

No. 635
Dated: 25/03/22

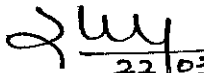
UNIVERSITY OF SARGODHA, SARGODHA

NOTIFICATION

No. SU/Acad/188

Dated: 22.03.2022

On the recommendation of Academic Council made in its meeting held on 18.06.2020, the Syndicate in its meeting held on 27.07.2020 has approved the revised Scheme of Studies/Curriculum of BS Economics program w.e.f 2020-2024 for main Campus University of Sargodha and w.e.f 2021-2025 for affiliated Colleges University of Sargodha. The approved copy is annexed herewith.


22/03/22.

Asif Mehmood
Deputy Registrar (Acad)

Distribution:


- Chairman, Department of Economics
- Controller of Examinations
- All Principals of Affiliated Colleges concerned
- Web Developer (for uploading on University website)

C.C

- Director, Academics
- Director, QEC
- Deputy Registrar (Affiliation)
- Deputy Registrar (Registration)
- Secretary to the Vice-Chancellor
- PA to Registrar
- Notification file

Please put up
AMPK
24.03.22
25/03/22
✓ DCB (Secretary)
ACE (Secretary)

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بی۔ ایس۔ معاشیات

Secrecy Branch, 
25-3-22

University of Sargodha
Department of Economics
Scheme of Studies of B.S (4-years) Economics

SCHEME OF STUDIES FOR BS (4YEAR) ECONOMICS		
Semester	Name of Subject	Credits
First		
URCE5101	Grammar	3(3-0)
ECON 5101	Principles of Micro Economics	3(3-0)
URCI 5105	Islamic Studies (Compulsory)	2(2-0)
URCM 5107	Mathematics	3(3-0)
ICTC 5201	Introduction to Information Communication Technologies	3(2-1)
SOCI-5101	General Sociology-I	3(3-0)
		17
Second		
URCE 5102	Language Comprehension & presentation Skills	3(3-0)
URCP 5106	Pakistan Studies	2(2-0)
ECON 5102	Principles of Macro Economics	3(3-0)
MATH 6161	Calculus - I	3(3-0)
ECON 5103	Principles of accounting	3(3-0)
NTR 5101	Introduction to International Relations	3(3-0)
		17
Third		
URCE 5103	Academic Writing	3(3-0)
ECON 5104	Intermediate Micro Economics	3(3-0)
ECON 5105	Development Economics	3(3-0)
STAT 5122	Statistics for Economics-I	3(3-0)
ECON 5106	Principles of Marketing	3(3-0)
ECON 5107	Financial Management	3(3-0)
		18
Fourth		
URCE 5104	Introduction to English Literature	3(3-0)
ECON 5108	Intermediate Macro Economics	3(3-0)
STAT 5123	Statistics for Economics-II	3(3-0)
ECON 5109	Agriculture Economics	3(3-0)
ECON 5110	Political Economy	3(3-0)
ECON 5111	Managerial Economics	3(3-0)
		18

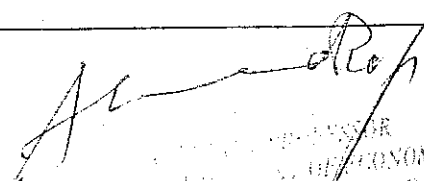
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DEPARTMENT OF ECONOMICS
UNIVERSITY OF SARGODHA

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DEPARTMENT OF ECONOMICS
UNIVERSITY OF SARGODHA

Semester	Name of Subject	Credits
Fifth		
ECON 6112	Micro Economics	3(3-0)
ECON 6113	Econometrics I	3(3-0)
ECON 6114	Mathematical Economics I	3(3-0)
ECON 6115	Environmental economics	3(3-0)
ECON 6116	Energy Economics	3(3-0)
ECON 6117	Poverty and Income Distribution	3(3-0)
		18
Sixth		
ECON 6118	Macro Economics	3(3-0)
ECON 6119	Econometrics II	3(3-0)
ECON 6120	Mathematical Economics II	3(3-0)
ECON 6121	General equilibrium and Welfare Economics	3(3-0)
ECON 6122	Monetary Economics	3(3-0)
		15
Seventh		
ECON 6123	International Trade Theory	3(3-0)
ECON 6124	Research Methodology	3(3-0)
ECON 6125	Public Finance	3(3-0)
ECON 6126	History of Economics Thoughts	3(3-0)
ECON 6127	Project Appraisal and Investment Analysis	3(3-0)
		15
Eight		
ECON 6128	Applied Economics	3(3-0)
ECON 6129	Islamic Economics	3(3-0)
ECON 6130	Issues in Pak Economy	3(3-0)
ECON 6131	Economics of Education	3(3-0)
		12


 ASSISTANT PROFESSOR
 DEPARTMENT OF ECONOMICS
 UNIVERSITY OF SARGODHA

BS 1st Semester

URCE-5191 Grammar

The course aims at developing grammatical competence of the learners to use grammatical structures in context in order to make the experience of learning English more meaningful. The objectives of the course are to (i) reinforce the basics of grammar (ii) understand the basic meaningful units of language (iii) introduce the functional aspect of grammatical categories and (iv) comprehend language use.

Contents

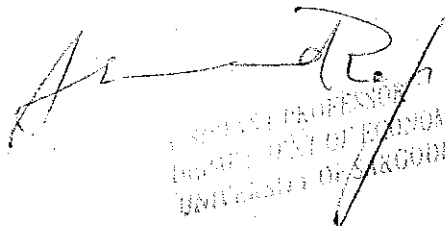
1. Parts of Speech
 - a. Types and uses of nouns
 - b. Types and uses of pronouns
 - c. Types and uses of verbs
 - i. Finite verbs (action, modal, helping, transitive n intransitive)
 - ii. Non-finite verbs (infinitives, participles, gerunds)
 - d. Types and uses of adverbs
 - e. Types and uses of adjectives
 - f. Types and uses of prepositions
 - g. Types and uses of conjunctions
 - h. Use of article
2. Common grammatical errors and their corrections
3. Sentence structure
4. Types and functions of sentences
5. Types and functions of phrases
6. Types and functions of clauses
7. Synthesis of sentences
8. Conditional sentences
9. Voice and change of voice
10. Direct and indirect narration
11. Punctuation

Recommended Books

1. Eastwood, J. *A Basic English Grammar*, OUP (3rd edition, 1999).
2. Eastwood, J. *Oxford Guide to English Grammar*. (OUP, 2002)

Suggested Readings

1. Richards, V. T. & Eston, E. E. (2007). *Analysing the Grammar of English* (3rd ed). Georgetown University Press
2. Azar, B. S. (2016). *Understanding and Using English Grammar* (5th ed). Pearson.
3. Swan, M. (2016). *Practical English Usage* (4th ed). Oxford University Press.
4. Thomson, A. J., & Martinet, A. V. (1986). *A Practical English Grammar*. OUP.
5. Biber, D., Johansson, S., Leech, G., Conrad, S., Finegan, E., & Quirk, R. (1999). *Longman Grammar of Spoken and Written English* (Vol. 2). MIT Press.
6. Hunston, S., & Francis, G. (2000). *Pattern Grammar: A corpus-driven approach to the lexical grammar of English* (Vol. 4). Amsterdam: John Benjamins.


ASSISTANT PROFESSOR
DEPARTMENT OF ECONOMICS
UNIVERSITY OF SAKSHI

The course is designed for the beginners with either no formal background or very 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 microeconomics. Emphasis will be on the use of graphs, diagrams and numerical tables/schedules for exposition. The teacher is expected to draw examples from the surrounding world to clarify the concepts.

Contents

1. Introduction

- a) An overview of the social system, Economy as integral part of the social system
- b) Economic agents and economic problem
- c) Classification of economics, Importance and scope of micro-economics, Basic concepts

2- The Price Mechanism

- a) The concept of a market economy, Laws of demand and supply
- b) Market equilibrium and determination of price
- c) Concept of elasticity of demand and supply, Importance of elasticity.

3- Consumer's Behaviour

- a) Consumers/ households as economic agents, Problem of the consumers, The utility theory
- b) Laws of diminishing marginal utility and equi-marginal utilities,
- c) Budget constraint and consumer's equilibrium, Individual demand and market demand

4- Firms and Industries

- a) Business enterprises, Forms of business organization: Proprietorship, Partnership, Joint stock companies, Multi-national corporations,
- b) Classification of the firms, Production and supply of commodities Objectives of the firm
- c) Output maximization and cost minimization, Industrial structure & market supply.

5- Production and Cost Functions

- a) Production function, Primary inputs: factors of production, Secondary/intermediate inputs
- b) The laws of returns, Revenues of the firm
- c) Cost function Short-run and Long-run costs, Equilibrium of the firm.

6- Market Structure

- a) Classification of markets i.e. Perfect competition, Imperfect competition: Monopoly and Monoposony, Monopolistic competition
- b) Price determination

Recommended Book

1. Mankiw, G. - Principles of Economics – Latest Edition, South-West Publishers.
2. Samuelson and Nordrons - Economics –Latest Edition- McGraw Hill.

Suggested Books

1. McConnel and Bruce - Principles of Economics -17th Edition (2006)- McGraw Hill.
2. Lipsey and Goerant-Principles of Economics-10th Edition (2003)- Oxford University Press

URCI-5195 Islamic Studies (Compulsory)

Islamic Studies engages in the study of Islam as a textual tradition inscribed in the fundamental sources of Islam: Qur'an and Hadith, history and particular cultural contexts. The area seeks to provide an introduction to and a specialization in Islam through a large variety of expressions (literary, poetic, social, and political) and through a variety of methods (literary criticism, hermeneutics, history, sociology, and anthropology). It offers opportunities to get fully introductory foundational bases of Islam in fields that include Qur'anic studies, Hadith and Seerah of Prophet Muhammad (PBUH), Islamic philosophy, and Islamic law, culture and theology through the textual study of Qur'an and Sunnah..

- To make students understand the relevance and pragmatic significance of Islam in their lives.
- To make learners comprehend the true spirit of Islam with reference to modern world.
- To generate a sense of Islamic principles as a code of living that guarantee the effective solutions to the current challenges of being.
- To provide Basic information about Islamic Studies
- To enhance understanding of the students regarding Islamic Civilization
- To improve Students skill to perform prayers and other worships
- To enhance the skill of the students for understanding of issues related to faith and religious life.

Contents

Introduction to Qur'anic Studies

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

1. مطالعہ قرآن (تعارف قرآن، سورۃ البقرہ، سورۃ الحجرات، سورۃ الفرقان، سورۃ المؤمنون، سورۃ الانعام، سورۃ الصف ترجمہ و تفسیر)

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

2. معالِمہ حدیث (متن حدیث ترجمہ و تشریح)

3. سیرت النبی

4. سیرت النبی (مطالعہ سیرت کی ضرورت و اہمیت، تعمیر سیرت و شخصیت کا بیوگرافی، اقامت دین، میثاق مدینہ، خطبہ حجۃ الوداع، اخلاقی تعلیمات)

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

4. اسلامی تہذیب و تمدن (اسلامی تہذیب کے ارکان و بنیادیں، خصوصیات، اسلامی تہذیب کے فکری، علمی، معاشرتی اور سماجی اثرات، عصری تہذیبی کشمکش اور اسلامی تہذیب، تہذیبی تصادم کے اثرات و نتائج)

Recommended Books

- 1) Hameedullah Muhammad, —Emergence of Islam I, IRI, Islamabad
- 2) Hameedullah Muhammad, —Muslim Conduct of State

Suggested Books

- 1) Hameedullah Muhammad, _Introduction to Islam
- 2) Ahmad Hasan, —Principles of Islamic Jurisprudence Islamic Research, Institute, International Islamic University, Islamabad (1993)
- 3) Dr. Muhammad Zia-ul-Haq, —Introduction to Al Sharia Al Islamial Allama Iqbal Open University, Islamabad (2001)


The image shows a handwritten signature in black ink over a circular stamp. The stamp contains text in Urdu, including 'URCI-5195' and 'Islamic Studies (Compulsory)'. The signature is written in a cursive style.

The purpose of this course is to provide students the necessary mathematical skills to pursue more advanced courses in economics. The course is devised to enhance the technical skills in the areas of Algebra, which are used in almost all sub-disciplines of economics.

Contents

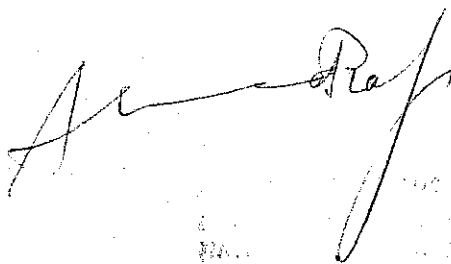
1. Real-number system.
2. Complex numbers.
3. Introduction to sets, set operations.
4. Functions, types of functions.
5. Matrices: Introduction to matrices, types.
6. Determinant, Matrix inverse.
7. System of linear equations, Cramer's rule.
8. Quadratic Equations: Solution of quadratic equations.
9. Qualitative analysis of roots of a quadratic equations.
10. Equations reducible to quadratic equations.
11. Cube roots of unity, relation between roots and coefficients of quadratic equations.
12. Sequences and Series: Arithmetic progression.
13. Geometric progression.
14. Harmonic progression.
15. Binomial Theorem: Introduction to mathematical induction.
16. Binomial theorem with rational and irrational indices.
17. Trigonometry: Fundamentals of trigonometry.
18. Trigonometric identities.

Recommended Books

1. Thomas, *Calculus*, (Addison Wesley Publishing Company, latest Edition).
2. Swokowski EW, *Fundamentals of Algebra and Trigonometry* (6th edition), 1986, PWS-Kent Company, Boston.
3. Kaufmann JE, *College Algebra and Trigonometry, latest Edition* (PWS-Kent Company, Boston)

Suggested Books

1. Anton H., Bevens I., Davis H., *Calculus, latest Edition*, (John Wiley & Sons, Inc).
2. Dolciani MP, Wooton W, Beckenback EF, Sharron S, *Algebra and Trigonometry, latest Edition* (Houghton & Mifflin, Boston)

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ICTC-5201 Introduction to Information & Communication Technologies

The course introduces students to information and communication technologies and their application in the workplace. Objectives include basic understanding of computer software, hardware, and associated technologies. How computers can be used in the workplace, how communications systems can help boost productivity, and how the Internet technologies can influence the workplace.

Contents

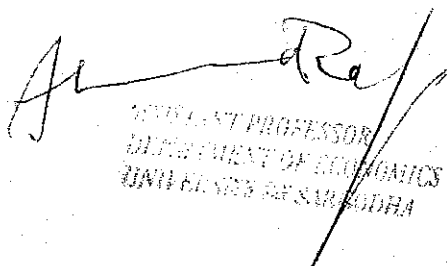
1. Basic Definitions & Concepts
2. Hardware: Computer Systems & Components, Storage Devices, Number Systems
3. Software: Operating Systems, Programming and Application Software.
4. Introduction to Programming
5. Databases and Information Systems Networks
6. Data Communication
7. The Internet, Browsers and Search Engines
8. Email Collaborative Computing and Social Networking
9. E-Commerce
10. IT Security and other issues
11. Use of Microsoft Office tools (Word, Power Point, Excel) or other similar tools depending on the operating system.
12. Other IT tools/software specific to field of study of the students if any

Recommended Book

1. Discovering Computers 2018: Digital Technology, Data and Devices by Misty E. Vermaat, Susan L. Sebok

Suggested Books

1. Computing Essentials 2017 by Timothy J. O'Leary and Linda I. O'Leary, McGraw Hill Higher Education; 26th edition
2. Computers: Understanding Technology by Fuller, Floyd; Larson, Brian: edition 2015


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UNIVERSITY OF SARGODHA

Sociology is the study of society, patterns of social relationships, social interaction, and culture that surrounds everyday life. It is a social science that uses various methods of empirical investigation and critical analysis to develop a body of knowledge about social order and social change. Subject matter can range from micro-level analyses of society to macro-level analyses. The course is designed to introduce the students with basic sociological concepts and to get familiarity with the overall discipline. The focus of the course shall be on basic concepts like scope and significance of Sociology, How Sociology is related as well as distinct from other social sciences. It focuses on the constituent parts of the society i.e. social systems and structures, socio-economic changes and social processes. This will also give an understanding of the Culture, elements of culture and the relationship of culture and personalities. The course will provide due foundation for further studies in the field of sociology.

Contents

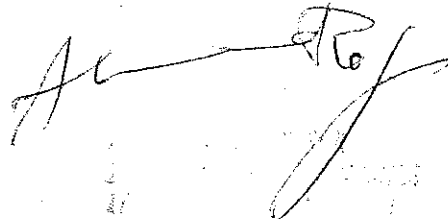
- 1 Introduction to Sociology: The Science of Society, Scope and significance
- 2 Fields of Sociology: Sociology and other Social Sciences
- 3 Social interaction and social structure: The Nature and Basis of Social Interaction
- 4 Social Processes: Social structure Status, Roles, Power and Authority, Role Allocation
- 5 Culture: Meaning and nature of culture, Elements of culture: Norms, values beliefs, sanctions
- 6 Culture and Socialization, Transmission of Culture, Cultural Lag, Cultural Variation
- 7 Cultural Integration, Cultural Evolution, Cultural Pluralism, Culture and personality
- 8 Socialization & personality: Socialization, Agents of socialization
- 9 Personality: components of personality
- 10 Deviance and social control: Deviance and conformity
- 11 Mechanism and techniques of social control, Agencies of social control
- 12 Social organization: Definition, meaning and forms, Social groups: Functions of groups
- 13 Social Institutions: forms, nature and inter-relationship
- 14 Community: definition and forms (Urban and rural).
- 15 Social Institutions: Structure and functions of Institutions
- 16 Family, Religion, Education, Economy and political institution

Recommended Texts

- 1 Giddens, A. (2018). *Sociology* (11thed.).UK: Polity Press.
- 2 Macionis, J. J. (2016). *Sociology* (16thed.). New Jersey: Prentice-Hall.

Suggested Readings

- 1 Anderson, M. and Taylor, F. H.(2017). *Sociology: The essentials* (9thed.). Boston: Cengage Learning.
- 2 Schaefer, T. R.(2012). *Sociology* (13thed.). New York: McGraw-Hill.
- 3 Henslin, M. J.(2011).*Sociology: A down to earth approach*(11thed.). Toronto: Pearson.



2nd Semester

URCE-5192 Language Comprehension & Presentation Skills

The course aims at developing linguistic competence by focusing on basic language skills in integration to make the use of language in context. The course objectives are to enhance students' language skill management capacity, comprehend text(s) in context, respond to language in context and write structured response(s).

Contents

Listening Skills

1. Recognizing different phonemes
2. Recognizing syllables
3. Listening to isolated sentences
4. Listening to small speech extracts
5. Expressing opinions (debating current events)
6. Oral synthesis of thoughts and ideas

Pronunciation Skills

1. Pronouncing English phonemes
2. Recognizing phonemic symbols
3. Practicing intonation patterns in simple sentences
4. Conflict resolution through panel discussion

Comprehension Skills

1. Reading strategies
2. Critical Reading (SQ3R Method)
3. Comparing and contrasting
4. Drawing conclusions
5. Self-questioning
6. Relating background knowledge
7. Distinguishing between fact and opinion
8. Finding the main idea, important facts, and supporting details
9. Comprehending text organization patterns
10. Investigating implied ideas in a text
11. Purpose and tone of the text

Presentation Skills

1. Features of good presentations
2. Different types of presentations
3. Different patterns of introducing a presentation
4. Giving suggestions and recommendations while ending of a presentation
5. Dealing with the questions of audience
6. Listening to recorded presentations

Pre-Requisite: Nil

Recommended Books

1. Worthington, D. Fitch-Hauser, M. *Listening: Processes, Functions, and Competency* (2nd ed). Routledge, 2018.
2. Siddons, S. *The Complete Presentation Handbook*. Kogan Page Ltd. 2008.

Suggested Books

1. Mandel, S. *Effective Presentation Skills*. Thomson Learning, 2000.
2. *Reading Comprehension Skills and Strategies*. The Edge
3. Dorothy, E.Z. & Rumisek, L.A. *College Writing: from Paragraph to Essay*. McMillan, 2003.
4. Helgesen, M., Brown, S., & Brown, S. *Active listening: Building skills for understanding*. Cambridge University Press. 1994.

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URCP-5196 Pakistan Studies

The course is designed to acquaint the students of BS programs with the rationale of the creation of Pakistan. The students would be apprised of the emergence, growth and developments of Muslim nationalism in South Asia and the struggle for freedom, which ultimately led to the establishment of Pakistan. While highlighting the main objectives of national life, the course explains further the socio-economic, political and cultural aspects of Pakistan's endeavors to develop and progress in the contemporary world. For this purpose, the foreign policy objectives and Pakistan's foreign relations with neighboring and other allied countries are also included. This curriculum has been developed to help students analyze the socio-political problems of Pakistan while highlighting various phases of its history before and after the partition and to develop a vision in them to become knowledgeable citizens of their homeland.

Contents

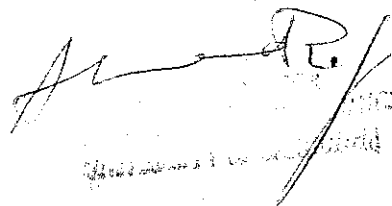
1. Introduction to the Course
2. Geography of Pakistan: Geo-Strategic Importance of Pakistan
3. Freedom Movement and Pakistan Movement
4. Nationalism in South Asia and Two Nations Theory
5. Ideology of Pakistan
6. Initial Problems of Pakistan
7. Political and Constitutional Developments in Pakistan
8. Economy of Pakistan
9. Society and Culture of Pakistan
10. Foreign Policy Objectives of Pakistan
11. Current and Contemporary Issues of Pakistan
12. Human Rights: Issues of Human Rights in Pakistan

Recommended Books

1. Kazimi, M. R. *A Concise History of Pakistan*. Karachi: Oxford University Press, 2009.
2. Sheikh, Javed Ahmed. *Pakistan's Political, Economic and Diplomatic Dynamics*. Lahore: Kitabistan Paper Products, 2004.

Suggested Books

1. Hayat, Sikandar. *Aspects of Pakistan Movement*. Islamabad: National Institute of Historical and Cultural Research, 2016.
2. Kazimi, M. R. *A Concise History of Pakistan*. Karachi: Oxford University Press, 2009.
3. Sheikh, Javed Ahmed. *Pakistan's Political, Economic and Diplomatic Dynamics*. Lahore: Kitabistan Paper Products, 2004.
4. Talbot, Ian. *Pakistan: A Modern History*. London: Hurst and Company, 1998.



A handwritten signature in black ink is written over a circular stamp. The signature is stylized and appears to be 'A. R.'. The stamp is partially obscured by the signature and contains some illegible text.

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. Emphasis will be on the use of graphs, diagrams and numerical tables/schedules for exposition. The teacher is expected to draw examples from the surrounding world to clarify the concepts.

Contents

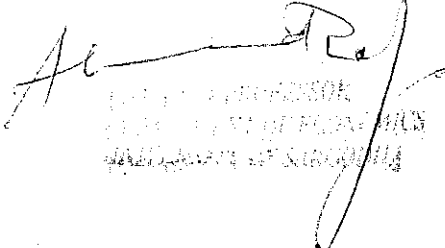
1. Introduction
 - a) The economy in aggregate, Complexities of the world of business, Scope of macroeconomics
 - b) Brief account of the development of macro-economics after the World War-II
 - c) Concept of business cycles, Concepts of Inflation and Unemployment
 - d) Macroeconomic variables and their mutual relationship, Macro-models
2. National Income
 - a) Definition and various concept of national income, Measures of national income
 - b) Computation of national income: Product, Income and Expenditure approaches
 - c) Circular flow of income, Nominal versus Real income, Per capita income and the standard of living
3. Components of Aggregate Demand
 - a) The Concept of Open and closed economy models
 - b) Concept of aggregate markets: Product, Money, Labor and Capital markets
 - c) Components of aggregate demand: Consumption, Investment and Government spending
4. Money and Banking
 - a) Money: definition, forms and functions
 - b) Central Bank and its functions with reference to the State Bank of Pakistan, Commercial banking
 - c) The Quantity Theory of money, Inflation: measurement and impacts, causes of inflation and remedies
 - d) Monetary policy: brief introduction
5. Public Finance and Taxation
 - a) Sources of public revenue, Various forms of taxes
 - b) Major heads of public expenditure, Revenue and Capital account, Concept of budget deficits
 - c) Sources of filling the gaps, Deficit financing, Fiscal policy: meaning and objectives.
6. International Trade
 - a) Global distribution of resources, Concept of imports and exports.
 - b) Theory of absolute and comparative advantage, Currency exchange rates.
 - c) Balance of Payments: causes of deficits in BOP of Pakistan and remedial measures.
 - d) Custom Unions. The problem of external debt. Commercial Policy: objectives and scope

Recommended Books

1. Mankiw, G - *Principles of Economics* - (Latest Edition) - South-West Publishers.
2. Samulson and Nordrons - *Economics* - 18th Edition (2004) - McGraw Hill. Inc.

Suggested Books

1. Parkin, Michael - *Macroeconomics*, 7th Edition (2004) - Prentice Hall.
2. Miller, R.L. *Economics Today* - 14th Edition (2005) - Addison Wesley.


 PROFESSOR
 DEPARTMENT OF ECONOMICS
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MATH-6161 Calculus - I

The purpose of this course is to provide students the necessary mathematical skills to pursue more advanced courses in economics. This course also focuses on techniques of integration and applications of integrals. The course is devised to enhance the technical skills in the area of calculus, which are used in almost all sub-disciplines of economics. The course aims provide both the analytical and computational skills that are required for the analysis of economic problem.

Contents

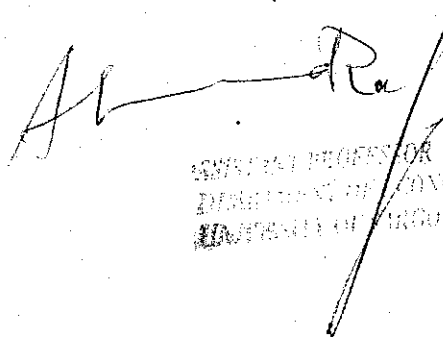
1. Real-number line.
2. Functions and their graphs.
3. Solution of equations involving absolute values, inequalities.
4. Limits and Continuity: Limit of a function, left-hand and right-hand limits,
5. Continuity.
6. Derivatives : Definition, techniques of differentiation, differentiation of polynomials, rational,
7. Exponential, logarithmic and trigonometric functions, inverse functions, the chain rule,
8. Higher order derivatives.
9. Applications of derivatives : Increasing and decreasing functions.
10. Relative extrema and optimization.
11. Integration and Definite Integrals: Techniques of evaluating indefinite integrals,
12. Integration by substitution, integration by parts, change of variables in indefinite integrals.
13. Applications of integrals: Area between curves.
14. Curve sketching, Rolle's theorem, the mean value theorem.
15. Indeterminate forms and L' Hospitals rule.

Recommended Books

1. Thomas, *Calculus*, (Addison Wesley Publishing Company, Latest Edition).
2. Anton H., Bevens I., Davis H., *Calculus*, (John Wiley & Sons. Inc).

Suggested Books

1. Liebeck M. A concise introduction to pure Mathematics, (CRC Press, 2011).
2. Kaseberg, *Intermediate Algebra*, (Thomson Brooks/cole, 2004).
3. Stewart J., *Calculus*, (Brooks/COLE) (Latest Edition).


ASSISTANT PROFESSOR
DEPARTMENT OF ECONOMICS
UNIVERSITY OF VIRGINIA

INTR-5102 Theories of International Relations

This course offers the major conceptual appreciation of the theory and practice of International Relations. In addition to providing a detailed understanding of the fundamental theoretical perspectives and the issues that divide them, it poses the question of whether it is possible to overcome the main disagreements between these competing approaches. It tends to examine a range of important issues in contemporary international politics and use these theoretical frameworks to provide better understanding of these events

Contents

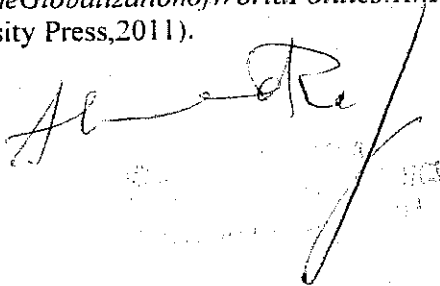
1. Understanding and Explaining World Politics: The development of discipline of International Relations
2. Liberalism and its variances (Idealism, Capitalism, Neo-Liberalism)
3. Realism and its variances (Classical Realism, Neo-Realism, Neo-Classical, Offensive and Defensive Realism)
4. Hard and Soft Power
5. The English School (International Society)
6. Constructivism
7. Critical Theory
8. Structuralism and Post-Structuralism
9. Feminist Theory
10. Green Politics
11. Globalization
12. Contemporary Trends in International Politics (Media, Non-state Actors)

Recommended Books

1. Burchill, Scott et al., *Theories of International Relations*. (Basingstoke: Palgrave Macmillan, 2009).
2. Jackson, Robert, Sorensen, George. *Introduction to International Relations: Theories and Approaches* (Oxford University Press, 2016)

Suggested Books

1. Morgenthau, Hans. J., *Politics Among Nations: The Struggle for Power and Peace* (McGraw-Hill, 1993)
2. Devetak, Richard, Anthony Burke, Jim George (eds.), *An Introduction to International Relations* (Cambridge, 2012).
3. Bellamy, Alex (ed.), *International Society and its Critics* (Oxford University Press, 2005).
4. Baylis, Smith and Owens. *The Globalization of World Politics: An Introduction to International Relations* (Oxford University Press, 2011).



3rd Semester

URCE-5193 Academic Writing

The course aims at providing understanding of writer's goal of writing and to use that understanding and awareness for academic reading and writing. The course objectives are to:

- Learn academic writing skills
- Acquire argumentative writing techniques
- Understand referencing the sources
- Learn the technical aspects of referencing

Contents

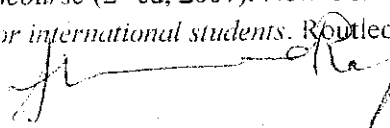
1. Academic vocabulary
2. Quoting, summarizing and paraphrasing texts
3. Process of academic writing
4. Rhetoric: Persuasion and identification
5. Elements of Rhetoric: Text, author, audience, purposes, setting
6. Sentence structure: Accuracy, variation, appropriateness, and conciseness
7. Sentence Skills (choice of verbs, passive structures and nominalisations)
8. Appropriate use of active and passive voice
9. Types of writing
 - a) Persuasive
 - b) Argumentative
 - c) Analytical
 - d) Comparing and contrasting
 - e) Explaining cause and effect
 - f) Commentaries, and opinion pieces
 - g) Personal Profiles
10. Paragraph and Essay Writing
 - a) Organization and structure of paragraph and essay
 - b) Logical reasoning
 - c) Transitional devices (word, phrase and expressions)
 - d) Development of ideas in writing
11. Letters
 - a) Of Invitation
 - b) Of Regrets
 - c) Of Sales/persuasive letters
12. Official Writing
 - a) Joining/leaving reports
 - b) Notifications
 - c) Meeting notices
 - d) Minutes of meeting
13. Technical and Scientific Reports
 - a) Styles of documentation (MLA and APA)
 - b) In-text citations
 - c) Plagiarism and strategies for avoiding it
14. Issues in scientific writing (plagiarism, authorship, ghostwriting, reproducible research)
15. How to do a peer review; and how to communicate with the lay public

Recommended Books

1. Brannan, B. *A Writer's Workshop: Crafting paragraph, building essays*. New York: McGraw Hill, 2003.
2. Wong, L. *Paragraph Essentials: A writing guide*. Boston: Houghton Mifflin, 2002.

Suggested Books

1. McCarthy, M. & O'Dell, F. *Academic Vocabulary in Use* (2nd ed, 2016). Cambridge
2. Aristotle. *On Rhetoric: A theory of civic discourse* (2nd ed, 2007). New York: OUP.
3. Bailey, S. *Academic Writing: A handbook for international students*. Routledge, 2014.


UNIVERSITY OF BARTOLINA

The objective of the course is to clarify and extend further the microeconomic concepts and to develop analytical skills and solving petty problems. In addition to diagrammatic approach the course intend to get accustomed the students to simple mathematics and numerical tools. The teacher is expected to draw examples from surroundings for exposition. The students may be given assignments to collect information from the markets and to analyze the data. They may have tours to the industrial units and to observe the process of production and problems in supply and demand.

Contents

1. Introduction

- a) Scope of Microeconomics and areas of its concern.
- b) The role of markets and importance of price signals in efficient allocation of resources.
- c) Economic models as abstraction from the reality.

2. Theory of Consumer Behavior

- a) Cardinal and ordinal approach to utility
- b) The indirect utility function
- c) Homothetic and Non-homothetic Preferences, Introduction to the Revealed Preference Theory.

3. Demand & Elasticity

- a) Derivation of demand functions using indifference curves,
- b) Elasticity of demand, its Importance and different types.

4. Production Functions

- a) Different production functions: Cobb Douglas and CES etc.
- b) Iso-quant maps, the cost line and equilibrium of the firm.

5. Cost of Production

- a) Different types of costs.
- b) Cost minimization subject to given/pre-determined level of output.

6. Behavior of the Firm

- a) Equilibrium of the firm when it faces the market.
- b) Economic profit and rent, Short-run, Long-run position of a price taking and price seeking firm

7. Market Structure and Price Determination

- a) The Perfectly Competitive Market.
- b) Monopoly and Monopsony, bilateral monopoly, price discrimination.
- c) Monopolistic Competition and Oligopoly.
- d) Pricing of the Factors of Production.

Recommended Books

1. Walter Nicholson- *Intermediate Microeconomics*- 6th Edition (1994) or latest -The Dryden Press: Harcourt Brace College Publishers
2. Koutsoyiannis, A.-*Modern Microeconomics*- 2nd edition (1979)-Macmillan.

Suggested Books

1. Varian Hall R.-*Intermediate Microeconomics: Modern Approach*-6th edition (2002)- W. W. Norton Publishing Company, New York.
2. Dowling, Edward - *Mathematics for Economists*-(1980) -(Schaum's Outline Series) McGraw Hill Inc.

Al R...

ASSISTANT PROFESSOR
DEPARTMENT OF ECONOMICS
UNIVERSITY OF WASHINGTON

ECON 5105 Development Economics

This course provides an understanding the evolution and relevance of Development Economics concepts and its policy suggestions in addressing the widespread issues like inequality, unemployment, poverty, gender disparities, labor productivity etc. The course would explain the humanistic perspective of economics and explicitly involves the explanation of multi-dimensional nature of Development Economics.

Content


1. Economic Development
 - a) Economic Development and Growth
 - b) Measurement of Economic Development and Growth.
 - c) Characteristics of Least Developing Countries (LDCs)
2. Major Theories of Development
 - a) Classical and Contemporary Theories
3. Agriculture and Industry
 - a) Complementarity of Sectors
 - b) Green Revolution and Industrialization
4. Population, Education and Human Capital
 - a) Demographic Significance for Development
 - b) Investment in education and returns.
5. Debt and Aid/Assistance
 - a) Sources of Borrowing
 - b) Policies to combat debt problem
6. WTO, Liberalization and International Trade
 - a) Trade as an engine of growth
 - b) WTO and Regional Trade
7. Poverty and Income Distribution
 - c) Poverty concepts
 - d) Income inequality
8. Economic Growth and Environment
 - a) Sustainable Development

Recommended Books

1. Todaro, M. and Smith, S., *Economic Development* (Pearsons New York, 2015).
2. Meier G. M. and Rauch J. E., *The globalization of World Politics: An Introduction to International Relations*. (Oxford University Press, 2000).

Suggested Books

1. Cypher J. M. and Dietz James L., *The Process of Economic Development*. (Routledge New York, 2004)
2. Jhingan, M. L., *The Economics of Development and Planning*. (New Delhi)


ASSISTANT PROFESSOR
DEPARTMENT OF ECONOMICS
UNIVERSITY OF SARGODHA

STAT-5122 Statistics for Economics-I

The main objective of this course is to acquaint students with the basic techniques of statistical methods with a strong emphasis on its application to economic theories and principles.

Content

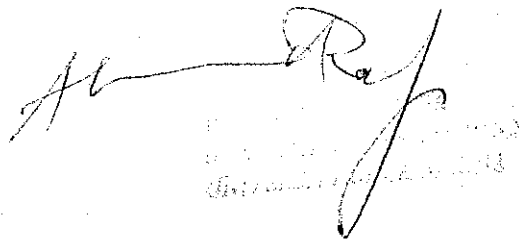
1. What is Statistics
 - a) The basic concepts
 - b) Type of measurement scale
 - c) Types of data, errors, data collection
 - d) Significant digits, Rounding of a Number
2. Presentation of Data
 - a) The frequency distribution and its types
 - b) Graphic and diagrammatic representation.
3. Measures of Central Tendency
 - a) Types of Averages,
 - b) Quantiles
 - c) Relative Merits and Demerits of various Averages
 - a) Box and Whisker Plot, Stem and Leaf Display and Outliers
4. Measures of Dispersion
 - a) Absolute and relative measures,
 - b) Properties of variance and standard Deviation, Standardized variables,
 - c) Moments and Moments ratios.
5. Probability and Probability Distribution
 - a) Basics of Probability
 - b) Discrete distributions
 - c) Continuous distributions
6. Index Numbers and Time Series Analysis
 - a) Index Numbers
 - b) Time series analysis

Recommended Books

1. Lind, Douglas A., Marshal, William G. and Mason, Robert D., *Statistical Techniques in Business and Economics*, 15th ed. (Boston: McGraw Hill, 2015).
2. Chaudhry, Sher Mohammad and Kamal, Shahid, *Introduction to Statistical Theory*, 7th ed. (Lahore: Ilmi Kitab Khana, 2010).

Suggested Books

1. Siegel, Andrew F., *Practical Business Statistics*, 7th ed. (Boston: McGraw Hill, 2012).
2. Newbold, Paul, Carlson, William L. and Thorne, Betty M., *Statistics for Business and Economics*, 5th ed. (New Jersey: Prentice-Hall, 2002).



The image shows a handwritten signature in black ink, which appears to be 'A. R. J.'. Below the signature is a circular stamp, likely an official seal or institutional mark, though the text within it is mostly illegible due to the angle and fading.

ECON 5106

Principles of Marketing

This course is designed to provide students with an understanding of the principles of Marketing. There will be a focus on the management of the marketing activities and how marketing relates to overall organisational functioning, including the management of exchange processes between business units and consumers and between firms.

Contents

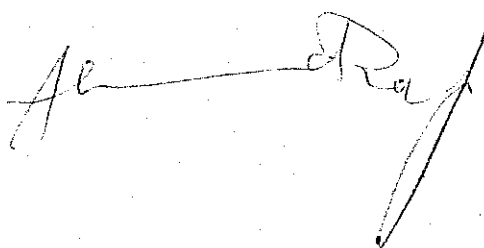
1. Introduction to Marketing
 - a) Key Marketing Concepts, Scope of Marketing, Evolution of Marketing
 - b) Importance of Marketing, Marketing as an Exchange Process, Marketing as a Demand Management Tool. Marketing Cost and Price Relationship.
 - c) Primary and Secondary activities in Supply Chain / Value Chain. Identify and Maximizing linkages within the Various Activities.
2. Strategic Marketing Planning Process
 - a) The SMP Process. The BCG Matrix, GE Nine Cell Model and Porter's Generic
 - b) Strategies Models of SMP.
3. International Marketmg: The Target Markets & Marketing Mix
 - a) Identify Target Markets. Forecasting Market Demand, The Target Market
 - b) Strategies, Key Elements of Marketing Mix. Local Vs. International Marketing.
 - c) International Marketing Strategy and Planning
4. Product Management
 - a) The Consumer and Industrial Products. Product Planning and Development
 - b) Product Adoption and Diffusion, Product Life Cycle, Product Positioning
 - c) Differentiation, Product Mix Strategies.
5. Marketing Cost, Finance and Cost Management
 - a) Analysis of Cost, Marketing Cost for Products. Reasons for Higher Cost and Methods to Minimize. Abuses and Advantages of Marketing Cost Debate over Legitimacy Solution, Need for Marketing Finance. Kinds of Marketing
 - b) Designing Distribution Networks. Channels Conflict and Channel Power.
 - c) Physical Distribution. The Wholesale Market, Retail Marketing, Consumer's and Buyer's Behaviours
6. Managing Marketing in Various Forms of Competition
 - a) Industrial Analysis., Industry and Market Concepts of Competition, Strategies of Leaders. Challengers, Followers and Nichers. Global Marketing, Industrial Marketing, Services Marketing, Agricultural Marketing.
7. Managing Total Marketing Effort
 - a) Key Organizations for Marketing, Market Control, Marketing Audit.
 - b) Significance, Advantages of Market Segmentation, Segmentation Variables, Segmenting Industrial Markets, Effectives of Segmentation, Market Targeting, Strategic Opinion.
8. Pricing Strategies and Sales
 - a) Theories of Pricing and Value. Supply and Demand Model, Mark-up Pricing, Dumping, Economic Choice, Pricing and Market Orientation, Market Share, Cost based Pricing, Customer based Pricing Methods, Competitor based Pricing war.

Recommended Books

1. Kotler, P. and Armstrong, G. 2008. Principal of Marketing. 12th Edition Prentice-Hall International, Inc.
2. The Fundamentals of Marketing" 11th Edition by Etzel, Walker & Stanton. McGraw Hill

Suggested Books

1. Basic Marketing 8th edition by Jerome McCarthy, Prentice Hall.
2. Marketing Management: Strategic Approach with a Global Orientation 3rd Edition by Boyd H. W.. Latest edition.



ECON 5107

Financial Management

This course focuses on the application of modern financial techniques to operating and investing decisions. It comprehensively analyzes working capital management and capital budgeting decisions within the context of the firm's business strategy. The course is designed for managers in non-financial functions and financial analysts and managers in financial lending organizations who make working capital loan decisions and it ensures students reach a proficient level of professional applicability.

Contents

1. Introduction to Financial Management
 - a) The Role of Financial Management, Defining Financial Management
 - b) Organization of the Financial Management Functions
 - c) The Business, Tax and Financial Environments
2. Tools of Financial analysis and Planning
 - a) Financial Statement Analysis, Cash-Flow Analysis and Financial Planning
 - b) Accounting statement of Cash Flows, Cash-flow forecasting
3. Valuation
 - a) The Time Value of Money, The interest rate, Simple and Compound interest
 - b) Compounding more than once a year, The Valuation of long-term Securities
 - c) Distinctions among valuation concepts, Bond Valuation
 - d) Preferred stock valuation, Common stock valuation, Rates of Return (or Yields)
4. Risk and Return
 - a) Defining risk and return, Using probability distributions to measure risk
 - b) Attitudes toward risk, Risk and return in a portfolio context
 - c) Diversification, The capital asset pricing model
5. Cost of Capital
 - a) Required Returns and the Cost of Capital, Overall cost of capital of the Firm
 - b) The CAPM: Project-Specific and Group-Specific required rates of return
 - c) Evaluation of Projects on the Basis of Their Total Risk, Operating and Financial Leverage, Operating Leverage, Financial Leverage, Total leverage, Cash-Flow ability to service debt
6. Working Capital Management-I
 - a) Overview of Working Capital Management,
 - b) Cash and Marketable Securities Management
7. Working Capital Management-II
 - a) Accounts Receivable and Inventory Management, Inventory management and control
 - b) Short-term Financing
8. Investment in Capital Assets
 - a) Overview of capital budgeting process, Estimating project "After-Tax incremental operating cash flows"
 - b) Capital Budgeting Techniques, Project evaluation and selection: Alternative Methods
 - c) Risk and Managerial Options in Capital Budgeting
9. Long-term Financing
 - a) Long-Term Debt, Preferred Stock and Common Stock
 - b) The Loans and Leases

Recommended Books

1. Fundamentals of Financial Management By James C. Van Horn 12th Edition
2. Principles of Managerial Finance By Lawrence J. Gitman 10th Edition

Suggested Books

1. Block, S.B., Hirt, G.A., & Short, J.D. (2015). Foundations of Financial Management. (10th Canadian ed.). Toronto, ON: McGraw-Hill Ryerson Ltd.
2. Eugene F. Brigham, Joel H. Houston. Fundamentals of financial Management (12th edition)

APPROVED
FOR THE DEPARTMENT OF ECONOMICS
UNIVERSITY OF SASKATCHEWAN

4th Semester

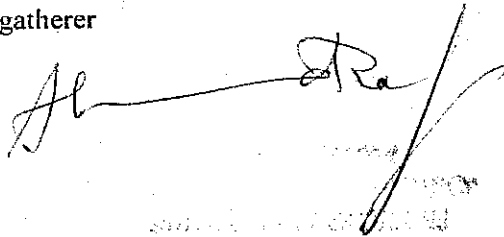
URCE-5194 Introduction to English Literature

This course is designed with the goal to aid students, who may not be familiar or versed in the various genres of literature, in acquiring the skills necessary to engage, understand, critically analyze, and enjoy the literary genres of the short story, poetry, the novel and drama. As they read a range of works belonging to these genres, students will explore the basic concepts of literary technique, narrative, poetic, and dramatic structures and innovations, and begin to engage with the more advanced cognitive aspects of literature. In addition to these theoretical skills, students will also read below the surface of the texts for their historical, ethical, psychological, social, and philosophical value, developing insight in how literature gives us a window into both the experiences of others and wider appreciation for the human condition

Contents

Poems

1. Milton: Book 9, lines 897 – 959 (Adam's speech when he meets Eve after she has eaten the apple)
2. Shakespeare: All the world is a stage.
3. Browning: My last Duchess
4. Wordsworth: The leech gatherer

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ECON 5108

Intermediate Macro Economics

This course offers the student a comprehensive introduction of macroeconomics so as they develop the capacity to understand the issues and problems of the economy in a global scenario. In particular, they have to capture the nature and scope of various public policies. In addition to diagrammatic approach, the students are confronted to simple mathematical analysis.

Content


1. The introduction of Keynesian revolution and growth of Macroeconomics
 - a) Oken's Law and unemployment, Price Indices and Inflation
 - b) Exogenous and Endogenous variables and their functional relationships
 - c) Introduction to the Classical and Keynesian Schools of Thought
2. Measurement of National Income
 - a) The circular flow of National Income, GDP and GNP
 - b) Personal and disposable income
 - c) Injections into and Leakages from the economy: Saving and Investment
 - d) The closed and open economy models
3. Theories of Consumption
 - a) The Absolute income, Relative income, Permanent income and Life-cycle income
 - b) Kuznet's findings and Reconciliation of Marginal and Average Propensity to Consume
4. Saving and Investment
 - a) Real and Financial investment, Autonomous and Induced investment
 - b) Lags in Investment Demand, Volatility of Investment, Equilibrium in the goods market
 - c) Derivation of IS curve (graphic), Factors affecting the position and slope of the IS curve, the Saving-Investment gap in developing countries
5. The Demand for and Supply of Money
 - a) The demand for money, The Quantity Theory of Money, The Liquidity Preference
 - b) The supply of money: M1, M2, M3 concepts, Derivation of LM Curve (graphic)
6. Aggregate Supply and the Labour Market
 - a) Labor market and its Equilibrium: The flexible and sticky wage models
 - b) The concepts of full-employment and underemployment, Supply shocks and stabilization
 - c) Interaction of aggregate demand and supply and price determination
7. Inflation and Unemployment
 - a) Types, causes and measurement of inflation
 - b) Transitory and structural unemployment
 - c) Phillips curve in the short-run and long-run

Recommended Books

1. Shapiro, Edward, *Macroeconomic Analysis*. (Harcourt Brace Inc. 2000)
2. Froyen, Richard, *Macroeconomics: Theories and Policies*. (Pearson Publisher, 2012)

Suggested Books

1. Mankiw, Gregory N., *Macroeconomics*. (Worth Publishers, 2018)
2. Blanchard, Oliver, *Macroeconomics*. (Prentice Hall International, 2017)


ASSISTANT PROFESSOR
DEPARTMENT OF ECONOMICS
UNIVERSITY OF SARGODHA

STAT-5123 Statistics for Economics-II

The main objective of this course is to acquaint students with the basic techniques of statistical methods with a strong emphasis on its application to economic theories and principles.

Contents

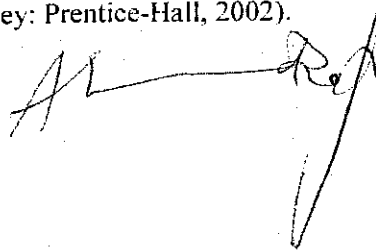
1. Sampling and Sampling Distributions
 - a) Sampling distributions
 - b) The central limit theorem
 - c) Sampling distributions for single mean and proportion
 - d) The difference of means and proportions
2. Hypothesis Testing
 - a) Basics of hypothesis
 - b) General procedure for testing of hypothesis
3. Testing of Hypothesis- Single Population
 - a) C.I about the population mean and proportion
 - b) Testing of hypothesis about the population mean and proportion
4. Testing of Hypothesis- Two or more Population
 - a) C.I about the difference of population means and proportions
 - b) Testing of hypothesis about the difference of population means and proportions
5. Testing of Hypothesis- Independence of Attributes
 - a) Contingency tables
 - b) Testing of Hypothesis about the Independence of Attributes
 - c) ANOVA
6. Simple Linear Regression and Correlation Analysis
 - a) Linear and multiple regression analysis
 - b) Correlation analysis and rank correlation
 - c) Estimation of the mean values and prediction of individual values
 - d) Testing of significance about regression and correlation coefficients

Recommended Books

1. Lind, Douglas A., Marshal, William G. and Mason, Robert D., *Statistical Techniques in Business and Economics*, 15thed. (Boston: McGraw Hill, 2015).
2. Chaudhry, Sher Mohammad and Kamal, Shahid, *Introduction to Statistical Theory*, 7thed. (Lahore: Ilmi Kitab Khana, 2010).

Suggested Books

1. Siegel, Andrew F., *Practical Business Statistics*, 7thed. (Boston: McGraw Hill, 2012).
2. Newbold, Paul, Carlson, William L. and Thorne, Betty M. *Statistics for Business and Economics*, 5thed. (New Jersey: Prentice-Hall, 2002).



Econ-5109 Agriculture Economics

This course provides a comprehensive introduction to agriculture economics, focusing in particular on its importance in an economy and its role for other sectors of the economy, its structure and role in economic development. More specifically, the course introduces key concepts related to resource use efficiency, supply response, theory of rent, surplus, and theories and models in agriculture economics.

Content

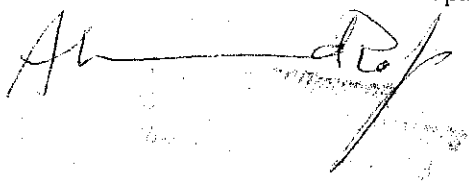
1. Introduction. Importance, Structure and Role of Agriculture
 - a. Agricultural Revolution, Importance of Agriculture, Agriculture vs. Industrial development
 - b. Current State of Agricultural Development. Brief Overview of Sources of Growth.
 - c. Traditional Agriculture and Productivity.
 - d. Framing Environment: Natural Hazards and Economic Uncertainties
 - e. Farm Size in Pakistan and Productivity
 - f. Product Contribution, Market Contribution, Factor's Contribution
2. Theory of Rent and Agriculture in Dualistic Development Models
 - a. The Theory of Economic Rent. Rent and Quasi-Rent The Ricardian Corn Rent.
 - b. Characteristics of Landownership in Underdeveloped Agriculture and Pakistan.
 - c. Tenant's Status in Pakistan. Agricultural productivity in Pakistan and use of inputs.
 - d. The Lewis, Ranis-Fei (FR), Jorgenson and Kelley, Williamson, Cheetham Models
 - e. Dual Economy Models. Agricultural Adequacy; Mellor's Model.
3. Resource Use Efficiency, Technical Change and Supply Response
 - a. Efficiency of Resource Utilization. Technological Change in Agriculture.
 - b. Generation of new Agricultural Technology. Factor-biased Technological Change
 - c. Technical Change in LDCs: with Special Reference to Pakistan.
 - d. The Cobweb Model: An Illustration. Price-Supply Response in Backward Agriculture
 - e. Response in the Underdeveloped Agricultural labour Market, Specifically in Pakistan
 - f. The Concept of 'Marketed Surplus': Some Methods of Estimation.
 - g. Green Revolution in Pakistan and Responses. Present Status of Green Revolution in Pakistan:
4. Population and Food Supplies
 - a. Classical Model. Contra-Malthusian Model. Ecological Disequilibrium.
 - b. Synthesis of Population and Food Supply Theories.
 - c. Malnutrition in Developing Countries like Pakistan and Remedial Manners.
 - d. Choice of Planning Strategy for Agriculture Development, Agricultural Project Planning.

Recommended Books

1. Ghatak S. & Ingersent, *Agriculture and Economic Development*, (Latest Edition), Harvester Press.
2. Capstick Margret, *The Economics of Agriculture*, London, George Allen Unwin Ltd., latest edition.

Suggested Books

1. Colman D. and Young T., *Principals of Agricultural Economics, Markets and Prices in Less Developed Countries*, (1989), Cambridge University Press.
2. Yujiro Hayami and Vernon W. Ruttan, *Agricultural Development*, John Hopkin University Press, London. (Latest edition).



ECON 5110**Political Economy**

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.

Contents

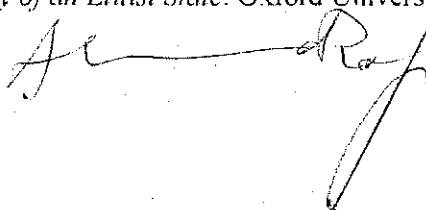
1. Introduction to Political Economy:
 - a) Course Introduction, Overview
 - b) Approaches to the Study of Political Economy
 - c) Analyzing Group Choice
 - d) Spatial Models of Majority Rule
 - e) Strategic Behavior and Majority Rule
 - f) Voting and Elections
2. Understanding Collective Action:
 - a) Cooperation
 - b) Collective Action
 - c) Market Failures and Collective Action
3. What Role Do Institutions Play:
 - a) Institutions and Their Impact
 - b) Legislatures
 - c) Bureaucracy, Delegation, and Principal Agent Theory
 - d) Courts and Judges
4. Topics in the Political Economy of Pakistan:
 - a) The Economics of Patronage
 - b) Seven Pillars of Good Governance
 - c) The Political Economy of Reforms
 - d) Pakistan - Dynamics of Elitist Model
 - e) Strategies for Self-preservation
 - f) A military Theocracy
 - g) Different Regimes
 - h) Economic Development
 - i) Ethnic conflict
 - j) The Role of State
 - k) Emerging Economic and Political Issues and their Linkages
 - l) Regionalism
 - m) Poverty
 - n) Governance

Recommended Books

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

Suggested Books

1. Nadeem, A.H. (2002). *Pakistan: The Political Economy of Lawlessness*. Oxford University Press
2. Hussain, I. (1999). *Pakistan: The Economy of an Elitist State*. Oxford University Press



ECON 5111 Managerial Economics

Managerial Economics is a core course of BS Economics aimed at presenting and developing a microeconomic approach to business decisions. The concepts and problems are analyzed from the perspective of the firm and the managers' decisions. Emphasis is thus placed on the study of the production process and the analysis of interactions in markets, both with the customers and the rival firms.

Content

1. Nature, Scope and Overview of Managerial Economics
 - a) The Nature and Scope of Managerial Economics. The Managerial decision making process.
 - b) Theory of the firm. Profit maximization. Cost Minimization.
 - c) Economic optimization. Economic relations of variables. The Incremental
 - d) concept in Economic Analysis. Demand., Supply and Equilibrium.
2. Demand Analysis, Estimation and Forecasting
 - a) The Basis for Demand. The Market Demand function. Demand sensitivity
 - b) analysis: Elasticity, Price Elasticity of Demand with Managerial applications.
 - c) Income Elasticity of Demand with Managerial applications. Application of
 - d) Regression Analysis: Demand estimation. Demand forecasting.
3. Production and Cost Analysis
 - a) Production function; Total, Marginal and Average Product. Revenue and Cost in
 - b) Production. Production function estimation. Productivity Measurement.
 - c) Homogenous and Homothetic Production Function. Short run and long run cost
 - d) curves. Learning curves and application. Cost-value-profit analysis. Cost estimation
4. Decision Making Under Risk and Uncertainty
 - a) Introduction. Risk Analysis of Decision Alternatives. Adjustment for Risk in
 - b) Decision Making. The Expected Value Criterion. The Standard Deviation
 - c) Criterion. The Coefficient of Variation Criterion. The Certainty Equivalent
 - d) Criterion. The Maxima and Maximax Criterion. The Decision Tree and Joint
 - e) Probabilities. Optimal decision Strategy. Limit Pricing and Preventing entry.
5. Pricing Analysis and Decisions
 - a) A Review of Market Structures and Basic Pricing Models. Perfect Competition.
 - b) Monopoly. Monopolistic Competition. Oligopoly. Selected Pricing Models.
 - c) Marginalist Pricing. Mark up pricing. New Product Pricing. Oligopoly Model.
 - d) Contestable Markets. Pricing Strategies for Firms and Market Power.
 - e) Monopolistic Competition. Price Discrimination, Monoposony and Price Product
6. Managerial Theories and Models of the Firm
 - a) Baumol's Theory of Sales Revenue Maximization. Marris's Model of Managerial
 - b) Enterprise. Williamson's Model of Managerial Discretion Topics, Behavioral
 - c) Model by Cyert and March.
7. Public Sector Production and Pricing of Goods.
 - a) Public and Private Goods and their pricing mechanism Decreasing cost Industry
 - b) and pricing. Externalities and Market Pricing issues. Rent seeking and control.
 - c) Government Policy and International Trade, tariff and pricing. Import
 - d) Competitiveness and tax, International pricing Techniques / Strategies.
8. Capital Budgeting and Investment
 - a) Pre-requisites of Capital Budgeting. Investment Criteria and Decisions. Cash
 - b) flowest illation. Internal Rate of Return, Profitability-Index Criterion and other
 - c) criterion. Optimal Capital Budget.

Recommended Books

1. Salvatore, D. *Managerial Economics in a Global Economy*, 8th Ed. Oxford University Press (McGraw Hill, 2015).
2. Hirschey, M. *Managerial Economics*, 14th ed. (U.S.A. Thomson South-Western, 2016).

Suggested Books

1. Koutsoyiannis, A., *Modern Microeconomics*, 2nd Ed. (MacMillan, 1979).
2. Evan J. Douglas and, Scott Callan., *Managerial Economics analysis and strategy*, 4th Ed. (Prentice Hall, 1992).

Handwritten signature
ASSISTANT PROFESSOR
DEPT. OF ECONOMICS
UNIVERSITY OF SRILOKKA

5th Semester

ECON 6112

Micro Economics

The course is designed for senior undergraduates. The objective is to confront them to advanced theoretical concepts and rigorous analysis with mathematical tools at hand. They have to develop the analytical skills and to enhance the capabilities to solve somewhat complicated problems. As usual, the teacher is expected to draw examples from the surrounding world for exposition. The students may be given frequent assignments and exercises from the texts, which may be discussed by the teacher in the class after submission. The students should be motivated to use computer for solving the assignments.

Contents

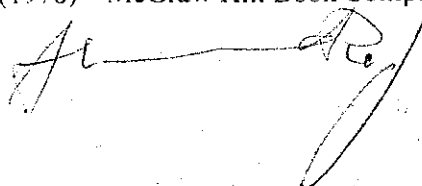
1. The Theory of Consumption and Demand
 - a) Utility maximization and ordinary (Marshallian & Hicksian) demand functions.
 - b) The inter-relationship between ordinary and compensated demands.
 - c) Homogeneity of demand functions, Euler's relation and demand elasticities.
 - d) The Slutsky Equation: derivation and interpretation, Gross and net substitutes.
2. The Theory of Production and Supply
 - a) Different production functions, Properties of Cobb-Douglas and CES production functions.
 - b) Equilibrium of the firm in the short and long run, Demand for variable factors.
 - c) Elasticity of substitution, the role of technical progress.
3. Market Structures and Price Determination
 - a) Perfect competition, price and output determination.
 - b) The imperfect competition: Monopoly and Monopsony, Duopoly and Oligopoly, Monopolistic competition.
 - c) Natural monopolies and the global markets, The multinational corporations.
 - d) Introduction to: Game theory and strategic behaviour, Market with uncertainty and imperfect information.
4. General Equilibrium and Welfare Economics
 - a) The concept of efficiency and welfare, Conditions of allocative efficiency.
 - b) Theorems of optimality/welfare Production possibility frontier and Social indifference curve.
 - c) Introduction to computation of general equilibrium in a 2x2x2 (two consumers, two sectors/ commodities, two factors) economy.

Recommended Books

1. Nicholson, Walter - *Microeconomic Theory: Basic Principles and Extensions*- 8th Edition (2002) or latest - Thomson & Learning Inc.
2. Henderson & Quandt - *Microeconomic Theory: A Mathematical Approach*- 3rd Edition (1980) - McGraw Hill International.

Suggested Books

1. Silberberg, E. & Suen, W. - *The Structure of Economics: A Mathematical Analysis*- 3rd Edition (2001) - McGraw Hill International
2. Layard & Walters - *Microeconomic Theory*- (1978) - McGraw Hill Book Company.

A handwritten signature in black ink, appearing to be 'A. R.', is written over the bottom right portion of the page. The signature is stylized and somewhat cursive.

The course is designed for undergraduates for their understanding to derive relationship between economic variables from the available data. The students should be in a position to apply statistical methods to data via simple mathematical models and to interpret the results by using economic theory. The teacher should expose the students to the use of computer in solving simple econometric problems and assignments.

Contents

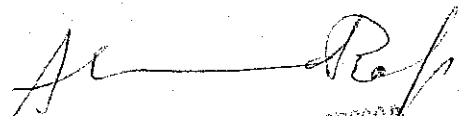
- 1- Introduction
 - a) Definition and scope of Econometrics b) Economic theory as the basis for empirical analysis
 - c) Mathematical and Econometric models d) Application of Statistical techniques to Economic data e) Ingredients of Econometric modeling: Specification, Estimation, Evaluation and Forecasting.
- 2- The Classical Linear Regression Model (CLRM)
 - a) Explaining Variables and parameters, Regressors and Regressand, Estimators and estimates, Correlation theory, Simple and multiple Regression theory, Mathematical versus econometric model. Structure of the linear econometric model with two or more variables
 - b) Rationale for inclusion of the disturbance term, Assumptions of the model with special reference to the disturbance term, The least squares principle, BLUE properties of the OLS estimators, Extensions of the model: Time as explanatory variable, Dummy variables, Regression through the origin, Standardized regression coefficients.
 - c) The estimation procedure, The economic interpretation of the estimated coefficients, Hypothesis testing and the use of Z, t, F, test statistics. The confidence interval and tests of significance approaches, The ANOVA technique, The explanatory power of the model, Coefficient of determination vs. correlation coefficient., Econometric forecasting Important features of a good forecast. Computation of elasticities.
- 3- Deviation from the Classical Assumptions
 - a) Multicollinearity
 - b) Heteroscedasticity
 - c) Autocorrelation
- 4- The Simultaneous Equations Models
 - a) Types of equation systems (Simultaneous, Recursive, Block-Recursive & Seemingly unrelated)
 - b) Identification problems
 - c) Indirect Least Squares (ILS) & Two Stages Least Squares (2SLS) methods.

Recommended Books

Koutsoyiannis, A.- Theory of Econometrics - 2nd Edition (1977) - McMillan.
Gujrati, D.N. - Basic Econometrics – Latest Edition - McGraw Hill Company.

Suggested Books

Dougherty, Christopher – Introduction to Econometrics – Latest Edition Oxford University Press.


ASSISTANT PROFESSOR
DEPARTMENT OF ECONOMICS
UNIVERSITY OF SIKKIM

The course is designed to enable the students use mathematical tools in clarifying their economic concepts and solving problems. This is because economic analysis requires extensive use of mathematics in the present day world of complexity. Mere logical reasoning and diagrammatic approach is perhaps not sufficient. This is true for positive economics in particular. As such, the students of economics have to learn and apply mathematics alongside their theoretical underpinnings.

Contents

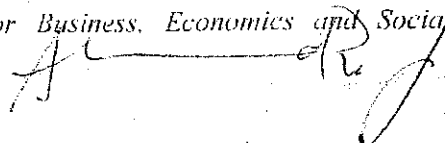
1. The Nature of Mathematical Economics
 - a) The use of mathematical tools in social sciences particularly in economics
 - b) Economic theory (logical argument) as description of some kind of relationship between variables and its functional form
 - c) Types of functions and graphs of various functions
 - d) The importance and limitations of mathematical models
2. Equilibrium Analysis
 - a) Equation of a straight line
 - b) Intercept and Slope parameters and their economic interpretation
 - c) Partial and general equilibrium analysis
 - d) Calculation of elasticity's at equilibrium
 - e) The effect of an excise tax on market equilibrium
 - f) National Income determination
3. Linear Models and Matrix Algebra
 - a) Simultaneous equations models and the use of matrices
 - b) Types of matrices
 - c) transpose and their properties
 - d) Laws of matrix operations
 - e) Determinant & its properties
 - f) Properties of inverse matrix
 - g) Solution of linear equations through Gaussian method
 - h) Cramer's rule and Inverse of a matrix method
 - i) Use of matrix approach in market & national income models
4. Differentiation
 - a) Rules of differentiation
 - b) Free and Constrained optimization
 - c) Partial differentiation & its rules
 - d) Total differentials & total derivatives
 - e) Hessian and Jacobian determinants
5. Economic Applications of Differential Calculus
 - a) Utility, profit & revenue maximization and minimization of cost
 - b) Comparative static analysis
 - c) Homogenous, Cobb Douglas and CES Production function
6. Linear Programming
 - a) Graphical and Simplex method
 - b) Duality theorems

Recommended Books

1. Chiang, A. C., *Fundamental Methods of Mathematical Economics*, 4th ed. (McGraw Hill Publishing Company, 2004).
2. Dowling E. T., *Mathematics for Economists*, Schaum's Outline Series, 3rd ed. (McGraw Hill Publishing Company, 2009).

Suggested Books

1. George. Alvery et al ., *Essentials of Mathematics with Business Applications*, 18th ed. (McGraw Hill Publishing Company, 2004).
2. Frank. Budnick *Applied Mathematics for Business, Economics and Social Sciences*. 4th ed. (McGraw Hill Publishing Company, 2011).



This course provides a broad coverage of environmental economics for Master-level students. The course covers market failure, the economics of pollution control, market-based instruments, environmental cost-benefit analysis, environmental valuation, the environment and the economy, global environmental problems, and other topics. Students will apply economic approaches to analyse policy options to better manage the environment at both the local and global levels.

Content

1. Introduction and Awareness
 - a) What is Economics of Environment. Historical Framework for Environmental Protection.
 - b) Distinction between natural resource economics and environmental economics. The Economy and the Environment. First and the second laws of thermodynamics.
 - c) The fundamental balance.
2. Analytical Tools: An Environment
 - a) Supply and Demand Issue: Cost of Controlling Environment Benefit – Cost and its Estimation. Willingness to Pay. Equilibrium Principle Technology and Equi.
 - b) Marginal Principles. Marginal Cost and Supply, Economic Efficiency and Markets.
 - c) Equity and Social Efficiency. External costs and external benefits
3. The Economics of Environmental Quality
 - a) Pollution and Impacts on Human Life, quality of life and Environment Quality.
 - b) General Models of Pollution Control. Emission Reduction and Equi.
 - c) Marginal Principle. Long Run Sustainability through Pricing Mechanism.
4. Valuing the Environment and Benefit Cost Analysis
 - a) Measuring environmental benefits: Contingent valuation, the travel cost method and the hedonic approach.
 - b) Benefit Cost analysis: Costs: The value of life, health, safety and risk. Pigovian Analysis, The Coase Theorem.
5. Economic Development and the Environment
 - a) General considerations, Environmental degradation in developing economies.
 - b) Economy and Environment. The Pollution Haven hypothesis. The role of developed countries.
6. Environment and Pakistan
 - a) Emergence of Environment Issue. in Pakistan. Industrial Waste. Urban Waste and Agricultural Issues Related to Pesticides use.
 - b) Salinity and Water Logging. Urban Environmental Issues. Public and Private Efforts to Improve Environment Quality and Impacts.
 - c) Air pollution in Pakistan. Public Policies and Awareness to Control Pollution. Environmental Policy and Strategy in Pakistan.
7. The Global Environment
 - a) Ozone Depletion, the Economics of Global Warming. Kyoto – Protocol and Issues.
 - b) International Environmental Agreements. UN and Environmental Cooperation.
 - c) International trade and the Environment. Impacts of Awareness Policy.

Recommended Books

1. Field. B.C and M.K Field., *Environmental Economics: An Introduction* ,7th Ed.(New York: McGraw Hill,2016).
2. Hussen A., *Principles of Environmental Economics and Sustainability*,4th Ed.(Routledge Pubiishers,2003).

Suggested Books

1. Baker Steve, *Environmental Economics*, New Delhi (Dominant Publisher and Distributors, 2003).

ECON 6116

Energy Economics

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.

Contents

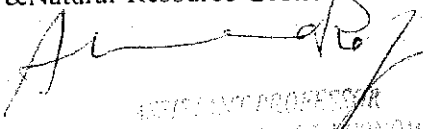
1. Overview and Fundamental Concepts:
 - d) Energy in the Economy; Global Energy Problems and Issues
 - e) Fundamental Concepts: Energy, Power; Measuring energy: units and conversion factors,
 - f) Laws of Thermodynamics, 1st Law and Entropy law, Input and output energy, energy efficiency, Energy conversions (technologies)
 - g) Energy markets and energy prices; competitive market valuation and social valuation.
2. Oil Resources and Economic Issues:
 - a) Discounted cash flow analysis, Reserve and resources, resource substitution
 - b) Forecasting prices and speculation, Natural resource (oil) demand and supply, OPEC
3. Overview of Energy Economics and Global Energy Sustainability:
 - a) Primary energy supply, secondary energy and energy end use demand/consumption.
 - b) Economic activity, and growth: energy intensity, global energy use forecasts
 - c) Energy conversion, energy transportation and/or transmission, and clean energy use.
 - d) Conditions for a sustainable global energy system, climate change and clean energy
4. Clean Energy Supply from Non-Conventional, Alternative and Renewable sources:
 - a) Climate change and primary and secondary energy use
 - b) Energy Conservation policies, Demand side management
 - c) Non-conventional and renewable alternative energy: Solar, Biomass, Wind, Geothermal, Tidal & other, Hydrogen energy, fuel cells
5. Energy Supply from Non-Renewable Fossil Fuel Resources:
 - a) Fossil fuel resources and reserves model, Cartel models of global energy markets
 - b) Overview of Oil, Natural gas, and Coal industries, Backstop technologies and Non-renewable resource Pricing (Hotelling model), Clean fossil fuel use; carbon sequestration
6. Energy Conversion and Supply by Electric Utility Industries:
 - a) Electric Power demand and load duration vs. Electric energy consumption
 - b) Electricity production technologies and electricity production cost trade-offs, Thermal, hydro, nuclear and renewable production and transmission of electricity
 - c) Electricity pricing issues, regulation and deregulation issues
 - d) Nuclear energy issues and prospects
7. Sustainable Energy Policy:
 - a) Jaccard's Sustainable Energy System in 2100, Energy Policy of Pakistan
 - b) Sustainable energy options and criteria for comparison, Sustainable Energy Policy Alternatives and Climate Change, International Policy Initiatives.

Recommended Books

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)

Suggested Books

1. J. M. Griffin, and H. B. Steele (1985): *Energy Economics and Policy*, Academic Press
2. Tom Tietenberg and Lynne Lewis *Environmental & Natural Resource Economics* Pearson Education, Inc., 9th Edition 2012


ASSISTANT PROFESSOR
DEPARTMENT OF ECONOMICS
UNIVERSITY OF PAKISTAN

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.

Contents

- 1- Introduction
 - a) Absolute Poverty
 - b) Relative Poverty
 - c) Multi-dimensional Poverty
 - d) Determinants of poverty/ Inequality
 - e) Some important aspects i.e. Sen's approach, Vulnerability etc.

- 2- Choice of poverty line and measurement of poverty
 - a) Headcount Index
 - b) Poverty Gap Index
 - c) Squared Poverty Gap
 - a) Sen's Index
 - b) The Sen-Shorrocks-Thon Index,
 - c) FGT class of measures, multidimensional poverty index

- 3- Measurement and decomposition of income inequality
 - a) Docile Dispersion Ratio
 - b) Gini Coefficient of Inequality
 - c) Generalized Entropy Measures,
 - d) Atkinson's Inequality Measures
 - e) Comparison of inequality measures

- 4- Poverty and inequality reduction strategies
- 5- Pro-poor growth
- 6- Poverty \Inequality profile of Pakistan

Recommended Books

Jonathan H. and Shahidur K. (2009) Handbook on Poverty and Inequality. (W.B. Training Series)
 Sachs, J. (2005) End of Poverty: Economic Possibilities for our Time (New York, Penquin).

Suggested Books

Fields, G. S. (2001). *Distribution and Development*. Cambridge, MA: MIT Press.
 Foster, J. E., J. Greer and E. Thorbecke (1984). "A class of decomposable poverty measures", *Econometrica*, 52(3): 761-66

6th Semester

ECON 6118

Macro Economics

This course provides a comprehensive introduction to Macroeconomics; the objective is to enhance their analytical skills and to clarify further their macroeconomic concepts with quantitative tools at hand. They must have a strong theoretical foundation so as to understand the real problems of the economy with particular emphasis on inflation, unemployment, instability, deficit and debt etc. to which the developing countries are confronted at present.

Content

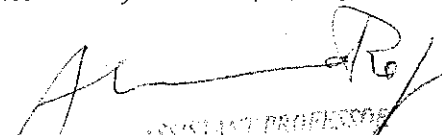
1. Macroeconomics: The Classical Framework
 - a) Ingredients of the Classical model: The Says law of markets.
 - b) The Quantity theory of money, The Marginal Productivity theory, Equilibrium in the goods and money markets.
 - c) A critical appraisal of the Classical model, Dichotomy in the economy.
2. The Demand Management Economy
 - a) The Keynesian framework, liquidity preference function, ISLM model and its mathematical derivation, interaction of the goods and money markets in a closed economy.
 - b) The multiplier effects of fiscal and monetary actions, derivation of aggregate demand function.
 - c) The Neoclassical critique of the Keynesian model: the Keynes effect, the Pigou effect, the Real Balances effect, The Keynesian-Neoclassical Synthesis
3. The Supply Side Economics
 - a) Demand for and Supply of Labour, The wage rate determination, Rigidity versus flexibility of nominal wage rate.
 - b) The short-run Production function, Derivation of Aggregate Supply under the Classical and Keynesian assumptions, the supply side disturbances leading to stagflation.
4. The Open Economy Macroeconomics
 - a) Balance of Payments: Current and Capital account, The IS-LM-FB model due to Mundell and Fleming, The case of a small open economy
 - b) The relative effectiveness of Fiscal and Monetary policies under the Fixed and Floating exchange rate regimes, Devaluation and its impacts for developing countries.
5. Macroeconomic Policy Debate
 - a) Macroeconomics Policy: the Fiscal, Monetary and Commercial policies
 - b) Seignorage and Inflation: Monetarists vs. Activists, the short-run and long-run analysis of the Phillips Curve

Recommended Books

1. Froyen, Richard, *Macroeconomics: Theories and Policies*. (Pearson, 2012)
2. Gupta, G.S., *Macroeconomics: Theory and Applications*. (McGraw Hill, 2014)

Suggested Books

1. Mankiw, Gregory, *Macroeconomics*. (Worth Publisher, 2018)
2. Branson, Willium, *Macroeconomics: Theory and Policy*. (Harper and Row, 1989)


CONSULTANT PROFESSOR
DEPARTMENT OF ECONOMICS
UNIVERSITY OF KALAHATI

The 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. They have to understand data problems, to have good grasp over advanced estimation techniques and to have the capability of inferring results accurately. The students have to learn certain computer packages like SPSS, E-views and Strata besides Excel. The students are required to devote at least one hour per week to computer laboratory. They have to develop the capacity to read and understand research papers to understand estimation techniques and their interpretations.

Contents

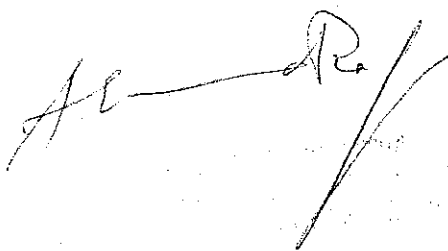
- 1- Overview of the Classical Regression Model
 - a) The multiple regression (K-variable) model in matrix format, Assumptions of the model, The Least-Squares estimation procedure in matrix notation, Properties of the OLS estimators, Interpretation of the Beta coefficients ($\beta_1, \beta_2, \dots, \beta_k$), Hypothesis testing using matrix approach.
 - b) Forecasting in OLS model, Time as an explanatory variable, Regression on Dummy variables, Dummy variable trap, Chow test, Specification bias and Errors in variables, Estimation with endogenous lagged variables, Restricted Least Squares.
- 2- The Generalized Least-Squares Model
 - a) Deviation from the assumptions of the classical regression model, The problem of heteroscedasticity,
 - b) The GLS model in matrix format, Detection of the problem and consistent estimators, The problem of autocorrelation: Autoregressive and Moving Average processes, The Durbin-Watson statistics, Alternative estimation techniques.
- 3- The Maximum Likelihood Estimators
 - a) The likelihood function, Properties of ML estimators
 - b) Consistency, Asymptotic normality, efficiency, Comparison with OLS estimators, Instrumental variable (IV) estimators
- 4- Time Series Analysis
 - a) Rationale for univariate analysis, ARMA and ARIMA Models, Comparison of forecast based on ARIMA and regression models.
 - b) Stationarity, Unit roots, co-integration and error correction models, Introduction to Autoregressive Distributed Lag models, ARCH models

Recommended Books

1. Asteriou, D. – Applied Econometrics: A Modern Approach Using EViews and Microfit – Revised Edition (2007) Palgrave Macmillan
2. Judge, George G. et al - The Theory and Practice of Econometrics- (1988) John Willey and Sons

Suggested Books

1. Gujarati, D.N. - Basic Econometrics – Latest Edition - McGraw Hill Company.

A handwritten signature in black ink, appearing to be 'A. R.' followed by a large, sweeping flourish.

To prepare the students, not majoring in mathematics, with the essential tools of calculus to apply the concepts and the techniques in the field of economics. In order to satisfy the requirements of this course, students will need to acquire a thorough understanding of the mathematical concepts introduced during the semester, and will need to demonstrate that they can apply the corresponding tools and ideas to unfamiliar problems. The objective is to confront the students to advanced mathematical techniques so as to enable them handle economics models, interpret the results and solve complex problems.

Contents

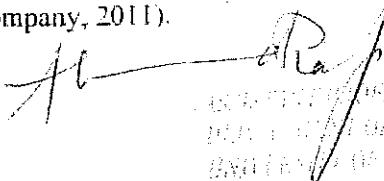
1. Complex Number and Circular Functions
 - a) Imaginary and Complex Numbers
 - b) Properties of Sine & Cosine functions
 - c) Euler and Maclaurin series
2. Integral Calculus
 - a) Rules of Integrations and Operation
 - b) Definite integrals, their properties and area under a curve
 - c) Improper integral
 - d) Economic Applications of Integrals
 - e) The Domar growth model
3. Differential Equations
 - a) First order linear and non linear differential equations
 - b) Phase diagrams
 - c) Types of time paths and the dynamic stability of equilibrium
 - d) Market models and Solow growth model
 - e) Solution of second order linear differential equations and its dynamic stability
 - f) The Interaction of inflation and unemployment in continuous time
 - g) Convergence and the Routh theorem
4. Difference Equations
 - a) First order linear and non linear difference equations its solution and verification of results
 - b) Conditions for dynamic stability of equilibrium
 - c) The Cobweb model, market model with inventory and model with price ceiling
 - d) The qualitative/graphic approach and phase diagrams
 - e) Second-order linear difference equations
 - f) The convergence and divergence of the time paths
 - g) The Multiplier-Acceleration interaction model
 - h) Inflation-unemployment model in discrete time
 - i) Convergence and the Schur's theorem
 - j) Solution of simultaneous difference equations
5. Non-Linear Programming
 - a) Non-linearity's in Economics
 - b) The Kuhn-Tucker Sufficiency theorem
 - c) The Arrow-Enthoven Sufficiency theorem
 - d) Quasi-concave programming

Recommended Books

1. Chiang, A. C., *Fundamental Methods of Mathematical Economics*, 4th ed. (McGraw Hill Publishing Company, 2004).
2. Dowling E. T., *Mathematics for Economists*, Schaum's Outline Series, 3rd ed. (McGraw Hill Publishing Company, 2009).

Suggested Books

1. George, Alvery et al., *Essentials of Mathematics with Business Applications*, 18th ed. (McGraw Hill Publishing Company, 2004).
2. Frank. Budnick *Applied Mathematics for Business, Economics and Social Sciences*, 4th ed. (McGraw Hill Publishing Company, 2011).


 ASSISTANT PROFESSOR
 DEPARTMENT OF ECONOMICS
 UNIVERSITY OF GUYANA

General equilibrium and welfare economics helps to compare the different policies and to choose the most appropriate one applying different kinds of criteria. It also encompasses the analysis of the data and making strategic decisions in-line with the objectives of the govt. These decisions are mainly related to the economic stability, financing and investments. This course helps to learn the tools and techniques which govt. uses while planning for the future. The students would go through in depth practice of issues and discussions and real life examples concerning different economic policies.

Contents

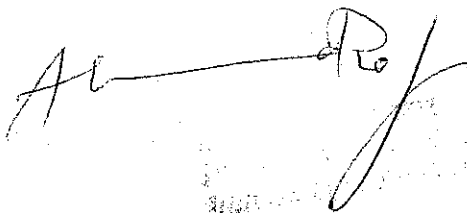
1. General Equilibrium
 - a) The general equilibrium analysis.
 - b) Walras Law; Existence of equilibrium; Stability of equilibrium;
 - c) Technical and allocative efficiency.
2. Pareto principle
 - a) Pareto principle, consumption, production and product-mix cases
 - b) Efficiency of Perfect Competition.
3. Compensation Principle.
 - a) Compensation Principle.
 - b) The Theory of Social Choice: Social welfare functions.
4. Measurement of Changes in welfare
 - a) Producer Surplus,
 - b) Consumer Surplus
5. Welfare analysis of market distortion
 - a) Price ceiling
 - b) Price support
 - c) Taxes
 - d) Subsidies
 - e) Quota and
6. Arrow's Impossibility Theorem
 - a) Arrow's Impossibility Theorem.
 - b) Externalities: positive and negative and their solutions.

Recommended Books

1. Richard E just, Darrel L. Hueth and Andrew Schmitz Edward Elgar, *Welfare economics of public policy, A practical approach to project and policy evaluation*. Edward Elgar Cheltenham, UK • Northampton. MA, USA
2. Rosen and Harvey S., *Public Finance*, McGraw Hill (latest edition)

Suggested Books

1. Jehle, G.A., & P.J. Reny, *Advanced Microeconomics, Theory*, Addison Wesley, 2001 (2nd ed.)
2. Varian, H., *Microeconomics Analysis*, Norton 1992 (3rd ed)



This course provides cognizance of the significance of monetary phenomenon within any economy. Understanding of the theoretical base behind the functioning of money and its allied concepts and how they are meaningful in the conduct of monetary policy and its implications within national borders and beyond. Further, it will inculcate ability to understand the formulation, function and execution of monetary policy relative to contemporary national and international circumstances.

Content

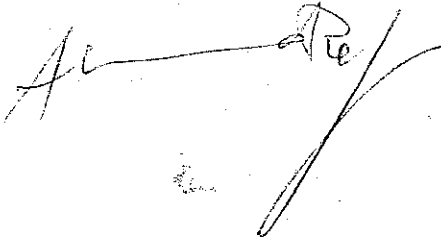
1. Introduction and Development Of Monetary Mechanism
 - a. Evolution of Money and Payment System.
 - b. Definition, Function and Measurement of Money
2. Role of Money in the Economy
 - a. Classical Dichotomy and Keynesian IS LM Framework
 - b. Money in Aggregate Demand & Aggregate Supply Analysis.
 - c. Keynesian Vs. Monetarist views of Equilibrium Output, Employment and Prices
3. Demand for Money and Money Supply process
 - a. Theories of Money Demand
 - b. Keynesian Liquidity Preference Framework
 - c. Multiple Deposit Creation and Monetary Base
 - d. Determinants of the Money Supply
4. The Conduct of Monetary Policy: Central Bank
 - a. The Conduct of Monetary Policy: Goals and Targets.
 - b. Tools of Monetary Policy by Central Bank
5. Money & Interest Rates
 - a. Determinants and Kinds of Interest Rates
 - b. The Risk and Term Structure of Interest Rates
6. Money and Inflation
 - a. What is Inflation, its Causes and types
 - b. Philips Curve and Accelerating Inflation.
 - c. Inflation in Pakistan: Sources and Policies to Combat Inflation
7. Monetary Policy in International Framework
 - a. Monetary Policy in Fixed and Flexible Exchange Rates.
 - b. Exchange Rate, Monetary Policy and Balance of Payment.

Recommended Books

1. Mishkin, F. S., *The Economics of Money, Banking & Financial Markets* (Pearsons, New York, 2001).
2. Miller, R. L. and David V. H., *Money, Banking & Financial Markets*. South Western, Singapore. 2001)

Suggested Books

1. Vanish K., *Monetary Theory*. (Vikas Publishing House, Delhi, 2001)
2. Mishkin F. S., *Financial Markets and Money*. (Harper & Row Publisher, 2000).



7th Semester

ECON 6123 International Trade Theory

This course provides a comprehensive introduction to international trade, focusing in particular on trade theory explaining why trade takes place; its history and key concepts, major theoretical frameworks, main factors and agents. More specifically, the course introduces key concepts related to flow of goods and services, funds, monies and currencies from one country to another country.

Content

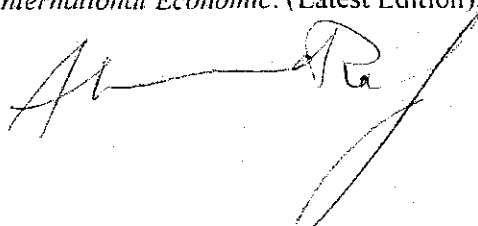
1. Importance and Basis of Trade
 - a. Why Study International Economics? Basis of Trade, Gains from Trade.
 - b. Absolute Advantage, Comparative. Pattern of Trade. Offer Curves and Free Trade Equilibrium.
 - c. The Elasticity of Exports Demand and Balance of Payment. Substitution and Income Effects
2. Growth and Trade
 - a. Factor endowment and Heckscher – Ohlin theory, factor price equalization,
 - b. Factor intensity reversal. Newly industrializing countries (NICs). Rybeczunksy theorem.
 - c. Markets, cartels and international trade. Dumping / discrimination and WTO
 - d. Multinationals firms and foreign direct investment, transfer of capital, technology.
3. Technology and Factor Endowment
 - a. Ricardian Trade Model, World Production and Gains. Comparative Cost and Trade Pattern.
 - b. Technical Progress and International Gains. WTO and Gains from Technical Progress
 - c. Free Trade and Income Distribution, Relative Demand, Supply and Pattern of Trade
4. Factor Endowment and Heckscher – Ohlin Theory
 - a. Output and Factors Rewards in 2*2 Model. Heckscher- Ohlin (H.O) Model, The Role of Demand
 - b. Factor's Prices and Commodity Prices, Factor Price Equalization, and Factor Intensity Reversal.
 - c. Newly Industrializing Countries (NIC's). Rybescky Theorem and its critical review.
5. Tariff quota and trade policies
 - a. Tariff and Small Country: Effects of Tariff, Price and Demand for Imports,
 - b. Welfare impacts, Impacts of Tariff on Government Revenue
 - c. The Optimal Tariff. Tariff and Distribution of Income. Brief Introduction of Tariff and WTO
 - d. Subsidies and Quota, Voluntary Quota, Quantitative Restrictions, Voluntary Export Restrictions
6. Major Contemporary International Economic Issues
 - a. WTO: GATT and Emergence of WTO. Expected Impacts on Trade, Liberalization and B.O.P
 - b. WTO Rules: Sanitary, Phytosanitary, Dumping, Anti-Dumping etc Rules and Their Impacts.
 - c. Emerging Regional Trading, Blocks, Special Preference and Monetary

Recommended Books

1. Donomick Salvatore B, *International Economics*. (Latest edition), Prentice Hall.
2. Chacholiades, Miltiades, *International Trade Theory and Policy* (latest edition). McGraw Hill Book Company New York, London.

Suggested Books

1. Sodersten B. and Geoffry Read. *International Economics* (Latest edition), MacMillan Press Ltd.
2. Peter Holinder & Thomas A. Pugel. *International Economic*. (Latest Edition).

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ECON 6124

Research Methodology

This course covers the basics of conducting applied economic research. This includes the selection of topic, literature review and survey, selection of research method and approach, formulation of hypothesis, testing of hypothesis using statistical analysis, and summarizing results. You will organize and complete the research project in stages. This process includes the following steps: • choice of a topic; • finding, critically evaluating and describing the relevant economics literature on this topic; • developing a research proposal; • finding relevant economic data sources and collecting economic data; • analyzing these data using appropriate statistical and econometric techniques; • clearly and meaningfully summarizing, tabulating and explaining the findings; • writing a final report/paper; • preparing a presentation.

Content

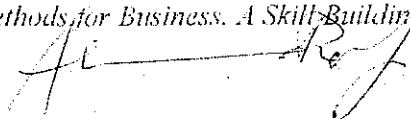
1. Importance of Research Methodologies.
2. Research techniques in social sciences and their limitations.
 - a) Theory and basis of research.
 - b) Empirical and theoretical research.
 - c) Stages of research process.
3. Identification of problem/issue, data, theory and estimation and related problems.
4. Thinking. Field Research Designs; the process of field research, Exploratory Research, Casual Inference.
5. Methods of communication in survey.
 - a) Vision survey and communication techniques.
 - b) Art of asking questions and getting quality information.
 - c) Preparation of Research Proposal Questionnaire.
6. Sample Design;
 - a) The Nature of Sampling.
 - b) Measurement and Scaling;
 - c) Measurement, Measurement Scales,
 - d) the Characteristics of Sound Measurement,
 - e) the Development of Measurement Tools,
 - f) Scaling. the Nature of Scaling, Response Methods, Scale Construction.
7. Data Collection Methods
 - a) Survey Instruments and Field Procedures; Survey Instrument Designs.
 - b) the Survey Situations, the Instrument Development Process.
 - c) Questionnaire Development, Field Procedures, Personal Interviewing, Telephone Interviewing.
 - d) Interviewing by mail, observations. Data collection, Observation,
 - e) Experimentation and Simulations;
 - f) Experimentation and Simulation. Choice of Research Technique, Experimental Research Design, Simulation, Observation, Observation Designs.
8. Use of Secondary Data;
 - a) the Nature of Secondary Data Sources, the Use of Secondary Data,
 - b) Types of Secondary Data Sources, Statistical Sources, Data Research Procedures.
 - c) Evaluating Secondary Data. Vision Survey:
9. Interpretation of Replies. Data Presentation and Analysis:
 - a) Elements of Analysis, Data Preparation, Special Data Problem. Tabulation,
 - b) Data Presentation, and Data Analysis.
10. Report Writing; the Questions and analysis of Research Proposal.
 - a) Organization of Research Paper.
 - b) How to format and Write country Research Report.
 - c) Executive summary and abstract of a report. Conclusion and its basis.
 - d) Evaluation of Research Work.
11. The Research Report, Research Report Format. Writing and editing of research Report.

Recommended Books

1. Johnson, Glenn *Research Methodology for Economists: Philosophy and Practice*, (McMillan publishing Co., 1986).
2. Ranjit Kumar ., *Research Methodology: A Step-by-Step Guide for Beginners*, 5th Edition.(SAGE Publications Ltd . 2018).

Suggested Books

1. Uma Sekaran. Roger Bougie..*Research Methods for Business. A Skill-Building Approach*. 7th Ed.(John Willey & Sons. Inc.1992).



2. Charles M. Judd, Louise H. Kidder and Eliot R. Smith., *Research Methods in Social Relations*. 6th Ed.(Holt, Rinehart & Winston, 1991)

ECON 6125 Public Finance

This course investigates the role of the public sector in the economic arena. We will attempt to explain why government intervention is needed, how it influences the behavior of the private sector and what the welfare effects of such influences are. We will also survey political economy, which regards actions of the public sector as determined by political processes.

Contents

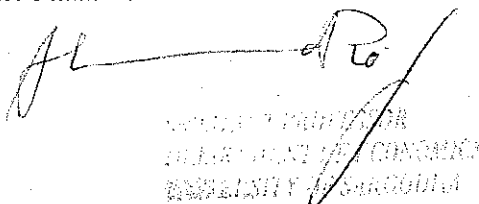
1. Scope and New Developments
 - a) Definitions: Economic Development and Growth, Identification of Development variables. Scope and Significance of Development Economics.
2. Major Theories of Development
3. Agriculture and Industry
 - a) Agriculture vs. Industry: Development Debate, Lewis' Model of surplus Labor. Rains' Fei Model and its critical review.
 - b) Transforming Agriculture. Underemployment problem. Role of Agriculture: Market for Industrial Output, Provision of Input, food, Complementarities, productivity growth.
4. Terms of Trade Issue and Subsidies
 - a) Land Holdings, Green Revolution and its Performance.
 - b) Problem of Sectoral Dualism. Why Green Revolution? The Spread of Green Revolution in Pakistan and its Status / Contributions.
5. Population, Education and Human Capital
 - a) Demographic Transition. Human Resources as a source of growth and their contributions.
 - b) Investment in education and returns. Models of Employment & Unemployment: Time Criterion, Productivity Criterion and New Index etc.. and Employment generation Strategies/Techniques.
6. International Debt, Aid / Assistance
 - a) Why international borrowing? Two Gap Model, Aid commitments and disbursement.
 - b) Sources of borrowing. Debt Cycle Theory/Stages, Debt Burden: Debt Servicing etc.
 - c) Policies to combat debt problem: Forecasting debt and solution for debt burden
7. WTO, Liberalization and International Trade
 - a) Trade vs. Aid. Liberalization of Trade and its impacts/gains etc., Foreign Exchange Constraints and Balance of Payment deficit.
 - b) Role of GATT and its Failure. WTO and LDC's. Trade Instability, Distribution of gains from Trade liberalization.
 - c) Regional Trade Associations (RTA's): their role and contributions.
8. Poverty and Income Distribution
 - a) Definitions and Measurement of Poverty/Poverty Line.
9. Economic Growth and Environment
 - a) Market Based Approach and Externalities. Deforestation and Renewable Resources. Measuring environment values.
 - b) Urbanization and environmental issues. Sustained development, Ecology and economic progress.

Recommended Books

1. David N Hyman, (1996), *Public Finance, A Contemporary Application of—*, Harcourt Brace College Publishers.
2. Meier Gerald M., *Leading Issues in Economic Development*, (Latest Issue), Oxford University Press.

Suggested Books

1. Ghatak Subarta, (2003), *Introduction to Development Economics*. Routledge, Taylor and Francis Group, London/New York.
2. Rosen and Harvey S., (1999), *Public Finance*. Mc-Craw Hill.


UNIVERSITY OF SARGODHA
DEPARTMENT OF ECONOMICS
SARGODHA

ECON 6126

History of Economics Thoughts

This course aims at introducing students to the understanding of how economic thought has developed over time acknowledging that alternative frameworks offering different conceptualizations of the individual economy society relationship coexist as of today by ways of surveying the major controversies over the definition of the objectives, scopes and methodologies of the discipline.

Contents

1. Introduction:

- a) Introduction: Importance of Economic History, Approaches to Study the Subject
- b) Overview of Ancient Greek, Roman and Medieval Economic Thought
- c) Overview of Ancient and medieval thoughts, Quensy's influential ideas, Feudalism, Mercantilism, Nature's Circular Flow, Process of modern theories and thoughts
- d) Overview of Islamic thoughts: Ibne-Khuldoon and thereafter

2. Mercantilists and the Physiocrats:

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

3. Classical School:

- a) The Contributions of Classical School, Adam Smith; Malthus and Ricardo etc.,
- b) The Labor Theory of Value
- c) Bullin Debate. Ricardo's Monetary Thought. Evolutionists, Ricardo and Reformers of 18th Century, The Theory of Rent
- d) Profit Concepts of Colonization

4. Socialism:

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

5. Keynesian and Post Keynesian School:

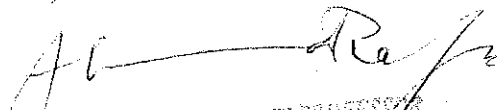
- a) The Keynesian and Post Keynesian School, The Great Depression: Economic Policies and Capitalist Instability Between the World Wars. The 20th Century Paradigms. The Growth of International Economy. The Rise and fall of Post World War II. The American economic history and Lessons
- b) The Crisis of the 1970's and International Responses. Failure of Trickle down effects. Rational Expectation Revolution. Basic Needs Approach and welfare. Emergence Famine and Poverty
- c) Modern Economic Thought. Comparison of Post Keynesian and Monetarist Thoughts. Supply side economics. Globalization, Liberalization and New Weave of Economic Growth and Welfare. New Growth Theory. Convergence and Divergence Debate. Future of Economics, Quality and International Trade and emergence of markets. New Regionalism, New directions of research. Environment and sustainable growth

Recommended Books

1. *A History of Economic Ideas*, (1959), Robert Lekachman, McGraw Hill Company.
2. *Economic Theory in Retrospect*, Blaug, (1978), Cambridge University Press.
3. Spechler, Martin C., (1990), *Perspective in Economic Thought*, McGraw Hills.

Suggested Books

1. Frank A. G., (1998), *Global Economy in the Asian Age*, Univ., of California Press.
2. Henery John D., *The Future of Economics*, (1992), Black Wall Publishers.


ASSISTANT PROFESSOR
DEPARTMENT OF ECONOMICS
UNIVERSITY OF WAHIA

ECON 6127

Project Appraisal and Investment Analysis

The ultimate outcome of a public or a private investment is determined by the financial, economic, managerial and political parameters associated with the project. A project evaluation that closely links the financial and economic analysis, and in turn identifies the distribution of benefits and costs over the various interest groups, will be far more likely to identify fatal flaws in the design of a project that will an appraisal that segments the analysis and does not address the interdependencies of the components.

This course will enable students to understand the concepts which underlie the appraisal of investment projects and the advantages and drawbacks of each of the main approaches used (namely cost benefit analysis, multi criteria analysis and other important concepts).

Contents

1. Introduction:

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

2. Identify Project Benefits and Costs:

- a) Objectives of Costs and Benefits, The Incremental / Net Benefits and "With" and "Without" Comparisons, Categories of Costs and Benefits.

3. Pricing Project Costs and Benefits:

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

4. Comparing Project Costs and Benefits (Measuring of a Project Worth):

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

5. Applying Discounted Measures of Project Worth:

- a) Sensitivity analysis, Switching value, Choice among mutually exclusive alternatives
- b) Domestic resource cost of foreign exchange earning / saving.

6. Cost Effectiveness Analysis:

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

7. Financial (Investment) Analysis:

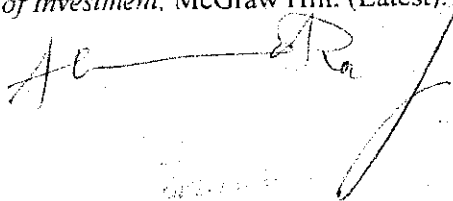
- a) Theoretical and empirical examination and saving and investment, Concept of capitalization types of securities, non-banking financial institution
- b) Development financing, Asset Structure, Stock Prices, Money Market, Portfolio Theory and Investment Analysis
- c) Financing the industrial sector; Large scale and small scale. Interest rate. Bond market. Real and financial investment

Recommended Books

1. Hughes, A., & D.J. Storey: "Finance and The Small Firm" (Ed) Routledge, London, (Latest).
2. Bruno Solmik, *International Investment*, Addison Wesley, (Latest).

Suggested Books

1. William F. Sharpe & Gordon J., "Investments" 5th Ed., Prentice Hall, (Latest).
2. Zvi Bodie, Alex Kane, Alan K., *Essentials of Investment*, McGraw Hill, (Latest).



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8th Semester

ECON 6128

Applied Economics

It is a special applied course, which covers different aspects of economic theory and its application. The course is offered in the last semester. In this course, estimation of econometric models and applied economic research is taught. For this purpose, students are required to apply the knowledge and theory to produce a research paper. Completion of this course provides confidence among the students to embark upon research on important national and international economic issues.

Content

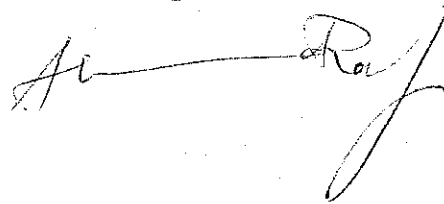
1. Introduction to Windows 2000 and Ms-Word
 - a) Operating System, Performance Management, Desktop Management, Printer Management,
 - b) Internet Explorer, E-mail. MS-Word, using Advanced Formatting Features,
 - c) Sharing data with Word, Word Macros, Composing Models and Mathematical Equations.
2. PowerPoint and MS-Access (XP)
 - a) Database Concepts, File Linkages, Data Retrieval, Data Editing / Updating. Data Transferring.
3. SPSS and E-View
 - a) Menu, Tool Bars, File Linkages, Dialog Boxes. Data Analysis, Analysis of Variance. Simple
 - b) Multiple Regression Analysis, Formatting Reports, Creation and Modification of Chart,
 - c) Line Area and Pie Chart. Output Navigator Printing,
 - d) Data Editor Printing, Command Syntax Printing. Use of E-view for Model Estimation.
4. Estimation of Production Function
 - a) Use of Computer, SPSS, E-View to Estimate Production Functions.
 - b) Cob-Douglas Production Function, Constant Elasticity Production Function etc.
5. Computer Applications: Demand – Supply & Equilibrium
 - a) Estimation of Demand and Supply using E-View / SPSS.
 - b) Aggregate Demand – Aggregate Supply and Equilibrium.
6. Model Building and Estimation
 - a) Building Simple Econometric Models and Estimation. Single Equation Models,
 - b) Multiple / Simultaneous Equation Model. Interpretation of Computer Output.
7. Project Appraisal and Computer Application
 - a) Use of Computer Programming (Softwares), E-View etc. for Cost-Benefit Analysis,
 - b) Estimation of Present Values, Estimation of Economic and Social Benefits.
 - c) Project Appraisal Using E-View etc. Estimation of Cost Functions and Decision Making.
8. Econometric Analysis and Computer Applications
 - a) Regression Functions. Estimation with Qualitative Variables
 - b) Confidence Interval and Hypothesis Testing. Estimation and Improving Model Estimates:
 - c) Autocorrelation, Estimation of Simultaneous Equations. Estimation of VAR and ARIMA Models.

Recommended Books

1. E-View Manual, (Learning help available with package (software)).
2. Gimi, Carter and Annette, Marquis, with Karl Browning, *Mastering Microsoft Office XP Premium*, (Selection B.P.B., Publishers, New Dehli , 2001).

Suggested Books

1. Robertson, D.F., *Computer Applications and Programming*, latest ed. Har Brace Jovanovich Inc. USA SPSS-Manual



ECON 6129 Islamic Economics

The objective of this course is to let them realize that Islam provides full guidance to its followers in all spheres of social life. The students have to understand the Islamic injunctions ordained for economic behavior, both in the individual as well as collective capacity. They have to compare the prevailing system with that devised by Islam, to capture the socio-economic problems faced by the present-day Muslim countries and to find ways and means to reconstruct the system in vogue according to Islamic guidelines.

Content

1. Introduction Islamic Economics
 - a) Islamic Economics Versus Secular Economics, foundations, Basic Values of Islam,
 - b) The lawful and unlawful (Halal and Haram).
2. Islamic Economic Thought
 - a) Contribution of prominent scholars (Imam Abu Yousuf, Imam Abu Ubaid Al-Qasim, Ibne-Khuldoon, Imam Ibn-e-Taimiyah, Shah WalliullahDehlawi, MaulanaMaududi, Baqar-al-Sadaretc).
3. Microeconomics in Islamic Framework
 - a) Consumer's Behavior
 - b) Firm's Behavior
 - c) Market structure
6. Macroeconomics in Islamic Framework.
 - a) Basic Macroeconomics concepts (i.e. Consumption, Saving, Investment, Inflation, Unemployment, etc.)
 - b) Money, Banking and Monetary Policy (i.e. Interest, Modes of financing, central banking, etc.)
 - c) Public Finance and Fiscal Policy (i.e. Sources of revenues, heads of expenditures, Zakah, etc.)
7. Islamic Economic System
 - a) Salient features of an Islamic Economic System
 - b) The institution of Zakah and Bait-ul-Mal, Wider circulation of wealth.
8. Islamization Process in Pakistan
 - a) Islamization of the banking and financial system
 - b) Islamic Banking practice and the role of the State Bank of Pakistan

Recommended Books

1. Ahmed. Khurshid, *Studies in Islamic Economics*. (King Abdul Aziz University Press. 1980)
2. Ziauddin et al., *Money and Banking in Islam*. (King Abdul Aziz University Press, 1983) Islamabad.

Suggested Books

1. Siddiqui, M.N., *Issues in Islamic Banking*, (The Islamic Foundation, 1983)
2. Iqbal, Munawar, *Distributive Justice and Need Fulfillment in an Islamic Economy* – (International Islamic University, 1986)


ASSISTANT PROFESSOR
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ECON 6130**Issues of Pakistan Economy**

To introduce students about the key features of macroeconomic management, its process in Pakistan, and also critical issues facing macroeconomic management in Pakistan.

Contents

1. National Income Accounts
 - a) GDP (Nominal and Real) and GNP
 - b) Measure of Inflation and Employment and GDP
2. Review of Alternative Models of Economic Management
 - a) Capitalism and Mixed Economy
 - b) Islamic Economics or Islamic Capitalism
 - c) Pakistan's Models of Economic Management
3. Background of Pakistani Economic Management
 - a) British Colonialism and Muslim Responses
 - b) Ali Garh and the Upbringing of Muslim Nationalism
 - c) Relationship between Muslim Nationalism and Capitalism
4. Agricultural Sector of Pakistan
 - a) Agriculture Sector and its key issues in Pakistan
 - b) The Green Revolution and its Impacts
 - c) Land Reforms (both of Ayub and Bhutto)
5. Industrial Sector of Pakistan
 - a) Process of industrialization from 1947-88
 - b) Industry after Structural Adjustment Program—1988-onwards
 - c) Key Issues in Pakistani Industry
6. Fiscal and Monetary Policies and Inflation in Pakistan
 - a) Fiscal Development
 - b) Monetary Policy Management and Inflation in Pakistan
 - c) Inflation and its Causes in Pakistan
7. Public and External Debts in Pakistan
 - a) Difference between the Debts
 - b) Concerns Regarding Pakistan's Fiscal Deficit
8. Structural Adjustment Program (SAP) and Pakistan
 - a) Globalization and Export of Development Thinking
 - b) SAP. Did Pakistan need to go for SAP?
 - c) Why does Pakistan Adopt IMF Program
9. Performance of Pakistan on Foreign Economic Front
 - a) BOP
 - b) Impacts of Trade Policy, Globalization and WTO on poverty in Pakistan
 - c) Exchange Rate Regimes in Pakistan
10. Social Sector in Pakistan
 - a) Health Sector and Education and its Issues
 - b) Poverty and Income Distribution
11. Recent Challenges Facing Pakistan Economy
 - a) Deteriorating law and order Situation
 - b) Energy Crises and Rising Circular Debt

Recommended Books

1. Zaidi Akbar. *Issues in Pakistan's Economy*. (Oxford University Press, Karachi, 2011)
2. Ishrat Hussain. *The Economy of an Elite State*. (Oxford University Press, Karachi, 2007)

Suggested Books

1. Ishrat Hussain, (2009) "Pakistan's Economy-1999/2000-2007/2008: An Objective Appraisal". Business Review, Vol 4 (1): p. 7-48; IBA, Karachi

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.

Content

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

Recommended Books

1. Dominic J. Brewer and Patrick J. McEwan, *ECONOMICS OF EDUCATION* (2010).
2. Capstick Margret, *The Economics of Agriculture*, London, George Allen Unwin Ltd., latest edition.
3. 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

Suggested Books

1. Clotfelter, Charles T., and Helen F. Ladd. "Recognizing and Rewarding Success in Public Schools." Washington, DC: Brookings Institution Press, 1996. ISBN: 9780815751038.
2. 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.

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 UNIVERSITY OF SUIBI
 DEPARTMENT OF EDUCATION