrial Policies.

### **Economic Integration: Custom Unions and Free Trade Areas**

Trade Creating Custom Unions, Trade Diverting Custom Unions, The Theory of the Second Best and Other Static Welfare Effects of Custom Unions and History of Attempts at economic Integration.

### **The Balance of Payments of Pakistan**

Some Theoretical Aspects, History of Balance of Payments of Pakistan Economy, BOPs Equilibrium, Pakistan's Balance of Payments, Pakistan's Balance of Payment Problem, Current Position, Main Causes of Imbalance in Balance of Payments of the Economy and Solutions to the BOP Problems.

### **Recommended Books:**

- Paul R. Krugman and Maurice Obstfeld, International Economics: Theory and Policy, Addison Wesley, Latest edition.
- Donomick Sal Vatore B., International Economics: Prentice Hal, Latest edition.

**Code: ECON-401**

**Title: Public Sector Economics**

**Credit Hours: 03**

**Prerequisite: Intermediate Microeconomics and Intermediate Macroeconomics**

### **Objectives:**

The main objective of this course is to develop an understanding of the impact of government policies on resource allocation and equitable distribution of income. Public sector economics helps to analyze and identify the effect of public policy on various macroeconomic indicators. This course will help the students to enhance their understanding of various public policies and their effects on the economy.

## **Course Contents**

### **Introduction**

Introduction to public sector economics, concept of public budget, Objectives of budget, Types of budget deficit, surplus and balanced budget, Distinction between public and private expenditure, Main sources of public revenue.

### **Public Expenditures**

Causes of public expenditure growth, Major theories of public expenditure, Wagner's Law of public expenditure, Colin Clark (Critical Limit) Hypothesis.

### **Market Failure**

Externalities, Types of externalities- negative externality, socially optimal output, Positive externality, internalizing externalities, Coase theorem, Implications for income distribution.

### **Public Goods**

Public goods excludable, public goods non excludable, Rivalarous and non rivalarous in consumption, Excludability and non-excludability, Concept of free rider, Asymmetric information, Adverse selection and moral hazard.

### **Cost Benefit Analysis**

Private and social costs, Types of cost and benefits, Criteria for cost benefit analysis, Project evaluation, Concepts of NPV (Net Present Value), IRR (Internal Rate of Return) and their economic applications.

### **Introduction to Taxation**

Desirable characteristics of a tax system, choosing among different tax system, Types of taxes- direct vs indirect taxes Tax incidence in competitive markets and without perfect competition, Equivalent Taxes, Factors affecting tax incidence.

### **Taxation and Economic Efficiency**

Theories of taxation- The cost theory, the benefit theory, the ability to pay theory- Subjective approach, Objective approach, Progressive, Proportional and Regressive taxes, Degressive tax, specific and advalorem tax, single and multiple taxes, Impact of tax vs incidence of a tax. Specific tax incidence, Differential tax incidence, balanced budget incidence. Concept of optimal taxation.

### **Deficit Financing and Public Enterprises**

Consequences of Government deficits, improving the budgetary process, Managerial problems of public enterprises in Pakistan, Theories of pricing in public sector enterprises- no profit no loss theory, Managerial cost of production theory, Average cost of production theory, Theory of making profit.

### **Policies**

Social Insurance and Security, Income Distribution and Welfare Reforms State and Local Public Economics: Overview of Fiscal Policy in Pakistan.

**Recommended Books:**

- Stiglitz E. Economics of The public sector, W.W. Norton & Co. (Latest Edition)
- Ted Gayer and Harvey S. Rosen. (2010). Public Finance- 10th edition.
- Ronald C. Fisher, (2006). State and local public finance-3rd edition.
- Govt of Pakistan, Economic Survey, yearly publication, Ministry of Finance, Economic Advisory Wing, Islamabad
- Reports of State Bank of Pakistan
- Reports of World Bank

**Code: ECON-405****Title: Econometrics-II****Credit Hours: 03****Objectives:**

This course follows up the data analysis and data estimation techniques included in Econometrics I. The major objective of this course is to enable the student for competing in a job market where positive analysis is increasingly becoming subject to highly intensive and extensive analytical formulations, largely owing to the unprecedented and remarkable development in information technology. The main Course Contents of the course include panel data estimation techniques, identification problem and dummy dependent variable, the Logit/Probit model. Hence, this course is designed for senior undergraduates more inclined towards quantitative studies. The objective is to enable the students dive deep into complex problems of the real world economic life. The students have to learn certain computer packages like SPSS, E-views and Stata besides Excel.

**Lab work**

The students are required to devote at least two hours per week to computer laboratory. They have to attend classes to learn various Econometrics software for practical application of Econometric models they have learnt so far.

**Course Contents****Matrix Approach of the Classical Linear Regression Model**

The multiple regression (K-variable) model in matrix format, Assumptions of the model, The Least-Squares estimation procedure in matrix notation, Properties of the OLS estimators, Interpretation of the Beta coefficients ( $\beta_1, \beta_2, \dots, \beta_k$ ), Hypothesis testing using matrix approach, Forecasting in OLS model, OLS estimation: variance-covariance matrix of estimators, Coefficient of determination,  $R^2$ , in matrix notations, Correlation matrix.

**Model Specification**

Model selection criteria, Types of specification errors, Consequences of model, specification errors, Tests of specification errors, Errors of measurement, Model selection criteria, Endogeneity: where X is not fixed in repeated sampling, Nature of Endogeneity, OLS estimation in presence of Endogeneity, Detection of Endogeneity, BLUE estimator in the presence of Endogeneity, Consequences of Endogeneity in OLS estimation, Remedial

measures.

### **Categorical Variables in regression**

Nature of dummy variables, ANOVA models with qualitative variables, Regression with dummy independent variables, Logit/Probit models, Use of indicator variables, Multinomial logit/probit models.

### **Simultaneous Equation Models & Estimation Methods**

Simultaneous equation models, Nature of simultaneous equations, Examples of simultaneous equation models from economic theory, Inconsistency of OLS estimators, Identification problem, Notations and definitions, Unidentified, exactly identified and over identified, Rules for identification, Simultaneous equation approaches to estimation, Method of indirect least squares (ILS), Method of two stage least squares (2SLS), Instrumental Variable approach to 2SLS.

### **Time Series Econometrics**

Concept of Stationarity, Tests of Stationarity, Unit Root test, Transforming Non-stationary Time Series, ARMA and ARIMA Models, Comparison of forecast based on ARIMA and regression models, Co-integration and Error Correction Mechanism (ECM), VAR models, ARCH models.

### **Panel Data**

Why panel data regression models, Estimation of pool data regression models, Common intercept method, fixed effects model, Least Square Dummy Variables Approach, Random effects model, Generalized Least Square Approach, Fixed effects model vs. random effects model, Hausman Specification Test.

### **Recommended Books:**

- Stock H. J. and Watson M. W. (2003), Introduction to Econometrics, India: Pearson Education. Latest edition
- Gujarati, D. Porter, D. (2009). Basic Econometrics, McGraw-Hill Company. 5th edition
- Jeffrey M. Wooldridge J. M., (2001). Econometric Analysis of Cross Section and Panel Data”, The MIT Press, Latest edition.
- Johnston, J. & John D. (1997). Econometric Methods. The McGraw Hill Companies, Inc, Singapore. Latest edition/
- Greene W. H (latest edition), Econometrics Analysis, Pearson Education, Inc.

**Code: ECON-406**

**Title: Development Economics-II**

**Credit Hours: 03**

**Prerequisite: Development Economics-I**

### **Objectives:**

The course objectives are: To provide an introduction to the concepts, ideas, and strategies employed in the pursuit of economic development; To develop and understand basic principles that enable critical assessment of alternative development policies and programs. To reflect on

the goals and objectives, implementation strategies, and successes and failures of economic development efforts

## **Course Contents**

### **The Millennium Development Goals**

A case study of Pakistan

### **Urbanization and Rural-Urban Migration**

The migration and urbanization dilemma, the role of cities, urban problems, urban formal sector, migration and economic development, economic theory of rural urban migration.

### **Human Capital and Contributions to Growth**

Role of education and health in economic development, employment – issues and generation strategies, educational system and economic development, health measurement and distribution, health productivity and policy.

### **Environment and Economic Development**

Environment and development: some basic issues, rural development and the environment, global warming and climate change: change scope, mitigation and adaptation, economic models of environment issues, urban development and the environment, the local and global cost of forest destruction, case study of developed and developing countries.

### **Trade, FDI and Development**

Gains from trade, aid versus trade debate, MNC's (Multinational co-operations) advantages and disadvantages. Transfer of technology: ways and means.

### **Foreign Finance, Investment, and Aid: Controversies and Opportunities**

The International Flow of Financial Resources, Private Foreign Direct Investment and the Multinational, Private Foreign Investment: Some Pros and Cons for Development, Private Portfolio Investment: Benefits and Risks, The Role and Growth of Remittances, Foreign Aid: The Development Assistance Debate, Conceptual and Measurement Problems, Amounts and Allocations: Public Aid, Why Donors Give Aid, Why Recipient Countries Accept Aid, The Role of Nongovernmental Organizations in Aid, The Effects of Aid.

### **Institutions and Economic Development**

Domestic political institutions: What is democracy? Domestic political institutions and the IMF, Global governance: Who runs the international institutions? Why do we have a G-20? and what is the role of regional institutions?

### **Research Articles**

Three recent research articles from well-known journal, The Developing Economies.

### **Recommended Books:**

- Hirshman A. O., (1960). Strategy of Economic Development, Yale University, Press.
- Jones H. G., An Introduction to Modern Theories of Economic Growth, (Latest Edition), McGraw Hills.
- Debraj Ray, Development Economics.

- David N. Weil, Development Economics, (Latest Edition).
- Todaro and Smith (2014). Development Economics, 11th or 12th Edition Pearson.
- Przeworski, Adam, Michael Alvarez, José Antonio Cheibub, and Fernando Limongi. (2000). Democracy and Development: Political Regimes and Economic Well-being in the World, 1950-1990. New York: Cambridge University Press.
- Research Journal, The Developing Economies, Impact Factor: 0.481.

**Code: ECON-412**

**Title: International Finance**

**Credit Hours: 03**

**Prerequisite: International Trade**

**Objectives:**

The objective is to provide the students a detailed understanding of international finance

**Course Contents**

### **Foreign Exchange Market and Exchange Rate Determination**

Definition of Foreign Exchange Rates. Real, Nominal and Effective Rates. Determinants of Foreign Exchange Rate. Efficient F.E.R Market. Dynamic Theory of Interest and Exchange Rate. The Theory of Spot Exchange Rate Determination. Capital Flow and Speculations. Forward Exchange Market, Interest Arbitrage, Interest Parity Theory, Speculators, Hedgers and Traders, Forward Exchange Rate Policy.

### **Purchasing Power Parity, Exchange Rates and Balance of Payments (B.O.P)**

Purchasing Power Parity (PPP): Non-Trade Goods, Balance of Payment Effect. Test of Exchange Rate Instability. Impacts of F.E.R. Rate Instability. B.O.P: Income Absorption Approach to B.O.P. Elasticities of Exports and Imports and Impact on B.O.P. The Marshall-Lerner Conditions. Monetary Approach to B.O.P. Monetarist Critique to the Keynesian Closed Economy Model. B.O.P. Effects of Stabilization Policies. Empirical Tests of Monetary Approach to the B.O.P. WTO and B.O.P Support. Adjustment with Short-run capital Flow. Methods dealing with undesired Short-run Capital Flow.

### **International Institution: Trade, Capital and B.O.P.**

Introduction of International Institutions, Role and Major Activities of IMF. IMF Credit Facilities. Loan Mechanism, Value of SDRs. The Optimum Quantity of Reserves, Optimum Interest Rate. Euro-Dollar, Exchange and Impacts. Role of IMF in B.O.P Support and Stabilization.

### **International Movements of Factors and Welfare: Impacts / Issues**

Facts on International Capital Flow: ASEAN Crisis and Role of International Institution and Criticism. Motive for Capital Movement: Return and Risk Diversification. Why disagreement on International Movement of Labour? Welfare Impacts of Labour Movements. Factors of Production and Price Equalization Issues. Losses of National Sovereignty. Can Developing Countries Compete and Gain from Trade: Terms of Trade due to Demand Pattern and its Impacts. What Counts for wage Differential Between Primary Goods Producer and Value Added Goods Producer, Competitiveness Issue. WTO: GATT and Emergency of WTO. Why

Necessary to Join WTO? WTO: Expected Impacts on Trade, Liberalization and B.O.P; Special Status of Developing Countries and Net Food Importing Countries. Protections under WTO Rules. Are Free Trade Gains more than Restricted Trade? Gains for whom; how much and how long? Centre-Periphery Theory. WTO Rules: Sanitary, Phytosanitary, Dumping, Anti-Dumping etc Rules and Emerging New Issues and Their Impacts

### **Major Contemporary International Economic Issues**

WTO: GATT and Emergency of WTO. Why Necessary to Join WTO? WTO: Major Trade Rules and Their Expected Impacts on Trade, B.O.P Deficit. WTO and Fair Trade / Free Trade. Free Trade will it be? Issue of “Are Free Trade Gains more than Restricted Trade”? Emerging Regional Trading, Blocks, Special Preference and their Impacts. Issues relating to the Contributions of International Financial Institutions and Their Evaluations. Is there need to Reform International Institutions? Monetary Integration and Their Impacts. Terms of Trade Issue. International Debt Problem, Growth and Competitiveness. Issues of Developing Countries: Level of Development, Competitiveness and Trade Stability: World Income Distribution and Free Trade.

### **Recommended Books:**

- Caves Richard, E., and Jones Ronald W., World Trade and Payments: An Introduction, Latest Editions. Little, Brown and Company, Boston, Toronto.
- Chacholiades, Miltiades, International Trade Theory and Policy (Latest Edition). McGraw Hill Book Company, New York, London.
- Donomick Sal Vatore B., International Economics (Latest Edition), Prentice Hall.
- Grubel Herbert C., International Economics, (Latest Edition) Richard D. Irwin Inc., Homewood, Illinois.
- Sodersten B. and Geoffry Read., (1994). International Economics, MacMillan Press Ltd.
- The Global Competitiveness, Report (1999). World Economic Forum, Oxford University Press, Oxford, New York.
- World Bank. (1986). World Development Report. Oxford University Press.

**Code: ECON-402**

**Title: Growth Theories and Models**

**Credit Hours: 03**

**Prerequisite: Advanced Macroeconomics, Development Economics-II**

### **Objectives:**

This course aims at developing understanding of economic growth models and theories at graduate level. The goal of this course is to comprehend the foundations and principles to

make countries successful in economic terms. It focuses on both the historical experience of countries that are currently rich and are in the process of catching –up.

## **Course Contents**

### **Introduction and Overview**

This section includes discussions on the facts about economic growth, differences in the level of income among countries, differences in the rate of income growth, growth before and after 19th century, the production function and the lessons from data.

### **Factors of Production**

#### **Physical Capital**

The nature of capital, capital's role in production, the Solow growth model, the relationship between investment and saving, and exogenous versus endogenous factors.

#### **Population and Economic Growth**

Population and output in the long-run, the Malthusian model, population growth in the Solow model, demographic transitions, future population trends, and the economic consequences of demographic change.

#### **Human Capital**

Human capital in the form of health, human capital in the form of education, modeling the interaction of health and incomes, changes in the level of education, education and variation in income across countries.

#### **Productivity and Technology**

Measuring productivity, differences in productivity and growth rates of productivity among countries, the role of Technology in growth, the nature, transfer and determinants of technology, research and development, patents, modeling the relationship between Technology creation and growth, barriers to technology transfers, the cutting edge technology, the industrial revolution, the technology production function, differential technological progress, efficiency, differences in efficiencies, types of inefficiencies, misallocation of factors.

#### **Growth in the Open Economy**

Autarky versus openness, Globalization, the effect of openness on economic growth, effects of geographical barriers, openness and factor accumulation, growth with capital mobility, openness and productivity, trade as a form of technology, openness and technological progress, and opposition to openness.

#### **Fundamentals behind Economic Growth**

##### **Government**

Government's role in economy, governance and rule of law, taxation, efficiency and the size of government, planning and policies, corruption and Kleptocracy, democracy and economic growth, causation from government quality to income.

##### **Income Inequality**

Facts about income equality, the Kuznets Hypothesis, effects of income inequality on the

accumulation of physical and human capital, and economic growth.

### **Culture**

The effect of culture on economic growth, openness to new ideas, hard work, saving behaviour, trust, social capital, cultural change, determinants of cooperation.

### **Geography, Climate and Natural Resources**

Location, trade and growth, geographic concentration and spillovers, climate and productivity, climate and disease, natural resource endowment and economic growth, the curse of natural resources, incorporating natural resources into the analysis of economic growth.

### **Recommended Books:**

- David N. Weil, Economic Growth, (2012). Third Edition. Pearson Addison-Wesley.
- Charles I. Jones and Dietrich Vollrath. (2013). Introduction to Economic Growth, Third edition. W. W. Norton & Company.
- Elhanan Helpman, The Mystery of Economic Growth, (2010). Belknap, Press of Harvard University Press.
- William R. Easterly. (2008). The Elusive Quest for Growth: Economists' Adventures and Misadventures in the Tropics. The MIT Press

**Code: ECON-403**

**Title: Applied Economics**

**Credit Hours: 03**

**Prerequisite: Advanced Microeconomics, Advanced Macroeconomics, Mathematical Economics-I and Econometrics-II**

### **Objectives:**

This course is designed for senior students having gone through theory of Macroeconomics, Microeconomics, Statistics, Mathematics and Econometrics. The important areas will be emphasized in this course are reading articles, data analysis/ estimation and writing ability. The students will also be taught how to build economic model and estimate them. The software programs such as EViews, SPSS and STATA are recommended for this course. This course is enormously demanding and students will have to make efforts and hard work. Consistency and seriousness will be of paramount important for performing well in this course.

### **Course Contents**

#### **Introduction**

Introduction to Applied Areas, Selection of topic, Defining the problem statement, writing literature, Building Economic model. Selection of variables for economic model.

#### **Estimation of Production Function**

Use of Computer, SPSS, E-Views to Estimate Production Functions. Cob-Douglas Production

Function, Constant Elasticity Production Function etc.

### **Computer Applications: Demand, Supply and Equilibrium**

Estimation of Demand and Supply using E-Views/SPSS. Aggregate Demand, Aggregate Supply and Equilibrium.

### **Model Building and Estimation**

Building Simple Econometric Models and Estimation. Single Equation Models, Multiple / Simultaneous Equation Model. Interpretation of Computer

### **Project Appraisal and Computer Application**

Use of Computer Programming (Softwares), E-Views etc. for Cost-Benefit Analysis, Estimation of Present Values, Estimation of Economic and Social Benefits. Project Appraisal Using E-Views etc. Estimation of Cost Functions and Decision Making.

### **Econometric Analysis and Computer Applications**

Regression Functions. Estimation with Qualitative Variables Confidence Interval and Hypothesis Testing. Estimation and Improving Model Estimates: Autocorrelation, Estimation of simultaneous Equations. Estimation of VAR and ARIMA Models.

### **Results and Discussions**

Types of results, interpretation and discussion of results, how to conclude results, policy suggestions, referencing.

### **Recommended Books:**

- E-Views Manual (Learning help available with package (Software)). Gimi, Carter and Annette, Marquis, with Karl Browning, Mastering Microsoft
- Office XP Premium, Selection B.P.B., Publishers, New Delhi, 2001.
- D. F. Robertson, Computer Applications and Programming, USA: Har Brace Jovanovich Inc., Latest edition.
- SPSS-Manual.
- Micro-fit

**Code: ECON-310**

**Title: Labor Economics**

**Credit Hours: 03**

**Prerequisite: Intermediate Microeconomics & Intermediate Macroeconomics**

### **Objectives:**

The objective of this course is to provide an introduction to the broad field of labor economics. Students will become familiar with models of how firms make decisions about their need for workers, how workers make labor supply decisions, and how wages and other benefits are determined. Historical labor market trends and other important issues that affect the labor market such as immigration, discrimination, and unions are also discussed. Throughout the

course we will investigate the effects of relevant public policies (such as minimum wage, employment subsidies, and unemployment insurance) on the labor market.

## **Course Contents**

### **Introduction**

What is Labor Economics? Importance of Labor Economics

### **Labor Supply**

Basic Concepts, Measures and Definitions, Labor Supply Theory, Static Labor Supply, Utility Function, Marginal Rate of Substitution, Constraints, The Solution to Worker's Optimization problem, Reservation Wage, Hours of Work Decision, Comparative Statics, Substitution Effect and Income Effect, Slutsky Equation, Fixed Cost of Going to Work, Unemployment Benefits, Inter-temporal Labor Supply.

### **Labor Demand**

The objective of the Firm, How Firms Decide How Much Labor to Hire? The Demand for Labor in the Short Run, The Demand for Labor in the Long Run, Substitution and Scale Effect, Elasticity of Substitution, Elasticity of Labor Demand and its Determinants, Non-Wage Costs of Employment

### **Labor Market Equilibrium**

Equilibrium in Competitive Labor Markets, Shifts in Demand and Supply, The Cobweb Model, The Effects of Government Intervention on Equilibrium, Monopsonistic Labor Market, Minimum Wages in a Monopsonistic Labor Market.

### **Education and Training**

The Schooling Model, The Wage-Schooling Locus, The Stopping Rule, Estimating the Rate of return to Schooling, Signaling Model, Human Capital Model, On-the-job Training, Estimates of the Returns on Training.

### **The Distribution of Earnings**

Labor Market Discrimination, Employer Discrimination, Employment in a Discriminating Firm, Discrimination and Profits, Nepotism Coefficient, Black Labor Market Equilibrium, Employee Discrimination, Customer Discrimination, Measuring Discrimination, The Oaxaca Decomposition, Wage Inequality, A Simple Model of Labor Market, Reasons for wage inequality.

### **Trade Unions**

Where and Why do Unions Exist? First Bargaining Structure, Leontieff's Monoploy union Model, Efficiency of Unions.

### **Recommended Books:**

- Borjas, G.J. (2009). Labor economics. (Boston, Mass.; London: Irwin/McGraw-Hill) fifth edition [ISBN 9780070172708].

- Briggs, V.M., A.G. & Marshall, F.R. (1980). Labor Economics: Wages, Employment and Trade Union. Richard D. Irwing, Inc Home wood Illusions.
- Edgmand, M.R. (1979). Macroeconomic Theory and Policy, Prentice Hall.
- Ehrenberg, R.G., & Smith R.S. (1997). Modern Labor Economics: Theory and Public Policy. Addison-Wesley.
- Kaufman, B.E., & Hotchkiss, J.L. (2003). Labor Market Economics. Cengage Learning
- Lloyd Reynolds, Labor Economics and Labor Relations.
- Mc Connell, C-R., Bruce, S.L., & Macpherson, D.A. (2003). Contemporary Labor Economics. MCgraw-Hill.
- Smith Stephen (2003). Labour Economics, Routledge Publishers.

## **Elective Courses (Economics)**

**Code: ECON-311**

**Title: Population Economics**

**Credit Hours: 03**

### **Objectives:**

This course introduces the students to the subject of demography. The course aims to educate students regarding basic demographic theories, study of demographic processes and population characteristics, demographic trends, basic methods of demographic analysis and the important demographic transitions. In the latter part of the course the focus will be on the relationship between population and issues such as urbanization, family change, population aging and health.

### **Course Contents**

#### **Introduction**

Understanding Demography, Importance of Demography, Sources of Demographic Data, Processes of Demography

#### **Fertility**

Understanding the Concept; Intercourse, Conception & Gestation Variables, Measuring Fertility, Period Measures of Fertility, Cohort Measures of Fertility, Fertility Trends, Fertility & Population Growth in Pakistan.

## **Mortality**

Components of Mortality; Lifespan, Longevity, Causes of Death, Measuring Mortality, Differentials in Mortality, Estimates of Mortality in Pakistan.

## **Migration**

Definition & Measurement, Causes of Migration, Internal Vs International Migration, Individual & Social Consequences of Migration, Migration Trends in Pakistan: Causes & Consequences.

## **Theories of Population**

Mercantilist Perspective, Malthusian Theory of Population, The Marxist Perspective, John Stuart Mill, Lujo Brentano's Theory, Emile Durkheim's Perspective, The Theory of Demographic Transition, Theory of Relative Income.

## **Population Composition: Age & Sex Composition**

Measuring the Age Composition; Measuring the Sex Composition; Impact of Population Processes on the Age Composition; Impact of Age Composition on Population Processes; the Dynamics of Age/Sex Compositions; Age-Stratification Theory

## **Population Growth & Ageing**

Demographic Composition of the Elderly: Dynamic Scenarios, Biological & Social Aspects of Aging, Implications for the Society

## **Urbanization**

Demographic Components of Urbanization, Internal Rural-to-Urban Migration, Impact of Population Processes, and Urbanization in Pakistan: Trends, Causes & Consequences.

## **Population Policy**

Need of Population Policy, Influencing Population Processes, Case Studies of Pakistan.

## **Recommended Books:**

- Weeks J. R. (1989). Population: An Introduction to Concepts and Issues, Wadsworth Publishing Company, USA.
- Poston D. L. & L. F. Bouvier (2010). Population and Society: An Introduction to Demography, Cambridge University Press, UK.
- John Piggott & Alan Woodland. (2016). Handbook of the Economics of Population.

**Code: ECON-312**

**Title: Comparative Economic System**

**Credit Hours: 03**

**Prerequisite: Principles of Microeconomics and Principles of Macroeconomics**

**Objectives:**

This course aims to make graduate students familiar with the major concepts, theories, and debates in comparative economic systems. The course is aimed to maintain the students' representations of the complexity of the economy of global market. Comparative economic systems are often viewed as a divergence of traditional economics types: free and planned economies with a new type of mixed systems. The course covers many issues to compare legal systems, corporate governance, financial market, energetic systems, human capital, inequality, social policies, etc. Additional attention was paid to informal institutions (corruption and organized crime), which could be "normal" institutions in economic sense.

**Course Contents**

**Evaluation of Economic Systems**

Classification of Economic Systems, Historical Development Criteria for Evaluation of an Economic System. Basic Differences between Economic System.

**Capitalism**

Definition, Historical Development, Pre-Requisites of Capitalism, Competitive and Monopoly Capitalism. Economic Institutions of Capitalism. Distinction between private and Public Property and Production, Price System, Profit Maximization/Cost Minimization and Competition. Economic Decision Making under Capitalism. Evaluation of Capitalism in USA and Europe Capitalism, Market System and Environmental Problems.

**Communism and Socialism**

Meaning and Nature, Communism and Power to the Centre. Concepts of Ownership and Production. Various types of Communism, Marxism, Socialism, Economic Planning and Decision Making. Achievements and Failures, Communism / Socialism in USSR, China and Other parts of the World. Modern Trend and its failure, Convergence of Capitalism and Socialism. Present Status of Socialism.

**Economic System of Islam**

Distinctive Features, Basic Economic Values of Islam. Economic Institutions and their Role, Property Rights, Production and Distribution System. The Concept of Welfare State. Comparative Analysis: Islamic System, Capitalism and Communism.

**Economic System in Pakistan**

Brief Economic History of Pakistan. The Mixed Economy, Nationalization and its Impacts. Operations under Mixed Economy, Privatization and Liberalization in the 1990's and 2000's. Islamisation in Pakistan: Process and Problem, Achievements and Experience. Islamic Economics as Global System of Equity and Welfare.

**Recommended Books:**

- Carson, Richard L. (2002). Comparative economic systems. ME Sharpe.
- Bornstein, Morris. (2005). Comparative economic systems: Models and cases. McGraw-Hill/Irwin.
- Comparative Economic System by William, Louks and William G. Whitney (latest edition).
- Martin C. Schmelzter and James W. Hordyke (1977). Comparative Economic Systems.
- Mifflin Company, Boston (1985). Comparative Economic Systems by Gregory, Stuart, Houghton.

**Code: ECON-313****Title: Development Policy****Credit Hours: 03****Prerequisite: Advanced Microeconomics, Advanced Macroeconomics and Development Economics-I****Objectives:**

The course objectives are to provide the concepts, ideas, and strategies employed in the pursuit of economic development; develop and understand principles that enable critical assessment of alternative development policies and programs; and reflect on the goals and objectives, implementation strategies, and successes and failures of economic development efforts. Different facets of human development: education, health, gender, the family, land relations, risk, informal and formal norms and institutions will also be studied.

**Course Contents****Institutions**

Social Institutions: Education, Economic, Religious, Political, Economic Institution: Taxations, Trade, State control, Political institution: Political freedom, Corruption

**International Debt, Aid / Assistance**

Why international borrowing? Two Gap Model, Aid commitments and disbursement. Sources of borrowing. Debt Cycle Theory/Stages. Debt Burden: Debt Servicing. Policies to combat debt problems: Forecasting debt and solution for debt burden, saving mobilization/Domestic resource mobilization, Debt rescheduling etc.

**WTO, Liberalization and International Trade**

Trade vs. Aid. Liberalization of Trade and its impacts/gains etc., Foreign Exchange Constraints and Balance of Payment deficit. Role of GATT and its Failure. WTO and LDC's. Trade Instability, Distribution of gains from Trade liberalization. Regional Trade Associations (RTA's): their role and contributions. Basis for trade and benefits: Gains from Trade: Static and Dynamic Gains. Comparative Advantage, Revealed Comparative Advantage and Competitiveness. Trade as an engine of growth. Product Cycle. Determinants of exports growth. Transfer of Technology: Sources & Need. Technology Centered Development and Appropriate technology issue.

## **Transnational Corporations (TNC'S), FDI and Development**

Transnational Corporations (TNC's): Objectives, Role and Contributions, Long term cost of TNC's. Transfer of Technology: Ways and Means. Global integrated production system: TNC's and Globalization, Foreign Direct Investment (FDI) and Its Determinants/Role. Foreign Direct Investment (FDI) and TNC's. Flow of FDI and its contributions.

## **Poverty and Income Distribution**

Definitions and Measurement of Poverty/Poverty Line. Poverty concepts/definitions. Absolute Poverty, Relative Poverty, Income approach, Expenditure approach, Basic needs approach, Poverty of Opportunities Index (POPI) and Calorie-based approach etc. Poverty Indicators. Poverty by socio-economic groups. Sources, impacts and policies to combat poverty. Strategies and tools to combat poverty. Growth and Income Inequality in the world. Empirical evidences on poverty. Redistribution with growth. How to combat income inequality. Basic Needs, Social Action Programs and Poverty alleviation.

## **Growth Models**

Harrod-Domer Model, Technical Change and growth Model, Kaldor's Model of Distribution, Joan Robinson's Model of capital accumulation, Model of Steady State Growth. Saving-Investment and Golden Rules.

## **Recommended Books:**

- Richard Peet and Elaine Hartwick. (2009). Theories of Development: Contentions, Arguments, Alternatives (2nd Edition); the Guilford Press.
- Colin H. Kirkpatrick, Ron Clarke, Charles Polidano. (2002). Handbook on Development Policy and Management, Edward Elgar.
- Cypher J. M. and Dietz James L., (2004). The Process of Economic Development, Routledge. Tayl or Francis Group, London/New York.
- Ghatak Subarta, (2003). Introduction to Development Economics, Routledge, Taylor and Francis Group, London/New York.
- Herrick B. and Kindleberger C., (latest eds.). Economic Development. McMillan, New York.
- The World Development Reports of 2010 onwards for comparatives analysis

**Code: ECON-314**

**Title: Political Economy**

**Credit Hours: 03**

## **Objectives:**

This course is designed to provide students with an introduction to the field of political economy. Political economy seeks to understand and explain policy outcomes and political behavior. The approach taken is an interdisciplinary one that utilizes tools and concepts from economics to study politics and political behavior. The course will presume that political actors are rational and goal oriented. Political outcomes are then explained by the interaction between these actors within the (institutional) constraints of their environment. This course aims to enable students to apply economic theories and concepts to the study of political action

and the formation of policy. Students will learn how economic and political forces may shape the incentives and constraints of policymakers and other political actors. Furthermore, this course will enable students to recognize the role of institutions in shaping both political action and policy outcomes.

### **Course Contents**

#### **Introduction to Political Economy**

Course introduction, Overview, Approaches to the study of political economy, analyzing group choice, Spatial models of majority rule, Strategic behavior and majority rule, Voting and elections.

#### **Understanding Collective Action**

Cooperation, Collective action, Market failures and collective action

#### **What Role Do Institutions Play?**

Institutions and their impact, Legislatures, Bureaucracy, Delegation and principal agent theory, Courts and judges

#### **Topics in the Political Economy of Pakistan**

The economics of patronage, Seven pillars of good governance, The political economy of reforms, Pakistan - Dynamics of Elitist Model, Strategies for self-preservation, A military theocracy, Different regimes, Economic development, Ethnic conflict, The role of state, Emerging economic and political issues and their linkages, Regionalism, Poverty, Governance.

#### **Recommended Books:**

- Shepsle, K.A., & Alt, J.E. (1990). Perspectives on positive political economy (political economy of institutions and decisions). Cambridge University Press.
- Claudia Chwalisz, Thillaye, R., & Kinloch, E. (2017). New routes to social justice: empowering individuals and innovative forms of collective action. London: Policy Network.

#### **Additional Reading:**

- Stiglitz, J. (2016). The great divide. Penguin
- Stiglitz, J. (2016). Globalization and its discontents (new ed.). Penguin
- Latest Research articles on political economy

**Code: ECON-315**

**Title: Agricultural Economics**

**Credit Hours: 03**

**Prerequisite: Intermediate Microeconomics & Intermediate Macroeconomics**

#### **Objectives:**

The main aim of this course is to provide a comprehensive knowledge about the all branches of agriculture. Economy of Pakistan is an agrarian economy. Agriculture occupies the pivotal role in the development of Pakistan. Contributions of agriculture to GDP is the highest one, so

without developing it we cannot develop Pakistan.

## **Course Contents**

### **Introduction and Importance of Agriculture**

Agricultural Revolution, Importance of Agriculture, Food Safety, Agriculture vs. Industrial development Debate. Current State of Agricultural Development. Brief Overview of Sources of Growth. Introduction to issues in Agriculture etc.

### **Structure and Characteristics of Agriculture in LDCs**

Traditional Agriculture and Productivity. Access to non-labor resources. The Framing Environment: Natural Hazards and Economic Uncertainties. The Food problem. Farm Size and Productivity. Farm Size in Pakistan and Productivity Commercial Farms. Impact of Agricultural Reforms on Farm Size.

### **Role of Agriculture in Economic Development**

A framework of Analysis. Product Contribution, Market Contribution, Factor's Contribution. Foreign Exchange Contribution. Agriculture vs. Industry Debate of Development.

### **Theory of Rent and the Concept of 'Surplus'**

Introduction. Economic Rent. The Theory of Rent. Rent and Quasi-Rent the Ricardian 'Corn Rent. The Rental Market. Agricultural Surplus. Characteristics of Landownership in Underdeveloped Agriculture and Pakistan. The Theory of Share Tenancy. Some Extensions of the Share Tenancy Model. Tenant's Status in Pakistan. Agricultural productivity in Pakistan and use of inputs. Green revolution, its origin, and impact on agriculture in Pakistan.

### **Agriculture in Dualistic Development Models**

Introduction. The Lewis Model. The Ranis-Fei (FR) Model. The Jorgenson Model. Kelley, Williamson, Cheetham Model, Criticism: Dual Economy Models. Agricultural Adequacy; Mellor's Model.

### **Resource Use Efficiency and Technical Change in Peasant Agriculture**

Efficiency of Resource Utilization. Technological Change in Agriculture. Generation of new Agricultural Technology. Factor-biased Technological Change and its Distributional Consequences. Agricultural Technical Change and Agricultural Employment: Empirical Evidences. Agricultural Resources and Technical Change in LDCs: with Special Reference to Pakistan.

### **Supply Response**

Introduction. The Cobweb Model: An Illustration. Price-Supply Response in Backward Agriculture. A simple Supply Response Model. Supply Response in the Underdeveloped Agricultural labour Market, Specifically in Pakistan. The Concept of 'Marketed Surplus': Some Methods of Estimation. Some Criticisms of Krishna's Method and the Alternative Approach of Behrman Perennial Crops and Marketed Surplus in Pakistan. Green Revolution in Pakistan and Responses. Present Status of Green Revolution in Pakistan: Empirical Analysis.

### **Population and Food Supplies**

The Classical Model. Contra-Malthusian Model. Ecological Disequilibrium. Synthesis of

Population and Food Supply Theories. Malnutrition in Developing Countries like Pakistan and Remedial Manners. Choice of Planning Strategy for Agriculture Development, Agricultural Project Planning.

### **Recommended Books:**

- Johnston, Bruce, F & Fellir Kily. Agricultural and Structural Transformation, Economic Strategies in late Developing Countries.
- Khan Mahmood-ul-Hassan. (1975). The Economics of Green Revolution in Pakistan, New York.
- Shafi M. (1995). Pricing of Farm Produce in Pakistan, Objectives, Practices, and Experiences. Print Associates International, Islamabad.
- Yujiro Hayami and Vernon W. Ruttan, Agricultural Development, John Hopkin University Press, London. (Latest edition).
- Zaidi, S. Akbar (2005). Issues in Pakistan's Economy, Oxford University Press.
- Pakistan Economic Survey (various issues)

**Code: ECON-316**

**Title: Human Resource Development**

**Credit Hours: 03**

**Prerequisite: Intermediate Microeconomics & Intermediate Macroeconomics**

### **Objectives:**

This course will help the students understand meaning and need of human resource development. It will also make them familiar with various types of human resource activities. They will also learn organizational process of human resource development.

### **Course Contents**

#### **Meaning and Need of Human Resource Development**

The progression towards a field of Human Resources Development. The early training programs for semiskilled and unskilled workers. The human relations movement. The establishment of training profession. Emergence of human resources development. The relationship between human resources management and HRD training. Secondary HRM functions. Human resource development functions. Training and development, organizational development and career development. Roles and competence of an HRD professional. The HRD executive/ manager. Other HRD roles and outputs for HRD professionals. Challenges to organizations and to HRD professionals.

#### **Formal and informal organizations involved in human resource development**

Definition and purpose of needs assessment. Components of person analysis. Performance appraisal in the person analysis process. Recruitment, and selection and performance management. Management promotion and performance criteria. Rewards and compensations. Training, development and employee wellbeing. Work design basing upon employee involvement. Organization development theory and concepts. Model of planned change. The role of labor unions. Types of intervention (techno structural, sociotechnical systems and organizational change). Educational, training and social institutions.

## **Meaning and inter-relationship of organization structure and human resource development**

Introduction to organizational culture. Labor market changes and discrimination. Impact of recent immigration patterns. Adapting to demographic changes. Affirmative action programs. Cross-cultural education and training programs. Human resources development programs for culturally diverse employees. Socialization and orientation. Career development.

## **Meaning and Types of Human Resource Development Activities**

Defining of HRD activities. Designing HRD programs. Defining objectives of HRD intervention. Scheduling and HRD programs. Training delivery methods. On the job training (OJT) methods. Job instruction training and job rotation. Class room training approach. Discussing methods and methods of Audio/Visual media. Experiential methods. Computer based training. Arranging the physical environment. Designing E-Learning material.

## **Organizational Processes involved in human resource development**

Extent of management development activities. Approach to understand the job of managing authority. Importance of needs assessment in determining managerial competence. Executive education programs. Company designed courses. Corporate universities. On job experiences and designing effective management for development programs. Up gradation of educational technical and socio-political atmosphere.

## **Motivation**

Multiple Intelligence Model. Two factor model of intelligence. Primary Mental abilities. Nature and Nurture Controversy. Emotional Intelligence Framework. Hygiene. Motivator factors and achievement need.

## **Power and Authority**

Ten Myths and truths of corporate creativity. Development needs associated with the power and authority. Use of power and authority for all. The HRD executive manager and other HRD roles and outputs for HRD professionals.

## **Leadership**

Qualities of leadership. Extent of management development activities. Describing the manager's job. Command over the hearts of all the stake holders. Management training and experiences. Company designed courses, corporate universities and on the job experiences.

## **Communication**

Communications for the purpose of involvement and participation concept of "soft" HRM model. Communication with renewed interests and policy initiatives supported by the government. The central concept of HRD, the individual employee. Oriented approach. Difference between the employ participation and employed involvement.

## **Conflict**

The concept of going on strike and lock ups. Utilization of employ participation and involvement. Damages of conflicts. Important role of the management and government.

## **Decision Making**

Investment criterion and concept of cost drivers. Consideration of operating cost curves and planning cost curves. Consideration of internal and external market conditions. Availability of the resources and the profit margin.

### **Recommended Books:**

- Reynolds, L. G. (1974). Labor Economics and labor relations (6th ed.). New Jersey: Prentice Hall.
- Ehrenber, R. G., & Smith, R. S. (1997). Modern labor economics: theory and public policy (6th ed.). New York: Addison Wesley.
- Marshall, F. R., King, A. G., & Briggs, V. M. (1980). Labor economics: wages employment and trade unionism. USA: Richard D. Irwin.
- Peter M. Blau and W. Richard Scott. (1962). Formal Organizations: A Comparative Approach, Stanford University Press.
- Charles Perrow. (1971). Organizational Analysis: A Sociological View, Tavistock Publications Ltd.
- John W. Newstrom and Keith Davis. (2002). Organizational Behaviour: Human Behavior at Work, 11th edition, New York: McGraw-Hill-Irwin.
- Randy Hodson and Teresa A. Sullivan. (2012). The Social Organization of Work, 5th edition, Cengage Learning.
- Rolf P. Lynton and Udai Pareek, (2011). Training for Development, 3rd edition, New Delhi: Kumaria Press.
- Heinz Weihrich and Harold Koontz. (2004). Management: A Global Perspective, 11th edition New York: McGraw-Hill, Inc.

**Code: ECON-317**

**Title: Money, Banking & Financial Institutions**

**Credit Hours: 03**

### **Objectives:**

To provide students with a solid awareness about the fundamentals of monetary theory, money, banking and financial institutions.

### **Financial Markets and Financial institutions**

Why study money, banking and financial markets? an overview of financial system, debt and equity markets, exchange and over-the counter markets, Financial Structure, puzzles, transaction costs asymmetric information, The Lemon problem, Moral Hazards and debt and equity contracts, influence of Moral Hazard on financial structure, understanding interest rates, the behavior of interest rates, the risk and term structure of interest rates.

### **The stock market and the efficient market hypothesis**

Price of common stock, the theory of rational expectations, implications of the theory of rational expectations, the efficient market hypothesis: rational expectations in financial markets, rationale behind the hypothesis, behavioral finance.

### **An economic analysis of financial structure**

Basic facts about financial structure, the Enron implosion, financial development and economic growth, factors causing financial crises, dynamics of financial crises in emerging market economies. Economic analysis of financial regulations, Case studies of financial crisis.

### **International finance and monetary policy**

PICIC, IDBP, ICP, ZTBL, HBFC, NIT, SMEDA, World Bank, IMF (Brief intro and contribution to the economy), Foreign exchange market, long run and short run exchange rate behavior, the interest parity conditions, comparing expected returns on domestic and foreign assets, interest parity conditions, unsterilized interventions and sterilized interventions.

### **Recommended Books:**

The Economics of Money, Banking and Financial Institutions by FREDERICS S. MISHKIN (Latest Edition)

Miller, R. L., & VanHoose, D. D. (1993). *Modern money and banking*. McGraw-Hill College.

Luckett, D. G. (1980). *Money and banking*. McGraw-Hill Companies.

**Code: ECON-318**

**Title: Economic Principles, Strategies and Techniques of Marketing**

**Credit Hours: 03**

### **Objectives:**

The course will introduce students to economic principles and their correlation with different marketing strategies. The course aims primarily at developing the student's ability to analyze marketing activity in industrial and organizational markets. The structure of the course is to build upon basic marketing principles, and reveal the interfaces of marketing philosophies and their linkage with socio-economic factors with their impact on inter-firm business functions, especially channels, sales, supply chains /value chain. In this course the learners will examine the points of retreat with consumer markets, be more managerial rather than descriptive in approach, and emphasize operational aspects.

### **Course Contents**

#### **Economics**

Understanding fundamental economic principles and concepts that impact business operations  
Introduction to Contemporary Business Practices, Macroeconomics in a Global Context and World Economy.

#### **Introduction to Marketing**

Key Marketing Concepts, Scope of Marketing, Evolution of Marketing, Importance of Marketing, Marketing as an Exchange Process, Marketing as a Demand Management Tool.

Marketing Cost and Price Relationship.

### **Supply Chain / Value Chain Management**

Primary and Secondary activities in Supply Chain / Value Chain. Identify and Maximizing linkages within the Various Activities. Relationships & E-commerce, Managing Logistics and Supply Chain.

### **Strategic Marketing Planning Process**

The SMP Process. The BCG Matrix, GE Nine Cell Model and Porter's Generic Strategies Models of SMP.

### **International Marketing: The Target Markets & Marketing Mix**

Identify Target Markets. Forecasting Market Demand, The Target Market Strategies, Key Elements of Marketing Mix, Local Vs. International Marketing, International Marketing Strategy and Planning, Organizational Structure of International Markets, Exporting, Contracting, International Corporations and their Marketing Techniques. The Promotional Program, the Key Components of Promotional Mix.

### **Product Management**

The Consumer and Industrial Products. Product Planning and Development, Product Adoption and Diffusion, Product Life Cycle, Product Positioning and Differentiation, Product Mix Strategies.

### **Marketing Cost, Finance and Cost Management**

Analysis of Cost, Marketing Cost for Products, Reasons for Higher Cost and Methods to Minimize. Abuses and Advantages of Marketing Cost Debate over Legitimacy Solution, Need for Marketing Finance. Kinds of Marketing. Financing. Significance of Prices, Methods of Price Determination. Key Pricing Strategies. Price wars.

### **Distribution Management and Market Intermediaries**

Designing Distribution Networks. Channels Conflict and Channel Power. Physical Distribution. The Wholesale Market, Retail Marketing.

### **Consumer's and Buyer's Behaviours**

Consumer Motive to Marketing, Models of Consumer, Buyer Behaviour, Influences on Buyer's Behaviour, Industrial Buyer Behaviour. Decision making behaviour.

### **Managing Marketing in Various Forms of Competition**

Industrial Analysis, Industry and Market Concepts of Competition, Strategies of Leaders, Challengers, Followers and Nichers. Global Marketing, Industrial Marketing, Services Marketing, Agricultural Marketing.

### **Managing Total Marketing Effort**

Key Organizations for Marketing, Market Control, Marketing Audit.

### **Segmentation and Targeting**

Significance, Advantages of Market Segmentation, Segmentation Variables, Segmenting Industrial Markets, Effectives of Segmentation, Market Targeting, Strategic Opinion.

## **Pricing Strategies and Sales**

Theories of Pricing and Value. Supply and Demand Model, Mark-up Pricing, Dumping, Economic Choice, Pricing and Market Orientation, Market Share, Cost based Pricing, Customer based Pricing Methods, Competitor based Pricing war. Short-run and Long-run Pricing, Predicting Future Conditions Forecasting Sales and difference Pricing Policies, Data Analysis and Sales Forecasting, Survey and Price Analysis, Profit and other Motives for Pricing.

### **Recommended Books:**

- Jerome McCarthy. Basic Marketing 8th Edition, Prentice Hall.
- Boyd H.W. Marketing Management: Strategic Approach with a Global Orientation. 3rd Edition, latest edition.
- Evans Burman. Marketing. 4th Edition, McMillan Publishing Co., latest edition.
- R.D. Tousley & Eugene Clark. Principles of Marketing, latest edition.
- Etzel, Walker & Stanton. The Fundamentals of Marketing. 11th Edition, McGraw Hill (or latest ed.
- Kardes, Cronley & Cline. (2015). Consumer Behavior. South Western College, (ISBN: 978-1-133-58767-5); older editions are also acceptable.

**Code: ECON-407**

**Title: Institutional Economics**

**Credit Hours: 03**

**Prerequisite: Intermediate Microeconomics, Intermediate Macroeconomics and Development Economics-I**

### **Objectives:**

A course in "Institutional economics" accomplishes a series of courses that constitute the basic training for economists. Before studying institutional economics students should master not only the fundamentals of general economic theory but have knowledge of the historical courses and humanities as well.

### **Course Contents**

#### **Introduction**

The concept of institution: attempts at definition. Institutions and organizations. Functions of social institutions. Interaction situations and the types of norms: prisoners' dilemma-type situation; co-ordination situation; inequality situation. Enforcement characteristics. Institutional structure of a society. Formal and informal institutions. Sanctions for disobeying norms (self-enforcing sanctions, guilt, shame, informational sanctions, bilateral costly sanctions, multilateral costly sanctions). Conditions of norms' effectiveness. Interaction of formal and informal institutions. The limits of imitations of institutions from best-performing countries. The problems of their enforceability. The New Institutional Economics and modern institutionalism. Old institutional economics.

#### **Property rights**

Property rights in different legal traditions (common law and civil law traditions). The property rights approach: some basic concepts. Specification of property rights, the bundle of rights, partitioning of property rights, attenuation of property rights. Assigning of property rights: the internalization of externalities. The Coase Theorem. Critic of Coase (dynamic effects of alternative legal rules, wealth effect, distributional effects, strategic behavior and the problem of holding-out, endowment effect, sociological critic, unrealistic assumption about zero transaction costs). Communal property. Optimal group size. Private property. Moral and economic aspects of private property.

### **Contracts**

The definition of a contract. Legal and economic approach to contracts. Freedom of contract. Bounded rationality and contractual incompleteness. Asymmetric information (hidden characteristics, hidden information/ hidden action, hidden intentions) and opportunistic behavior. Adverse selection and the closing of markets. Signalling, screening and self-selection. Asset plasticity and moral hazard. Principal-agent problem and agency costs. A simple principal-agent experiment in the classroom. Controlling and preventing moral hazard (controlling the agent, incentive contracts, bonding, do-it-yourself method).

### **The new institutional theory of the firm**

Neoclassical theory of the firm. Explanations of the firm in the new institutional theory (F. Knight, R. Coase, A. Alchian and H. Demsetz, O. Williamson, O. Hart). The market and the firm. Comparative analyses of the alternative coordination forms. Internal market and influence costs. The boundaries of the firm. Ownership structure of the firm. Separation of ownership and control in the open corporation.

### **The new institutional theory of the state:**

Social mechanisms for constraining open access. Contractual theories of the state (Locke, Rousseau), Hobbes predatory theory of the state. North's model of the state. The regulatory role of the state in the Russian economy.

### **Recommended Books:**

- Elinor Ostrom. Understanding Institutional Diversity. latest Edition, Princeton University Press.
- Marc Tool. Institutional Economics Theory, Method, Policy. Latest Edition.
- North D. (1990) Institutions, Institutional Change and Economic Performance. Cambridge University Press.
- Tullock G. Rent-seeking. (1987) In: The New Palgrave: A Dictionary of Economics. - L., Macmillan.

**Code: ECON-408**

**Title: Welfare and Happiness Economics**

**Credit Hours: 03**

### **Objectives:**

This module is designed to provide a basic understanding of human development and capability approach to the postgraduate and undergraduate students of various disciplines of

social sciences. The module emphasizes the centrality of human being in development discourse, practice, policy and research. It is argued throughout the module that development is about enhancing human freedoms and flourishing human capabilities. The process of development should enable individuals to act as the agents of change to live the kind of life they have reason to value. It is also argued that the public policy needs to respect the fundamental principles of human development; equity, empowerment, sustainability, and efficiency. The outline given below is very extensive, and teachers may select their own areas of interest to specialize and develop further, according to capabilities and requirements of their students.

## **Course Contents**

### **Ethics and Development: Normative Framework for Development**

Normative concerns lie at the heart of development analysis and policy. Development policy and uncertainty, trade-off, and complexity. Any public policy is based on ideas about what matters. Different kinds of ideas lead to different kinds of actions (e.g. poverty reduction policies depend on how poverty is conceptualised). The output or impact on wellbeing of any given policy varies depending on the context of countries or societies. Concerns for people should come first in social and economic progress

### **Introduction to the Human Development and Capability Approach**

Objectives of development, Advent and influence of UNDP's Human Development Reports on development discourse and policy Values, priorities and public debate Agency, voice and empowerment Plural information and many dimensions, Core principles for development; Equity, Efficiency, Participation, and Sustainability, Amartya Sen's Capability Approach Functioning and Capabilities Compare and contrast of Capabilities Approach with other approaches, Selecting valuable capabilities Individual and collective capabilities

### **Contemporary Development Ideas**

Human development and market liberalism: Freedom compared, How the idea of freedom spread? The Basic Needs Approach, Human Rights, Human Security Other related human development ideas, The Millennium Development Goals (MDGs) Sustainable Development

### **Economic Growth and Human Flourishing**

Growth and flourishing in the history of economic thought Contribution of economic growth to human flourishing Economic growth is one of the several necessary ingredients for promoting human flourishing GDP fails to promote human flourishing for two main reasons; 1) income is a poor measure of wellbeing and 2) it masks inequity in the distribution of income and material consumption Economic policies over last three decades have tended to focus more narrowly on efficiency and growth alone, ignoring equity and public engagement thus sidelining concerns for human flourishing. This has resulted in inequities, insecurity and environmental damage Finding 'best' growth and development path.

### **Human Development, Equality and Justice**

Link of the capability approach with theories of equality and social justice. How capability approach differs from John Rawls's theory of justice. Introduction to the underlying purpose and main ideas of theories of justice. Implications of a capability based approach to justice for policy design and other intervention strategies.

## **Poverty and Inequality Measurement**

Importance of measurement in policy, Income poverty and inequality, Standard Human Development Indices, measuring multi-dimensional poverty, why concepts matter in measurement, Measuring freedom Qualitative poverty assessments.

## **Education**

Conventional approaches to education Human Capital (instrumental role of education)

Capability approach to education (both instrumental as well as intrinsic roles of education)

Capability and functioning in education, Case Study: *Two descriptions of education in Bihar, India*

## **Health and Nutrition**

What is health? Conventional approaches to health. Human capital or health as input. Health as output. Health within the human development and capability approach. Resource inputs and conversion factors. Capabilities and functioning. Health at the heart of inter-locking deprivations. Case study from Pakistan

## **Human Development Policy Analysis**

Main areas of public policy. Areas of economic and social policy. Framework and macro policies. Resource, manufacturing and services sector policy. Economic and social services. Policy in the private, non-profit and international donors sector, Policy, politics and power, Tools for policy analysis. A human development approach to policy analysis

## **Policy Case Studies**

Key questions to bear in mind while analyzing policy from human development perspective. What is the problem to be addressed? What is the data needed to highlight the problem? What is being done to address the problem? Does the existing policy respect the four principles of human development; equity, empowerment, sustainability, and efficiency? In what ways the current policy can be reformed to effectively promote valuable human freedoms?

## **Recommended Books:**

- Alkire, S. and Deneulin, S. (2009). The Human Development and Capability Approach, in: Deneulin, S. and Shahani, L. (Eds.). An Introduction to the Human Development and Capability Approach: Freedom and Agency. London: Earthscan.
- Alkire, Sabina (2002). Dimensions of Human Development. World Development, 30(2), 181-205.
- Layard, Richard (2005). Happiness: Lessons from a New Science, London.
- Nussbaum, Martha (2000). Women and Human Development, Cambridge University Press
- 6. Robeyns, Ingrid (2005). The Capability Approach – A Theoretical Survey. Journal of Human Development, 6(1), 93-114.

**Code: ECON-409**

**Title: Project Appraisal and Investment Analysis**

**Credit Hours: 03**

## **Prerequisite: Public Sector Economics**

### **Course Contents**

#### **Introduction**

Meaning of Project Appraisal, usefulness and significance, Aspect of project appraisal with a special focus on economic versus financial analysis, Contours and Dimensions of a project and its essential ingredients, Project Vs. Plans. Project Cycle.

#### **Identify Project Benefits and Costs**

Objectives of Costs and Benefits, The Incremental / Net Benefits and “With” and “Without” Comparisons. Categories of Costs and Benefits.

#### **Pricing Project Costs and Benefits**

Prices reflecting values, Market price and financial analysis, finding market prices and related problems, Change in relative prices and inflation: Shadow Prices and economic analysis, Removal of market price distortions in traded and non-traded goods. Premium on foreign exchange through use of Shadow exchange rate and conversion factor approach

#### **Comparing Project Costs and Benefits (Measuring of a Project Worth)**

Undiscounted measures of project worth, Discounted measures of NPW, IRR, BCR, Net benefit – Investment Ratio, Comparative assessment of discounted measures. Social vs. Economic benefits and selection of projects

#### **Applying Discounted Measures of Project Worth**

Sensitivity analysis, switching value, Choice among mutually exclusive alternatives, Domestic resource cost of foreign exchange earning / saving.

#### **Cost Effectiveness Analysis**

Areas and elements of analysis, Methods of analysis: Constant Effect Method, Constant Cost Method, Measuring of cost effectiveness, Present Worth, Annual Worth, Cross over discount rate, Limitation of analysis.

#### **Financial (Investment) Analysis**

Theoretical and empirical examination and saving and investment, Concept of capitalization types of securities, non-banking financial institution. Development financing, Asset Structure, Stock Prices, Money Market, Portfolio Theory and Investment Analysis. Financing the industrial sector; Large scale and small scale, Interest rate. Bond market, Real and financial investment. Financial intermediaries; Speculation and Inter – relationship of financial and real variables in the economy.

#### **Recommended Books:**

- Hughes, A., & D.J. Storey. (1994). Finance and The Small Firm” (Ed) Routledge, London.
- Bruno Solnik. (1996). International Investment, Addison Wesley.
- Burno Solnik. (1996). International Investments” 3rd Ed. Addison, Wesley publishing Co.
- Donald, E., Fischer, Arnold, J. (1997). Security Analysis and Portfolio Management. Prentice Hall, Delhi.



**Code: ECON-410**

**Title: Environmental and Natural Resource Economics**

**Credit Hours: 03**

**Prerequisite: Intermediate Microeconomics, Intermediate Macroeconomics, Development Economics-I**

**Objectives:**

This course focuses on economic causes of environmental problems. In particular, economic principles are applied to environmental questions and their management through various economic organizations, 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 Contents**

**Introduction**

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

**Limitation of Market**

Excludable and rival goods, common pool resources and public goods

**The Theory of Externalities**

Pareto optimality and market failure in the presence of externalities; property rights and the Coase theorem.

**Valuing the Environment: Methods**

Introduction: theoretical aspects, Economic valuation of the environment: Methodologies and Applications

**Cost–Benefit Analysis and Other Decision Making Metrics**

Framework of BCA and its applications, Divergence of Social and Private Discount Rates, Cost-Effectiveness Analysis, Impact Analysis

**The Design and Implementation of Environmental Policy**

Overview; Pigouvian taxes and effluent fees; tradable permits; choice between taxes and quotas under uncertainty; selection of environmental policy instruments; implementation of environmental policy.

**International Environmental Problems**

Trans-boundary environmental problems; global pollution; economic significance of biodiversity; economics of climate change; trade and environment, dispute resolutions.

## **Natural Resource Management**

Renewable resources, Non-renewable resources

## **Measuring the Benefits of Environmental Improvements**

Non-Market values and measurement methods; risk assessment and perception. Incentive based solutions

## **Contemporary Issues in Environmental Economics with Reference to Pakistan**

Energy crisis, Water footprints, Forests, Fisheries, Economics of Pollution

## **Sustainable Development**

Concepts; Sustainability of Development, The Growth–Development Relationship measurement (conventional and alternative)

## **Recommended Books:**

- David A. Anderson. (2014). Environmental Economics and Natural Resource Management”, Routledge, 4th Edition.
- Tom Tietenberg and Lynne Lewis. (2012). Environmental & Natural Resource Economics Pearson Education, Inc., 9th Edition.
- Charles Kolstad. (2010). Intermediate Environmental Economics, Oxford University Press, 2nd edition.
- Robert N. Stavins. (2005) Economics of the Environment: Selected Readings, W. W. Norton, 5th edition.
- Ian Wills. (2007). Economics and Environment; A signaling and incentive approach, 2nd edition.
- Freeman, A. M. (2003). The measurement of Environment and resource Values; Theory and Methods, resource for the future, 2nd edition.
- Thomas Sterner. (2003). Policy Instruments for Environmental and Natural Resource Management, Resource for the future.

**Code: ECON-411**

**Title: Economic Dynamics**

**Credit Hours: 03**

**Prerequisite: Advanced Microeconomics, Advanced Macroeconomics and Calculas-II**

## **Objectives:**

This is an introduction to the analysis of difference and differential equations, including the solution of the simplest linear dynamic systems, the linearization of non-linear systems and the use of phase diagrams. It aims at providing necessary techniques for graduate students to analyze economic dynamics

## **Course Contents**

### **Introduction**

Definitions and concepts, Dynamic models, Deterministic dynamical models, Difference equations, Attractors and repellers, Nonlinear dynamical systems, Continuous models Continuous differential equations.

### **Demand and Supply Dynamics**

The linear cobweb model, Different expectations, The Goodwin model of expectations, Nonlinear cobwebs, Ceilings and floors, Cobwebs in interrelated markets

### **Simple Keynesian Dynamics**

The Keynesian-cross diagram, The dynamic multiplier, A dynamic model with taxes, The multiplier-accelerator model, Introduction of net exports

### **Constructing trajectories in the phase plane**

Trajectories and fixed points, Isoclines and vector forces: continuous models, Isoclines and vector forces: discrete models, A variety of trajectories, Limit cycles, Lorenz, curves and strange attractors

### **IS-LM dynamics**

The static model, Instantaneous money market adjustment, a continuous IS-LM model A discrete version of the IS-LM model, Interest rate ceiling

### **Inflation-unemployment dynamics**

The Phillips curve, a simple macroeconomic model of inflation, the dynamics of the simple model, Dynamic model with positive inflation, a change in the money supply A change in the natural level of unemployment.

### **Dynamics of the firm**

Introduction, Monopoly and advertising, Advertising model: discrete version, Diffusion models, Static theory of oligopoly, Discrete dynamic model with output adjusting Instantaneously, Dynamic oligopoly with three firms, Partial-adjustment duopoly model.

### **Saddles and Rational Expectations**

What are saddles? The Dornbusch model under perfect foresight, Announcement effects Discrete systems exhibiting saddle solutions

### **Fiscal Dynamics**

Budgetary concepts, Budget dynamics with no inflation and no monetary financing, Budget dynamics with inflation and money plus bond financing, Budget criteria of the Maastricht Treaty

### **Recommended Books:**

- Shone. R. (2001). An introduction to economic dynamics. Cambridge University Press.
- Shone. R. (2002). Economic Dynamics: Phase Diagrams and their applications

**Code: ECON-413**

**Title: Managerial Economics**

**Credit Hours: 03**

**Prerequisite: Principles of Microeconomics, Calculus-II**

**Objectives:**

The main objective of this course is to make the students familiar with economic theory and tools essential to the analysis and solution of those problems that have significant economic consequences both for the firms and society at large. After taking this course a student will be able to suggest solutions to such business problems as optimization of output mix, input combination and profit maximization

**Course Contents**

**Nature, Scope and Overview of Managerial Economics**

What is Managerial Economics? The Nature and Scope of Managerial Economics, Firms and Managerial Objectives, The Managerial decision making process, Economic Optimization, Firms and Profits, Tools of Economic Analysis, Marginal Analysis, Theory of the firm. Profit maximization, Cost Minimization. Economic optimization. Economic relations of variables. The Incremental concept in Economic Analysis.

**Market Forces: Demand Analysis, Estimation and Forecasting**

Demand, Supply and Equilibrium, Demand Analysis, Elasticity, Price elasticity of demand and supply and use of derivative in finding elasticity of demand & supply, Point elasticity & Arc elasticity, income elasticity of demand, cross elasticity of demand, Promotional elasticity of demand, Concept of partial elasticity, Measuring Economic Relationships, Statistical Relations and Regression Analysis, Simple linear regression model, Multiple linear regression model estimation. Forecasting, Methods of demand forecasting. Trend projections, smoothing techniques, Exponential smoothing.

**Production and Cost**

Theory of Production, Production functions. Total, Marginal and Average Product. Revenue and Cost in Production. Production function estimation. Short run and long run cost curves. Economies of scale and Diseconomies of scale. Optimization of multivariate functions maxima, minima, point of inflection and economic applications of maximization of profits and minimization of cost.

**Market Structure**

Pricing decision under Perfect Competition, Monopolies, Monopolistic Competition and Oligopoly. Pricing Strategies for Firms in the short run and long run. Mark up pricing. Price Discrimination, Monoposony and Multiplant Monopoly and measuring Firms' Performance, Making Decisions under Noncompetitive Conditions, Oligopolies, Game Theory: Inside Oligopoly, Pricing Methods, Pricing Strategies for Firm with Market Power.

**Linear Programming**

Linear Programming, Ingredients of Linear Programming, Assumption etc. Application of Linear Programming. Profit Maximization problems using graphical approach. Cost Minimization problems using graphical approach. The concept of dual, duality theorem, solving primal via dual and their economic applications.

### **Capital Budgeting and Investment**

Project appraisal/ capital budgeting, Investment Criteria and Decisions. Cash flow estimation, Net present value (NPV) Internal Rate of Return (IRR), Profitability-Index Criterion, Optimal Capital Budget.

### **Recommended Books:**

- Baye, Michael, Managerial Economics and Business Strategy. Sixth Edition. Boston: McGraw-Hill Irwin, latest edition.
- Mark, Hirschey. (2003). Managerial Economics, latest edition, Thomson/South- Western College Publishing.
- Peterson, Craig, H., Lewis, W. Cris and Jain, Sudhir, K. (2009). Managerial Economics, latest Edition Pearson Education.
- Salvatore, D. (2001). Managerial Economics, McGraw Hill

**Code: ECON-414**

**Title: Experimental and Behavioral Economics**

**Credit Hours: 03**

**Prerequisite: Intermediate Microeconomics**

### **Objectives:**

To provide an overview of research in behavioral economics, with a particular focus on those areas in which behavioral economic models of individual decision-making are the most well-developed (specifically, social, risk, and time preferences); and to provide a comprehensive introduction to the empirical experimental literature focused on testing behavioral economic theories of individual choice.

### **Course Contents**

#### **Introduction to Basic Game Theory**

Extensive Form Games, solution by backwards induction, Strategies Normal Form Games, Dominance, Nash Equilibrium, Dominance Solvable Games.

#### **Why do we need Experiments?**

Why do we need experiments? Experimental Methods: Advantages and Limitations. Different types of experiments

#### **Altruism and Fairness: Ultimatum Game**

Ultimatum Game: Theory and Results. What is altruism and Fairness? Dictator Game and

Altruism

### **Public Good Game and Free-Riding**

Public Good Game: theory and Practices, Free Riding and Voluntary Contribution Dilemma, Factors to Alleviate Free Riding

### **Experimental Labor Market**

Employment Relations, Incentives and Performance, Market vs. Social exchanges

### **Trust, reciprocity, Incentives and Crowd-Out**

Gift Exchange mechanism, Reciprocity and Trust, Incentives and internal and External motivation, Crowding out of internal motivation, Monetary and Non-monetary incentives

### **Bargaining and Auctions**

Structured and unstructured Bargaining, Bilateral Bargaining: Ultimatum Game, Multilateral Bargaining: Auction

### **Social Norms and Economic Behavior**

Social Norms, Role of expectations, Self Image

### **Recommended Books:**

- Davis and Holt. Experimental Economics. Latest Edition.
- Durlauf and Blume. Behavioral and Experimental Economics. Latest Edition.
- Falk and Gächter. Experimental Labor market. Latest Edition.
- Angrist, Joshua, and Jörn-Steffen Pischke. (2008). Mostly Harmless Econometrics: An Empiricist's Companion. Princeton University Press.
- Gerber, Alan and Donald Green. (2012). Field Experiments. W. W. Norton & Company

**Code: ECON-415**

**Title: Regional Economics**

**Credit Hours: 03**

**Prerequisite: Calculus-II and Which Development Economics**

### **Objectives:**

Regional Economics is an introductory course, which will provide the students with the basic concepts related to regional economic growth and analysis. The course will also touch on the concept of sustainability and prevalent approaches to policy design in this context.

The objective of this course is to apply the methods of microeconomic analysis to gain an understanding of both why this is the case, and of the forces that shape land development and resource allocation in urbanized areas. A general objective is to improve your ability to apply microeconomic analysis. The more specific objective is to build a working understanding of the economics of urban areas: (1) economic explanations of why cities exist and where they develop and why they grow; (2) how and why urban land develops as it does; and (3) the roles of local governments in influencing the allocation of resources in urban areas. Income determination will also be an important area of study, looking at how economic growth is

distributed, and the role of growth in improving household well-being.

## **Course Contents**

### **Introduction**

Economics and space, Location and Physical-metric space, Regional Growth local development, Theories of convergence and divergence

### **Agglomeration and Location**

Agglomeration economies and transportation costs, Localization Economies and transportation cost, Market size and Transportation cost, Economies of scale and transportation cost, spatial demand, market equilibrium and firm location, Interdependency in location choices.

### **Accessibility and location**

Accessibility and transportation cost, The location of agriculture activities: The Von Thunen model, The urban location of firms: The Alonso model, The urban location of household, Recent developments: General equilibrium model

### **Productive Structure and development**

The different interpretations of regional growth and development, the different conceptions of space, the theories of the stages of development, Stages of development and disparities, Industrial structure and regional growth: shift share analysis, The centrality approach

### **Demand**

Demand and Regional Growth, interregional relations, the exporter region: the export-base model, critical assessment of the model, input-output analysis, the importer region: The Harrod-Domar model, Balance of payment and local growth

### **Factor Endowment**

Factor endowment and regional growth, regional growth and factor mobility, factor mobility specialization and well-being, absolute vs comparative advantages in regional growth

### **Territorial Competitiveness and Exogenous Development**

The components of territorial Competitiveness, the growth-pole theory, the role of multinational companies in local development, the spatial diffusion of innovation, infrastructure and regional development, new communication technologies and regional development

### **Territorial Competitiveness and Endogenous Development**

The endogenous sources of competitiveness: agglomeration economies, space and static efficiency, space and dynamic efficiency, the urban structure and regional development

### **Territorial Competitiveness and Cumulative Demand/Supply Growth**

Increasing returns, Competitiveness and cumulative growth, equilibrium in condition of non-linearity, increasing returns external to the firm: the circular and cumulative causation model, increasing return internal to the firm: the new economic geography

### **Territorial Competitiveness and Endogenous Growth**

Endogenous growth and increasing returns, the endogenous sources of growth: the knowledge stock and learning

**Recommended Books:**

- Capello, R. (2007). Regional Economics. New York: Routledge.
- Hoover, E. M., & Giarratani, F. (1999). An introduction to Regional Economics (3rd ed.). West Virginia: Knopf.
- Richardson, H.W. (1972). Input-Output & Regional Economics. London: Weidenfeld and Nicolson.
- Temple, M. (1994). Regional Economics. Great Britain: St. Martin's Press.
- Armstrong, Harvey, (2000). Regional Economics and Policy, Black wall Publishing Company.

Choi, Rok-Byung, (2003). High Technology Development in Regional

- Davis H., Craig. (1990). Regional Economics, Impact Analysis and Project Evaluation, Amazon.com.
- Hijkamp (Editor). Handbook of Regional and Urban Economics, North Holland.
- Lee Roger (ed). (1997). Geographics of Economics, John Wiley and Sons. 106
- Mcker David L., (1970). Regional Economics: Theory and Practice, The Free Press, New York.
- Philip McCann, (2001). Urban and Regional Economics, Oxford University Press

**Code: ECON-416**

**Title: Poverty and Income Distribution**

**Credit Hours: 03**

**Prerequisite: Development Economics-I**

**Objectives:**

The aim of this course is to introduce students to the subject of poverty and inequality. The emphasis will be on problems in the modern contemporary economy, but the topic will also be approached from an historical perspective, taking a longer term view of the distribution of income in human societies. In particular, we will examine why some individuals and groups have less access to resources and income than others. Students will learn the fundamental concepts, theories and methodologies that are used by economists to measure and understand questions related to the distribution of income. By the end of the course, students should expect to not only have a greater knowledge of the forces determining the extent of poverty and the distribution of income, but to have also gained some understanding of the methods used by economists and policy-makers to deal with them

**Course Contents**

**Traditional Measures of Poverty**

What Is Poverty and Why Measure It? The Concepts of Well-Being and Poverty, Measuring Poverty, steps in Measuring Poverty, monetary poverty, capability approach, Poverty Lines, Relative Poverty, Absolute Poverty, Issues in Choosing an Absolute Poverty Line, Measures

of Poverty, Headcount Index, Poverty Gap Index, Squared Poverty Gap (Poverty Severity) Index,

### **New Dimensions of Poverty**

Multidimensional Poverty Index, Sen Index, The Sen-Shorrocks-Thon Index, FGT class of measures, multidimensional poverty index, Poverty Indexes: Checking for Robustness, Sampling Error, Measurement Error, Equivalence Scales, Choice of Poverty Line and Poverty Measure

### **Measuring Income Inequality**

Definition of Inequality, Measures of Inequality, Decile Dispersion Ratio, Gini Coefficient of Inequality, Generalized Entropy Measures, Atkinson's Inequality Measures, Inequality Comparisons, Measuring Pro-Poor Growth, Decomposition of Income Inequality, Poverty Profiles, Additive Poverty Measures, Determinants of Poverty, Household and Individual-Level Characteristics, Analyzing the Determinants of Poverty: Regression Techniques, Poverty Reduction Policies, The Analysis of Poverty over Time, Vulnerability to Poverty, Quantifying Vulnerability to Poverty.

### **Poverty and Income Inequality in Pakistan**

Poverty and inequality in Pakistan- How does Pakistan compare? Historical Trends- the longer term picture

### **Recommended Books:**

- Sen, A. (2002). On Economic Inequality. New Delhi: Oxford University Press.
- Shorrocks, A., & Hoenen, R.V.D. (Eds.) (2005). Growth, Inequality, and Poverty: Prospects for economic development. New York: Oxford University Press.
- Jonathan Houghton and Shahidur Khandker (2009). Handbook on Poverty and Inequality. (World Bank Training Series). ISBN-10: 0821376136.
- Atkinson, A. B., B. Cantillon, E. Marlier and B. Nolan (2002). Social Indicators. The EU and Social Inclusion. Oxford: Oxford University Press.
- Cowell, F. (1992). Measuring Inequality, 2nd Edn. Hemel Hempstead: Harvester Wheatsheaf.
- Fields, G. S. (2001). Distribution and Development. Cambridge, MA: MIT Press.
- Foster, J. E., J. Greer and E. Thorbecke (1984). A class of decomposable poverty measures. *Econometrica*, 52(3), 761-66.
- Kakwani, N. (2003). Issues in Setting Absolute Poverty Lines. Poverty and Social Development Paper 3. Asian Development Bank. .
- Ravallion, M. (1994). Poverty Comparisons, Chur: Harwood Academic Publishers.
- Sachs, Jeffrey. (2005). End of Poverty: Economic Possibilities for our Time (New York, Penquin).

**Code: ECON-417**

**Title: Energy Economics**

**Credit Hours: 03**

## **Prerequisite: Intermediate Macroeconomics**

### **Objectives:**

The main focus of the course is to study economic relationships in energy production, consumption, demand and supply, pricing and conservation, energy policy and the development of new and renewable energy sources. The aim of the course is to provide students with the opportunity to study and develop a broader understanding of the economics of energy. There is mounting evidence that the current global energy system has been growing far beyond what is globally sustainable and already poses a serious, and potentially irreversible, threat to global environmental quality and stability in future decades.

### **Course Contents**

#### **Overview and Fundamental Concepts**

Energy in the Economy; Global Energy Problems and Issues, Fundamental Concepts: Energy, Power; Measuring energy: units and conversion factors, Laws of Thermodynamics, 1st Law and Entropy law, Input and output energy, energy efficiency, Energy conversions (technologies), Global Energy system sustainability issues, Energy markets and energy prices; competitive market valuation and social valuation, Market Failures: Market power (monopoly, oligopoly, and cartels), Externalities, Public goods and common property resources.

#### **Oil Resources and Economic Issues**

Discounted cash flow analysis, reserve and resources, resource substitution, forecasting prices and speculation, Natural resource (oil) demand and supply, OPEC

#### **Overview of Energy Economics and Global Energy Sustainability**

Primary energy supply, secondary energy and energy end use demand/consumption, Energy, economic activity, and growth: energy intensity, global energy use forecasts, Energy conversion, energy transportation and/or transmission, and clean energy use, Conditions for a sustainable global energy system, climate change and clean energy

#### **Clean Energy Supply from Non-Conventional, Alternative and Renewable sources**

Climate change and primary and secondary energy use, Energy Conservation policies, demand side management, Non-conventional and renewable alternative energy: Solar, Biomass, Wind, Geothermal, Tidal & other, Hydrogen energy, fuel cells

#### **Energy Supply from Non-Renewable Fossil Fuel Resources**

Fossil fuel resources and reserves model, Cartel models of global energy markets, Overview of Oil, Natural gas, and Coal industries, Backstop technologies and Non-renewable Resource Pricing (Hotelling model), Clean fossil fuel use; carbon sequestration

#### **Energy Conversion and Supply by Electric Utility Industries**

Electric Power demand and load duration vs. Electric energy consumption, time-of-use, Electricity production technologies and electricity production cost trade-offs, Thermal, hydro, nuclear and renewables production and transmission of electricity, Electricity pricing issues, regulation and deregulation issues, Nuclear energy issues and prospects

#### **Sustainable Energy Policy**

Jaccard's Sustainable Energy System in 2100, Energy Policy of Pakistan, Sustainable energy options and criteria for comparison, Sustainable Energy Policy Alternatives and Climate Change, International Policy Initiatives

### **China-Pakistan Economic Corridor (CPEC)**

What is CPEC? Central Role and Key Areas, Energy sector projects, Project Financing, Benefits to Pakistan, Benefits to China and other Countries, Challenges

### **Recommended Books:**

- Tom Tietenberg and Lynne Lewis. (2012). Environmental & Natural Resource Economics Pearson Education, Inc., 9th Edition.
- Mark Jaccard. (2005). Sustainable Fossil Fuels: The Unusual Suspects in the Quest for Clean and Enduring Energy, Cambridge University Press.
- Subhes C. Bhattacharyya. (2011). Energy Economics Concepts, Issues, Markets and Governance Springer-Verlag London Limited.
- J. M. Griffin, and H. B. Steele (1985). Energy Economics and Policy, Academic Press

**Code: ECON-418**

**Title: Islamic Banking and Finance**

**Credit Hours: 03**

**Prerequisite: Principles of Microeconomics and Principles of Macroeconomics**

### **Objectives:**

Islamic banking course provides an opportunity to explore, investigate and become professionally competent. According to an estimate upto 20% of the world population utilizes or actively seeks Islamic banking services. With no previous financial experience or knowledge of banking required, students will be introduced to the concept of Islamic banking and the way in which it differs from traditional banking. It covers the primary and unique characteristics of Islamic finance, along with how Islamic law applies to and affects the financial dealings. It is based on the principles of socio-economic justice

### **Course Contents**

#### **Introduction of Islamic Banking**

Provision of a comprehensive introduction to Islamic banking. Discovering the financial instruments offered by Islamic banks. Awareness of the theory behind Islamic banking practices

#### **Basics of Islamic Banking and Finance**

Exploring the philosophy of Islamic banking and financing alongwith the series of key alternative financing principles. Knowledge about Mudarabah, Musharkah, Murabaha-Mu'ajjal and Salam

### **Islamic Banking and Conventional Banking**

Highlighting the key differences between Islamic banking and conventional banking. Islamic banking model and its comprehensive definition and overview of how the model work in a contemporary business setting. Exploration of the difference between Islamic banking and others and magnitude of difference from conventional western banking

### **Islamic Law of Contract**

Contract laws under the rules of Islamic banking and representation of balancing situation. Explanation of the key elements of Islamic contracts, the various types of contracts relevant to Islamic banking and their framework

### **Islamic Financial Products**

Deeper insight into specific Islamic financial products, touching upon Islamic financial institutions, investment banking, and introduction to Islamic principles in relation to stock and sukuk (Islamic bonds for the generation of returns to investors)

### **Islamic Business Ethics**

Analyzing the Islamic business ethics, incorporating essential teachings on gentleness, honesty, legitimate earnings and justice

### **Globalization of Islamic Banking**

Islamic banking and finance on a global basis and representation of the contemporary international Islamic financial institutions including the Islamic Financial Services Board and the International Islamic Rating Agency

### **Recommended Books:**

- Ahmad, K. (1976). Islami Nazriya Hayat. Karachi: Institute of policy studies.
- Chapra, M. U. (1992). Islam and the economic challenge. Lahore: The Islamic foundation.
- Dar, A. H., & Akram, M. M. (2007). Islamic Economics. Lahore: Ilmi Kitab Khana.
- Mannan, M. A. (2006). Islamic Economics : theory and practice. Lahore: Sh. Muhammad Ashraf.
- Mulathawi, M. H. (1995). Muashiyat Islam. Karachi: Manghu Peer Sharif.
- Naqvi, S. N. H.(2003). Perspectives on Morality and Human Well-Being: A Contribution to Islamic Economics. UK: The Islamic Foundation.
- Naqshbandi, Q. M. A. Islamic Economics. Lahore: Iqra Books

**Code: ECON-419**

**Title: Monetary Theory and Policy**

**Credit Hours: 03**

**Prerequisite: Intermediate Microeconomics and Intermediate Macroeconomics**

**Objectives:**

The course is intended to provide the students a thorough understanding of monetary theory monetary policy.

**Course Contents****Definition and Tools of Monetary Policy**

The Market for Reserves and the Federal Funds Rate; Demand and Supply in the Market for Reserves, Major Tools of Monetary Policy, Changes in the Tools of Monetary Policy and its Effect on the Federal Funds Rate.

**The Conduct of Monetary Policy: Strategy and Tactics**

Monetary Targeting. Advantages of Monetary Targeting, Inflation Targeting, Advantages and Disadvantages of Inflation Targeting. Choosing the Policy Instrument and Criteria for Choosing the Policy Instrument. The Taylor Rule. Central Banks Response to Asset-Price Bubbles: Lessons from Supreme Crisis.

**The Foreign Exchange Market**

What are Foreign Exchange Rates? Why are Exchange Rates Important? How is Foreign Exchange Traded? Exchange Rates in the Long Run, Exchange Rates in The Short Run: A Supply and Demand Analysis. Explaining Changes in Exchange Rates; Shifts in the Demand for Domestic Assets, Domestic Interest Rate, Foreign Interest Rate, Changes in the Expected Future Exchange Rate, Recap: Factors That Change the Exchange Rate.

**The International Financial System**

Intervention in The Foreign Exchange Market, Exchange Rate Regimes in The International Financial System, Capital Controls, Role of IMF, International Considerations and Monetary Policy and to Peg and Not To Peg: Exchange Rate Targeting As an Alternative Monetary Policy Strategy.

**Monetary Policy in International Framework**

Money Demand and Empirical Evidences. Money in Growth Models. Inflationary Spiral. Current Issues in Monetary and Financial Sector Reforms. Conduct of Monetary Policy in Fixed and Flexible Exchange Rates. Perfect Mobility of Capital and Money Control, Effectiveness of Policy. Impact of Reserves on B.O.P and Exchange Rates. Targeting Exchange Rate. Managed Exchange Rate System and Monetary Policy. Targeting Inflation. Exchange Rate and Balance of Payment.

**Time Inconsistency/CB Independence.**

Rules Vs Discretion debate. Monetary Policy Rules, Discretion in monetary policy making, Central Bank independence and monetary policy under CBI.

**VAR Model of Monetary Policy**

Introduction to VAR, Representation of VAR and Estimation, Granger Causality Impulse Response Function, Forecast Error Variance Decomposition.

**Transmission Mechanism of Monetary Policy: The Evidence**

Framework For Evaluating Empirical Evidence, Transmission Mechanism of Monetary Policy

and Lessons For Monetary Policy. Transmission channels: Interest rate channel, Ex-Rate Channel.

**Recommended Books:**

- Bennett T. McCallum. (1989). Monetary Economics, Theory and Policy, McMillan.
- Fredric S. M. (1995). Financial Markets and Money, Harper & Row Publishers.
- Laider, David E.W (1996). The Demand for Money: Theories, Evidence and Problems (Fourth edition), Harper & Row, Publishers, New York.
- Miller, R. L. and David VanHose. (2001). Money, Banking & Financial Markets. South Western, Singapore.
- Mishkin, Frederic S. (2001). The Economics of Money, Banking and Financial Markets. (Sixth edition). Addison Wesley, New York.
- Patinkin Don. Money, Interest and Prices, Harper and Row Publishers, (Latest Edition).

**Code: ECON-420**

**Title: World Economic History**

**Credit Hours: 03**

**Prerequisite: Intermediate Microeconomics and Intermediate Macroeconomics**

**Objectives:**

This course surveys the history of colonial expansion from the discovery of the Americas up to the colonization of the Middle East following the end of the First World War. The course is intended to give students a chronological account of the rise of imperialism and the colonial expansion into Latin America, Asia and Africa. While emphasis is placed on social, political and economic developments within the European nations which prompted colonial expansion, the primary focus is on how the actual colonies were acquired and the subsequent changes that took place. The course attempts to provide an essential background to understanding the historical processes by which modern developed nations became developed, and how the underdeveloped “Third World” originated as part of the same historical process

**Course Contents**

**Introduction**

What is Economic History? What is World Economic History?, Why study World Economic History

**The world economy during the medieval period: The beginnings of the Great Divergence**

The first Global Economy? The Sung Miracle, the Golden Age of Islam and Medieval Europe, The Plague and the beginnings of the Great Divergence

**The Discovery of the Americas to the Rise of Industrial Capital, 1492 – 1770**

Introduction: Dependency Theories, The Discovery of America, The Origins of the Slave Overland Trade Routes and the Middle East, Origins of Colonial Expansion in Asia, Overview of Africa’s Economy from ancient to modern

**Industrial Capitalism to Monopoly Capitalism, 1771 – 1870**

The First Industrial Revolution, The Latin American Revolutions, The End of the Slave Trade, Expansions into the Middle East, The Conquest of India, Big Push industrialization

**Monopoly Capitalism to The First World War, 1870 – 1917**

The Second Industrial Revolution, The Scramble for Africa, The Opium Wars and the Onslaught on East Asia, Russian Political and Economic Developments, The Japanese Response

**Nationalist Thoughts, 1917 - onwards**

Nationalist Thought and Indigenous Responses to the West, Origins of Nationalist Thought I, Origins of Nationalist Thought II, The Russian Revolution., Rise of East Asia, (Re)-Globalization

**Recommended Books:**

- L. S. Stavrianos (1981). Global Rift: The Third World Comes of Age, (New York: William

Morrow and Company.

- Allen, Robert C. (2001). *Global Economic History: A Very Short Introduction* (Oxford, OUP).
- Harriss, John, Janet Hunter, and Colin Lewis. (2009). *The new institutional economics and third world development*. Routledge.

#### **Additional Readings:**

- Kuhn, Frithjof. (1987). Causes of underdevelopment and concepts for development. An introduction to development theories." *The Journal of Institute of Development Studies*, NWFP.
- Arrighi, Giovanni. (1998). Globalization and the Rise of East Asia Lessons from the Past, Prospects for the Future. *International Sociology* 13(1), 59-77.
- Findlay, Ronald, and Kevin H. O'Rourke. (2007). *Power and plenty: trade, war, and the world economy in the second millennium*. Princeton, NJ: Princeton University Press.
- Stiglitz, Joseph E. (2002). *Globalization and its DisCourse Contents*. Vol. 500. New York: WW Norton.
- Stiglitz, Joseph E. (2003). Globalization, technology, and Asian development. *Asian Development Review*, 20(2) 1-18

**Code: ECON-421**

**Title: General Equilibrium and Welfare Economics**

**Credit Hours: 03**

**Prerequisite: Intermediate Microeconomics and Intermediate Macroeconomics**

#### **Objectives:**

It is a fundamental microeconomics course which studies the interdependency between individual decision making and market clearing price formation. From a methodological viewpoint, the general equilibrium approach views the economy as a closed and interrelated system in which the equilibrium values of all variables are simultaneously determined. Welfare economics deals with the interaction between "positive economics" (i.e. statements of what will happen under different policies) and "normative economics" (statements about what policies should be followed). Welfare economics considers how value judgments involving interpersonal comparisons can be incorporated into the basic framework of positive economics in order to reach normative conclusions.

#### **Course Contents**

##### **Concept and History of General Equilibrium Theory**

Introduction to General Equilibrium Theory, Partial and General Equilibrium: Development of the field, History of General Equilibrium Theory, Problems with Partial Equilibrium Analysis.

##### **An elementary General Equilibrium Model: The Robinson Crusoe Economy**

Centralized Allocation, Decentralized Allocation, Pareto Efficiency of the Competitive Equilibrium Allocation: First Fundamental Theorem of Welfare Economics

## **The Edgeworth Box**

Geometry of the Edgeworth Box, Pareto Efficiency and its constituents, Consumption Efficiency, Production Efficiency, Product Mix Efficiency, Calculating an Efficient Allocation, Competitive Market solution in the Edgeworth Box, Walrasian Equilibrium

## **Integrating production and multiple consumption decisions: A 2 X 2 X 2 model**

A 2 X 2 X 2 model, Technical Efficiency and Pareto Efficiency, First Fundamental Theorem of Welfare Economics: Competitive Equilibrium is Pareto Efficient, Social Justice and the Social Optimum, Prices and Decentralization, Are competitive prices fair? The Theory of the Second Best, The Second Fundamental Theorem, Positive Economics and Normative Economics, Welfare Economics and the Real World

## **Recommended Books:**

- L. S. Stavrianos (1981). Global Rift: The Third World Comes of Age, (New York: William Morrow and Company. Starr, Ross M. (2011). General Equilibrium Theory: An Introduction, 2nd Edition, Cambridge University Press
- Walter Nicholson. (2005). Microeconomic Theory: Basic Principles and Extensions, 9th edition. Thomson South-Western.
- James M. Henderson and Richard E. Quandt. (1971). Microeconomic Theory: A Mathematical Approach, 2nd edition. McGraw Hill Kogakusha Ltd., Tokyo.
- Eugene Silberberg. (1990). The Structure of Economics: A Mathematical Analysis, 2nd edition, New York: McGraw Hill Publishing Co.
- P. R. G. Layard and A. A. Walters. (1978). Microeconomic Theory, McGraw Hill Book Company.
- Jeffrey M. Perloff. (2014). Microeconomics, 7th edition, Prentice Hall
- Allen, Robert C. (2001). Global Economic History: A Very Short Introduction (Oxford, OUP.
- Harriss, John, Janet Hunter, and Colin Lewis. (2009). The new institutional economics and third world development. Routledge.