CURRICULUM

of

BS in Economics& AD in Economics

Session 2021 Onward

Department of Economics

University of Swabi, Anbar-Swabi

Khyber Pakhtunkhwa

Curriculum of BS in Economics (04Years-08 Semesters)

Scheme of Studies for BS in Economics (04 Years-08 Semesters) program and AD in Economics (02 Years-04 Semesters) program

Duration of Program

Total Duration of BS in Economics program will be comprising of four academic years including eight semesters. Each semester will consist of eighteen (18) academic weeks.

Total Duration Associate Degree in Science (Economics) program will be comprising of two academic years including four semesters. Each semester will consist of eighteen (18) academic weeks.

Division of Courses

A student of Associate Degree in Economics Program must complete 63 credit hours, including 21 courses and Practical Learning Requirement, to become eligible for Associate Degree in Economics degree. The Division of courses of AD in Economics Program are given in table below.

In light of Undergraduate Education Policy 2020 by HEC, every student enrolled inAD in Economics Program will have to complete Fifteen (13) courses (03 credit hours each) comprises of thirty-nine (39) credit hours of General Education Requirement Courses, Four (04) courses (03 credit hours each) comprise of Twelve (12) credit hours of Minor Courses, and Four (04) courses (03 credit hours each) comprises of Twelve (12) credit hours of Major Courses (Discipline Specific).

A student of BS Economics Program must complete 126 credit hours, including 40 courses and Research Project/Two Optional Subject of Six(06) credit hours, to become eligible for BS in Economics degree.In light of Undergraduate Education Policy 2020 by HEC, every student enrolled in BS EconomicsProgram will have to complete Thirteen (13) courses (03 credit hours each) comprises of thirty-nine (39) credit hours of General Education Requirement Courses, Four (04) courses (03 credit hours each) comprise of Twelve (12) credit hours of Minor Courses, Eighteen (19) courses (03 credit hours each) comprise of Fifty-Four (57) credit hours of Compulsory Major Courses (Discipline Specific), Four (04)courses (03 credit hours each)

Curriculum of BS in Economics (04Years-08 Semesters)

comprise of Twelve (12) credit hours of Optional Courses (Discipline Specific), and Six (06) Credit Hours of Research Project/Two Optional Subject (Discipline Specific) .

Division of Courses for BS in Economics Program

S. No.	Type of Courses	No. of Courses	No. of Credit Hours
01	General Education Requirement Courses	13	39
02	Minor Courses	04	12
03	Discipline Specific Major Courses (Compulsory)	19	57
04	Discipline Specific Major Courses (Optional)	04	12
05	Research Thesis/Research Project/Two Optional	02*	06
Total		**42****	**126**

* In Case of Research Thesis/Research project this will be read as zero course.
** In Case of Research Thesis/Project, the number of courses will be 40.

Division of Courses for AD in Economics Program

S. No.	Type of Courses	No. of Courses	No. of Credit Hours
01	General Education Requirement Courses	13	39
02	Minor Courses	04	12
03	Discipline Specific Major Courses	04	12
Total		**21**	**63**

The General Education Requirement courses are divided into three categories, i.e., Breadth Courses, Foundational Skills Courses and Civilization Courses.The Division of General Education Requirement courses are given as under.

General Education Requirement Courses Distribution

S. No.	Type of Courses	No. of Courses	No. of Credit Hours
01	Breadth Courses	06	18
02	Foundational Skills Course	05	15
03	Civilizational Courses	02	06

Curriculum of BS in Economics (04Years-08 Semesters)

Total	13	39

The breadth courses are further divided into three subcategories i.e. Natural Sciences, Social Sciences and Arts & Humanities. Each student of AD and BS program must select Six (06) courses (18 credit hours) by taking Two (02) courses (03 credit hours each) from three subcategories. Furthermore, a total of Five (05) courses of Foundational Skills (15 credit hours) shall be completed by taking Three (03) courses (03 credit hours each) and Two (02) courses (03 credit hours each) of expository writing and quantitative reasoning, respectively. Two (02) courses (06 credit hours) are allotted to civilizational courses. The details are given in table below.

Distribution of Breadth, Foundational and Civilizational Courses

S. No.	Category	Type of Courses	No. of Courses	No. of Credit Hours
01		Natural Science	02	06
02	Breadth Courses	Social Sciences	02	06
03		Arts and Humanities	02	06
Total			**06**	**18**

S. No.	Category	Type of Courses	No. of Courses	No. of Credit Hours
01	Foundational Courses	Expository Writing	03	09
02		Quantitative Reasoning	02	06
Total			**05**	**15**

S. No.	Category	Type of Courses	No. of Courses	No. of Credit Hours
01	Civilizational Courses	Islamic Studies	01	03
02		Pakistan Studies	01	03
Total			**02**	**06**

Curriculum of BS in Economics (04Years-08 Semesters)

Semester wise Breakdown of Courses

Semester-I			
Course Code	**Type of Courses**	**Credit Hours**	**Category**
Eco-111	Principles of Microeconomics	03	Major
Math-111	Calculus-I	03	Minor
Eng-113	Functional English	03	Expository Writing
	Breadth Course	03	Arts & Humanities
	Breadth Course	03	Social Sciences
Isl-121	Islamic Studies	03	Civilizational
Total		**18**	
Semester-II			
Course Code	**Type of Courses**	**Credit Hours**	**Category**
Eco-121	Principles of Macroeconomics	03	Major
CS-111	Introduction to Information and Communication Technologies	03	Minor
Eng-123	Communications Skills	03	Expository Writing
Math-122	Elements of Set Theory and Mathematical Logic	03	Quantitative Reasoning
PS-115	Pakistan Studies	03	Civilizational
Total		**15**	
Semester-III			
Course Code	**Type of Courses**	**Credit Hours**	**Category**
Eco-211	Intermediate Microeconomics	03	Major
Stat-211	Statistics-I	03	Minor
Eng-213	Technical Writing	03	Expository Writing
	Breadth Course	03	Arts & Humanities
	Breadth Course	03	Natural Science
Total		**15**	
Semester-IV			
Course Code	**Type of Courses**	**Credit Hours**	**Category**
Eco-221	Intermediate Macroeconomics	03	Major
Stat-221	Statistics-II	03	Minor
	Breadth Course	03	Social Sciences
	Breadth Course	03	Natural Science
Math-223	Linear Algebra	03	Quantitative Reasoning
Total		**15**	
Semester-V			
Course Code	**Type of Courses**	**Credit Hours**	**Category**
Eco-311	Microeconomic Analysis	03	Major Discipline
Eco-312	Mathematical Economics	03	Major Discipline
Eco-313	Development Economics	03	Major Discipline
Eco-314	Issues in Pakistan Economy	03	Major Discipline

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Eco-315	Labour Economics	03	Major Discipline
Eco-	Optional-I	03	Discipline
Total		**18**	
Semester-VI			
Course Code	**Type of Courses**	**Credit Hours**	
Eco-321	Macroeconomic Analysis	03	Major Discipline
Eco-322	Econometrics-I	03	Major Discipline
Eco-323	Monetary Economics	03	Major Discipline
Eco-324	Financial Economics	03	Major Discipline
	Optional-II	03	Optional Discipline
Total		**15**	
Semester-VII			
Course Code	**Type of Courses**	**Credit Hours**	
Eco-411	Research Methodology	03	Major Discipline
Eco-412	Econometrics-II	03	Major Discipline
Eco-413	Public Finance	03	Major Discipline
Eco-414	International Economics	03	Major Discipline
	Optional-III	03	Optional Discipline
Total		**15**	
Semester-VIII			
Course Code	**Type of Courses**	**Credit Hours**	
Eco-421	Islamic Economics	03	Major Discipline
Eco-422	Poverty and Income Distribution	03	Major Discipline
	Optional-IV	03	Optional Discipline
Eco-420	Research Project/Two Optional (Discipline)	06	
Total		**15**	

Curriculum of BS in Economics (04Years-08 Semesters)

List of Breadth Courses

Course Code	Title of Course	Credit Hours
List of Natural Sciences Courses		
Math-121	Calculus-II	03
Math-224	Ordinary Differential Equations	03
Env.Sci-115	Introduction to Environmental Science	03
Geol-311	Introductory Geology	03
List of Social Sciences Courses		
Pol-111	Introduction to Political Science-I	03
Soc-101	Principles of Sociology	03
IR-	Introduction to International Relations	03
BBA-111	Introduction to Business	03
BBA-121	Principles of Management	03
BBA-125	Fundamentals of Accounting	03
BBA-211	Principles of Marketing	03
BBA-221	Human Resource Management	03
BBA-212	Financial Accounting	03
BBA-322	Cost Accounting	03
List of Arts and Humanities Courses		
Arb-121	Arabic Language-I	03
Arb-241	Arabic Language-II	03
ISH-474	Islamic History-I	03
ISH-475	Islamic History-II	03
UR/BS-442	Urdu Language (اردو زبان۔ قواعد و املا)	03

List of Expository Writing Courses

Course Code	Type of Courses	Credit Hours
Eng-113	Functional English	03
Eng-123	Communications Skills	03
Eng-213	Technical Writing	03

List of Quantitative Reasoning

Course Code	Type of Courses	Credit Hours
Math-122	Elements of Set Theory and Mathematical Logic	03
Math-223	Linear Algebra	03

Curriculum of BS in Economics (04Years-08 Semesters)

Civilizational Courses

Course Code	Type of Courses	Credit Hours
Isl-121	Islamic Studies	03
PS-115	Pakistan Studies	03

List of Minor Courses

Course Code	Type of Courses	Credit Hours
CS-111	Introduction to Information and Communication Technologies	03
Math-111	Calculus-I	03
Stat-211	Statistics-I	03
Stat-221	Statistics-II	03

List of Discipline Specific Major(Compolsary)Courses

Course Code	Title of Course	Credit Hours
Eco-111	Principles of Microeconomics	03
Eco-121	Principles of Macroeconomics	03
Eco-211	Intermediate Microeconomics	03
Eco-221	Intermediate Macroeconomics	03
Eco-311	Microeconomic Analysis	03
Eco-312	Mathematical Economics	03
Eco-313	Development Economics	03
Eco-314	Issues in Pakistan Economy	03
Eco-315	Labour Economics	03
Eco-321	Macroeconomics Analysis	03
Eco-322	Econometrics-I	03
Eco-323	Monetary Economics	03
Eco-324	Financial Economics	03
Eco-411	Research Methodology	03
Eco-412	Econometrics-II	03
Eco-413	Public Finance	03
Eco-414	International Economics	03
Eco-421	Islamic Economics	03
Eco-422	Poverty and Income Distribution	03

List of Discipline Specific (Optional)Courses

S. No.	Course Code	Title of Course	Credit Hours
Semester-V	Eco-316	Managerial Economics	03
	Eco-317	Cost Benefit Analysis	03
	Eco-318	Natural Resource Economics	03
	Eco-319	Issues in World Economy	03
Semeste	Eco-325	Game Theory	03
	Eco-326	Agricultural Economics	03

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	Eco-327	Experimental Economics	03
	Eco-328	Dynamic Optimization	03
	Eco-329	Industrial Organization	03
Semester-VII	Eco-415	Energy Economics	03
	Eco-416	General Equilibrium and Welfare Economics	03
	Eco-417	Population Economics	03
	Eco-418	Trade and Development	03
	Eco-419	Islamic Banking, Theory and Practices	03
Semester-VIII	Eco-423	Health Economics	03
	Eco-424	Fiscal Policy	03
	Eco-425	Monetary Policy	03
	Eco-426	Environmental Economics	03
	Eco-427	International Finance	03
	Eco-428	Islamic Finance	03
	Eco-429	Economics of Climate Change	03
	Eco-420	Research Project	06

Practical Learning Requirement:

As per Undergraduate Policy 2020 by HEC, the graduate student must complete the following requirements:

Internship: Every BS Student shall have to complete an internship program, of at least 9 week duration, at any time after the completion of their fourth semester, generally during the summer. University will collaborate with employers to arrange the requisite number of internship slops.

Every Studentof AD in Economics program shall have the option of completing 09-week summer internship any time after first semester or a work attachment for a total of up to 360 hours during their course work.

Practical Learning Lab (PLL): EveryBS studentwill have to enrol in at least one non-credit extracurricular program referred to as a "Lab" for at least 4 Semesters. The "Lab" will meet for a minimum of 4 hours per week. "Labs" would be offered in one or more of the following three areas: entrepreneurship, youth clubs and sports.

Every AD studentwill have to fulfil the PLL requirements by signing up for an extracurricular "Lab" of 4 hours a week for 2 Semesters in one of the following areas: entrepreneurship, youth clubs and sports.

Note: The first four Semesters of the Scheme of Studies of BS in Economics Program will be considered as the Scheme of Studies for Associate Degree in Economics Program.

Agenda Item -IV

Curriculum of BS in Economics (04Years-08 Semesters)

Consideration and Recommendation for the approval of Course Outlines/Contents for BS in Economics (4 years – 8 Semesters) Program and Associate Degree in Economics (2 years – 4 Semesters)

COURSE OUTLINES
of
LIST OF MAJOR COMPULSORY COURSES

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	**PRINCIPLES OF MICROECONOMICS**
COURSE CODE	**Eco-111**
CREDIT HOURS	**03**
PREREQUISITE	**NIL**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE DESCRIPTION
Principles of Microeconomics is an introductory undergraduate course that teachesthefundamentals of microeconomics. Thiscourse introducesmicroeconomic concepts, supply anddemand analysis, theories of the firm and individual behaviour, competition and monopoly.Studentswill also beintroduced totheuseof microeconomicapplications to address problems in current economic policy throughout the semester. The course will rely heavily on graphical analysis and simple numerical calculations.

COURSE OBJECTIVES
By the end of the course, students will be able to understand introductory microeconomic theory,solve basic microeconomic problems, and use these techniques to think about severalbasic policy questions relevant to the operation of the economy. More specifically, this course aims:

- To develop an understanding of introductory microeconomic theory and its relevance to the real word.
- To sharpen the problem-solving tactics required to solve basic microeconomic problems.
- To give a broader implications of microeconomics principles and their applications.
- To train the students to work with others as a part of team to solve problems.

COURSE LEARNING OUTCOMES
After completing this course, students should have developed a range of skills enabling them to understand economic concepts and use those concepts to analyse specific questions. By the end of this course, students should be able to:

- UNDERSTAND consumer and firm behaviour.
- APPLY graphical analysis for a variety of economic situations.
- CALCULATE and INTERPRET elasticities.
- DEFINE and DERIVE short-run and long-run production costs.
- EXPLAIN various market structures.

COURSE CONTENT

1. Introduction
Definitions of Economics, Scope, The Economic Problem, Economic Decision Makers, Distinction Between Microeconomics and Macroeconomics, The Market System

2. Consumer Behaviour
Utility Analysis (Cardinal Approach), Marginal Utility, Law of Diminishing Marginal Utilityand Law of Equi-Marginal Utility,Consumer Equilibrium, Ordinal Approach of ConsumerBehaviour, Indifference Curves,Features of Indifference Curves, Budget Line, ConsumerEquilibrium,Comparison between Cardinal Approach and Ordinal Approach.

3. Demand & Supply
Demand, Demand Function, Demand Curve, Engel Curve, Changesin Demand, Law of Demand,

Shift in Demand, Factors Affecting Demand, Consumer Surplus, Supply, Supply Function, Supply Curve, Changes in Supply, Factors Affecting Supply, Law of Supply, Producer Surplus, Equilibrium of Demand and Supply, Market Equilibrium, PriceControls, Taxes and Subsidies

4. Elasticity of Demand & Supply

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

5. The Theory of production & Theory of Cost

Cost of Production, Short Period and Long Period Analysis, Economies of Scale, Elasticity of Cost, Graphical Representation ofLong Run Cost, Production, Factors of Production, Production Function, Short PeriodProduction Relations, Total, Average and Marginal Product, Elasticity

of Production, Laws of Returns to Scale. Revenue and Revenue Curves under perfect and imperfect competition.

6. Market Structure

Basics of Perfect Competition, Monopoly, Monopolistic Competitionand Oligopoly, Different Possibilities of Short Run firm Equilibrium under Perfect Competition, Profit Maximization in Short-run and long-run under PerfectCompetition, Supply Curve of Perfectly Competitive Firm under Short and Long Run, Short run and Long run Equilibrium under Monopoly

TEACHING METHODOLOGY

- Lectures
- In Class Activities
- Written Assignments

TEXT AND REFERENCE BOOKS

- Michael J. Swann, William A. McEachern Microeconomics:AContemporaryIntroduction, 3rd edition (or latest available).
- Mankiw N. Gregory, Principles of Microeconomics 7th edition (or latest available).
- Campbell R. McConnell, Stanley L. Brue, Principles of Economics, 17th edition (or latestavailable).
- Paul A. Samuelson, William D. Nordhaus, Economics, Latest Edition.

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	**PRINCIPLES OF MACROECONOMICS**
COURSE CODE	**Eco-121**
CREDIT HOURS	**03**
PREREQUISITE	**NIL**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE DESCRIPTION

The course is specially designed for the beginners with no formal background or little association with economics. This course is an introduction to the macroeconomic indicators and issues such as national income, unemployment, inflation etc.The course will establish the students understanding on the behaviour and performance of the economy as a whole.

COURSE OBJECTIVES

Bythe end of the course, students will be able to understand introductory macroeconomic theory and understand the concepts of macro aggregates like National Income, inflation, unemployment etc. More specifically, this course aims:

- To familiarize the student with the generally accepted principles of macroeconomics.
- To understand the computation of National Income Accounts.
- To Interpret and evaluate media reports on the macro-economy.

COURSE LEARNING OUTCOMES

After completing this course, students should have developed a range of skills enabling them to understand basic concepts of macroeconomics. By the end of this course it is expected that thestudent should be able to:

- ACQUIRE the basic knowledge of terminologies used in macroeconomics and the key elements involved in the business decision.
- UNDERSTAND the meaning and components of the National Income Accounts,especially GDP and GNP.
- APPLY three different approaches to MEASURE National Income, and the problems associated with calculating, interpreting, and comparing National Income statistics.
- UNDERSTAND the tools, advantages and drawbacks of fiscal policy and monetary policy and how these policies operate.

COURSE CONTENT

1. Introduction

What is macroeconomics and how economist thinks?The economy in aggregate,Scope of macroeconomics,Brief account of classical and the development of macro-economicafter theWorld War-II, Concept of business cycles: Boom and Depression,Three concerns ofMacroeconomics; Inflation, GDP growth andUnemployment,Macro-models as abstractionfrom the real economy.

2. National Income Accounting

Definition and concept of national income,Measures of national income: Gross Domestic Product (GDP) andGross National Product (GNP), Net National Product (NNP), National Income (NI), Disposable Income, GDP at factor cost and at marketprices, GDP deflator, Computation of national income: Product, Income and Expenditureapproaches,Circular flow of income,Nominal versus Real income,Per capita income, and the standard of living.Measuring the

cost of living: the consumer price index, CPI versusGDP deflator, MeasuringUnemployment rate

3.   Components of Aggregate Demand

The Concept of Open and closed economy models,Concept of aggregate markets: Product, Money, Labour and Capitalmarkets,Components of aggregate demand: Consumption, Investment andGovernment spending, Income and expenditure identities, Money and Monterey policy,Fiscal Policy

TEACHING METHODOLOGY

- Lectures
- In Class Activities
- Written Assignments

TEXT AND REFERENCE BOOKS

- N. Gregory Mankiw. Principles of Macroeconomics, (latest edition)
- Samulson and Nordrons. Economics, 18th Edition, (or latest available)
- Parkin, Michael. Macroeconomics, Edition Wesley International Inc. (latestedition)

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	**INTERMEDIATE MICROECONOMICS**
COURSE CODE	**Eco-211**
CREDIT HOURS	**03**
PREREQUISITE	**Principles of Microeconomics**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE DESCRIPTION

Intermediate Microeconomics is the second course of Microeconomics in the undergraduate program that builds up an extended knowledge of microeconomic concepts, principles, and theories. This course mainly focuses on the conceptual foundations of microeconomics: prices, markets, optimization, equilibrium, and comparative statics. The course presents a logical and analytical framework for the observed economic phenomena. The course includes the study ofconsumer theory, theory of demand, producer theory, perfect competition, imperfectcompetition,externalities, public goods, and government interventions. Basic algebra andcalculus, alongwith graphical techniques, will be used to analyse thesemicroeconomicconcepts.

COURSE OBJECTIVES

The objective of the course is to extend the knowledge of the basic microeconomic principles that will provide the foundation for future studies in economics. The course is aimed to develop the economic way of thinking to tackle the issues like resource allocation of consumers andproducers. The course is aimed.

- To give an insight into how economic models can help us think about important real-world phenomena, like reasons behind the rise and fall of prices and wages, how firmsearn profits and why they go out of business.
- To analyse the role of decision-making agents in the economy and their impact on input and output prices and resource allocation.
- To analyse critically the role of free markets, the possible reasons behind market failure and the effects of government intervention in the market.
- To obtain basic knowledge of the issues that may arise when market information is asymmetric.

COURSE LEARNING OUTCOMES

Upon successful completion of the course, the student will be able to:

- ACQUIRE proficiency to employ numerical and graphical techniques as well as verbal presentation of microeconomic concepts.
- UNDERSTAND the concepts microeconomic theories and models in terms of theirpolicy implications, advantages, and limitations.
- EXPLAINS consumers', firms', and market behaviour using mathematical tools and diagrams the problems.
- DEMONSTRATE AND APPLY microeconomic models to design solutions to practical economic issues and real-world scenarios.

COURSE CONTENT

1. Introduction

Analysing Economic Problems, Constructing Economic Models, Optimization Principle

2. Consumer Theory

Budget Constraint and its Application, Utility and Preferences, Indifference Curve Analysis, Optimal Choice of Consumer, Application of Consumer Theory in choosing Taxes, Income Effect, Substitution Effect, Price Effect as a combination of Income and Substitution Effect, Decomposition of Price Effect into income & substitution effects (allapproaches), Marshallian and Hicksian Demand Curves (normal, inferior and Giffengoods).

3. Theory of Demand and Supply

Income Consumption Curve and Engel Curves, The Price Consumption Curve and the Demand Curve, Derivation of Demand Curve, Demand Function, Supply Function, Supply and Demand Equilibria, Comparative Statics, The Inverse Demand Function.

4. Producer Theory

Producer's Objective, Technology Constraints, Short Run and Long Run Production Function and Cost, Diminishing Marginal Product, Diminishing Technical Rate of Substitution, Returns to Scale and Cost Function, Isoquant and Isocost Analysis, Cost Minimization in Short and Long run, Short-Run and Long run Profit Maximization.

5. Markets Analysis

Perfectly Competitive Markets: Analysis and Application, Short Period Analysis (equilibriumcases, supply curve of firm), Long Period Analysis (equilibrium of firm, supply curve ofindustry), Monopoly Markets: Analysis and Application, Short Period Analysis (equilibriumcases, why no supply curve of firm), Long Period Analysis(equilibrium of firm, sub-optimum,optimum and super-optimum cases), Price Discrimination (concept, need, possibility, forms anddegrees of price discrimination), Monopolistic Competition: Analysis and Application, Short Period Analysis (equilibrium cases), Long Period Analysis (equilibrium of firm), Oligopoly: Analysis and Application, Cournot Model, Bertrand Model, Stackelberg Model, Sweezy's Kinked Demand Model.

TEACHING METHODOLOGY

- Lectures
- In Class Activities
- Written Assignments

TEXT AND REFERENCE BOOKS

- Hal R. Varian, Intermediate Microeconomics, 9th Edition, 2014, W.W. Norton & Company, ISBN-13: 9780393123968.
- Walter Nicholson and Christopher M. Snyder, Intermediate Microeconomics and Its Application, Latest Edition; Thomson South-Western, ISBN13: 9781133189022.
- Robert S. Pindyck and Daniel L. Rubinfeld, Microeconomics, Prentice Hall, Fifth Edition, ISBN: 0130165832.

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	**INTERMEDIATE MACROECONOMICS**
COURSE CODE	**Eco-221**
CREDIT HOURS	**03**
PREREQUISITE	**Principles of Macroeconomics**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE DESCRIPTION

The course is designed to teach the basic concepts and terms used inMacroeconomics.It will help the students to understand how the economies behave keeping in view the NationalIncome, inflation, unemployment and macroeconomic fluctuations in the long run and short run. It will discuss Aggregate Demand and Aggregate Supply. The course will help students to think like economists.

COURSE OBJECTIVES

- To understand concept of National income what it is and how it works, causes and effects of inflation and unemployment,
- To learn how to critically analyse the economic fluctuation including short run and long run shocks in the economy.
- To be able to analyse and relate the facts and figures (numbers) with theory to support and strengthen the research and critical analysis.

COURSE LEARNING OUTCOMES

By the end of this course, it is expected that the students will be able to:

- AQUIRE the knowledge aboutthe monetary system, inflation, andunemployment.
- UNDERSTAND the concept of market Equilibrium keeping in view thedemand andsupply of goods and services.
- INTERPRETandANALYZEthedata,graphsandtrendsinthemacroeconomicindicators.
- UNDERSTAND the concepts of Economic Fluctuations in the goods and money marketin the light of IS and LM curves.
- DEMONSTRATE macroeconomic concepts by using appropriate terms and explainingthem with country specific examples.
- APPLY macroeconomic theories and models to address the Macroeconomic issues.

COURSE OUTLINE

1. **Introduction to Macroeconomics**
2. **National Income:**

Where it Comes from and where it Goes, what determines the Total Production of Goods and Services?How Is National Income Distributed to the Factors of Production?What Determines the Demand for Goods and Services?Equilibrium in the Market for Goods and Services

3. **Money, Prices and Unemployment**

The Monetary System: What it is and How it Works? What Is Money, its types and role, How the Quantity of Money is Controlled and measured Inflation: It Causes, Effects, and Social Costs, The Quantity Theory of Money, Seigniorage: The Revenue From Printing Money, Inflation and Interest Rates, The Nominal Interest Rate and the Demand for Money, The Social Costs of Inflation, Hyperinflation, Unemployment, Job Loss, Job Finding, and the Natural Rate of Unemployment, Job Search and Frictional Unemployment, Real-Wage Rigidity and

Structural Unemployment, Labour-Market Experience: The United StatesLabour-Market Experience: Europe

4. The Economy in The Short Run

Introduction to Economic Fluctuations, The Facts About the Business Cycle, How the ShortRun and Long Run Differ, The Model of Aggregate Supply and Aggregate Demand, Aggregate Demand: The Quantity Equation, Slope and Shifts in theAggregate Demand Curve, Aggregate Supply curve in the Long Run and Short Run, Stabilization Policy: Shocks to Aggregate Demand and AggregateSupply

Aggregate Demand-I

Building the IS-LM Model: The Goods Market and the IS Curve, The Money Market and the LM Curve, The Short-Run Equilibrium

Aggregate Demand-II

Applying the IS-LM Model: Explaining Fluctuations with the IS-LM Model, IS-LM as aTheory of Aggregate Demand, The Great Depression, Aggregate Supply & the Short-runTrade-offbetweenInflation&Unemployment, The Basic Theory of Aggregate Supply, Inflation, Unemployment, and the Phillips Curve

TEACHING METHODOLOGY

- Lectures
- In Class Activities
- Written Assignments

TEXT AND REFERENCE BOOKS

- Mankiw, N. Gregory. Macroeconomics.8th Edition, Worth Publishers.
- Abel, Andrew, B.,Bernanke, Ben S. &Croushore, D.Macroeconomics, SeventhEdition. Addison-Wesley.
- Williamson, Stephen D. Macroeconomics, 4th Edition, Prentice Hall.

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	**MICROECONOMIC ANALYSIS**
COURSE CODE	**Eco-311**
CREDIT HOURS	**03**
PREREQUISITE	**Intermediate Microeconomics**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE DESCRIPTION
This course covers the advance topics in microeconomics. The focus will be on mathematical treatment of consumer theory, production theory and market analysis. Students should have good mathematical background.

COURSE OBJECTIVES
Following are the prime objectives of this course:
- To explain the technical concepts of microeconomics.
- To learn the latest developments in microeconomic theory.
- To understand the modeling of consumer and production theory.

COURSE LEARNING OUTCOMES
After completing this course, students are expected to:
- RECOGNIZE and IDENTIFY the latest development in microeconomic theory.
- UNDERSTAND the modeling of consumer choices and production decisions.
- APPLY the theoretical knowledge in research.

COURSE CONTENTS
1. Consumer Behaviour
Consumer Preferences, Consumption bundle, Axioms of consumer preferences, Budget Constraint, Consumer choices, Utility maximization subject to budget constraint, Marshallian demand function(Concept,Derivation, andProperties), Indirect utility function (Concept, Derivation and Properties), Budget minimization subject to utility constraint, Hicksian demand function (Concept, Derivation and Properties), Expenditure Function (Concept, Derivation and Properties), Duality between Hicksian and Marshallian demand functions,Duality between utility function and indirect utility function, Choice under uncertainty (elementary treatment), Consumption over Time (elementary treatment)

2. Production Analysis
Constraints, Technical Constraints: Production, production process, Typesof inputs, concept of net output, production plan, Production set, Few Concepts in describing technology; Iso-quants, Technicalrate of substitutions, Elasticity of substitution, Returns to scale, Elasticity of scale, Euler's theorem, Technologies with distinct outputs and inputs,Production function and Classification of production functions; Fixed coefficients production function, Leoetief technology, Linear production function, Cob-Douglas production function, Constant elasticity of substitution production function.Financial Constraints: Budget Constraint, Cost of Production, Economic Cost, Private Cost, External Cost, Implicit Cost, Explicit Cost, Cost equation and Cost Function. Market Constraints: Price Constraints: price takers, priceregulations, sticky prices,minimum prices etc,QuantityConstraints: Quota, Negatively sloped demand curve, kinkeddemand curve

3. Optimization

Profit maximization: Profit equation, Input demand function(concept, derivation and, properties),Output supply function (concept, derivation and properties), Profit function (concept, derivationand properties).

Cost minimization: The cost minimization problem, Conditional input demand function (concept, derivation and properties), Cost function (concept, derivation and properties).

Revenue maximization: The revenue maximization problem,Revenue function concept, derivation and properties)

TEACHING METHODOLOGY

- Lectures
- In Class Activities
- Written Assignments

TEXT AND REFERENCE BOOKS

- Gravelle and Rees, Microeconomics, Third Edition, Pearson Education.
- Varian H. R. Microeconomic Analysis, Third Edition, W.W. Norton andCompany, New York, 1992.
- Silberberg E. The Structure of Economics: A mathematical analysis, Second Edition, McGraw Hill publishing Company, 1990.

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	**MATHEMATICAL ECONOMICS**
COURSE CODE	**Eco-312**
CREDIT HOURS	**03**
PREREQUISITE	**Calculus-I**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE DESCRIPTION

This course is about the use of basic mathematic tools that enables the study of economic theoryatthe undergraduate level, specifically the courses in microeconomic theory,macroeconomictheory, statistics and econometrics. In this course, particular economic models are not the ends, but the means forillustrating the method of applying mathematical techniques to economic theory in general.

COURSE OBJECTIVES

The course is designed to enable the students to use the mathematical tools in clarifyingtheir economic concepts and solving the problems accordingly. This is true because economic analysis requires extensive use of mathematical tools/techniques in the present day world of complexity. Mere logical reasoning and diagrammatic approach is perhaps not sufficient. This is true for positive economicsto learn/ apply mathematics along with their theoretical underpinnings.

COURSE CONTENTS

1. The Nature of Mathematical Economics

Pure vs applied mathematics, The use of mathematical tools in social sciences particularly in Economics, Economic theory (logical argument) as description of some kind ofrelationship between variables, Mathematical Support: Expression of theory in functional form, Explaining properties of economic parameters like elasticity,propensity to consume etc.Verification of hypotheses and the use of mathematical models, Parameters and variables (dependent and independent), Linear and non-linear functions: quadratic, polynomial, circular, Types offunctions: constant, rational, non-algebraic, logarithms & exponential, Rules of logarithms andexponents, Functions of more than two independent variables, Graphs of variousfunctions, The importance and limitations of mathematical models.

2. Equilibrium Analysis

Equation of a straight line: Intercept and Slope parameters and theireconomic interpretation, Partial and general equilibrium analysis, Single and Simultaneous equation models, Examples from market models: Demand and supplyequations, Determination of price and quantity,Calculation of elasticities at equilibrium,

3. Linear Models and Matrix Algebra

Simultaneous equations models and the use of matrices, Typesof matrices: Square, identity,null, idempotent, diagonal, transpose and their properties, Laws of matrix operations: addition/subtraction, scalar and vector multiplication, Conditions for non singularity of a matrix, Determinant & its properties, Minors and cofactors, Adjoint and inverse of a matrix, Properties of inverse of a matrix, Solution of linear equations: Gaussian method, Cramer's rule, andInverse matrix method, Economic applications: Solution of market models, national incomemodels.

4. Differentiation

The concept of derivative, Functions of one variable.Rules of differentiation: Sum-difference, product and quotient rules,chain rule, power function rule, inverse function rule, Implicit functions
rule, Combinations of rules, differentiation of logarithmic & exponential functions, Higher order derivatives, Concept of maxima & minima, First and second derivative tests, point of inflection, Free and Constrained optimization

5. Economic Applications of Differential Calculus

Analysis of Utility, Demand, Production, Cost and Supply functions,Lagrange function, Profit maximization and cost minimization under perfect competitionand monopoly, Maximizing excise tax revenue in monopolistic competitive market,Comparative- static analysis: Partial equilibrium market model,National Income model, Optimization of unconstrained functions and
their economic applications, Profit maximization by a multi -productand multi-plant firms, Price discrimination and monopoly, Optimization by using Cobb-Douglas, CES and Translog functions with interpretation of the results.

6. Linear Programming

Ingredients of linear Programming, Graphical approach, Simplexmethod, Economicapplication of linear programming, Concept of primal & dual, Duality theorems, Solving ofPrimal via dual,Economic interpretation of a dual.

TEACHING METHODOLOGY

- Lectures
- In Class Discussion/Practice
- Assignments

TEXTS AND REFERENCE BOOKS

- Chiang, A. C. Fundamental Methods of Mathematical Economics, 3rd Edition (1984) McGraw Hill Publishing Company.
- Frank, Budnick. Applied Mathematics for Business, Economics and Social Sciences, 4th Edition or latest - McGraw Hill Publishing Company.
- Dowling, E. T. Mathematics for Economists, Schaum's Outline Series, 3rd Edition McGraw Hill Publishing Company.
- George, Alvey et. al. Essentials of Mathematics with Business Applications, 5th Edition, McGraw Hill Publishing Company.
- Weber, E. Jean. Mathematical Analysis:Business and EconomicApplications,Latest Edition, Harper and Row Publishers, New York.
- Colin, Glass. An Introduction to Mathematical Methods in Economics, Latest Edition,McGraw Hill Publishing Company.

COURSE TITLE	**DEVELOPMENT ECONOMICS**
COURSE CODE	**Eco-313**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE DESCRIPTION

This course examines the process of economic development, including the determinants of underdevelopment, poverty and inequality. The course focuses on describing and understanding the many problems faced by developing countries and their citizens. Through the course, we discuss policy implications of the topics we explore. We begin with an overview of economic development and models economists use to understand the process of economic development. Afterward, we consider the impediments to development and how they can potentially beaddressed. Both microeconomic issues such as, health, education, credit, etc., and macroeconomic issues such as land reforms, industrial policy, savings, trade, etc. will be addressed.

COURSE OBJECTIVES
- To introduce students to the basic theory of development economics and to the different economic concerns of developing countries.
- To facilitate students to be able to engage with the development economic literature on their own with an intermediate level knowledge of current issues and policies.
- To understand and analyze key development economic theories affecting a number of contemporary development issues.
- Reflect on and critically examine the links between alternatives development economic theories and approaches.
- Review the policy implications of these key development economic theories.

COURSE LEARNING OUTCOMES

Upon successful completion of the course, the student will be able to:
- ACQUIRE the UNDERSTANDING of various development theories and their policy outcomes.
- UNDERSTAND different concepts in relation to the development of the developing countries.
- SOLVE the critical development issues, such as poverty, humandevelopment,inequality etc.
- EVALUATE the available solutions and alternatives outcomes
- DEMONSTRATE, compare and Contrast alternative development theoriesand hypotheses

COURSE CONTENTS

1. An Overview of Development

Historical experiences of developing countries, Broad conceptual explanation of underdevelopment, Economic Growth versus economic development,Comparative economic development, Emerging major issues of developing world, Basic theories of growth and development, andContemporary models of underdevelopment/development.

2.   Domestic Problems and Policies

The nexus of poverty, inequality and underdevelopment, The distribution of wealth and resources, Poverty and nutrition, Demographic transition, population growth; its causes andConsequences, Urbanization/rural-urban migrations; its causes and consequences, Human capital; education, health and development, Human Development Index, Agriculture and rural development, Land distribution, Environment and natural resources, Feudalism and Asiatic Mode of Production, Colonial Path and Asiatic Capitalism in South Asia, Agrarian class relations in Pakistan, Industrial relations in Pakistan

3.   International Problems and Policies

Trade/access to factor and product markets and development, Balance of payment problems, Debt, stabilization policies, International shocks, foreign finance, Foreign assistance and aids, International wars, conflicts and refugees, Migration and remittances

4.   Markets and Development

The role of markets in development,Credit, financing, SME's, industrial and trade policies, land, labor andagriculture and livestock, Market failure and government intervention, Property rights and investment incentives, Technology adoption and learning, Stabilization policies.

5.   Institutions and Development

What are the institutions?Political institutions Versus economic institutions, The Role of Institutions in Development, thepolitical economy and corruption, Democracy Versus dictatorship, Decentralization and federalism, Various tiers of government,Good governance, corruption, Rent seeking, Ethnic conflict, Gender inequality, Voting and lobbying, The role of civil society, The role of state for economic development, The Informal institutions and development, Social network and social capital, Various tiers of government

6.   Alternative Theories of Economic Development

Culture Hypothesis, Geography Hypothesis, Institutions Hypothesis

TEACHING METHODOLOGY

- Lectures
- Written Assignments
- Guest Speakers (if any)
- Group Discussion
- Field Visits (optional)
- Report Writing/Case Studies (optional)
- Presentations

TEXT AND REFERENCE BOOKS

- Todaro, M. P. and S. C. Smith. (2011). Economic Development, 11th edition,Palgrave.
- Debraj Ray (998).Development Economics, Princeton University Press.
- Daron Acemoglu and James Robinson (2012). Why Nations Fails: TheOrigins of Power, Prosperity and Poverty, Crown Publishing Group.
- Banerjee and E. Duflo (2012). Poor Economics, Public Affairs.
- Taimur Rahman.(2012). The Class Structure of Pakistan, Oxford UniversityPress.
- Vaqar Ahmed (2017). Pakistan's Agenda for Economic Reform, Oxford University Press.

COURSE TITLE	ISSUES IN PAKISTAN ECONOMY
COURSE CODE	Eco-314
CREDIT HOURS	03
PREREQUISITE	Nil
REV. NO.	01
DATE	June 04, 2021

COURSE DESCRIPTION

This course gives an overview of economic issues of Pakistan. Starting from national income accounts, it carries a detail description of all sectors of the economy. Moreover,italso highlights the main problems like poverty, inflation and unemployment. The last section ofthis course describes the recent challenges to the economy of Pakistan.

COURSE OBJECTIVES

The major objective of the course is to give the students the completecomprehension o socioeconomic issues of Pakistan economy. The students will be able:

- To have the familiarity with key features of socioeconomic problems and their solutions in Pakistan
- To understand the process of emerging issues in Pakistan economy
- To analyze the programs dealing with issues in Pakistan economy

LEARNING OUTCOMES

Upon Successful Completion, the Students Should be able to:

- IDENTIFY the challenges to the economy of Pakistan
- UNDERSTAND the problems to the economy of Pakistan
- HAVE knowledge about the state of economy.

COURSE CONTENTS

1.   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

2.   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

3.   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 andImplications.

4.   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 DevelopmentPrograms.

5.   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.

6.   Public and External Debts in Pakistan

Difference between the two Debts, Is Debt Creation Always Bad?Concerns Regarding Pakistan's Fiscal Deficit, Reforms to Bring Debt under Control.

7.   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.

8.   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 andother Socioeconomic Indicators in Pakistan, Exchange Rate Regimes in Pakistan, The Weakening Currency of Pakistan., Why can't Muslims Adopt a Common Currency?

9.   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.

10.   Recent Challenges Facing Pakistan Economy

Law and Order Situation, Energy Crises, Rising Circular Debt, or any other recent economic challenges.

TEACHING METHODOLOGY
* Lectures
* In Class Activities
* Group Discussion
* Guest Lectures (optional)
* Term Paper (optional)

TEXT AND REFERENCE BOOKS
* Zaidi, Akbar.Issues in Pakistan's Economy, Oxford University Press,Karachi. (Latestedition).
* 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.
* Rashid, Amjed and Barki, Shahid Javed (2016)Pakistan Moving the EconomyForward.Oxford University Press, Karachi.

COURSE TITLE	**LABOUR ECONOMICS**
COURSE CODE	**Eco-315**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE DESCRIPTION

This course is aiming to provide an exposure of the functioning of labour market. This course isexpected to impart the skills essentially needed to understand the topics like labour demand andsupply, wage determination, labor migration, unemployment, and the role of labor unions.

COURSE OBJECTIVES

- To understand the dynamics of labour market.
- To understand the employment decisions initiated by the firm.
- To understand the mechanism of wage determination.
- To analyze the causes of unemployment for potential policy interventions.

COURSE LEARNING OUTCOMES

Upon Successful Completion, the studentmust be able to:

- UNDERSTAND that how firms make decisions about their need for workers, how workers make labour supply decisions and how wages and other benefits are determined
- IDENTIFY role of migration and labour unions
- Acquire KNOWLEDGE of relevant public policies, such as minimum wage.

COURSE CONTENTS

1.   Introduction

Introduction of the labour market, Important actors of the labour market, Importance of the understanding of the labour market.

2.   Labour Supply

Defining and measuring the labour force, Factors behind labour supply, Understanding the worker's preferences, Derivation of labour supply curve, Measuring the elasticity of labour supply

3.   Labour Demand

The production function, Employment decisions by the firm and factors related to these Decisions, Cost adjustment and labour demand, The effect of minimum wage on labour demand

4.   Labour Market Equilibrium

Labour market equilibrium in a competitive environment, Competitive equilibrium across labour markets, Economic impact of labour force migration, The cobweb model in labour market, Non-competitive labour markets

5.   Compensating Wage Differentials

The Market for risky jobs, Hedonic wage estimation, Safety and health regulations, Compensating wage differentials, Health insurance and labor market

6.   Human Capital

Education and labour market, Present value of education, The schooling model, Education and earning, On-job trainings

7.   The Wage Structure

The earnings distribution, Explanation of wage inequality, Family migration, The job match, Job turnover and retention policies.

8.   Labour Market Discrimination

Race and gender based discrimination in labor market, Estimation of the coefficient for discrimination, Employer discrimination, Employee discrimination, Discrimination among other groups.

9.   Labour Unions and Collective Bargaining

Labour union: background and facts, Determinants of union membership, Unions and monopoly, Efficient bargaining, Strikes, Wage and non-wage effects of union.

10.   Unemployment

Types of unemployment, Mismatching and unemployment, Unemployment compensation, Intervention in labour markets and unemployment

TEACHING METHODOLOGY
- Lectures
- In Class Activities
- Group Discussion
- Assignments
- Guest Lectures (optional)
- Term Paper (optional)

TEXT AND REFERENCE BOOKS
- Borjas, George J. (2008). Labor Economics. McGraw-Hill/Irwin.
- McConnell et al. Contemporary Labor Economics, (latest edition), McGraw-Hill/Irwin.
- R. Ehrenberg and R. Smith. Modern Labor Economics, (latest edition), Addison Wesley

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	**MACROECONOMIC ANALYSIS**
COURSE CODE	**Eco-321**
CREDIT HOURS	**03**
PREREQUISITE	**Intermediate Macroeconomics**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE DESCRIPTION

This is an advanced course of macroeconomics built on principles of macroeconomics and intermediate macroeconomics courses. There will be in depth analysis of macroeconomic theories and policies and effort will be made to make the study more realistic and applicable in real life situations relating to macroeconomic activities. This course focuses mainly on theeconomy in the very long run (growth theories),towards microeconomic foundations of themacro economy, open economy, macroeconomic policy

COURSE OBJECTIVES

- To give students a thorough understanding of the macroeconomic system. The theoretical and empirical underpinnings of the Growth models, conduct of monetary policy and fiscal policy in closed and open economies.
- To provide students with the necessary mathematical tools to analyze complex macroeconomic problems.
- To enable students to understand and analyze short-run behavior of an economy.
- To look at the role of different stabilization policies in the short run of an economy.
- To utilize macroeconomic theories in applied research.

COURSE LEARNING OUTCOMES

Upon completion of this course students should:

- STRENGTHEN grip on macroeconomic tools with a wider coverage of topics and scope of study and their application in real life situations.
- UNDERSTAND the main insights into the economic growth process that economists have gleaned over the past half century.
- Be ABLE to identify applications and limitations of the macro models learned.
- IDENTIFY the underlying causes of important economic problems and possible strategies to tackle them.
- CRITICALLY ANALYZE the economic events taking place around us and to evaluate government economic policies.
- UNDERSTAND the complications of open economies and strengths of economies to compete in global competition.

COURSE OUTLINE

1.   The Economy in The Very Long Run

Economic Growth I:

Capital Accumulation and Population Growth, The Accumulation of Capital; The Supply and Demand for Goods, Growth in the Capital Stock and the Steady State, Approaching the Steady State: A Numerical Example, How Saving Affects Growth, The Golden Rule Level of Capital; Comparing Steady States, Finding the Golden Rule Steady State: A Numerical Example, The Transition to the Golden Rule Steady State Population Growth; The Steady State with Population

Growth, TheEffects of Population Growth, Alternative Perspectives on PopulationGrowth.

Economic Growth II:

Technology, Empirics, Policy, and Human Capital technological Progress in the Solow Model; The Efficiency of Labor,The Steady State with Technological Progress, The Effects ofTechnological Progress, From Growth Theory to Growth Empirics; Balanced Growth, Convergence, Factor Accumulation Versus Production Efficiency, Policies to Promote Growth;Evaluating the Rate of Saving, Changingthe Rate of Saving, Allocating the Economy's Investment, Establishingthe Right Institutions, Encouraging Technological Progress, Beyond the Solow Model: Endogenous Growth Theory; The BasicModel, A Two-Sector Model,TheMicroeconomics of Researchand Development, The Process of Creative Destruction

Economic Growth III:

Beyond the Correlates of Economic Growth, The Effect of Culture on Economic Growth;Openness to NewIdeas, Hard Work, Saving for the Future, Trust, Social Capital, Social Capability, What Determines Culture?; Climate and Natural Resources, Cultural Homogeneity and Social Capital, Population Density and Social Capability, Cultural Change; Economic Growth and Cultural Change, Government Policy and Cultural Change, Geography; Location, Trade and Growth, Geographic Concentration and Spillovers, Geography's Effect on GovernmentClimate; Climate and Agricultural Productivity, Climate and Disease, Climate and Human Effort,Natural Resources; The Relationship between Natural Resources andGrowth, Explanations for the Resource Curse

2. **Towards Microeconomic Foundations of The Macro Economy**

Understanding Consumer Behavior

John Maynard Keynes and the Consumption Function; Keynes'sConjectures, The Early Empirical Successes, Secular Stagnation, Simon Kuznets, and the Consumption Puzzle, Irving Fisher and Intertemporal Choice; The Intertemporal Budget Constraint, Consumer Preferences, Optimization, How Changes in Income Affect Consumption, How Changes in the Real Interest Rate Affect Consumption, Constraints on Borrowing,Franco Modigliani and the Life-Cycle Hypothesis,Milton Friedman and the Permanent-Income Hypothesis,Robert Hall and the Random-Walk Hypothesis,David Laibson and the Pull of Instant Gratification

The Theory of Investment

Business Fixed Investment; The Rental Price of Capital, The Cost ofCapital, The Determinants of Investment, Taxes and Investment, The Stock Market and Tobin's q, Alternative Views of the Stock Market: The Efficient Markets Hypothesis Versus Keynes's Beauty Contest, Financing Constraints,Residential Investment; The Stock Equilibrium and the Flow Supply, Changes in Housing Demand, Inventory Investment; Reasons for Holding Inventories, How the RealInterest Rate and Credit Conditions Affect Inventory, and Investment.

3. **International Macroeconomics: The Open Economy**

The Open Economy

The International Flows of Capital and Goods; The Role of NetExports, International Capital Flows and the Trade Balance, International Flows of Goods and Capital: An Example Saving and Investment in a Small Open Economy; Capital Mobility and the World Interest Rate, Why Assume a Small Open Economy?, The Model, How Policies Influence the Trade Balance, Evaluating Economic Policy, Exchange Rates; Nominal and Real Exchange Rates, The Real Exchange Rate and the Trade Balance, The Determinants of the Real Exchange Rate, How Policies Influence the Real Exchange Rate, The Effects of Trade Policies, The Determinants of

the Nominal Exchange Rate, The Special Case of Purchasing-Power Parity

Open Economy Revisited

The Mundell-Fleming Model; The Key Assumption: Small OpenEconomy With Perfect Capital Mobility, The Goods Market and the IS Curve, The Money Market and the LM Curve,Putting the Pieces Together, The Small Open Economy Under Floating Exchange Rates; Fiscal Policy, Monetary Policy, Trade Policy, The Small Open Economy Under Fixed Exchange Rates; How aFixed-Exchange-Rate System Works, Fiscal Policy, Monetary Policy, Trade Policy, Policy in the Mundell-Fleming Model: A Summary, Interest Rate Differentials; Country Risk and Exchange-Rate Expectations, Differentials in the Mundell-Fleming Model, Should Exchange Rates Be Floating or Fixed?, Pros and Cons of Different Exchange-Rate Systems, Speculative Attacks, Currency Boards, and Dollarization, The Impossible Trinity, From the Short Run to the Long Run: The Mundell-Fleming Model With a Changing Price Level

4.   Macroeconomic Policy

Alternative Perspectives on Stabilization Policy, Should Policy Be Active or Passive?; Lags in the Implementation andEffects of Policies, The Difficult Job of Economic Forecasting,Ignorance, Expectations, and the Lucas Critique, The HistoricalRecord, Should Policy Be Conducted by Rule or by Discretion?, Distrust ofPolicymakers and the Political Process, The Time Inconsistency ofDiscretionary Policy, Rules for Monetary Policy.

Government Debt and Budget Deficits, The Size of the Government Debt , Four Problems in Measurement i.e. Inflation,Capital Assets,Uncounted Liabilities, and The Business Cycle,The Traditional View of Government Debt, The Ricardian View of Government Debt; The Basic Logic of RicardianEquivalence, Consumers and Future Taxes, Making a Choice, Other Perspectives on Government Debt, Balanced Budgets VersusOptimal Fiscal Policy, Fiscal Effects on Monetary Policy, The Financial System: Opportunities and Dangers, What Does the Financial System Do?; Financing Investment, SharingRisk, Dealing With Asymmetric Information, Fostering Economic Growth, Financial Crises; The Anatomy of a Crisis, Policy Responses to a

Crisis, Policies to Prevent Crises

TEACHING METHODOLOGY

- Lectures
- Interactive learning
- Written Assignments

TEXTS AND REFERENCE BOOKS

- Barro R., and X. Sala-i-Martin, Economic Growth, 2nd Edition., MIT Press, Cambridge,MA.
- Mankiw, N. Gregory. Macroeconomics.8th Edition, Worth Publishers.
- Richard T. Froyen, Macroeconomics: Theories and Policies, 10th Edition
- Romer D., Advanced Macroeconomics, 4th Edition, McGraw Hill Publishers.
- Williamson, Stephen D. Macroeconomics.(latest Edition), Prentice Hall.
- Willam M. Scarth , Macroeconomics: An introduction to advanced Methods, 2nd Edition

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	ECONOMETRICS-I
COURSE CODE	Eco-322
CREDIT HOURS	03
PREREQUISITE	Inferential Statistics
REV. NO.	01
DATE	June 04, 2021

COURSE DESCRIPTION

This course basically focuses on techniques for estimating linear regression models, problems commonly encountered in estimating these models, and on interpreting the estimates of models. As estimation and interpretation are marketable skills so this course will teach basics of econometric theory and practice to inculcate skills for estimation of econometric models with actual data.

COURSE OBJECTIVES

This course is designed to develop basic understanding in students about econometrics andprovide working knowledge of its basic tools. After completion of this course, students

- Can apply econometric tools for modeling, estimation, inference, and forecasting in the context of real-world economic problems.
- Be capable to apply appropriate estimation techniques under different typesof data/modelproblems
- Can evaluate critically the results and conclusions of other researchers.
- Have a foundation and understanding for advanced level course ineconometrics.

COURSE LEARNING OUTCOMES

On successful completion of this course, students will be able to:

- APPLY knowledge of regression technique for analyzing economic data.
- INTERPRET and CRITICAL to evaluate the outcomes of empirical analysis
- USE elementary procedures for model validation in the single equationcontext.

COURSE CONTENTS

1.   An Introduction to Econometrics

Why Study Econometrics?Methodology of Econometrics, Types of Econometrics, Data types and its sources

2.   The Classical Linear Regression Model (CLRM)

Simple Regression function, Population regression function, Linear regression function, Linearity in variables and linearity in parameters, Simple Regression Analysis, Estimation of regression equation using OLS, Statistical properties of OLS estimators (BLUE), Classical Linear Regression Model (CLRM) and its assumptions, Coefficient of determination,Estimation of the coefficient of determination.

3.   The Multiple Linear Regression Model (MLRM)

Multiple Regression Analysis, Difference between simple and multiple regression analysis, OLS estimation of multiple regression equation, Properties of OLS estimators, Coefficient of determination (R^2) and Adjusted R^2, Testing the significance of Regression coefficients (t-test), Testing the overall significance (F-test) of the model

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	**MONETARY ECONOMICS**
COURSE CODE	**Eco-323**
CREDIT HOURS	**03**
PREREQUISITE	**Principles of Macroeconomics**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE DESCRIPTION

This course is designed to provide a foundation for the monetary economics to the students. It will cover topics such as the definitions of money and its role, portfolio choice, financial markets and banks, exchange rate fluctuations, central banks, monetary policy, and the monetary transmission mechanism.

COURSE OBJECTIVES

- To provide a thorough understanding of monetary policy and financial markets
- To give the comprehension of money and interest rates in the economy
- To make a comparison of monetary policy in closed and open economy
- To analyze the Monetarists' and Keynesian views of inflation.

COURSE LEARNING OUTCOMES

Upon successful completion of the course, the student will be able to:

- ACQUIRE the basic knowledge of money, money markets and financial markets
- UNDERSTAND the transmission mechanism of monetary policy
- ABILITY to develop and evaluate monetary policy models
- EVALUATE the monetary policies
- DEMONSTRATE the choices and objectives of monetary policy

COURSEOUTLINE

1.   Introduction and Development of Monetary Mechanism

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

2.   Role of Money in the Economy

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

3.   Theory of Demand for Money

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

4.   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 MoneySupply Model.

5. The Conduct of Monetary Policy: Central Bank

Structure and Functions of Central Bank, Independence of Central Bank and its Role in Economic Growth, Tools of Central Bank for Money Control, The Conduct of Monetary Policy: Goals and Targets, Tools of Monetary Policy and their Comparative Analysis, Impact Analysis of Monetary Policy Tools, Financial Intermediaries, Monetization of Public Debt, Infectiveness of Stabilization Policies, Targeting interest rate and inflation.

6. Money and Interest Rates

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

7. Money and Inflation

Inflation, Kinds of Inflation and Causes of Inflation, Demand - pull Inflation, Cost - push Inflation, Stagflation and Hyperinflation, Inflation as a Monetary Phenomenon, The Philips Curve and Accelerating Inflation, Situation Analysis of Inflation in Pakistan: Historical Perspective, Causes of Inflation in Pakistan, Policies to Combat Inflation in Pakistan

8. Monetary Policy in International Framework

Money Demand and Empirical Evidences, Money in Growth Models, Inflationary Spiral, Monetary and Financial Sector Reforms, Financial Sector Reforms in Pakistan, Monetary Policy in Fixed and Flexible Exchange Rates, Perfect Mobility of Capital and Money Control, Impact of Reserves on Balance of Pakistan (BOP) and ExchangeRates, Targeting Exchange Rate, Managed Exchange Rate System and Monetary Policy, Targeting Inflation, Exchange Rate and Balance of Payment.

TEACHING METHODOLOGY

- Lectures
- Guest Speaker (optional)
- Group Discussion
- Written Assignments

TEXTS AND REFERENCE BOOKS

- Mishkin, Frederic S. The Economics of Money, Banking and Financial Markets. Pearson (11th edition)
- Cecchetti, Stephen and Kermit, Schoenholtz. Money, Banking and Financial Markets. McGraw-Hill.(4th edition).
- McCallum, Bennett T. Monetary Economics, Theory and Policy. McMillan. (Latest Edition).
- Laider, David E. W. The Demand for Money: Theories, Evidence and Problems. Pearson. (4th edition).
- Miller, R. L. and Van Hoose, D. Money, Banking and Financial Markets. Thomson South-Western (Latest edition).
- Patinkin, D. Money, Interest, and Prices: An Integration of Monetary and Value Theory. The MIT Press (Latest edition).
- Handa, J. Monetary Economics. Routledge. (Latest edition).

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	**FINANCIAL ECONOMICS**
COURSE CODE	**Eco-324**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**00**

COURSE DESCRIPTION
This course is designed to provide an overview of financial economics as a specialized field of economics. It is a foundation course for studying courses line international finance. It includes discussion of the efficient markets theory and presents an overview of quantitative methods in finance. Further the course covers the new developments in financial economics.

COURSE OBJECTIVES
- To introduce the fundamentals of financial economics
- To understand financial system
- To explain the financial decision-making process, essential for understanding various financial contracts, such as stocks, bonds, and derivatives contracts

COURSE LEARNING OUTCOMES
At the end of the course, students should be able to
- UNDERSTAND the primary functions of the Financial System
- RECOGNIZE the structure of the Financial Markets
- IDENTIFY the Financial Market Instruments and understand the causes offinancial instability
- CLARIFY the role of central banking

COURSE CONTENTS
1. An Introduction to Financial Economics
2. Risk and Risk Aversion
3. The Capital Allocation Decision
4. Optimal Risky Portfolios
5. The Capital Asset Pricing Model and some of its limitations
6. Multi-Factor Models (Arbitrage Pricing Theory)
Factor model, Arbitrage opportunity, APT, Fama-French three factor model
7. Efficient Markets Hypothesis
Random walk, Autoregressive (AR) process, Unit root process, Predictability
8. Rise of Behavioural Finance
9. Bond Yields and Interest Rate Risk
10. The Term Structure of Interest Rates
11. Minsky's Financial Instability Hypothesis and Financial Crises

TEACHING METHODOLOGY
- Lectures
- Guest Speaker
- Class Presentations

TEXT AND REFERENCE BOOKS
- Fredric S. Mishkin, The Economics of Money, Banking and Financial Markets, (latest

edition), The Pearson Series in Economics.
- Stephen F. LeRoy and Jan Werner, Principles of Financial Economics, (latest edition), Cambridge University Press.

COURSE TITLE	**RESEARCH METHODOLOGY**
COURSE CODE	**Eco-411**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE DESCRIPTION

This course is designed to enable the students to understand the basics of research and its processadopted in field of economics, which include the research fundamentals, research design,literature review, data sciences, sampling, data analysis and thesis/ report writing.

COURSE OBJECTIVES

By the end of this course following Bloom's Taxonomy the students shall be able:
- To understand the research process followed in economics.
- To apply research techniques for analysis of economic problems.
- To familiarize the students to identify the researchable issues in the economy.
- To equip the students with basic research techniques of data collection,analysis, writing and presentation.

COURSE LEARNING OUTCOMES

By studying this course, the students shall be able to:
- IDENTIFY economic problems and analyze them by using scientific process of empirical inquiry in economics discipline.
- ACQUIRE UNDERSTANDING about conducting research in economics based on certain economic issue.
- DESCRIBE the research question; explore the strengths of various methods, and techniques to address the stated problem.
- APPLY different computational techniques to analyze the data.

COURSE CONTENTS

1. Introduction

Basic Concepts, Definitions, Terminologies.

2. Research types and designs

Research Types; Advantages and disadvantages of different researchtypes, Research designs; Advantages and disadvantages of differentdesigns.

3. Literature review

Formats, finding research journals, journals by ranking, themes etc., Review styles; Summary of each paper vs. review of many papersunder one theme [thematic review], Gap finding.

4. Sampling

Types of sampling, Methods of sampling, Determining the sample size, Handling the issues.

5. Data Sciences

Data types: primary and secondary, Qualitative and Quantitative,Cross sectional, Time Series and panel data

6. Data analysis

Descriptive analysis, Regression, Qualitative data analysis models, Time Series and Panel Data

analysis models, Data Visualization.

7.   Thesis /Report writings

Elements of thesis / report; Abstract, Introduction, Review of Literature,Framework of Analysis, Estimation, Results and discussion, andConclusion, References; APAand other formats, Plagiarism, and its outcomes to researchers.

TEACHING METHODOLOGY

- Lectures
- Practical assignments based on applied issues in economics in the region.
- Class Presentations
- Software i.e. EndNote etc. (Optional)

TEXT AND REFERENCE BOOKS

- Kothari,C.R. Research Methodology: Methods and Techniques, New Delhi, Wiley Eastern Limited. Latest Edition.
- Dawson, Catherine Practical Research Methods,NewDelhi,UBS Publishers, LatestEdition.
- Kumar, Ranjit. Research Methodology: A Step by Guide for Beginners, Second Edition, Singapore, Pearson Education. Latest Edition.
- Etheridge Don E. Research Methodology in Applied Economics: Organizing, planning and Conducting Economic Research,   2nd Edition. Blackwell Publishing

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	ECONOMETRICS-II
COURSE CODE	Eco-412
CREDIT HOURS	03
PREREQUISITE	Econometrics-I
REV. NO.	01
DATE	June 04, 2021

COURSE DESCRIPTION

Econometricians use econometric tools to forecast future developments in the economy. They can measure past relationships among variables such as consumer spending, household income, tax rates, interest rates, employment, etc., in order to forecast how changes in some variables will affect the future outcomes of others. This course is designed to develop an understanding among students about nonlinear estimation techniques, simultaneous equation models, panel data models, dummy dependent variable models and time series analysis.

COURSE OBJECTIVES

This course is designed to teach the model building approach, and students will learn methods to conduct independent analysis of real world economic data. After completion of this course, students would be able to:

- Estimate and interpret the non-linear regression models.
- Understand the issues related to the estimation of limited dependent variable and time series models.
- Identify appropriate simultaneous equations technique for estimation.
- Appraise econometric analysis with respect to choice of model, estimation method and interpretation

COURSE LEARNING OUTCOMES

Upon successful completion of the course, student will be able to:

- APPLY appropriate tools for analyzing economic data.
- INTERPRET and CRITICIZE the estimates of the outcomes of empirical analysis.
- VALIDATE models using elementary procedures.

COURSE OUTLINE

1.   Nonlinear Regression Models

Intrinsically linear and intrinsically nonlinear Regression models, Estimation of nonlinear Regression models

2.   Qualitative Response Regression Models

The nature of qualitative response models, The linear probability model, Applications of linear probability model, The logit model, Estimation of the Logit model, The grouped Logit model, The Logit model for ungrouped or individual data, The Probit model, Probit model estimation with grouped data,The Probit model for ungrouped or individual data, The Tobit model

3.   Time-Series Econometrics

Stationarity, Tests for Stationarity, Transforming Non-stationary Time Series, ARMA and ARIMA Models, Comparison of forecast based on ARIMA and regression models,,Cointegration and Error Correction Models (ECM), ARCH and GARCH models

4.   Pool and Panel Data

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

5.   Simultaneous Equation Models and Estimation Methods

Simultaneous equation models, Nature of simultaneous equations, Examples of simultaneous equation models from economic theory, Inconsistency of OLS estimators, Identification problem, Unidentified, exactly identified and over identified, Rules for identification, Simultaneous equations approach to estimation, Indirect least squares, Two-stage least squares, Instrumental Variables, Seemingly unrelated regression (SUR), Nature of SUR equations, Method ofGeneralized Least Squares

TEACHING METHODOLOGY

- Lectures
- Assignments
- Presentations
- Use of Software (Eviews/STATA/SPSS/Minitab/R, etc.)

TEXT AND REFERENCE BOOKS

- Dimitrios, A. and Hall, S.G. Applied Econometrics: A Modern Approach using Eviews and Microfit, Palgrave, Macmillan
- Gujarati, D. N. Basic Econometrics McGraw-Hill Company.
- Hill, R.C., Griffiths, W.E. and Lim, G.C. Principles of Econometrics, JohnWiley, New York.
- Stock H. J. and M. W. Watson Introduction to Econometrics, Pearson Education.
- Wooldridge J. M. Econometric Analysis of Cross Section and Panel Data, The MIT Press, Latest edition.

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	**PUBLIC FINANCE**
COURSE CODE	**Eco-413**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE DESCRIPTION

This course is based on the economic analysis of public sector. The course involves theories of public expenditure and revenue (taxation), using concepts and tools in microeconomics and welfare economics. Furthermore, the role of government in efficiency and equity is also emphasized.

COURSE OBJECTIVES

- Provide arguments for the case of government intervention in a moderneconomy
- Understanding the functioning of public finance
- To explain the rational and form of taxation

COURSE LEARNING OUTCOMES

- ANALYZE the functioning of modern public finance
- IDENTIFY the types of public needs and the mechanisms of their financing
- UNDERSTAND the instruments and objectives of budgetary policy

COURSE CONTENTS

1. Introduction

The State and the Economy, The Rationale for State Intervention

2. Fundamentals of Welfare Economics

Market Efficiency, Market Failure, Efficiency and Equity

3. Analysis of Public Expenditure

Public Goods, Public Choice, Public production and Bureaucracy, Externalities, Cost BenefitAnalysis

4. Expenditure Programmes

The Analysis of Expenditure Policy, Cost Benefit Analysis

5. The Theory of Taxation

Introduction to Taxation, Tax Incidence, Taxation and Economic Efficiency, Optimal Taxation

6. Selective Topics

Public Finance in a Federal System, Deficit Finance

TEACHING METHODOLOGY

- Lectures
- Guest Speaker (if any)
- Group Discussion

TEXTS AND REFERENCE BOOKS

- Rosen Harvey S, Public Finance. McGraw Hill.
- Rosen Harvey S and Gayer Ted, Public Finance. McGraw Hill.
- Musgrave R. A and P. B. Musgrave, Public Finance in Theory and Practice
- Stiglitz J. S, Economics of the Public Sector Norton and Company.

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	**INTERNATIONAL ECONOMICS**
COURSE CODE	**Eco-414**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE DESCRIPTION

The subject matter of international economics consists of issues raised by the special problems of economic interactions among nations. The subject explains the gains from trade, the pattern of trade, protectionism, the balance of payments, exchange-rate determination, international policy coordination, and the international capital market.

COURSE OBJECTIVES

The main objectives of the course are:
- To apply the theoretical models of trade into practice
- 2. To introduce the students with alternative trade barriers or enabling the students to critically analyze the pros and cons of free trade vs restricted trade 3. To provide information regarding the overall economic development of the country.

COURSE LEARNING OUTCOMES

Upon successful completion of the course, the student will be able to:
- UNDERSTAND the existing patterns of international trade and what determines them, or the theories and practices of world trade
- RECOGNIZE the functioning of foreign exchange market and balance of payments
- ANALYZE the implications of international trade for the economies of the world both developing and developed.

COURSE OUTLINE

1.   Introduction

International Economics and Economic theory, The subject matter of International Economics, Importance of international trade in the changing world

2.   Theories of International Trade

History of International trade, Pre-classical theories of internationaltrade-Mercantilism, and Physiocracy.Classicaltheories of InternationalTrade- absolute advantage,comparative advantage and reciprocal demand, Neo-Classical theories of international trade- Opportunity cost theory, Modern Theory of International Trade- H-O Theory, H-O-S Hypothesis, Leontief Paradox. Alternative theories of trade-Human Skills, Technology and product cycle theories. Use of indifference curves, offer curves and box diagrams for exposition of trade theory

3.   International trade Policies

Free trade vs protected trade, Objectives of commercial policy, Instruments of trade policies-tariff barriers, non-tariff trade barriers, GATT, WTO

4.   Trade policies in Developing countries

Import substituting Industrialization, Export oriented Industrialization

5.   Economic integration

Types and reason of economic integration, The theory of customs union, static and dynamic effects of customunions. Economic integration among the countries- EU and SAARC, The foreign Exchange Markets, Definition and Functions, Hedging and Speculation, Types and determination of exchange rate, The Balance of Payments, Balance of payments accounting, Features of balance of payments, Components of balance of payments, Measuring the deficit or surplus of balance of payment

TEACHING METHODOLOGY

- Lectures
- Written Assignments
- Guest Speaker (if any)
- Class presentations

TEXT AND REFERENCE BOOKS

- Salvatore, D. International Economics, (latest edition).Wiley Global Education.
- Krugman, P. R. International Economics: Theory and policy, (latest edition), Pearson Education India.
- FrancisCheruniliam. International Economics, (latest edition), The McGraw-Hill Companies

COURSE TITLE	ISLAMICECONOMICS
COURSE CODE	Eco-421
CREDIT HOURS	03
PREREQUISITE	Nil
REV. NO.	01
DATE	June 04, 2021

COURSE DESCRIPTION

The objective of studying social sciences is to help in achieving human wellbeing. However, framework in conventional economics is secular. Hence, the objective of every member in a society is to maximize his/her own material well-being. According to neo-classical paradigm individuals maximize the welfare of a society while maximizing private self-interest. In other words there exist no fallacies of composition. That is, whatever is in the self-interest of an individual, is also in the interest of a society as a whole. Hence, there is no need to motivate economics agent for behaving in line with the interest of society. Keynesians though believe on the clash between self and social interest and admit the existence of fallacies of composition such as 'paradox of thrift' and 'liquidity trap' however, they believe that such anomalies can be resolvedby appropriate government intervention and not by changing the fundamental objective ofindividuals. Still we are observing manyeconomic issues in the world. In this subject we will discuss how Islam provides a better alternative.

COURSE OBJECTIVE

The objectives of this course are:

- To introduce the basic concepts and principles of Islamic economics.
- A enable the students for comparative analysis of different economicsystems.
- To enable the students to understand the role of values in economy
- To explain the theories and concepts of the Sharia'h compliant financial system in an Islamic economy.
- To appraise the efforts undertaken in Pakistan and other Islamic countries at the state level as well as in private sector to revamp overall economy on the universal principles of Shariah.
- To outline the challenges faced in transformation of contemporary interest based economy into interest free economy.

COURSE LEARNING OUTCOMES

Upon successful completion of the course, the student will be able to:

- DIFFERENTIATE between the major characteristics of the dominant conventional
- economic systems (capitalism and Communism/socialism) and one based on the fundamental principles of Islam
- UNDERSTAND the conditions that should be met for a just, well-balanced, stable, and growing economy under Islamic perspective.
- UNDERSTAND the Islamic principles governing Islamic financial system.

COURSE CONTENTS

1. 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,

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Sunnah &Hadith, Ijma Ijtihad/Qiyas/Reason.

2.   Islam and other Economic Systems

Capitalism, Socialism, Communism, Mixed Economic System,Comparison and contrast

3.   Islamic Economics

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

4.   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,Rent and Wages in Islam, Islamic Values and work life

5.   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

6.   Islamic Financial System

Islamic Contracts,Islamic Modes of Financing, Banking in Islam

7.   Financial system in Islamic Economy

Applications of Islamic Financing,Project Financing,Working Capital Financing,Import Financing, Export Financing

8.   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.

9.   Case Studies

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

10.   Emerging Trends and Recent Developments

TEACHING METHODOLOGY

- Lectures
- In Class Activities
- Group Discussion
- Assignments
- Guest Lectures (optional)
- Term Paper (optional)

TEXT AND REFERENCE BOOKS

- 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, Ilmikitab Khana, UrduBazaar, Lahore
- Abbas Mirakhor, Zamir Iqbal, Hossein Askari, Introduction to Islamic Economics:Theoryand Application, John Wiley & Sons.

COURSE TITLE	**POVERTY AND INCOME DISTRIBUTION**
COURSE CODE	**Eco-422**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE DESCRIPTION

Poverty and income inequality have always been issues of concern for economists. Their empirical analysis is of great significance. This course describes the technical issues related with the empirical analysis of poverty and income inequality.

COURSE OBJECTIVES

- To explain the distributional aspects of national income
- To familiarize students with the effects of poverty and income inequality
- To understand the technical issues in the measurement of poverty andinequality

COURSE LEARNING OUTCOMES

Upon Successful Completion, the Students Should be able to:

- UNDERSTAND the importance of income distribution in economic growth
- ANALYSE and INTERPRET the poverty and inequality estimates
- IDENTIFY sources and causes of poverty and inequality
- CONDUCT independent research on poverty and inequality

COURSE CONTENTS

1.   Introduction

The concept of poverty, inequality & well-being, Correlation between inequality & poverty, Consequences of inequality & poverty, Determinants / sources of poverty and inequality

2.   Issues in the Measurement of Poverty & Inequality

Unit of wellbeing, Unit of measurement, Sampling procedure, Problems of grouped and survey data, Issue of relative purchasing power

3.   Empirical Analysis of Poverty

Defining and estimating poverty Lines, Poverty measures, Desirable qualities of good poverty measure, Rigid and adjustable measures, Sub group poverty analysis, Welfare Interpretation of poverty measures, Multidimensional Poverty (concept and measurement)

4.   Empirical Analysis of Inequality

Approaches to measure inequality, Desirable qualities of good inequality measure, Classification of inequality measures and details, Decomposition of inequality

5.   Empirical Analysis of Welfare

Approaches to measure welfare, Desirable qualities of good welfare measure, Classification of welfare measures and details, Decomposition of welfare

6.   Issues in Poverty and Inequality

Migration, inequality and poverty, Fiscal measures, inequality and poverty, Economic development, Inequality and poverty, Globalization, inequality and poverty

7.   Poverty and Inequality in Pakistan

Time series Analysis of inequality, welfare and poverty, International comparison

TEACHING METHODOLOGY
- Lectures
- In Class Activities
- Group Discussion
- Assignments
- Guest Lectures (optional)

TEXT AND REFERENCE BOOKS
- Cowell F.A.Measurement of Inequality, STICERD, London School of Economics and Political Science, London (2000)
- Anand S. Inequality and Poverty in Malaysia, Measurement and Decomposition, A World bank Research Publication, Oxford University Press. (1983)
- Kakwani, N. Income Inequality and Poverty: Methods of Estimation and Policy: Applications, A World bank Research Publication, Oxford University Press. (1980)

COURSE OUTLINES
of
LIST OF OPTIONAL COURSES
(ECONOMICS)

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COURSE TITLE	**MANAGERIAL ECONOMICS**
COURSE CODE	**Eco-316**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE DESCRIPTION

This course is designed to provide a detail understanding of topics related to managerial decisions. This course discusses the use of managerial economics in firm's decision making process, the market forces, price determination under different market structures. It also discusses some managerial theories and also provide an understanding about market regulation strategies and decision under uncertainty.

Course Objectives

This course of managerial economics will help:

- To understand the concept of this economic efficiency.
- To discuss the effects of policy intervention on efficiency of resources as well as effects of government intervention on it.
- To have a good understanding of economic concepts and tools that have direct managerial applications.
- To sharpen their analytical skills through integrating their knowledge of the economic theory with decision making techniques.

Course Contents

1. The Fundamentals of Managerial Economics

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

2. Market Forces: Demand and Supply, Quantitative Demand Analysis

Demand, Supply, Demand Analysis, Elasticity, Price elasticity of demand and supply and use of derivative in finding elasticity of demand & supply, Point elasticity & Are elasticity, income elasticity of demand, cross elasticity of demand, Promotional elasticity of demand, Concept of partial elasticity.

3. Marginal Analysis

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

4. Production and Cost

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

5. Market Structure

Perfect Competition, Monopolies, Monopolistic Competition. Oligopoly. Selected Pricing

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

6. 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.

7. Regulating the Market Economy
Economies of Scale, Taxes and Subsidies, Costs of Regulation

8. 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.

9. 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.

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

RECOMMENDED TEXTS AND BOOKS

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

COURSE TITLE	**COST BENEFIT ANALYSIS**
COURSE CODE	**Eco-317**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE DESCRIPTION

This course explains the phases of project cycle. It explains the cash and benefits flow from point of view of society as a whole and emphasis on the importance of economic analysis rather than merely conducting financial analysis of a project.

COURSE OBJECTIVES

- To equip students with an understanding of the principles of Cost Benefit Analysis (CBA) and project appraisal, with special emphasis on Economic analysis.
- To provide introductory material for those seeking to undertake appraisal exercises by their own.

COURSE LEARNING OUTCOMES

Upon successful completion of the course, the students would be able to:

- UNDERSTAND the rationale of CBA
- DIFFERENTIATE between the Financial and Economic Analysis.
- CONDUCT the cost and benefit analysis of project.

COURSE CONTENTS

1.   Introduction

Rationale of a project and its Cost Benefit Analysis

2.   Project Cycle

Phases ofProject Cycle:Identification, FeasibilityReport, Preparation, Appraisal,Implementation and Evaluation

3.   Project Identification

Sources of Project Identification, Steps of Project Identification

4.   Feasibility Report & Project Planning

Dimensions of a Feasibility Study, Problems in Project Preparation, Linking Projects toResources

5.   Project Appraisal

Purpose of Project Appraisal, Aspects of Project Appraisal: Technical, Managerial, Commercial, Financial and Economic. Economic analysis in detail with pricing of inputs and output, identification and discounting of costs and benefits. Techniques of project appraisal; undiscounted and discounted techniques. Sensitivity analysis

6.   Project Approval

Rules of project approval

7.   Project Implementation

Monitoring Indicators, Kinds of monitoring. Monitoring and reviewing techniques

8.   Project Evaluation

Significance & Purpose, Types and indicators of evaluation

TEACHING METHODOLOGY
- Lectures
- In Class Activities
- Written Assignments
- Project (optional)

TEXT AND REFERENCE BOOKS:
- Broadmanet al. Cost Benefit Analysis: Concepts and Practices, Prentice Hall International (latest edition)
- Manual for Development Projects, Project Wing, Planning &Development Division, Islamabad. (latest edition)

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	**NATURAL RESOURCE ECONOMICS**
COURSE CODE	**Eco-318**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE DESCRIPTION

This course explores the use of natural resources from an economic perspective. The course presents the theories of efficient utilization of natural resources and discusses issues related to current practices of use of natural resources. The course introduces students to the principles, reasoning, and techniques required to solve allocation problems under different social objectives. This subject also discusses issues of sustainability, conservation and preservation of natural resources.

COURSE OBJECTIVES

- To understand economics and management of natural resources
- To acquaint students with the various categories of natural resources and the economic theory associated with their optimal use.

COURSE LEARNING OUTCOMES

Upon Successful Completion, the Students Should be able to:

- RECOGNIZE and EXPLAIN the key categories of natural resources;
- UNDERSTAND the optimal use/depletion of natural resources

COURSE CONTENTS

1. Introduction

An introduction to natural resource economics, Economy-environment interdependence, Natural resource economics: overview

2. Reasons of Studying Natural Resource Economics

Property rights, open access resources, tragedy of the commons, Market failures, externalities and environmental problems, Dynamic decisions and irreversible consequences, Fundamental issues in the economic approach to natural resourceeconomics

3. Imperfect Competition in Natural Resource Markets

Review of basic concepts, perfect competition and imperfectcompetition, Economic approach and Economic Efficiency, Social decision making and socially efficient level, Economic Methods: Strengths and Weaknesses

4. Natural Resources: Types, Classification and Scarcity

Classifications of Natural Resources, renewable and nonrenewable, Measuring resource scarcity, Natural Resource use and conflicts.

5. Fundamentals of Renewable Resources

Open-access resources and steady-state harvests, Socially efficient resource harvesting, The dynamics of renewable resource harvesting

6. Economics of Non-Renewable Resources

Resource taxonomy (current reserves, potential reserves, resourceendowment), Price and size of reserves, theory of efficient extraction:Hoteling rule, mathematical and graphical explanations

7. Optimal Allocation of Scare Natural Resources

The efficient and optimal use of natural resources, Resource scarcity and economic growth, The social welfare function and an optimal allocation of naturalresource,   Economic efficiency,allocation of resources and equity

8. Economic Valuation and Evaluation

Concepts and measurement of value for decision making, Direct method of valuation and indirect method of valuation, Contributions of nature and Non-market valuation methods, Hedonic models

9. Sustainability, Conservation and Preservation

The origins of the sustainability problem, The pursuit of sustainable development, Sustainability, Conservation, and Preservation

10. Population Growth and Natural Resources

Impact of population growth on economic development, Poverty, population and natural Resources, Poverty, inequality and natural Resources

11. Input-Output Analysis, Technology and Environment

Origin, derivation and usefulness of the model

12. Computable General Equilibrium Models and NaturalResources Accounting

TEACHING METHODOLOGY

- Lectures
- In Class Activities
- Group Discussion
- Guest Lectures (optional)
- Term Paper (optional)

TEXT AND REFERENCE BOOKS

- Tietenberg, T.H,and Lewis, L. (2012). Environmental and Natural Resource Economics, (9th Edition), Pearson Addison Wesley.
- Perman,R., Yue M., Common M.,Maddison,D., and Mcgilvray, J. (2011). Natural Resource and Environmental Economics, (4th Edition), Pearson Addison Wesley.
- Nick Hanley, N., Jason, F. S., and White, B. Environmental Economics in Theory and Practice(2nd edition), Palgrave Macmillan.

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	ISSUES IN WORLD ECONOMY
COURSE CODE	Eco-319
CREDIT HOURS	03
PREREQUISITE	Nil
REV. NO.	00

COURSE DESCRIPTION
This course offers a comprehensive analysis of various issues of global economy within the field of International Economics. It investigates the phenomenon of global economy and seeks to provide understanding of today's increasingly interdependent world. This course recognizes that economy cannot be treated separately from other domains of social studies so such topics as political economic theories and models, historical context, cultural phenomenon, role of information and communication technologies, and others will be discussed.

COURSE OBJECTIVES
The basic objective of this course is to focus on major global economic issues that characterize the state of our current world. This course aims to give students a deep and a comprehensive understanding of what global economy is and how to managedomestic economy in the context of a dynamic global economy. This course introduces and critically examines the processes involving the increasing interconnection of the world and its effects on people's lives. The course provides an interdisciplinary perspective on major concepts in order to make sense of the changes taking place at a global scale. It also explores existing debates and case studies in order to illustrate the ongoing challenges that communities face.

COURSE LEARNING OUTCOMES
Upon successful completion of the course, the student will:
- LEARN fundamentals regarding the dynamics of the global economy. They will explore characteristics of capitalist and socialist economies; examine new trends in global economy.
- Be AWARE OF data relating to global economic performance and will be able to interpret what they show.
- Have good KNOWLEDGE of the evolution of the world's monetary and trading systems.
- Be able to apply this theory to investigate and better understand contemporary worldeconomic issues.

COURSE CONTENTS
1. Economic Geography: An Introduction
2. The Historical Development of Capitalism
3. Population
4. Resources and Environment
5. Theoretical Considerations
6. Agriculture
7. Manufacturing
8. Services
9. Transportation and Communications
10. Cities and Urban Economies
11. Consumption

12. International Trade and Investment
13. International Trade Patterns
14. Development and Underdevelopment in the Developing World

TEACHING METHODOLOGY

- Lectures
- In Class Activities
- Written Assignments
- Group Discussion

TEXT AND REFERENCE BOOKS

- Stutz, F. P., & De Souza, A. R. (1998). The world economy: Resources, location, trade, and development. Prentice Hall.
- Stiglitz, J. E. (2002). Globalization and its Discontents. New York.
- Dicken, P. (2007). Global shift: Mapping the changing contours of the world economy. SAGE Publications Ltd.
- Rosser, J. B., & Rosser, M. V. (2018). Comparative economics in a transforming world economy. MIT Press.
- Freidman, T. (2005). The world is flat. New York: Farrar, Straus and Giroux.
- Bhagwati, J. (2007). In defense of globalization: With a new afterword. Oxford University Press.
- Stiglitz, J. E. (2008). Making Globalization Work. WW Norton & Company.

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	**GAME THEORY**
COURSE CODE	**Eco-325**
CREDIT HOURS	**03**
PREREQUISITE	**Intermediate Microeconomics**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE DESCRIPTION

How individuals take decisions in a situation where his/her interests depend not only on own actions but also on the actions of other people as well. Game theory provides the analysis of such strategic interactions. This subject is an introduction to the economic study of game theory. A main aim of this subject is to show how tools and techniques from game theory can be applied to interesting and relevant problems in economics and everyday life.

COURSE OBJECTIVES

- To provide the students a glimpse of how the traditional decision making differ from strategic interaction
- To introduce the basic concepts and techniques related to the strategic interaction
- To show some applications of game theory like Bargaining, Auctions, and Mechanism Design etc.

COURSE LEARNING OUTCOMES

Upon Successful Completion, the Students Should be able to Understand:

- HOW to transform a strategic interaction into a Game?
- How to FIND Equilibrium Outcomes in Strategic Interactions?
- How to APPLY the concepts of game theory into real life strategic interactions?

COURSE CONTENTS

1. Principles and Basic Concepts of Game Theory

Introduction: Basic Concepts, Static Games of Complete Information,Strategic Game: Simultaneous games with pure and discretestrategies, Pure strategy Nash Equilibrium, Pure VersusBehavioral Strategies, Common Knowledge of Rationality,Dominate and dominated strategy,Iterative elimination of dominated strategyCorrelated Equilibrium, Multiple Nash Equilibria, Pareto Optimality, Existence of NashEquilibriumStatic Games of complete but imperfect information Simultaneous games with continuous and mixed strategies,Non-Existence of a Pure Strategy Equilibrium,Mixed Strategy Nash Equilibrium, Dynamic games of complete information, o Sequential Games: Extensive form representation of game, Theory of Backward Induction, Sequential Rationality and, Backward Induction, Sub Game Perfect Nash Equilibrium(SPE), Critique of Backward Induction and Sub gamePerfection, Dynamic games of complete but imperfect information, Sub-games, Sub-game perfect Nash Equilibrium

2. Advanced Concepts of Game Theory

Static Games of Incomplete Information,Static Bayesian Games and Bayesian NashEquilibrium,Examples of Bayesian Equilibrium,Dynamic Games of Incomplete information,Perfect Bayesian Equilibrium,Signaling Games, Repeated games, Finitely Repeated Games with Several Static Equilibria, Infinitely Repeated Games, Infinite Horizon Equilibria,Folk Theorem

3. Applications of Game Theory

Industrial organization:Cournot Model of Duopoly, Cournot Competition Under Asymmetric Information, Providing a Public Good under Incomplete Information, Bertrand Model of Duopoly, the Problem of Commons, Stackelberg Model of Duopoly

Bargaining:Rubinstein Model of Bargaining, Uniqueness of Infinite, Horizon Equilibria, comparative Statics, Auctions:Theory of Auctions and Competitive Bidding

TEACHING METHODOLOGY
- Lectures
- In Class Activities
- Written Assignments

TEXT AND REFERENCE BOOKS
- Mas-Colell, Whinsten and Green. Microeconomic Theory
- H. R. Varian , Microeconomic Analysis
- Martin J. Osborne, An Introduction to Game Theory
- Robert Gibons , Game Theory for Applied EconomistsOsborne and Rubinstein , A Course in Game Theory

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	**AGRICULTURAL ECONOMICS**
COURSE CODE	**Eco-326**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE CONTENTS

➢ **Introduction and Importance of Agriculture**

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

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

Traditional Agriculture and Productivity. Access to non-labor resources

The Framing Environment: Natural Hazards and Economic Uncertainties. The Food problem. Farm Size and Productivity. Farm Size in Pakistan and Productivity Commercial Farms. Impact of Agricultural Reforms on Farm Size.

➢ **Role of Agriculture in Economic Development**

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

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

Introduction. Economic Rent. The Theory of Rent. Rent and Quasi-Rent

The Ricardian 'Corn Rent. The Rental Market. Agricultural Surplus. Characteristics of Landownership in Underdeveloped Agriculture and Pakistan. The Theory of Share Tenancy. Some Extensions of the Share Tenancy Model. Tenant's Status in Pakistan. Agricultural productivity in Pakistan and use of inputs.

➢ **Agriculture in Dualistic Development Models**

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

➢ **Resource Use Efficiency and Technical Change in Peasant Agriculture.**

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

➢ **Supply Response**

Introduction: The Cobweb Model: An Illustration. Price Supply Response in Backward Agriculture. A simple Supply Response Model.

Supply Response in the Underdeveloped Agricultural labor Market, Specifically in Pakistan. The Concept of Marketed Surplus': Some Methods of Estimation.

Some Criticisms of Krishna's Method and the Alternative Approach of Behrman Perennial Crops and Marketed Surplus in Pakistan. Green Revolution in Pakistan and Responses. Present Status of Green Revolution in Pakistan: Empirical Analysis.

➢ **Population and Food Supplies**

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

Synthesis of Population and Food Supply Theories. Malnutrition in Developing Countries like Pakistan and Remedial Manners.

Choice of Planning Strategy for Agriculture Development, Agricultural Project Planning.

Recommended Texts:

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

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	**ECONOMICS OF EDUCATION**
COURSE CODE	**Eco-327**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE OBJECTIVES

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

COURSE CONTENTS

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

RECOMMENDED TEXTS

1. Economics of Education by Dominic J. Brewer and Patrick J. McEwan (2010)
2. Autor, David, Frank Levy, and Richard J. Murnane. "The Consequences of Increasing the Nation's Supply of College Graduates." Policy Brief Written for the Gates Foundation. December, 2003
3. Feinstein, Leon. "Inequality in the Early Cognitive Development of British Children in the 1970 Cohort." *Economica* 70, no. 277 (2003): 73-97.
4. Introduction to Econometrics: 4th Edition by Christopher Dougherty, Oxford University Press (2011, 512pp)
5. Modern Labour Economics, Theory and Public Policy: Ronald Ehrenberg, Robert Smith, 11th edition.
6. Borjas, G. 2008. Labour Economics, pp.268-273.
7. Hanushek, E. A. 1986. "The Economics of Schooling: Production and Efficiency in

PublicSchools." *Journal of Economic Literature* 24(3): 1141-77.

8. Clotfelter, Charles T., and Helen F. Ladd. "Recognizing and Rewarding Success in Public Schools." Chapter 2 in *Holding Schools Accountable*. Edited by Helen Ladd. Washington, DC: Brookings Institution Press, 1996. ISBN: 9780815751038.

9. Rouse, Cecilia Elena, and Alan B. Krueger. "Putting ComputerizedInstruction to the Test: A Randomized Evaluation of a 'Scientifically Based'ReadingProgram."*Economics of Education Review*23, no. 4 (2004): 323-338.

COURSE TITLE	**DYNAMIC OPTIMIZATION**
COURSE CODE	**Eco-328**
CREDIT HOURS	**03**
PREREQUISITE	**Mathematical Economics**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE DESCRIPTION
The Mathematical Economics II is an extension of course "Mathematical Economics I". This course includes various applications of mathematical techniques to economics, particularly economic theory. The absolute knowledge of mathematics is essential to understand almost all areas of economics. In this course, we will discuss the application of linear algebra, differential calculus and optimization techniques to the economics models used in microeconomics and macroeconomics.

COURSE OBJECTIVES
Objectives of the course are:
- To confront the students to advanced mathematical techniques.
- To formulate, analyze and apply mathematical models.
- To learn how to frame economic ideas/ theories in mathematical form.
- To enable the students to handle economic models, interpret the results and solve complex problems.
- To use basic mathematical tools to analyze economic models, especially optimization models, both univariate and multivariate.

COURSE LEARNING OUTCOMES
Upon successful completion of the course, the student will be able to:
- ACQUIRE the basic knowledge to solve economic issues with calculus and linear algebra.
- UNDERSTAND the general framework of mathematical research; an understanding of the role of axioms, assumptions, theorems and
- SOLVE economic problems by using the mathematical methods described inthe subject.
- EVALUATE the standard economic problems by applying mathematicaltechniques(the consumption decision, the production decision, costminimization, simple multi-period decision making).
- DEMONSTRATE the basic computational methods in calculus, algebra, and differential equations.

COURSE OUTLINES
1. Complex Number and Circular Functions
Imaginary and Complex Numbers,Complex Roots, Circular Functions,
2. 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 totalfunctions from marginal functions, Investment & capital formation,Present value (PV) of cash flow, P.V. of a Perpetual Flow, The Domargrowth model.

**3.	First Order differential equation**

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, BernoulliEquation, Separable Variables, Economic Application: Dynamics ofmarket models,Solow growth model.

**4.	Higher Order Differential Equations**

Solution and Verification of second order linear differential equationswith constant coefficients and constant terms,Dynamic stability of equilibrium, Economic applications: Market

models with price expectations,The Interaction of inflation and unemployment in continuous time,

**5.	First Order Difference Equations**

Meaning and definition, First order linear difference equations:Solution and verification of results, Conditions for dynamic stability ofequilibrium, Types of time paths, Economic applications: The Cobweb model, Market model with inventory, Model with price ceiling, Nonlinear difference equations, Thequalitative/graphic approach and phase diagrams.

**6.	Higher Order Difference Equations**

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

**7.	Non-Linear Programming**

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

TEACHING METHODOLOGY
- Lectures
- In class activities
- Assignments

TEXT AND REFERENCE BOOKS
- Chiang, A.C. and Kevin Wainwright. Fundamental Methods of Mathematical Economics, 4th Edition, McGraw Hill Publishing Company.
- Gandalfo, G. Economic Dynamics: Methods and Models, Latest Edition, North Holland Publishing Company
- 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, Addison & Wesley Publishers.

COURSE TITLE	**INDUSTRIAL ORGANIZATION**
COURSE CODE	**Eco-329**
CREDIT HOURS	**03**
PREREQUISITE	**Intermediate Microeconomics**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE DESCRIPTION

This is a course of applied microeconomics. It is concerned with the behaviour of firms in markets, with a focus on strategic interactions. We will study the determinants of market structure, the pricing decisions of firms, the strategic interactions among firms, and the effects of structure and on price and non-price dimensions.

COURSE OBJECTIVES

- To describe the basic models of the interacting firms.
- Solve analytically problems relating to industrial organization.
- To study the rationale of Government intervention in markets.

COURSE LEARNING OUTCOMES

Upon Successful Completion, the Students Should be able to:

- APPLY strategic concepts to analyze firms' and market behaviour
- IDENTIFY various strategic environments and discuss their welfare implications
- ANALYZE basic antitrust and regulatory policy issues
- EXECUTE a research-based project.

COURSE CONTENTS

1.   Monopoly Power and Practice

Price discrimination, Product variety and quality

2.   Game Theory and Oligopoly Markets

Static games and Cournot competition, Dynamic games and first and second movers

3.   Anticompetitive Strategies

Limit pricing and entry deterrence, Price-fixing and repeated games

4.   Contractual Relations between Firms

Horizontal mergers, Vertical and conglomerate mergers

5.   Non-price Competition

Advertising, market power, and information, Research and Development

6.   New Developments in Industrial Organization

Network issues, Auctions and Auction Markets.

TEACHING METHODOLOGY

- Lectures
- In Class Activities
- Group Discussion
- Written Assignments

TEXT AND REFERENCE BOOKS

- LynnePepall, Daniel J.   Richards and George Norman,Industrial Organization: Contemporary Theory and Practice, (latest edition), SouthWestern College Publishing

- Tirole, J .The Theory of Industrial Organization, (latest edition), MIT Press.

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	**ENERGY ECONOMICS**
COURSE CODE	**Eco-415**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE DESCRIPTION
This Energy Economics course explores the economics and structure of markets for different energy sources (such as oil, coal, natural gas), with a focus on electricity, industry structure and regulatory framework. It will also try to examine current policy issues arising from electrical energy production and use the relationship with economic growth and the environment

COURSE OBJECTIVES
1) To provide a better understanding and analysis Global energy trends and current situation
2) To enable the students to combine the economic tools with the goals of energy policy.

COURSE LEARNING OUTCOMES
Upon the completion of the course the students would be able to:
- DESCRIBE the oil, natural gas and coal production background history and markets.
- EXPLAIN the regulatory framework of the electric utility industry.
- SUMMARIZE and explain the major public policy issues regarding energy efficiency and carbon emissions.
- ANALYZE energy-related policy issues using standard economic tools.

COURSE CONTENTS
1. Introduction and Background

Global energy trends and current situation, Energy and the economy - biophysical foundations
2. Oil industry, history and market structure.

Oil, gas, and coal resources - geology, discovery, development,production, refining etc.World distribution of oil resources and production, Non-renewable resource scarcity theory, Oil markets, market structure, and pricing, Oil price shocks and the economy
3. Natural Gas, Nuclear and Coal Industry

World distribution of coal, gas, and uranium resources and production, Nuclear Energy
4. Supply and Demand for Electricity in the US, Pakistan and rest of the world.
5. State Regulatory Model
6. Economics of electric power production, linear programming and marginalcosts.
7. Topics in electric tariff design
8. Electric Industry Restructuring
9. Renewable Resources and Portfolio Standards

Innovation and learning curve - analysis of alternative energytechnologies, Renewable energy - wind, solar, geothermal etc.Energy storage

TEACHING METHODOLOGY
- Lectures
- In Class Activities
- Group Discussion

- Guest Lectures (optional)
- Term Paper (optional)

TEXT AND REFERENCE BOOKS

- Bhattacharyya, S. C. (2011). Energy Economics Concepts, Issues, Markets and Governance, Springer-Verlag.
- Fouquet, R. (2013). Handbook on Energy and Climate Change, Edward Elgar Publishing, Cheltenham.
- Zweifel, P., Praktiknjo, A.J., and Erdmann, G. (2017). Energy Economics: Theory and Applications. Springer Publisher. ISBN: 978-3-662-53020-7

COURSE TITLE	**GENERAL EQUILIBRIUM AND WELFARE ECONOMICS**
COURSE CODE	**Eco-416**
CREDIT HOURS	**03**
PREREQUISITE	**Intermediate Microeconomics**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE DESCRIPTION

In this course, we extend the partial equilibrium analysis, studied in the basic microeconomics, to general equilibrium. Alternatively, here we study the equilibrium and their welfare consequences in case of many markets where the allocation of resources results from the interaction of several economic agents (consumers and producers). The basic structure is based the competitive forces with no externality and noinformation asymmetry accompanied by rational individuals (utilitymaximization of consumers and profit maximization of producers). The maximization behaviour of individual economic agents occur in such a way that all markets clear in a simultaneous way. Second, the course includes the theory of social choice and welfare ranging from the measurement of welfare to the fundamental theorems of welfare. After the completion of course, the student should be able to understand the framework of general equilibrium and its welfare characteristics.

COURSE OBJECTIVES

- To Provide an Overview to Students how the Overall Economic System Works
- To Introduce the Basic Concepts and Techniques related to the Equilibriumin the Overall Economy
- To show the Welfare Characteristics of Overall Economy
- To Show the Students some Applications of General Equilibrium Theory

COURSE LEARNING OUTCOMES

Upon successful completion of the course, the students will be able:

- UNDERSTAND the aggregation of individual Preferences into AggregatePreferences?
- IDENTIFY the interaction of Several Markets at the Same Time Work
- To APPLY the theory of General Equilibrium in Alternative EconomicStructures
- COURSE CONTENTS

1. Introduction to General Equilibrium

Complete Markets, Spot Market vs Forward Market, Partial versus, general equilibrium, theWalrasian System, Exchange Economy,Production Economy

2. Exchange Economy

General equilibrium of Pure Exchange Economy, The Edgeworth BoxDiagram, Offer Curves,Existence, Uniqueness and Stability of Equilibrium, Mathematical and Graphical Representation of General Equilibrium, Pareto Efficiency in Exchange Economy, Contract Curve,Core in Exchange Economy, Interaction between Equilibrium, Pareto Efficiency and Core.

3. Production Economy

General equilibrium of production and consumption; A RobinsonCrusoe Economy: OneConsumer and One Producer Economy, Equation of Contract Curve, Production Possibility Frontier, ISOWelfare Line, Pareto Efficiency in Robinson Crusoe Economy;

General equilibrium in the two-sector model; The Production Economy in Edgeworth Box: 2x2 Model, Pareto Efficiency in 2x2x2 economy, general equilibrium and allocation of resources, Extension of the simple general equilibrium model to any number of Consumers, producers and factors.

3.   Application of General Equilibrium Theory

Some applications like Heckscher-Ohlin Theory of Trade, Stolper-Samuelson Theorems,Problems of the general equilibrium model.

4.   Welfare Economics

Meaning of welfare, measurement of social welfare, Utility PossibilitySet, Social WelfareFunction, Pareto Optimality, Theory of Social Choice, the Majority Rules, Condorcet's Paradox, Borda Count, Arrow's Impossibility Theorem, Maximization of social welfare, Welfaremaximization and perfect competition, the First Fundamental Theorem of Welfare, the Second Fundamental Theorem of Welfare, Monopoly, Externalities, imperfect information, public goods, Some Criticism, Extension and Policy implication

TEACHING METHODOLOGY

- Lectures
- In Class discussion
- Assignments

TEXT AND REFERENCE BOOKS

- James C Moore, General Equilibrium and Welfare Economics: An Introduction (latest edition), Springer.
- Layard, P.R.G and Walters, A.A Microeconomic Theory, Latest Edition.
- Mas-Colell, Andreu, Michael D. Whinston, and Jerry R. Green.Microeconomic Theory
- Eugene Silberberg and Wing Suen.TheStructure ofEconomics:AMathematical Analysis.

COURSE TITLE	**POPULATION ECONOMICS**
COURSE CODE	**Eco-417**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE DESCRIPTION

This course familiarize the students with the basic concepts of demography. The course aims to establish initial understanding of the important demographic issues for   instance, demographic processes, demographics theories, population characteristics, methods of demographic analysis, and the demographic transitions. In the latter part of the course the focus will be on the issues such as urbanization, family change, population aging, and health related issues.

COURSE OBJECTIVES

- To provide the initial exposure of the important demographic issues.
- To enable the students to establish the linkages between economic and demographic factors.

COURSE LEARNING OUTCOMES

Upon Successful Completion, the Students Should be able to:

- UNDERSTAND the importance of demography
- IDENTIFY the factors related to population policies
- Acquire KNOWLEDGE of the population dynamics of Pakistan.

COURSE CONTENTS

1. Introduction

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

2. Theories of Population

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

3. Fertility

Understanding the Concept, Measuring Fertility, Period Measures of Fertility, Cohort Measures of Fertility, Fertility Trends, Fertility & Population Growth in Pakistan

4. Mortality

Components of Mortality, Measuring Mortality, Differentials in Mortality, Estimates of Mortality in Pakistan

5. Migration

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

6. Population Composition: Age & Sex Composition

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

7.   Population Growth & Ageing

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

8.   Urbanization

Demographic Components of Urbanization, Internal Rural-to-Urban Migration, Impact of Population Processes and Urbanization in Pakistan

9.   Population Policy

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

TEACHING METHODOLOGY

- Lectures
- In Class Activities
- Group Discussion
- Guest Lectures (optional)
- Term Paper (optional)

RECOMMENDED BOOKS

- Weeks J. R, Population. An Introduction to Concepts and Issues(latest edition). Wadsworth Publishing Company, USA.
- Poston D. L.& L. F. Bouvier. Population and Society: An Introduction to Demography, (latest edition), Cambridge University Press, UK.

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	**TRADE AND DEVELOPMENT**
COURSE CODE	**Eco-418**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE DESCRIPTION
This course covers the major issues facing developing economies in a global environment. This course exposes students to current policy debates underlying the issues of trade and development.

COURSE OBJECTIVES:
1. To study the linkage between trade and development
2. To understand current policy debates underlying the issue of trade anddevelopment.
3. To understand the regulatory framework governing international trade.

COURSE LEARNING OUTCOMES:
Upon Successful Completion, the Students Should be able to:
- UNDERSTAND linkage between trade and development
- UNDERSTAND major issues of trade and development.
- UNDERSTAND international context of trade and development

COURSE CONTENTS:
1. Comparative advantage, trade and protection
2. Trade in goods and technology transfer
3. Pathways to growth and role of trade
4. Global economic crises and impact on trade and development
5. Private Foreign Direct Investment in developing countries
6. Trade in goods and services and financial development
7. Role of Intellectual Property Rights in trade development
8. The political economy of outward dependency and impact of trade on poverty
9. Welfare effect of trade surplus and trade deficit
10. Role of WTO and UNCTAD in trade and development

TEACHING METHODOLOGY:
- Lectures
- In Class Activities
- Group Discussion
- Guest Lectures (optional)
- Term Paper (optional)

TEXT AND REFERENCE BOOKS
- Stiglitz, J.,Fair Trade for All: How Trade can Promote Development. Oxford University Press, 2007.
- Chang, H.,Rethinking Development Economics, Anthem Press, 2003
- Basu, K.,Analytical Development Economics: The Less Developed Economy Revisited. (latest edition), MIT press.

- Gervais, D., Intellectual Property, Trade and Development, Oxford University Press, 2014
- Hoekman, B., World Trade Organization: Law, Economics, and Politics, Routledge, 2015

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	**ISLAMIC BANKING: THEORY AND PRACTICE**
COURSE CODE	**Eco-419**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE DESCRIPTION
The course covers the topics on Islamic banking system with emphases on chronological development of Islamic banking system, Shariah compliant financial structures, and on Islamic retail, cooperate and treasury products.

COURSE OBJECTIVES
The prime objectives of this course are;
- To know the features, evolution, growth and development of the Islamic banking system in different periods,
- To know the origin, legitimacy, Shariah principles, structure, mechanism andflows of different types of Islamic finance structures,
- To know the Islamic retail, corporate and treasury products,
- To know the various forms of an Islamic investment funds. Sukuk and Takaful.

COURSE LEARNING OUTCOMES
After completion of this course students are expected to;
- DEFEND Islamic banking practices on Shariah grounds and REMOVE misconceptions about similar functioning of dual banking systems,
- RECOGNISE and IDENTIFY the cooperate and investment banking products,
- APPLY various Islamic Finance structures to design Islamic retail products,
- Practically CALCULATE the financials such as return, profit and installment for each of the Islamic retail products, for Islamic cooperate and investment, treasury product, Sukuk and Takaful.
- UNDERSTAND the key features, mechanism, operations and required documentations for Sukuk and Takaful (insurance).

COURSE OUTLINES
1.   Introduction to Islamic Banking
Salient features of Islamic Finance/Banking based on Shariah&Fiqh;Prohibition of Riba,Prohibition of Gharar,Prohibition of Mayser,Prohibition of dealing in unlawful goods and services,Desire for justice and equity based on business Ethics.History and Development of Islamic Banking;During 650 AD - 750 AD,During 750 AD - 1900 AD,During 1900 AD - 2000 AD,2000 AD till date.Difference between Islamic and conventional banking.

2.   Islamic Retail Products
Islamic finance structures used for Home Finance,Islamic finance structures used for Vehicle Finance,Islamic finance structures used for Personal Finance,Islamic finance structures used for Good Finance,Ujrah based Credit Card,Islamic Bank Accounts (current, saving and investment accounts).

3.   Islamic Coperate Products
Islamic Bank Guarantee,Islamic finance structures based Letter of Credit,Coperate finance based

on various Islamic finance structures,Working Capital finance based on various Islamic finance structures,Syndicate finance based on various Islamic finance structures,Current Account based on various Islamic finance structures.

4. Islamic Treasury Products for Liquidity Management

Commodity Instruments based on various Islamic finance structures,Tawarruq Instruments based on various Islamic finance structures,Islamic Agency Instruments,Sukuk Instruments (Asset based Sukuk and Debt-based Sukuk).

5. Islamic Treasury Products for Risk Management

Introduction to Risk Management,Islamic Profit Rate Swap,Currency Swap based on various Islamic finance structures,Mechanism of Islamic Options based on various Islamic financestructures.

6. Conventional Insurance Policy versus Islamic Takaful

Takaful Models,Contractual Relationship,Takaful account,Takaful Indemnity,Takaful Surplus,Expiry of Takaful Policy,Difference between Insurance and Takaful.

7. Zakat Calculation in case of Islamic Banks

Legitimacy of Zakat,Zakat on fixed and on liquid/current assets,Zakat on liabilities, provisions and reserves.

TEACHING METHODOLOGY

- Lectures
- In Class Activities
- Group Discussion
- Guest Lectures (optional)
- Term Paper (optional)

TEXT AND REFERENCE BOOKS

- Arif, M., and M. Iqbal. Foundations of Islamic Banking: The Theory, Practice and Education, Cheltenham, United Kingdom: Edward Elgar Publishing Ltd, 2011.
- Ayub, M. Understanding Islamic Finance, John Wiley and Sons Ltd., The Atrium, Southern Gate, Chichester, West Sussex, England, 2007.
- Hanif, M. Islamic Banking Theory and Practice, Ingram International Inc. ISBN 10: 1475233981 and ISBN 13: 9781475233988, 2012.

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	**HEALTH ECONOMICS**
COURSE CODE	**Eco-423**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE OBJECTIVES
This course is an introduction for advanced economics students to contemporary theoretical analysis of, empirical evidence on and Policy debate about: what and who produces health, how it is produced, variations in its production, and consequences of its production or lack of production

COURSE CONTENTS

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

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

➢ **The fundamental microeconomics of health care**
Is health care really different from other commodities? Is this market failure irreparable, and what does it imply for market versus social or state provision of health care? Have we learnt more since Arrow's basic insights? Health care insurance as a special sub-topic of insurance. The health care market: Supply, demand, industrial organization. Health care as a part of public economics. Why health care is almost everywhere a topic for public economics. The alternate private/public mix which has been developed in different countries. What is happening in Russia? What could happen? How should health care systems be compared? Cost-effectiveness and the role of the economist in the health sector: an introduction. (Students interested in further applications can find them in Cost-Benefit Analysis). Measuring Health : Adjusted Life Years: QALYs, DALYS, life years. How far have we come? Can we really measure cost-effectiveness. Can we produce a single objective function? The debate over WHO rankings. How health and health care has changed in the last century, the last two decades, the last year: an international overview. Demographers' measures, particularly life expectancy. What has happened to Russian mortality in the last century, the last two decades, the last few years? Trying to quantify health care: QALYs, DALYs and WHO rankings. How is it done? What should we do now? What is the research agenda? Problems of Health Care Insurance in theory. Alternate forms of health care provision in the world, and recent changes. Trade- offs in "American" versus "European" systems. Is Health care really different from all other commodities? Are there even partial cures for problems such as the agency problem? How much is inherent, how much is in-built institutionally?

➢ **The pharmaceutical market**
➢ **Health in transition**

> ➢ **The future of health care reform in the world, and particularly Pakistan**

Recommended Texts:

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

COURSE TITLE	**FISCAL POLICY**
COURSE CODE	**Eco-424**
CREDIT HOURS	**03**
PREREQUISITE	**Public Finance**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE DESCRIPTION

The course is intended to equip students with theoretical and analytical issues of Fiscal Policy. Starting with basic topology of Fiscal interventions and its impact on macro variables. Then gradually moving towards Public Choice models and concluding at the fiscal deficit issues.Then we will move towards the stand alone topics such as fiscal federalism, Fiscal Policy inan Islamic Economy and collaboration of monetary and fiscal policy etc.

COURSE OBJECTIVES

- To understand the rationale of government interventions
- To equip students with issues of fiscal policy

COURSE LEARNING OUTCOMES

Upon Successful Completion, the Students Should be able to:

- UNDERSTAND scope of fiscal policy issues
- ACQUIRE knowledge of analytical details in gauging the policy impacts
- UNDERSTAND fiscal policy mechanism of Pakistan

COURSE CONTENTS

1. Fiscal Policy in Equilibrium Models
2. Goals of Macro-Economic Policy
3. Political Economy of Budget Deficits
4. Tax Smoothing
5. Fiscal policy instruments as Automatic Stabilizers
6. Deficits and Interest Rate
7. Government Budget Constraint
8. Ricardian Approach to Budget Deficits
9. Fiscal Sustainability
10. Fiscal Decentralization
11. Third World Debt Crisis
12. Fiscal Policy and Long run Economic Growth
13. Fiscal Policy in Pakistan
14. Fiscal Policy and Resource Allocation in Islam

TEACHING METHODOLOGY

- Lectures
- In Class Activities
- Group Discussion
- Guest Lectures (optional)
- Term Paper (optional)

TEXT AND REFERENCE BOOKS

- Froyen, Richard T., Macroeconomics: Theories and Policies, (latest edition) , Prentice Hall International
- Romer David, Advance Macroeconomics, (latest edition) Edition, McGraw-Hill Irwin
- Brown C.V. & Jackson P.M., Public Sector Economics, (latest edition), Basil Blackwell,

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	**MONETARY POLICY**
COURSE CODE	**Eco-425**
CREDIT HOURS	**03**
PREREQUISITE	**Intermediate Macroeconomics**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE DESCRIPTION

The course begins by considering the goals of monetary policy, in the context of developed and developing countries. Contemporary macroeconomic theory is used to define what is achievable through monetary policy. The course then considers the instruments available to the monetary authorities to achieve these aims, and assesses the relative merits of these approaches to the implementation of monetary policy.

COURSE OBJECTIVES

- Outline the goals of monetary policy
- Review the instruments available to central banks for the achievement of these goals;
- Give an overview of the implementation of monetary policy in practice;

COURSE LEARNING OUTCOMES

By the end of this course, students should be able to

- Outline and give a detailed JUSTIFICATION of the main goals of monetary policy;
- EVALUATE the ability of different monetary policy instruments to achieve these goals;
- REVIEWand assess the experience of a range of economies in conducting monetary policy
- EXPLAIN the difficulties in designing optimal monetary policy and assess alternative solutions to these problems.

COURSE CONTENTS

1. Introduction
2. Rules versus Discretion
3. Evolution of Monetary Policy
4. Goals of Monetary Policy
5. Monetary Policy Targets; intermediate and operational
6. Tools of Monetary Policy
7. Transmission Mechanism
8. Overview of Monetary Policy in Pakistan (present and past)

TEACHING METHODOLOGY

- Lectures
- In Class Activities
- Group Discussion
- Guest Lectures (optional)

TEXT AND REFERENCE BOOKS

- Mishkin, Frederic (2013), The Economics of Money, Banking and Financial Markets, 10th Edition, Pearson, London, UK.
- Abel, Andrew, Bernanke, Ben and Croushore, Dean, Macroeconomics, 9th Edition, Pearson, London, UK.

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	ENVIRONMENTAL ECONOMICS
COURSE CODE	Eco-426
CREDIT HOURS	03
PREREQUISITE	Nil
REV. NO.	01
DATE	June 04, 2021

COURSE DESCRIPTION
Environmental economics is a course in applied welfare economics and considers the efficient and equitable use of society's scarce environmental resources. The course explains the interdependencies between the environment and the economy. The course focuses on market failure particularly externalities and common property resources and studies the economic valuation of environmental amenities such as clean air and ecological systems. It also discusses issues of sustainability, conservation and preservation of natural resources.

COURSE OBJECTIVES
- To demonstrate how environmental problems such as global warming, ozone depletion, air and water pollution are threats to global economy.
- To understand how environmental problems can be approached and analyzed using economic theory.

COURSE LEARNING OUTCOMES
Upon Successful Completion, the Students Should be able to:
- EXPLAIN how economics can be used to address important environmentalproblems.
- DEMONSTRATE how the economy and environment are related
- EXAMINE techniques for quantifying the benefits and costs of improvingenvironmental quality

COURSE CONTENTS
1. Introduction
An introduction to environmental economics, Economy-environment interdependence, Main environmental problems, Environmental economics: An overview
2. Reasons of Studying Environmental Economics
Market failures, externalities, Imperfect competition, Dynamic decisions and irreversible consequences, Public vs. private goods, Property rights and open access resources
3. Economic Efficiency and Social Efficiency
Review of basic concepts, Economic approach and economic efficiency, Social decision making and socially efficient level
4. Externalities
Private costs and benefits, Social costs and benefits, External costs and benefits, Partial welfare analysis of external effects, Benefits and costs of environmental resources, Regulation of external effects
5. Environmental Pollution and Control Mechanisms
Pollution control: targets, Pollution flows and stocks, Privately and socially efficient level of pollution, Pollution control: Instruments
6. Command and control instruments

Economic (market based) instruments, Institutional instruments, Instruments: taxes, subsidies, tradable permits, Pigouvian taxation

7.   Criteria for evaluating environmental policies

Cost efficiency and cost effectiveness

8.   Economic Valuation

Concepts and measurement of value for decision making, Direct method of valuation and indirect method of valuation, Contributions of non-market valuation methods, Hedonic models

9.   Sustainability and Development

Limits to growth, The origins of the sustainability problem, The pursuit of sustainable development

10.   Population Growth and Natural Resources

Impact of population growth on economic development, Poverty, population and natural Resources, Poverty, inequality and natural Resources

11.   Input-Output Analysis, Technology and Environment

Origin, derivation and usefulness of the model

12.   Global Environmental Problems

Global environmental problems, Role of international environmental treaties in control of global pollution

TEACHING METHODOLOGY

- Lectures
- In Class Activities
- Group Discussion
- Guest Lectures (optional)
- Term Paper (optional)

TEXT AND REFERENCE BOOKS

- Nick Hanley, Jason F. Shogren and Ben White. Environmental Economics in Theory and Practice, (2nd edition), Palgrave Macmillan.
- Perman,R., Yue M., Common M.,Maddison, D., and Mcgilvray, J. (2011). Natural Resource and Environmental Economics, (4th Edition), Pearson Addison Wesley.
- Field, B. and Field, M. (2002). Environmental Economics: An Introduction, Boston, McGraw Hill.
- Tietenberg, T.H., andLewis, L. (2012). Environmental and Natural Resource Economics, (9th Edition), Pearson Addison Wesley.

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	**INTERNATIONAL FINANCE**
COURSE CODE	**Eco-427**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE DESCRIPTION

The subject matter of international finance consists of issues raised by the special problems of economic interaction among sovereign states. This course will introduce the main concepts and theories of international finance and illustrates them with applications on the real world issues. Course will address a wide range of issues, including the introduction and foundations of international finance, balance of payments, exchange rates, exchange rate market and its determination's models, open economy macroeconomics and policy adjustment, role of monetary and fiscal policies in open economies.

COURSE OBJECTIVES

This course examines and analyzes important and related macroeconomics issues in open economies. The objectives of the course are

- To understand three important and related macroeconomics issues:exchange rates, capitalflows and balance of payments
- To introduce and critically evaluate the main relevant economic theories, models andempirical works in the key areas of International Finance
- To apply these analytical tools to build an understanding of relevant economicdevelopments and policy issues in the preface of global economy.

COURSE LEARNING OUTCOMES

Upon Successful Completion, the Students Should be able to:

- UNDERSTAND basic international finance terminologies/concepts such as Balance of Payments, Exchange rates and Exchange rate market, etc.
- ILLUSTRATE and EXPLAIN the working of foreign exchange markets; spot market and forward market.
- ANALYZE the exchange rate / balance of payments basic theories: modern and traditional theories.
- EVALUATE the open economy models used to remove internal and external disequilibrium simultaneously: Swan model, Mundell-Fleming model.
- CRITICALLY EVALUATE the claims of politicians and other policymakers regarding the welfare effects of their financial proposals.

COURSE CONTENTS

1. Introduction to international finance concepts: balance of payments, foreign

exchange rate and market, arbitrage, hedging, foreign bonds, Euro-bonds, speculation, etc.

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Curriculum of BS in Economics (04Years-08 Semesters)

2. Description of balance of payments and its various accounts; current, capital and official reserve accounts

3. Illustration of foreign exchange markets: spot and forward markets, forward premium and discount

4. Interest arbitrage and efficiency of foreign exchange markets: covered & uncovered interest arbitrage, Covered interest arbitrage parity line & margin.

5. Theories of exchange rate/balance of payments determination: modern theories (Purchasing Power Parity, monetary approach to BOP, Portfolio balance model)

6. Traditional theories of BOP: price adjustment mechanism (elasticity approach to BOP) and income adjustment mechanism (Absorption approach to BOP).

7. Adjustment policies inopen economy to remove internal & external disequilibrium: Swan model, Mundell-Fleming model (perfect and imperfect capital mobility) and policy and pricechanges.

8. Prices and output in an open economy: aggregate demand and aggregate supply model under fixed exchange rate and flexible exchange rate systems.

9. Economic Shocks (real & nominal) and aggregate demand in open economyin long run

10. Role of fiscal and monetary policies in aggregate demand in open economy.

11. Role of macroeconomic policies to stimulate growth and adjust to supplyshocks in open economy.

12. Introduction to European Monetary System (1979-1998), Exchange rates bands: adjustable pegs, crawling pegs and managed floating

TEACHING METHODOLOGY
- Lectures
- In Class Activities
- Group Discussion
- Guest Lectures (optional)
- Term Paper (optional)

TEXT AND REFERENCE BOOKS
- Salvatore, D. International Economics, Wiley.
- Suranovic, S. S. International Finance: Theory and Policy, Saylor Foundation.
- Madura, J. International Financial Management, Cengage Learning.

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	**ECONOMICS OF CLIMATE CHANGE**
COURSE CODE	**Eco-428**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE DESCRIPTION

Climate change is a natural phenomenon associated with human livelihoods. The effects of climate change on different sectors of the economy particularly agriculture and other natural resources may vary across the diverse ecological regions. The major human induced factors causing environmental degradation are: mismanagement / over exploitation of naturalresources,deforestation and unsustainable agricultural practices. Timely preparation to climate change isneeded to reduce the adverse impacts of climate change in all sectors of the economy in general and agriculture, livestock, forest and water resources in particular.

COURSE OBJECTIVES

- To impart basic understanding of the concepts of the climate change and its adaptation and mitigation measures.
- To increase knowledge about the risks and vulnerabilities posed by climatechange and its potential impacts for economic development and poverty.
- To provide an up-to-date economic interpretation of climate change.
- To discuss and compare the theoretical economic solutions to combatingclimate change.
- To outline possible future climate policy issues and their solutions.

COURSE LEARNING OUTCOMES:

It is expected that a successful teaching of the course will result in the following outcomes:

- CLARIFICATION of the concept of climate change, its causes and consequences.
- UNDERSTAND the pertinent threats from the climate change to the global and local economy.
- RECOGNIZE the potential measures needed to minimize adverse impact of climate change to the economy.
- UNDERSTAND the ways and means of addressing climate change related research.
- ABLILITY TO contribute in policy and development related dialogue pertaining to climate change.

COURSE CONTENTS

1.   Introduction

Climate Change, Climate Change Factor, Global Warming

2.   Causes and Consequences of Climate Change

Green House Gas Effect, Trends in Global Carbon Emissions, Trends and Projections for Global Climate

3.   Economic Analysis of Climate Change

Cost-Benefit Studies of Global Climate Change, Climate Change and Inequality

4.   Policy Responses to Climate Change

Adaptation and Mitigation, Climate Change Adaptation Studies, Climate Change Mitigation: Economic Policy Options, Carbon Taxes, Tradable Permits, Carbon Taxes or Cap and Trade,

Other Policy Tools such as Subsidies, Standards, R&D, andTechnology Transfer, The Technical Challenge

5.   Climate Change Policy in Practice

The Paris Agreement of 2015, How adequate or inadequate are the commitments, Regional, National and Local Actions, Water, Forests and Soils

TEACHING METHODOLOGY:

☐   Lectures
☐   In Class Activities
☐   Group Discussion
☐   Guest Lectures (optional)
☐   Term Paper (optional)
☐   Field Exposure (optional)

TEXT AND REFERENCE BOOKS:

- Frank, A.,& Elizabeth, A. S. (2008). The Cost of Climate Change, Natural Resource Defense Council. www.nrdc.org/globalwarming/cost/cost.pdf.
- 2.   Boden, T.A., Marland,G.,&Andres.R. J. (2016). Global, Regional, and National Fossil-Fuel CO_2 Emissions, Carbon Dioxide Information Analysis Center (CDIAC), Oak RidgeNational Laboratory.
- Jeremy,C.,&Fedor,D. (2016). Tracking Global Carbon Revenues: A Survey of Carbon Taxes versus Cap-and-trade in the Real World. Energy Policy 96: 50-77.
- 4.   Simon, D.,& Nicholas S.(2014). Endogenous Growth, Convexity of Damages and Climate Risk: How Nordhaus' Framework Supports Deep Cuts in Carbon Emissions, GranthamResearch Institute on Climate Change and the Environment, Working paper No. 159, June.

COURSE TITLE	ISLAMIC FINANCE
COURSE CODE	Eco-429
CREDIT HOURS	03
PREREQUISITE	Nil
REV. NO.	01
DATE	June 04, 2021

COURSE DESCRIPTION:

The course covers the topics on Islamic finance. Main focus will be on the features of Islamic financial system, and Shariah compliant financial structures.

COURSE OBJECTIVES:

The prime objectives of this course are;

- To explain the fundamental principles of Islamic Finance,
- To know the evolution, growth and development of the Islamic finance indifferent periods,
- To know the origin, legitimacy, Shariah principles, structure, mechanism and flows of different types of Islamic finance structures.

COURSE LEARNING OUTCOMES:

After completion of this course students are expected to;

- UNDERSTAND the salient features of Islamic Financial system,
- RECOGNISE and IDENTIFY the differences between Islamic andconventionalfinance,
- APPLYIslamic Finance structures in monetary and capital institutions of an Islamicstate.

COURSE CONTENTS:

1. Definition of Islamic Finance based on Shariah and Fiqh,

2. Features of Islamic finance;

Prohibition of Riba,Prohibition of Gharar,Prohibition of Mayser,Prohibition of dealing in unlawful goods and services,Desire for justice and equity based on business Ethics.

3. History and Development of Islamic Finance;

During 650 AD-750 AD,During 750 AD-1900 AD,During 1900 AD-2000 AD, 2000 AD till date.

4. Shariah Compliant Islamic Finance Structures;

Barter Trading (Bay al-Muqayada),General Sale (Bay al-Mutlaq),Exchange Sale (Bay al-Sarf) ,Markup-Sale (Murabaha),Deferred Payment Sale (Bay' BithamanAjil),Monetization (Tawarruq),Ena Contract,Salam Sale (Bai Salam),Manufacturing Finance (Istisna),Partnership (Musharaka),Venture Capital (Mudaraba),Islamic Lease (Ijara),Pledge (Rahn),Guarantee (Kafala),Wakala,Hawala,Wadia,Muqassa,Urboun,Waad (Promise),Qard.

5. Difference between Islamic finance and conventional finance.

TEACHING METHODOLOGY:

- Lectures
- In Class Activities
- Group Discussion
- Guest Lectures (optional)
- Term Paper (optional)

TEXT AND REFERENCE BOOKS

- Ahmad, K. Studies in Islamic Economics, Leicester, The Islamic Foundation, United Kingdom, 1980.
- Ayub, M. Understanding Islamic Finance, John Wiley and Sons Ltd., The Atrium, Southern Gate, Chichester, West Sussex, England, 2007.
- Maududi, Sayyid Abul Ala. First Principles of Islamic Economics, Islamic Foundation, Markfield, United Kingdom, 2011.
- Usmani, M. Taqi. Islamic Finance, MaktabaMaariful Quran, Pakistan, 2005.

COURSE OUTLINES
of
MINOR COURSES

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	**CALCULUS-I**
COURSE CODE	**Math-111**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**01**
DATE	**June 04, 2021**

SPECIFIC OBJECTIVES OF THE COURSE

Calculus serves as the foundation of advanced subjects in all areas of mathematics. This is the first course of Calculus. The objective of this course is to introduce students to the fundamental concepts of limit, continuity, differential and integral calculus of functions of one variable.

COURSE OUTLINE

1. Equations and inequalities

Solving linear and quadratic equations, linear inequalities. Division of polynomials, synthetic division. Roots of a polynomial, rational root. Descartes rule of signs. Solutions of equations with absolute value sign. Solution of linear and non-linear inequalities with absolute value sign.

2. Functions and graphs

Domain and range of a function. Examples: polynomial, rational, piecewise defined functions, absolute value functions, and evaluation of such functions. Operations with functions:
sum, product, quotient and composition. Graphs of functions: linear, quadratic, piecewise defined functions.

3. Limits and continuity

Functions, limit of a function. Graphical approach. Properties of limits. Theorems of limits. Limits of polynomials, rational and transcendental functions. Limits at infinity, infinite limits, one-sided limits. Continuity.

4. Derivatives

Definition, techniques of differentiation. Derivatives of polynomials and rational, exponential, logarithmic and trigonometric functions. The chain rule. Implicit differentiation. Rates of change in natural and social sciences. Related rates. Linear approximations and differentials. Higher derivatives, Leibnitz's theorem.

5. Applications of derivatives

Increasing and decreasing functions. Relative extrema and optimization. First derivative test for relative extrema. Convexity and point of inflection. The second derivative test
for extrema. Curve sketching. Mean value theorems. Indeterminate forms and L'Hopitals rule. Inverse functions and their derivatives.

RECOMMENDED BOOKS

- Anton H, Bevens I, Davis S, Calculus: A New Horizon (8[th]edition), 2005, John Wiley, New York.
- Stewart J, Calculus (3[rd]edition), 1995, Brooks/Cole (suggested text).
- Thomas GB, Finney AR, Calculus (11[th]edition), 2005, Addison-Wesley, Reading, Ma, USA.
- C.H. Edward and E.D Penney, *Calculus and Analytics Geometry*,   Prentice Hall, Inc. 1988
- 5.   E. W. Swokowski, *Calculus with Analytic Geometry*, PWS Publishers, Boston, Massachusetts,   1983.

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	**INTRODUCTIONTO INFORMATION ANDCOMMUNICATION TECHNOLOGIES**
COURSE CODE	**CS-111**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE DESCRIPTION

This is an introductory course on Information and Communication Technologies. Topicsinclude ICT terminologies, hardware and software components, the internet and World WideWeb, and ICT based applications.

LEARNING OUTCOMES

After completing this course, a student will be able to:

- Understand different terms associated with ICT.
- Identify various components of a computer system.
- Identify the various categories of software and their usage.
- Define the basic terms associated with communications and networking.
- Understand different terms associated with the Internet and World Wide Web.
- Use various web tools including Web Browsers, E-mail clients and searchutilities.
- Use text processing, spreadsheets, and presentation tools.
- Understand the enabling/pervasive features of ICT.

COURSE CONTENTS

- Basic Definitions & Concepts
- *Hardware:*

Computer Systems & Components Storage, Devices, Number Systems

- *Software:*

Operating Systems, Programming and Application Software, Introduction to Programming, Databases and Information Systems

- Networks
- Data Communication
- The Internet, Browsers and Search Engines
- The Internet: Email, Collaborative Computing and Social Networking
- The Internet: E-Commerce
- IT Security and other issues
- Project Week
- Review Week

TEXTBOOKS/REFERENCE BOOKS

- Introduction to Computers by Peter Norton, 6th International Edition,McGraw-Hill.
- Using Information Technology:A Practical Introduction to Computer &Communications by Williams Sawyer, 6th Edition, McGraw-Hill.
- Computers, Communications & information: A user's introduction by SarahE.Hutchinson, Stacey C. Swayer.
- Fundamentals of Information Technology by Alexis Leon, Mathews Leon, Leon Press.

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	STATISTICS-I
COURSE CODE	Stat-211
CREDIT HOURS	03
PREREQUISITE	Nil
REV. NO.	01
DATE	June 04, 2021

COURSE DESCRIPTION
This course deals with statistical concepts, such as data presentation, graphs, measures of central tendency and dispersion, correlation, and index numbers.

COURSE OBJECTIVES
By the end of the course, students will be able to collect, present and analyse the data.More specifically, the course will equip students to:
- Understand techniques of data collection and data presentation.
- Analyse data by using statistical techniques.
- Communicate the results of statistical work, and more specifically write up theresults of statistical analysis in a report consisting of a non-technical abstract for decision makers,so that they can improve their decisions.

COURSE LEARNING OUTCOMES
Upon successful completion of the course, the student will:
- UNDERSTAND and be able to CALCULATE basic statisticalconcepts(tabular and graphic representation of data, measures of central tendency,dispersion and asymmetry, correlation)
- APPLY knowledge to SOLVE simple tasks using computer software, such as MS Excel, SPSS.
- Based on the acquired knowledge to INTERPRET the meaning of thecalculated statistical results

COURSE CONTENTS
1. Statistics and Statistical Thinking
The Science of Statistics and its importance, Fundamental Elements of Statistics, The Role of Statistics in Critical Thinking and Ethics

2. Organizing Data
Types of Variables Measurement Scales (nominal, ordinal, interval,and ratio scale), Data Collection Methods, Presentation of data through classification, tabulation, diagrams andgraphs

3. Descriptive Measures
Measures of Location: Mean, Median, Mode, Geometric Mean, Quartiles, Deciles & Percentiles, Measures of Dispersion; Range, Mean Absolute Deviation, StandardDeviation, Coefficient of Variation, Boxplots

4. Index Numbers
Defining an Index Number, Un-weighted Aggregates Index, Weighted Aggregates Index, Average of Relative Methods, Quantity and Value Indices

7. Probability
Probability, Rules of Probability, Bayes Theorem

8. Random Variable and Discrete Distributions
Discrete Random Variables, Mean and Standard Deviation of a Discrete Random Variable, The

Binomial and Poison.

9. The Normal Distribution

Central Limit Theorem, Introducing Normally Distributed Variables, Areas under the Standard Normal Curve, Working with Normally Distributed Variables, Assessing Normality; Normal Probability Plots

TEACHING METHODOLOGY

- Lectures
- In Class Activities
- Assignments
- Practical (Based on Excel / SPSS)

TEXT AND REFERENCE BOOKS

- Anderson, Sweeney and Williams, Statistics for Business and Economics, South-Western, Cengage Learning. (latest edition)
- Weiss, N. A. Elementary Statistics, Pearson. (latest edition)
- McClave, J.andSincich, T. Statistics Pearson. (latest edition)
- Lind, D. A. Statistical Techniques in Business and Economics, The McGraw-Hill Companies (latest edition)
- Gerald, K. Statistics for Management and Economics, Pearson. (latest edition)

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	STATISTICS-II
COURSE CODE	Stat-221
CREDIT HOURS	03
PREREQUISITE	Descriptive Statistics
REV. NO.	01
DATE	June 04, 2021

COURSE DESCRIPTION
This course deals with inferential statistical. Therefore, focus will be on the techniquesby which decisions about a statistical population are made based on sample data. It willcover topics related to sampling, estimation, testing of hypothesis and statistical inference.

COURSE OBJECTIVES
By the end of the course, students will be able:
- To draw conclusions about population based on sample data,
- Understand techniques of sampling, estimation, hypotheses testing, experimental design
- Analyse the techniques of statistical inference.

COURSE LEARNING OUTCOMES
Upon successful completion of the course, the student will:
- UNDERSTAND the purpose and techniques of sampling.
- APPLY the techniques of Statistical Inference.
- INTERPRET the meaning of the calculated statistical results.

COURSE CONTENTS
1. **Sampling and Sampling Distributions**
Sampling techniques: random, cluster, systematic,convenience,judgment and stratified, Simplerandom sampling, Point estimation, Introduction to sampling distributions, Properties of pointestimators.
2. **Interval Estimation**
Population with sigma-known, Population mean with sigma-unknown, Determining the sample size, Population proportion
3. **Hypothesis Testing**
Developing null and alternative hypothesis, Type I and type II error, Population mean withknownvariance (sigma), Population mean with unknownvariance (sigma), Population Proportion, Hypothesis testing and decision making, Calculating probabilities of Type-II error, Determining the sample size for hypothesis testing about a population mean.
4. **Statistical Inference About Mean and Proportions with Two Populations**
Inference about the difference between two population means withknown and unknown variance (sigma) values of 1 and 2, Inferenceabout the difference between two population means:matched samples
5. **Inferences About Population Variances**
Inferences about a population variance, Inference about two population variances
6. **Tests of Goodness of Fit and Independence**
Goodness of Fit: A multinomial population, Tests of independence, Goodness of fit tests
7. **Analysis of Variance and Experimental designs**

An introduction to analysis of variance, Analysis of variance: testing for the equality of k population means, Multiple comparison procedures, An introduction to experimental design, Randomized block design, Factorial experiments.

8. Nonparametric Methods

Sign test, Wilcoxon test, Mann-Whitney-Wilcoxon test,Kruskal-Wallis test, Rank correlation

TEACHING METHODOLOGY

- Lectures
- In Class Activities
- Written Assignments
- Practical (Excel/SPSS)

TEXT AND REFERENCE BOOKS

- Anderson, Sweeney and Williams, Statistics for Business and Economics, CengageLearning.
- Wonnacott, T.H. and Wonnacott, R. J., Introductory Statistics, John Wiley & Sons,New York.

COURSE OUTLINES
of
GENERAL EDUCATIONAL REQUIREMENT

COURSES

(List of Breadth Courses)

Natural Sciences Courses

COURSE TITLE	**CALCULUS-II**
COURSE CODE	**Math-121**
CREDIT HOURS	**03**
PREREQUISITE	**Calculus-I**
REV. NO.	**01**
DATE	**June 04, 2021**

SPECIFIC OBJECTIVES OF THE COURSE
This is second course of Calculus. As continuation of Calculus I, it focuses on techniques of integration and applications of integrals. The course also aims at introducing the students to infinite series, parametric curves and polar coordinates.

COURSE OUTLINE
1. **Integration**
Anti derivatives and integrals. Riemann sums and the definite integral. Properties of Integral. The fundamental theorem of calculus. The substitution rule.
2. **Techniques of integration**
Integrals of elementary, hyperbolic, trigonometric, logarithmic and exponential functions. Integration by parts, substitution and partial fractions. Approximate integration.
Improper integrals. Gamma functions.
3. **Applications of integrals**
Area between curves, average value. Volumes. Arc length. Area of a surface of revolution. Applications to Economics, Physics, Engineering and Biology.
4. **Infinite series**
Sequences and series. Convergence and absolute convergence. Tests for convergence: divergence test, integral test, p-series test, comparison test, limit comparison test, alternating series test, ratio test, root test. Power series. Convergence of power series. Representation of functions as power series. Differentiation and integration of power series. Taylor and McLaurin series. Approximations by Taylor polynomials.
5. **Conic section, parameterized curves and polar coordinates**
Curves defined by parametric equations. Calculus with parametric curves: tangents, areas, arc length. Polar coordinates. Polar curves, tangents to polar curves. Areas and arc length in polar coordinates.

RECOMMENDED BOOKS

- Anton H, Bevens I, Davis S, *Calculus: A New Horizon*(8thedition), 2005, John Wiley, New York.
- Stewart J, *Calculus*(3rdedition), 1995, Brooks/Cole, U.S.A (suggested text).
- Thomas GB, Finney AR, *Calculus*(11thedition), 2005, Addison-Wesley, Reading, Ma, USA.

COURSE TITLE	**ORDINARY DIFFERENTIAL EQUATIONS**
COURSE CODE	**Math-224**
CREDIT HOURS	**03**
PREREQUISITE	**Calculus-I**
REV. NO.	**00**

SPECIFIC OBJECTIVES OF THE COURSE

To introduce students to the formulation, classification of differential equations and existence anduniqueness of solutions. To provide skill in solving initial value and boundary value problems.To develop understanding and skill in solving first and second order linearhomogeneous and nonhomogeneous differential equations and solving differential equationsusing power series methods.

COURSE OUTLINE

1. **Preliminaries**

Introduction and formulation, classification of differential equations, existence and uniqueness of solutions, introduction of initial value and boundary value problems

2. **First order ordinary differential equations**

Basic concepts, formation and solution of differential equations. Separable variables, Exact Equations, Homogeneous Equations, Linear equations, integrating factors. Some nonlinear first order equations with known solution, differential equations of Bernoulli and Ricaati type, Clairaut equation, modelling with first-order ODEs, Basic theory of systems of first order linear equations, Homogeneous linear system with constant coefficients, Non homogeneous linear system.

3. **Second and higher order linear differential equations**

Initial value and boundary value problems, Homogeneous and non-homogeneous equations, Superposition principle, homogeneous equations with constant coefficients, Linear independence and Wronskian, Nonhomogeneous equations, undetermined coefficients method, variation of parameters, Cauchy-Euler equation, Sturm-Liouville (S-L) boundary value problems .

4. **Series Solutions**

Power series, ordinary and singular points, Existence of power series solutions, power series solutions, types of singular points. The Bessel equation and its solutions.

RECOMMENDED TEXT

- Zill DG, Cullen MR, *Differential Equations with Boundary-Value Problems* (3rd edition), 1997, PWS Publishing Co, Boston.
- Kreyszig E, *Advanced Engineering Mathematics by Erwin Kreyszig* (10th edition), 2011, John Wiley.

COURSE TITLE	**INTRODUCTION TO ENVIRONMENTAL SCIENCE**
COURSE CODE	**Env.Sci-115**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**00**

Objectives:
- To learn the importance of Environmental Science in human life, its relationship with various segments of society and sectors of development.
- To become familiar with current national, regional and global challenges for sustainable development.

Course Contents:
- Definitions, history, movements, and
- Environmental systems: atmosphere, lithosphere, hydrosphere and biosphere, origin and inter-relationship.
- Environmental aspects: physic-chemical, biological, socio-economic,
- Environmental factors; chemical, physical and biological.
- Environmental pollution, types, sources, causes, effects.
- Environmental dilemmas; deforestation, water logging, salinity, drought and desertification.
- Issues of environment and sustainable development.
- Issues of the social environment; population growth, urbanization, migration and poverty Environment and lifestyle.

Recommended Books:
1. Botkin, D. & Keller, E. Environmental Sciences; Earth as a Living Planet. 8th ed. John Wiley and Sons, Inc. (2000).
2. Cunningham, W.P, & Saigo, B.W. Environmental Sciences 6th ed. McGraw-Hill (2001).
3. Enger. E.D. & Smith, B.F. Environmental Science: A study of Interrelationship. McGraw-Hill, (1997).
4. Kupchella, C.E. & Hyland. M.C. Environmental Science; Living within the System of Nature. Prentice Hall, (1986).
5. Nebel. B.J. & Wright, R.T. Environmental Sciences, 6th ed. Prentice Hall. New Jersey. (1999).

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	**INTRODUCTORY GEOLOGY**
COURSE CODE	**Geol. 311**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**00**

COURSE OBJECTIVES
This course is designed to acquire the knowledge about the basic concepts of geology. This will help the students to get knowledge about various types of rocks and minerals and the processes of their formation.
COURSE CONTENTS
Introduction and scope of geology; importance and relationship with other sciences; history and philosophy of geology; Earth as a member of the solar system; its origin, age, composition and internal structure; Isostasy; mountain building processes; earthquakes and volcanoes; Mass wasting; weathering, erosion and deposition; introduction, identification and classification of rocks and minerals; Crystallography; sedimentary, igneous and metamorphic structures; introduction to fossils in sedimentary rocks; introduction to folds, faults, joints, cleavage, foliation, lineation and unconformities; Introduction to ore deposits; Geological Time Scale; Law of Superposition, present is key to the past and Law of Faunal Succession; concept and techniques of geological dating, relative and absolute dating; evolution of life on earth; use of Brunton Compass and GPS, etc.
Lab: Identifications of minerals, Identification of rocks, introduction to maps, types of maps.
BOOKS RECOMMENDED
- Physical Geology by C. Plummer, D. Mc Geary, Diane Carlson, L. Hammersley, 2009, Mcgraw-Hill
- Laboratory Manual in Physical Geology (9th Edition), Richard M. Bausch, 2011, AGI.
- Principles of Physical Geology by Holmes, A., 1978.
- Lab Manual for Physical Geology by Jones and Charles E., 2005, McGraw-Hill.
- How Does Earth Work: Physical Geology and Process of Science by Smith, G. and Pun, A., 2006, Prentice Hall.

Social Sciences Courses

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	**INTRODUCTION TO POLITICAL SCIENCE-I**
COURSE CODE	**Pol-111**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE OBJECTIVES
The objective of this course is to introduce the students with the fundamentals of the subject of Political Science and prepare them for advanced studies in the forthcoming semesters. The very basic concepts and terminology commonly used in the further courses of studies are taught to make the students friendly with the subject.

COURSE CONTENTS
1. Definition, Nature, Scope and Sub-fields* of Political Science.
2. Relationship of Political Science with other social sciences.
3. Approaches to the study of Political Science: Traditional and behavioral approach.
4. State: its origin and evolution; Western and Islamic concepts of State,
5. Nation and Sovereignty.
6. Basic concepts of Political Science: Power, Authority, Legitimacy
7. Organs of Government: Legislature, Executive, Judiciary.

Note: * *Sub-fields of Political Science include: Political Philosophy/Theory; Comparative Politics; International Relations; Public Administration/ Public Policy; Local Government, etc.*

RECOMMENDED BOOKS

- Ahmad , Sheikh Bashir, *Riyasat Jo Ilm* (Sindhi meaning Science of State), Jamshoro, Institute of Sindhalogy, University of Sindh, 1985.
- Haq, Mazher ul, *Theory and Practice in Political Science*, Lahore Bookland, 1996.
- Ian Mackenzi (Ed.), *Political Concepts: A Reader and Guide*, Edinburgh, University Press, 2005.
- Mohammad Sarwar, *Introduction to Political Science*, Lahore Ilmi Kutub Khana, 1996.
- R. C. Agarwal, *Political Theory* (*Principles of Pol. Science*), New Delhi, S. Chand & Co., 2006.
- Robert Jackson and Dorreen Jackson, *A Comparative Introduction to Political Science,* New Jersey, Prentice – Hall,1997
- Rodee Anderson etc. *Introduction to Political Science,* Islamabad, National Book Foundation, Latest Edition.
- Roskin, Michael G., Political Science: An Introduction, London: Prentice Hall, 1997.
- Shafi, Choudhry Ahmad, *Usul-e-Siyasiat (Urdu)*, Lahore Standard Book Depot, 1996.
- V. D. Mahajan, *Political Theory- Principles of Pol. Science,* New Delhi, S. Chand & Co., 2006.

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	**PRINCIPLES OF SOCIOLOGY**
COURSE CODE	**Soc-101**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE AIMS AND 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

1. Introduction
Definition, Scope and Subject Matter, Historical Background of Sociology, Sociology as a Science, Importance of Sociology, Sociology, and other Social Sciences

2. Basic Concepts of Sociology
Society, Definition, Meaning, Characteristics, Types of Society, Community, Difference between community and Society, Rural and Urban Community

3. Culture
Definition, aspects and characteristics of Culture, Material and non-material culture, Ideal and real culture, Elements of culture, Cultural Relativism, Cultural Lag, Ethnocentrism and Xenocentrism, Cultural change and related concepts

4. Social Norms and Sanctions
Social Norms, Folkways, Mores, Values, Formal & Informal Sanctions

5. Socialization & Personality Development
Socialization, Agencies of Socialization, Theories of Socialization, Self-Personality, Factors of Personality Development, Theories of Personality Development, Role & Status

6. Social Processes
Social interaction and forms of social interaction, Cooperation, Competition, Conflict, Assimilation and acculturation, Accommodation

7. Social Groups
Types of social groups, In and out groups, Primary and Secondary group, Reference groups, Pressure groups

8. Social Inequality and Social Stratification
Social Stratification, Social Class, Caste, Social Mobility and types of social mobility

9. Perspectives in Sociology
Structural Functionalist perspective, Conflict perspective, Symbolic Interactionist perspective, Evaluation of Perspectives

RECOMMENDED BOOKS
- Alam, Anwar. 2006. *Principles of Sociology*. Peshawar:Saif PrintingPress.
- Brown, Ken 2004. *Sociology*. UK: Polity Press
- Gidden, Anthony 2002. *Introduction to Sociology*. UK: Polity Press.
- Macionis, John J. 2006. 10th Edition *Sociology* New Jersey: Prentice-Hall
- Tischler, Henry L. 2002. *Introduction to Sociology* 7th ed. New York: The Harcourt

Press.
- Frank N Magill. 2003. *International Encyclopedia of Sociology*. U.S.A: Fitzroy Dearborn Publishers
- Macionis, John J. 2005. *Sociology* 10th ed. South Asia: Pearson Education
- Leslie, Gerald et al. 1973. *Order and Change: Introductory Sociology*Toronto: Oxford University Press.
- James M. Henslin. 2004. *Sociology: A Down to Earth Approach*. Toronto: Allen and Bacon.
- Rao, C. N. Shankar. 2008. „Sociology: Principles of Sociology with an Introduction toSocial Throughts‟ New Delhi: S. Chand &Company.
- Hortun, Paul B. and Hunt, Chester L. 1984. *Sociology*. New York:McGraw-Hill.

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	**INTRODUCTION TO INTERNATIONAL RELATIONS**
COURSE CODE	**Pol-244**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**01**
DATE	**June 04, 2021**

OBJECTIVES

The course is designed to focus on the dynamics of International Relations, national interests, power factor and state behaviour as a guide to understand the nature of real politick. The course will enable the students to analyse the basic approaches and fundamental concepts of International Relations.

COURSE OUTLINE

1. Introduction, Nature and Scope of International Relations.
2. Approaches to the Study of International Relations:
Realism, neo realism, Idealism (Liberalism), Behaviouralism
3. Concept of Nationalism
4. Modern State System and Sovereignty
5. Doctrine of Power in International Relations:
Elements of Power, Balance of Power.
6. National Interests in International Relations
7. Concept of Diplomacy
8. Huntington theory of Clash of civilization
9. Fukuyama theory of End of History

RECOMMENDED BOOKS

- Bruce Russett, *Grasping the Democratic Peace: Principles for postCold War World*, Princeton, Princeton University Press, 1993.
- Chris Brown, *Understanding International Relations*, London,Palgrave, 2005.
- Hans J. Morgenthau, *Politics Among Nations*, New York, McGraw Hill, 1993.
- J. Steans and L. Pettiford, *International Relations*: *Perspectives and Themes*, Harlow, Pearson Education Press, 2005.
- James E. Dougherty and Robert L. Pfaltzraff Jr. *Contending Theories of International Relations: Comprehensive Survey*, Ed (New York),Harper and Row Publishers, 1981
- John Baylis and Steve Smith, *The Globalization of World Politics: An introduction to International Relations*, Oxford University Press,London, 2005
- John T. Rourke, *International Politics on the World Stage*, Boston, Boston University Press, 2004.
- Joshua Goldstein, International Relations 9th edition
- Karen A. Mingst, *Essentials of International Relations*, London, W.W. Norton & Company, 2004.

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	**INTRODUCTION TO BUSINESS**
COURSE CODE	**BBA-111**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE OUTLINE
Introduction to Business
Definition of Business, Characteristics of Business, Importance of Business, Qualities of a successful Businessman, Stakeholders in Business
Sole Proprietor form of Business
Sole proprietorship and its characteristics, Advantages and Disadvantages of Sole proprietorship
Partnership form of Business
Definition of Partnership, Salient feature of Partnership, Partnership Deed, Types of Partners, Position of a minor in a Partnership, Mutual duties, rights and liabilities of Partners, Reconstitution of Partnership, Registration of a firm, Dissolution of a Partnership firm.
Joint Stock Company
Joint Stock Company, Joint Stock Company and its features, Classification of companies, Advantages and Disadvantages of a Company, Private limited Company, Public limited Company, Main features of Partnership, Private limited and Public limited Company, Company promoters and their functions
Formation of a Company
Formation of a Public Company, Basic legal documents issued by a company
Classes of Capital
Classes of capital, Classes of shares, Bonds/ Debentures ,Underwriting of shares, Managing Agents, Dividend
Management of a Company
Management of a company, Company meetings, Liquidation of a joint stock company
Business Finance
Financial Sources, Why firm need funds, Comparing Equity and Debt Financing, Sources of Short Term Financing, Sources of Medium Term Financing, Sources of Long Term Financing
Marketing
Marketing Goods and Services, Marketing Strategy, Products and Services, Product Identification and Branding, Promotion Strategies
Function of Stock Exchange
Stock exchange and its features, How business is transacted at the stock exchange, Bullish and Bearish trend, Causes of fluctuations in security prices
Business Risk and Insurance
Business Risk and Insurance, What is Business Risk?Requisites of Insurance, Principles of Insurance, Advantages of Insurance
Human Resource Management
Human Resource Management, Definition, Objectives of HRM, The process of selection
RECOMMANDED BOOKS
- Business Today by Stephen P. Robbins

- Introduction to Business by Brown/ Peterlod
- Financial Management by I. M. Padey
- Introduction to Business by M. Saeed Nasir

COURSE TITLE	**PRINCIPLES OF MANAGEMENT**
COURSE CODE	**BBA-121**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE OUTLINE
An Overview of Management
Definitions of Management, Characteristics of Management, Different between Management and Administration
Functions of Management
Functions a brief Treatment, Planning, Organizing, Staffing, Directing, Controlling,Coordination
Principles of Management
Taylor's Principles, Fayol's Principles, General Principles, Importance and Scope of Management, Importance of Management, Scope of Management
Nature of Management
Management as an art, Management as a Science, Management as a Profession
Planning
Definition, Nature and Characteristics, Importance of Planning, Limitations of Planning, Essentials of a good Plan, Steps in Planning Process, Types of Planning
Decision Making
Meaning and Elements of Decision Making, Importance and Process of Decision Making, Salient Features of a good or an Effective Decision, An Effective Decision Making
Organizing
Nature and Importance of Organization, Steps in the Process of Organization, Formal and Informal Organization, Principles of Organization
Communication
Definition of Communication, Process of Communication, Importance of Communication, Types of Communication, Barriers to Communication, Over Coming the Barriers, Characteristics of agood Communication System
Staffing
Definition of Staffing, Sources of Recruitment, Steps in Selection Process, Orientation or Induction, Training and Education, Types and Methods of Training
Directing / Direction
Definition, Nature and Importance, Principles & Techniques
Leadership
Definition, Traits / Qualities of a Successful Leader, Leadership Styles, Function of Leader Ship
Motivation
Meaning and Importance, Financial and Non Financial Incentives, Theory X and Theory Y, Maslow's Need Priority Model
Controlling
Definition of Controlling, Characteristics of Controlling, Objectives of Controlling, Steps in the Process of Controlling, Essentials of an Effective Control System
RECOMMENDED BOOKS

- Principles and Practice of Management 1998 Edition, Terry, Prentice Hall USA.
- Practice of Management, 1997 Edition P.F. Duck Ker, Macmillion, London.
- Fundamentals of Management 2004 Edition, Prof. Fazli Wahid IBMS/CS Agricultural University Peshawar.

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	**PRINCIPLES OF MARKETING**
COURSE CODE	**BBA-211**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**00**

COURSE OUTLINE
Understanding Marketing and Marketing Process
What is marketing?Marketplace and customersneeds, Basic functions of marketing, Importance of marketing
Marketing Strategy: Building strong customers relationship
Defining marketing role, Marketing strategy and marketing Mix, Managing the marketing efforts
Consumer Buying Behavior.
What influence consumers behavior, Types of buying decision behavior, The buying decision process, The buying decision process for new products
Business markets and Business Buyers' Behavior
Business markets, Business buying behavior, Stages in business buying process, Institutional and government markets
Market Segmentation, Targeting and positioning for competitive advantage
Market Segmentation, Market Targeting, Differentiation and positioning
Product and Services Marketing Strategies.
What is product and service, Level of product and services, Product and services classification, Product and services decision, Services marketing
New Product Development and Product Life Cycle Strategies.
New product development strategies, New product development process, Product life cycle strategies
Developing pricing Strategies
What is price?, Setting price, Price adjustment strategies, New-product pricing strategies, Price changes
Marketing channels and Supply Chain Management.
Nature and importance of marketing channels, Various marketing channels, Channel design decision, Channel management decision
Retailing and Wholesaling
Types of retailers, Retailers marketing decision, The future of retailing, Types of wholesaling, Wholesalers marketing decision, Trends in wholesaling
Integrated Marketing Communication.
The marketing communication mix, A view of communication process, Steps in developing effective communication, Socially responsible marketing communication
Advertising and Public Relations
Setting advertising objectives, Types of advertising, The advertising decision process, The role and impact of public relation, Major public relation tools
RECOMMENDED BOOKS
- William J. Stanton and Charles Furtrell, Fundamentals of Marketing
- The Principles of Marketing by Philip Kotler and Gray Arms
- PRINCIPLES OF MARKETING --- MichaelJ.Etzel, BrvceJ.WalkerWilliam J.Stanton Stanton11[th] Edition McGraw Hill-1997

Curriculum of BS in Economics (04Years-08 Semesters)

- PRINCIPLES OF MARKETING --- Thomas C. Kinnear, Kenneth L- BernHardt,4th Edition KathleemA.Krentler, Honper Collin   College   Publishers

COURSE TITLE	**FUNDAMENTALS OF ACCOUNTING**
COURSE CODE	**BBA-125**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE OUTLINE

Introduction

Purpose and Nature of Accounting, Various areas of Accounting Forms of Business enterprises, Accounting Information users,GAAP, Accounting Systems, Accounting Terminology

Recording Business Transactions:

Types of Accounts.Debit & Credit Rules.Journal, Ledger, Trial Balance;Accounting equation.

Measuring of Business Income:

Preparation of Income Statement, Statement of Owner's Equity.Adjusting Process.Preparation of Balance Sheet, Closing Entries. Preparation of Work sheet,

Controlling Accounts & Subsidiary Ledger Accounts.

Special Journal for Purchase & Sales,Purchase Returns & Sales Returns.Cash Receipts and Cash Payment Journal, Accounts Receivables & Accounts Payables

Control of Cash Transactions and Bank Reconciliation Statement.

Cash Book.Bank Reconciliation Statement.

Capital & Revenue:

Capital & Revenue Expenditures, Capital & Revenue Receipts, Capital & Revenue Profits, Capital & Revenue Losses.

TEXT BOOKS

- Robert F.Meigs and Walter B.Meigs: Accounting: The Basis for Business Decisions, McGrawHill, Inc
- Eric G. Flamholtz, Diana TroikFlamholtz, Michael A.Diamond: Principle of Accounting, Macmillan Publishing Co. New York
- Frankwood: Business Accounting-I, Business Accounting-II

COURSE TITLE	HUMAN RESOURCE MANAGEMENT
COURSE CODE	BBA-211
CREDIT HOURS	03
PREREQUISITE	Nil
REV. NO.	00

COURSE OUTLINE
The Human Resource Frameworks
Introduction to Human Resource Management, Objectives of Human Resource Management, Human Resource Management Activities, External Organizational Challenges to Human Resource Management, Internal Organizational Challenges to Human Resource Management
Human Resource Planning
Need for Human Resource Planning, Factors Shaping Organization Demand for Human Resources Forecasting Techniques for Human Resource, Career Planning Defined, Advantages of Career Planning, Major Actions Aiding Career Development
Recruitment & Selection
Definition of Recruitment, Recruitment Process, Constraints and Challenges of Recruitment Process, Recruitment Channel, Selection Defined, Selection Process
Equal Employment Opportunity
 HRM in Global Environment, Current Issues
Performance Appraisal
Introduction to Performance Appraisal, Uses of Performance Appraisal, Elements of Performance Appraisal Systems, Appraisal Methods
Training and Development
Difference between Training and Development, Steps to Training and Development
Interactive Conflicts and Negotiation Skills
Individual Conflicts, Interpersonal Conflicts, Inter Group Behavior and Conflicts, Organizational Conflicts, Negotiation Skills, Traditional Negotiation Skills, Newly Emerging Skills
Health & Safety at Workplace
Introduction, Important of Health & Safety at Work, Health & Safety Policies & Implementation, Changing attitude to Health & Safety
Compensation and Benefits
Objectives of Compensation Management, Challenges affecting Compensation
Motivation & Reward System
Concept of motivation, Reward system, Motivation techniques, Employees Disciplines
Collective Bargaining & Internal EmployeeRelations
The Collective Bargaining Process, Bargaining Issues, A Global Perspective of IER
RECOMMENDED BOOKS
- Human Resource & Personnel, William B. Werther & Keith Davis
- McGraw Hill.
- HUMAN RESOURCE MANAGEMENT, Bernardin & Russell, latest Edition.
- McGraw Hill.
- ORGANIZATIONAL BEHAVIOR, Fred Luthans. Latest Edition, McGraw Hill.
- Organizational Behavior, Robert Kreitner &Angelokinicki , Latest Edition, IR.

COURSE TITLE	**FINANCIAL ACCOUNTING**
COURSE CODE	**BBA-212**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**00**

COURSE OUTLINE
Accounting Concepts(Review)
GAAP, The Consistency Principle, The Disclosure Principle, Materiality Principle,Conservatism Principal, International Accounting Standards-Overview.
Partnership Accounts
Introduction,Formation, Admission & Liquidation,Division of Income,
Corporation Accounting
Introduction,Formation of Corporation,Types of Capital, Types of Shares/Stock & Debentures/Bond,Accounting process for issue of shares and Debentures,Preparation of Corporation's Balance Sheet,
Statement of Cash Flow
Introduction & Purpose,Classification of Cash Flow,Preparation of Cash Flow Statement
Plant Assets & Depreciation
Categories of Plant Assets.Depreciation Methods, MACRS Methods, Amortization & DepletionMethods
Inventories
Introduction, Types of Inventories.Inventory costing Methods, LIFO, FIFO, AVERAGE.
TEXT BOOKS
- Robert F.Meigs and Walter B.Meigs: Accounting: The Basis for Business Decisions, McGraw Hill, Inc
- Eric G. Flamholtz, Diana TroikFlamholtz, Michael A.Diamond: Principle of Accounting, Macmillan Publishing Co. New York
- Frankwood, Business Accounting-I and Business Accounting-II
- M.A.Ghani, Principles of Accounting.
- Fundamentals of Accounting, Aftab Ahmed

COURSE TITLE	COST ACCOUNTING
COURSE CODE	BBA-322
CREDIT HOURS	03
PREREQUISITE	Nil
REV. NO.	00

COURSE CONTENTS
Introduction
The Nature and Concept of Cost Accounting, Classification of Cost and Financial Forecasting, Product Cost Accumulation System, Absorption Costing, Master Budget
Job Order Costing System
Cost Accumulation Procedure, Job Order Cost Accumulation Procedure, Cost Accounting Procedure for Material
Cost Accounting Procedure for Labour
Cost Accounting procedure for (F.O.H), Job order Cost Sheet
Process Costing
Characteristics of Process Costing, Procedure of Process Costing, Cost of Production Report, Equivalent Production, Unit Cost for Material, Labour and F.O.H, Normal Loss of Unit, Abnormal Loss of Unit, Procedure for the Material, Procedure for Labour and F.O.H
By Product and Joint Product Costing
Difficulties in Costing by Product and Joint Product, Nature of By Product, Methods of by Products and Joint Products, Characteristics of Joint Products
Controlling and Costing Material
Procedure for Material Procurement and UseMaterial Costing Method, FIFO Method, LIFO, Average Methods, Perpetual Inventory System, Physical Inventory System
Costing and Controlling of Factory overhead
Concept of Departmentalization, Direct Departmental Expenses, Indirect Departmental Expenses, Establishing Departmental overheads, Controlling and Costing for Labour, Basis for Labour Cost Control, Productivity Measurement, Efficiency measurement
Labour Performance report
Organization for labour cost control, Procedure for Labour Costing, Incentive wage plan types, Requirement of wage plan, Purpose of wage plan
Standard Costing
Objectives of standard costing, Budgets and standard, Material, labour, F.O.H. cost standard, Analysis of variance
Direct Costing
Definition of direct costing, Facts of direct costing, Internal uses of direct costing, External uses of direct costing
Break Even Analysis and Cost Volume Profit Analysis
The Nature of Break Even Analysis, Determining Break Even Point, Break Even analysis for Decision Making, Effects of changes and fixed Cost, Effects of changes sales
Inventory Management
Need for Inventory, Objectives of Inventory Management, Financial Objectives
Operating Objective

Different Levels of Inventory, Ordering Point, Minimum Level, Maximum Level, Average Stock Level, Danger Level, Economic Order Quantity, Factors Influencing the Different Levels of Inventory

RECOMMENDED BOOKS

- COST ACCOUNTING by Hrngren Usry, Hilton.
- COST ACCOUNTING by Ralphs. Polimeni, Frnk J. Favozz and   Arthur H. Adelberg.

Arts & Humanities Courses

COURSE TITLE	**ARABIC LANGUAGE-I**
COURSE CODE	**Arb-121**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**00**

ARABIC LANGUAGE –I

Introduction	یہ مضمون عربی زبان کی قواعد گرامر اور بول چال پر مشتمل ہے، جس میں قرآنی لغت شناسی، فصیح اور جدید عربی بولنے اور سمجھنے کی عملی مشق کرائی جاتی ہے۔	
Objectives of the Course	۱۔ طلباء کو عربی زبان کی علوم اسلامیہ میں اہمیت سے آگاہ کرنا	
	۲۔ طلباء کو علم صرف اور نحو کے بنیادی قواعد سے آگاہ کرنا تاکہ اسلامی علوم سے کماحقہ استفادہ کیا جا سکے	
	۳۔ طلباء کو علم صرف کے بنیادی اصولوں سے آگاہ کرنا	

S.No	Topic	Description
1	عربی زبان کا تعارف و اہمیت	۱۔ عربی زبان کا آغاز و ارتقاء ۲۔ عربی زبان کی اہمیت ۳۔ علوم اسلامیہ کے فہم میں عربی زبان کا کردار
2	ماضی اور مضارع	۱۔ فعل ماضی اور مضارع کا تعارف ۲۔ فعل ماضی اور مضارع کی اقسام اور گردانیں ۳۔ فعل ماضی اور مضارع کے بنیادی صرفی قواعد
3	فعل امر و نہی	۱۔ فعل امر و نہی کا تعارف ۲۔ فعل امر و نہی کی اقسام اور گردانیں ۳۔ فعل امر و نہی کے بنیادی صرفی قواعد
4	اسم-1	۱۔ اسم فاعل کا تعارف اور صرفی قواعد ۲۔ اسم مفعول کا تعارف اور صرفی قواعد
5	اسم-2	۱۔ اسم تفضیل کا تعارف اور صرفی قواعد ۲۔ اسم ظرف (زمان و مکان) کا تعارف اور صرفی قواعد ۳۔ اسم آلہ کا تعارف اور صرفی قواعد
6	اسم-3	۱۔ اسم اشارہ (قریب اور بعید) ۲۔ اسم موصول اور جملہ موصولہ کا تعارف
7	معرب و مبنی	۱۔ اسم معرب کا تعارف اور اس کی اقسام ۲۔ اسم مبنی کا تعارف اور ان کی اقسام
8	حروف	۱۔ حروف جارہ ۲۔ حروف کو ناصب مضارع ۳۔ حروف جو جازم مضارع
9	فعل ثلاثی مجرد	۱۔ فعل ثلاثی مجرد کا تعارف ۲۔ فعل ثلاثی مجرد کے ابواب
10	فعل ثلاثی مزید فیہ (۱)	۱۔ فعل ثلاثی مزید فیہ کا تعارف ۲۔ فعل ثلاثی مزید فیہ کے ابواب

11	علائی مریدہ فیہ (۲)		علائی مریدہ کے ابواب کا تفصیلی مطالعہ
12	لغت اقسام (۱)		ا۔ تحیج ۲۔ مثال (وادی۔ یائی) ۳۔ مضعف ۴۔ لطیف (مطروق اور مقرون)
13	لغت اقسام (۲)		ا۔ ناقص (واوی۔ یائی) ۲۔ مہموز (الفاء والعین واللام) ۳۔ اجواف
14	التدریب و التمارسة		التکلم باللغة العربية
15	التدریب و التمارسة		التکلم باللغة العربية
16	التدریب و التمارسة		التکلم باللغة العربية

مطالعاتی کتب

نام کتاب	نام مصنف	نمبر شمار
القواعد الصرفية و تطبیقاتہا فی اللغة العربية	ڈاکٹر سید سیار علی و ڈاکٹر محمد سلیمان	1

الکتب القارۃ

نام کتاب	نام مصنف	نمبر شمار
عربی کا معلم (چاروں حصے)	عبدالستار خان	1
تمرین صرف	معین اللہ ندوی	2
تمرین النحو	محمد مصطفی ندوی	3
معلم الانشاء	مولانا عامد المامد ندوی	4

حوالہ جاتی کتب

نام کتاب	نام مصنف	نمبر شمار
النحو الواضح	علی جارم	1
مبادئ العربية فی الصرف و النحو	رشید الشرطونی	2
کتاب النحو	عبدالرحمن امر تسری	3

COURSE TITLE	**ARABIC LANGUAGE-II**
COURSE CODE	**Arb-241**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**00**

ARABIC LANGUAGE –II

Introduction	عربی زبان دافی کا یہ کورس علم النحو کے اساسی قواعد پر مشتمل ہے، مجی و معرب کلمات، اسماء، مرفوعات، منصوبات، مجرورات، مرکبات، حروف عامل اس کورس کے بنیادی عناصر ہیں۔ ساتھ ساتھ مختلف کتب سے مطالعہ کے لیے کچھ اقتباسات بھی شامل کئے گئے ہیں۔
Objectives of the Course	۱۔ عربی زبان کو صحیح استعمال کرنے کے لیے صرف نحوی کی مہارت پیدا کرنا ۲۔ عربی شعر کو پڑھنے اور سمجھنے کی صلاحیت پیدا کرنا ۳۔ طلباء میں عام عربی نصوص کو سمجھنے کی صلاحیت کو بہتر کرنا

S.No	Topic	Description
1	علم النحو (۱)	۱۔ علم النحو کا تعارف ۲۔ علم النحو کی اہمیت ۳۔ علم النحو کی مبادیات
2	علم النحو (۲)	۱۔ علم النحو کے متعلق قواعد ۲۔ جملہ کی اقسام I (جملہ اسمیہ اور فعلیہ) ۳۔ جملہ کی اقسام II (توضیح جملہ اسمیہ اور فعلیہ)
3	مجی کلمات	۱۔ مجی کلمات کا تعارف ۲۔ مجی کلمات کی اقسام ۳۔ مجی کلمات سے متعلق قواعد
4	اسماء	۱۔ اسم موصول ۲۔ اسم اشارہ ۳۔ اسماء افعال
5	معرب کلمات	۱۔ معرب کلمات کا تعارف ۲۔ معرب کلمات کی اقسام ۳۔ معرب کلمات کے متعلق قواعد
6	مرفوعات	مرفوعات
7	منصوبات	منصوبات
8	مجرورات	مجرورات
9	مرکبات	۱۔ مرکب ناقص اور اقسام ۲۔ مرکب تام (جملہ اسمیہ اور فعلیہ)

			ا۔ حروف استفهام
10	حروف عاملہ		۲۔ حروف ناصبہ
			۳۔ حروف جازمہ
11	التدريب و التمارین		التکلم باللغة العربیة
12	التدريب و التمارین		التکلم باللغة العربیة
13	التدريب و التمارین		التکلم باللغة العربیة
14	التدريب و التمارین		التکلم باللغة العربیة
15	التدريب و التمارین		التکلم باللغة العربیة
16	التدريب و التمارین		التکلم باللغة العربیة

مطالعاتی کتاب

نمبر	نام مصنف	نام کتاب
1	ڈاکٹر سید سیار علی و ڈاکٹر محمد سلیمان	القواعد النحویة و تطبیقاتھا فی اللغة العربیة

اکتب القراءة

نمبر	نام مصنف	نام کتاب
1	عبد الستار خان	عربی کا معلم (چاروں حصے)
3	محمد مصطفی تہدی	تمرین النحو
4	مولانا عبد الماجد تہدی	معلم الانشاء

حوالہ جاتی کتب

نمبر شمار	نام مصنف	نام کتاب
1	علی جادم	الخوالوامع
2	رشید الشرطوطی	مبادئ العربیة فی الصرف و النحو
3	عبد الرحمن امر تسری	کتاب النحو

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	**ISLAMIC HISTORY-I**
COURSE CODE	**ISH-474**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**00**
COURSE DESCRIPTION	زندگی کا ہر دن تاریخ کا حصہ بن جاتی ہے۔ تاریخ اسلام کی اس کورس میں سیرت النبی ﷺ ، سیرت خلفاء راشدین ، تاریخ بنو امیہ، تاریخ بنو عباس اور اندلس کے تواریخ پڑھائے جائیں گے
OBJECTIVES OF THE COURSE	۱۔طلباءکوسیر ت النبی ﷺ کے حوالے سے آگہی حاصل ہو جائے گی ۲۔طلباءکو اسلامی تاریخ سے روشناس کروانا ۳۔طلباءکی تاریخ کے آئینے میں کردار سازی کروانا

S.No	Topic	Description
1	سیرت طیبہ	۱۔خاتم النبیین حضرت محمد ﷺ کی مکی زندگی ۲۔خاتم النبیین حضرت محمد ﷺ کی مدنی زندگی
2	سیرت طیبہ (غزوات)	۱۔غزوہ بدر۲۔ غزوہ احد ۳۔ غزوہ خندق
	سیرت طیبہ (غزوات)	۱۔ صلح حدیبیہ، خیبر ۲۔ غزوہ موتہ اور فتح مکہ ۳۔ غزوہ حنین
3	سیرت و تاریخ خلفاء راشدین	۱۔سیرت حضرت ابو بکر رضی اللہ عنہ ۲۔ خلافت اور انتظام ۳۔ جھوٹے مدعیان نبوت کےخلاف جہاد (اسود عنسی، طلیحہ ، مسیلمہ، سجاح، سلمیٰ)
4	سیرت و تاریخ خلفاء راشدین	۱۔فتوحات حضرت ابوبکر رضی اللہ عنہ (جنگ سلاسل، نہر، انبار) ۲۔فتوحات حضرت ابوبکر رضی اللہ عنہ (جنگ دومۃ الجندل، جنگ فراض) ۳۔فتوحات حضرت ابوبکر رضی اللہ عنہ (جنگ اجنادین)
5	سیرت و تاریخ خلفاء راشدین	۱۔سیرت حضرت عمررضی اللہ عنہ ۲۔ خلافت اور پالیسیاں ۳۔ اصلاحات (ملکی تقسیم، فوجداری نظام، عسکری نظام)
6	سیرت و تاریخ خلفاء راشدین	۱۔فتوحات حضرت عمر رضی اللہ عنہ (جنگ نمارق، کسکر) ۲۔فتوحات حضرت عمر رضی اللہ عنہ (جنگ جسر، بویب) ۳۔فتوحات حضرت عمر رضی اللہ عنہ (جنگ قادسیہ)
7	سیرت و تاریخ خلفاء راشدین	۱۔فتوحات حضرت عمر رضی اللہ عنہ (جنگ مدائن، جلولاء) ۲۔فتوحات حضرت عمر رضی اللہ عنہ (جنگ حلوان ، نہاوند) ۳۔ ایرانی فتوحات (جنگ یرموک، فتح بیت المقدس)

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8	سیرت و تاریخ خلفاء راشدین	۱۔ سیرت حضرت عثمان رضی اللہ عنہ ۲۔ خلافت ، الزامات اور بغاوتیں ۳۔ فتوحات (طرابلس، قبرص، فارس)
9	سیرت و تاریخ خلفاء راشدین	۱۔ سیرت حضرت علی رضی اللہ عنہ ۲۔ جنگ جمل ۳۔ جنگ صفین
10	تاریخ بنو امیہ	۱۔ بنو امیہ کی حکومت کا آغاز و ارتقاء ۲۔ سیرت امیر معاویہ رضی اللہ عنہ ۳۔ کارنامے اور فتوحات
11	خلفاء بنو امیہ	۱۔ یزید بن معاویہ کا تذکرہ ۲۔ شہداء کربلا کی تاریخ ۳۔ سیرت عبداللہ بن زبیر رضی اللہ عنہ
12	خلفاء بنو امیہ	۱۔ عبد الملک بن مروان ۲۔ عبد الملک بن مروان کی اصلاحات ۳۔ ولید بن عبد الملک کا تذکرہ
13	خلفاء بنو امیہ	۱۔ سلیمان بن عبد الملک کا تذکرہ ۲۔ سیرت حضرت عمر بن عبد العزیز رحمہ اللہ ۳۔ حضرت عمر بن عبد العزیز رحمہ اللہ کی اصلاحات
14	خلفاء بنو امیہ	۱۔ یزید بن عبد الملک ۲۔ ہشام بن عبد الملک ۳۔ ولید بن یزید
15	خلفاء بنو امیہ	۱۔ یزید ثالث بن ولید ۲۔ مروان ثانی بن محمد ۳۔ سلطنت بنو امیہ کی زوال کے اسباب
16	خلفاء بنو امیہ	۱۔ بنو امیہ کی مرکزی انتظام سلطنت ۲۔ بنو امیہ کی صوبائی انتظام سلطنت ۳۔ بنو امیہ کی عسکری نظام

مطالعاتی کتاب

نمبرشمار	ناممصنف	نامکتاب
1	پروفیسر شمس الرحمٰن گوہر	تاریخ اسلام حصہ اول

حوالہ جاتی کتب

نمبرشمار	ناممصنف	نامکتاب
1	سید سلیمان ندوی	سیرت النبی ﷺ
2	محمد بن جریر طبری	تاریخ طبری
3	عماد الدین ابن کثیر	تاریخ ابن کثیر
4	عبدالرحمٰن بن خلدون	تاریخ ابن خلدون
5	ڈاکٹر حمید الدین	تاریخ اسلام

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	**ISLAMIC HISTORY–II**
COURSE CODE	**ISH-475**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**00**

COURSE DESCRIPTION	زندگی کا ہر دن تاریخ کا حصہ بن جاتی ہے۔ تاریخ اسلام کی اس کورس میں سیرت النبی ﷺ ، سیرت خلفاء راشدین ، تاریخ بنو امیہ، تاریخ بنو عباس اور اندلس کے تواریخ پڑھائے جائیں گے
OBJECTIVES OF THE COURSE	۱۔ طلباءکوتاریخ بنو عباس اور تاریخ اندلس کا درس دینا ۲۔ طلباءکو اسلامی تاریخ سے روشناس کروانا ۳۔ طلباءکی تاریخ کے آئینے میں کردار سازی کروانا

S.No	Topic	Description
1	خلافت عباسیہ	۱۔ آغاز خلافت بنو عباس ۲۔ ابو العباس السفاح ۳۔ ابو جعفر المنصور
2	خلافت عباسیہ	۱۔ ابو عبد اللہ محمد مہدی ۲۔ ہارون الرشید ۳۔ محمد امین الرشید
3	خلافت عباسیہ	۱۔ مامون رشید ۲۔ محمد بن ہارون معتصم باللہ ۳۔ ابو جعفر ہارون واثق باللہ
4	خلافت عباسیہ	۱۔ جعفر معتصم بن متوکل علی اللہ ۲۔ محمد بن جعفر منتصر باللہ ۳۔ محمد بن جفعر معتز باللہ
5	خلافت عباسیہ	۱۔ ابو العباس احمد بن متوکل معتمد علی اللہ ۲۔ الو العباس احمد بن موفق معتضد باللہ ۳۔ ابو محمد علی بن معتضد مکتفی باللہ
6	خلافت عباسیہ	۱۔ جعفر بن معتضد مقتدر باللہ ۲۔ فضل بن مقتدر مطیع اللہ ۳۔ عبد الکریم بن مطیع طائع اللہ
7	خلافت عباسیہ	۱۔ احمد بن مقتدر قادر باللہ ۲۔ عبد اللہ بن قادر قائم بامر اللہ ۳۔ فضل بن مستظہر مسترشد باللہ
8	خلافت عباسیہ	۱۔ احمد بن مستضی ناصر الدین اللہ ۲۔ ابو جعفر منصور مستنصر باللہ ۳۔ عبد اللہ بن مستنصر مستصم باللہ

9	خلافت عباسیہ	۱۔ بنو عباس کی انتظام سلطنت ۲۔ بنو عباس کی فوجی نظام ۳۔ بنو عباس کی زوال کے اسباب
10	اندلسی دور	۱۔ فتح اندلس ۲۔ دور امارات
11	اندلسی دور	۱۔ امیر عبدالرحمان الداخل ۲۔ ہشام بن عبد الرحمان
12	اندلسی دور	۱۔ دور ملوک الطوائف
13	اندلسی دور	۱ : دور مرابطین (یوسف بن تاشفین)
14	اندلسی دور	۱ : دور المؤحدین
15	اندلسی دور	۱ : دور غرناطہ
16	اندلسی دور	۱ : انتظام سلطنت ۲ : سلطنت اندلس کے زوال کے اسباب

مطالعاتی کتاب

نمبرشمار	ناممصنف	نامکتاب
1	پروفیسر شمس الرحمٰن گوہر	تاریخ اسلام حصہ دوم

حوالہجاتیکتب

نمبرشمار	ناممصنف	نامکتاب
1	محمد بن جریر طبری	تاریخ طبری
2	عماد الدین ابن کثیر	تاریخ ابن کثیر
3	عبدالرحمٰن بن خلدون	تاریخ ابن خلدون
4	ڈاکٹر حمید الدین	تاریخ اسلام

ا

COURSE TITLE	املا و قواعد اردو زبان۔
COURSE CODE	**UR/BS-442**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**00**

ہجا: حروف تہجی اور ان کی آوازیں،حروفِ علت، حروف صحیح،واو معروف و مجہول، ٹئے معروف و مجہول،نون غنہ، دوچشمی ھ،اعراب، زبر، زیر، پیش،جزم، شد، مد، تنوین،حروف شمسی و قمری

صرف: کلمے کی ساخت: مفرد، سابقی و لاحقی، امتزاجی، ترکیبی

اقسام کلمہ: اسم، ضمیر، صفت، فعل، تمیزفعل، حرفِ نحو

نحو: مرکبات ناقص و تام:مرکبات ناقص: اضافی،عطفی، توصیفی مرکبات تام: اجزائے جملہ، مبتدا، خبر

جملے کی قسمیں بلحاظ ساخت: سادہ، مرکب،بلحاظ فعل: اسمیہ، فعلیہ،اجزائے جملہ کی مطابقت ،امالہ

ب۔املا اور رسم الخط کے مسائل:

حروف کی ابتدائی و سطی اور آخری شکلیں، حروف ملفوظہ و غیر ملفوظہ، ء،،ھ،،ہ،غنّہ کے مسائل، الف اور کھڑی زبر، و اور الٹا پیش ،انگریزی اور ہندی الفاظ کا املا

مجوزہ کتب:

قواعد اردو (طبع جدید)	مولوی عبدالحق
مصباح القواعد	فتح محمد جالندھری
آئینِ اردو	زین العابدین فرجاد
اردو املا اور رسم الخط	ڈاکٹر فرمان فتح پوری
جامع القواعد (حصہ صرف)	ڈاکٹر ابواللیث صدیقی
جامع القواعد(حصہ نحو)	ڈاکٹر غلام مصطفیٰ خان
فرہنگِ تلفظ	شان الحق حقی
املا نامہ	گوپی چند نارنگ
اردو املا	رشید حسن خان

COURSE OUTLINES
of
FOUNDATIONAL COURSES
(Expository Writing)

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	**English-I (FUNCTIONAL ENGLISH)**
COURSE CODE	**Eng-113**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE OBJECTIVES
Enhance language skills and develop critical thinking.
COURSE CONTENTS
Basics of Grammar
Parts of speech and use of articlesSentence structure, active and passive voice, Practice in unified sentence, Analysis of phrase, clause and sentence structure, Transitive and intransitive verbs**,** Punctuation and spelling.
Comprehension
Answers to questions on a given text
Discussion
General topics and every-day conversation (topics for discussion to be at the discretion of the teacher keeping in view the level of students)
Listening
To be improved by showing documentaries/films carefully selected by subject teachers.
Translation skills
Urdu to English
Paragraph writing
Topics to be chosen at the discretion, of the teacher
Presentation skills
Note: Extensive reading is required for vocabulary building.
Recommended Books:
a) Grammar

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

b) Writing

- Writing. Intermediate by Marie-Christine Boutin, Suzanne Brinand and Francoise Grellet. Oxford Supplementary Skills. Fourth Impression 1993. ISBN 0 19 435405 7 Pages 20-27 and 35-41.

c) Reading/Comprehension

- Reading. Upper Intermediate. Brain Tomlinson and Rod Ellis. Oxford Supplementary Skills. Third Impression 1992. ISBN 0 19453402 2.

d) Speaking

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	**English-II (COMMUNICATIONS SKILLS)**
COURSE CODE	**Eng-123**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE OBJECTIVES
Enable the students to meet their real life communication needs.
COURSE CONTENTS
Paragraph writing
Practice in writing a good, unified and coherent paragraph
Essay writing
Introduction
CV and job application
Translation skills, Urdu to English
Study skills
Skimming and scanning, intensive and extensive, and speed reading, summary and précis writing and comprehension.
Academic skills
Letter/memo writing, minutes of meetings, use of library and internet
Presentation skills
Personality development (emphasis on content, style and pronunciation)
Note: documentaries to be shown for discussion and review
RECOMMENDED READINGS
a) **Grammar**
- 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**
- Writing. Intermediate by Marie-Christine Boutin, Suzanne Brinand and Francoise Grellet. Oxford Supplementary Skills. Fourth Impression 1993. ISBN 0 19 435405 7 Pages 45-53 (note taking).
- Writing. Upper-Intermediate by Rob Nolasco. Oxford Supplementary Skills. Fourth Impression 1992. ISBN 0 194354065 (particularly good for writing memos, introduction to presentations, descriptive and argumentative writing).

c) **Reading**
- Reading. Advanced. Brian Tomlinson and Rod Ellis. Oxford Supplementary Skills. Third Impression 1991. ISBN 0 19 4534030.
- Reading and Study Skills by John Langan
- Study Skills by Richard Yorky.

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	English-III (TECHNICAL WRITING AND PRESENTATION SKILLS)
COURSE CODE	Eng-213
CREDIT HOURS	03
PREREQUISITE	Nil
REV. NO.	01
DATE	June 04, 2021

COURSE OBJECTIVES
Enhance language skills and develop the writing skills.
COURSE CONTENTS
Presentation skills
Essay writing
Descriptive, narrative, discursive, argumentative
Academic writing
How to write a proposal for research paper/term paper
How to write a research paper/term paper (emphasis on style, content, language, form, clarity, consistency)
Technical Report writing
Progress report writing
Note: Extensive reading is required for vocabulary building
RECOMMENDED BOOKS

- Marshal Gersen, Technical Writing: The Process and Product
- Michael H.2nd Edition, Technical Writing: situation and strategies St.Martine's Press New York 1988
- Technical writing: Process and Product 5th Ed Sharon J. Gersen.

COURSE OUTLINES
of
FOUNDATIONAL COURSES
(Quantitative Reasoning)

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	**ELEMENTS OF SET THERORY AND MATHEMATICAL LOGIC**
COURSE CODE	**Math-122**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**00**

SPECIFIC OBJECTIVES OF COURSE
Everything mathematicians do can be reduced to statements about sets, equality and membership which are basics of set theory. This course introduces these basic concepts. The course aims at familiarizing the students with cardinals, relations and fundamentals of propositional and predicate logics.
COURSE OUTLINE
   1. **Set Theory**
Sets, subsets, operations with sets: union, intersection, difference, symmetric difference, Cartesian product and disjoint union.
   2. **Relations**
Equivalence relations, partitions, quotient set; examples, parallelism, similarity of triangles. Order relations, min, max, inf, sup; linear order. Examples: N, Z, R, *P*(*A*). Well ordered sets and induction.Inductively ordered sets and Zorn's lemma.Functions: graph of a function.Composition; injections, surjections, bijections, inverse function.
   3. **Computing cardinals**
Cardinality of Cartesian product, union. Cardinality of all functions from a set to another set. Cardinality of all injective, surjective and bijective functions from a set to another set. Infinite sets, finite sets. Countable sets, properties, examples (Z, Q). R is not countable. R, RxR, RxRxR have the same cardinal. Operations with cardinal numbers. Cantor-Bernstein theorem.
   4. **Mathematical logic**
Propositional Calculus. Truth tables. Predicate Calculus.
RECOMMENDED BOOKS
   * M. Liebeck, *A Concise Introduction to Pure Mathematics*, CRC Press, 2011.
   * N. L. Biggs, *Discrete Mathematics*, Oxford University Press, 2002.
   * R. Garnier, J. Taylor, *Discrete Mathematics*, Chapters 1,3,4,5, CRC Press, 2010.
   * A.A. Fraenkal, *Abstract Set Theory*, North-Holland Publishing Company, 1966.
   * P. Suppes, *Axiomatic Set Theory*, Dover Publication, 1972.

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	**LINEAR ALGEBRA**
COURSE CODE	**Math-223**
CREDIT HOURS	**03**
PREREQUISITE	**Calculus-I**
REV. NO.	**00**

SPECIFIC OBJECTIVES OF THE COURSE
Linear algebra is the study of vector spaces and linear transformations. The main objective of this course is to help students learn in rigorous manner, the tools and methods essential for studying the solution spaces of problems in mathematics, engineering, the natural sciences, and social sciences and developmathematical skills needed to apply these to the problems arising within their field of study; and to various real world problems

COURSE OUTLINE
1. System of Linear Equations
Representation in matrix form. Matrices. Operations on matrices. Echelon and reduced echelon form. Inverse of a matrix (by elementary row operations). Solution of linear system. Gauss-Jordan method. Gaussian elimination.

2. Determinants
Permutations of order two and three and definitions of determinants of the same order. Computing of determinants. Definition of higher order determinants. Properties. Expansion of determinants.

3. Vector Spaces
Definition and examples, subspaces. Linear combination and spanning set. Linearly Independent sets. Finitely generated vector spaces. Bases and dimension of a vector space. Operations on subspaces, Intersections, sums and direct sums of subspaces. Quotient Spaces.

4. Linear mappings
Definition and examples. Kernel and image of a linear mapping. Rank and nullity. Reflections, projections, and homotheties. Change of basis. Eigen-values and eigenvectors. Theorem of Hamilton-Cayley.

5. Inner product Spaces
Definition and examples. Properties, Projection. Cauchy inequality. Orthogonal and orthonormal basis. Gram Schmidt Process. Diagonalization.

RECOMMENDED BOOKS
- ShilovGE, *Linear Algebra,* 1977, Dover Publications, New York.
- ZillD G, CulleM R, *Advanced Engineering Mathematics*, 1996, PWS, Publishing Company, Boston.
- Herstein IN, *Topics in Algebra* (2nd edition)*,* 1975, John Wiley.
- TrooperAM, *Linear Algebra*, 1969, Thomas Nelson and Sons.
- Anton H, *Linear Algebra with Applications* (8th edition), 1997, John Wiley, New York
- Hill RO, *Elementary Linear Algebra with Application* (3rd edition), 1995, Brooks/Cole, USA.
- Leon SJ, *Linear Algebra with Applications* (6th edition), 2002, Prentice Hall, Englewood Cliffs, NJ, USA.
- Nicholson K, *Elementary Linear Algebra with Applications* (2nd edition), 2003, McGraw-HillRyerson Higher Education, Canadian edition.

COURSE OUTLINES
of
CIVILIZATIONAL COURSES

COURSE TITLE	**ISLAMIC STUDIES**
COURSE CODE	**Isl-121**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**01**
DATE	**June 04, 2021**

COURSE OBJECTIVES
- To provide Basic information about Islamic Studies
- To enhance understanding of the students regarding Islamic Civilization
- To improve Student's skill to perform prayers and other worships
- To enhance the skill of the students for understanding of issues related to faith and religious life.

COURSE OUTLINE

Introduction to Quranic Studies
Basic Concepts of Quran, History of Quran, Uloom-ul -Quran

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

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

Seerat of Holy Prophet (S.A.W) I
Life of Muhammad Bin Abdullah (Before Prophet Hood), Life of Holy Prophet (S.A.W) in Makkah, Important Lessons derived from the life of Holy Prophet in Makkah

Seerat of Holy Prophet (S.A.W) II
Life of Holy Prophet (S.A.W) in Madina, Important Events of Life of Holy Prophet in Madina, Important Lessons derived from the life of Holy Prophet in Madina

Introduction to Sunnah
Basic Concepts of Hadith, History of Hadith, Kinds of Hadith, Uloom –ul-Hadith, Sunnah & Hadith, Legal Position of Sunnah

Selected Study from Text of Hadith

Introduction to Islamic Law & Jurisprudence
Basic Concepts of Islamic Law & Jurisprudence, History & Importance of Islamic Law & Jurisprudence, Sources of Islamic Law & Jurisprudence, Nature of Differences in Islamic Law, Islam and Sectarianism

Islamic Culture & Civilization
Basic Concepts of Islamic Culture & Civilization, Historical Development of Islamic Culture & Civilization, Characteristics of Islamic Culture & Civilization, Islamic Culture & Civilization and Contemporary Issues

Islam & Science

Basic Concepts of Islam & Science, Contributions of Muslims in the Development of Science, Quran & Science

Islamic Economic System

Basic Concepts of Islamic Economic System, Means of Distribution of wealth in Islamic Economics, Islamic Concept of Riba, Islamic Ways of Trade & Commerce

Political System of Islam

Basic Concepts of Islamic Political System, Islamic Concept of Sovereignty, Basic Institutions of Govt. in Islam

Islamic History

Period of Khlaft-E-Rashida, Period of Ummayyads, Period of Abbasids

Social System of Islam

Basic Concepts Of Social System Of Islam, Elements Of Family, Ethical Values Of Islam

RECOMMENDED READINGS

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

Curriculum of BS in Economics (04Years-08 Semesters)

COURSE TITLE	**PAKISTAN STUDIES**
COURSE CODE	**PS-115**
CREDIT HOURS	**03**
PREREQUISITE	**Nil**
REV. NO.	**01**
DATE	**June 04, 2021**

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

COURSE OUTLINE

1. Historical Perspective
Ideological rationale with special reference to Sir Syed Ahmed Khan, Allama Muhammad Iqbal and Quaid-e-Azam Muhammad Ali Jinnah, Factors leading to Muslim separatism, People and Land, Indus Civilization, Muslim advent, Location and geo-physical features.

2. Government and Politics in Pakistan
Political and constitutional phases:
1947-58, 1958-71, 1971-77, 1977-88, 1988-99, 1999 onward

3. Contemporary Pakistan
Economic institutions and issues, Society and social structure, Ethnicity, Foreign policy of Pakistan and challenges, Futuristic outlook of Pakistan.

RECOMMENDED READINGS

- Afzal, M. Rafique. *Political Parties in Pakistan,* Vol. I, II & III. Islamabad: National Institute of Historical and cultural Research,
- 1998.
- Akbar, S. Zaidi. *Issue in Pakistan's Economy.* Karachi: Oxford University Press, 2000.
- Amin, Tahir. *Ethno - National Movement in Pakistan,* Islamabad: Institute of Policy Studies, Islamabad.
- Aziz, K.K. *Party, Politics in Pakistan,* Islamabad: National Commission on Historical and Cultural Research, 1976.
- Burki, Shahid Javed. *State & Society in Pakistan,* the Macmillan Press Ltd 1980.

Agenda Item -V

Consideration & Recommendation for approval of Admission Criteria for
BS in Economics (4 years – 8 Semesters) and Associate Degree in Economics (2 years – 4
Semesters) Program

Curriculum of BS in Economics (04Years-08 Semesters)

Eligibility Criteria for Admission in AD in Economics and BS in Economics:

Intermediate with at least 45% Marks from a recognized institution or A-Levels (22 Points) with Equivalency Certificate from Inter Board Committee of Chairman (IBCC) Islamabad or an equivalent certificate from a recognized institution are eligible to apply.

Candidates are required to pass entry test/interview (if any) conducted by the University/College.