

## Economics, Course Breakups Semester Spring 2024

<b><u>Semester II ( New)</u></b>			
Course Code	Course Title	Credit hours	Category
GEN-3201	Expository Writing	3(3-0)	General
GEN-3202	Arabic for Understanding Quran	2(2-0)	General
GEN-3203	Introduction to Sociology	2(2-0)	General
GEN-3204	Quantitative Reasoning-II	3(3-0)	General
GEN-3205	Information and Communication Technology (ICT)	3 (2-1)	General
GEN-3206	Civics and Community Engagement	2 (2-0)	General
<b>Total</b>		<b>15(15-0)</b>	

<b><u>Semester II (For repeaters only)</u></b>		
Course Code	Course Title	Credit hours
ENG-121	English -II	3
PSD-122	Pakistan Studies	2
MAT-123	Mathematics-II	3
ECO-124	Principles of Macroeconomics	3
ARB-125	Arabic (Basic and understanding of Quran)	3
EDU-116/ SOC-117	Optional (Non-Economics) Introduction to Education/ Introduction to Sociology	3
<b>Total</b>		<b>17(17-0)</b>

<b><u>Semester IV</u></b>		
Course Code	Course Title	Credit hours
STA-221	Statistics-II	3
ECO- 222	Agricultural Economics	3
ECO-223	Intermediate Macroeconomics	3
ECO-	Optional-I(Economics)	3
	Optional-II(Non Economics)	3
	Optional-III(Non Economics)	3
<b>Total</b>		<b>18(18-0)</b>

<b>Semester VI</b>		
Course Code	Course Title	Credit hours
ECO-321	Advanced Macroeconomics	3
ECO-322	Econometrics-II	3
ECO-323	Mathematical Economics-II	3
ECO-324	International Trade Theory	3
ECO-325	Monetary Economics	3
ECO-	Optional-(Economics)	3
<b>Total</b>		<b>18(18-0)</b>

<b>Semester VIII</b>		
Course Code	Course Title	Credit hours
ECO-421	Islamic Economics	3
ECO-422	Issues in Pakistan Economy	3
ECO-	Optional-I( Economics)	3
ECO-	Optional-II( Economics)	3
ECO-	Optional-III( Economics)	3
ECO-	Thesis (Optional)	6
ECO-461	Comprehensive Oral Examination	S/U Basis
<b>Total</b>		<b>15(15-0)</b>

### **List of Optional Courses Economics**

Course Code	Course Title	Credits.Hrs
ECO-424	Human Resource Development	3
ECO-425	Human Resource Management	3
ECO-426	Labor Economics	3
ECO-427	Managerial Economics	3
ECO-428	Institutional Economics	3
ECO-429	Economics of Happiness	3
ECO-430	Environmental Economics	3
ECO-431	Demographic Economics	3
ECO-432	Dynamic Macro Economics	3
ECO-433	Monetary Policy	3
ECO-434	Fiscal Policy	3
ECO-435	Development policy	3
ECO-436	Rural Development	3
ECO-437	Sustainable Development	3-

ECO-438	Political Economy	3
ECO-439	Industrial Economics	3
ECO-440	Transport Economics	3
ECO-441	Health Economics	3
ECO-442	Experimental Economics.	3
ECO-444	Urban Economics	3
ECO-445	Regional Economics	3
ECO-446	Disaster Economics	3
ECO-447	Advanced Econometrics	3
ECO-448	Financial Econometrics	3
ECO-449	Institutional Economics	3
ECO-450	Growth Theories	3
ECO-451	Game Theory	3
ECO-452	Ethics, Economics and Universal Values	3
ECO-453	Project monitoring and Evaluation	3
ECO-454	Economic Planning	3
ECO-455	Islamic Banking & Finance	3
ECO-456	General Equilibrium and Welfare Economics	3
ECO-457	Energy Economics	3
ECO-458	Economics of Education	3
ECO-459	Thesis	6

### **List of Optional Non Economics**

<b>Semester II</b>		
PSY-126	Introduction to Psychology	3
ANT-127	Introduction to Anthropology	3
INR-128	International relation	3

<b>Semester IV</b>		
MKT-224	Introduction to Marketing	3
BUS-225	Introduction to Business	3
PHL-226	Fundamental of Philosophy	3
ESC-227	Introduction to Environmental Science	3
ISJ-228	Islamic Jurisprudence	3
JUR-229	Introduction to Journalism	3

# Course Contents

## Semester II

**Subject: Expository Writing**

**Course Code: GEN-3201**

**Credit Hours: 3**

### **Expository Writing                      Credit Hours: 3(3-0)**

**Course Objectives:** The course is developed with the aim to enable the students to meet their real life communication needs by

- Helping them learn and understand basic concepts of communication process
- Practically implementing theoretical aspects in the real life situations

#### **Course Contents:**

What is Communication?

- Process of communication, effective steps of communication, basic communication skills

Paragraph Writing;

- Practice in writing a good, unified and coherent paragraphs
- Paragraph writing leading towards the writing of five to seven paragraphs long essay
- Stages of writing (brain storming, researching, drafting and editing)
- Methods of writing (cause and effect, problem solutions, comparison and contrast)

Essay Writing;

- Basic structure of essay, topic sentence, supporting sentence, concluding sentence, thesis statement
- Unity and Coherence, Introduction and Conclusion

CV and Job Application;

- Preparing a Curriculum Vitae
- Writing a formal job application

Translation Skills;

- Urdu to English

(Practice at advanced level)

Study Skills;

- Skimming and scanning, intensive, extensive and speed reading

- Summary and precis writing
- Comprehension (at advanced level)
- (sQ3R and Sq4r methods)

Academic Writing;

- Letter/ Memo writing, Minutes of Meeting, use of Dictionary, Library and Internet

Presentation Skills;

- Personality development (emphasis on content, style and pronunciation)
- Preparation stage, audience analysis, handling and asking questions, managing time, handling non-verbal means, feedback

Academic Writing;

- How to write a research proposal for research paper/term paper?
- How to write a research paper/ term paper?
- (Emphasis on style, content, language, form, clarity , consistency)

Report Writing;

- Technical Report writing
- Progress report writing
- Preparation and planning

E-mail writing;

- Creating e-mail account
- Writing and sending e-mails

Preparing for Interview and Research proposal/ research paper defense

*Note: Documentaries to be shown for discussion and review*

**Recommended Books:**

**Communication Skills**

a) Grammar

1. Practical English Grammar by A. J. Thomson and A. V. Martinet. Exercises 2. Third edition. Oxford University Press 1986. ISBN 0 19 431350 6.

b) Writing

1. Writing. Intermediate by Marie-Christine Boutin, Suzanne Brinand and Françoise Grellet. Oxford Supplementary Skills. Fourth Impression 1993. ISBN 019 435405 7 Pages 45-53 (note taking).
2. Writing. Upper-Intermediate by Rob Nolasco. Oxford Supplementary Skills. Fourth Impression 1992. ISBN 0 19 435406 5 (particularly good for writing memos, introduction to presentations, descriptive and argumentative writing).

c) Reading

1. Reading. Advanced. Brian Tomlinson and Rod Ellis. Oxford Supplementary Skills. Third Impression 1991. ISBN 0 19 453403 0.

2. Reading and Study Skills by John Langan

3. Study Skills by Richard York.

d) Speaking

4. Ellen, K. 2002. Maximize Your Presentation Skills: How to Speak, Look and Act on Your Way to the Top

5. Hargie, O. (ed.) Hand book of Communications Skills

6. Mandel, S. 2000. Effective Presentation Skills: A Practical Guide Better Speaking

**Subject: Arabic for Understanding Quran**

**Course Code: GEN-3202**

**Credit Hours: 2**

**Arabic**

**Credit Hours: 2(2-0)**

Objectives of the Course	<p>۱۔ طلباء کو عربی زبان کی علوم اسلامیہ میں اہمیت سے آگاہ کرنا</p> <p>۲۔ طلباء کو علم صرف اور نحو کے بنیادی قواعد سے آگاہ کرنا تاکہ اسلامی علوم سے کما حقہ استفادہ کیا جا سکے</p> <p>۳۔ طلباء کو علم صرف کے بنیادی اصولوں سے آگاہ کرنا</p> <p>۴۔ قرآن مجید سے قواعد عربیہ کی عملی مشق کروانا۔</p>
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Week	Lecture No.	قواعد	عملی مشق	
<b>Week 1</b>	Lecture 1	• اسم کی پہچان	• تعوذ اور سورۃ الفاتحہ (4-1)	
	Lecture 2	• هُوَ، هُمْ، ...ضمائر منفصلہ	• سورۃ الفاتحہ (5-7)، تکبیر، ثناء، تسبیحات	
<b>Week 2</b>	Lecture 3	• ل، مِنْ، عَنْ، مَعَ...حروف جار	• تشهد، درود، دعا	
	Lecture 4	• فعل ماضی: فَعَلَ	• سورۃ الإخلاص	
<b>Week 3</b>	Lecture 5	• فعل مضارع: يَفْعَلُ	• سورۃ الفلق	
	Lecture 6	• فعل امر، فاعل، مفعول، فعل	• سورۃ النَّاس	<b>Quiz # 01</b>
<b>Week 4</b>	Lecture 7	• نَصَرَ، عَبَدَ	• سورۃ النصر	<b>Assignment# 01</b>
	Lecture 8	• ضَرَبَ، ظَلَمَ، سَمِعَ، عَلِمَ	• سورۃ الكافرون	

Week 5	Lecture 9	• كمزور أفعال: وَهَبَ، وَعَدَّ	• سورة البقرة: 5-1	
	Lecture 10	• كمزور أفعال: قَالَ، زَادَ	• سورة البقرة: 6-10	
		•	•	
		• <b>Mid Term</b>		
Week 6	Lecture 11	• بمزه والى أفعال: أَمَرَ	• سورة البقرة: 11-13	
	Lecture 12	• يكسا حروف والى أفعال: ظَنَّ، ظَلَّ	• سورة البقرة: 14-18	
Week 7	Lecture 13	• فعل مجهول: نُصِرَ، جُعِلَ	• سورة البقرة: 19-20	
	Lecture 14	• فعل مجهول: وُعدَ، أَمَرَ	• سورة البقرة: 21-22	
		•	•	
Week 8	Lecture 15	• مزيد في: حَاسَبَ	• سورة البقرة: 23-25	
	Lecture 16	• مزيد في: اسْتَلَمَ، اِخْتَلَفَ	• سورة البقرة: 26-29	
		•		
Week 9	Lecture 17	• مزيد في: اسْتَعْفَرَ	• سورة البقرة: 30	<b>Quiz # 02</b>
	Lecture 18	• مزيد في: تَدَبَّرَ، تَدَارَسَ، اِنْقَلَبَ	• سورة البقرة: 31-35	
		•	•	
Week 10	Lecture 19	• مزيد في: وَلَّى	• سورة البقرة: 36-37	<b>Assignment# 02</b>
	Lecture 20	• مزيد في: نَادَى، أَقَامَ	• سورة البقرة: 38-42	
		•	•	
Week 11	Lecture 21	• مزيد في: اتَّقَى، سَنَقَمَ	• سورة البقرة: 43-46	
	Lecture 22	• مؤنث ضمائر	• سورة البقرة: 47-50	
Week 12	Lecture 23	• مؤنث فعل كا ثبيل	• سورة البقرة: 51-53	

	Lecture 24	• مؤنث فعل كا تُبيل، تثنيه (دو) تُبيل	• سورة البقرة: 54-57	
		•	•	
Week 13	Lecture 25	• فعل مجهول (مزيد في) عَلِمَ، أَنْزَلَ	• سورة البقرة: 58-59	
	Lecture 26	• فعل: كَرُمَ، أَوْرَ فَعْل مَضارِع	• سورة البقرة: 60-61	
		•	•	
Week 14	Lecture 27	• لَمْ أَوْرَ مَضارِعَ مَزِيدَ فِي أَفْعَال	• سورة البقرة: 62	
	Lecture 28	• لَنْ أَوْرَ فَعْلَ مَضارِعَ، اسْمَ مَكَان	• سورة البقرة: 63-66	
		•	•	
Week 15	Lecture 29	• اسم مكان	•	
	Lecture 30	• جَمَعَ تَكْسِيرَ، جَمَلَهُ اسْمِيهِ	• سورة البقرة: 67-70	
		•	•	
Week 16	Lecturer 31	• جَمَلَهُ فَعْلِيهِ	• سورة البقرة: 71-73	
	Lecturer 32	• مَضَافٌ، مَضَافٌ إِلَيْهِ، مَوْصُوفٌ، صَفَت	• سورة البقرة: 74	
		•	•	
Week 17		<b>Terminal Examination</b>		

#### نصابی کتب

نام کتاب	نام مصنف	نمبر شمار
عربی کا معلم (چاروں حصے)	عبدالستار خان	1
تمرین صرف	معین اللہ ندوی	2
تمرین النحو	محمد مصطفیٰ ندوی	3
معلم الانشاء	مولانا عبدالماجد ندوی	4
مختار النحو	مولانا مختار احمد	5

#### حوالہ جاتی کتب

نام کتاب	نام مصنف	نمبر شمار
النحو الواضح	علی جارم	1
اساس عربی	نعیم الرحمن	2
مبادئ العربية في الصرف و النحو	رشيد الشريطی	3
کتاب النحو	عبدالرحمن امرتسری	4
تمرین النحو	محمد مصطفیٰ ندوی	5



قواعد القرآن	عبدالرحمن طاهر	6
اللغة العربية لغير الناطقين بها	جامعة الملك السعود، رياض	7
قرآنى عربىك	ڈاكٲر ابراهيم سورٲى	8

**Subject: Introduction to Sociology**

**Course Code: GEN-3203**

**Credit Hours: 2**

**Objectives:** The course is designed to introduce the students with sociological concepts and the discipline. The focus of the course shall be on significant concepts like social systems and structures, socio-economic changes and social processes. The course will provide due foundation for further studies in the field of sociology.

### **Course Outline**

#### **Unit I: Introduction**

- a. Definition, Scope, and Subject Matter
- b. Sociology as a Science
- c. Historical back ground of Sociology

#### **Unit II: Basic Concepts**

- a. Group, Community, Society
- b. Associations
  - i. Non-Voluntary
  - ii. Voluntary
- c. Organization
  - i. Informal
  - ii. Formal
- d. Social Interaction
  - i. Levels of Social Interaction
  - ii. Process of Social Interaction
    1. Cooperation
    2. Competition
    3. Conflict
    4. Accommodation
    5. Acculturation and diffusion
    6. Assimilation
    7. Amalgamation

#### **Unit III: Social Groups**

- a. Definition & Functions

- b. Types of social groups
  - i. In and out groups
  - ii. Primary and Secondary group
  - iii. Reference groups
  - iv. Informal and Formal groups
  - v. Pressure groups

#### **Unit IV: Culture**

- a. Definition, aspects and characteristics of Culture
  - i. Material and non-material culture
  - ii. Ideal and real culture
- b. Elements of culture
  - i. Beliefs
  - ii. Values
  - iii. Norms and social sanctions
- c. Organizations of culture
  - i. Traits
  - ii. Complexes
  - iii. Patterns
  - iv. Ethos
  - v. Theme
- d. Other related concepts
  - i. Cultural Relativism
  - ii. Sub Cultures
  - iii. Ethnocentrism and Xenocentrism
  - iv. Cultural lag

#### **Unit V: Socialization & Personality**

- a) Personality, Factors in Personality Formation
- b) Socialization, Agencies of Socialization
- c) Role & Status

#### **Unit VI: Deviance and Social Control**

- a) Deviance and its types
- b) Social control and its need
- c) Forms of Social control
- d) Methods & Agencies of Social control

#### **Unit VII: Collective Behavior**

- a) Collective behavior, its types
- b) Crowd behavior
- c) Public opinion
- d) Propaganda
- e) Social movements
- f) Leadership

#### **Recommended Books:**

1. Anderson, Margaret and Howard F. Taylor. 2001. *Sociology the Essentials*. Australia: Wadsworth.
2. Brown, Ken 2004. *Sociology*. UK: Polity Press
3. Giddens, Anthony 2002. *Introduction to Sociology*. UK: Polity Press.
4. Macionis, John J. 2006. 10<sup>th</sup> Edition *Sociology* New Jersey: Prentice-Hall
5. Tischler, Henry L. 2002. *Introduction to Sociology* 7th ed. New York: The Harcourt Press.
6. Frank N Magill. 2003. *International Encyclopedia of Sociology*. U.S.A: Fitzroy Dearborn Publishers
7. Macionis, John J. 2005. *Sociology* 10<sup>th</sup> ed. South Asia: Pearson Education
8. Kerbo, Harold R. 1989. *Sociology: Social Structure and Social Conflict*. New York: Macmillan Publishing Company.
9. Koenig Samuel. 1957. *Sociology: An Introduction to the Science of Society*. New York: Barnes and Nobel..
10. Lee, Alfred Mclung and Lee, Elizabeth Briant 1961. *Marriage and The family*. New York: Barnes and Noble, Inc.
11. Leslie, Gerald et al. 1973. *Order and Change: Introductory Sociology* Toronto: Oxford University Press.
12. Lenski, Gevbard and Lenski, Jeam. 1982. *Human Societies*. 4<sup>th</sup> edition New York: McGraw-Hill Book Company.
13. James M. Henslin. 2004. *Sociology: A Down to Earth Approach*. Toronto: Allen and Bacon.

**Subject: Quantitative Reasoning-II**

**Course Code: GEN-3204**

**Credit Hours: 3**

## QUANTITATIVE REASONING (II)

UGE Policy V 1.1 : General Education Course

**Credits:** 03  
**Pre-Requisite:** Quantitative Reasoning (I)  
**Offering:** Undergraduate Degrees (including Associate Degrees)  
**Placement:** 2 - 4 Semesters  
**Type:** Mandatory  
**Fields:** All

### DESCRIPTION

Quantitative Reasoning (II) is a sequential undergraduate course that focuses on logical reasoning supported with mathematical and statistical concepts and modeling / analysis techniques to equip students with analytical skills and critical thinking abilities necessary to navigate the complexities of the modern world. The course is designed to familiarize students with the quantitative concepts and techniques required to interpret and analyze numerical data and to inculcate an ability in students the logical reasoning to construct and evaluate arguments, identify fallacies, and think systematically. Keeping the pre-requisite course of Quantitative Reasoning (I) as its base, this course will enable students further their quantitative, logical and critical reasoning abilities to complement their specific major / field of study.

### COURSE LEARNING OUTCOMES

By the end of this course, students shall have:

1. Understanding of logic and logical reasoning;
2. Understanding of basic quantitative modeling and analyses;
3. Logical reasoning skills and abilities to apply them to solve quantitative problems and evaluate arguments;
4. Ability to critically evaluate quantitative information to make evidence based decisions through appropriate computational tools.

### SYLLABUS

1. **Logic, Logical and Critical Reasoning**
  - Introduction and importance of logic;
  - Inductive, deductive and abductive approaches of reasoning;
  - Propositions, arguments (valid; invalid), logical connectives, truth tables and propositional equivalences;
  - Logical fallacies;
  - Venn Diagrams;
  - Predicates and quantifiers;
  - Quantitative reasoning exercises using logical reasoning concepts and techniques.
2. **Mathematical Modeling and Analyses**
  - Introduction to deterministic models;
  - Use of linear functions for modeling in real-world situations;
  - Modeling with the system of linear equations and their solutions;
  - Elementary introduction to derivatives in mathematical modeling;
  - Linear and exponential growth and decay models;
  - Quantitative reasoning exercises using mathematical modeling.
3. **Statistical Modeling and Analyses**
  - Introduction to probabilistic models;
  - Bivariate analysis, scatter plots;

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**Subject: Information and Communication Technology (ICT)    Course Code: GEN-3205**

**Credit Hours: 3**

**APPLICATIONS OF INFORMATION AND COMMUNICATION TECHNOLOGIES**

**UGE Policy V 1.1 : General Education Course**

**Credits:** 03 (Class Credits: 02; Lab Credits: 01)  
**Pre-Requisite:** Nil  
**Offering:** Undergraduate Degrees (including Associate Degrees)  
**Placement:** 1 - 4 Semesters  
**Type:** General Education  
**Fields:** All

**DESCRIPTION**

This course is designed to provide students with an exploration of the practical applications of Information and Communication Technologies (ICT) and software tools in various domains. Students will gain hands-on experience with a range of software applications, learning how to leverage ICT to solve daily life problems, enhance productivity and innovate in different fields. Through individual and interactive exercises and discussions, students will develop proficiency in utilizing software for communication, creativity, and more.

**COURSE LEARNING OUTCOMES**

By the end of this course, students will be able to:

1. Explain the fundamental concepts, components, and scope of Information and Communication Technologies (ICT).
2. Identify uses of various ICT platforms and tools for different purposes.
3. Apply ICT platforms and tools for different purposes to address basic needs in different domains of daily, academic, and professional life.
4. Understand the ethical and legal considerations in use of ICT platforms and tools.

**SYLLABUS**

1. **Introduction to Information and Communication Technologies:**
  - Components of Information and Communication Technologies (basics of hardware, software, ICT platforms, networks, local and cloud data storage etc.).
  - Scope of Information and Communication Technologies (use of ICT in education, business, governance, healthcare, digital media and entertainment, etc.).
  - Emerging technologies and future trends.
2. **Basic ICT Productivity Tools:**
  - Effective use of popular search engines (e.g., Google, Bing, etc.) to explore World Wide Web.
  - Formal communication tools and etiquettes (Gmail, Microsoft Outlook, etc.).
  - Microsoft Office Suites (Word, Excel, PowerPoint).
  - Google Workspace (Google Docs, Sheets, Slides).
  - Dropbox (Cloud storage and file sharing), Google Drive (Cloud storage with Google Docs integration) and Microsoft OneDrive (Cloud storage with Microsoft Office integration).
  - Evernote (Note-taking and organization applications) and OneNote (Microsoft's digital notebook for capturing and organizing ideas).
  - Video conferencing (Google Meet, Microsoft Teams, Zoom, etc.).
  - Social media applications (LinkedIn, Facebook, Instagram, etc.).
3. **ICT in Education:**
  - Working with learning management systems (Moodle, Canvas, Google Classrooms, etc.).
  - Sources of online education courses (Coursera, edX, Udeny, Khan Academy, etc.).
  - Interactive multimedia and virtual classrooms.

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**4. ICT in Health and Well-being:**

- Health and fitness tracking devices and applications (Google Fit, Samsung Health, Apple Health, Xiaomi Mi Band, Runkeeper, etc.).
- Telemedicine and online health consultations (OLADOC, Sehat Kahani, Marham, etc.).

**5. ICT in Personal Finance and Shopping:**

- Online banking and financial management tools (JazzCash, Easypaisa, Zong PayMax, ILLINK and MNET, Keenu Wallet, etc.).
- E-commerce platforms (Daraz.pk, Telemart, Shophive, etc.)

**6. Digital Citizenship and Online Etiquette:**

- Digital identity and online reputation.
- Netiquette and respectful online communication.
- Cyberbullying and online harassment.

**7. Ethical Considerations in Use of ICT Platforms and Tools:**

- Intellectual property and copyright issues.
- Ensuring originality in content creation by avoiding plagiarism and unauthorized use of information sources.
- Content accuracy and integrity (ensuring that the content shared through ICT platforms is free from misinformation, fake news, and manipulation).

**PRACTICAL REQUIREMENTS**

As part of the overall learning requirements, the course will include:

1. Guided tutorials and exercises to ensure that students are proficient in commonly used software applications such as word processing software (e.g., Microsoft Word), presentation software (e.g., Microsoft PowerPoint), spreadsheet software (e.g., Microsoft Excel) among such other tools. Students may be assigned practical tasks that require them to create documents, presentations, and spreadsheets etc.
2. Assigning of tasks that involve creating, managing, and organizing files and folders on both local and cloud storage systems. Students will practice file naming conventions, creating directories, and using cloud storage solutions (e.g., Google Drive, OneDrive).
3. The use of online learning management systems (LMS) where students can access course materials, submit assignments, participate in discussion forums, and take quizzes or tests. This will provide students with the practical experience with online platforms commonly used in education and the workplace.

**SUGGESTED INSTRUCTIONAL/READING MATERIALS**

1. "Discovering Computers" by Vermaat, Shaffer, and Freund.
2. "GO! with Microsoft Office" Series by Gaskin, Vargas, and McLellan.
3. "Exploring Microsoft Office" Series by Grauer and Poatsy.
4. "Computing Essentials" by Morley and Parker.
5. "Technology in Action" by Evans, Martin, and Poatsy.

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## CIVICS AND COMMUNITY ENGAGEMENT

### UGE Policy V 1.1 : General Education Course

<b>Credits:</b>	02
<b>Pre-Requisite:</b>	Nil
<b>Offering:</b>	Undergraduate Degrees (including Associate Degrees)
<b>Placement:</b>	1 - 4 Semesters
<b>Type:</b>	General Education
<b>Fields:</b>	All

#### DESCRIPTION

This course is designed to provide students with fundamental knowledge about civics, citizenship, and community engagement. In this course, the students will learn about the essentials of civil society, government, civic responsibilities, inclusivity, and effective ways to participate in shaping the society which will help them apply theoretical knowledge to the real-world situations to make a positive impact on their communities.

#### COURSE LEARNING OUTCOMES

By the end of this course, students will be able to:

1. Demonstrate fundamental understanding of civics, government, citizenship and civil society.
2. Understand the concept of community and recognize the significance of community engagement for individuals and groups.
3. Recognize the importance of diversity and inclusivity for societal harmony and peaceful co-existence.

#### SYLLABUS

1. **Civics and Citizenship:**
  - Concepts of civics, citizenship, and civic engagement.
  - Foundations of modern society and citizenship.
  - Types of citizenship: active, participatory, digital, etc.
2. **State, Government and Civil Society:**
  - Structure and functions of government in Pakistan.
  - The relationship between democracy and civil society.
  - Right to vote and importance of political participation and representation.
3. **Rights and Responsibilities:**
  - Overview of fundamental rights and liberties of citizens under Constitution of Pakistan 1973.
  - Civic responsibilities and duties.
  - Ethical considerations in civic engagement (accountability, non-violence, peaceful dialogue, civility, etc.)
4. **Community Engagement:**
  - Concept, nature and characteristics of community.
  - Community development and social cohesion.
  - Approaches to effective community engagement.
  - Case studies of successful community driven initiatives.
5. **Advocacy and Activism:**
  - Public discourse and public opinion.
  - Role of advocacy in addressing social issues.
  - Social action movements.
6. **Digital Citizenship and Technology:**
  - The use of digital platforms for civic engagement.
  - Cyber ethics and responsible use of social media.

## Semester IV

**Subject: Statistics II**

**Course Code:STA-221**

**Credit Hours: 3**

### Main components & Core Issues

➤ Sampling
➤ Estimation
➤ Test of significance
➤ The analysis of variance
➤ Time Series

### Reference Material

- ❖ Basic Statistics for business and Economics by EARLK. BROWN AND MARTIN STARR
- ❖ Introduction to Statistics theory, Part I and pat II. B.Sc by Sher Muhammad Chaudry
- ❖ Spiegel, Murray R, 1961. Theory and Problems of Statistics. New York: Schaum Publishing Company
- ❖ Statistics for Management and Economics, Fifth Edi- tion, John E. Floyd
- ❖ Anderson, D.R Sweeney, D.J and W. Williams, T.A. (1991) “Introduction to Statistics; Concepts and Applications” West publishing company, New York.
- ❖ Levin R.I “Statistics for Management”, Englewood cliffs, prentice-Hall, New York, 1993.
- ❖ GM Clarke and Arnold (1992), “A Basic course in statistics”.
- ❖ Introduction to Statistics theory, Part I and pat II. B.Sc by Sher Muhammad Chaudry
- ❖ Introduction to Business Statistics 2004 Edition, Shamim Khan, Research and Development Center Peshawer

### Course Breakup



Week	Lecture	Topic	Activity
Week 1	Lecture 1	<b>Sampling Techniques</b> <b>Basic Concept of Sampling</b>	
	Lecture 2	<b>Probability sampling and its types</b>	
	Lecture 3	Continue...	Practical
Week 2	Lecture 4	Continue...	
	Lecture 5	<b>Sampling with replacement with mean</b>	
	Lecture 6	<b>Sampling with replacement with Proportion</b>	
Week 3	Lecture 7	<b>Sampling without replacement with mean</b>	
	Lecture 8	<b>Sampling without replacement with Proportion</b>	
	Lecture 9	<b>Non probability sampling and its types</b>	
Week 4	Lecture 10	Continue...	
	Lecture 11	<ul style="list-style-type: none"> <li>➤ <b>Estimation</b> <ul style="list-style-type: none"> <li>• Point estimation</li> <li>Interval estimation</li> </ul> </li> </ul>	
	Lecture 12	<ul style="list-style-type: none"> <li>• Confidence Interval</li> </ul>	
Week 5	Lecture 13	<b>Introduction of Hypotheses testing</b>	
	Lecture 14	Hypothesis testing procedure	
	Lecture 15	Formulation of hypothesis	
Week 6	Lecture 16	Type-I and type-II error	Quiz
	Lecture 17	Steps in the construction of hypothesis testing	
	Lecture 18	One sample Z test with confidence interval	
Week 7	Lecture 19	One sample proportion test with confidence interval	
	Lecture 20	One sample t test with confidence interval	
	Lecture 21		Presentation

Week 8	Lecture 22		Presentation
	Lecture 23		Presentation
	Lecture 24		Mid-term
Week 9	Lecture 25	two sample test: Difference of means population variance is known with confidence interval	
	Lecture 26	two sample test: Difference of proportion	
	Lecture 27	two sample test: Difference of means population variance is not known but equal with confidence interval	
Week 10	Lecture 28	two sample test: Difference of means population variance is not known but not equal with confidence interval	
	Lecture 29	<b>Paired sample test</b> with confidence interval	
	Lecture 30	➤ <b>Chi Square Distribution</b> Chi Square test	
Week 11	Lecture 31	<b>CONT...</b>	Quiz
	Lecture 32	F test with confidence interval	
	Lecture 33	➤ <b>The analysis of Variance</b>	
Week 12	Lecture 34	One-way ANOVA	
	Lecture 35	One-way ANOVA	
	Lecture 36	Two-way ANOVA	
Week 13	Lecture 37	Two-way ANOVA when interaction	
	Lecture 38	LSD test	
	Lecture 39	Duncan's Test	
Week 14	Lecture 40	<b>Time Series and Analysis of time series introduction</b> <b>Components of time series</b> <b>Mathematical model of time series</b>	
	Lecture 41	<b>Measurement of secular trend</b>	

		Free hand curve method Semi-average method	
	<b>Lecture 42</b>	Moving average method Least square method	
<b>Week 15</b>	<b>Lecture 43</b>	<b>Measurement of Seasonal variation</b> Percentage of annual average method Ratio to moving average method	
	<b>Lecture 44</b>	Ratio to trend method Link relative method	
	<b>Lecture 45</b>	Detrending and deseasonalization Forecasting	
<b>Week 16</b>	<b>Lecture 46</b>		Presentation
	<b>Lecture 47</b>		Presentation
	<b>Lecture 48</b>	overview	
<b>Week 17</b>			Terminal Exam

**Subject Agricultural Economics**

**Course Code: ECO-222**

**Credit Hours: 3**

### Course Contents

#### **Introduction to Agriculture Economics**

Define and concept of agriculture economics. Structure of agriculture economics and agriculture issues Scope and need for agriculture economics Concept of agriculture economy in Islam

## **Agriculture system in Pakistan**

Relationship between agriculture economics and economic theory, Importance of agriculture system in Pakistan, Problem faced by agriculture system in Pakistan, Measures to remove agriculture problems, Issues in agriculture sector, Govt measures and policies to remove them, Revolution in agri-sector, Agricultural Vs industrial sector debate

## **Land tenure system**

importance of land tenure system, Pakistan's land tenure system, types of land tenure system in Pakistan, Problems created by land tenure system

## **Land lien and Reforms in Pakistan**

Advantages and disadvantages of large farms, Advantages and disadvantages of small farms, Size of farm and land reform. Implementation of land reforms of 1972-77, Statistical analysis of Green revolution in Pakistan Second green revolution in Pakistan.

## **Consolidation and fragmentation of Holding**

Subdivision and fragmentation of holdings, Causes of subdivision and fragmentation of holding, Effects of subdivision and fragmentation of holdings, Effects of consolidation of land, Water logging and salinity in Pakistan, causes of water logging and salinity in Pakistan, Theory of rent and tenancy, Ricardian, Theory of corn-rent

## **Agriculture inputs**

Types of agri-labor, properties of agri labor, Capital, Types of agri-capital, properties of agri capital, Needs and importance of agri-inputs in agri-sector

## **Agricultural prices**

Agri-prices, stabilization of agri prices Agriculture outputs, major crops, Cobweb Theorem and its importance Agriculture marketing, Types of market, Problems of agriculture marketing in Pakistan, Agricultural prices and programs

## **Agricultural marketing**

Definition and nature of agriculture marketing system, primary secondary and Terminal Exam Exam market, Role of functionaries in agri-markets

## **Recommended Books**

Lekhi R K, JoginderSingh(2008), "Agricultural Economics",6th Edition.

Baker, Greg A, Orlen Grunewald, and D William (2001), "Introduction to Food and Agribusiness Management",5th edition.

## **Course Breakup**

<b>Week</b>	<b>No</b>	<b>Topic</b>	<b>Activity</b>
Week 1	Lecture 1	Definition and concept of agriculture economics.	

	Lecture 2	Structure of agriculture economics	
	Lecture 3	Agriculture issues and Scope Need for agriculture economics	
Week 2	Lecture 4	Relationship between agriculture economics and economic theory	
	Lecture 5	Importance of agriculture system in Pakistan	
	Lecture 6	Problem faced by agriculture system in Pakistan	
Week 3	Lecture 7	Measures to remove agriculture problems, Issues in agriculture sector,	Assignment 1
	Lecture 8	Govt. measures and policies to remove them	
	Lecture 9	Revolution in agri-sector,	
Week 4	Lecture 10	Major crops in Pakistan,	
	Lecture 11	Agricultural Vs industrial sector debate	
	Lecture 12	Importance of land tenure system	
Week 5	Lecture 13	Pakistan's land tenure system Types of land tenure system in Pakistan,	Quiz 1
	Lecture 14	Problems created by land tenure system	
	Lecture 15	Land Reforms in Pakistan	
Week 6	Lecture 16	Advantages and disadvantages of large farms	Mid-term exam
	Lecture 17	Advantages and disadvantages of small farms	
	Lecture 18	Size of farm and land reform	
Week 7	Lecture 19	Implementation of land reforms of 1972-77	
	Lecture 20	Statistical analysis of Green revolution in	
	Lecture 21	Pakistan	
Week 8	Lecture 22	Second green revolution in Pakistan	
	Lecture 23	Subdivision and fragmentation of holdings	
	Lecture 24	Causes of subdivision and fragmentation of holding	

Week 9	Lecture 25	Effects of subdivision and fragmentation of holdings	
	Lecture 26	Effects of consolidation of land	
	Lecture 27	Water logging and salinity in Pakistan,	
Week 10	Lecture 28	Causes of water logging and salinity in Pakistan,	
	Lecture 29	Theory of rent and tenancy	
	Lecture 30	Ricardian, Theory of corn-rent	
Week 11	Lecture 31	<b>Agriculture inputs</b> Types of agri-labor, properties of agri labor,	
	Lecture 32	Capital, Types of agri-capital, Properties of agri-capital	
	Lecture 33	Needs and importance of agri-inputs in agri-sector	
Week 12	Lecture 34	Agri-prices, stabilization of agriculture prices	
	Lecture 35	Agri-price policies in Pakistan	
	Lecture 36	Agriculture outputs	
Week 13	Lecture 37	Cobweb Theorem and its importance	Assignment 2
	Lecture 38	Cont...Cobweb theorem	
	Lecture 39	Types of market,	
Week 14	Lecture 40	Agriculture marketing	Quiz 2
	Lecture 41	Agricultural prices and programs	
	Lecture 42	Agriculture Marketing in Pakistan	
Week 15	Lecture 43	Agriculture Marketing in Pakistan cont.	
	Lecture 44	Need and importance of marketing	
	Lecture 45	Problems of agri-marketing in Pakistan	
Week 16	Lecture 46	Measures to remove problems	
	Lecture 47	Cont.....	
	Lecture 48	Concluding session	

Week 17			Terminal Exam
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<b>Subject: Intermediate Macroeconomics</b>	<b>Course Code: ECO-223</b>
<b>Credit Hours: 03</b>	

### Course Contents:

#### Introduction

The Keynesian revolution and growth of Macroeconomics, Actual vs. Potential Output, Analytical approach to macroeconomics, Oken's Law and unemployment, Price Indices and Inflation, The simple macroeconomic models, Lead and Lagged variables, Exogenous and Endogenous variables and their functional relationships, Introduction to the Classical and Keynesian Schools of Thought.

#### Measurement of National Income

The circular flow of National Income, GDP and GNP, Measurement of GNP: Expenditure (demand), Product (supply) and Income (factor rewards) approach, Value added at factor cost and market prices, Personal and disposable income, Per capita income, GNP as measure of welfare, Injections into and Leakages from the economy: Saving and Investment, Exports and Imports, Domestic Absorption, Nominal and Real income, The GDP deflator, Problems in computation of national income, The underground economy, Components of Aggregate Demand: The closed and open economy models.

#### Theories of Consumption

Consumption as a function of income, Theories of Consumption: The Absolute income, Relative income, Permanent income and Life-cycle income hypotheses, Kuznet's findings and Reconciliation of Marginal and Average Propensity to Consume, Saving and Investment

#### Theories of Investment

Definition of Investment, Real and Financial investment, Autonomous and Induced investment, Determinants of investment: The Present Value, IRR and benefit-cost ratio  
Criteria, Investment Demand and capital formation, Tobin's Q-Theory, Lags in Investment Demand, Volatility of Investment, Investment by the Public sector, Equilibrium in the goods market, Derivation

of IS curve (graphic), Factors affecting the position and slope of the IS curve, The Saving-Investment gap in developing countries.

### **The Demand for and Supply of Money**

The demand for money, The Quantity Theory of money, The Liquidity Preference/ Portfolio Balance Approach, The supply of money: M1, M2, M3 concepts, The money supply multiplier and the role of banking system, Instruments of credit control and the role of central bank, Equilibrium of the money market, Derivation of LM Curve (graphic), Factors affecting the position and slope of the LM curve.

### **Determination of National Income**

The Keynesian model for a simple two-sector economy, inflationary and deflationary gaps, The concepts of multiplier, Interaction of the IS and LM functions and derivation of the aggregate demand function, The impact of changes in public expenditure, taxation and money supply on aggregate demand and the rate of interest.

### **Aggregate Supply and the Labor Market**

The aggregate production function, Demand for Labor in the short run, Labor market and its Equilibrium: The flexible and sticky wage models, The imperfect information model, The short-run aggregate supply function, The concepts of full-employment and underemployment, Supply shocks and stabilization, Interaction of aggregate demand and supply and price determination.

### **Inflation and Unemployment**

Types, causes and measurement of inflation, The structural and monetary approaches to inflation, Global inflation and its impacts on developing economies, Transitory and structural unemployment, The problem of unemployment with special reference to Pakistan, The relationship between inflation and unemployment, Phillips curve in the short-run and long-run, Remedial measures to combat inflation and unemployment. Emerging trends and recent developments

### **Reference Material:**

- **Shapiro, Edward Macroeconomic Analysis-7th Edition (2000) –Harcourt Brace Inc.**
- **Froyen, Richard Macroeconomics: Theories and Policies–7th Edition(2002)Macmillan**
- **Gregory N.-Macroeconomics 6th Edition (2007), Worth Publishers, NY.**
- **Blanchard, Oliver Macroeconomics-2nd Edition (2000)- Prentice Hall International.**
- **Dornbusch&Fisher Macroeconomics-9th Edition (2004) McGraw Hill Inc.**



- **Pakistan Economic Survey (latest), Annual reports of the State Bank of Pakistan, Federal and Provincial Budgets (latest)**

**Course Breakup**

<b>Week</b>	<b>Lecture .</b>	<b>Topic</b>	<b>Activity</b>
<b>Week 1</b>	<b>Lecture 1</b>	<b>The Keynesian revolution and growth of Macroeconomics,</b>	
	<b>Lecture 2</b>	<ul style="list-style-type: none"> <li>• <b>Actual vs. Potential Output, Analytical approach to macroeconomics</b></li> </ul>	
	<b>Lecture 3</b>	<ul style="list-style-type: none"> <li>• <b>Oken’s Law and unemployment</b></li> </ul>	
<b>Week 2</b>	<b>Lecture 4</b>	<ul style="list-style-type: none"> <li>• <b>Price Indices and Inflation,</b></li> <li>• <b>The simple macroeconomic models,</b></li> </ul>	
	<b>Lecture 5</b>	<ul style="list-style-type: none"> <li>• <b>Lead and Lagged variables,</b></li> <li>• <b>Exogenous and Endogenous variables and their functional relationships</b></li> </ul>	
	<b>Lecture 6</b>	<ul style="list-style-type: none"> <li>• <b>Introduction to the Classical and Keynesian Schools of Thought</b></li> </ul>	
<b>Week 3</b>	<b>Lecture 7</b>	<ul style="list-style-type: none"> <li>• <b>The circular flow of National Income,</b></li> <li>• <b>GDP and GNP,</b></li> </ul>	
	<b>Lecture 8</b>	<ul style="list-style-type: none"> <li>• <b>Measurement of GNP: Expenditure (demand), Product (supply) and Income (factor rewards) approach</b></li> </ul>	
	<b>Lecture 9</b>	<ul style="list-style-type: none"> <li>• <b>Value added at factor cost and market prices,</b></li> </ul>	<b>Quiz # 01</b>

Week 4	Lecture 10	<ul style="list-style-type: none"> <li>• Personal and disposable income,</li> <li>• Per capita income, GNP as measure of welfare,</li> </ul>	Assignment# 01
	Lecture 11	<ul style="list-style-type: none"> <li>• Injections into and Leakages from the economy:</li> <li>• Saving and Investment,</li> <li>• Exports and Imports, Domestic Absorption</li> </ul>	
	Lecture 12	<ul style="list-style-type: none"> <li>• Nominal and Real income,</li> <li>• The GDP deflator,</li> <li>• Problems in computation of national income</li> </ul>	
Week 5	Lecture 13	<ul style="list-style-type: none"> <li>• The underground economy,</li> <li>• Components of Aggregate Demand</li> <li>• The closed and open economy models</li> </ul>	
	Lecture 14	<ul style="list-style-type: none"> <li>• Consumption as a function of income,</li> <li>• Theories of Consumption: The Absolute income,</li> </ul>	
	Lecture 15	Relative income, Permanent income	
Week 6	Lecture 16	Life-cycle income hypotheses,	Midterm Exam
	Lecture 17	Kuznet's findings and Reconciliation of Marginal and Average Propensity to Consume	
	Lecture 18	Cont...	
Week 7	Lecture 19	<ul style="list-style-type: none"> <li>• Definition of Investment, Real and Financial investment, Autonomous and Induced investment,</li> </ul>	

	Lecture 20	<ul style="list-style-type: none"> <li>• <b>Determinants of investment: The Present Value, IRR and benefit-cost ratio Criteria</b></li> </ul>	
	Lecture 21	<ul style="list-style-type: none"> <li>• <b>Investment Demand and capital formation</b></li> </ul>	
Week 8	Lecture 22	<ul style="list-style-type: none"> <li>• <b>Tobin's Q-Theory, Lags in Investment Demand, Volatility of Investment, Investment by the Public sector,</b></li> </ul>	
	Lecture 23	<ul style="list-style-type: none"> <li>• <b>Equilibrium in the goods market, Derivation of IS curve (graphic), Factors affecting the position and slope of the IS curve,</b></li> </ul>	
	Lecture 24	<ul style="list-style-type: none"> <li>• <b>The Saving-Investment gap in developing countries</b></li> </ul>	
Week 09	Lecture 25	<ul style="list-style-type: none"> <li>• <b>The demand for money, The Quantity Theory of money,</b></li> </ul>	
	Lecture 26	<ul style="list-style-type: none"> <li>• <b>The Liquidity Preference/ Portfolio Balance Approach</b></li> </ul>	
	Lecture 27	<ul style="list-style-type: none"> <li>• <b>The supply of money: M1, M2, M3 concepts</b></li> </ul>	
Week 10	Lecture 28	<ul style="list-style-type: none"> <li>• <b>The money supply multiplier and</b></li> <li>• <b>The role of banking system,</b></li> </ul>	Quiz # 02
	Lecture 29	<ul style="list-style-type: none"> <li>• <b>Instruments of credit control and</b></li> <li>• <b>The role of central bank, Equilibrium of the money market</b></li> </ul>	
	Lecture 30	<ul style="list-style-type: none"> <li>• <b>Derivation of LM Curve (graphic), Factors affecting the position and slope of the LM curve</b></li> </ul>	

Week 11	Lecture 31	<ul style="list-style-type: none"> <li>• The Keynesian model for a simple two-sector economy,</li> </ul>	Assignment# 02
	Lecture 32	<ul style="list-style-type: none"> <li>• inflationary and deflationary gaps, The concepts of multiplier,</li> </ul>	
	Lecture 33	<ul style="list-style-type: none"> <li>• Interaction of the IS and LM functions and derivation of the aggregate demand function,.</li> </ul>	
Week 12	Lecture 34	<ul style="list-style-type: none"> <li>• The impact of changes in public expenditure,</li> <li>• taxation and money supply on aggregate demand</li> </ul>	
	Lecture 35	<ul style="list-style-type: none"> <li>• The rate of interest. The aggregate production function,</li> </ul>	
	Lecture 36	<ul style="list-style-type: none"> <li>• Demand for Labor in the short run, Labor market and its Equilibrium:</li> </ul>	
Week 13	Lecture 37	<ul style="list-style-type: none"> <li>• The flexible and sticky wage models,</li> </ul>	
	Lecture 38	<ul style="list-style-type: none"> <li>• The imperfect information model,</li> </ul>	
	Lecture39	<ul style="list-style-type: none"> <li>• The short-run aggregate supply function,</li> <li>• The concepts of full-employment and underemployment</li> </ul>	
Week 14	Lecture 40	<ul style="list-style-type: none"> <li>• Supply shocks and stabilization, Interaction of aggregate demand and supply and price determination.</li> </ul>	
	Lecture 41	<ul style="list-style-type: none"> <li>• Types, causes and measurement of inflation</li> </ul>	

	Lecture 42	<ul style="list-style-type: none"> <li>• The structural and monetary approaches to inflation,</li> </ul>	
Week 15	Lecture 43	<ul style="list-style-type: none"> <li>• Global inflation and its impacts on developing economies,</li> </ul>	
	Lecture 44	<ul style="list-style-type: none"> <li>• Transitory and structural unemployment,</li> </ul>	
	Lecture 45	<ul style="list-style-type: none"> <li>• The problem of unemployment with special reference to Pakistan,</li> </ul>	
Week 16	Lecture 46	<ul style="list-style-type: none"> <li>• The relationship between inflation and unemployment, Phillips curve in the short-run</li> </ul>	
	Lecture 47	<ul style="list-style-type: none"> <li>• Phillips curve in the long-run</li> </ul>	
	Lecture 48	<ul style="list-style-type: none"> <li>• Remedial measures to combat inflation and unemployment</li> </ul>	
Week17			Terminal Exam

**Subject: Managerial Economics**

**Course Code: ECO-427**

**Credit Hours: 03**

**Nature,**

### **Scope and Overview of Managerial Economics**

The Nature and Scope of Managerial Economics. The Managerial decision making process. Theory of the firm. Profit maximization, Cost Minimization. Economic optimization. Economic relations of variables. The Incremental concept in Economic Analysis. Demand, Supply and Equilibrium.

### **Demand Analysis: Estimation and Forecasting**

The Basis for Demand. The Market Demand function. Demand sensitivity analysis: Elasticity, Price Elasticity of Demand with Managerial applications. Income Elasticity of Demand with

Managerial applications. Application of Regression Analysis: Demand estimation. Demand forecasting.

### **Production and Cost Analysis**

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

### **Decision Making Under Risk and Uncertainty**

Introduction. Risk Analysis of Decision Alternatives. Adjustment for Risk in Decision Making. The Expected Value Criterion. The Standard Deviation Criterion. The Coefficient of Variation Criterion. The Certainty Equivalent Criterion. The Maximax Criterion, Maximin Criterion and Minimax regret criterion. The Decision Tree and Joint Probabilities. Optimal decision Strategy. Limit Pricing and Preventing entry.

### **Pricing Analysis and Decisions**

A Review of Market Structures and Basic Pricing Models. Perfect Competition. Monopoly. Monopolistic Competition. Oligopoly. Selected Pricing Models. Marginalist Pricing. Mark up pricing. New Product Pricing. Oligopoly Model. Contestable Markets. Pricing Strategies for Firms and Market Power. Monopolistic Competition. Price Discrimination, Monoposony and Price Product.

### **Managerial Theories and Models of the Firm**

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

### **Public Sector Production and Pricing of Goods**

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

### **Capital Budgeting and Investment**

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

### **Emerging Trends and Recent Developments**

## Course Breakup

Week No	Lecture	Topics	Activity
Week 1	Lecture 1	<b>Nature, Scope and Overview of Managerial Economics</b> The Nature and Scope of Managerial Economics.	
	Lecture 2	The Managerial decision making process. Theory of the firm	
	Lecture 3	Profit maximization	
Week 2	Lecture 4	Cont...	
	Lecture 5	Cost Minimization. Economic optimization.	
	Lecture 6	Economic relations of variables	
Week 3	Lecture 7	The Incremental concept in Economic Analysis. Demand, Supply and Equilibrium	Quiz# 01
	Lecture 8	<b>Demand Analysis: Estimation and Forecasting</b> The Basis for Demand	
	Lecture 9	The Market Demand function. Demand sensitivity analysis:	
Week 4	Lecture 10	Elasticity, Price Elasticity of Demand with Managerial applications.	Assignment# 01
	Lecture 11	Income Elasticity of Demand with Managerial applications.	
	Lecture 12	. Application of Regression Analysis:	
Week 5	Lecture 13	Demand estimation. Demand forecasting	
	Lecture 14	<b>Production and Cost Analysis</b> Production functions. Total, Marginal and Average Product.	
	Lecture 15	Revenue and Cost in Production.	
Week 6	Lecture 16	Production function estimation. Productivity Measurement	Midterm Exam
	Lecture 17	Homogenous and Homothetic Production Function	
	Lecture 18	Short run and long run cost curves.	
Week 7	Lecture 19	Learning curves and application.	
	Lecture 20	Cost-value-profit analysis. Cost estimation.	

	Lecture 21	<b>Decision Making Under Risk and Uncertainty</b> Introduction. Risk Analysis of Decision Alternatives.	
Week 8	Lecture 22	Adjustment for Risk in Decision Making	
	Lecture 23	The Expected Value Criterion.	
	Lecture 24	The Standard Deviation Criterion	
Week 9	Lecture 25	The Coefficient of Variation Criterion	
	Lecture 26	The Certainty Equivalent Criterion.	
	Lecture 27	The Maximax Criterion, Maximin Criterion and Minimax regret criterion.	
Week 10	Lecture 28	The Decision Tree and Joint Probabilities.	
	Lecture 29	Optimal decision Strategy	Quiz # 02
	Lecture 30	Limit Pricing and Preventing entry.	
Week 11	Lecture 31	<b>Pricing Analysis and Decisions</b> A Review of Market Structures and Basic Pricing Models.	Assignment # 02
	Lecture 32	Perfect Competition. Monopoly	
	Lecture 33	Monopolistic Competition. Oligopoly	
Week 12	Lecture 34	Selected Pricing Models.	
	Lecture 35	Marginalist Pricing	
	Lecture 36	Mark up pricing. New Product Pricing.	
Week 13	Lecture 37	Oligopoly Model. Contestable Markets	
	Lecture 38	Pricing Strategies for Firms and Market Power. Monopolistic Competition.	
	Lecture 39	Price Discrimination, Monoposony and Price Product.	
Week 14	Lecture 40	<b>Managerial Theories and Models of the Firm</b> Baumol's Theory of Sales Revenue Maximization	
	Lecture 41	Marris's Model of Managerial Enterprise.	
	Lecture 42	Williamson's Model of Managerial Discretion Topics,	
	Lecture 43	Behavioral Model by Cyert and March.	



Week 15	Lecture 44	<b>Public Sector Production and Pricing of Goods</b> Public and Private Goods and their pricing mechanism	
	Lecture 45	Decreasing cost Industry and pricing.	
Week 16	Lecture 46	Externalities and Market Pricing issues. Rent seeking and control	
	Lecture 47	Government Policy and International Trade, tariff and pricing.	
	Lecture 48	Import Competitiveness and tax, International pricing Techniques /Strategies.	
Week 17			<b>Terminal Exam</b>

**Subject: Introduction to Marketing**

**Course Code: MKT-224**

**Credit Hours: 03**

**Course contents:**

The contents of the course include: Marketing: Managing Profitable Customer Relationships, Company and Marketing Strategy: Partnering to Build Customer Relationships; The Marketing Environment, Managing Marketing Information; Consumer and Business Buyer Behavior, Segmentation, Targeting and Positioning; Product, Services and Brand Strategy; New-Product Development and Product Life-Cycle Strategies, Pricing Considerations and Strategies; Marketing Channels & Supply Chain Management, Retailing and Wholesaling; Advertising, Sales, Promotion, and Public Relations; Personal Selling and Direct Marketing , Marketing in the Digital Age; People, process and physical evidence. The Global Marketplace, Marketing Ethics; Development of a Marketing Plan; Services Marketing; Industrial Marketing

**Recommended Text:**

1. Philip K.: Principles of Marketing, 12th Edition, Prentice Hall.
2. Agnihotri P. Y., Armstrong G., Haque E., Kotler P. ‘Principles of Marketing’: A South Asian Perspective (13th Edition).

3. Perreault W.D., McCarthy J.E. 'essentials of Marketing.' (5th Edition). USA, Homewood: Irwin Pvt. Ltd.

4. Berkowitz E.N., Kerin R. A., Hartley S. W., Rudelius W. (2000). 'Marketing.' (6th

### Course Breakup

Week	Lecture .	Topic	Activity
<b>Week 1</b>	Lecture 1	Meaning, definition and introduction of Marketing	
	Lecture 2	Evaluation of Marketing	
	Lecture 3	Importance and characteristics	
<b>Week 2</b>	Lecture 4	Marketing Scope	
	Lecture 5	Functions of Marketing	
	Lecture 6	Marketing Process	
<b>Week 3</b>	Lecture 7	Continue....	<b>Quiz # 01</b>
	Lecture 8	Marketing strategies	
	Lecture 9	Vision and Mission Statement	
<b>Week 4</b>	Lecture 10	Micro Environment	<b>Assignment# 01</b>
	Lecture 11	Continue	
	Lecture 12	Company Macro environment	
<b>Week 5</b>	Lecture 13	Continue...	
	Lecture 14	Marketing segmentation	

	Lecture 15	Aspects of segment	
<b>Week 6</b>	Lecture 16	<b>Continue....</b>	<b>Midterm Exam</b>
	Lecture 17	<b>Basis of segmentation</b>	
	Lecture 18	<b>Cont.....</b>	
<b>Week 7</b>	Lecture 19	Requirements for successful segmentation	
	Lecture 20	Discussion on Assignment	
	Lecture 21	Product	
<b>Week 8</b>	Lecture 22	Classification of product	
	Lecture 23	New product development	
	Lecture 24	Product innovation	
<b>Week 09</b>	Lecture 25	Introduction of new product	
	Lecture 26	<b>Fashion and trends</b>	
	Lecture 27	Design and styles	
<b>Week 10</b>	Lecture 28	Price	<b>Quiz # 02</b>
	Lecture 29	<b>Importance of cost and retail price</b>	
	Lecture 30	Allocation of prices	
<b>Week 11</b>	Lecture 31	Competitive advantage	

	Lecture 32	Factors influencing price	<b>Assignment# 02</b>
	Lecture 33	Place or distribution	
<b>Week 12</b>	Lecture 34	Product distribution strategies	
	Lecture 35	Target Market	
	Lecture 36	Types of distribution channel	
<b>Week 13</b>	Lecture 37	Physical product distribution	
	Lecture 38	<b>Promotion</b>	
	Lecture 39	Strategies of promotion	
<b>Week 14</b>	Lecture 40	Scope and importance	
	Lecture 41	Channel Distribution	
	Lecture 42	Types of channel	
<b>Week 15</b>	Lecture 43	B2B,B2C,C2C	
	Lecture 44	Planning	
	Lecture 45	Personal setting plan	
<b>Week 16</b>	Lecture 46	Continue...	
	Lecture 47	Quries during Marketing of product	
	Lecture 48	Discussion	
<b>Week17</b>			<b>Terminal Exam</b>

**Subject: Introduction to Business**

**Course Code: BUS-225**

**Credit Hours: 03**

**Course Outline:**

**Introduction**

The course is designed to impart knowledge among the students about the basics of business entity and how they can improve skills of leadership, organization, communicating, planning, presenting and overall confidence to perform and deal with difficult situation

Week	Lecture No.	Topic	Activity
<b>Week 1</b>	Lecture 1	Introduction to Business and its Characteristics	
	Lecture 2	Merits and Demerits of Business	
	Lecture 3	Sole Proprietorship, Characteristics, Merits and Demerits of Proprietorship	
<b>Week 2</b>	Lecture 4	Partnership, Characteristics Merits and Demerits of Partnership	
	Lecture 5	Joint Stock Company, Characteristics Merits and Demerits of JSC	
	Lecture 6	Article and Memorandum of the JSC	
<b>Week 3</b>	Lecture 7	Public Limited and Private Limited Company	<b>Quiz # 01</b>
	Lecture 8	Concept of Business and Factor of Production	
	Lecture 9	Types of Business Organization	
<b>Week 4</b>	Lecture 10	Entrepreneurship	

	Lecture 11	Merits and Demerits of Business Organization and Entrepreneurship	<b>Assignment# 01</b>
	Lecture 12	Globalization and Levels of Globalization	
<b>Week 5</b>	Lecture 13	International Organization Structure	
	Lecture 14	Barriers of International Trade	
	Lecture 15	Setting Goals and Formulating Strategy	
<b>Week 6</b>	Lecture 16	Levels of Management, Areas of Management	<b>Midterm Exam</b>
	Lecture 17	Organizing the Business Enterprise	
	Lecture 18	Organizational Building Blocks Basic form of Organizational Structure	
<b>Week 7</b>	Lecture 19	Finance and Human Resource Importance in Business	
	Lecture 20	4 P's Management and its impact on Business	
	Lecture 21	Foundation of Human Resource Management	
<b>Week 8</b>	Lecture 22	Developing the Workforce	
	Lecture 23	Staffing the Organization	
	Lecture 24	Training, Development	
<b>Week 9</b>	Lecture 25	Compensation and Benefits	
	Lecture 26	New Challenges in Changing Workplace	
	Lecture 27	Importance of Satisfaction and Morale	

<b>Week 10</b>	Lecture 28	Concept of Motivation Inner and Outer Motivation	<b>Quiz # 02</b>
	Lecture 29	Classical Theory	
	Lecture 30	Human Resource Model	
<b>Week 11</b>	Lecture 31	Two Factor Theory and its Importance	<b>Assignment# 02</b>
	Lecture 32	Hierarchy of Needs Model and its Importance	
	Lecture 33	Expectancy Theory, Equity Theory Leadership Styles	
<b>Week 12</b>	Lecture 34	Tools of Total Quality Management	
	Lecture 35	Finance and Role of Financial Manager	
	Lecture 36	Marketing, Marketing Process	
<b>Week 13</b>	Lecture 37	Marketing Environment, Marketing Mix	
	Lecture 38	The Product Lifecycle Theory and BCG Matrix	
	Lecture 39	(Continued) The Product Lifecycle Theory and BCG Matrix	
<b>Week 14</b>	Lecture 40	Market Segmentation and Marketing Concepts	
	Lecture 41	(Continued) Market Segmentation and Marketing Concepts	
	Lecture 42	Research, Role of Research in the Business	
<b>Week 15</b>	Lecture 43	Case studies discussion	
	Lecture 44	Micro and Macro Environment of the Company	
	Lecture 45	(Continued) Micro and Macro Environment of the Company	
	Lecture 46	SWOT Analysis	

<b>Week 16</b>	Lecture 47	Strategies, Strategic Management	
	Lecture 48	Strategic Management Process	
<b>Week17</b>			<b>Terminal Exam</b>

**Reference Material:**

**Business 8<sup>th</sup> Edition, Risky W. Griffin and Ronald J. Ebert**

**Introduction to Business Professor M.Saeed Nasir**



# Semester VII

**Subject: Advanced Macroeconomics**

**Course Code: ECO-321**

**Credit Hours: 3**

## **Course Contents**

### **Macroeconomics: The Classical Framework**

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

### **The Demand Management Economy**

The Keynesian framework, Characteristics of a depression economy, Innovations due to Keynes: The consumption function, The liquidity preference function, Wage rigidity in the labour market, The ISLM model, Mathematical derivation of the IS and LM functions, The interaction of the goods and money markets in a closed economy, The role of public sector investment, The multiplier effects of fiscal and monetary actions, Derivation of the aggregate demand curve/function, Stabilization and the relative effectiveness of fiscal and monetary policies, The Neoclassical critique of the Keynesian model: the Keynes effect, the Pigou effect, the Real Balances effect, The Keynesian-Neoclassical Synthesis.

### **The Supply Side Economics**

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

### **The Open Economy Macroeconomics**

Balance of Payments: Current and Capital account, The IS-LM-FB model due to Mundell and Fleming, The case of a small open economy with special reference to developing economies, The relative effectiveness of Fiscal and Monetary policies under the Fixed and Floating exchange rate regimes, The Managed exchange rates system, Determinants of the Exchange Rates, Devaluation

and its impacts for developing countries, Perfect and imperfect capital mobility, Problems of stabilization in a global framework..

### Macroeconomic Policy Debate

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

### Growth and Business Cycles

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

### Reference Material

Mankiw, Gregory- Macroeconomics- 5<sup>th</sup> Edition (2003)- Worth Publisher, New York.

Branson, William – Macroeconomics: Theory and Policy – 3<sup>rd</sup> Edition (1989) or latest Harper and Row, New York

Froyen, Richard–Macroeconomics: Theories and Policies – 7<sup>th</sup> Edition (2002)

### Course Breakup

Week	Lecture .	Topic	Activity
<b>Week 1</b>	Lecture 1	Ingredients of the Classical model: The Says law of markets	
	Lecture 2	The Quantity theory of money	
	Lecture 3	The Marginal Productivity theory	
<b>Week 2</b>	Lecture 4	Equilibrium in the goods and money markets	
	Lecture 5	A critical appraisal of the Classical model	
	Lecture 6	Dichotomy in the economy.	

<b>Week 3</b>	Lecture 7	The Keynesian framework, Characteristics of a depression economy	<b>Quiz # 01</b>
	Lecture 8	Innovations due to Keynes: The consumption function,	
	Lecture 9	The liquidity preference function, Wage rigidity in the labour market.	
<b>Week 4</b>	Lecture 10	The ISLM model, Mathematical derivation of the IS and LM functions	<b>Assignment# 01</b>
	Lecture 11	The interaction of the goods and money markets in a closed economy	
	Lecture 12	The role of public sector investment	
<b>Week 5</b>	Lecture 13	The multiplier effects of fiscal and monetary actions	
	Lecture 14	Derivation of the aggregate demand curve/function	
	Lecture 15	Stabilization and the relative effectiveness of fiscal and monetary policies	
<b>Week 6</b>	Lecture 16	The Neoclassical critique of the Keynesian model	<b>Midterm Exam</b>
	Lecture 17	the Keynes effect, the Pigou effect, the Real Balances effect	
	Lecture 18	The Keynesian-Neoclassical Synthesis	
<b>Week 7</b>	Lecture 19	Demand for and Supply of Labour, The wage rate determination, Rigidity versus	
	Lecture 20	flexibility of nominal wage rate, The short-run Production function	
	Lecture 21	Derivation of Aggregate Supply under the Classical and Keynesian assumptions	
<b>Week 8</b>	Lecture 22	The notions of full employment and under-employment, Scarcity of raw material and energy	
	Lecture 23	The supply side disturbances leading to stagflation	

	Lecture 24	The problems of developing countries: shortage of supply vs. deficiency of demand, The scope for structural changes in developing economies.	
<b>Week 09</b>	Lecture 25	Cont....	
	Lecture 26	Balance of Payments: Current and Capital account,	
	Lecture 27	The IS-LM-FB model due to The relative effectiveness of Fiscal and Monetary policies under the Fixed Floating exchange rate regimes,	
<b>Week 10</b>	Lecture 28	Cont.....	
	Lecture 29	The Managed exchange rates system	<b>Quiz # 02</b>
	Lecture 30	Determinants of the Exchange Rates	
<b>Week 11</b>	Lecture 31	Devaluation and its impacts for developing countries,	<b>Assignment# 02</b>
	Lecture 32	Perfect and imperfect capital mobility	
	Lecture 33	Problems of stabilization in a global framework	
<b>Week 12</b>	Lecture 34	Policy Actions: Active or Passive,	
	Lecture 35	Ignorance, Expectations and the Lucas Critique	
	Lecture 36	Conduct of Policy: Formula/Rule vs. Discretion, Distrust of Policy makers and Political Process	
<b>Week 13</b>	Lecture 37	Macroeconomics Policy: the Fiscal, Monetary and Commercial policies	

	Lecture 38	Policy formulation and implementation in a world of uncertainty. the short-run and long-run analysis of the Phillips Curve,	
	Lecture 39	Seignorage and Inflation: Monetarists vs. Activists	
<b>Week 14</b>	Lecture 40	The expectation-augmented Phillips Curve, The Perfect Foresight and adjustment	
	Lecture 41	The accumulation of capital	
	Lecture 42	Acceleration principle and the concept of steady state growth path, the steady state conditions	
<b>Week 15</b>	Lecture 43	The basic Neoclassical (Solow) growth model, Golden rule for consumption and investment	
	Lecture 44	Cont.....	
	Lecture 45		
<b>Week 16</b>	Lecture 46	The role of technical progress in growth, Introduction to the theory of Real Business Cycles:	
	Lecture 47	Interpretation, Labor market, Technology shocks, Household Behavior	
	Lecture 48	The persistence of output Fluctuations, Limitations of the Model	
<b>Week17</b>			Terminal Exam

**Subject: Econometrics-I I**

**Course Code: ECO-322**

**Credit Hours: 3**

**Course Outline:**

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

The multiple regression (K-variable) model in matrix format, Assumptions of the model, The Least-Squares estimation procedure in matrix notation, Properties of the OLS estimators,

Interpretation of the Beta coefficients ( $\beta_1, \beta_2, \dots, \beta_k$ ), Hypothesis testing using matrix approach, Forecasting in OLS model, OLS estimation: variance-covariance matrix of estimators, Coefficient of determination,  $R^2$ , in matrix notations, Correlation matrix.

### **Dummy Variable Regression Models**

Nature of dummy variables, ANOVA models with qualitative variables, Regression with dummy variables, Technical aspects of the dummy variable

### **Econometric Modeling: Model Specification**

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

### **Pool the Cross-sectional and Time-series Data**

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

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

Simultaneous equation models, Nature of simultaneous equations, Examples of simultaneous equation models from economic theory, Inconsistency of OLS estimators, Identification problem, Notations and definitions, Unidentified, exactly identified and over identified, Rules for identification, Simultaneous equation approaches to estimation, Method of indirect least squares (ILS), Method of two stage least squares (2SLS), Instrumental Variable approach to 2SLS, Seemingly unrelated equations (SUR), Nature of SUR equations, Method of GLS, Equations having characteristics of simultaneity and SUR, Three stage least squares technique (3SLS), Full information maximum likelihood estimation (FIML)

### **Time Series Econometrics**

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

### **Recent Development in Econometrics**

#### **Reference Material:**

- Johnston, J & John Dinardo- Econometric Methods – 4<sup>th</sup> Edition (1997) The McGraw Hill Companies, Inc, Singapore.
- Intrilligator, M - Econometric Models: Techniques and Applications- N. J. Prentice Hall, (Latest).

- Judge, George G. et al - The Theory and Practice of Econometrics- (1988)
- John Willey and Sons.
- Maddala, G.S. & Kim –Unit Roots, Co-integration and Structural Change -(1998)
- Stock H. J. and M. W. Watson (2003), Introduction to Econometrics, India: Pearson Education.
- Greene W. H (latest edition), Econometrics Analyssi, Pearson Education, Inc.
- Dimitrios A. (latest edition), “Applied Econometrics: A Modern Approach using E-views and Microfit”, Palgrave, Macmillan

### Course Breakup

Week	Lecture .	Topic	Activity
<b>Week 1</b>	Lecture 1	The multiple regression (K-variable) model in matrix format,	
	Lecture 2	Assumptions of the model	
	Lecture 3	The Least-Squares estimation procedure in matrix notation,	
<b>Week 2</b>	Lecture 4	Properties of the OLS estimators	
	Lecture 5	Interpretation of the Beta coefficients ( $\beta_1, \beta_2, \dots, \beta_k$ ),	
	Lecture 6	Hypothesis testing using matrix approach,	
<b>Week 3</b>	Lecture 7	Forecasting in OLS model, OLS estimation:	<b>Quiz # 01</b>
	Lecture 8	variance-covariance matrix of estimators	
	Lecture 9	Coefficient of determination, $R^2$ , in matrix notations, Correlation matrix.	
<b>Week 4</b>	Lecture 10	Nature of dummy variables,	<b>Assignment# 01</b>
	Lecture 11	ANOVA models	
	Lecture 12	ANOVA models with qualitative variables	

<b>Week 5</b>	Lecture 13	Regression with dummy variables	
	Lecture 14	Technical aspects of the dummy variable	
	Lecture 15	Model selection criteria, Types of specification errors,	<b>Midterm Exam</b>
<b>Week 6</b>	Lecture 16	Consequences of model, specification errors, Tests of specification errors,	
	Lecture 17	Errors of measurement, Model selection criteria	
	Lecture 18	<b>Cont.....</b>	
<b>Week 7</b>	Lecture 19	Endogeneity: where X is not fixed in repeated sampling, Nature of Endogeneity	
	Lecture 20	OLS estimation in presence of Endogeneity	
	Lecture 21	Detection of Endogeneity, BLUE estimator in the presence of Endogeneity, Consequences of Endogeneity in OLS estimation, Remedial measures	
<b>Week 8</b>	Lecture 22	Why panel data regression models, Estimation of pool data regression models,	
	Lecture 23	Common intercept method, Fixed effects model,	
	Lecture 24	Least Square Dummy Variables Approach, Random effects model	
<b>Week 09</b>	Lecture 25	Generalized Least Square Approach,	
	Lecture 26	Fixed effects model vs. random effects model,	
	Lecture 27	Hausman Specification Test	
<b>Week 10</b>	Lecture 28	Simultaneous equation models, Nature of simultaneous equations	<b>Quiz # 02</b>
	Lecture 29	Examples of simultaneous equation models from economic theory,	



	Lecture 30	Inconsistency of OLS estimators,	
<b>Week 11</b>	Lecture 31	Identification problem, Notations and definitions, Unidentified,	<b>Assignment# 02</b>
	Lecture 32	exactly identified and over identified,	
	Lecture 33	Rules for identification, Simultaneous equation approaches to estimation,	
<b>Week 12</b>	Lecture 34	Method of indirect least squares (ILS),	
	Lecture 35	Method of two stage least squares (2SLS),	
	Lecture 36	Instrumental Variable approach to 2SLS	
<b>Week 13</b>	Lecture 37	Seemingly unrelated equations (SUR), Nature of SUR equations,	
	Lecture 38	Method of GLS, Equations having characteristics of simultaneity and SUR,	
	Lecture 39	Three stage least squares technique (3SLS), Full information maximum likelihood estimation (FIML)	
<b>Week 14</b>	Lecture 40	Concept of Stationarity,	
	Lecture 41	Tests of Stationarity,	
	Lecture 42	, Unit Root test, Transforming Non-stationary Time Series,	
<b>Week 15</b>	Lecture 43	ARMA and ARIMA Models,	
	Lecture 44	Comparison of forecast based on ARIMA and regression models,	
	Lecture 45	(Continued) Comparison of forecast based on ARIMA and regression models,	
<b>Week 16</b>	Lecture 46	Cointegration and Error Correction Mechanism (ECM)	
	Lecture 47	ARCH models	
	Lecture 48	<b>Recent Development in Econometrics</b>	
<b>Week17</b>			<b>Terminal Exam</b>

**Subject: Mathematical Economics-II**

**Course Code: ECO-323**

**Credit Hours: 3**

**Course Outline:**

**Complex Number and Circular Functions**

Imaginary and Complex Numbers, Complex Roots, Circular Functions, Properties of Sine & Cosine functions, Euler and Maclaurin series, Alternative representation of Complex Numbers.

**Integral Calculus**

Comparative Dynamics and Integration, The Nature of Indefinite Integrals, Rules of Integrations and Operation: Substitution Rule, Integration by parts. Definite integrals and their properties, Definite Integrals and Area under a curve, Improper integrals, Economic Applications of Integrals: Finding total functions from marginal functions, Investment & capital formation, Present value of cash flow, P.V. of a Perpetual Flow, The Domar growth model.

**Differential Equations**

**(i) First Order Linear Differential Equations**

Meaning and Definition; Homogenous & non-Homogenous cases, Solution of first order linear differential equations: with constant coefficient & constant term, with variable coefficient and variable terms, Qualitative approach: Concept of phase diagrams, types of time paths and the dynamic stability of equilibrium, Exact differential equations: Solution and Verification, Non-linear differential equations of the first order and first degree, Bernoulli Equation, Separable Variables, Economic Application: Dynamics of market models, Solow growth model.

**(ii) Higher Order Differential Equations**

Solution and Verification of second order linear differential equations with constant coefficients and constant terms, Real and imaginary roots, Distinct, repeated roots and complex roots, Dynamic stability of equilibrium, Economic applications: Market models with price expectations, The Interaction of inflation and unemployment in continuous time, Higher order differential equations, Convergence and the Routh theorem, Solution of simultaneous difference equations.

**Difference Equations**

**(i) First Order Difference Equations**

Meaning and definition, First order linear difference equations: Solution and verification of results, Conditions for dynamic stability of equilibrium, Types of time paths, Economic applications: The

Cobweb model, Market model with inventory, Model with price ceiling, Nonlinear difference equations, The qualitative/graphic approach and phase diagrams.

**(ii) Higher Order Difference Equations**

Solution and verification of second-order linear difference equations with constant coefficients and constant terms, Real and imaginary roots, Distinct, repeated and complex roots, The convergence and divergence of the time paths. Economic applications: Models of business cycles, The Multiplier-Acceleration interaction model, inflation-unemployment model in discrete time, Higher order difference equations and their solutions, Convergence and the Schur's theorem, Solution of simultaneous difference equations.

**Non-Linear Programming**

The nature of non-linear programming, Non-linearities in Economics, Kuhn-Tucker conditions and their interpretation, The Kuhn-Tucker Sufficiency theorem: Concave programming, The Arrow-Enthoven Sufficiency theorem: Quasi-concave programming, Economic applications: Utility maximization, Least-cost combination,

**Recent Development in Mathematical Economics**

**Reference Material:**

- Chiang A.C and Kevin Wainwright - Fundamental Methods of Mathematical Economics- 4<sup>th</sup> Edition (2005) McGraw Hill Publishing Company.
- Gandolfo, G – Economic Dynamics: Methods and Models – (1983 or Latest Edition)  
North Holland Publishing Company
- Dowling Edward T. -Mathematics for Economics: Schaum Series – (1981).
- Weber E. Jean, Mathematical Analysis, Business and Economic Application (latest edition), Harper and Row Publishers, Netherlands.
- Hoy M., Livermois J, Rees R, Stengos T. - Mathematic for Economics – (1996) - Addison & Wesley Publishers.
- Shone, R – Economic Dynamics: Phase Diagrams and their Economic Applications- (1997)- Cambridge University Press.

**Course Breakup**

Week	Lecture .	Topic	Activity
<b>Week 1</b>	Lecture 1	Imaginary and Complex Numbers, Complex Roots,	
	Lecture 2	Circular Functions, Properties of Sine & Cosine functions,	

	Lecture 3	Eular and Maclaurin series, Alternative representation of Complex Numbers	
<b>Week 2</b>	Lecture 4	Comparative Dynamics and Integration, The Nature of Indefinite Integrals,	
	Lecture 5	Rules of Integrations and Operation: Substitution Rule, Integration by parts.	
	Lecture 6	Definite integrals and their properties, Definite Integrals and Area under a curve, Improper integrals,	
<b>Week 3</b>	Lecture 7	Economic Applications of Integrals: Finding total functions from marginal functions	<b>Quiz # 01</b>
	Lecture 8	Investment & capital formation, Present value of cash flow, P.V. of a Perpetual Flow,	
	Lecture 9	The Domar growth model.	
<b>Week 4</b>	Lecture 10	Meaning and Definition; Homogenous & non-Homogenous	<b>Assignment# 01</b>
	Lecture 11	Solution of first order linear differential equations: with constant coefficient & constant term,	
	Lecture 12	with variable coefficient and variable terms, Qualitative approach	
<b>Week 5</b>	Lecture 13	Concept of phase diagrams, types of time paths and the dynamic stability of equilibrium	
	Lecture 14	Exact differential equations: Solution and Verification,	
	Lecture 15	Non-linear differential equations of the first order and first degree,	
<b>Week 6</b>	Lecture 16	<b>Cont...</b>	<b>Midterm Exam</b>
	Lecture 17	Bernoulli Equation,	
	Lecture 18	Separable Variables,	
<b>Week 7</b>	Lecture 19	Economic Application	
	Lecture 20	Dynamics of market models	
	Lecture 21	Solow growth model.	
<b>Week 8</b>	Lecture 22	Solution and Verification of second order linear differential equations with constant coefficients and	

		constant terms,	
	Lecture 23	Real and imaginary roots,	
	Lecture 24	Distinct, repeated roots and complex roots,	
<b>Week 09</b>	Lecture 25	Dynamic stability of equilibrium,	
	Lecture 26	Economic applications	
	Lecture 27	Market models with price expectations, The Interaction of inflation and unemployment in continuous time,	
<b>Week 10</b>	Lecture 28	Higher order differential equations,	
	Lecture 29	Convergence and the Routh theorem,	<b>Quiz # 02</b>
	Lecture 30	Solution of simultaneous difference equations.	
<b>Week 11</b>	Lecture 31	Meaning and definition, First order linear difference equations	
	Lecture 32	Solution and verification of results,	<b>Assignment# 02</b>
	Lecture 33	Conditions for dynamic stability of equilibrium, Types of time paths,	
<b>Week 12</b>	Lecture 34	Economic applications: The Cobweb model, Market model inventory	
	Lecture 35	Model with price ceiling, Nonlinear difference equations,	
	Lecture 36	The qualitative/graphic approach and phase diagrams.	
<b>Week 13</b>	Lecture 37	Solution and verification of second-order linear difference equations with constant coefficients	
	Lecture 38	Solution and verification of second-order linear difference equations with constant constant terms,	
	Lecture 39	( Continued) Solution and verification of second-order difference equations with constant coefficients constant terms	
<b>Week 14</b>	Lecture 40	Real and imaginary roots, Distinct, repeated and complex roots,	
	Lecture 41	The convergence and divergence of the time paths.	

		Economic applications:	
	Lecture 42	Models of business cycles, The Multiplier-Acceleration inter model, inflation-unemployment model in discrete time,	
<b>Week 15</b>	Lecture 43	Higher order difference equations and their solutions,	
	Lecture 44	, Convergence and the Schur's theorem,	
	Lecture 45	Solution of simultaneous difference equations.	
<b>Week 16</b>	Lecture 46	The nature of non-linear programming, Non-linearities in Economics,	
	Lecture 47	Kuhn-Tucker conditions and their interpretation, The Kuhn-Tucker Sufficiency theorem: Concave programming, The Arrow-Enthoven Sufficiency theorem: Quasi-concave programming,	
	Lecture 48	Economic applications: Utility maximization, Least-cost combination,  <b>Recent Development in Mathematical Economics</b>	
<b>Week17</b>			<b>Terminal Exam</b>

**Subject: International trade Theory**

**Course Code: ECO-324**

**Credit Hours: 3**

### Course Contents

**Importance and Bases of Trade Why Study International Economics? The Changing World and Interdependence: Basis of Trade, Gains from Trade. Absolute Advantage, Comparative Advantage, Overview of Comparative Advantage and Pattern of Trade. Offer Curves and Free Trade Equilibrium. Disagreements on Free Trade: Overview of Emergency of International Trade Issues. The Elasticity of Exports Demand and Balance of Payment. Substitution and Income Effects, Impacts of Rise in Exports Demand.**

### Growth and Trade

International Trade and Shift in Production Function, Immerizing Growth, Output Growth and Terms of Trade (T.O.T) / Deterioration: Uniform Growth at given T.O.T. The Transfer Problem: Marshall Plan and Transfers, Transfer of Resources: Neutral Case.

## Technology and Factor Endowment

Ricardian Trade Model, World Production and Gains. Comparative Cost and Trade Pattern. National and World Gains from Trade. International Wage differentials and Productivity. Technical Progress and International Gains. WTO and Gains from Technical Progress: Impacts on Prices. Equilibrium Production and Consumption: Non-traded and Tradable, Costs, Marginal Physical Product and Production Possibilities. Production Possibilities with Diminishing Returns, Increasing Opportunity Cost. Free Trade and Income Distribution, Relative Demand, Supply and Pattern of Trade. Dutch Disease and its application.

## Factor Endowment and Heckscher – Ohlin Theory

Output and Factors Rewards in 2\*2 Model. Factor Intensity Comparison. HeckscherOhlin (H.O) Model, The Role of Demand, Factor's Prices and Commodity Prices, Factor Price Equalization, and Factor Intensity Reversal. Newly Industrializing Countries (NIC's) and Footloose Production Process. NIC's and H.O Theorem. The Product Cycle, Critical Analysis of Traditional Trade Theories. Rybescky Theorem and its critical review.

## Markets, Cartels and International Trade

Monopoly and Import Competition, Export Opportunities. Product Differentiation and Monopolistic Competition. Dumping / Discrimination and WTO, Competitiveness and Market Share, Gains from Migration. WTO and Factor's Movements and the Commodity Movement. Multinationals Firms and Foreign Direct Investment, Transfer of Capital, Technology, Skill and other Gains, Transfer of Resources and Transfer Problem.

## Reference Material

Richard, E., and Jones Ronald W., World Trade and Payments: An Introduction, Latest Editions. Little, Brown and Company, Boston, Toront. Latest edition.. • Chacholiades, Miltiades, International Trade Theory and Policy (Latest Edition). McGraw Hill Book Company, New York, London, Latest edition. • Donomick Sal Vatore B., International Economics (Latest Edition), Prentice Hal, Latest edition.

## Course Breakup

Week No	Lecture	Topics	Activity
Week 1	Lecture 1	Importance and Bases of Trade Why Study International Economics?	
	Lecture 2	The Changing World and Interdependence: Basis of Trade,.	
	Lecture 3	Gains from Trade. Absolute Advantage, Comparative Advantage,	
	Lecture 4	Overview of Comparative Advantage and Pattern of Trade.	

<b>Week 2</b>	<b>Lecture 5</b>	Offer Curves and Free Trade	
	<b>Lecture 6</b>	Equilibrium. Disagreements on Free Trade: Overview of Emergency of International Trade Issues.	
<b>Week 3</b>	<b>Lecture 7</b>	The Elasticity of Exports Demand and Balance of Payment.	<b>Quiz# 01</b>
	<b>Lecture 8</b>	Substitution and Income Effects,	
	<b>Lecture 9</b>	Impacts of Rise in Exports Demand	
<b>Week 4</b>	<b>Lecture 10</b>	Growth and Trade International Trade and Shift in Production Function	<b>Assignment# 01</b>
	<b>Lecture 11</b>	Cont	
	<b>Lecture 12</b>	Cont	
<b>Week 5</b>	<b>Lecture 13</b>	Cont	
	<b>Lecture 14</b>	Immerizing Growth,	
	<b>Lecture 15</b>	Output Growth and Terms of Trade (T.O.T) / Deterioration: Uniform Growth at given T.O.T.	
<b>Week 6</b>	<b>Lecture 16</b>	Cont	<b>Midterm Exam</b>
	<b>Lecture 17</b>	The Transfer Problem: Marshall Plan and Transfers, Transfer of Resources	
	<b>Lecture 18</b>	Neutral Case. Technology and Factor Endowment Ricardian Trade Model, World Production and Gains.	
<b>Week 7</b>	<b>Lecture 19</b>	Comparative Cost and Trade Pattern. National and World Gains from Trade. International Wage differentials and Productivity	
	<b>Lecture 20</b>	∴ Technical Progress and International Gains. Production Possibilities with Diminishing.	
	<b>Lecture 21</b>	WTO and Gains from Technical Progress: Impacts on Prices.	



<b>Week 8</b>	<b>Lecture 22</b>	Equilibrium Production and Consumption: Non-traded and Tradable, Costs, Marginal Physical Product and Production Possibilities.	
	<b>Lecture 23</b>	Returns, Increasing Opportunity Cost. Free Trade and Income Distribution, Relative Demand, Supply and Pattern of Trade	
	<b>Lecture 24</b>	Cont	
<b>Week 9</b>	<b>Lecture 25</b>	Cont	
	<b>Lecture 26</b>	Dutch Disease and its application.	
	<b>Lecture 27</b>	Factor Endowment and Heckscher – Ohlin..., , and. and F and H.O Theorem.	
<b>Week 10</b>	<b>Lecture 28</b>		<b>Quiz # 02</b>
	<b>Lecture 29</b>	Theory Output and Factors Rewards in 2*2 Model	
	<b>Lecture 30</b>	Factor Intensity Comparison	
<b>Week 11</b>	<b>Lecture 31</b>	HeckscherOhlin (H.O) Model	<b>Assignment # 02</b>
	<b>Lecture 32</b>	The Role of Demand, Factor's Prices and Commodity Prices,	
	<b>Lecture 33</b>	Factor Intensity Reversal	
<b>Week 12</b>	<b>Lecture 34</b>	Factor Price Equalization	
	<b>Lecture 35</b>	Newly Industrializing Countries (NIC's)	
	<b>Lecture 36</b>	ootloose Production Process. NIC's	
<b>Week 13</b>	<b>Lecture 37</b>	The Product Cycle, Critical Analysis of Traditional Trade Theories.	
	<b>Lecture 38</b>	Rybescky Theorem and its critical review.	

	<b>Lecture 39</b>	Markets, Cartels and International Trade,.. and. Transfer of Capital,	
<b>Week 14</b>	<b>Lecture 40</b>	Monopoly and Import Competition	
	<b>Lecture 41</b>	Export Opportunities	
	<b>Lecture 42</b>	Product Differentiation and Monopolistic Competition	
<b>Week 15</b>	<b>Lecture 43</b>	Dumping / Discrimination	
	<b>Lecture 44</b>	WTO, Competitiveness and Market Share, Gains from Migration	
	<b>Lecture 45</b>	WTO and Factor's Movements and the Commodity Movement. Multinationals Firms and Foreign Direct Investment,	
<b>Week 16</b>	<b>Lecture 46</b>	Technology, Skill and other Gains, Transfer of Resources and Transfer Problem.	
	<b>Lecture 47</b>	Presentation	
	<b>Lecture 48</b>	Presentation	
<b>Week 17</b>			<b>Terminal Exam</b>

**Subject: Monetary Economics**  
**Credits Hours: 03**

**Course Code: ECO-325**

**Course Outline:**

Introduction and Development of Monetary Mechanism  
Evolution of Money and Payment System. Definition of Money, Function of Money & Measurement of Money, Demand for Money & Supply of Money. Definitions of Money, M1, M2, M3, L etc. The Evolution of Monetary Thought, Quantity Theory of money,

Keynesian Tradition, Monetarism and Modern Quantity Theory, Rational Expectation Theory

### **Role of Money in the Economy**

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

### **Demand for Money**

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

### **The Money Supply Process**

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

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

Structure and Functions of Central Bank. Independence of Central Bank and its role in Economic Growth. Tool of Central Bank for Money Control. Monetary Base. The Conduct of Monetary Policy: Goals and Targets. Tools of Monetary Policy: Three Major Tools of Monetary Policy. Required Reserve Ratio, Discount Window Loans and Open Market Operation. Advantages and Disadvantages and Impact Analysis of each Policy Tool. Central Bank as a lender of last Resort. Financial Intermediaries. Monetization of Public Debt. Ineffectiveness of Stabilization Policies. Targeting interest rate and inflation.

### **Money & Interest Rates**

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

### **Money and Inflation**

What is Inflation & Causes of Inflation? Demand – pull Inflation, Cost – push Inflation, Stagflation & Hyperinflation. Inflation as a Monetary Phenomenon. The Philips Curve

and Accelerating Inflation. Inflation in Pakistan: Sources and Managing Policies. Sources of Inflation in Pakistan: Spiracle Evidences. Policies to Combat Inflation in Pakistan.

**Monetary Policy in International Framework**

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

**Reference Material:**

- **Jhingan, M.L. “Monetary Economics,”6th edition.**
- **Mishkin, Frederic S. (2001),“The Economics of Money, Banking and Financial Markets”, Addison Wesley,NewYork, Sixth edition.**

**Course Breakup**

Week	Lecture .	Topic	Activity
Week 1	Lecture 1	<ul style="list-style-type: none"> <li>• Introduction and Development of Monetary Mechanism</li> <li>• Evolution of Money and Payment System.</li> </ul>	
	Lecture 2	<ul style="list-style-type: none"> <li>• Definition of Money,</li> <li>• Function of Money &amp; Measurement of Money.</li> </ul>	
	Lecture 3	<ul style="list-style-type: none"> <li>• Demand for Money &amp; Supply of Money. Definitions of Money, M1, M2, M3, L etc</li> </ul>	
Week 2	Lecture 4	<ul style="list-style-type: none"> <li>• The Evolution of Monetary Thought, Quantity Theory of Money. Fisher’s Transaction Theory of Demand for Money</li> </ul>	
	Lecture 5	<ul style="list-style-type: none"> <li>• Keynesian Tradition, Monetarism and Modern Quantity Theory,</li> </ul>	

	<b>Lecture 6</b>	<ul style="list-style-type: none"> <li>• Rational Expectation Theory</li> </ul>	
<b>Week 3</b>	<b>Lecture 7</b>	<ul style="list-style-type: none"> <li>• Role of Money in the Economy</li> <li>• Debate on neutrality and non-neutrality of Money.</li> </ul>	
	<b>Lecture 8</b>	<ul style="list-style-type: none"> <li>• Classical Dichotomy and Keynesian Integration of Nominal and Real Sectors.</li> </ul>	
	<b>Lecture 9</b>	<ul style="list-style-type: none"> <li>• Role of Money in the IS-LM Framework.</li> </ul>	<b>Quiz # 01</b>
<b>Week 4</b>	<b>Lecture 10</b>	<ul style="list-style-type: none"> <li>• Money in Aggregate Demand &amp; Aggregate Supply Analysis</li> </ul>	<b>Assignment# 01</b>
	<b>Lecture 11</b>	<ul style="list-style-type: none"> <li>• Keynesian Vs. Monetarist views of Equilibrium Output, Employment and Prices</li> </ul>	
	<b>Lecture 12</b>	<ul style="list-style-type: none"> <li>• Demand for Money</li> <li>• Quantity Theory of Money.</li> <li>• Portfolio Theories of Demand for Money.</li> </ul>	
<b>Week 5</b>	<b>Lecture 13</b>	<ul style="list-style-type: none"> <li>• Transaction Theories of Demand for Money</li> </ul>	
	<b>Lecture 14</b>	<ul style="list-style-type: none"> <li>• Baumol – Tobin Model of Cash Management.</li> </ul>	
	<b>Lecture 15</b>	<ul style="list-style-type: none"> <li>• Friedman’s Restatement of Quantity Theory of Money: Empirical Evidence on the Demand for Money</li> </ul>	

<b>Week 6</b>	<b>Lecture 16</b>	The Money Supply Process	<b>Midterm Exam</b>
	<b>Lecture 17</b>	Monetary Base, Keynesian Liquidity Preference Framework,	
	<b>Lecture 18</b>	Cont.....	
<b>Week 7</b>	<b>Lecture 19</b>	Friedman's Modern Quantity Theory of Money.	
	<b>Lecture 20</b>	Multiple Deposit Creation: Introducing the Money Supply Process.	
	<b>Lecture 21</b>	<ul style="list-style-type: none"> <li>• Determinants of the Money Supply:</li> <li>• Exogenous and Endogenous. Understanding Movements in the Monetary Base</li> </ul>	
<b>Week 8</b>	<b>Lecture 22</b>	<ul style="list-style-type: none"> <li>• Money Multiplier. Velocity of Money and its variability. Explaining Depositor and Bank Behaviour: the Complete Money supply model</li> <li>• Regressive Expectation Model</li> </ul>	
	<b>Lecture 23</b>	<ul style="list-style-type: none"> <li>• The Conduct of Monetary Policy: Central Bank</li> <li>• Structure and Functions of Central Bank. Independence of Central Bank and its role in Economic Growth....</li> </ul>	
	<b>Lecture 24</b>	<ul style="list-style-type: none"> <li>• Tool of Central Bank for Money Control.</li> <li>• Monetary Base</li> </ul>	

<b>Week 09</b>	<b>Lecture 25</b>	<ul style="list-style-type: none"> <li>• The Conduct of Monetary Policy: Goals and Targets</li> <li>• Tools of Monetary Policy: Three Major Tools of Monetary Policy. Required Reserve Ratio, Discount Window Loans and Open Market Operation</li> </ul>	
	<b>Lecture 26</b>	<ul style="list-style-type: none"> <li>• Advantages and Disadvantages and Impact Analysis of each Policy Tool. Central Bank as a lender of last Resort. Financial Intermediaries</li> </ul>	
	<b>Lecture 27</b>	<ul style="list-style-type: none"> <li>• Monetization of Public Debt. Ineffectiveness of Stabilization Policies. Targeting interest rate and inflation.</li> </ul>	
<b>Week 10</b>	<b>Lecture 28</b>	<ul style="list-style-type: none"> <li>• Money &amp; Interest Rates</li> <li>• Determinants of interest rates. Kinds of Interest Rates</li> </ul>	<b>Quiz # 02</b>
	<b>Lecture 29</b>	<ul style="list-style-type: none"> <li>• The Behavior of Interest Rates. Understanding &amp; Measuring the Interest Rates.</li> </ul>	
	<b>Lecture 30</b>	<ul style="list-style-type: none"> <li>• Real &amp; Nominal Interest Rates</li> </ul>	
<b>Week 11</b>	<b>Lecture 31</b>	<ul style="list-style-type: none"> <li>• Theories of Interest Rate Determination. The Risk and Term Structure of Interest Rates.</li> </ul>	<b>Assignment# 02</b>
	<b>Lecture 32</b>	<ul style="list-style-type: none"> <li>• The Distinction between Interest Rates and Returns. Maturity &amp; Volatility of Bond Returns</li> </ul>	
	<b>Lecture 33</b>	<ul style="list-style-type: none"> <li>• Portfolio Choice: the Theory of Asset Demand</li> </ul>	
<b>Week 12</b>	<b>Lecture 34</b>	<ul style="list-style-type: none"> <li>• Money and Inflation</li> <li>• What is Inflation &amp; Causes of Inflation? Demand – pull Inflation, Cost – push Inflation</li> </ul>	

	<b>Lecture 35</b>	<ul style="list-style-type: none"> <li>• Stagflation &amp; Hyperinflation.</li> </ul>	
	<b>Lecture 36</b>	<ul style="list-style-type: none"> <li>• Inflation as a Monetary Phenomenon. The Philips Curve and Accelerating Inflation</li> </ul>	
<b>Week 13</b>	<b>Lecture 37</b>	<ul style="list-style-type: none"> <li>• Inflation in Pakistan: Sources of Inflation in Pakistan</li> </ul>	
	<b>Lecture 38</b>	<ul style="list-style-type: none"> <li>• Managing Policies of inflation in Pakistan</li> </ul>	
	<b>Lecture 39</b>	<ul style="list-style-type: none"> <li>• Spiracle Evidences. Policies to Combat Inflation in Pakistan</li> </ul>	
<b>Week 14</b>	<b>Lecture 40</b>	<ul style="list-style-type: none"> <li>• Monetary Policy in International Framework</li> <li>• Money Demand and Empirical Evidences. Money in Growth Models. Inflationary Spiral</li> </ul>	
	<b>Lecture 41</b>	<ul style="list-style-type: none"> <li>• Current Issues in Monetary and Financial Sector Reforms</li> </ul>	
	<b>Lecture 42</b>	Conduct of Monetary Policy in Fixed and Flexible Exchange Rates	
<b>Week 15</b>	<b>Lecture 43</b>	<ul style="list-style-type: none"> <li>• Perfect Mobility of Capital and Money Control</li> </ul>	
	<b>Lecture 44</b>	<ul style="list-style-type: none"> <li>• Effectiveness of Policy. Impact of Reserves on B.O.P</li> </ul>	
	<b>Lecture 45</b>	<ul style="list-style-type: none"> <li>• Effectiveness of Policy and Exchange Rates.</li> </ul>	
<b>Week 16</b>	<b>Lecture 46</b>	<ul style="list-style-type: none"> <li>• Managed Exchange Rate System and Monetary Policy</li> </ul>	
	<b>Lecture 47</b>	<ul style="list-style-type: none"> <li>• Targeting exchange rate. Targeting Inflation</li> </ul>	
	<b>Lecture 48</b>	<ul style="list-style-type: none"> <li>• Exchange Rate and Balance of Payment.</li> </ul>	



<b>Week17</b>			<b>Terminal Exam</b>

## **SEMESTER VIII**

**Subject: Islamic Economics**

**Course Code: ECO-412**

**Credit Hours: 03**

### **Definitions and Basics**

- **Definitions, concepts and terminologies,**
- **Brief History of Islamic Economics,**
- **Rationale for Islamic Economics,**
- **Islamic Economic System,**
- **Sources of Islamic Laws,**

### **The Holy Qur'an, Sunnah & Hadith, Ijma Ijtihad/Qiyas/Reason**

#### **Islam and other Economic Systems**

- **Introduction,**
- **Capitalism, Socialism, Communism, Mixed Economic System,**
- **Comparison and contrast**

#### **Islamic Economics**

- **Defining Islamic Economics**
- **Principles of Islamic Economics**
- **Consumer behavior, Basic values of Islamic economic system,**
- **Philanthropic and other-regarding behavior**

#### **Factors of Production**

- **Land as a Factor of Production,**

- **Land Tenure System in Islam,**
- **Place of Capital in Islamic Socio-Economic set-up,**
- **Labour-Capital Relationship and Islam,**
- **Interest, its Prohibitions and Classifications**
- **Riba /interest definitions and its types,**
- **Riba in Quran, Riba in Hadith,**
- **Commercial Interest and Usury**
- **The implications of interest**
- **Islamic Financial System**
- **Islamic Contracts**

#### **Islamic Modes of Financing, Banking in Islam**

##### **Financial system in Islamic Economy**

- **Applications of Islamic Financing,**
- **Project Financing**
- **Working Capital Financing,**
- **Import Financing, Export Financing**
- **Islamization of Economy**
- **Pre-modern Muslim thought on economics**
- **Development of "Islamic economics" as an academic discipline,**
- **Achievements, Challenges,**
- **Islamization of financial institutions in Pakistan: Achievements, Problems and prospects.**

##### **Case Studies**

- **Islamic Financial Institutions (Bank/ Insurance),**
- **Islamization of economy [at least any two countries]**

#### **Emerging Trends and Recent Developments**

##### **Reference Material**

- **Asad Zaman Islamic Economics; A Survey of the Literature, IRI publications, IIUI, Islamabad (available online)**
- **Syed Nawab Haider Naqvi, Perspectives on Morality and Human Well-being,**

**Leicester (UK): Islamic Foundation, 2003.**

- **M.A. Mannan, Islamic Economics, Theory and Practice (Latest Edition), Sh. Muhammad Ashraf Publisher, Lahore, Pakistan.**
- **Abdul Hameed Dar and Muhammad Akram, Islamic Economics, Ilmi kitab Khana, Urdu Bazaar, Lahore**
- **Abbas Mirakhor, Zamir Iqbal, Hossein Askari , Introduction to Islamic Economics: Theory and Application, John Wiley & Sons**

### Course Breakup

Week No	Lecture No	Topics	Activity
Week 1	Lecture No 1	Course introduction	
	Lecture No 2	Definitions, concepts and terminologies	
	Lecture No 3	<a href="#">Brief History</a> of Islamic Economics	
Week 2	Lecture No 4	Cont...	
	Lecture No 5	Rationale for Islamic Economics	
	Lecture No 6	Islamic Economic System	
Week 3	Lecture No 7	Cont...	Quiz# 01
	Lecture No 8	Sources of Islamic Laws	
	Lecture No 9	Cont...	
Week 4	Lecture No 10	The Holy Qur'an, Sunnah & Hadith, Ijma Ijtihad/Qiyas/Reason	Assignment# 01
	Lecture No 11	Cont...	
	Lecture No 12	Islam and other Economic Systems Introduction	
Week 5	Lecture No 13	Capitalism, Socialism, Communism, Mixed Economic System,	
	Lecture No 14	Cont...	
	Lecture No 15	Cont...	
Week 6	Lecture No 16	Comparison and contrast	Midterm Exam
	Lecture No 17	Islamic Economics Defining Islamic Economics	
	Lecture No 18	Principles of Islamic Economics	

Week 7	Lecture No 19	Consumer behavior, Basic values of Islamic economic system	
	Lecture No 20	Philanthropic and other-regarding behavior	
	Lecture No 21	Factors of Production Land as a Factor of Production,	
Week 8	Lecture No 22	Land Tenure System in Islam	
	Lecture No 23	Place of Capital in Islamic Socio-Economic set-up	
	Lecture No 24	Labour-Capital Relationship and Islam	
Week 9	Lecture No 25	Interest, its Prohibitions and Classifications  Riba /interest definitions and its types,	
	Lecture No 26	Riba in Quran, Riba in Hadith	
	Lecture No 27	Commercial Interest and Usury	
Week 10	Lecture No 28	The implications of interest	Quiz # 02  -
	Lecture No 29		
	Lecture No 30	Islamic Financial System  Islamic Contracts	
Week 11	Lecture No 31	Islamic Modes of Financing, Banking in Islam	Assignment # 02
	Lecture No 32	Financial system in Islamic Economy Applications of Islamic Financing,	
	Lecture No 33	Project Financing	
Week 12	Lecture No 34	Working Capital Financing	
	Lecture No 35	Import Financing	
	Lecture No 36	Export Financing	
Week 13	Lecture No 37	Islamization of Economy  <a href="#">Pre-modern Muslim thought on economics</a>	
	Lecture No 38	<a href="#">Development of "Islamic economics" as an academic discipline</a>	

	<b>Lecture No 39</b>	<a href="#">Achievements</a> , <a href="#">Challenges</a> , Islamization of financial institutions in Pakistan	
<b>Week 14</b>	<b>Lecture No 40</b>	Cont.....	
	<b>Lecture No 41</b>	Achievements, Problems and prospects.	
	<b>Lecture No 42</b>	Cont.....	
<b>Week 15</b>	<b>Lecture No 43</b>	Case Studies Islamic Financial Institutions (Bank/ Insurance),	
	<b>Lecture No 44</b>	Cont.....	
	<b>Lecture No 45</b>	Islamization of economy [at least any two countries]	
<b>Week 16</b>	<b>Lecture No 46</b>	Cont.....	
	<b>Lecture No 47</b>	Recent developments	
	<b>Lecture No 48</b>	Cont...	
<b>Week 17</b>			<b>Terminal Exam</b>

**Subject: Issues in Pakistan Economy**

**Course Code: ECO-422**

**Credit Hours: 03**

### **Course Contents**

#### **Quick Review of National Income Accounts**

- **GDP (Nominal and Real) and GNP**
- **Measure of Inflation and Employment**
- **Measures of Social Welfare**
- **Beyond GDP**
- **Basic Needs Approach**

#### **HDI Approach**

#### **Review of Alternative Models of Economic Management**

- **Markets or Liberal Capitalism**
- **Socialism or State Capitalism**
- **Social Democracy or Mixed Economy**
- **Islamic Economics or Islamic Capitalism**
- **Pakistan's Models of Economic Management**

#### **Agricultural Sector of Pakistan**

- **1947-58: The Neglected Agriculture Sector**
- **The Green Revolution and its Impacts**
- **Evaluation of Green Revolution as Development Strategy**
- **Critical Analysis of Land Reforms in Pakistan**
- **Pakistan's Agricultural Sector:**
- **Historical Perspectives and Implication**

#### **Industrial Sector of Pakistan**

- **Composition of Manufacturing Sector**
- **Process of Industrialization from 1947-58**
- **The Development Decade of Ayub—1958-68**

- **The Experimental Regime of Bhutto—1972-77**
- **Zia Regime and back to the Basics—1977-88**
- **Industry after Structural Adjustment Program—1988-onwards**
- **Industrial Development in Pakistan: Factors and Development Programs**

#### **Fiscal and Monetary Policies and Inflation in Pakistan**

- **Fiscal Developments**
- **Structure and Trends in Revenue**
- **Structure of Expenditures and Trends of Fiscal Deficit**
- **Financing of Fiscal Deficit**
- **New NFC Award and Medium-Term Budgetary Framework**
- **Monetary Policy Management and Inflation in Pakistan**
- **Understanding Monetary Data**
- **Monetary Management**
- **Financial Sector Reforms**
- **Salient Features of Banking Sector**
- **Inflation and its Causes in Pakistan**

#### **Public and External Debts in Pakistan**

- **Difference between the two Debts**
- **Is Debt Creation Always Bad?**
- **Concerns Regarding Pakistan's Fiscal Deficit**

#### **Reforms to Bring Debt under**

#### **Structural Adjustment Program (SAP) and Pakistan**

- **Globalization and Export of Development Thinking**
- **Composition of SAP**
- **Implementation of SAP in Pakistan**
- **Evaluation of the Results of SAP**
- **Did Pakistan Need to Go for SAP?**
- **Why Does Pakistan Adopt IMF Program**

#### **Performance of Pakistan on Foreign Economic Front**

- **Understanding BOP accounts**



- **Trends in BOP**
- **Composition of Exports and Imports**
- **Historical Directions of Pakistan's Trade Policy Regimes**
- **Impacts of Structural Adjustment Program on Trade Policy**
- **Dealing with Globalization and WTO**
- **Impacts of Globalization on Poverty and other Socioeconomic Indicators in Pakistan**
- **Exchange Rate Regimes in Pakistan**
- **The Weakening Currency of Pakistan**

**Why can't Muslims Adopt a Common Currency?**

**Social Sector in Pakistan**

- **Health Sector and its Issues**
- **Education and its Issues**
- **Gender Inequality**
- **Regional Inequalities**
- **Structure of Population**
- **Population: Asset or Liability?**
- **Urbanization and Housing Problems**
- **Infrastructure Development**
- **Poverty and Income Distribution**
- **Measurement Issues of Poverty and Income Inequality**
- **Trends in Poverty and Income Distribution**
- **The Implications of Poverty and Income Disparity**
- **Growth and Poverty?**
- **Analysis of Poverty Alleviation Strategies**

**Recent Challenges Facing Pakistan Economy**

- **Law and Order Situation**
- **Energy Crises**
- **Rising Circular Debt**

**Reference Material**

- **Zaidi, Akbar. Issues in Pakistan's Economy, Oxford University Press, Karachi. (Latest edition).**
- **Ahmed, Vaqar (2017) Pakistan's Agenda for Economic Reform, Oxford University Press.**
- **Hussain, Ishrat (2007) Pakistan: The Economy of an Elite State, Oxford University Press, Karachi.**
- **Saeed, Khawaja Amjed. Economy of Pakistan. Oxford University Press, Karachi. (Latest edition).**
- **Economic Survey of Pakistan (various issues) Federal Bureau of Statistics, Government of Pakistan.**

### Course Breakup

Week No	Lecture No	Topics	Activity
<b>Week 1</b>	Lecture No 1	Course introduction	
	Lecture No 2	An overview of Pakistan economy.	
	Lecture No 3	Pakistan's development experience since independence	
<b>Week 2</b>	Lecture No 4	Pakistan's Structural transformation 1947-2022	
	Lecture No 5	Cont...	
	Lecture No 6	Success story of Pakistan economy, Sectoral break down and sector wise analysis of Pakistan economy	
<b>Week 3</b>	Lecture No 7	Cont...	<b>Quiz# 01</b>
	Lecture No 8	A Historical account of the development of agriculture in Pakistan	
	Lecture No 9	Development of agriculture before the consolidation of British rule	
<b>Week 4</b>	Lecture No 10	The impact of British colonialism	<b>Assignment# 01</b>
	Lecture No 11	The green revolution	
	Lecture No 12	Cont...	
	Lecture No 13	Land reforms	

<b>Week 5</b>	Lecture No 14	The nature and direction of Agrarian change	<b>Midterm Exam</b>
	Lecture No 15	Critical issues in Agriculture	
<b>Week 6</b>	Lecture No 16	Cont...	
	Lecture No 17	The process of Industrialization in Pakistan I (1947-77)	
	Lecture No 18	Cont...	
<b>Week 7</b>	Lecture No 19	The process of Industrialization in Pakistan II (1977.....)	
	Lecture No 20	Cont...	
	Lecture No 21	Key issues in Industry in Pakistan	
<b>Week 8</b>	Lecture No 22	The small scale manufacturing sector	
	Lecture No 23	Issues affecting the small scale sector	
	Lecture No 24	The textile industry and its crisis	
<b>Week 9</b>	Lecture No 25	The privatization process	
	Lecture No 26	The energy crisis	
	Lecture No 27	Pakistan's Balance of Payment (BOP)	
<b>Week 10</b>	Lecture No 28	Cont...	<b>Quiz # 02</b>
	Lecture No 29	World Regional Trading Blocs and Pakistan.	
	Lecture No 30	WTO and Pakistan	
<b>Week 11</b>	Lecture No 31	Social sector development on Pakistan.	<b>Assignment # 02</b>
	Lecture No 32	<b>Poverty and inequality in global context</b>	
	Lecture No 33	Empirical literature of Pakistan and other less developed countries.	
<b>Week 12</b>	Lecture No 34	Cont...	
	Lecture No 35	Human Resource Development in Pakistan (HRDP)	
	Lecture No 36	Governance urbanization,	
<b>Week 13</b>	Lecture No 37	environment and globalization	
	Lecture No 38	Fiscal and monetary policy of Pakistan	

	Lecture No 39	Resource mobilization and the structure of Pakistan	
<b>Week 14</b>	Lecture No 40	Debt and deficits	
	Lecture No 41	Devolution and fiscal federalism	
	Lecture No 42	Monetary policy and financial and capital markets	
<b>Week 15</b>	Lecture No 43	Monetary policy ,saving and inflation	
	Lecture No 44	Role international institutions such as World Bank and IMF	
	Lecture No 45	IMF and structural adjustment programmes in Pakistan Why does Pakistan accept IMF programmes?	
<b>Week 16</b>	Lecture No 46	Was 1988 structural adjustment programmes A success, achievements and failures the 2008 stand By agreement	
	Lecture No 47	Asian Development Bank in the development of the economy of Pakistan	
	Lecture No 48	Islamic Bank in the development of the economy of Pakistan.	
<b>Week 17</b>			<b>Terminal Exam</b>