

CURRICULUM
OF
ECONOMICS
FOR
BS (4 YEAR)



(Revised 2013)

HIGHER EDUCATION COMMISSION
ISLAMABAD

CURRICULUM DIVISION, HEC

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PREFACE

The curriculum, with varying definitions, is said to be a plan of the teaching-learning process that students of an academic programme are required to undergo. It includes objectives & learning outcomes, course contents, scheme of studies, teaching methodologies and methods of assessment of learning. Since knowledge in all disciplines and fields is expanding at a fast pace and new disciplines are also emerging; it is imperative that curricula be developed and revised accordingly.

University Grants Commission (UGC) was designated as the competent authority to develop, review and revise curricula beyond Class-XII vide Section 3, Sub-Section 2 (ii), Act of Parliament No. X of 1976 titled “**Supervision of Curricula and Textbooks and Maintenance of Standard of Education**”. With the repeal of UGC Act, the same function was assigned to the Higher Education Commission (HEC) under its Ordinance of 2002, Section 10, Sub-Section 1 (v).

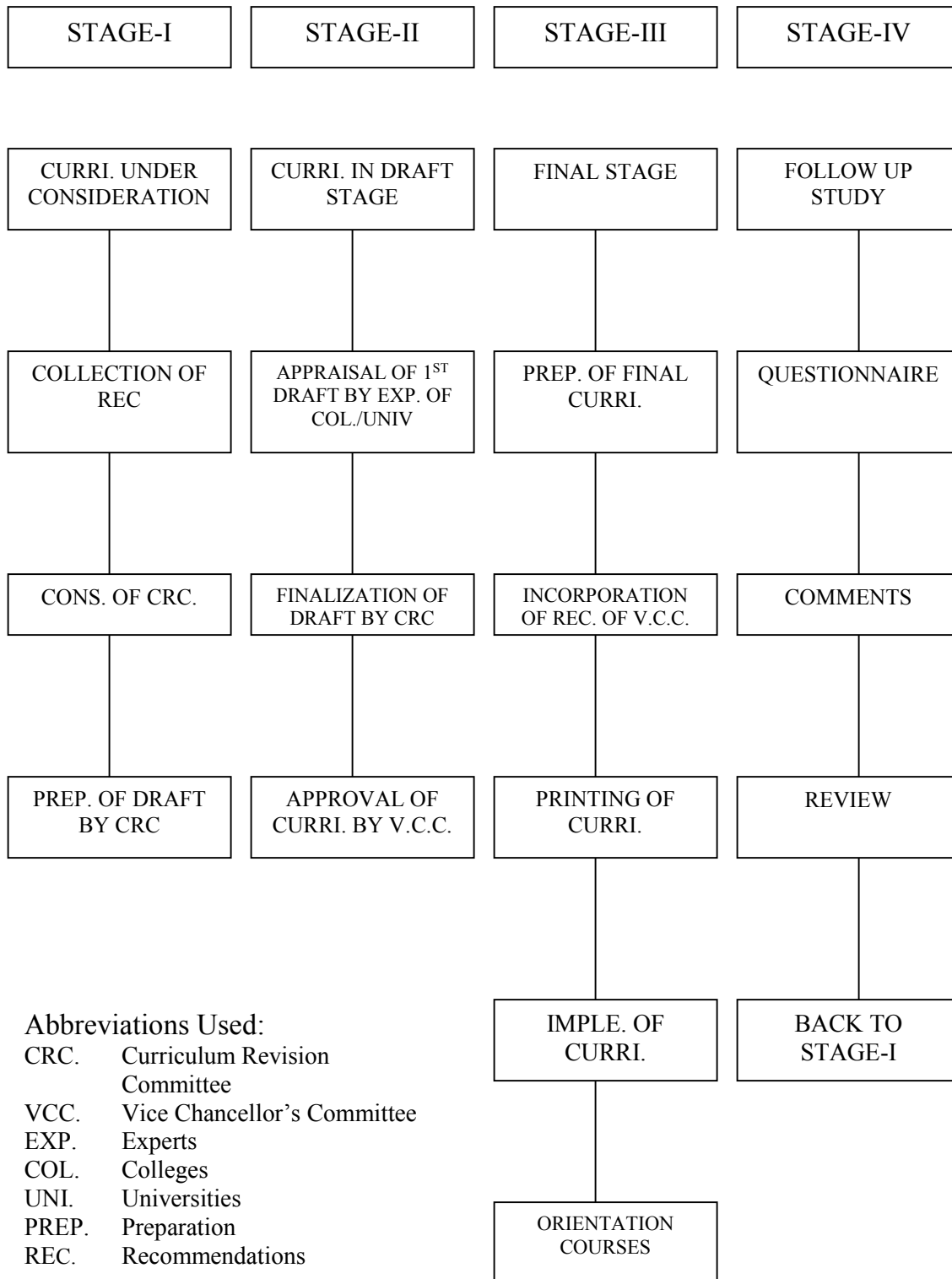
In compliance with the above provisions, the Curriculum Division of HEC undertakes the revision of curricula after every three years through respective National Curriculum Revision Committees (NCRCs) which consist of eminent professors and researchers of relevant fields from public and private sector universities, R&D organizations, councils, industry and civil society by seeking nominations from their organizations.

In order to impart quality education which is at par with international standards, HEC NCRCs have developed unified templates as guidelines for the development and revision of curricula in the disciplines of Basic Sciences, Applied Sciences, Social Sciences, Agriculture and Engineering in 2007 and 2009.

It is hoped that this curriculum document, prepared by the respective NCRC’s, would serve the purpose of meeting our national, social and economic needs, and it would also provide the level of competency specified in Pakistan Qualification Framework to make it compatible with international educational standards. The curriculum is also placed on the website of HEC (www.hec.gov.pk).

(Fida Hussain)
Director General (Academics)

CURRICULUM DEVELOPMENT PROCESS



Introduction:

The Final Meeting of National Curriculum Revision Committee in the discipline of Economics was held on February 13-15, 2013 at Higher Education Commission, Regional Centre, Lahore. The objective of the meeting was to finalize the curriculum of Economics developed in the Preliminary Meeting of NCRC held on September 19-21, 2012 at the same venue. Following Members attended the meeting:

1.	Dr. Asad Zaman, Professor and Director General, International Institute of Islamic Economics, International Islamic University, Islamabad.	Member/Convener
2.	Dr. Waqar Ahmed Wadho, Assistant Professor, Department of Economics, Lahore School of Economics, Lahore.	Member/Secretary
3.	Dr. Bushra Yasmin, Assistant Professor and HoD, Department of Economics, Fatima Jinnah Women University, The Mall, Rawalpindi.	Member
4.	Dr. Hafeez ur Rehman, Professor, Department of Economics, University of the Punjab, Lahore.	Member
5.	Dr. Himayatullah Khan, Professor, Institute of Development Studies, KPK Agricultural University, Peshawar.	Member
6.	Dr. Haider Mahmood Assistant Professor, Department of Economics, Government College University, Lahore.	Member
7.	Dr. Ijaz Hussain, Assistant Professor, Department of Economics, Gomal University, D.I. Khan	Member
8.	Dr. Murad Khatoon Panhwar, Professor, Department of Economics & Management, Hyderabad Institute	Member

	of S&T, Hyderabad	
9.	Dr. Muhammad Nawaz Chand, Professor, Department of Economics, Shah Abdul Latif University, Khairpur.	Member
10.	Dr. Maryam Wasif, Associate Professor, Department of Economics, Lahore College for Women University, Lahore.	Member
11.	Dr. Misbah, Assistant Professor, Department of Economics, Hazara University, Mansehra.	Member
12.	Dr. Masood Sarwar Awan, Associate Professor, Department of Economics, University of Sargodha, Sargodha.	Member
13.	Dr. Naheed Sultana, Associate Professor and Dean LBS/HoD, Faculty of Management Sciences, University of Lahore, Lahore.	Member
14.	Prof. Dr. Naeem-ur-Rehman, Dean, Faculty of Social Sciences, University of Peshawar, Peshawar.	Member
15.	Prof. Dr. Nanik Ram, Chairman, Department of Economics, University of Sindh, Jamshoro.	Member
16.	Dr. Rukhsana Kalim, Associate Dean (Research), Department of Economics, University of Management & Technology, Lahore	Member
17.	Dr. Syed Nisar Hussain Hamdani, Professor and Director, Kashmir Institute of Economics, University of AJK, Muzaffarabad.	Member
18.	Dr. Sofia Anwar, Associate Professor / Chairperson, Department of Economics, Government College University, Faisalabad.	Member

19.	Dr. Tasneem Akhtar, Associate Professor, Department of Accounting and Finance, GIFT University, Gujranwala.	Member
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2. Following Members could not attend the meeting due to other engagements:

1.	Dr. Attiya Yasmin Javid, Professor, Department of Economics, PIDE, Islamabad.
2.	Dr. Ashfaque Hassan Khan, Principal & Dean, NUST Business School, NUST, Islamabad.
3.	Mr. Khalid Khan, Assistant Professor, Department of Economics, Lasbela University of Agriculture, Water and Marine Sciences, Uthal, Balochistan.
4.	Dr. Muhammad Ashfaq, Professor / Director, Institute of Agri. Extension & Resource Economics, University of Agriculture, Faisalabad.
5.	Dr. Aneel Salman, Assistant Professor, Department of Management Sciences and Humanities, GIK Institute of Engineering & Technology, Topi, Swabi, KPK
6.	Mr. Muhammad Rafiq, Assistant Professor, School of Liberal Arts, Institute of Management Sciences, Peshawar.
7.	Dr. Fazli Rabbi, Assistant Professor, Institute of Economics, Social and Development Studies, University of Swat, Swat.
8.	Syed Muhammad Hussain, Assistant Professor, Department of Economics, LUMS, Lahore.
9.	Prof. Dr. Toseef Azid, Department of Economics, Bahauddin Zakariya University, Multan.

10.	Prof. Dr. Shehla Amjad, Chairperson, Department of Development Studies, CIIT, Abbottabad.
11.	Dr. Jahangir Achakzai, Associate Dean & Assistant Professor (TTS), Department of Economics, University of Balochistan, Quetta.
12.	Dr. Zahoor ul Haq, Professor & Dean, Department of Management Sciences, Abdul Wali Khan University, Mardan.

3. The meeting started with the recitation of Holy Verses from the Holy Quran by Mr. Farrukh Raza, Assistant Director (Curriculum), HEC, followed by welcome address by Mr. Nazeer Hussain, Director, HEC Regional Centre, Lahore. Dr. Waqar Ahmed Wadho, Secretary NCRC recalled the proceedings of the Preliminary Meeting and apprised the aims and objectives of the meeting with particular focus on revision and finalization of the curriculum in three days. Meanwhile, Dr. Asad Zaman, Convener NCRC joined the meeting and formal proceeding of the meeting started.

4. It was further resolved in the meeting that the approved curriculum will be disseminated by HEC to Universities/DAIs for guidelines as per procedure. The Convener and Secretary of the Committee thanked all the Members for sparing their valuable time and quality contribution towards finalization of the curriculum. They also recommended the HEC for issuance of acknowledgement letters to all the Members of NCRC in recognition of their endeavors for this national cause. The Committee highly admired the efforts made by the officials of HEC as well for making excellent arrangements to facilitate the smooth work by the Committee and their comfortable accommodation/stay at Lahore.

5. The meeting ended with the vote of thanks to the Chair as well as participants of the meeting.

SCHEME OF STUDIES FOR BS (4-YEAR) ECONOMICS

Semester/Year	Name of Subject	Credits
First		
ECON101	English I	3
ECON102	Principles of Micro Economics	3
ECON103	Islamic Studies	2
ECON104	Mathematics I	3
ECON105	Introduction to Computer	3
ECON106	Optional (Non-Economic)	3
		17
Second		
ECON107	English II	3
ECON108	Pakistan Studies	2
ECON109	Principles of Macro Economics	3
ECON110	Mathematics II	3
ECON111	Optional (Non-Economics)	3
ECON112	Optional (Non-Economics)	3
		17
Third		
ECON201	English III	3
ECON202	Intermediate Microeconomics	3
ECON203	Development Economics	3
ECON204	Statistics I	3
ECON205	Optional (Non-Economics)	3
ECON206	Optional (Non-Economics)	3
		18
Fourth		
ECON207	English IV	3
ECON208	Intermediate Macroeconomics	3
ECON209	Statistics II	3
ECON210	World Economic History	3
ECON211	Optional (Non-Economics)	3
ECON212	Optional (Non-Economics)	3
		18
Fifth		
ECON301	Microeconomics	3
ECON302	Macroeconomics	3
ECON303	Mathematical Economics I	3
ECON304	Issues in Pak Economy	3
ECON305	Optional (Non-Economics)	3
		15

Sixth		
ECON307	Economic Growth	3
ECON308	Econometrics I	3
ECON309	Mathematical Economics II	3
ECON310	Elective I	3
ECON311	Elective II	3
		15
Seventh		
ECON401	International Trade Theory	3
ECON402	Research Methods	3
ECON403	Public sector Economics	3
ECON404	Econometrics II	3
ECON405	Elective III	3
		15
Eight		
ECON406	Entrepreneurial Economics	3
ECON407	Islamic Economics	3
ECON408	Monetary Economics	3
ECON409	Elective IV	3
ECON410	Elective V	3
		15

Total Credit Hours = 130

In the final meeting the members furnish details of courses i.e. course outlines, contents, objectives and list of books for each course, assigned to them in the preliminary meeting.

List of Elective Courses:

1. Research project/Internship
2. Institutional Economics
3. Welfare and Happiness Economics
4. Labor Economics
5. Population Economics
6. Comparative Economic System
7. Project Appraisal and Investment Analysis
8. Environmental and Natural Resource Economics
9. Dynamic Macro Economics
10. Public Policies
11. Rural Development
12. Ethics in Economics
13. International Finance
14. Development Policy
15. Institutional Economics
16. Financial Markets
17. Managerial Economics

18. Political Economy
19. Industrial Economics
20. Transport Economics
21. Health Economics
22. Experimental and Behavioral Economics
23. Urban Economics
24. Regional Economics
25. Poverty and Income Distribution
26. Energy Economics
27. Economics of Education
28. Agricultural Economics

DETAIL OF COURSES

Foundation Courses

PRINCIPLES OF MICRO ECONOMICS

Objectives:

Microeconomics studies the behavior of specific economic units that make up the economic aggregates. Microeconomics is the subject matter of this course explaining the behavior of specific economic units. The main focus will be on theories of consumption, production, distribution and role of the government. Topics include demand, supply, household behavior and consumer choice, the cost structure of the firms, market structures, market failures and externalities, economic regulations and Good governance. The course will rely heavily on graphical analysis and simple numerical calculations.

Introduction to Economics:

Studying Choice in a World of Scarcity :The No-Free-Lunch Principle , The Cost-Benefit Principle , Reservation Prices , Economic Surplus , Opportunity Cost , The Role of Economic Models , To What Extent should an Activity be Perused , Micro Economic Versus Macro Economics , Economic Naturalism , Positive Versus Normative Economics , Some common Pitfalls for Decision Makers , Conclusion.

Consumer Behaviour:

Cardinal Approach/Utility Analysis, Marginal Utility, Law of Diminishing Marginal Utility, Law of Equi-Marginal Utility, Consumer Equilibrium
Ordinal Approach of Consumer Behavior, Indifference Curves, Features of Indifference Curves, Budget Line, Consumer Equilibrium, Comparison between two approaches Conclusion.

Demand & Supply:

Demand Function, Law of Demand, Shift in Demand, Change in Demand
Factors Affecting Demand, Supply Function, Law of Supply, Changes in
Supply Price Equilibrium, Market Equilibrium.

Elasticity of Demand & Supply:

Price Elasticity of Demand & Supply, Point Elasticity of Demand & Supply
Arc Elasticity of demand & Supply, Income Elasticity of Demand & Supply,
Cross Elasticity of demand & Supply, Conclusion.

Efficiency and Exchange:

Market Equilibrium and Efficiency, Economic Surplus, the Cost of Preventing
Price Adjustments, Taxes and Efficiency, Conclusion.

The Theory of production & Theory of Cost:

The Production Function , Total, average and marginal product, Laws of
Returns to Scale , Short run Theory of Cost , Seven family cost curves,
Relationship between Production and Cost Curves . Long-run Theory of Cost:
Graphical Representation of Long Run Cost Economies, Diseconomies and
Constant Returns to Scale.

Market Structure:

Perfect Competition vs. Pure Competition, Different Possibilities of SR firm
Equilibrium, Profit Maximization in the Short-run and long-run

Monopoly: Short run and Long run Equilibrium under Monopoly. Conclusion
(Comparison of both) Imperfect Competition: Monopolistic Competition, Price
and output determination in monopolistic competition , Comparison perfect
competition with monopolistic competition Oligopoly: Definition, Strategic
behavior and game Theory, Price Rigidity and the kinked demand curve,
Conclusion (Comparison of both) Labor Markets

The Market Demand for Labor, Supply of labor, Shifts in the market
demand for and supply of labor, Inefficiency wages, monopsony

Textbooks & Supplies:

1. Mankiw, "Principles of Economics" 7th Edition, (2008), Southwest Publishers

2. Miller, R. L –Economics Today-14th Edition (2005) Addison Wesley

Supplementary Material:

Samuelson Nordons –Economics -18th edition (2004), McGraw-Hill, Inc.

McConnell and Bruce-Principles of Economics -17th Edition, (2006), McGraw-
Hill.

PRINCIPLES OF MACROECONOMICS

Objectives:

The course is designed for the beginners with no formal background or little acquaintance with economics. The objective is to give the students with a clear understanding of the basic concepts, tools of analysis and terminologies used in macroeconomics. The teacher is expected to draw examples from the surrounding world to clarify the concepts.

Course Contents:

Introduction:

The economy in aggregate, Complexities of the world of business, Scope of macroeconomics, Brief account of classical and the development of macro-economic after the World War-II, Concept of business cycles: Boom and Depression, three concerns of macroeconomics, Inflation, GDP growth and unemployment, Macroeconomic variables and their mutual relationship, Macro-models as abstraction from the real economy.

National Income:

Definition and concept of national income, Measures of national income: Gross Domestic Product (GDP) and Gross National Product (GNP), GDP at factor cost and at market prices, Computation of national income: Product, Income and Expenditure approaches, Circular flow of income, Nominal versus Real income, Per capita income and the standard of living.

Components of Aggregate Demand:

The Concept of Open and closed economy models, Concept of aggregate markets: Product, Money, Labor and Capital markets, Components of aggregate demand: Consumption, Investment and Government spending, Income and expenditure identities. Money and Monetary policy, Fiscal Policy.

Recommended Texts:

1. Mankiw, G—Principles of Economics- latest edition.
2. Samulson and Nordrons - Economics –latest edition

Additional Texts:

1. Parkin, Michael - Macroeconomics, latest edition
2. Miller, R.L.— Economics Today – latest edition

INTERMEDIATE MICROECONOMICS

PRE REQUISITE: Principles of Microeconomics

Objectives:

The course seeks to provide an understanding of the core economic models for the analysis of decisions by consumers, markets and firms. It would provide some illustrations of the applications of some models to contemporary issues in economics. It also emphasizes upon the welfare concept in economics.

An introduction to Economic models:

Optimization techniques, Constructing a model, Optimization and equilibrium,

Utility:

Constructing a Utility Function, Maximization of function of one variable Functions of several variables, Constrained maximization, utility maximization Axioms of rational choice, Utility, Indifference curves and marginal rate of substitution Utility functions for specific preferences, Utility maximization: optimization principle Indirect utility function, Income and substitution effects, Demand relationship among goods Demand functions, Changes in income, Changes in goods price, Individual demand curve Compensated demand curve, Mathematical development response to price changes, Consumer surplus revealed preferences, Substitutes and complements Substitutability with many goods composite commodities.

From Individual to Market Demand:

The Inverse Demand Function, the Elasticity of a Linear Demand Curve Elasticity and Demand, Elasticity and Revenue, Elasticity and Marginal Revenue.

Supply:

Market supply, Market equilibrium, Effect of tax Taxation with Linear Demand and Supply Passing along a Tax, Consumer and producers' burden of tax, deadweight Loss of a Tax.

Production function:

Marginal productivity, Iso quant maps and the rate of technical substitution Returns to scale, the elasticity of substitution, Cost functions Cost functions and the shifts in the cost curves, Short run long run distinction, Profit maximization.

Firms:

The nature and behavior of firms, Profit maximization, Marginal revenue, and short run supply by a price taking firm, Profit functions, Profit maximization and input demands.

Monopoly:

Linear Demand Curve and Monopoly, Markup Pricing, The Impact of Taxes on a Monopolist, Inefficiency of Monopoly, Deadweight Loss of

Monopoly, Price Discrimination, First Degree Price Discrimination, Second-Degree Price Discrimination, Third-Degree Price Discrimination

Oligopoly:

Choosing a Strategy, Quantity Leadership, the Follower's Problem, the Leader's Problem Price Leadership Comparing Price Leadership and Quantity Leadership, Simultaneous Quantity Setting Cournot Equilibrium, Simultaneous Price Setting, Collusion.

Game theory:

Basic concepts, Nash equilibrium, Existence of Nash equilibrium, the prisoners dilemma, A two period game, Pricing in static games, Entry exit and strategy, Games of incomplete information.

The Edge Worth Box:

Trade, Pareto Efficient Allocations, Market Trade, The Algebra of Equilibrium Walras' Law, Relative Prices, Equilibrium and Efficiency, Pareto Efficiency, Social Welfare Functions Welfare Maximization, Individualistic Social Welfare Functions, Fair Allocations.

Textbooks:

- 1) Intermediate Microeconomics: A Modern Approach, 7th Edition by Hal R. Varian.
- 2) Microeconomics by Pindyck and Rubinfeld 8th Edit.
- 3) Microeconomic theory Basic Principles and Extensions, 9th Edition by Nicholson, W.

INTERMEDIATE MACROECONOMICS

PRE REQUISITE: Principles of Macroeconomics

Reading Material:

Textbook:

1. Mankiw, N. Gregory (2013). Macroeconomics. 8th Edition, Worth Publishers.
2. *Supplementary Texts*
3. Abel, Andrew, B., Bernanke, Ben S. & Croushore, D. (2010). Seventh Edition. Addison-Wesley.
4. Williamson, Stephen D. (2010). Macroeconomics. 4th Edition, Prentice Hall.

And other readings and handouts, as required.

Topics and Chapters to be Covered:

A. INTRODUCTION TO MACROECONOMICS

- 1. The Science of Macroeconomics (Mankiw Ch#1, ABC Ch#1, Williamson Ch#1)**
 - 1.1 What Macroeconomists Study
 - 1.2 How Economists Think

- 2. The Data of Macroeconomics (Mankiw Ch#2, ABC Ch#2, Williamson Ch#2)**
 - 2.1 Measuring the Value of Economic Activity: Gross Domestic Product

 - 2.2 Measuring the Cost of Living: The Consumer Price Index

 - 2.3 Measuring Joblessness: The Unemployment Rate

 - 2.4 From Economic Statistics to Economic Models

- 3. National Income: Where it comes from and Where it Goes? (Mankiw Ch#3, ABC Ch#3, Williamson Ch#4)**
 - 3.1 What Determines the Total Production of Goods and Services?

 - 3.2 How Is National Income Distributed to the Factors of Production?

 - 3.3 What Determines the Demand for Goods and Services?

 - 3-4 What Brings the Supply and Demand for Goods and Services into Equilibrium?

B. MONEY, PRICES, AND UNEMPLOYMENT

4. The Monetary System: What it is and How it Works? (Mankiw Ch#4, ABC Ch#7, Williamson Ch#11, 16)

4.1 What Is Money?

4.2 The Role of Banks in the Monetary System

4.3 How Central Banks Influence the Money Supply

Inflation: It Causes, Effects, and Social Costs (Mankiw Ch#5, ABC Ch#7,12, Williamson Ch#18)

5.1 The Quantity Theory of Money

5.2 Seigniorage: The Revenue From Printing Money

5-3 Inflation and Interest Rates

5-4 The Nominal Interest Rate and the Demand for Money

5.5 The Social Costs of Inflation

5.6 Hyperinflation

5. Unemployment (Mankiw Ch#7, ABC Ch#3,12, Williamson Ch#17)

6.1 Job Loss, Job Finding, and the Natural Rate of Unemployment

6.2 Job Search and Frictional Unemployment

6.3 Real-Wage Rigidity and Structural Unemployment

6.4 Labor-Market Experience: The United States

6.5 Labor-Market Experience: Europe

C. THE ECONOMY IN THE SHORT RUN: ECONOMIC FLUCTUATIONS

6. Introduction to Economic Fluctuations (Mankiw Ch#10, ABC Ch#8, Williamson Ch#3)

7.1 The Facts About the Business Cycle

7.2 Time Horizons in Macroeconomics

How the Short Run and Long Run Differ

The Model of Aggregate Supply and Aggregate Demand

- 7.3 Aggregate Demand
 - The Quantity Equation as Aggregate Demand
 - Why the Aggregate Demand Curve Slopes Downward
 - Shifts in the Aggregate Demand Curve
- 7.4 Aggregate Supply
 - The Long Run: The Vertical Aggregate Supply Curve
 - The Short Run: The Horizontal Aggregate Supply Curve
 - From the Short Run to the Long Run
- 7.5 Stabilization Policy
 - Shocks to Aggregate Demand
 - Shocks to Aggregate Supply

7. Aggregate Demand I: Building the IS-LM Model (Mankiw Ch#11, ABC Ch#9)

8.1 The Goods Market and the IS Curve

8.2 The Money Market and the LM Curve

8.3 The Short-Run Equilibrium

8. Aggregate Demand II: Applying the IS-LM Model (Mankiw Ch#12, ABC Ch#11)

9.1 Explaining Fluctuations with the IS–LM Model

9.2 IS–LM as a Theory of Aggregate Demand

9.3 The Great Depression

9. Aggregate Supply and the Short-run Tradeoff Between Inflation and Unemployment (Mankiw Ch#14, ABC Ch#11, Williamson Ch#13)

10.1 The Basic Theory of Aggregate Supply

10.2 Inflation, Unemployment, and the Phillips Curve

10. A Dynamic Model of Aggregate Demand and Aggregate Supply (Mankiw Ch#15)

11.1 Elements of the Model

11.2 Solving the Model

11.3 Using the Model

11.4 Two Applications: Lessons for Monetary Policy

11.5 Toward DSGE Models

11. Classical Business Cycle Analysis: An Equilibrium Business Cycle Model (ABC Ch#10, Williamson Ch#12)

12.1 Business Cycles in the Classical Model

12.2 Money in the Classical Model

12.3 The Misperceptions Theory and the non-neutrality of Money

STATISTICS I

A free online course with video-lectures, corresponding written lectures, self-assessment exams and computer exercises for each lecture has been prepared especially for Pakistani students. This course is available from <http://asadzaman.net>. Statistics teachers are encouraged to use this material to develop their own courses, built around the following recommended outline.

UNIT ONE: Descriptive Statistics

1. Introduction & Motivation
2. Index Numbers – Laspayres & Paasche
3. Sorting, Ranking and Percentiles.
4. Representative Measures: Mean, Median, Mode
5. Measuring Variation: Interquartile Range (IQR) and Standard Deviation.
6. Data Summaries: the Boxplot.
7. Histograms.
8. Data Density estimates.
9. Picturing Bivariate Relationships.

UNIT TWO: Random Samples

10. Random Draws from Populations
11. Random Variables
12. Probability Laws: Additive and Multiplicative
13. Binomially Distributed Random Variables
14. Expected Values, Averages, and Law of Large Numbers
15. Central Values and Unexpected Values.
16. Approximations of Binomial by Normal Distribution
17. Central Limit Theorem: Approximating Sums by Normals
18. Assessing Independence in Contingency Tables.

STATISTICS II

This is a continuation of the previous course, and should be based on topics treated in Freedman, Pisani and Purves – Statistics 4th Edition. References like Ch. 1 below are to chapters in this textbook.

1. Causality via Experimental Data – Ch. 1
2. Causality via Observational Data – Ch. 2
3. Review of Histograms & Density Estimates. – Ch. 3 & Lec 7 & 8 from Stats I above.
4. Normal Approximation. Ch. 5.
5. Measurement Error. Ch. 6
6. Correlations: Basic Ideas, Ch. 8
7. Correlations: Complexities Ch. 9
8. Regressions: Basics. Ch. 10
9. Regressions: Complications, Ch. 11, 12, and additional materials
10. Review of Central Limit Theorem & Random Sampling. Ch. 16 & 21.
11. Sample Surveys: Ch. 19
12. Gallup Poll – Ch. 20, 21
13. Survey of Employment & Unemployment – Ch. 22
14. Hypothesis Tests – Ch. 24, 25, 26
15. Tests for Independence – Ch. 28
16. Applications to Real Data Sets.

DEVELOPMENT ECONOMICS

Objective:

This is a first course in development economics that studies the economics of low and middle income countries. Topics include the structure of developing countries, their institutions, the policies their governments follow, the contours of poverty and inequality, and the ongoing struggles with economic growth. Apart from that it would cover theoretical foundations for different policy issues such as--What is the role of markets? Is government intervention in a market is a good thing? Do we need to be concerned about inequality? and why? What are institutions, and how do they facilitate or hinder economic development? Is development necessarily uneven, with some sectors growing and others stagnating? How do we think about the political economy of development: from voting or lobbying all the way to conflict? What are local problems and policies and what are international problems and policies?

Contents:

An overview of Development:

Historical experiences of developing countries, broad conceptual explanation of underdevelopment, comparative economic development, emerging major

issues of developing world, basic theories of growth and development, and contemporary models of underdevelopment/development.

Domestic problems and Policies:

The nexus of poverty, inequality and underdevelopment, the distribution of wealth and resources, poverty and nutrition, demographic transition, population growth; its causes and consequences, urbanization/rural-urban migrations; its causes and consequences, human capital; education, health and development, agriculture and rural development, wars and conflicts, environment and natural resources, sustainable development.

International problems and Policies:

Trade/access to factor and product markets and development, balance of payment problems, debt, stabilization policies, international shocks, foreign finance, foreign aid, international wars and conflicts, migration and remittances.

Markets and Development:

The role of markets in development, credit, financing, SME's, industrial and trade policies, land, labor and agriculture, livestock, market failure and government intervention, stabilization policies.

Institutions and Development:

What are institutions, how do they facilitate or hinder economic development? The political economy, democracy vs dictatorship, decentralization, good governance, corruption, rent seeking, ethnic conflict, gender inequality, voting and lobbying, the role of civil society.

Recommended Books:

1. Todaro, M. P. and S. C. Smith. *Economic Development*, 11th edition (2011). Palgrave.
2. Debraj Ray. *Development Economics*, (1998), Princeton University Press.

Topic-wise break-ups:

D. PRINCIPLES AND CONCEPTS

1. *Introducing Economic Development: A Global Perspective* (Todaro Ch. 1, Ray Ch. 1)

1.1 *How the Other Half Live*

1.2 *Economics and Development Studies*

1.3 *What Do We Mean by Development?*

1.4 *The Millennium Development Goals*

2. *Comparative Economic Development* (Todaro Ch. 2, Ray Ch. 1)

2.1 *Defining the Developing World*

- 2.2 Basic Indicators of Development: Real Income, Health, and Education
- 2.3 Holistic Measures of Living Levels and Capabilities
- 2.4 Characteristics of the Developing World: Diversity within Commonality
- 2.5 How Low-Income Countries Today Differ from Developed Countries in Their Earlier Stages
- 2.6 Are Living Standards of Developing and Developed Nations Converging?
- 2.7 Long-Run Causes of Comparative Development
- 3. **Classic Theories of Economic Growth and Development (Todaro Ch. 3, Ray Ch. 2)**
 - 3.1 Classic Theories of Economic Development: Four Approaches
 - 3.2 Development as Growth and the Linear-Stages Theories
 - 3.3 Structural-Change Models
 - 3.4 The International-Dependence Revolution
 - 3.5 The Neoclassical Counterrevolution: Market Fundamentalism
 - 3.6 Classic Theories of Development: Reconciling the Differences
- 4. **Contemporary Models of Development and Underdevelopment (Todaro Ch. 4)**
 - 4.1 Underdevelopment as a Coordination Failure
 - 4.2 Multiple Equilibria: A Diagrammatic Approach
 - 4.3 Starting Economic Development: The Big Push
 - 4.4 Further Problems of Multiple Equilibria
 - 4.5 Michael Kremer's O-Ring Theory of Economic Development
 - 4.6 Economic Development as Self-Discovery
 - 4.7 The Hausmann-Rodrik-Velasco Growth Diagnostics Framework

E. PROBLEMS AND POLICIES: DOMESTIC

- 5. **Poverty, Inequality, and Development (Todaro Ch. 5, Ray Ch. 6, 7 & 8)**
 - 5.1 Measuring Inequality and Poverty
 - 5.2 Poverty, Inequality, and Social Welfare
 - 5.3 Absolute Poverty: Extent and Magnitude
 - 5.4 Economic Characteristics of High-Poverty Groups
 - 5.5 Policy Options on Income Inequality and Poverty: Some Basic Considerations

- 6. Population Growth and Economic Development: Causes, Consequences, and Controversies (Todaro Ch. 6, Ray Ch. 9)**
 - 6.1 The Basic Issue: Population Growth and the Quality of Life
 - 6.2 Population Growth: Past, Present, and Future
 - 6.3 The Demographic Transition
 - 6.4 The Causes of High Fertility in Developing Countries: The Malthusian and Household Models

 - 6.5 The Consequences of High Fertility: Some Conflicting Perspectives
 - 6.6 Some Policy Approaches

- 7. Urbanization and Rural-Urban Migration: Theory and Policy (Todaro Ch. 7, Ray Ch. 10)**
 - 7.1 The Migration and Urbanization Dilemma
 - 7.2 The Role of Cities
 - 7.3 The Urban Giantism Problem
 - 7.4 The Urban Informal Sector
 - 7.5 Migration and Development
 - 7.6 Toward an Economic Theory of Rural-Urban Migration

- 8. Human Capital: Education and Health in Economic Development (Todaro Ch. 8, Ray Ch. 4 & 13)**
 - 8.1 The Central Roles of Education and Health
 - 8.2 Investing in Education and Health: The Human Capital Approach
 - 8.3 Child Labor
 - 8.4 The Gender Gap: Discrimination in Education and Health
 - 8.5 Educational Systems and Development
 - 8.6 Health Measurement and Distribution
 - 8.7 Disease Burden
 - 8.8 Health, Productivity, and Policy

- 9. Agricultural Transformation and Rural Development (Todaro Ch. 9, Ray Ch. 11)**
 - 9.1 The Imperative of Agricultural Progress and Rural Development
 - 9.2 Agricultural Growth: Past Progress and Current Challenges
 - 9.3 The Structure of Agrarian Systems in the Developing World
 - 9.4 The Important Role of Women
 - 9.5 The Microeconomics of Farmer Behavior and Agricultural Development
 - 9.6 Core Requirements of a Strategy of Agricultural and Rural Development

- 10. The Environment and Development (Todaro Ch. 10)**
 - 10.1 Environment and Development: The Basic Issues

- 10.2 Rural Development and the Environment: A Tale of Two Villages
- 10.3 Global Warming and Climate Change: Scope, Mitigation, and Adaptation
- 10.4 Economic Models of Environment Issues
- 10.5 Urban Development and the Environment
- 10.6 The Local and Global Costs of Rain Forest Destruction
- 10.7 Policy Options in Developing and Developed Countries

11. Development Policymaking and the Roles of Market, State, and Civil Society (Todaro Ch. 11)

- 11.1 A Question of Balance
- 11.2 Development Planning: Concepts and Rationale
- 11.3 The Development Planning Process: Some Basic Models
- 11.4 Government Failure and the Resurgent Preference for Markets over Planning
- 11.5 The Market Economy
- 11.6 The Washington Consensus on the Role of the State in Development and Its
- 11.7 Development Political Economy: Theories of Policy Formulation and Reform
- 11.8 Development Roles of NGOs and the Broader Citizen Sector
- 11.9 Trends in Governance and Reform

F. PROBLEMS AND POLICIES: INTERNATIONAL AND MACRO

12. International Trade Theory and Development Strategy (Todaro Ch. 12, Ray Ch. 16)

- 12.1 Economic Globalization: An Introduction
- 12.2 International Trade: Some Key Issues
- 12.3 The Traditional Theory of International Trade
- 12.4 The Critique of Traditional Free-Trade Theory in the Context of Developing-Country Experience
- 12.5 Traditional Trade Strategies for Development: Export Promotion versus Import Substitution
- 12.6 The Industrialization Strategy Approach to Export Policy
- 12.7 South-South Trade and Economic Integration
- 12.8 Trade Policies of Developed Countries: The Need for Reform and Resistance to New Protectionist Pressures

13. Balance of Payments, Debt, Financial Crises, and Stabilization Policies (Todaro Ch. 13)

- 13.1 International Finance and Investment: Key Issues
- 13.2 The Balance of Payments Account
- 13.3 The Issue of Payments Deficits
- 13.4 Accumulation of Debt and Emergence of the Debt Crisis

- 13.5 Attempts at Alleviation: Macroeconomic Instability, Classic IMF Stabilization Policies, and Their Critics
- 13.6 "Odious Debt" and Its Prevention
- 13.7 Resolution of 1980s–1990s Debt Crises and Continued Vulnerabilities
- 13.8 The Global Financial Crisis and the Developing Countries
- 14. Foreign Finance, Investment, and Aid: Controversies and Opportunities (Todaro Ch. 14)**
 - 14.1 The International Flow of Financial Resources
 - 14.2 Private Foreign Direct Investment and the Multinational Corporation
 - 14.3 The Role and Growth of Remittances
 - 14.4 Foreign Aid: The Development Assistance Debate
 - 14.5 Conflict and Development
- 15. Finance and Fiscal Policy for Development (Todaro Ch. 15, Ray Ch. 18)**
 - 15.1 The Role of the Financial System in Economic Development
 - 15.2 The Role of Central Banks and Alternative Arrangements
 - 15.3 Informal Finance and the Rise of Microfinance
 - 15.4 Reforming Financial Systems
 - 15.5 Fiscal Policy for Development
 - 15.6 State-Owned Enterprises and Privatization
 - 15.7 Public Administration: The Scarcest Resource

Additional Readings:

1. Sokoloff, K. and S. Engerman (2000), "History Lessons: Institutions, Factor Endowments, and Paths of Development in the New World," *Journal of Economic Perspectives*.
2. Acemoglu, D., Johnson, S. and J. Robinson (2001), "The Colonial Origins of Comparative Development: An Empirical Investigation," *American Economic Review*.
3. S. Anderson and D. Ray (2010), "Missing Women: Age and Disease," *Review of Economic Studies*.
4. K. Munshi and J. Myaux (2006), "Social Norms and the Fertility Transition," *Journal of Development Economics*.
5. J. Esteban, L. Mayoral and D. Ray (2012), "Ethnicity and Conflict: Theory and Facts," *Science*.
6. Acemoglu, Daron and James A. Robinson (2006), *Economic Origins of Dictatorship and Democracy*, Cambridge University Press;
7. Basu, K. *Analytical Development Economics: The Less Developed Economy Revisited*. (Cambridge: MIT Press)
8. Thirlwall, A. P. *Growth, and Development with Special Reference to Developing Economies*. (Basingstoke: Palgrave Macmillan)

RESEARCH METHODS

Course Description:

This course is designed to provide students, enrolled in the undergraduate program of Economics, with the skills required to understand different scientific research tools, using for academic as well as professional investigation of the information. Topics, which will be covered, are scientific method, research design; measurement; 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. They will learn how to define a research question, explore the strengths of various methods, and experience different data collection methods. Students will be helped for drafting a preliminary research proposal. Students will also learn about some ethics, which are essential for the research.

Free online course, with video-taped lectures and other resources is available from website asadzaman.net. These lectures cover many aspects of the topics outlined below.

Course Contents:

Introduction to Research:

Why study research methods? Aims and Assumptions of this course, Central Issues of Research, Descriptive vs Explanation, Different ways to answer the situations.

Research Ethics:

Plagiarism, Data Collection and Analysis, Treatment of Human Subjects, Making Ethical Decisions, The Uses of Research: Science and Society

Problem Identification:

Analysis of the area of interest, The relationship between theory and method, What makes a problem/ topic interesting? What is researchable? Feasibility...The 'so what?!' factor The value of simplicity,

Research Questions:

General and Specific Research Questions, Developing Research Questions in Different Situations, Role of Research Questions, Hypothesis

Elements of Research Design:

Units of Analysis, Variables, Relationships, Statistically Significant Relationship, Research Purpose and Research Design, Qualitative Research Design, Quantitative Research Design

Proposal Writing:

How to draft a quality Proposal

Research Method:

Overview of research methods, Quantitative (multivariate) methods, Qualitative (interpretive) methods, Using available data, Multi-method and applied research methods

Data Collection:

Experiments, Survey Design, Field Study, Secondary Data Collection

Sampling:

Population Definition, Sampling Designs, Probability Sampling, Non Probability Sampling, Factors Affecting Choice of Sample Design, Sample Size and Factors Affecting Sample Size. Sampling Error

Data Analysis:

Data Processing, Preliminary Descriptive Analysis, Quantitative Data Analysis, Qualitative Data Analysis, Interpretation of Results

Report Writing:

Abstract, Introduction, Literature Review, Methods and Data Collection, Findings and Interpretation, Conclusion and Suggestions. References.

Recommended Books:

1. Singleton & Straits, "*Approaches to Social Research*" *latest Edition*, Oxford University Press
2. Keith F, Punch, "Introduction to Social Research: Quantitative and Qualitative Approaches" *latest Edition*, Sage Publication

MATHEMATICAL ECONOMICS I

Course Description:

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

Course Outline:

1. Preliminaries:

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

2. Functions of one real variable:

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

3. Single-variable optimization:

Geometric properties of functions: convex functions, their characterizations and applications; local and global optima: geometric characterizations, characterizations using calculus and applications.

4. Integration of functions:

Areas under curves; indefinite integrals; the definite integral.

5. Difference equations:

First order difference equations.

Readings:

1. K. Sydsaeter and P. Hammond, *Mathematics for Economic Analysis*, Pearson Educational
2. Asia, Delhi, 2002.
3. A. C. Chiang, *Fundamental Methods of Mathematical Economics*. N. Y., McGraw-Hill Co, Latest edition.

WORLD ECONOMIC HISTORY:

World Economic History: Origins of Development and Underdevelopment

Prerequisites: None

Description:

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.

Textbook:

The main textbook for this course is:

1. L. S. Stavrianos' *Global Rift: The Third World Comes of Age*, (New York: William Morrow and Company, 1981).

Additional readings are:

Kuhnen, Frithjof. "Causes of underdevelopment and concepts for development. An introduction to development theories." *The Journal of Institute of Development Studies, NWFP Agriculture* 8 (1987).

Arrighi, Giovanni. "Globalization and the Rise of East Asia Lessons from the Past, Prospects for the Future." *International Sociology* 13.1 (1998): 59-77.

Findlay, Ronald, and Kevin H. O'Rourke. *Power and plenty: trade, war, and the world economy in the second millennium*. Princeton, NJ: Princeton University Press, 2007.

Stiglitz, Joseph E. *Globalization and its Discontents*. Vol. 500. New York: WW Norton, 2002.

Stiglitz, Joseph E. "Globalization, technology, and Asian development." *Asian Development Review* 20.2 (2003): 1-18.

Module One:

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

1. Introduction: Dependency Theories.
Readings: Kuhn – Causes of underdevelopment
2. The Discovery of America.
Readings: Stavrianos, pp. 74-99
3. The Origins of the Slave Trade.
Readings: Stavrianos, pp. 99-122
4. Overland Trade Routes and the Middle East.
Readings: Stavrianos, pp. 122-141
5. Origins of Colonial Expansion in Asia.
Readings: Stavrianos, pp. 141-169

Module Two: Industrial Capitalism to Monopoly Capitalism,
1771 – 1870

6. The First Industrial Revolution.
Readings: Stavrianos, pp. 169-177
7. The Latin American Revolutions.
Readings: Stavrianos, pp. 177-196
8. The End of the Slave Trade
Readings: Stavrianos, pp. 196-205
9. Expansions into the Middle East
Readings: Stavrianos, pp. 205-230
10. The Conquest of India
Readings: Stavrianos, pp. 230-250

Module Three: Monopoly Capitalism to The First World War,
1870 – 1917

11. The Second Industrial Revolution.
Readings: Stavrianos, pp. 256-278
12. The Scramble for Africa
Readings: Stavrianos, pp. 278-309
13. The Opium Wars and the Onslaught on East Asia.
Readings: Stavrianos, pp. 309-333
14. Russian Political and Economic Developments
Readings: Stavrianos, pp. 333-349
15. The Japanese Response.
Readings: Stavrianos, pp. 349-367

Module Four: Nationalist Thought and Indigenous Responses to the West

16. Origins of Nationalist Thought I.
Readings: Stavrianos, pp. 367-390
17. Origins of Nationalist Thought II.
Readings: Stavrianos, pp. 390-433
18. The Russian Revolution.
Readings: Stavrianos, pp. 484-513
19. Rise of East Asia:
Readings: Arrighi p 59=77
- 20: (Re)-Globalization:
Readings: p496-540 from Findlay & O'Rourke
also: Stiglitz (p1-18)

Major Courses:

MACROECONOMICS

PRE REQUISITE: Intermediate Macroeconomics

Reading Material:

Textbook:

1. Mankiw, N. Gregory (2013). Macroeconomics. Eighth or latest Edition, Worth Publishers.
2. Weil, David N. (2012). Economic Growth. Third Edition, Pearson.

Supplementary Texts:

1. Abel, Andrew, B., Bernanke, Ben S. & Croushore, D. (2010). Seventh or latest Edition. Addison-Wesley.
2. Williamson, Stephen D. (2010). Macroeconomics. Fourth or latest Edition, Prentice Hall.
3. Romer, David - Advanced Macroeconomics -(latest edition)- McGraw Hills, New York.

And other readings and handouts, as required.

Topics and Chapters to be Covered:

A. THE ECONOMY IN THE VERY LONG RUN

1. Economic Growth I: Capital Accumulation and Population Growth (Mankiw Ch#8, Weil Ch#3, 4, Williamson Ch#6)

1.1 The Accumulation of Capital

1.2 The Golden Rule Level of Capital

1.3 Population Growth

2. Economic Growth II: Technology, Empirics, Policy, and Human Capital (Mankiw Ch#9, Weil Ch#7, 8, 9, 6, Williamson Ch#7)

2.1 Technological Progress in the Solow Model

2.2 From Growth Theory to Growth Empirics

2.3 Policies to Promote Growth

2.4 Beyond the Solow Model: Endogenous Growth Theory

3. Economic Growth III: Beyond the Correlates of Economic Growth (Weil Ch#14 & 15)

3.1 The Effect of Culture on Economic Growth

3.2 What Determines Culture?

3.3 Cultural Change

3.4 Geography

3.5 Climate

3.6 Natural Resources

B. TOWARDS MICROECONOMIC FOUNDATIONS OF THE MACRO ECONOMY

4. Understanding Consumer Behaviour (Mankiw Ch#16, ABC Ch#4, Williamson Ch#8)

4.1 John Maynard Keynes and the Consumption Function

4.2 Irving Fisher and Intertemporal Choice

4.3 Franco Modigliani and the Life-Cycle Hypothesis

4.4 Milton Friedman and the Permanent-Income Hypothesis

4.5 Robert Hall and the Random-Walk Hypothesis

4.6 David Laibson and the Pull of Instant Gratification

5. The Theory of Investment (Mankiw Ch#17, ABC Ch#5, Williamson Ch#10)

5.1 Business Fixed Investment

5.2 Residential Investment

5.3 Inventory Investment

C. INTERNATIONAL MACROECONOMICS: THE OPEN ECONOMY

6. The Open Economy (Mankiw Ch#6, ABC Ch#13, Williamson Ch#14)

6.1 The International Flows of Capital and Goods

6.2 Saving and Investment in a Small Open Economy

6.3 Exchange Rates

7. Open Economy Revisited: The Mundell-Fleming Model and the Exchange Rate Regime (Mankiw Ch#13, ABC Ch#13, Williamson Ch#15)

7.1 The Mundell–Fleming Model

7.2 The Small Open Economy Under Floating Exchange Rates

7.3 The Small Open Economy Under Fixed Exchange Rates

7.4 Interest Rate Differentials

7.5 Should Exchange Rates Be Floating or Fixed?

7.6 From the Short Run to the Long Run: The Mundell–Fleming Model With a Changing Price Level

D. MACROECONOMIC POLICY

8 Alternative Perspectives on Stabilization Policy (Mankiw Ch#18, ABC Ch#12)

8.1 Should Policy Be Active or Passive?

8.2 Should Policy Be Conducted by Rule or by Discretion?

8.3 Making Policy in an Uncertain World

9 Government Debt and Budget Deficits (Mankiw Ch#19, ABC Ch#15)

9.1 The Size of the Government Debt

9.2 Problems in Measurement

9.3 The Traditional View of Government Debt

9.4 The Ricardian View of Government Debt

9.5 Other Perspectives on Government Debt

10 The Financial System: Opportunities and Dangers (Mankiw Ch#20, Williamson Ch#9)

10.1 What Does the Financial System Do?

10.2 Financial Crises

MICROECONOMICS

PRE REQUISITE: Intermediate Microeconomics

Course Description and Objectives

This is an intermediate undergraduate course in Microeconomic Theory. It encompasses the study of strategic behavior and individual decision-making, market organization, information, public goods and externalities, and general equilibrium. More importantly, this 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. The theoretical presentation of the material will be complemented with numerical examples.

Recommended Reading

Textbook

- 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

Course Contents

1. Methodology and Course Overview

2. Games of Strategy: Game Theory (Perloff Chapter 14)

2.1 An Overview of Game Theory

2.2 Static Games

Normal-Form Games

Predicting a Game's Outcome

Multiple Nash Equilibria, No Nash Equilibrium, and Fixed Strategies

Cooperation

2.3 Dynamic Games

Sequential Game

Repeated Game

2.4 Auctions

Elements of Auctions

Bidding Strategies in Private-Value Auctions

Winner's Curse

3. Market Organization: Oligopoly and Monopolistic Competition (Perloff Chapter 13)

3.1 Market Structures

3.2 Cartels

Why Cartels Succeed or Fail

Maintaining Cartels

Mergers

3.3 Noncooperative Oligopoly

3.4 Cournot Oligopoly Model

The Cournot Equilibrium with Two or More Firms

The Cournot Model with Non-identical Firms

3.5 Stackelberg Oligopoly Model

Why Moving Sequentially Is Essential

Strategic Trade Policy: An Application of the Stackelberg Model

3.6 Comparison of Collusive, Cournot, Stackelberg, and Competitive Equilibria

3.7 Bertrand Oligopoly Model

Bertrand Equilibrium with Identical Products

Nash-Bertrand Equilibrium with Differentiated Products

3.8 Monopolistic Competition

Monopolistically Competitive Equilibrium

Fixed Costs and the Number of Firms

4. Risk, Uncertainty and Expected Utility (Perloff Chapter 17)

4.1 Degree of Risk

Probability

Expected Value

Variance and Standard Deviation

4.2 Decision Making Under Uncertainty

Expected Utility

Attitudes Toward Risk

Degree of Risk Aversion

4.3 Avoiding Risk

Obtain Information

Diversify

Insure

4.4 Investing Under Uncertainty

How Investing Depends on Attitudes Toward Risk

Investing with Uncertainty and Discounting

Investing with Altered Probabilities

5. General Equilibrium (Perloff Chapter 10)

5.1 General Equilibrium

Competitive Equilibrium in Two Interrelated Markets

Minimum Wages with Incomplete Coverage

- 5.2 General Equilibrium Exchange Economy: Trading Between Two People
 - Endowments
 - Mutually Beneficial Trades
 - Deriving the Contract Curve
 - Bargaining Ability
- 5.3 Competitive Exchange
 - Competitive Equilibrium
 - The Efficiency of Competition
 - Obtaining Any Efficient Allocation Using Competition
- 5.4 Production and Trading
 - Comparative Advantage
 - Efficient Product Mix
 - Competition
- 6. Asymmetric Information, Adverse Selection, Contracts, and Moral Hazard (Perloff Chapters 19 and 20)**
 - 6.1 Problems Due to Asymmetric Information
 - 6.2 Responses to Adverse Selection
 - Controlling Opportunistic Behavior Through Universal Coverage
 - Equalizing Information
 - 6.3 How Ignorance About Quality Drives Out High-Quality Goods
 - Lemons Market with Fixed Quality
 - Lemons Market with Variable Quality
 - Limiting Lemons
 - 6.4 Market Power from Price Ignorance
 - Tourist-Trap Model
 - Advertising and Prices
 - 6.5 Problems Arising from Ignorance when Hiring
 - Information About Employment Risks
 - Cheap Talk
 - Education as a Signal
 - Screening in Hiring
 - 6.6 Principal-Agent Problem
 - A Model
 - Types of Contracts
 - Efficiency
 - 6.7 Production Efficiency
 - Efficient Contract
 - Full Information
 - Asymmetric Information
 - 6.8 Trade-Off Between Efficiency in Production and in Risk Bearing
 - Contracts and Efficiency
 - Choosing the Best Contract
 - 6.9 Payments linked to Production or Profit
 - Piece-Rate Hire Contracts
 - Contingent Contract Rewards Linked to a Firm's Success

- 6.10 Monitoring
 - Bonding
 - Deferred Payments
 - Efficiency Wages
 - After-the-Fact Monitoring
- 6.11 Contract Choice

7. Externalities and Public Goods (Perloff Chapter 18)

- 7.1 Externalities
- 7.2 The Inefficiency of Competition with Externalities
 - Supply-and-Demand Analysis
 - Cost-Benefit Analysis
- 7.3 Regulating Externalities
 - Emissions Fees Versus Standards Under Uncertainty
- 7.4 Market Structure and Externalities
 - Monopoly and Externalities
 - Monopoly Versus Competitive Welfare with Externalities
 - Taxing Externalities in Noncompetitive Markets
- 7.5 Allocating Property Rights to Reduce Externalities
 - Coase Theorem
 - Markets for Pollution
- 7.6 Open-Access Common Property
 - Overuse of Open-Access Common Property
 - Solving the Commons Problem
- 7.7 Public Goods
 - Types of Goods
 - Markets for Public Goods
 - Free Riding
 - Reducing Free Riding
 - Valuing Public Goods

ECONOMETRICS I

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 hour per week to computer laboratory. They have to attend classes to learn various Econometrics softwares 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 Classical Linear Regression Model (CLRM)

(a) 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

(b) 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.

(i) 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.

(ii) 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).

(iii) 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:

1. Gujarati, D. J. - Basic Econometrics – 4th Edition (2003) McGraw-Hill Company.
2. Maddala, G. S. – Econometrics - (1988) – McGraw-Hill Company.
3. Koutsoyiannis, A.- Theory of Econometrics - 2nd Edition (1977) - McMillan.

Additional Readings:

1. Dougherty, Christopher – Introduction to Econometrics – 2nd edition (2002)
Oxford University Press.
2. Wonnacot & Wonnacot –Econometrics – 2nd Edition (1970)-John Wiley, New York.
3. Pindyck & Rubinfeld- Econometric Models & Economic Forecasts- 3rd Edition (1992)- McGraw-Hill Inc.
4. Stock H. J. and M. W. Watson (2003), *Introduction to Econometrics*, India: Pearson Education.

6. Stewart G. K. (2005), *Introduction to Applied Econometrics*, United States of America: Curt Hinrichs.
7. Free online course on Introduction to Econometrics, available from <http://asadzaman.net>.

ECONOMETRICS II

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 contents of the course include panel data estimation techniques, identification problem and dummy on 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 hour per week to computer laboratory. They have to attend classes to learn various Econometrics softwares 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

Dummy Variable Regression Models:

Nature of dummy variables, ANOVA models with qualitative variables, Regression with dummy dependent and independent variables, Technical aspects of the dummy variable.

Econometric Modeling: 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.

Pool the Cross-sectional and Time-series 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.

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, Seemingly unrelated equations (SUR), Nature of SUR equations, Method of GLS, Equations having characteristics of simultaneity and SUR, Three stage least squares technique (3SLS), Full information maximum likelihood estimation (FIML)

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, Cointegration and Error Correction Mechanism (ECM), ARCH models

Recommended Books:

1. Stock H. J. and M. W. Watson (2003), *Introduction to Econometrics*, India: Pearson Education. Latest edition
2. Gujarati, D. J. - *Basic Econometrics* (2003) McGraw-Hill Company. Latest edition
3. Jeffrey M. Wooldridge J. M., (2001) "*Econometric Analysis of Cross Section and Panel Data*", The MIT Press, Latest edition
4. Dimitrios A. (latest edition), "*Applied Econometrics: A Modern Approach using Eviews and Microfit*", Palgrave, Macmillan

Additional Readings:

1. Johnston, J & John Dinardo- *Econometric Methods* – (1997) The McGraw Hill Companies, Inc, Singapore. Latest edition
2. Greene W. H (latest edition), *Econometrics Analysis*, Pearson Education, Inc

3. Intrilligator, M - *Econometric Models: Techniques and Applications*- N. J. Prentice Hall, (Latest edition).
4. Judge, George G. et al - *The Theory and Practice of Econometrics*- (1988), John Willey and Sons.
5. Maddala, G. S. & Kim –*Unit Roots, Co-integration and Structural Change* - (1998)

INTERNATIONAL TRADE THEORY

Prerequisite: Microeconomics

Objectives:

The main objective of the course is to offer a detailed introduction to the economics of international trade. In the first, we will develop an analytical framework for studying international trade. The question that we answer is, 'Why do nations trade?' Secondly, we use the analytical framework to examine policies that government adopts toward international trade.

Course Contents:

Introduction:

The gains from trade, The pattern of trade, Protectionism, The balance of payments, Exchange rate determination, International policy coordination, The international capital market.

The Ricardian Model:

The concept of comparative advantage, Trade in one factor world, Misconception about comparative advantage, Comparative advantage with many goods, Empirical evidence on the Ricardian model.

The Specific Factors Model:

Assumptions of the model, International trade in the specific factors model, Income distribution and the gains from trade.

The Heckscher Ohlin Model:

A model of a two factor economy, Effects of international trade, Empirical evidence.

The Standard Trade Model:

A standard model of a trading economy, Economic growth, International transfers of income, Tariff and export subsidies

Economics of Scale and Imperfect Competition:

Economies of scale and international trade, Economy of scale and market structure, the theory of imperfect competition, Monopolistic competition and trade, Dumping, The theory of external economies, External economy and international trade

International Factor Mobility:

International labor mobility, International borrowing and lending, Direct foreign investment and multinational firms.

Instruments of Trade Policy:

Tariff, export subsidies, import quota, voluntary export restraints, the effects of trade policy

Trade Policies in Developing Countries:

Import substituting industrialization, Problem of the dual economy, Export oriented industrialization

Recommended Books:

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

PUBLIC SECTOR ECONOMICS**Objectives:**

The course aims to develop an understanding of the impact of government policies on resource allocation and equitable distribution of income. Public economics helps to analyze and identify the effect of public policy on various macroeconomic indicators. The course facilitates to develop the economic and social intuition of government expenditures, Taxes and various social security benefits associated with public financing. It helps the understanding of the effects of public policies and enables students to envisage the consequences of these policies even before they are implemented.

Course Contents:

1. Introduction to Public Finance: Role and Function of the Government.
2. Welfare economics, the fundamental theorems of welfare economics, Market failure, Consumer and producer surplus
3. Public and Private Goods, the free rider problem; Pareto optimal supply of public goods, Public choice
4. Externalities, the nature of externalities, Externalities and Market Failures, Pigovian taxes
Private and public responses to externalities, Implications for income distribution
5. Taxation and Fundamental Tax Reforms, Taxation and Income Distribution, Tax incidence, Taxation and Efficiency, Excess Burden, Impact of taxes on market prices and output; deadweight loss in the long and short run, Ramsey Rule, Optimal Income Taxation
6. Impacts of subsidies on market equilibrium, deadweight losses in the long and short run
7. Market Failures; Cost Benefit Analysis

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

Essential Readings:

1. Public Finance- 10th edition by Ted Gayer and Harvey S. Rosen, 2010;
2. State and local public finance-3rd edition by Ronald C. Fisher, 2006;
3. Reports of State Bank Of Pakistan
4. Reports of World Bank

ECONOMIC GROWTH

Description:

This is an advanced undergraduate course in Economics, dealing with theoretical and empirical examination of economic growth and income differences between countries. The course focuses on both the historical experience of countries that are currently rich and the process of catch-up among poor countries. Topics include underlying determinants of economic growth, including population growth, accumulation of physical and human capital, technological change, natural resources, income distribution, geography, government, and culture.

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 Kuznet 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 behavior, 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.

What we have learned and where we are headed:

Recommended Books:

Main textbook:

1. David N. Weil, *Economic Growth*, 3rd edition (2012). Pearson Addison-Wesley.

There is a website for this book <http://www.aw-bc.com/weil/>, on which you will find some useful materials.

1. Charles I. Jones and Dietrich Vollrath, *Introduction to Economic Growth*, 3rd edition (2013). W. W. Norton & Company.

Additional readings:

1. Elhanan Helpman, *The Mystery of Economic Growth*, (2010). Belknap Press of Harvard University Press.
2. William R. Easterly, *The Elusive Quest for Growth: Economists' Adventures and Misadventures in the Tropics*, (2008). The MIT Press.

MATHEMATICAL ECONOMICS II**Course Description:**

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

Course Outline:**1. Differential equations:**

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

2. Linear algebra:

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

3. Functions of several real variables:

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

4. Multi-variable optimization:

Convex sets; geometric properties of functions: convex functions, their characterizations, properties and applications; further geometric properties of functions: quasiconvex functions, their characterizations, properties and applications; unconstrained optimization: geometric characterizations, characterizations using calculus and applications; constrained optimization with equality constraints: geometric characterizations, Lagrange

characterization using calculus and applications; properties of value function: envelope theorem and applications.

Readings:

1. K. Sydsaeter and P. Hammond, *Mathematics for Economic Analysis*, Pearson Educational Asia, Delhi, 2002.
2. A. C. Chiang, *Fundamental Methods of Mathematical Economics*. N. Y., McGraw-Hill Co, Latest edition.

ISSUES IN PAK ECONOMY

Objectives:

To introduce students about:

- the key features of macroeconomic management in Pakistan
- the process of macroeconomic management in Pakistan
- critical issues facing macroeconomic management in Pakistan

Course Plan:

- **Quick Review of National Income Accounts**
 - GDP (Nominal and Real) and GNP
 - Measure of Inflation and Employment
 - Problems with GDP as a Measure of Social Welfare
 - Beyond GDP
 - Basic Needs Approach
 - HDI Approach and its Calculation
- **Review of Alternative Models of Economic Management**
 - Markets or Liberal Capitalism
 - Socialism or State Capitalism
 - Social Democracy or Mixed Economy
 - Islamic Economics or Islamic Capitalism
 - Pakistan's Models of Economic Management
- **Background of Pakistani Economic Management**
 - Why we are Doing What We are Doing
 - British Colonialism and Muslim Responses
 - Ali Garh and the Upbringing of Muslim Nationalism
 - Muslim League and its Targets
 - Relationship between Muslim Nationalism and Capitalism
- **Agricultural Sector of Pakistan**
 - Is Pakistan Feudal or Capitalist?
 - Nature of its Structure Before British Rule
 - British Regulations and the Emergence of Markets
 - 1947-58: The Neglected Agriculture Sector
 - The Green Revolution and its Impacts
 - Evaluation of Green Revolution as Development Strategy

- Land Reforms (both of Ayub and Bhutto)
- Key Issues in Pakistan's Agricultural Sector
- **Industrial Sector of Pakistan**
 - Composition of Manufacturing Sector
 - Process of industrialization from 1947-58
 - The Development Decade of Ayub—1958-68
 - The Experimental Regime of Bhutto—1972-77
 - Zia Regime and back to the Basics—1977-88
 - Industry after Structural Adjustment Program—1988-onwards
 - Key Issues in Pakistani Industry
- **Fiscal and Monetary Policies and Inflation in Pakistan**
 - Fiscal Developments
 - Structure and trends in revenue
 - Structure of expenditures and trends of fiscal deficit
 - Issues with Financing of Fiscal Deficit
 - New NFC Award and Medium-Term Budgetary Framework
 - Monetary Policy Management and Inflation in Pakistan
 - Understanding Monetary Data
 - Monetary Management
 - Financial Sector Reforms
 - Salient Issues in Banking Sector
 - Inflation and its Causes in Pakistan
- **Public and External Debts in Pakistan**
 - Difference between the two Debts
 - Is Debt Creation always bad?
 - Concerns Regarding Pakistan's Fiscal Deficit
 - Reforms to bring debt under control
- **Structural Adjustment Program (SAP) and Pakistan**
 - Globalization and Export of Development Thinking
 - Composition of SAP
 - Implementation of SAP in Pakistan
 - Evaluation of the Results of SAP
 - Did Pakistan need to go for SAP?
 - Why does Pakistan Adopt IMF Program
- **Performance of Pakistan on Foreign Economic Front**
 - Understanding BOP accounts
 - Trends in BOP
 - Composition of Exports and Imports
 - Historical Directions of Pakistan's Trade Policy Regimes
 - Impacts of Structural Adjustment Program on Trade Policy
 - Dealing with Globalization and WTO
 - Impacts of Globalization on Poverty in Pakistan
 - Exchange Rate Regimes in Pakistan
 - The weakening currency of Pakistan
 - Why can't Muslims adopt a common currency?
- **Social Sector in Pakistan**

- Health Sector and its Issues
- Education and its Issues
- Gender Inequality
- Regional Inequalities
- Structure of Population
 - Population: Asset or Liability?
- Urbanization and Housing
- Infrastructure
- Poverty and Income Distribution
 - Measurement Issues
 - Trends In Poverty and Income Distribution
 - Is Poverty *the* Problem?
 - Does growth eliminate or create Poverty?
 - Poverty Alleviation Strategies and their Failure
- **Recent Challenges Facing Pakistan Economy**
 - Deteriorating Law and Order Situation
 - Energy Crises
 - Rising Circular Debt

Reading Material:

1. Zaidi Akbar (2006), *Issues in Pakistan's Economy*, Oxford University Press, Karachi
2. Ishrat Hussain, (2007) *Pakistan: The Economy of an Elite State*, Oxford University Press, Karachi
3. Ishrat Hussain, (2009) "Pakistan's Economy-1999/2000-2007/2008: An Objective Appraisal", *Business Review*, Vol 4 (1): p. 7-48; IBA, Karachi
4. *Pakistan Economic Surveys*

ISLAMIC ECONOMICS

Free online lectures, outlines, texts, and supporting reference materials are available from website <http://asadzaman.net>, under the title Current Issues in Islamic Economics (CIIE). There is a wide variety of diverse approaches to the subject, necessitating a start from the basic definitions of the subject matter. A paper which discusses over twenty definitions given in the literature, and arrives at an integrated approach is the following:

Asad Zaman, "Re-Defining Islamic Economics", Chapter in Islamic Economics: Basic Concepts, New Thinking and Future Directions, Cambridge Scholars Publishing (Forthcoming)

Based on the approach taken in this paper, and the outlines & lectures referenced in the first paragraph above as CIIE, an outline for the course can be given as follows:

1. Principles of Islamic Education – Lecture 1 of CIIE.
2. Defining Islamic Economics – covered in "Re-Defining Islamic Economics"
3. Origins of Western Social Science. Lecture 2 of CIIE
4. Islamic and Western Conceptions of Scarcity
5. Limits to Market Economy
6. Rebuilding Islamic Societies
7. Contrasts between Islamic and Western Economic Views
8. Islam Versus Economics; Ten Dimensions of Difference.
9. Roots of European Thought
10. Legitimization of Pursuit of Wealth
11. The Evils of Interest
12. The Normative Foundations of Scarcity

Recommended Books:

Asad Zaman "Islamic Economics; A Survey of the Literature," IRI publications, IIUI, Islamabad (to appear). This book (available online) provides a comprehensive survey of relevant literature and references to articles and books relating to all aspects of the topic.

Syed Nawab Haider Naqvi, Perspectives on Morality and Human Well-being, Leicester (UK): Islamic Foundation, 2003.

Entrepreneurial Economics

Entrepreneurship is considered the liberal arts of business education. Entrepreneurship means to keep an open mind, think outside the box, re-evaluate your own views of entrepreneurship, and intellectually challenge your peers. Entrepreneurship is a way of thinking and acting.

The emphasis of this course is on entrepreneurship as a manageable process that can be applied in virtually any organizational setting. Entrepreneurship will be studied over the life cycles of people's careers, of organizations as they evolve from start-up enterprise to sizeable corporation. However, the principal focus is on the creation of new ventures, the ways that they come into being, and factors associated with their success.

Another interesting dimension of this course is that it enables you to appreciate the concept of spiritual orientation. The Islamic perspective of entrepreneurship is also discussed in the course. This provides a new approach to the subject integrated with local cultural norms, which creates motivation and inspiration for the subject, combined with a practical how-to-do-it approach. This approach has been pioneered by a newly established Entrepreneurship Department at IBA, Karachi. This Department will be happy to share teaching resources with any HEI on the topics discussed below.

The objective is to have a greater understanding of the entrepreneurial process – a process of opportunity recognition, resource marshalling, and team building driven by communication, creativity and leadership. When process and passion collide, the seemingly unconnected become connected. New ventures are born, stagnating businesses grow, and failing businesses are reinvented.

The course consists of the following major modules

1. The Entrepreneurial Mind for an Entrepreneurial World
2. The Effectuation theory of Entrepreneurship
3. The Opportunity
4. The Founder and the Team
5. Marketing and Financing Entrepreneurial Ventures
6. Startup and beyond

Recommended Books:

1. "New Venture Creation: Entrepreneurship for the 21st century", by Jeffrey Timmons, Stephen Spinelli, Jr. 8th edition
2. Entrepreneurship: A process perspective 2e, by Robert A. Barona and Scott A. Shane

3. Effectual Entrepreneurship, by Stuart Reed and Saras Sarasvathy
4. Innovation and Entrepreneurship: Peter Drucker
5. Collins and Porras: Build to Last
6. Parker, Simon C., "The economics of Entrepreneurship" latest Edition, Cambridge University Press, USA, New York.
7. Hirsch, Robert D., Peters, Michael P. and Shepherd, Dean A., "Entrepreneurship" latest Edition, McGraw-Hill Companies, Inc. USA, New York.
8. Naqi, S. M., "Entrepreneurship: A Recipe for Economic Development" Latest Edition, Newfine Printing Press, Lahore.

Support Articles

1. Entrepreneurship Plus: The Impact of Spiritual Orientation on Entrepreneurial Orientation, Market Orientation and the Entrepreneurial Process, Shahid Qureshi, IRCMP, 16-17 January 2013, LUMS, Lahore, Pakistan, Theme: Entrepreneurship.
2. HBS reading: The New Normal: Agenda for responsible living
3. IBA Review: The New Entrepreneurial Leader
4. Beyond Selfishness Henry Mintzberg, MIT Sloan Management Review
5. Entrepreneurship from an Islamic Perspective by Journal of Business Ethics Ali Aslan Gümüşay
6. HBS reading: How will you measure your life

MONETARY ECONOMICS

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, L 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 IS-LM 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: Spiracle 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:

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

Additional Readings:

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

Elective Courses:

WELFARE AND HAPPINESS ECONOMICS

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.

The course is divided into three main sections. The first section, consisting of topics 1-3, provides the conceptual foundations of human development and capability approach. The section, consisting of topics 4-10, provides the applications of the concepts of human development and capability approach to various issues of development. The third and final section, consisting of topics 11-12, provides an overview of the policy analysis from the human development perspective.

The structure of this module is based upon the first textbook on human development, ***An Introduction to the Human Development and Capability Approach: Freedom and Agency (2009)***. This textbook is an outcome of a project by the Oxford Poverty and Human Development Initiative (OPHI) and is published by the Earthscan Publishers. The textbook is edited by Severine Deneulin and Lila Shahani, and several authors have contributed chapters. The book is an open source document and available at IDRC website.

Course Contents:

1. 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

Readings:

Key reading

1. Alkire, S. and Deneulin, S. (2009): "Normative framework for development", in: Deneulin, S. and Shahani, L. (Eds.). *An Introduction to the Human Development and Capability Approach: Freedom and Agency*. London: Earthscan.

Further Readings:

1. Cowen, M.P. and R. W. Shenton (1996), *Doctrines of Development*, London: Routledge
2. Deaton, Angus (1997), *The Analysis of Household Surveys: A Microeconomic Approach to Development Policy*, Baltimore: John Hopkins University Press
3. Easterly, Bill (2001), 'The Lost Decades: Explaining Developing Countries' Stagnation in Spite of Policy Reform 1980-88', *Journal of Economic Growth*, 6(2): 135-57.
4. Gore, Charles (2000), 'The Rise and Fall of the Washington Consensus as a Paradigm for Developing Countries', *World Development*, 28(5): 789-804.
5. Preston, P. W. (1996), *Development Theory: An Introduction*, Oxford: Blackwell
6. Rist, Gilbert (1997), *The History of Development: From Western Origins to Global Faith*, London: Zed
7. Ruggeri Laderchi, Caterina, Ruhi Saith and Frances Stewart (2003), 'Does it matter that we do not agree on the definition of poverty?', *Oxford Development Studies*, 31(3): 243-74.
8. Stewart, Frances, Gustav Ranis and Alejandro Ramirez (2000), 'Economic Growth and Human Development', *World Development* 25(2): 197-209.

2. 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

Readings:

Key reading

1. 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.

Further Readings

1. Alkire, Sabina (2002), 'Dimensions of Human Development', *World Development*, 30(2): 181-205.
2. _____ (2005), 'Why the Capability Approach', *Journal of Human Development*, 6(1): 115-33.
3. Barro, Robert and Xavier Sala-i-Martin (2003), *Economic Growth*, Cambridge: MIT Press
4. Layard, Richard (2005), *Happiness: Lessons from a New Science*, London: Allen
5. 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.
7. Sen, Amartya (1980) 'Equality of What?', in S. McMurrin (ed.) *Tanner Lectures on Human Values*. Cambridge: Cambridge University Press
8. _____ (1989), 'Development as Capability Expansion', *Journal of Development Planning* 19: 41–58, reprinted in Sakiko Fukuda-Parr and A.K. Shiva Kumar (eds) (2003), *Readings in Human Development*, Oxford University Press, pp. 3-16.
9. _____ (1992) *Inequality Re-Examined*, Oxford: Clarendon Press
10. _____ (1999), *Development as Freedom*, Oxford University Press
11. _____ (2000), 'A Decade of Human Development', *Journal of Human Development*, 1(1): 17-23.
12. _____ (2004), 'Capabilities, Lists and Public Reason: Continuing the Conversation', *Feminist Economics* 10(3): 77–80.
13. Todaro, Michael (2006), *Economic Development*, 9th edition, Harlow: Pearson Addison-Wesley
14. Ul Haq, Mahbub (1995), *Reflections on Human Development*, New York: Oxford University Press
15. _____ (2003), 'The Human Development Paradigm', in S. Fukuda-Parr and A.K. Shiva Kumar (eds), *Readings in Human Development*, Oxford University Press, pp. 17-34.
16. Ul Haq, Khadija and Richard Ponzio (eds), *Mahbub ul Haq: An Intellectual Biography*, Delhi: Oxford University Press
17. UNDP (1990), *Human Development Report*, New York: Oxford University Press, introduction, available at <http://hdr.undp.org/en>.

3. 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

Readings:

Key Reading

1. Deneulin, S. (2009): "Human Development and related ideas", in: Deneulin, S. and Shahani, L. (Eds.). *An Introduction to the Human Development and Capability Approach: Freedom and Agency*. London: Earthscan.

Further Readings

1. Alkire, Sabina and Angus Ritchie (2007), 'Winning Ideas: Lessons from Free-Market Economics', *OPHI Working Paper 6*, Oxford Poverty and Human Development Initiative, Oxford, available at <http://www.ophi.org.uk>
2. Anand, Sudhir and Amartya Sen (2000), 'Human Development and Economic Sustainability', *World Development*, 28(12): 2029-49.
3. Commission on Human Security (2003), *Human Security Now*, available at <http://www.humansecurity-chs.org/>
4. Desai, Meghnad (1991), 'Human Development: Concepts and Measurement', *European Economic Review*, 35: 350-7.
5. Emmerij, Louis, Richard Jolly and Thomas Weiss (2001), *Ahead of the Curve?: UN Ideas and Global Challenges*, Bloomington: University of Indiana Press
6. Fukuda-Parr Sakiko and Shiv Kumar (eds) (2003), *Readings in Human Development*, Delhi: Oxford University Press
7. Jolly, Richard (2003), 'Human Development and Neo-Liberalism', in Fukuda-Parr and Kumar (eds), *Readings in Human Development*, Delhi: Oxford University Press, 82-92.
8. Sen, Amartya (1981), *Poverty and Famines*, Oxford: Clarendon Press
9. _____ (1999), *Development as Freedom*, Oxford University Press
10. _____ (2005), 'Human Rights and Capabilities', *Journal of Human Development*, 6(2): 151-166.
11. Srinivasan, T. N. (1994), 'Human Development: A New Paradigm or Reinvention of the Wheel?', *The American Economic Review*, 84(2): 238-243.
12. Streeten Paul (1994), 'Human Development: Means and Ends', *The American Economic Review*, 84(2); 232-7.
13. _____ (2003), 'Shifting Fashions in Development Dialogue', in Fukuda-Parr and Kumar, 68-81.

14. Streeten, Paul *et al.* (1981), *First Things First: Meeting Basic Human Needs in Developing Countries*, World Bank: Washington DC
15. UNDP (2000), *Human Development Report: Human Rights and Human Development*, Oxford University Press
16. World Commission on Environment and Development (1987), *Our Common Future*, New York: Oxford University Press

4. 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

Readings:

Key reading

1. Spence, R. (2009): "Economic growth", in: Deneulin, S. and Shahani, L. (Eds.). *An Introduction to the Human Development and Capability Approach: Freedom and Agency*. London: Earthscan.

Further Readings

5. 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.

Readings:

Key Reading:

1. Robeyns, I. (2009): "Equality and Justice", in: Deneulin, S. and Shahani, L. (Eds.). *An Introduction to the Human Development and Capability Approach: Freedom and Agency*. London: Earthscan.

Further Readings:

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

Readings

Key Reading

1. Alkire, S. and Santos, M. E. (2009): "Measurement", in: Deneulin, S. and Shahani, L. (Eds.). *An Introduction to the Human Development and Capability Approach: Freedom and Agency*. London: Earthscan.

Further Readings:

Markets, institutions and public action:

Institutions in economic development
 The institutional turn
 Testing the theory
 From formal rules to informal norms
 Institutions as a 'grand' theory of development

Markets

 Markets as institutions
 Markets in mainstream economic theory
 Institutionalist definitions of markets
 From 'self-regulated' to 'socially-regulated' markets
Institutions and markets in the human development approach

Readings:

Key Reading

1. Johnson, S. (2009): "Institutions and economic development", in: Deneulin, S. and Shahani, L. (Eds.). *An Introduction to the Human Development and Capability Approach: Freedom and Agency*. London: Earthscan.

Further Readings:

Human Agency and Democracy:

Democracy as polyarchy
More than free and fair elections
Beyond instrumentalism

Beyond the divides
Beyond the political boundaries
Government by public reasoning
Public action and global civil society
Case studies: Costa Rica, Legitimacy of military rules; Nigeria, Chile,
Indonesia, Turkey, Argentina

Readings:

Key reading

1. Deneulin, S. (2009): "Democracy", in: Deneulin, S. and Shahani, L. (Eds.).
*An Introduction to the Human Development and Capability Approach:
Freedom and Agency*. London: Earthscan.

Further Readings:

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*

Readings:

Key reading

1. Unterhalter, E. (2009): "Education", in: Deneulin, S. and Shahani, L.
(Eds.). *An Introduction to the Human Development and Capability
Approach: Freedom and Agency*. London: Earthscan.

Further Readings:

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 functionings
 Health at the heart of inter-locking deprivations
 Case study from Pakistan

Readings:

Key Reading

1. Ariana, P. and Naveed, A. (2009): "Health" in: Deneulin, S. (ed.) *An Introduction to the Human Development and Capability Approach: Freedom and Agency*. London: Earthscan.

Further Readings:

1. Anand, P. and M. V. Hees. (2006) 'Capabilities and achievement: An empirical study', *The Journal of Socio-Economics*, Vol. 35, pp268-284
2. Anand, S. and M. Ravallion. (1993) 'Human development in poor countries: On the role of private incomes and public services,' *Journal of Economic Perspectives*, Vol. 7, No. 1, pp133-150
3. Commission on Social Determinants of Health. (2008) *Closing the gap in a generation: health equity through action on the social determinants of health. Final Report of the Commission on Social Determinants of Health*. Geneva, World Health Organization.
4. Gallup, J. L. and J. D. Sachs. (2001) 'The economic burden of malaria,' *American Journal of Tropical Medicine and Hygiene*, Vol. 64, No. 1, suppl, pp85-96
5. Marmot, M. (2006) 'Health in an unequal world: Social circumstances, biology and disease,' *Clinical Medicine*, Vol. 6, No 6, pp559-572
6. _____ (2007) 'Achieving health equity: From root causes to fair outcomes,' *The Lancet*, Vol. 370, 29 September, pp1153-63
7. Narayan, D., R. Chamber, M. Shah, and P. Petesch. (2000) *Voices of the poor*, New York, Oxford University Press for the World Bank
8. Osmani, S. and A. K. Sen. (2003), 'The hidden penalties of gender inequality: Foetal origins of ill-health,' *Economics and Human Biology*, Vol. 1, pp105-121
9. Ranis, G., F. Stewart and A. Ramirez. (2000) 'Economic growth and human development', *World Development*, Vol. 28, No. 2, pp197-219
10. Ruger, J. P. (2006) 'Health, capability, and justice: Towards a new paradigm of health ethics, policy and law', *Cornell Journal of law and public policy*, vol 53, no 2, pp403-82.
11. Sen, A. K. (1999) 'Health in development', *Bulletin of the World Health Organization*, Vol. 77, No. 8, pp619-23
12. _____ (2002) 'Why health equity?,' *Health Economics*, Vol. 11, pp659-66
13. UNICEF and Micronutrient Initiative (2005) *Vitamin and mineral deficiency: A global progress report*,
http://www.unicef.org/nutrition/index_hidden_hunger.html
14. WHO (2005) *Preventing chronic diseases: A vital investment: WHO Global Report*,
http://www.who.int/chp/chronic_disease_report/full_report.pdf

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

Readings:

Key reading

1. Spence, R. and Deneulin, S. (2009): "Public policy analysis", in: Deneulin, S. and Shahani, L. (Eds.). *An Introduction to the Human Development and Capability Approach: Freedom and Agency*. London: Earthscan.

Further Readings:

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 respects 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?

Case Studies:

A personal narrative of women's life in Ghana

Gender policy in Turkey

Fiscal Policy in Syria

Security policy in Haiti

Technical assistance policy in Afghanistan

Post conflict policy in Liberia

Readings:

Key Reading

1. Deneulin, S. (2009): "Policy case studies", in: Deneulin, S. and Shahani, L. (Eds.). *An Introduction to the Human Development and Capability Approach: Freedom and Agency*. London: Earthscan.

Experimental and Behavioral Economics

This course outline is based on free online video lectures and supporting course materials available from <http://asadzaman.net> The course has been designed to minimize mathematical requirements, and to be aligned with requirements of and background of typical Pakistani students.

Introduction to Basic Game Theory:

Details:

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

Readings: Notes for Lecture 1, 2 and 3 available at:

<https://sites.google.com/site/uzmaexpecon/?pli=1>

Chapter 1, 2 and 3 available at:

<http://jourdan.ens.fr/~laffargue/teaching/Incertain/Problemes/lectnotes.pdf>

Why do we need Experiments:

Details:

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

Readings: Experimental Economic by Davis and Holt: Chapter 1 "Introduction and Overview"

Altruism and Fairness: Ultimatum Game:

Details:

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

Readings: Ultimatum Game: from Chapter 2 of Colin Camerer: Behavioral Game Theory

Public Good Game and Free-Riding:

Details:

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

Readings: Experimental Economics by Davis and Holt: Chapter 6, "Public Goods, Externalities and Voting"

Experimental Labor Market:

Details:

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

Readings: Behavioral and Experimental Economics edited by Durlauf and Blume: Experimental Labor market by Falk and Gächter
Heyman and Ariely (2004), Effort for payment. A tale of two markets, Psychological Science.15(11):787-93.

Trust, reciprocity, Incentives and Crowd-Out:

Details:

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

Readings:

1. The Currency of Reciprocity - Gift-Exchange in the Workplace (2011) by Sebastian Kube, Michel André Maréchal and Clemens Puppe (Working Paper No. 377, Institute for Empirical Research in Economics, University of Zurich)
2. PUTTING BEHAVIORAL ECONOMICS TO WORK: TESTING FOR GIFT EXCHANGE IN LABOR MARKETS USING FIELD EXPERIMENTS: by URI GNEEZY AND JOHN A. LIST (Econometrica, Vol. 74, No. 5 (September, 2006), 1365–1384)
3. A FINE IS A PRICE (2000) by URI GNEEZY and ALDO RUSTICHINI

Bargaining and Auctions:

Details:

- Structured and unstructured Bargaining
- Bilateral Bargaining: Ultimatum Game
- Multilateral Bargaining: Auction
- Different Auctions

Readings: Experimental Economic by Davis and Holt: Chapter 5 "Bargaining and Auctions".

Social Norms and Economic Behavior:

Details:

- Social Norms
- Role of expectations

- Self Image

Readings: Do the Right Thing: But Only if Others Do So, by Cristina Bicchieri and Erte Xiao.

POPULATION ECONOMICS

Objective:

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:

1. INTRODUCTION

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

2. 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

3. 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

4. MORTALITY

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

5. MIGRATION

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

6. 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

7. POPULATION GROWTH & AGEING

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

8. URBANIZATION

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

9. POPULATION POLICY

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

Recommended Readings:

1. **Weeks J. R.** (1989), *Population: An Introduction to Concepts and Issues*, Wadsworth Publishing Company, USA.
2. **Poston D. L.** & L. F. Bouvier (2010), *Population and Society: An Introduction to Demography*, Cambridge University Press, UK.

ENVIRONMENTAL AND NATURAL RESOURCE ECONOMICS

Course Description:

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

Course Outline:

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

Benefit–Cost 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.

Measuring the Benefits of Environmental Improvements:

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

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).

Readings:

1. Tom Tietenberg and Lynne Lewis *Environmental & Natural Resource Economics* Pearson Education, Inc., 9th Edition 2012
2. Charles Kolstad, *Intermediate Environmental Economics*, Oxford University Press, 2nd edition, 2010.
3. Robert N. Stavins (ed.), *Economics of the Environment: Selected Readings*, W. W. Norton, 5th edition, 2005.

4. Roger Perman, Yue Ma, James McGilvray and Michael Common, *Natural Resource and Environmental Economics*, Pearson Education/Addison Wesley, 3rd Edition, 2003.
5. Ian Wills, *Economics and Environment; A signaling and incentive approach*, 2nd edition, 2007
6. Freeman, A M, *The measurement of Environment and resource Values; Theory and Methods*, resource for the future, 2nd edition, 2003
7. Thomas Sterner, *Policy Instruments for Environmental and Natural Resource Management*, Resource for the future, 2003
8. Haab, T C and McConnell, K E, "*Valuing Environmental and Natural Resources; The Econometrics of Non-Market Valuation*", Edward Elgar Publishing Ltd, 2002.

MANAGERIAL ECONOMICS

Course Description:

This course of managerial economics will help to understand the concept of this economic efficiency and will explain the procedure, how to measure it. Through this course, student will enable to discuss the effects of policy intervention on efficiency of resources as well as effects of government intervention on it. Students who successfully complete the course will have a good understanding of economic concepts and tools that have direct managerial applications. The course will sharpen their analytical skills through integrating their knowledge of the economic theory with decision making techniques.

Course Contents:

The Fundamentals 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. Demand, Supply and Equilibrium

Market Forces: Demand and Supply, Quantitative Demand Analysis:

Demand, Supply, 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, Forecasting, Methods of demand forecasting. Trend projections, smoothing techniques, Exponential smoothing. Econometric models, Simple

linear regression model, estimation etc, Multiple linear regression model estimation. Business Cycle, Time Series Trends

Marginal Analysis:

Consumer Behavior, Constraints, Consumer Equilibrium, Indifference Curve Analysis & Demand Curves

Production and Cost:

Theory of Production, Production functions. Total, Marginal and Average Product. Revenue and Cost in Production. Production function estimation. Productivity Measurement. Homogenous and Homothetic Production Function. Short run and long run cost curves. Cost estimation, Learning curves and application. Cost and Profit Analysis, Empirical Analysis of Production and Cost, Cost-value-profit analysis.

Market Structure:

Perfect Competition, Monopolies, Monopolistic Competition. Oligopoly. Selected Pricing Models. Marginalist Pricing. Mark up pricing. New Product Pricing. Oligopoly Model. Contestable Markets. Pricing Strategies for Firms and Market Power. Monopolistic Competition. Price Discrimination, Monoposony and Price Product. Measuring Firms' Performance, Making Decisions under Noncompetitive Conditions, Oligopolies, Game Theory: Inside Oligopoly, Pricing Methods, Pricing Strategies for Firm with Market Power.

Managerial Theories and Models of the Firm:

Baumol's Theory of Sales Revenue Maximization. Marris's Model of Managerial Enterprise. Williamson's Model of Managerial Discretion Topics, Behavioral Model by Cyert and March.

Regulating the Market Economy:

Economies of Scale, Taxes and Subsidies, Costs of Regulation

Public Sector Production and Pricing of Goods:

Public and Private Goods and their pricing mechanism. Decreasing cost Industry and pricing. Externalities and Market Pricing issues. Rent seeking and control. Government Policy and International Trade, tariff and pricing. Import Competitiveness and tax, International pricing Techniques /Strategies.

Capital Budgeting and Investment:

Pre-requisites of Capital Budgeting. Investment Criteria and Decisions. Cash flow estimation, Internal Rate of Return, Profitability-Index Criterion and other criterion. Optimal Capital Budget.

Decision Making:

Decision Making under Uncertainty: Risk Analysis, Advanced Topics in Business Strategy.

Recommended Books:

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

ENERGY ECONOMICS**Course Description:**

This course is the study of economic relationships in energy production, consumption, demand and supply, pricing and conservation, energy policy and the development of new and renewable energy sources. This course aims 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 Outline:**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.

Textbook:

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

ECONOMICS OF EDUCATION

Course Objectives:

The course aims to analyze the ways through which the education is organized and delivered to achieve economic growth in the most efficient ways. It helps to understand the efficacy of reforms pertaining to teacher salaries, student teacher ratio and charter schools. The course helps to develop an understanding of the importance of education in economic growth of a country. This course is intended to make students aware of the fact as to how education enhances labour productivity, earnings and distribution of income. It will further help the students to analyze the relation between education, inequality and poverty prevailing in the developing economies of the world.

Course Contents:

1. Introduction : Defining economics and educational problem
2. Importance of Schooling
3. Econometrics overview, empirical research methods in the economics of education
4. Human Capital theory: The basic economic perspective on education
5. Education as a Signal: Signalling in the labour market
6. Returns to education in developing countries, with special reference to Pakistan, social rate of returns to education
7. Educational Production
8. Education and health
9. Education and inequality
10. School Accountability and Standards
11. Technology and Education
12. Role of state in education
13. Educational privatization

Topic wise essential readings:

1. [ECONOMICS OF EDUCATION](#) by Dominic J. Brewer and Patrick J. McEwan (2010).

1. Autor, David, Frank Levy, and Richard J. Murnane. "The Consequences of Increasing the Nation's Supply of College Graduates." Policy Brief Written for the Gates Foundation. December, 2003
2. Feinstein, Leon. "Inequality in the Early Cognitive Development of British Children in the 1970 Cohort." *Economica* 70, no. 277 (2003): 73-97.
3. Introduction to Econometrics: 4th Edition by Christopher Dougherty, Oxford University Press (2011, 512pp)
4. Modern Labour Economics, Theory and Public Policy: Ronald Ehrenberg, Robert Smith, 11th edition.
5. Borjas, G. 2008. Labour Economics, pp.268-273.

6. Hanushek, E. A. 1986. "The Economics of Schooling: Production and Efficiency in Public Schools." *Journal of Economic Literature* 24(3): 1141-77.
7. Clotfelter, Charles T., and Helen F. Ladd. "Recognizing and Rewarding Success in Public Schools." Chapter 2 in *Holding Schools Accountable*. Edited by Helen Ladd. Washington, DC: Brookings Institution Press, 1996. ISBN: 9780815751038.
8. Rouse, Cecilia Elena, and Alan B. Krueger. "[Putting Computerized Instruction to the Test: A Randomized Evaluation of a 'Scientifically Based' Reading Program](#)." *Economics of Education Review* 23, no. 4 (2004): 323-338.

PUBLIC POLICIES

Course Description:

In this course the students will learn about the different types and approach to policy, the problem and vision approach to policy development, examine the policy development cycle and how other governments (provinces and federal government) typically develop policy. Policy matters because it affects people's lives. Public policy is defined as "the things government chooses to do or not to do" for "societal benefit." Public policy addresses questions on "who gets what, when and how." This course is designed for both leadership (i.e. decision-makers) and staff; as leaders, participants learn about the kinds of questions that should be asked when directing and reviewing the development of policy. Students will learn how to complete 'due diligence' in order to support the leadership to make informed and effective decisions.

Course Outline:

- I. **Introduction:** Definition of Policy. Types of Policy: Broad, Specific and Operational Policy. Problem and Vision approach to policy development. Values, Vision and Policy: linkages and relationships. The policy development cycle and associated stages.
- II. **Policy Science**
Public Policy –Introduction, The Policy Problem, Approaches To Public Policy
- III. **Institutions, Actors And Instruments**
Policy Actors And Institutions, Issues In Public Economics, Market Failure And Intervention. Policy Instruments, Agenda Setting : Policy Determination , Policy Ideas And Policy Windows, Policy Formulation, Public Policy Decision Making
- IV. **Implementation And Evaluation**
Policy Design And Implementation Styles, Policy Evaluation

V. Policy Development And Change In Practice

Policy Regimes And Policy Dynamics

Evaluation: Does Policy Matter?

Recommended Books:

1. Michael Howlett and M. Ramesh, *Studying Public Policy: Policy Cycles and Policy*
2. *Subsystems*, Latest ed. (Toronto: Oxford University Press).
3. Michael C. Munger, *Analyzing Policy: Choices, Conflicts, and Practices* (New York: Norton). Latest Edition.

PROJECT APPRAISAL AND INVESTMENT ANALYSIS

Course Description:

This course is related to the methodologies used in the selection and appraisal of investment decisions in both the private and the public sectors. Course will focus on the theory and practice of project appraisal and cost-benefit analysis and will discuss their theoretical underpinnings and practical limitations. The debates about how to account for secondary, external and environmental effects and about basing economic valuation on international prices are explored in some detail. An extended case study exercise, along with computer application, will provide practical exposure in financial and economic appraisal techniques, which helps the students to make right decisions about their future investment.

Course Contents:

Introduction and Overview:

Investment – an Overview, Investment Appraisal – Nature and Scope, Investment Appraisal and Financial Decision Making, Cost-Benefit Analysis – Issues and Evolution, Projects and Project Appraisal, Public and Private Sector Appraisal

Investment Appraisal – Basic Evaluation Techniques:

Introduction, Traditional Methods, Time Value of Money Methods

Cash Flows, Capital Budgeting and Investment Decisions:

Introduction, Identifying and Using Cash Flows, Capital Market Imperfections, Simple Ways to Cope with Risk

Social and Economic Cost-Benefit Analysis:

Cost Benefit Analysis – an Illustration, Identifying Costs and Benefits, Valuation of Costs and Benefits, A Case Study in Valuation – Putting Money on Human Life

Discount Rate, Risk and Uncertainty in Cost Benefit Analysis:

Introduction, The Discount Rate, Theoretical Consistency and Derivation of a Social Rate of Discount, The Social Discount Rate in Practice: A Case Study on Discount Rate Policy in the UK, Risk and Uncertainty, Methods for Handling Risk and Uncertainty. A case study depicts the situation of Pakistan

Different Criterion for Project Evaluation:

Discounted Measures, Like NPV, IRR, BCR, Net Benefit-Investment Ration. Undiscounted measures for project worth. Comparative Analysis for Discounted Measures.

Income Distribution through Project Appraisal within and between Generations:

Introduction – Income Distribution and Thorny Questions, Diminishing Marginal Utility of Income and Intergenerational Welfare Weights, Income Classes for Distributional Weights, Further Issues, Intergenerational Distribution, Case Study

Significance and Importance of Investment and Project Appraisal in Developing Countries:

Reading Material:

1. Steve Lumby and Chris Jones: Corporate Finance: Theory & Practice, latest edition,
2. HM Treasury, “The Green Book, a UK government publication detailing the methods it uses in evaluating public service projects.” latest edition
3. David Potts,” Project Planning and Analysis for Development, latest edition
4. Pedro Belli, Jock Anderson, Howard Barnum, John Dixon and Jee-Peng, latest edition
5. Tan (2001) Economic Analysis of Investment Operations, latest edition
6. Richard Layard and Stephen Glaister, Cost-Benefit Analysis, latest edition

ETHICS AND ECONOMICS

An excellent single textbook for fulfillment of the objectives of the course is Hausman and MacPherson: Economic Analysis, Moral Philosophy, and Public Policy. Outline below is chosen from major topic headings. It is strongly recommended that this course should be taught as widely as possible, since it provides ethical and moral foundations currently missing entirely from conventional treatments of economics. Islamic views could easily be added to the topics treated, but this would require additional work on the part of the instructor. Collective efforts to create resources in this

direction would be very useful to create additional interest and motivation, as well as enhanced learning, among Pakistani students.

1 Ethics and Economics?

What Are Moral Questions and How Can They Be Answered? How Is Moral Philosophy Relevant to Economics?

2: Ethics in Welfare Economics: Two Examples

3 Ethics in Positive Economics: Two Examples

4 & 5: Rationality & Morality in Positive and Normative Economics

7 Utilitarianism and Consequentialism

8 Welfare & Preferences

9 Efficiency & Welfare

10 Liberty, Rights, and Libertarianism

11 Equality and Egalitarianism

12 Justice and Contractualism

13 Social Choice Theory

14 Moral Philosophy and Some Simple Games

15 Pollution Transfers and School Vouchers: Normative Economics Reconsidered

16 Economics and Ethics, Hand in Hand

SUGGESTED ADDITIONAL READINGS:

1. Ethics, Universal Values and Economics, a manual of selected essays, KIE, University of AJK
2. Economics and Ethics, Syed Nawab Haider Naqvi , The Islamic Foundation UK (1981)
3. On Ethics and Economics, Amartya Sen
4. Jami' al-Sa'adat (The Collector of Felicities) by Naraaqi; English translation by Gul M. Naqvi
5. Economic Analysis of Ethical Doctrines and Behavior Henry Hazlitt, *The Foundations of Morality*
6. Daniel Kahenman, Peter Walker and Rakesh Sarin, "Back to Bentham? Explorations of Experienced Utility," 112 *Quarterly Journal of Economics* (1997), pp. 375 – 405. **(B)**

Digital resources:

www.al-islam.org/al-tawhid/felicities/

A course on Ethics and Economics: http://works.bepress.com/mario_rizzo/20/

Introduction to Philosophy and Ethics <http://www.virtualclassroom.net/tvc/phil/>

Transport Economics

Course Objectives:

This course will provide students with the basic concepts and tools for economic evaluation of transportation projects and related investments. Students should obtain basic skills in the analysis of travel demand and in the valuation and analysis of transportation system benefits. Students should also be able to understand different components of the costs of transportation, basic pricing principles, and how these factors affect the market for transportation infrastructure and services. Finally, students should be able to apply these concepts to analyze transportation investment decisions.

Course Contents:

Economic analysis of transportation projects and transportation infrastructure investment, optimal pricing and investment, Travel demand analysis and the value of travel time saving consumers' surplus and producers' surplus measures, General equilibrium models for transportation economics, analysis of travel demand, benefits, costs, equilibrium, pricing, and market structure. Intro to microeconomic principles in transportation, Pricing alternatives, road pricing and sustainable transportation, fare increases and the public transport fare adjustment mechanism, Price discrimination, Road congestion pricing, Equity dimensions of transport policy, Cost function for transport firm, City formation and transport cost, , peak load and cost allocation problem, project appraisal and financing, Economics of transport logistics, ,Efficiency measurement theory and its application to transport, Theory of external cost, Transport and energy, Competition, regulation and public service obligations, Public private partnership in transport, transportation improvements and land values, returns to scale and road durability, Project evaluation, Congestion, Air quality, Fuel economy and safety, Transportation technology. Transportation and international Trade, Transportation and Economic Development.

Recommended Books:

1. Palma, Andre De. A Handbook of Transport Economics. Edward Elgar Publishing, 2011
2. Émile Quinet, R. Roger William Vickerman, Principles of Transport Economics, Edward Elgar Publisher 2005
3. John Robert Meyer, José A. Gómez-Ibáñez, W. William B. Tye, Essays in Transportation Economics and Policy. A Handbook in Honor of John R. Meyer.

Title **A Handbook of Transport Economics**

Elgar Original Reference Series

Editor **André De Palma**

Institutional Economics

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.

Pre-Requisite: It is assumed that the students should be familiar with the following courses: Microeconomics and Macroeconomics, game theory, industrial organization, economic history and history of economic thought.

1. Introduction to institutional analysis; 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.
2. Transaction costs: The concept of transaction. Market and intrafirm transactions. Transaction costs as friction in the economy. Transaction costs and transformation costs. Interdependency between transaction costs and transformation costs. Types of market transaction costs and means of transaction costs minimization (search and information costs; measurement costs; bargaining and decision costs; supervision and enforcement costs). Comparative advantages and shortcomings of the legal enforcement mechanism. Reputation as a contract enforcement device. Ideal model of "perfect reputation". Shortcomings of the reputation as a contract enforcement mechanism. Reputation and the "free rider problem". Reputations aided by institutions. Contract enforcement in contemporary Russia.
3. The definition of 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). Alternative

property rights regimes. Common property (open access) and the tragedy of the commons. Exclusive property rights and the conditions for their emergence. The first economic revolution. Communal property. Optimal group size. Private property. Moral and economic aspects of private property. Public property. The emergence of property rights. The optimistic theory of the emergence of property rights (naive model). The interest-group theory of property rights. The costs of collective action. The theory of rent-seeking. Interest-groups and rent-seeking in the Russian economy.

4. 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 principle-agent experiment in the classroom. Controlling and preventing moral hazard (controlling the agent, incentive contracts, bonding, do-it-yourself method). Case study: crisis of the savings and loan associations in America as an example of moral hazard in financial markets. Attributes of transactions and the choice of a contract. Asset specificity, types of specific assets. Synergy effects, quasi-rents appropriation and hold-up problem. Classification of contracts (classical, neoclassical and relational contracting). Discrete alternative governance structures: market, hybrids and hierarchy. Self-enforcing agreements (Telser) and hostages (Williamson). Hybrids: specific assets and their safeguards. Institutional environment and its role in the choice of contract. GM and Toyota: different models for solving the problem of safeguards for specific investments. The role of trust. Economic approach to trust. Kreps: the trust game. Types of trust (contractual trust, competence trust and good will trust). Explaining the internal structure of formal organizations: transaction costs approach.
5. 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. A theory of the owner-monitor. Competing forms of economic organization, relative advantages of alternative structures (proprietorships, partnerships, open corporation, regulated firms, public enterprises, nonprofit organizations, labor-managed firms). Separation of ownership and control in the open corporation. Opportunistic behavior of the managers and corporate control. Outsider and insider corporate governance. Privatization in Russia and other transition economies: how to control the managers.

6. 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.
7. The theory of institutional change: Stability of institutions and institutional change. The concept of institutional equilibrium. The main sources of institutional change. Centralized and spontaneous institutional change. The role of the state in the process of institutional change. The problem of compensation of the disadvantaged groups. Theories of selection of efficient institutions in the process of competition (Alchian, Friedman). Institutional change and path dependence. Forms of path-dependence (weak form, semi-strong and strong forms). Institutional change in contemporary Russia.

Recommended Books:

1. Elinor Ostrom, "Understanding Institutional Diversity" latest Edition, Princeton University Press
2. Marc Tool, "Institutional Economics Theory, Method, Policy" Latest Edition
3. Akerlof G. A. (1984) The Markets for "Lemons": Quality Uncertainty and the Market Mechanism" 84 Quarterly Journal of Economics, pp. 488-500
4. Alchian A., Demsetz H. (1972) Production, Information Costs and Economic 52 The American Economic Review, pp. 777-795
5. Coase R. (1937) The Nature of the Firm. 4 Economica, pp. 386-405
6. Coase R. H. (1960) The Problem of Social Cost. 3 Journal of Law and Economics 1-44
7. Dahlman C. (1979) The Problem of Externality. 22 Journal of Law and Economics, pp. 141-162
8. Eggertson Thr. Institutions and Economic Behavior.
9. Hart O. (1989) An Economist's Perspective on the Theory of the Firm. 89 Columbia Law Review, p. 1757
10. Joskow P. (1987) Contract Duration and Relationship-Specific Investments: Empirical Evidence from Coal Markets. 77 American Economic Review pp. 168-173
11. Milgrom P., Roberts J. Economics, Organisation and Management.
12. Milgrom P., Roberts (1992) J. Economics, Organization and Management. - Prentice-Hall Int.,.
13. North D. (1990) Institutions, Institutional Change and Economic Performance. Cambridge University Press,
14. Posner R. (1997) Social Norms and the Law: an Economic Approach. 87 American Economic Review, pp. 365-369
15. Rose C. Evolution of Property Rights. In: Newman P. The New Palgrave Dictionary of Economics and the Law. Vol. 2,.
16. Tullock G. Rent-seeking. (1987) In: The New Palgrave: A Dictionary of Economics. - L., Macmillan, 1987,

17. Varian H. Intermediate Microeconomics. A Modern Approach.

POVERTY AND INCOME DISTRIBUTION

Objective:

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 OUTLINE:

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, 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, 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 inequality in Pakistan- How does Pakistan compare? Historical Trends- the longer term picture.

SUGGESTED READINGS:

1. Jonathan Haughton and Shahidur Khandker (2009) Handbook on Poverty and Inequality. (World Bank Training Series) **ISBN-10: 0821376136**
2. Atkinson, A. B., B. Cantillon, E. Marlier and B. Nolan (2002), *Social Indicators. The EU and Social Inclusion*. Oxford: Oxford University Press.
3. Cowell, F. (1992), *Measuring Inequality*, 2nd Edn. Hemel Hempstead: Harvester Wheatsheaf.

4. Fields, G. S. (2001), *Distribution and Development*. Cambridge, MA: MIT Press.
5. Foster, J. E., J. Greer and E. Thorbecke (1984), "A class of decomposable poverty measures", *Econometrica*, 52(3): 761-66.
6. Kakwani, N. (2003), "Issues in Setting Absolute Poverty Lines", *Poverty and Social Development Paper 3*. Asian Development Bank. .
7. Ravallion, M. (1994), *Poverty Comparisons*, Chur: Harwood Academic Publishers.
8. Sachs, Jeffrey (2005) *End of Poverty: Economic Possibilities for our Time* (New York, Penquin).

International Finance

Objectives:

International Finance is built on belief to understand the international economy, students need to learn how economic models are applied to real world problems. This subject develops a unified model of the international macroeconomy. The text provides detailed descriptions of major macroeconomic variables, covers the interest rate parity and purchasing power parity theories of exchange rate determination, takes an exhaustive look at the pros and cons of trade imbalances and presents the well-known AA-DD model to explore the effects of fiscal and monetary policy under both fixed and flexible exchange rates.

Course Contents:

International Finance

Course Outline:

1. Introductory Finance Issues: Current Patterns, Past History, and International Institutions
2. National Income and the Balance of Payments Accounts
3. The Trade Imbalances
4. Foreign Exchange Markets and Rates of Return
5. Interest Rate Parity
6. Purchasing Power Parity
7. Interest Rate Determination
8. National Output Determination
9. The AA-DD Model
10. Exchange Rates and its management
11. Policy Effects with Floating Exchange Rates
12. Policy Effects with Fixed Exchange Rates
13. Short and long term financing
14. International finance in context of Pakistan

Recommended Books:

1. Steve Suranovic, International Finance: Theory and Policy latest edition
2. Madura, International Financial Management 8th , Ed. Thomson/Southwest

Labour Economics

Prerequisites:

Microeconomics

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.

Contents:

1. Introduction: Overview of the Labor Market (C. McConnell et al., Chapter 1)
2. Labor Supply: (G. Borjas, Chapter 2)
3. Labor Demand: (G. Borjas, Chapter 4)
4. Labor Market Equilibrium: (G. Borjas, Chapter 5)
5. Compensating Wage Differentials. , (G. Borjas, Chapter 6)
6. Labor Quality: Investing in Human Capital (C. McConnell et al., Chapter 4)
7. The wage structure (C. McConnell et al., Chapter 8)
8. Mobility, Migration, and Efficiency (C. McConnell et al., Chapter 9)
9. Labor Market Discrimination: (G. Borjas, Chapter 10)
10. Labor Unions and Collective Bargaining (G. Borjas, Chapter 11/ C. McConnell et al., Chapter 10)
11. Labor Market Contracts and Work Incentives (G. Borjas, Chapter 12)
12. Unemployment (G. Borjas, Chapter 13)

Required Text:

1. G. Borjas, Labor Economics, latest edition, McGraw-Hill.
2. McConnell et al., Contemporary Labor Economics, latest edition, McGraw-Hill,

Additional Texts:

1. R. Ehrenberg and R. Smith, Modern Labor Economics, latest edition, Addison Wesley,

2. R. Elliott, Labor Economics: A Comparative Text, latest edition McGraw-Hill.
2. Hamermesh and A. Rees, The Economics of Work and Pay, latest edition, Harper and Row.
3. Sapsford and Z. Tzannatos, The Economics of the Labour Market, latest edition Macmillan.

Labor Economics

Aim & Objectives

The main objective of this course is to make the student's familiar with the functioning & importance of Labor market in the development process of an economy. After taking this course, the students will be able to understand and analyze the problems & significance of Labor markets in the development process and can suggest measures for the smooth functioning of the labor market in an economy.

Course Outline

1. Importance of Labor Economics: Introduction, Industrialization and Emergence of Labor Economics.
2. Tools to Analyze Labor Markets and Conditions. Overview of labor issues in developing and developed world
3. Labor Market Analysis: Demand for labor, Labor market indications. Demand for labor. Decision making and labor hiring.
4. Labor migration. Reasons and impacts. Demand for labor by firms.
5. Short run and long run demand for labor. Industry and market demand. Labor mobility/migration.
6. Labor Market: Supply of Labor and Wages: Determinants of labor Supply. Concepts of Human Capital. Human Capital, Productivity and Wages.
7. The Determinants. Labor Force Participation. Supply of Labor and household Productions.

8. Labor Skill, Training and Productivity. The Dual Labor Market Theory. Labor Unions and wages.
9. Supply and demand for labor and wage determination backward bending supply curve of labor.
10. Wages, Unemployment and Inflation: Determinants of Wages, market Determination of Wages and Marginal Productivity.
11. High Wages and Involuntary Unemployment. Stagflation and Unemployment.
12. Structural Adjustment and Wages. Major Sources of Unemployment. Wages and Phillip Curve.
13. Wage Rigidity. Labor Unions and Unemployment. Unemployment and Social Protection.
14. Labor market Discrimination: Discrimination in labor Market: Gender, Race and Ethnicity.
15. Efficiency Wage Theories and Coordination Failure. Economics of family.
16. Theories of labor Movement: The Marxist, The Wells Selling and Pearlman's contributions. Trade Unions in Pakistan, Labor Legislation in Pakistan. Impacts of labor Union. Labor policies in Pakistan: Critical Evaluation child labor.

Recommended Books:

1. Comith Stephen (2003) Labour Economics, Routledge Publishers.
2. Bruce, Kaufman; e. Kaufman, Julie L; Hotchkiss, (2002), Economics of Labour Markets, Thomson Publisher.
3. Reynolds, Labor Economics and Labor Relations.
4. Orley, Ashenfelter (ed) Layard, P. R. G. (ed) Handbook of Labour Economics, Elsevier Science Pub. Co. (1986).
5. Marshall and Briggs, Labor Economics.

6. Lloyd Reynolds, Labor Economics and Labor Relations.
7. Edgemand, Macroeconomics.

Dynamic Macroeconomics

1. Introduction; The Solow Model and its dynamics; Physical Capital; Human capital and Technology. Quantitative implications of the Solow model: Effects of savings on long run income; Income per capita and Output per capita. Empirical applications; Growth accounting, Total Factor Productivity (TFP), Growth of the Asian tigers; Growth of the BRICKS; Convergence hypothesis and Forecasting.
2. Beyond Solow Model: externalities and endogenous growth, human capital and endogenous growth
3. Reflections on growth theory; where has all Growth gone?
4. Consumption and investment in the framework of Dynamic Macroeconomics.
5. Monetary and Fiscal Policies in the Framework of Dynamic Macroeconomics.
6. Dynamic Macroeconomics in an open economy.

Recommended Books:

1. Blanchard O and S. Fisher, 1998, Lectures on macroeconomics, MIT Press, Cambridge, Massachusetts and London, England.
2. Chaing A C. (1992): Elements of Dynamic Optimization. McGraw-Hill, New York: New York
3. Cooley T.F., 1995 Frontiers of business cycle research, Princeton University Press.
4. Huggett, M., 1996 Wealth distribution in life-cycle economics, Journal of Monetary Economics 38, 469-494.
5. Obstfeld, M., & Rogoff, K. S. (1996). *Foundations of International Macroeconomics*. Massachusetts Institute of Technology.
6. Perkins, D. H., Radelet, S., Snodgrass, D. R., Gillis, M., & Roemer, M. (2001). *Economics of Development*. W.W. Norton & Company.

7. Ljungqvist, L. and T. Sargent, 2000, Recursive macroeconomics theory, MIT Press, Cambridge, Massachusetts and London, England.
8. Marimon, R. and Scott A., 1999, Computational methods for the study of dynamic economics, Oxford University Press.
9. McCandless G. and N. Wallace, 1991 Introduction to dynamic macroeconomic theory, an overlapping generations approach, Harvard University Press.
10. Romer D. (2006) Advanced Macroeconomics. McGraw-Hill, New York: New York
11. Rros-Rull J., 1993, working in the market, working at home and the acquisition of skills: a general-equilibrium approach, American Economics Review 8, 893-907.
12. Sargent, T. J.(1987): Dynamic Macroeconomic Theory. Harvard University Press, Cambridge: Masschusetts.
13. Taylor, J. B., & Woodford, M. (Eds.). (1999). *Handbook of Macroeconomics*. Elsevier.
14. Taylor, J and M. Woodford, 1999, Handbook of Macroeconomics, Volume 1C, Elsevier.

Development Policy

Course Description and Objectives

This course is an introduction to development policies, policies that make individuals, families, communities, societies, nation, and nations. It is also a comparative analysis of theories and strategies that leads development in all levels. A strong development policy with all that it entails is essential for the development of any state. Any professional in the field of development must understand at least the basic principles and policies that bring development and how to draft, apply and practice to realize development.

Recommended Reading

- Peet, R., & Hartwick, E. (2009). *Theories of Development: Contentions, Arguments, Alternatives*. Guilford Press
- World Bank (2014). *World Development Report 2014: Risk and Opportunity: Managing Risk for Development*. World Bank

Course Contents

A. Development Theories

B. Development Strategies

C. Social Institutions

1. Education
2. Economic
3. Religious
4. Political

D. Economic Institutions

1. Taxations
2. Trade
3. State control

E. Political institutions

1. Political freedom
2. Corruption

F. Effect of Aid

1. IMF
2. World Bank

G. Globalization

1. Agricultural subsidies
2. Trade

H. Analysis: World Development Reports

Political Economy

Course Description and 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.

Recommended Reading

Textbooks

- Shepsle, K.A. *Analyzing Politics: Rationality, Behavior, and Institutions*, 2nd Edition (2010). W. W. Norton & Company
- Kardar, S. (Latest Edition). *The Political Economy of Pakistan*. Progressive Publishers

Supplementary Texts

- Riker, W.H. (1988). *Liberalism Against Populism: A Confrontation Between the Theory of Democracy and the Theory of Social Choice*. Waveland Press
- Nadeem, A.H. (2002). *Pakistan: The Political Economy of Lawlessness*. Oxford University Press
- Hussain, I. (1999). *Pakistan: The Economy of an Elitist State*. Oxford University Press

Course Contents

A. Introduction to Political Economy

1. Course Introduction, Overview
2. Approaches to the Study of Political Economy (Shepsle Chapters 1 and 2)
3. Analyzing Group Choice (Shepsle Chapters 3 and 4)
4. Spatial Models of Majority Rule (Shepsle Chapter 5)
5. Strategic Behavior and Majority Rule (Shepsle Chapter 6)
6. Voting and Elections (Shepsle Chapter 7)

B. Understanding Collective Action

1. Cooperation (Shepsle Chapter 8)
2. Collective Action (Shepsle Chapter 9)
3. Market Failures and Collective Action (Shepsle Chapter 10)

C. What Role Do Institutions Play?

1. Institutions and Their Impact (Shepsle Chapter 11)
2. Legislatures (Shepsle Chapter 12)
3. Bureaucracy, Delegation, and Principal Agent Theory (Shepsle Chapter 13)
4. Courts and Judges (Shepsle Chapter 15)

D. Topics in the Political Economy of Pakistan

1. The Economics of Patronage
2. Seven Pillars of Good Governance
3. The Political Economy of Reforms
4. Pakistan - Dynamics of Elitist Model
5. Strategies for Self-preservation
6. A military Theocracy
7. Different Regimes
8. Economic Development
9. Ethnic conflict
10. The Role of State
11. Emerging Economic and Political Issues and their Linkages
12. Regionalism
13. Poverty
14. Governance

Comparative Economic System

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 56 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:

1. Capitalism, Socialism and Islam by Syed A. Ala Maududi, Islamic Book Publisher, Lahore.
2. Comparative Economic System by William, Louks and William G. Whitney (latest edition).
3. Comparative Economic Systems by Martin C. Schmelzter and James W. Hordyke (1977).
4. Economic System of Islam by M. Omer Chapra.
5. Islam or Socialism by Wilicaynaki.
6. Comparative Economic Systems by Gregory, Stuart, Houghton Mifflin Company, Boston (1985).
- 7.
- 8.
- 9.
- 10.

Rural Development

Objectives

Introduction of the structure of the rural economy encompassing socio-economic set up, developmental status and core social, economic and environmental problems to the students. Impart knowledge to the students about the historical background, evolutionary planning process of rural development & familiarization of students with the rural scene of Pakistan.

Course Contents

Structures of Rural Economy: Land, People and Resources. Socioeconomic and Political Organizations. Modes, Means and Relations of Production. Potential for Development. Basic Problems Including Traditions, Power Structure, Illiteracy, Poor Health, Unemployment, Poverty, Underdeveloped Infrastructures and Environmental Degradation.

Theories of Rural Development: Basic Needs and Community Development. Modernization of Agriculture. Diversification of Rural Economy. Rural-Urban Nexus of Development and Other Approaches.

Rural Development Planning: Rural Integrated Development Program Including Location, People, Utilities and Services, and Infrastructures. Village Aid Program. Rural Development through Local Government. Rural Development through NGOs. Rural Resource Allocation.

Rural Development in Pakistan: Historical Background, Introduction, Rural Scene in Pakistan, Land Reforms, Government Plans and Policies, Peoples Participation, NGOs and RSPs Vision in Rural Development, Rural Development Strategy. Design and Evaluation of Rural Development Projects. Rural Development Programs Before and During Eighties. Rural HRD. Local Organizations for Rural Development. Role of Voluntary Agencies in Rural Development. Use of Improved Technologies, Poverty in the Non-Modern Sector. Impact of Integrated Rural Development Programme (IRDP). Impact of Rural Support Programmes (RSPs) on Rural Households.

Recommended Books:

1. Malcolm Moseley, Rural Development: Principles and Practice, Sage Publications 2003
2. Young, F/Clark, J., Interdisciplinary Theories of Rural Development, Jai Press 2006
3. Hasan, Ibnul, Integrated Rural Development in Pakistan, Sterling Press Limited 1989
4. Kator Singh, Rural Development: Principals and Policy Institute of Rural Management (1999)
5. Desilva, G. Haque, Towards A Theory of Rural Development, Progressive Publishers 1988
6. James, Jeffrey, Improving Traditional Rural Technologies, Macmillan Press 1989
7. Kenneth Lynch, Rural Urban Interaction in the Developing World, Routledge 2005
8. Khan, Mahmood Hasan, Community Organizations and Rural development, Vanguard 2001
9. Khana, B., Rural Development in South Asia, Deep & Deep Publications 1992
10. Khanna, B., Rural Development in South Asia, Deep and Deep Publication, New Delhi
11. Shoaib Sultan Khan, Rural Development in Pakistan, Vikas Publishers, 1982
12. The African Development Bank, African Development Report 2002, Oxford 2002
13. World Bank, Agriculture and Rural Development, Washington D.C. 2005
14. Dar, S. U, Impact of Integrated Rural Development Programme, Anmol, New Delhi 1992.

Industrial Economics

Objectives

The course analyzes the problems of the real economy that cannot be described within the framework of a classical economic theory that is taught by traditional micro- and macroeconomics. This course will cover all the three

main fields of industrial organization theory: the theory of a firm, the theory of imperfect competition, and the theory of economic regulation. The students are presumed to be familiar with the standard courses in micro- and macroeconomics at the graduate level.

Course Contents

Theory of a firm: What is the firm and why is it organized? A firm as an alternative to a market. Transaction costs theory explaining appearance of firms. Production scale, specialization level and advantages of firms as a means of production.

Hierarchical firm structure and its efficiency. Optimal size of a firm (of a number of hierarchical levels). Hierarchical firm structure under oligopoly.

Consumer Surplus and Public Welfare

Estimation of public welfare within the framework of partial equilibrium analysis. Quasilinear utility function and measure of public welfare.

Compensated and equivalent variations. Public welfare and Hicksian and Marshallian demand functions. Consumer surplus as an approximate measure of public welfare.

Economic Theory of Bundling

Bundling as a marketing tactics. Price discrimination and bundling.

Heterogeneous consumers. Pure components strategy, pure bundling strategy, and mixed bundling strategy. Superiority of mixed bundling relative to pure bundling. Conditions for mixed bundling strategy to be dominant over pure components strategy. Independent distribution of reservation prices.

Homogeneous consumers. Commodity bundling and consumer surplus.

Mergers and Acquisitions.

Horizontal Mergers and Acquisitions

Types of mergers and acquisitions: horizontal, vertical, conglomerates.

Examples of mergers and acquisitions within the last decade. Mergers of firms with identical production costs. Condition of a merger profitability.

Mergers of firms with differing production costs. Reaction of a firm to a change in output by all other firms on the same market. Condition of industry output increase, resulting from a merger.

Horizontal mergers and public welfare. Herfindal-Hirshman index as a measure of public welfare. Condition under which horizontal merger results in higher public welfare.

Vertical Mergers

Effect of a vertical merger on output of final and intermediate products.

Vertical mergers and market foreclosure. Vertical mergers and profits of integrated and unintegrated firms.

Product Differentiation

Location Models

Linear city, linear transportation costs. Quadratic transportation costs. Stability of equilibrium states. Circular city. Welfare implications.

Differentiated Goods, Increasing Returns to Scale, and Monopolistic Competition

Markets for differentiated goods. The problems solved by consumers and producers. Market equilibrium under free entry conditions. Effects of fixed costs and market size on product diversity and output.

Industrial Agglomeration

Phenomenon of industrial agglomeration. Increasing returns to scale as a driving force of agglomeration. External and internal mechanisms of increasing returns to scale. The role of transportation costs. A simple model of industrial agglomeration: two regions, two production factors (perfectly mobile workers and immobile farmers). Competition and market size – the main factors affecting the process of industrial agglomeration. Effects of transportation costs, fixed costs, a share of immobile factor on industrial agglomeration. Stability of distributed and agglomerated equilibria. Multiple equilibria and hysteresis.

Economics of Innovations

Model of the innovation process. Patent race. Market structure and innovation efforts. Incentives for innovations. Socially optimal and market investments into R&D. Patent life.

Imperfect Competition and Macroeconomics (1 lecture).

Theories of business cycles. Increasing returns to scale and stability of economic equilibrium. Price rigidity as a source of business cycles. Explanations of price rigidities: kinked demand curve, menu costs. Market monopolization and price rigidity. Small menu costs and large business cycles during economic booms and busts. Externalities, corrective taxes, and market structure. Possibility of a negative effect of Pigou tax on public welfare under monopoly.

Theory of Regulation

Public costs of monopoly. Subadditivity of cost function – a necessary and sufficient condition for a natural monopoly. Economy of scale, concavity of a cost function and subadditivity. Stability of a natural monopoly. History of regulation after World War II. When should natural monopolies be regulated? Demsetz competition for a market. Contestability of a market. Deadweight losses, sunk costs and regulation. Regulation under complete information. Price discrimination and nonlinear tariffs as a means of increasing efficiency of a regulated monopoly. Peak-load pricing. Regulating monopoly under asymmetric information. Exogenous mechanisms of

regulation. Averch-Johnson model. Endogenous mechanisms of regulation. The delegation and revelation approaches.

Analysis of Particular Industries and Enterprises.

Airlines

Effects of deregulating air companies. “Hub and Spokes” system and its efficiency.

Theatres and restaurants

Why in developed market economies there are queues in theatres, restaurants, etc.? Network externalities in services consumption and non-monotonicity of demand function. Instability of equilibrium, corresponding to profit maximization, and limitedness of prices and supply of services.

Economics of Show Business

Why relatively small number of people in show business, sports, book publishing, etc. earn a lot of money and dominate on markets? Effect of imperfect substitution: lesser talent is a poor substitute of larger talent. Dependence of demand function on quality. Increasing returns to scale in show business production. Demand and supply structure. Market equilibrium. Convexity of revenue function, depending on talent. Continuous distribution of performers on talent, and rent dissipation. Outstanding performer and rent value.

Recommended Books:

- Adams W.J., and J.L. Yellen, 1976, “Commodity Bundling and the Burden of Monopoly”, *Quarterly Journal of Economics*, vol. XC, 475-498.
- Averch H., and L.L. Johnson, 1962, Behavior of the Firm under Regulatory Constraint, *American Economic Review*, vol. 52, 1052-1069.
- Baron D., 1989, *Design of Regulatory Mechanisms and Institutions*, in R. Schmalensee and R.D. Willig eds.: The Handbook of Industrial Organization, Elsevier North-Holland.
- Baumol W.J., J.C. Panzar, and R.D. Willig, 1982, *Contestable Markets and the Theory of Industry Structure*, New York: Harcourt Brace Jovanovich.
- Becker G., 1991, A Note on Restaurant Pricing and Other Examples of Social Influences on Price, *Journal of Political Economy*, vol. 99, 1109-1116.
- Braeutigam R., 1989, *Optimal Policies for Natural Monopolies*, in R. Schmalensee and R.D. Willig eds.: The Handbook of Industrial Organization, Elsevier North-Holland.

- Buchanan J.M., 1969, External Diseconomies, Corrective Taxes, and Market Structure, *American Economic Review*, vol. 59, 174-177.
- Coase R.H., 1992, The Institutional Structure of Production, *American Economic Review*, vol. 82, 713-719.
- Diversity, *American Economic Review*, vol. 67, 297-308.
- Dixit A.K., and J. Stiglitz, 1977, Monopolistic Competition and Optimum Product
- Farrel J., and C. Shapiro, 1990, Horizontal Mergers: An Equilibrium Analysis, *American Economic Review*, vol. 80, 107-126.
- Krugman P., 1991, *Geography and Trade*, The MIT Press.
- Krugman P., 1991, Increasing Returns and Economic Geography, *Journal of Political Economy*, vol. 99, 483-499.
- Krugman P., 1995, *Development, Geography, and Economic Theory*, The MIT Press.
- Loury G.L., 1979, "Market structure and Innovation", *Quarterly Journal of Economics*, vol. XCIII, No. 3, 395-410.
- Mankiw G., 1985, Small Menu Costs and Large Business Cycles: A Macroeconomic Model of Monopoly, *Quarterly Journal of Economics*, vol. 100, 529-537.
- Martin S., 1993, *Advanced Industrial Economics*, Blackwell.
- McAfee R.P., J. McMillan, M.D. Whinston, 1989, "Multiproduct Monopoly, Commodity Bundling, and Correlation of Values, *Quarterly Journal of Economics*, vol. CIV, 371-383.
- Posner R.A., 1975, The Social Costs of Monopoly and Regulation, *Journal of Political Economy*, vol. 83, 807-827.
- Rotemberg J.J., and G. Saloner, 1987, The Relative Rigidity of Monopoly Pricing, *American Economic Review*, vol. 77, 917-926.
- Salant S.W., S. Switzer, and R.J. Reynolds, 1983, Losses from Horizontal Merger: The Effects of an Exogenous Change in Industry Structure on Cournot-Nash Equilibrium, *Quarterly Journal of Economics*, vol. 98, 185-199.
- Salinger M.A., 1988, Vertical Mergers and Market Foreclosure, *Quarterly Journal of Economics*, vol. 77, 345-356.
- Sharky W., 1982, *The Theory of Natural Monopoly*, Cambridge University Press.
- Shy O., 1995, *Industrial Organization*, The MIT Press.
- Tirole J., 1988, *The Theory of Industrial Organization*, The MIT Press.
- Varian H., 1992, *Microeconomic Analysis*, W.W. Norton & Company.
- Williamson O., 1996, *The Mechanisms of Governance*, Oxford University Press.
- Williamson O.E., 1981, The Modern Corporation: Origins, Evolution, Attributes, *Journal of Economic Literature*, vol. 19, 1537-1568.
- Willig R., 1976, Consumer's Surplus Without Apology, *American Economic Review*, vol. 66, 589-597.

Health Economics

This course is an introduction for advanced economics students to contemporary **theoretical analysis** of, **empirical evidence** on and **policy debate** about:

What and who produces health, how it is produced, variations in its production, consequences of its production or lack of production.

Course Contents

1. Introduction

The particular problems of health and the economics of health: great uncertainty, great irreversibility, major ethical/equity concerns throughout time, the near-impossibility of separating production from distribution. Are there parallels?

2. Studies of the production of health.

What makes individuals and populations healthier or unhealthier? life expectancy mortality, morbidity and X-Adjusted Life. The distinction between the production of health and the production of health care also a distinction between the production of health and the production of utility.

3. The fundamental microeconomics of health care

Is health care really different from other commodities? Is this market failure irreparable, and what does it imply for market versus social or state provision of health care? Have we learnt more since Arrow's basic insights? Health care insurance as a special sub-topic of insurance. The health care market: Supply, demand, industrial organization. Health care as a part of public economics. Why health care is almost everywhere a topic for public economics. The alternate private/public mix which has been developed in different countries. What is happening in Russia? What could happen? How should health care systems be compared? Cost-effectiveness and the role of the economist in the health sector: an introduction. (Students interested in further applications can find them in Cost-Benefit Analysis). Measuring Health : Adjusted Life Years: QALYs, DALYS, life years. How far have we come? Can we really measure cost-effectiveness. Can we produce a single objective function? The debate over WHO rankings. How health and health care has changed in the last century, the last two decades, the last year: an international overview. Demographers' measures, particularly life expectancy. What has happened to Russian mortality in the last century, the last two decades, the last few years? Trying to quantify health care: QALYs, DALYs and WHO rankings.

How is it done? What should we do now? What is the research agenda? Problems of Health Care Insurance in theory. Alternate forms of health care provision in the world, and recent changes. Trade-offs in “American” versus “European” systems. Is Health care really different from all other commodities? Are there even partial cures for problems such as the agency problem? How much is inherent, how much is in-built institutionally?

4. The pharmaceutical market.

5. Health in transition.

6. The future of health care reform in the world, and particularly Pakistan.

Recommended Books:

- The Economics of Health is one of the newest fields to have its own North-Holland 2-Volume Handbook, and remains somewhat unstandardized, with major variations in subject matter between countries and departments.
- Bootman JL, Townsend RJ, McGhan WF. (2005). *Principles of Pharmacoeconomics*. Harvey Whitney Books, Cincinnati.
- Drummond MF, O'Brien BJ, Stoddart GL, Torrance GW (1998). *Methods for the Economic Evaluation of Health Care Programmes*. 2nd edition, Oxford University Press, Oxford.
- Duckett SJ (2004). *The Australian Health Care System*. Oxford University Press, Oxford.
- Gold MR, Siegel JE, Russell LB, Weinstein MC (1996). *Cost-Effectiveness in Health and Medicine*. Oxford University Press, Oxford.
- Petitti DB (2000). *Meta-Analysis, Decision Analysis, and Cost-Effectiveness Analysis:*
- *Methods for Quantitative Synthesis in Medicine*, 2nd edition. Oxford University Press, Oxford.
- Rychlik R (2002). *Strategies in Pharmacoeconomics and Outcomes Research*. The Haworth Press, New York.
- Vogenburg, FR (2001). *Introduction to applied pharmacoeconomics*. McGraw Hill, New York.
- Zweifel and Breyer, *Economics of Health*, North Holland

Urban Economics

Course Contents

1. Theory of Residential Land Use The Standard Monocentric City Model: Comparative Statics, Dynamic Stability:
2. Durable Housing - Development Timing

3. Durable Housing - Endogenous Maintenance, A Commodity Hierarchy Model, Maintenance, Comparative Statics with Durable Housing:
4. Name Durable Housing - Investment and Demolition
5. Spatial Interactions and Non-monocentric Cities
6. Name Economics of Agglomeration
7. City Sizes: Factory Towns, A System of Cities,
8. Empirical Studies on the Housing Market: Homogeneous Housing, Intraurban Migration, Supply, Demand, Tenure Choice,
9. Urban Transportation: Congestion Pricing and Investment, Second-Best Pricing and Investment, Land Use for Transportation, Transportation Technology and Demand, Regulation of Urban Transportation Services
10. Local Public Goods
11. Taxation: Property Taxes, Capital Gains Tax
12. Externalities and Zoning: Externality Zoning, Fiscal Zoning
13. The Hedonic Approach
14. Measuring the Benefits and Costs of Urban Externalities
15. The Contract Theory and the Housing Market, Tenure Choice
Project Financing in Pakistan.

Recommended Books:

- Beckmann, M.J., Location Theory, Random House, (1968). (An old book, but still the best one in location theory.)
- Fujita, M., Urban Economics Theory, Cambridge University Press, (1989), (An up-to-date survey of technical aspects of urban land use theory.)
- Henderson, J.V., Economic Theory and the Cities, (2nd Edition), Academic Press, (1985). (A standard graduate textbook.)
- Kanemoto, Y., Theories of Urban Externalities, North-Holland, (1980).
- Miles, D., Housing, Financial Markets and the Wider Economy, Wiley, (1994). (A book on housing economics with special emphasis on the financial side.)
- Mills, E. S. and B.W. Hamilton, Urban Economics, (4th Edition), Scott, Foresman and Company, (1989). (A standard undergraduate textbook. If you have not read this book yet, you should do so in a hurry.)
- Small, K. A., Urban Transportation Economics, Harwood, (1992). (A good survey of recent research on transportation economics with special emphasis on the empirical side.)
- Wildasin, D. E., Urban Public Finance, Fundamentals of Pure and Applied Economics 10, Harwood Academic Publishers: Chur, Switzerland, (1986).

Regional Economics

Course Contents

Different types of Regions, Micro Level (Regional), Political Blocks, Homogeneous and Heterogeneous Blocks. Need for Planning for Local Level Development; Techniques / Methods / Tools. Regional Aims of Planning. Theoretical and Practical Problems of Regional Development Planning. Combining Theory, Techniques and Practices of Development. Linkage between Planning and Implementation at grassroots Level. Aggregate and Regional Planning Techniques / Models. Inter-industry Model. Theories of Inter-regional Economic Growth. Regional Policies and Alternatives. Shadow Pricing and Socio-economic Development. Criteria for Development of Backward Areas.

Impact of Distance on Classical Economic Markets and Theory of Firms. International and Regional Location Analysis of Industries. Spatial and Economic Structure of Regions and Regional Development. Agglomeration Economics and Industrialization Measurement of Regional Economic Activities. Social and Economic Returns to Develop Backward Regions.

Growth Poles. Project Economics and Planning. Centralized and Decentralized Planning and Financing for Development. Rationale for Decentralization and Functioning of Markets. Factor Mobility, Lack of Local Resources and Financing Techniques. Sharing to Finance Local Projects and Benefits. Cost / Benefits Analysis of Socially Uplifting Projects. Social Returns to Local Projects.

International Inter-regional Economic Growth: Convergence-divergence debate. Regional Policies for Development and Regional (Provincial) development in Pakistan; Planning, Implementation and Progress. International Income Differential and Issues.

Recommended Books:

- Armstrong, Harvey, (2000), Regional Economics and Policy, Black wall Publishing Company.
- Choi, Rok-Byung, (2003), High Technology Development in Regional Economic Growth, Policy Implications of Dynamic Externalities, Amazon.com.
- 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.

- Marshall Peter, (1998), *Competitiveness, Localized learning and Regional Development: Specialization and Prosperity in Small Open Economies*, (Routledge Functions of Political Economy), Amazon.com.
- Mcker David L., (1970), *Regional Economics: Theory and Practice*, The Free Press, New York.
- Philip McCann, (2001), *Urban and Regional Economics*, Oxford University Press.
- Richardson Harry, W., (1985), *Regional Development Theories in Economic Prospects for the Northeast*, (Editors), Harry W. Richardson and Joseph H., Turek, Temple University Press, Philadelphia, USA.
- Simon David, (1990), *Third World Regional Development: A Reappraisal*, Paul Chapman Educational Publishing.
- Shrivastava D.S. (1985), *Advanced Economics of Development and Planning*, Allied Publications, New Delhi.
- Thisse, Fujita, M.J., (2002), *Economics of Agglomeration: Cities, Industrial Location, and Regional Growth*, Cambridge University Press.
- Taylor, Jim, and Armstrong, H.W., (2000), *Regional Economics and Policy*, Amazon.com.
- Treyz, George, (1993), *Regional Economic Modeling: A Systematic Approach to Economic Forecasting and Policy Analysis*, Kluwer Academic Publishers.
- Winters L. Alam, *Regional Integration and Development*, Amazon.com, latest edition.
- Zaidi, Akbar, (1999), *Issues in Pakistan Economy*, Oxford Univ. Press, Karachi.

Financial Markets

Course Contents

Theory of the Role and Functioning of Financial System

Information asymmetric and the need for the role of financial sector. Some Basic concepts like adverse selection, moral hazard, free rider and principal-agent problems in financial sector to understand puzzles of financial markets. Financial system and its relationship with the rest of the economy. Functions of financial sector: mobilization and allocation of resources; pooling, diversification and trading of risk; advisory role; financing technological innovation and development. Financial Repression vs Financial Liberalization.

Growth and stability of financial system.

Why there is need to regulate the financial sector? Why financial sector is most regulated one in an economy? State Bank of Pakistan and its main functions: conduct of monetary policy; promotion, establishment, regulation and supervision of depository institutions; exchange rate policy and management of foreign exchange reserves; Payment System (NIFT And its functions. Relating to payments system). Securities and Exchange Commission of Pakistan and its functions: promotion, establishment, regulation and supervision of various components of capital market .

Financial Institutions and Current issues

- i) Scheduled Banks and their role in economic development of Pakistan: Introduction to commercial banking; structure of commercial bank in Pakistan; Assts and Liabilities of a commercial bank; performance indicators for commercial banks; recent issues in commercial banking.

- ii) Non-bank Financial Institutions: Development Financial Institutions, Investment Banks, Modarbas, Leasing companies, Mutual Funds, Housing Finance Corporations, Discount Houses, Venture Capital Companies.
- iii) Micro Finance Institutions, SME Banks
- iv) Insurance Companies – the rationale and role.

Financial Markets and Current Issues

- i) Functioning of Money Market (Primary and Secondary Dealers
- ii) Capital Market (Stock exchanges and Various Components of capital markets – Securities, equities, bonds, debentures)
- iii) Foreign Exchange Market and its evolution, dollarization of the economy.

Financial Infrastructure

Legal Framework (SBP Act 1956, BCO, 1984, SBP Prudential Regulations), Accounting Standard, Auditing, Corporate governance of banks and other financial institutions. Human Resource Development (Skill and Training) – Importance for functioning of financial sector. Electronic Banking and its prospects

Recommended Books

- Fabozzi, F. and Modigliani, F. Capital Markets. 2nd edition. Prentice- Hall London (1996).
- Mishkin (2003), The Economics of Money, Banking, and Financial Markets. 7th edition.
- Ritter, L. S. and Peterson, R.L. Financial Institutions and Financial Markets. 9th edition. New York. Basic Books.
- Arby, Muhammad Farooq (2004), “Functions, Evolution and Organization of State Bank of Pakistan” www.sbp.org.pk
- History of State Bank of Pakistan (Volume – 3, chapters 2 to7, 13).
- Zaidi, Akber (2005), “Issues in Pakistan Economy,” Karachi. Chapters12, 13
- SBP Annual and Quarterly Reports
- SBP Financial Sector Assessment: 1990-2002, 2003 and onward.

Agricultural Economics

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.

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

- Brown, Lester, The Social Impact of Green Revolution, New York, The Greogic Endowment for International Peace, 1971.
- Capstick Margret. The Economics of Agriculture, London George Allen Unwin Ltd., latest edition.
- Chaudhary M. Aslam, (1989), Agricultural Development and Public Policies, Izhar Sons, Lahore.
- Ghatak S., and Ingersent K., Agriculture and Economic Development, (Latest Edition), Harvester Press.
- Johnston, Bruce, F & Fellir Kily. Agricultural and Structural Transformation, Economic Strategies in late Developing Countries.
- Khan Mahmood-ul-Hassan. The Economics of Green Revolution in Pakistan, New York, Published 1975.
- Karamat, A., Political Economy of Rural Development in Pakistan, Lahore Vanguard Book House, 1981.
- Shafi M., (1995), Pricing of Farm Produce in Pakistan, Objectives, Practices, and Experiences. Print Associates International, Islamabad.
- Thorbake Erike. The Role of Agriculture in Economic Development, New York, Columbia University Press (1971).
- Upton Marlin, Agricultural Production and Resource Use.
- Colman D. and Young T., Principals of Agricultural Economics, Markets and Prices in Less Developed Countries, (1989), Cambridge University Press.
- Yujiro Hayami and Vernon W. Ruttan, Agricultural Development, John Hopkin University Press, London. (Latest edition).

DETAIL OF COMPULSORY COURSES

COMPULSORY COURSES IN ENGLISH FOR BS (4 YEAR) IN BASIC & SOCIAL SCIENCES

English I (Functional English)

Objectives: Enhance language skills and develop critical thinking.

Course Contents:

Basics of Grammar
Parts of speech and use of articles
Sentence structure, active and passive voice
Practice in unified sentence
Analysis of phrase, clause and sentence structure
Transitive and intransitive verbs
Punctuation and spelling

Comprehension

Answers to questions on a given text

Discussion

General topics and every-day conversation (topics for discussion to be at the discretion of the teacher keeping in view the level of students)

Listening

To be improved by showing documentaries/films carefully selected by subject teachers

Translation skills

Urdu to English

Paragraph writing

Topics to be chosen at the discretion of the teacher

Presentation skills

Introduction

Note: *Extensive reading is required for vocabulary building*

Recommended Books:

1. Functional English

- a) Grammar
 1. Practical English Grammar by A. J. Thomson and A. V. Martinet. Exercises 1. 3rd Edition. Oxford University Press. 1997. ISBN 0 194313492
 2. Practical English Grammar by A. J. Thomson and A. V. Martinet. Exercises 2. Third edition. Oxford University Press. 1997. ISBN 0 194313506.

- b) Writing
 - 1. Writing. Intermediate by Marie-Christine Boutin, Suzanne Brinand and Françoise Grellet. Oxford Supplementary Skills. Fourth Impression 1993. ISBN 0 19 435405 7 Pages 20-27 and 35-41.
- c) Reading/Comprehension
 - 1. Reading. Upper Intermediate. Brain Tomlinson and Rod Ellis. Oxford Supplementary Skills. Third Impression 1992. ISBN 0 19 453402 2.
- d) Speaking

English II (Communication Skills)

Objectives: Enable the students to meet their real life communication needs.

Course Contents:

Paragraph writing

Practice in writing a good, unified and coherent paragraph

Essay writing

Introduction

CV and job application

Translation skills

Urdu to English

Study skills

Skimming and scanning, intensive and extensive, and speed reading, summary and précis writing and comprehension

Academic skills

Letter/memo writing, minutes of meetings, use of library and internet

Presentation skills

Personality development (emphasis on content, style and pronunciation)

Note: documentaries to be shown for discussion and review

Recommended Books:

Communication Skills

a) Grammar

- 1. Practical English Grammar by A. J. Thomson and A. V. Martinet. Exercises 2. 3rd Edition. Oxford University Press 1986. ISBN 0 19 431350 6.

- b) Writing
1. Writing. Intermediate by Marie-Christine Boutin, Suzanne Brinand and Françoise Grellet. Oxford Supplementary Skills. Fourth Impression 1993. ISBN 0 19 435405 7 Pages 45-53 (note taking).
 2. Writing. Upper-Intermediate by Rob Nolasco. Oxford Supplementary Skills. Fourth Impression 1992. ISBN 0 194354065 (particularly good for writing memos, introduction to presentations, descriptive and argumentative writing).
- c) Reading
1. Reading. Advanced. Brian Tomlinson and Rod Ellis. Oxford Supplementary Skills. Third Impression 1991. ISBN 0 19 4534030.
 2. Reading and Study Skills by John Langan
 3. Study Skills by Richard Yorky.

English III (Technical Writing and Presentation Skills)

Objectives: Enhance language skills and develop critical thinking

Course Contents:

Presentation skills

Essay writing

Descriptive, narrative, discursive, argumentative

Academic writing

How to write a proposal for research paper/term paper

How to write a research paper/term paper (emphasis on style, content, language, form, clarity, consistency)

Technical Report writing

Progress report writing

Note: Extensive reading is required for vocabulary building

Recommended Books:

Technical Writing and Presentation Skills

a) Essay Writing and Academic Writing

1. Writing. Advanced by Ron White. Oxford Supplementary Skills. Third Impression 1992. ISBN 0 19 435407 3 (particularly suitable for discursive, descriptive, argumentative and report writing).
2. College Writing Skills by John Langan. McGraw-Hill Higher Education. 2004.
3. Patterns of College Writing (4th edition) by Laurie G. Kirszner and Stephen R. Mandell. St. Martin's Press.

b) Presentation Skills

- c) Reading
The Mercury Reader. A Custom Publication. Compiled by northern Illinois University. General Editors: Janice Neulib; Kathleen Shine Cain; Stephen Ruffus and Maurice Scharon. (A reader which will give students exposure to the best of twentieth century literature, without taxing the taste of engineering students).

Pakistan Studies (Compulsory)

Introduction/Objectives:

- Develop vision of historical perspective, government, politics, contemporary Pakistan, ideological background of Pakistan.
- Study the process of governance, national development, issues arising in the modern age and posing challenges to Pakistan.

Course Outline:

1. Historical Perspective

- a. Ideological rationale with special reference to Sir Syed Ahmed Khan, Allama Muhammad Iqbal and Quaid-i-Azam Muhammad Ali Jinnah.
- b. Factors leading to Muslim separatism
- c. People and Land
 - i. Indus Civilization
 - ii. Muslim advent
 - iii. Location and geo-physical features.

2. Government and Politics in Pakistan

Political and constitutional phases:

- a. 1947-58
- b. 1958-71
- c. 1971-77
- d. 1977-88
- e. 1988-99
- f. 1999 onward

3. Contemporary Pakistan

- a. Economic institutions and issues
- b. Society and social structure
- c. Ethnicity
- d. Foreign policy of Pakistan and challenges
- e. Futuristic outlook of Pakistan

Recommended Books:

1. Burki, Shahid Javed. *State & Society in Pakistan*, The Macmillan Press Ltd 1980.
2. Akbar, S. Zaidi. *Issue in Pakistan's Economy*. Karachi: Oxford University Press, 2000.
3. S.M. Burke and Lawrence Ziring. *Pakistan's Foreign policy: An Historical analysis*. Karachi: Oxford University Press, 1993.
4. Mehmood, Safdar. *Pakistan Political Roots & Development*. Lahore, 1994.
5. Wilcox, Wayne. *The Emergence of Banglades.*, Washington: American Enterprise, Institute of Public Policy Research, 1972.

6. Mehmood, Safdar. *Pakistan Kayyun Toota*, Lahore: Idara-e-Saqafat-e-Islamia, Club Road, nd.
7. Amin, Tahir. *Ethno - National Movement in Pakistan*, Islamabad: Institute of Policy Studies, Islamabad.
8. Ziring, Lawrence. *Enigma of Political Development*. Kent England: WmDawson & sons Ltd, 1980.
9. Zahid, Ansar. *History & Culture of Sindh*. Karachi: Royal Book Company, 1980.
10. Afzal, M. Rafique. *Political Parties in Pakistan*, Vol. I, II & III. Islamabad: National Institute of Historical and cultural Research, 1998.
11. Sayeed, Khalid Bin. *The Political System of Pakistan*. Boston: Houghton Mifflin, 1967.
12. Aziz, K.K. *Party, Politics in Pakistan*, Islamabad: National Commission on Historical and Cultural Research, 1976.
13. Muhammad Waseem, *Pakistan under Martial Law*, Lahore: Vanguard, 1987.
14. Haq, Noor ul. *Making of Pakistan: The Military Perspective*. Islamabad: National Commission on Historical and Cultural Research, 1993.

ISLAMIC STUDIES

(Compulsory)

Objectives:

This course is aimed at:

- 1 To provide Basic information about Islamic Studies
- 2 To enhance understanding of the students regarding Islamic Civilization
- 3 To improve Students skill to perform prayers and other worships
- 4 To enhance the skill of the students for understanding of issues related to faith and religious life.

Detail of Courses:

Introduction to Quran Studies

- 1) Basic Concepts of Quran
- 2) History of Quran
- 3) Uloom-ul -Quran

Study of Selected Text of Holly Quran

- 1) Verses of Surah Al-Baqra Related to Faith(Verse No-284-286)
- 2) Verses of Surah Al-Hujrat Related to Adab Al-Nabi (Verse No-1-18)
- 3) Verses of Surah Al-Mumanoon Related to Characteristics of faithful (Verse No-1-11)
- 4) Verses of Surah al-Furqan Related to Social Ethics (Verse No.63-77)
- 5) Verses of Surah Al-Inam Related to Ihkam(Verse No-152-154)

Study of Selected Text of Holy Quran

- 1) Verses of Surah Al-Ihzab Related to Adab al-Nabi (Verse No.6,21,40,56,57,58.)
- 2) Verses of Surah Al-Hashar (18,19,20) Related to thinking, Day of Judgment
- 3) Verses of Surah Al-Saf Related to Tafakar,Tadabar (Verse No-1,14)

Seerat of Holy Prophet (S.A.W) I

- 1) Life of Muhammad Bin Abdullah (Before Prophet Hood)
- 2) Life of Holy Prophet (S.A.W) in Makkah
- 3) Important Lessons Derived from the life of Holy Prophet in Makkah

Seerat of Holy Prophet (S.A.W) II

- 1) Life of Holy Prophet (S.A.W) in Madina
- 2) Important Events of Life Holy Prophet in Madina
- 3) Important Lessons Derived from the life of Holy Prophet in Madina

Introduction to Sunnah

- 1) Basic Concepts of Hadith
- 2) History of Hadith
- 3) Kinds of Hadith
- 4) Uloom –ul-Hadith
- 5) Sunnah & Hadith
- 6) Legal Position of Sunnah

Selected Study from Text of Hadith

Introduction to Islamic Law & Jurisprudence

- 1) Basic Concepts of Islamic Law & Jurisprudence
- 2) History & Importance of Islamic Law & Jurisprudence
- 3) Sources of Islamic Law & Jurisprudence
- 4) Nature of Differences in Islamic Law
- 5) Islam and Sectarianism

Islamic Culture & Civilization

- 1) Basic Concepts of Islamic Culture & Civilization
- 2) Historical Development of Islamic Culture & Civilization
- 3) Characteristics of Islamic Culture & Civilization
- 4) Islamic Culture & Civilization and Contemporary Issues

Islam & Science

- 1) Basic Concepts of Islam & Science
- 2) Contributions of Muslims in the Development of Science
- 3) Quran & Science

Islamic Economic System

- 1) Basic Concepts of Islamic Economic System
- 2) Means of Distribution of wealth in Islamic Economics
- 3) Islamic Concept of Riba
- 4) Islamic Ways of Trade & Commerce

Political System of Islam

- 1) Basic Concepts of Islamic Political System
- 2) Islamic Concept of Sovereignty
- 3) Basic Institutions of Govt. in Islam

Islamic History

- 1) Period of Khlaft-E-Rashida
- 2) Period of Ummayyads
- 3) Period of Abbasids

Social System of Islam

- 1) Basic Concepts Of Social System Of Islam
- 2) Elements Of Family
- 3) Ethical Values Of Islam

Reference Books:

- 1) Hameed ullah Muhammad, "Emergence of Islam", IRI, Islamabad
- 2) Hameed ullah Muhammad, "Muslim Conduct of State"
- 3) Hameed ullah Muhammad, "Introduction to Islam"
- 4) Mulana Muhammad Yousaf Islahi,"
- 5) Hussain Hamid Hassan, "An Introduction to the Study of Islamic Law" leaf Publication Islamabad, Pakistan.
- 6) Ahmad Hasan, "Principles of Islamic Jurisprudence" Islamic Research Institute, International Islamic University, Islamabad (1993)
- 7) Mir Waliullah, "Muslim Jurisprudence and the Quranic Law of Crimes" Islamic Book Service (1982)
- 8) H.S. Bhatia, "Studies in Islamic Law, Religion and Society" Deep & Deep Publications New Delhi (1989)
- 9) Dr. Muhammad Zia-ul-Haq, "Introduction to Al Sharia Al Islamia" Allama Iqbal Open University, Islamabad (2001)

Note: One course will be selected from the following six courses of Mathematics.

COMPULSORY MATHEMATICS COURSES FOR BS (4 YEAR)

**(FOR STUDENTS NOT MAJORING IN
MATHEMATICS)**

MATHEMATICS -I (Pre-calculus)

Prerequisite(s): Mathematics at secondary level

Credit Hours: 3 + 0

Specific Objectives of the Course:

To prepare the students, not majoring in mathematics, with the essential tools of algebra to apply the concepts and the techniques in their respective disciplines.

Course Outline:

Preliminaries: Real-number system, complex numbers, introduction to sets, set operations, functions, types of functions.

Matrices: Introduction to matrices, types, matrix inverse, determinants, system of linear equations, Cramer's rule.

Quadratic Equations: Solution of quadratic equations, qualitative analysis of roots of a quadratic equations, equations reducible to quadratic equations, cube roots of unity, relation between roots and coefficients of quadratic equations.

Sequences and Series: Arithmetic progression, geometric progression, harmonic progression.

Binomial Theorem: Introduction to mathematical induction, binomial theorem with rational and irrational indices.

Trigonometry: Fundamentals of trigonometry, trigonometric identities.

Recommended Books:

Dolciani MP, Wooton W, Beckenback EF, Sharron S, *Algebra 2 and Trigonometry*, 1978, Houghton & Mifflin,

Boston (suggested text):

Kaufmann JE, *College Algebra and Trigonometry*, 1987, PWS-Kent Company, Boston

Swokowski EW, *Fundamentals of Algebra and Trigonometry* (6th edition), 1986, PWS-Kent Company, Boston

Note: *General Courses from other Departments*

Details of courses may be developed by the concerned universities according to their Selection of Courses as recommended by their Board of Studies.

RECOMMENDATIONS

The committee has reviewed and revised the curriculum of BS (4 years) Economics and also suggested its guidelines for Masters in Economics.

BS in Economics:

- Committee has recommended 10 foundation and 12 major courses along with a list of 30 elective courses.
- A semester-wise scheme is suggested based on the technical level required for different courses.
- Based on the recent advancements in the discipline of Economics, committee has suggested new courses to be included in foundation, major and elective courses, and has revised the contents of existing courses. In particular, the following areas need to receive more emphasis:
 - Economic History, which provides testing ground for theory. This is a different course from History of Economic Thought. 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.
 - Behavioral and Experimental Economics.
 - Other heterodox approaches, including institutional economics.
 - A new course on Ethics and Economics offers essential integration of moral perspectives into conventional economics. This also offers a natural lead-in to Islamic Economics.
 - Econometrics courses should offer integrated lab work to provide students with hands-on practice on running and understanding econometric analysis of real world data sets.
 - University has the option to offer Research paper/Project in lieu of any (one) other course.

Masters in Economics:

- Committee recommended reconsidering the names of Masters Degree. MPhil degree is recommended for a Masters with research dissertation, and MS/MSc/MA is recommended for a Masters without dissertation.
- MSc/MA is to be considered equal to BS with 16 years of education.
- MS is to be considered 17 years of education. MS with 6 more credit hours of course work must not be deemed equal to M.Phil.
- For any PhD program in economics, MPhil is to be considered as a pre-requisite and in case of MPhil leading to PhD, MPhil requirements including research dissertation must be fulfilled.
- Someone with MS degree would directly be eligible for MPhil research dissertation.

- Committee recommended a Masters Degree (not MSc or MA) with minimum 24 credit hours of course work.
- For Masters Course work, committee recommended 4 (four) major courses: Advanced Macroeconomics, Advanced Microeconomics, Econometrics, and Recent Approaches to Development and 4 (four) elective courses (university can offer any four graduate level elective courses from any field of Economics).
- Recent approaches to Development; in particular, development is not merely accumulation of wealth. Various approaches of development including traditional; human development; sustainable development; food and water security; community development; political economy aspects and Islamic economics etc should be part of this course.
 - Committee believed that Masters is an advanced level graduate degree and it refrained from fixing contents for any course.

General Recommendations:

- Committee strongly recommended that HEC should make sure (facilitate) that all core readings (books/papers), software and computer labs are available.
- HEC must arrange teachers' training/workshops for faculty members.
- Committee recommended that all transcripts should follow same standard to gauge the relative standing of the student. It is recommended that a relative standing of student (in percentile) should be mentioned on transcript. This will help in creating comparability of grades across regions and institutions.
- Diversification courses should aim at achieving 'synthesis' – an integrated view of economics from diverse perspectives. Learning theory shows that students get deeper understanding by studying the same subject from different angles. Thus, psychology diversification should concentrate on the overlap between economics and psychology, as developed in Behavioral economics. Philosophy diversification may be achieved by studying moral philosophy within the course Ethics & Economics. The insights of Sociology into the economic realm can be studied via Giovanni Arrighi's work on the Long Twentieth Century, or via Karl Polanyi's classic text on the Great Transformation.