

**CURRICULUM
OF
COMMERCE**

BS/B.COM

(Revised 2010)



**HIGHER EDUCATION COMMISSION
ISLAMABAD – PAKISTAN**

CURRICULUM DIVISION, HEC

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PREFACE

The curriculum of subject is described as a throbbing pulse of a nation. By viewing curriculum one can judge the stage of development and its pace of socio-economic development of a nation. With the advent of new technology, the world has turned into a global village. In view of tremendous research taking place world over new ideas and information pours in like of a stream of fresh water, making it imperative to update the curricula after regular intervals, for introducing latest development and innovation in the relevant field of knowledge.

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

In compliance with the above provisions, the HEC undertakes revamping and refurbishing of curricula after regular intervals in a democratic manner involving universities/DAIs, research and development institutions and local Chamber of Commerce and Industry. The intellectual inputs by expatriate Pakistanis working in universities and R&D institutions of technically advanced countries are also invited to contribute and their views are incorporated where considered appropriate by the National Curriculum Revision Committee (NCRC).

To bring international compatibility to qualifications held from Pakistani universities/DAIs for promotion of students mobility and job seekers around the globe, a Committee comprising of Conveners of the National Curriculum Revision Committee of HEC met in 2007 and developed a unified template for standardized 4-years/8-semesters BS degree programmes. This unified template was aimed to inculcate broader base of knowledge in the subjects like English, Sociology, Philosophy, Economics etc in addition to major discipline of study. The Bachelor (BS) degree course requires to be completed in 4-years/8-semesters, and shall require qualifying of 130-136 credit hours of which 63.50% of the curriculum will constitute discipline specific and remaining 36.50% will comprise compulsory and general courses.

In line with above, NCRC comprising senior university faculty and experts from various stakeholders and the respective accreditation councils has finalized the curriculum for BS/B.Com. The same is being recommended for adoption by the universities/DAIs channelizing through relevant statutory bodies of the universities.

PROF. DR. ALTAF ALI G. SHAIKH
Member Academics

March 2010

CURRICULUM DEVELOPMENT

INTRODUCTION

A three-day meeting of the HEC-National Curriculum Revision Committee (NCRC) in commerce was held from 5-7 April 2010 at HEC Regional Centre, Karachi to finalize the draft curriculum of BS /B.Com Hons 4-Years degree program. Following attended the meeting:-

Sr.	Name	
1.	Dr. Mujahid Ali Dean Chairman, Department of Commerce B.Z. University, Multan	Convener
2.	Dr. Qais Aslam Professor of Economics University of Central Punjab Faculty of Commerce 185-Abu Bakr Block New Garden Town Lahore.	Member
3.	Dr. S.M. Amir Shah In-charge Deptt of Commerce Allama Iqbal Open University, Islamabad.	Member
Abbreviations Used:		Member
NCRC.	National Curriculum Revision Committee	mmerce
VCC.	Vice-Chancellor's Committee	
EXP.	Experts	
COL.	Colleges	Member
UNI.	Universities	
PREP.	Preparation	Chairpur
REC.	Recommendations	
LI	Learning Innovation	Member
R&D	Research & Development	
	Organization	ness
HEC	Higher Education Commission	
	University of Sindh, Allama I.I.Kazi Campus, Jamshoro- Sindh	

7.	Prof. Nadeem Ayaz Principal Leadership College 47-C Sadiqabad Road Chandni Chowk Satellite Town Rawalpindi.	Member
8.	Mrs. Dilshad Zafar Deptt of Commerce University of Karachi Karachi.	Member
9.	Mr. Safi Ullah Khan Assistant Professor Institute of Management Sciences Kohat University of Science & Tech. Kohat	Member
10.	Syed HamidAli Shah Lecturer Quaid-e-Azam College of Commerce University of Peshawar	Member
11.	Prof. Zafarullah Khan Buttar Principal F.G. College of Commerce H-8/4, Islamabad.	Member
12.	Mr. Uzair Mirza AVP, New Jubilee Insurance (NJI) 2nd Flr. Jubilee Insurance House, I.I. Chundrigar Raod Karachi.	Member
13.	Mr. Mushtaq Madraswala Director ICMAP, Karachi.	Member
14.	Ms. Ayesha Shoukat, Assistant Professor, Islamia University of Bahawalpur, Bahawallpur.	Member
15.	Mr. M. Hussain, ICMAP, Karachi	Member

Meeting started with recitation from the Holy Quran. Mr. Muhammad Javed Khan, Adviser (Academics), HEC welcomed the participants on behalf of the Chairman HEC. In his opening remarks he expressed his pleasure over the worthy participation of academia from all over the country. He also pointed out the need to prepare the curriculum

for 4 years BS/B.Com (Hons) in Commerce. He emphasized the need of standardized curricula for all HEC recognized Universities/Institutes for quality education and uniformity at the national level. He stated the importance of the programme and emphasized that in order to compete with the international universities it is essential to introduce 4 years integrated BS/B.Com (Hons) programme. This will facilitate our students to continue higher education abroad and compete for international job market.

The committee made the courses more balanced by realigning the course contents to modern needs to include both commerce and social sciences subjects for overall professional and character development of the student. Courses were classified into Core and specialized courses in Commerce. Support courses in social sciences and humanities were introduced for producing the effective leaders in commerce to meet the challenges of the 21st century. The participants represented the academicians/professors from the universities of all provinces of the country and professionals from the industry and trade

The Committee appreciates the efforts of HEC for arranging regular meetings for revision of curricula in the larger interest of the academic needs of our country and hopes this practice will continue as such so as to bring the subject at par with the developed world arena as well as in developing countries.

The committee finalized the draft curriculum of Commerce at graduate level in the light of suggestions/comments received from the NCRC members. At the end of meeting, Dr. M. Tahir Ali Shah, Deputy Director (Curriculum), HEC, thanked the committee members for their valuable time and suggestions especially the participants from the R& D organizations.

**SCHEME OF STUDIES
BS (COMMERCE) / B.COM (HONS) 4-YEARS COURSES**

#	Semester I	Cr hr
1	Islamic Studies	2
2	Functional English	3
3	Introduction to Business	3
4	Principals of Accounting	3
5	Micro Economics	3
6	Business Mathematics	3

#	Semester II	Cr hr
1	Pak studies	2
2	Communication Skills	3
3	Computer Application in Business	3
4	Financial Accounting	3
5	Macro Economics	3
6	Business Statistics	3

#	Semester III	Cr hr
1	Business Law	3
2	Business Taxation	3
3	Introduction to Business Finance	3
4	Advanced Accounting-I	3
5	Economic issues of Pakistan	3
6	Business Psychology	3

#	Semester IV	Cr hr
1	Auditing	3
2	Technical Writing and Presentation Skills	3
3	Cost Accounting	3
4	Advanced Accounting-II	3

5	Financial and Regulatory Institutions	3
6	Inferential Statistics	3

#	Semester V	Cr hr
1	Research Methods in Business	3
2	Managerial economics	3
3	Financial Management	3
4	Principals of Marketing	3
5	Principals of Management	3
6	Introduction to Sociology	3

#	Semester VI	Cr hr
1	Logical and Critical Thinking	3
2	Principles of Risk Management and Insurance	3
3	Human Resource Management	3
4	Managerial Accounting	3
5	Entrepreneurship	3

#	Semester VII	Cr hr
1	E. Commerce	3
2	Investment and Portfolio Management	3
3	Operations Management	3
4	Organization Behavior	3
5	Elective	3
6	Elective	3

#	Semester VIII	Cr hr
1	Corporate Governance	3
2	International Business	3
3	Strategic Management	3
4	Elective	3
5	Research Project & viva voce	6

Detail of Courses For BS/B.Com (4 Years)

Course	INTRODUCTION TO BUSINESS	Credit Hours	3
Pre-Requisite	NONE	Semester	I
Objectives	• To enhance students to full range of functions of business organization		

OUTLINE

1. BUSINESS

- 1.1 SCOPE, Importance and Functions, Enterpreneminal qualities of Businessman.
- 1.2 Business environment and social responsibility.
- 1.3 Role of business in economic progress of the country
- 1.4 Problems of business.

2. FORMS OF BUSINESS ORGANIZATION

- 2.1 Sole proprietorships – Nature, Advantages and Disadvantages
- 2.2 Partnership, Classification, Advantages and Disadvantages, Rights, Duties and Liabilities of Partners, disoluation of partnership.
- 2.3 Joint Stock Company, Types – Chartered Statuary and Registered Formation – Memorandum of Association, Articles of Association, Prospectus, Capital Management, Meetings and Winding up Features, Merits and Demerits, Management of the Companies.

3. COOPERATIVE OWNERSHIP AND BUSINESS COMBINATIONS

- 3.1 Types of Cooperatives, Advantages and Disadvantages.
- 3.2 Business Combination, Meaning, Types and Forms causes and purposes, Advantages and Disadvantages.

4. FINANCE

- 4.1 Definition, Components, Importance, Kinds and Sources
- 4.2 Long Term and Short Term Financing.
- 4.3 Some Important Financial Institutions.
- 4.4 Stock Exchange and Commodity Exchange, Nature, Role and Significance.
- 4.5 Risk & Insurance, Protection against Risks, Importance and Types of Insurance, Types of Risks.

5. MARKETING

- 5.1 Process of Marketing, Definition, Functions and Scope Approaches to the Study of Marketing.
- 5.2 Marketing Mix for Physical Goods and Service Products, Importance.
- 5.3 Channels of Distribution for Consumer Good and Organizational Goods.
- 5.4 Marketing Communication and Promotion, Advertising, Personal Selling, Sales Promotion, Public Relationing, Packaging.

6. TRADE

- 6.1 Wholesale and Retail, Meaning, Importance, Functions, Advantages and Disadvantages.
- 6.2 Foreign Trade, Imports and Exports, Role in Economic Development of the Country.

7. PHYSICAL FACTORS

- 7.1 Selecting Business Location, Factors Influencing Locations, Small Business, VS Large Business
- 7.2 Purchasing and Inventory Control Coordination of Purchasing with Sales, Organization of Purchasing Department, Centralize vs. Decentralize Purchasing, Purchasing Policies and Procedure Inventory Control.

8. THE PERSONEL DEPARTMENT

- 8.1 Employment Division, Recovering, Placement Promotion.
- 8.2 Wages and Salary Section, Analysis & Job Classification, Pay Scales.
- 8.3 Training Program, Apprentice, Supervisory etc.

Reference Books

- 1. Rober C. Appleby, Modern Business Administration
- 2. Shoukat Ali, Introduction to Business
- 3. Muhammad Irshad, Introduction to Business, Naveed Publication Lahore
- 4. Khalid Mehmood Cheema and Syed Mobin Mahmood, Introduction to Business & Co Lahore.
- 5. Theodre J. Sielaff & Belmont, Introduction to Business, California
- 6. John W. Aberle, Wordsworth Publishing Company Inc.
- 7. Askari Zaidi, Fundamentals of Business, Orient Publishers, Karachi
- 8. Ali M. H., Introduction to Business

Course	PRINCIPLES OF ACCOUNTING	Credit Hours	3
Pre-Requisite	NONE	Semester	I
Objectives	<ul style="list-style-type: none"> • Apprehend and explain the fundamental accounting principles and concepts • Record transactions in journal • Prepare ledger accounts, trial balance 		

	<ul style="list-style-type: none"> • Prepare bank and cash accounts, bank reconciliation statements and petty cash statements • Make year-end adjustments, prepare adjusted trial balance • Prepare profit and loss accounts and balance sheet from adjusted trial balance • Calculate depreciation by using different methods • Prepare bad debt accounts and provision for doubtful debts
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OUTLINE

1. Accounting Conventions, Concepts and Principles
Definition and scope of accounting; basic principles of accounting; concepts and conventions underlying accounting statements, substance over form, the impact of International Accounting Standards as applicable in Pakistan, (IAS 1, & 16).
2. Accounting Systems and Procedures
Principles of double-entry book-keeping; accrual-based accounting system, adjusting, closing and reversing entries, methods of keeping and presenting books of prime entry (cash book, petty cash book, sales journal, purchase journal, purchase and sales return journals etc); principal and subsidiary ledgers. trial balance, completion of accounting cycle, components of financial statements, responsibility and users of financial statements.
3. Control Accounts
Receivable control accounts; payable control accounts, errors of control accounts (including subsidiary ledger) and reconciliation of control accounts and subsidiary ledger.
4. Cash Control
Preparation of three-column cash book as well as petty cash statement and maintenance of petty cash system; preparation of bank reconciliation statement; cash receipts and payments accounts. The purpose, requirements and process of internal audit relating to cash control; financial control, errors and frauds.

5. Rectification of Error
Types and corrections of errors not affecting trial balance; corrections of errors affecting trial balance including suspense accounts.
6. Accounts Receivable
Receivables and its subsidiary ledger; recording bad debts and its recovery; estimation of allowance for bad and doubtful debts (both income statement and balance sheet approaches. of estimation).
7. Tangible Non-Current Assets (IAS-16 including Revaluation of Assets)
Recognition and measurement of tangible non-current assets; distinction between and application of principles of capital and revenue expenditures, concept of depreciation; methods and recording of depreciation; change of method; revision of life of an asset; concepts of historical cost, fair value, net realizable value and replacement cost; accounting for disposal and exchange of tangible non-current assets; application of IAS-16.
8. Intangible Non-Current Assets (including IAS-38 Portion only)
Nature and composition of intangible assets; accounting treatment of intangible assets i.e. goodwill and research and development; methods of goodwill computation; impairment of goodwill (concept and recording entry); capitalization of development cost; amortization of development cost (concept and recording entry); application of IAS-38 in respect of research and development and goodwill.
9. Computer-based Accounting Systems
Computer-based application in accounting; advantages of computer-based systems, ways of achieving Internal controls in a computer-based accounting system, preparation of chart of accounts, concepts of working on Peach Tree accounting package.
10. Preparation of Financial Statements for trading & services concerns Elements and components of Financial Statements in accordance with format of IAS-I; Financial Statements (balance sheet, income statement and cash

flow statement) in respect of trading; and services enterprises.

Recommended Books:

1. Mark S. Bettner, Jack L. Smith, Financial Accounting.
2. Jerry. J, Weygandt, Paul D. Kimmel and Donald E. Kieso Accounting Principles.
3. IFRS, IASs, International Accounting Standards Board, London

Course	MICRO ECONOMICS	Credit Hours	3
Pre-Requisite	NONE	Semester	I
Objectives	<ul style="list-style-type: none"> • To educate the students in basic principles of Microeconomics • To make students understand the working of the market economy • To enable students understand the optimal resource allocation concepts • To make students practice these concepts of Microeconomics in their personal and professional life 		

OUTLINE

Definitions: Nature, Scope and importance (Micro Economics).
 Definitions of Economics. Concept of scarcity, choice and wealth in economics. Economic & non-economic goods

Consumer Behaviour: Definition, Meaning, marginal Utility, Cardinal Approach (Law of Diminishing Marginal Utility & Equi-marginal Utility Law) and ordinal Approach (Indifference Curve Analysis).

Concepts of Demand and Law of Demand. Changes in Demand (Shift versus movement in Demand). Determinants of elasticity of Demand. Consumer's surplus. Elasticity of Demand and its measurements. Price,

Income and Cross Price Elasticity. Application / practical importance of concept of elastic for managers.

Concept of Supply & stock; Law of supply. Changes in Supply (shift and Movement of Supply Curve). Producer's surplus. Elasticity of Supply and its measurement.

Price and Market equilibrium. Effects of changes in market forces of demand and supply on market equilibrium and Market price and Normal price.

Production: Law of variable Proportions. Concept of Factor of Production, Land Labour, Capital & Entrepreneur. Laws of Returns and their application.

Production possibility curve, Factor Pricing: Rent, Wages, Interest and Profit.

Costs: Costs over time period Fixed, Variable, Total, Average - short run and long run Marginal. Opportunity Costs.

Market: Perfect and Imperfect Competition. Price and output determination, Revenue curves and their determination under perfect and Imperfect competition. Monopoly, Monopolistic competition Oligopoly Price Control, Price ceiling and price floor..

Recommended Books: (latest edition)

1. Pindyck Robert S.,. Rubinfeld Daniel L. (2005) " Micro Economics"
2. Parkin Michael (1998) "Micro Economics" 4th Edition Addison Wesley.
3. Hailstone J. Thomas and Mastriana V. Frank (2004) " Basic Economics" 13th edition Thomson
4. Petersen H. Craig, Lewis W. Cris (2003) " Managerial Economics" 4th edition Pearson
5. Colander C. David (2006)" Economics" 6th edition Mc Graw Hill Internatiional Edition.
6. Paul A Sameulson, Economics.
7. Liloyd G Reynolds Irwin, Micro Economics — Analysis & Policy, Irwin Homwood Illinois.
8. Koutsoyyians Micro-Economics
9. Mencaive Principles of Economic
10. Journals / Periodicals:
11. World Wide Web

Course	BUSINESS MATHEMATICS	Credit Hours	3
Pre-Requisite	NONE	Semester	I
Objectives	<ul style="list-style-type: none"> • To provide students with an understanding of the basic mathematical techniques used in business through application of techniques rather than its theoretical aspect. • Equip them with mathematical skills and knowledge that can be applied to solve financial problems 		

OUTLINE

One-Variable Equations

- Solution of First and Second Degree Equations in One Variable

Linear Equations

- Algebraic and Graphical Characteristics
- Slope-Intercept Form
- Determining the Equation of a Straight Line
- Linear Equations Involving More Than Two Variables

Systems of Linear Equations

- Two, Three and n-variable systems and their graphical and algebraic solutions

Mathematical Functions

- Definition, Types and Graphical Representation of Functions
- Linear Cost, Revenue and Profit Functions

Mathematics of Finance

- Interest and its Computation
- Single Payment Computations
- Annuities and Their Present/ Future Value
- Cost Benefit Analysis

Matrix Algebra

- Introduction, Simple and Special Types of Matrices
- Basic Matrix Operations

- The Determinant
- Inverse
- Solution of System of Linear Equations using Matrices

Differentiation

- Limits: Properties and Continuity
- Average Rate of Change
- The Derivative
- Differentiation
- Higher Order Derivative
- Optimization
- Identification of Maxima and Minima
- Application on Revenue, Cost, and Profit

Sequence, Series and Progression

- Sequence, Series and Progression: Introduction and Comparison thereof
- Arithmetic Series and its application in business
- Geometric Series and its application in business

Recommended Book:

- Frank S. Budnick, “Applied Mathematics For Business, Economics, and Social Sciences”, 4th Edition, 1993, Mc Graw-Hill Inc.
- Charles D. Miller, Stanley A. Salzman, and Gary Clendenen, “Business Mathematics”, 11th Edition, 2009, Addison-Wesley
- Glencoe “Mathematics with Business Applications”, Student Edition, 2006, McGraw-Hill

Course	PAKISTAN STUDIES	Credit Hours	2
Pre-Requisite	NONE	Semester	II
Objectives	<ul style="list-style-type: none"> • 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 		

OUTLINE

- Historical Perspective
 - a. Ideological rationale with special reference to Sir Syed Ahmed Khan, Allama Muhammad Iqbal and Quaid-i-Azam Muhammad Ali Jinnah.
 - b. Factors leading to Muslim separatism
 - c. People and Land
 - i. Indus Civilization
 - ii. Muslim Advent
 - iii. Location and geo-physical features.
- Government and Politics in Pakistan
 - Political and constitutional phases:
 - a. 1947-58
 - b. 1958-71
 - c. 1971-77
 - d. 1977-88
 - e. 1988-99
 - f. 1999 onward
- Contemporary Pakistan
 - a. Economic institutions and issues
 - b. Society and social structure
 - c. Ethnicity
 - d. Foreign policy of Pakistan and challenges
 - e. Futuristic outlook of Pakistan

Books Recommended

- Burki, Shahid Javed. *State & Society in Pakistan*, The Macmillan Press Ltd 1980.
- Akbar, S. Zaidi. *Issue in Pakistan's Economy*. Karachi: Oxford University Press, 2000.
- S.M. Burke and Lawrence Ziring. *Pakistan's Foreign policy: An Historical analysis*. Karachi: Oxford University Press, 1993.
- Mehmood, Safdar. *Pakistan Political Roots & Development*. Lahore, 1994.
- Wilcox, Wayne. *The Emergence of Banglades.*, Washington: American Enterprise, Institute of Public Policy Research, 1972.
- Mehmood, Safdar. *Pakistan Kayyun Toota*, Lahore: Idara-e-Saqafat-e-Islamia, Club Road, nd.
- Amin, Tahir. *Ethno - National Movement in Pakistan*, Islamabad: Institute of Policy Studies, Islamabad.
- Ziring, Lawrence. *Enigma of Political Development*. Kent England: WmDawson & sons Ltd, 1980.
- Zahid, Ansar. *History & Culture of Sindh*. Karachi: Royal Book Company, 1980.
- Afzal, M. Rafique. *Political Parties in Pakistan*, Vol. I, II & III. Islamabad: National Institute of Historical and cultural Research, 1998.
- Sayeed, Khalid Bin. *The Political System of Pakistan*. Boston: Houghton Mifflin, 1967.
- Aziz, K.K. *Party, Politics in Pakistan*, Islamabad: National Commission on Historical and Cultural Research, 1976.
- Muhammad Waseem, *Pakistan Under Martial Law*, Lahore: Vanguard, 1987.
- Haq, Noor ul. *Making of Pakistan: The Military Perspective*. Islamabad: National Commission on Historical and Cultural Research, 1993.

Course	COMPUTER APPLICATIONS IN BUSINESS	Credit Hours	3
Pre-Requisite	NONE	Semester	II
Objectives	<ul style="list-style-type: none"> • Develop awareness of computers' hardware and peripherals; concepts regarding software – its 		

	<p>types, basic operations, basic OS concepts, OS installation.</p> <ul style="list-style-type: none"> • Develop advanced user level skills in various Application Packages: MS Word, MS Access, MS Excel, MS PowerPoint. • Set up a computer for World Wide Web connection; Use e-mail to send / receive messages and file attachments; Concepts of on-line discussion groups.
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OUTLINE

INTRODUCTION TO COMPUTERS

- Computer, its characteristics, history, generations of computers
- Computer Hardware and its peripherals. New hardware and peripheral's installation. (Hands-On)
- Basic Architecture of Computer System
- Software – its types, basic operations. General installation guidelines. (Hands-On)
- Concepts on Computer Virus, Worms, Hacking, Spam

INTRODUCTION TO OPERATING SYSTEM (MICROSOFT WINDOWS XP)

- Basic concepts regarding System Software and OS
- OS (Windows) Installation, Repair, Recovery
- Using Windows Environment. (Hands-On)
 - Windows XP Features
 - Start Menu, Task Bar, System Tray
 - Control Panel, its basic items
 - Printing
 - Managing Files and Folders
 - Windows Explorer
 - Opening Documents / Files
 - Copying and Moving Files

- Deleting Files and Folders
- Controlling the View Detail Level
- Customizing the Tool Bars

WORD PROCESSING BASICS

- Types of documents created with a word processing program(MS Word)
- An overview of the menus in MS Word
- Principal features of a word processing program (Hands-On)
- In depth knowledge and competence on various operations of MS Word

SPREADSHEET APPLICATIONS

- Spreadsheet basics, its vocabulary, principles
- Usage of functions, macros, sorting, formatting, generating charts, pivot tables.
- Financial Management related Formula's Implementation.
- Statistics related Formula's Implementation.
- Cell Formatting, print previewing / printing of selected data
- Insert and name worksheets
- Import spreadsheet reports and charts into word processing documents
- Set up and analyze itemized lists of numbers e-g- various types of budgets / financial statements

DATABASE APPLICATIONS

- Define the purpose, components of a database.
- Plan a simple two-table database.
- Cardinality of Relationship.
- Creating Tables.
- Creating Relations of the Tables.

- Use wizards to enter and to search data.
- To create a report.
- Enter data in a form.
- Creating Module using Microsoft Access.
- Using simple queries in wizard.
- Privacy / Security issues related to databases.
- Create Data Base Using Microsoft Sql Server 2000.

PRESENTATIONS THROUGH POWERPOINT

- Examine purpose, examples of a presentation; explain components of a presentation
- Outline a presentation and apply good design principles
- Apply and modify a design template
- Add clip art, charts, sound to a presentation
- Formatting a slide show; Applying slide background, color, style, transitions – visual, text
- Running a slide show

NETWORKS & NETWORKING BASICS

- Use of Networks; Its Common Types
- Data Communication Modes; Using Telephone Lines, Modems
- Wireless Networks
- Network Security

INTERNET & E-MAIL BASICS

- Introduction to the Internet, the terminology, its advantages / disadvantages
- Internet Terminology
- Security on the Internet – Tools & Tips
- IT Issues
- Privacy
- Ethics

Recommended Text:

- Kinkoph, Shery (2003) *How to use Microsoft Office XP*. [Sams Publishing](#)

- Grauer, Robert T. & Barber, Maryam (2000) *Exploring Office XP*, Volume 1. Prentice Hall Publishers
- Capron, H.L. (2004) *Computers, Tools For An Information Age*, Prentice Hall Publishers, 8th Ed
- Recardo, Kethrine *Data Base Management Systems*. [Jones & Bartlett Publishers](#)
- Gralla, Preston (2003) *How The Internet Works*, Que Publishers, 2nd Ed
- Crumlish, Christian (1997) *The ABCs of the Internet*, Sybex Inc, 2nd Ed
- Sinha , P.K. (1992) *Introduction To Computers* BPB Publications

Course	FINANCIAL ACCOUNTING	Credit Hours	3
Pre-Requisite	Principles of Accounting	Semester	II
Objectives	Students should be able to: <ul style="list-style-type: none"> • prepare accounts and financial statements of joint venture, royalties, partnership, branches & departmental types of businesses, • prepare receipts and payments accounts and financial statements of non-profit organizations, • prepare financial statements from incomplete records, • understand the procedures to be followed in formation of companies, • identify and explain accounting treatment of expenses incurred during the course of formation of a company, • identify and explain reasons for profit appropriation, • identify and explain reasons why any loss/gain is debited or credited to retained earnings, • prepare and present financial statements of companies, according to local laws and International Accounting Standards, with appropriate notes, • explain potential matters that should be considered, while making a regulatory framework for published accounts, • describe the role of the International Accounting 		

	Standards, <ul style="list-style-type: none"> • prepare a statement of changes in Equity, • compute working capital ratios for business sectors.
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OUTLINE

Corporation, Companies' formation, recording of issue of shares

- Stock splits; right issue of shares; treasury stock ;
- Sources of retained earnings; retained earnings appropriation to dividends and reserves; concept and types reserves;
- Valuation of goodwill and shares,
- Liquidation of joint stock companies.
- Accounting for the cash dividends, stock dividends.

Account for purchased stock warrants.

- EPS, Basic EPS
- Adjust the weighted average number of common shares for stock dividends, stock splits,
- Use of treasury stock method

IAS-33 Earnings per Share

Long term liabilities

- Identify the methods for the presentation and analysis of long-term liabilities.
- Describe the formal procedures associated with issuing long-term debt.
- Identify various types of bond issues.
- Describe the accounting valuation for bonds at date of issuance.
- Apply the methods of bond discount and premium amortization.
- Describe the accounting for the extinguishment of debt.
- Explain the accounting for long-term notes payable.
- Explain the reporting of off-balance-sheet financing arrangements.
- Indicate how to present and analyze long-term debt.

The Information System: An Accountant perceptive

- Primary information flows within the business environment
- Accounting information systems and management information systems
- The general model for information systems
- Financial transactions from non-financial transactions
- The functional areas of a business
- Two main stages in the evolution of information systems
- Three roles of accountants in an information system.

Introduction of Transaction Processing

- Broad objectives of transaction cycles
- Types of transactions processed by each of the three transaction cycles
- The basic accounting records used in TPS

The Revenue cycle,

- Tasks performed in the revenue cycle, regardless of the technology used
- Functional departments in the revenue cycle and the flow of revenue transactions through the organization
- Documents, journals, and accounts needed for audit trails, records, decision making, and financial reporting

The Expenditure cycle Part- I

purchase and cash disbursement procedure,

- Fundamental tasks performed during purchases and cash disbursement processes
- Functional areas involved in purchases and cash disbursements and the flow of these transactions through the organization
- Documents, journals, and accounts that provide audit trails, promote the maintenance of records, and support decision making and financial reporting

The Expenditure cycle Part- II

Payroll processing and fixed asset procedures.

- Fundamental tasks of payroll and fixed asset processes
- Functional depts. of payroll and fixed asset activities and the flow of transactions through the organization
- Documents, journals, and accounts needed for audit trails, record maintenance, decision making, and financial reporting

Conversion cycle,

- Elements and procedures of a traditional production process
- Data flows and procedures in a traditional cost accounting system
- Accounting controls in a traditional environment
- Principles, operating features, and technologies of lean manufacturing
- Shortcomings of traditional accounting methods in the world-class environment

Coding schemes

Features, advantages, and disadvantages of various coding schemes

- Operational features of the GLS, FRS, and MRS
- Principle operational controls governing the GLS and FRS
- Factors that influence the design of the MRS
- Elements of a responsibility accounting system

Computerized Accounting System

- Elementary discussion on manual & E.D.P. accounting
- How to design a chart of Account? Its types along with practical examples.

Peachtree Complete accounting software 2006.

Recommended Texts:

- Larson, K. D., Wild, J. J., & Chiappetta, B. (2005), "Financial Accounting", 18th edition, McGraw Hill Irwin.
- Meigs, B. Walter., Johnson, E. Charles. & Meigs, F. Robert (2003), "Accounting: the basis of Business decisions", 11th edition McGraw Hill,.

- Hall A. James., (2009), Accounting Information System, 6th edition, Thomson South-Western.
- SAGE software, Peachtree Complete Accounting Software, 2006, SAGE software
- Marshall B. Romney, Paul J. Steinbart., (2009), Accounting Information System, 11th edition, Prentice Hall.
- International Accounting Standards Committee Foundation (IASCF) 2005, International Financial Reporting Standards (IFRSs), London United Kingdom.
- Kieso, Weygandt, and Warfield (2008) Financial Accounting, 6th Edition Wiley higher education.
- ICAP (2005), "Financial Accounting", Module-C, PBP professional education.

Course	MACRO ECONOMICS	Credit Hours	3
Pre-Requisite	NONE	Semester	II
Objectives	<ul style="list-style-type: none"> • To educate the students in basic principles of Macroeconomics • To make students understand the working of the policy initiatives in the market economy • To enable students understand the aggregate concepts of national Income, Employment, Inflation, Money and foreign Sector Issues • To develop economic thinking among students 		

OUTLINE

National Income:

Concepts of National Income-GNP, NNP, GDP, NI, PI, Personal disposable income, transfer payments, Circular flow of national Income. Measurement of National Income: National Income at market price, at factor Cost; Measurement of national Product in current price and in constant prices.

Trade Cycle:

Phases, Causes & Remedies, Theory of Trade Cycles (Keynes theory)

Employment and theories of unemployment

Consumption, Keynesian Psychological law of Consumption, Consumption function, saving function, investment multiplier,

Inflationary and deflationary gaps under Keynesian theory.

Inflation Kinds, Causes, & Remedies.

Value of Money:

Quantity Theory of Money, Liquidity preference theory and Motives to save (Money demand of Keynes), Money Multiplier. Concepts of M1 and M2 (Money Supply)

Public Finance:

Meaning, Difference between Private and

Public Finance, revenue and Expenditure of Public Bodies, Kinds

of Taxes and Cannons of Taxes fiscal policy.

Tools of Fiscal and Monetary Policy.

Balance of Payments, Exchange rates and trade: Balance of Trade, Balance of Payments,

Causes of Disequilibrium and Measures. Exchange rates (basic concept)

Policy mix

Economics in Islam: Economic role of State in Islam, Zakat and Usher

Recommended Books: (*Latest Editions*)

- Parkin Michael (1997) Macro Economics 4th edition New York Addison Wesley
- Mensfield Edwin (1986) Principles of Macro Economics 5th edition New York W.W. Norton
- Begg David, Fischer Stanley, Dornbusch Rudiger (2003) Economics 7th edition The McGraw Hill
- Nordous. D. William, Samuelson Paul. A (2005) Macro Economics 18th edition the MCGraw Hill
- Internet Material
- Paul A Sameulson, Economics. Nancy Smith Barrett, The Theory of Macro Economic Policy, Prentice Hall.

- Edward Shapiro, Macro Economic Analysis, Harcourt Brace.
- Froyen T. Richard *Macroeconomic theories and policies*
- Begg David, Fisher Stanley Dornbush Rudiger *Economics*
- Journals / Periodicals:
- World Wide Web:
- Ministry of Finance www.finance.org.pk
- State Bank of Pakistan www.sbp.org.pk

Course	BUSINESS STATISTICS	Credit Hours	3
Pre-Requisite	NONE	Semester	II
Objectives	<ul style="list-style-type: none"> • to provide students with an understanding of the basic statistical techniques for descriptive and inferential data analysis 		

OUTLINE

Why Study Statistics?

- Broad overview of the subject of statistics and its applications.
- Uncertainty, sampling, population, and samples.
- Distinction between descriptive and inferential statistics
- Statistical thinking
- Importance and pitfalls of spreadsheet programs like Microsoft Excel and SPSS.

Describing Data: Graphical

- Types of data and classify variables
- How to organize numerical data
- Tables and charts for numerical data
- Tables and charts for categorical data

Describing Data: Numerical

- Central tendency in numerical data.
- Variation in numerical data.
- Descriptive summary measures from a population

Probability

- Basic probability concepts
- Conditional probability and statistical independence
- Use of Bayes' theorem to revise probabilities in the light of new information

Discrete Random Variables & Probability Distributions

- Understanding of the basic concepts of discrete probability distributions and their characteristics
- Concept of mathematical expectations in relation to discrete random variables
- Binomial distribution and its application
- Poisson distribution and its application
- Hypergeometric distribution and its application
- Joint probability distributions and their application

Continuous Random Variables & Probability Distributions

- Normal probability distribution and its use in representing certain continuous variables
- Normal probability in assessing Normality
- Exponential distribution
- Normal approximation to the Binomial distribution

Linear Regression and Correlation

- Concept of Strength and Direction of Relationship
- Scatter Diagram and its use
- Coefficient of Correlation (Simple, Partial and Multiple)
- Simple and Multiple Linear Regression
- Coefficient of Determination

Sampling and Sampling Distributions

- Concept of sampling distributions
- Central limit theorem
- Developing the framework for statistical inference

Statistical Computing: Excel and Minitab

Using MS Excel and Minitab for the above-mentioned techniques

Recommended Books:

- Paul Newbold, William Carlson and Betty Thorne, "*Statistics for*

- *Business and Economics*”, 7th Edition, 2009, Prentice Hall.
- Downing Douglas and Jeffery Clark, “Business Statistics”, 4th Edition, 2003, Barron’s Educational Series Inc.

Course	BUSINESS LAW	Credit Hours	3
Pre-Requisite	NONE	Semester	III
Objectives	<ul style="list-style-type: none"> • to familiarize the students with the different Mercantile Laws affecting the economic and business environment in Pakistan. • to make students understand the important elements and aspects of business and industrial laws. • to enable the students to grasp the difference among various important aspects of business and industrial laws.. • to enable the students to assess the nature and impact of certain types of rules and regulations by analyzing the cases referred to in the recommended books/sources. • to equip the students with the necessary skills and aptitude to deal tactfully with the legal situations arising out of business routine matters. 		

OUTLINE

- Introduction to Law of Contract 1872
- Definition of Contract
- Essentials of a valid contract
- Contract and its kinds
- Offer and Acceptance
- Revocation of offer
- Consideration and Object
- Exceptions to Considerations
- Unlawful considerations
- Capacity of Parties
- Persons of unsound mind

- Disqualified persons
- Free consent
- Coercion and Undue influence
- Fraud and misrepresentation
- Mistake and its types
- Void Agreements
- Types and conditions
- Contingent and Quasi Contracts
- Performance of Contracts
- Performance of joint promises
- Reciprocal promises
- Contracts not requiring performance
- Discharge of Contract
- Breach of Contract and its remedies
- Indemnity and Guarantee
- Bailment and Pledge
- Essential features , and parties
- Rights and duties of parties
- Termination of pledge and Bailment
- Contract of agency
- Creation of agency
- Rights and duties of Principal and agent
- Termination of agency
- Contract of Sale of Goods
- Essentials of a sale
- Agreement to sell
- Fixation of Price
- Conditions and Warranties
- Definitions and Difference
- Doctrine of Caveat Emptor
- Transfer of Property
- Sale by non-owner
- Performance of Contract of Sale
- Rights of Unpaid seller
- Law of Negotiable Instruments
 - Parties of Negotiable Instruments
 - Presentment of Negotiable Instruments
 - Negotiation of Negotiable Instruments
 - Dishonor of Negotiable Instruments
- Banker and customer

- Law of Carriage of Goods
- Carriage of Goods of Land
- Carriage of Goods by Sea
- Carriage of Goods by Air
- Law of Carriage of Goods
- Carriage of Goods of Land
- Carriage of Goods by Sea
- Carriage of Goods by Air
- Law of Industrial Relations
- Unfair Labor practices
- Law of Labor in factories
- Law of Industrial and Commercial Employment
- Law of Partnership
- Introduction and scope of Partnership Act 1932
- Formation of, and relations in , Partnership
- Rights , Duties and liabilities of Partners
- Dissolution of firm and partnership

Recommended Text : (Latest Editions)

1. Cheema, Khalid Mahmood, Business Law, Sayed Mobin Mahmud & Co. Lahore.
2. Saeed, Khaja Amjad, Mercantile and Industrial Laws in Pakistan, Institute of Business Management, Lahore.
3. Internet source: www.Paksearch.com

Course	BUSINESS TAXATION	Credit Hours	3
Pre-Requisite	NONE	Semester	III
Objectives	<ul style="list-style-type: none"> • To familiarize the students with the Income and Sales Tax Laws in Pakistan. • To introduce to students the important elements and aspects of tax system and authorities and their limits. • To equip the students with necessary skills to deal with the situations concerning the field of taxation. 		

OUTLINE

- Introduction and scope of Income Tax Law in Pakistan.
- Definitions and Terminologies
- Exclusions from total income
- Reduction in tax liability
- Exemption from specific provisions of income tax ordinance 2001.

- Distinction between capital and revenue items of expenditures.
- Tests for different of capital and revenue receipts.
- Tests for differentiating capital and revenue expenditures.
- Capital loss.

- Income from Salary, Scope of salary income.
- Allowances and relieves under the Ordinance.
- Types of provident fund, treatment of provident fund, the sixth schedule, employer's contribution of approved gratuity fund deduction from income, gratuity fund deduction from income, gratuity fund and schemes.
- Computation of income tax payable from salaried persons.

- Income from business and profession Terms used.
- Considerations governing taxation of business profits.
- Maintenance of accounts on mercantile or cash basis.

- Income chargeability under income tax law on income from business.

- Principles of computation of taxable profits, allowable deductions.

- Deduction for computing business income, significant changes introduced by the ordinance.

- Non-admissible expense.
- Bad-debts.

- Income from property tax on agriculture income.
- Calculation of ALV.

- Allowable deduction from income from property.

- Set-off and carry forward of losses.
- Types of Losses.
- Rules for set-off and carry forward.
- Penalties, offenses, appeals and prosecutions.
- Income tax authorities their appointments adducties and the limitation and powers.
- Income from other sources.
- Deduction for computing income from other sources.
- Capital gains.
- Exchange gain/losses, income deemed to accure or arise.
- Tax accountings and assessment cycle, procedure filling of return.
- Power to grant extension of time for filling the return, assessment procedure, provisional assessment, notes for production of books of accounts, evidence, etc.
- Assessment on the basis of return, wealth statement, simplification of assessment of procedure, payment of tax before assessment, changes in tax withholding and collection of tax.
- Withholding tax rates under section 50(6) collection of tax on demand, recovery of tax.
- Recovery of arrears/ refunds demand, refund and tax credit, persons entitled to claim refund in certain case, income tax refunds, penalties, enhanced tax rates for higher slabs of income, first schedule rates of income tax for individuals, unregistered firms, association of persons and Hindu individuals.
- Deferred taxation and its treatment.
- Assessment of individual salaried and non-salaried person.
- Self-assessment scheme.
- Appeals
- Practical Problems
- Introduction and scope of sales tax.

- Definitions and terminologies.
- Sales tax authorities.
- Registration in Sale Tax.
- Book Keeping and invoicing requirements.
- Furnishing of Return of Sales Tax.
- Appeals.
- Practical Problems.

Recommended Text: (Latest Editions)

- Mehboob, A. Sheikh , Taxation, latest edition.
- Mughal, Muhammad Muazzam, Income Tax-Principles and Practice, Syed Mobin & Co.Lahore.
- Mughal, Muhammad Muazaam, Sales Tax, Syed Mobin & Co. Lahore.

Course	INTRODUCTION TO BUSINESS FINANCE	Credit Hours	3
Pre-Requisite	NONE	Semester	III
Objectives	<ul style="list-style-type: none"> • understanding of an integrated perspective for the inter-relation between financial markets, financial institutions and management • competence about the latest approaches/tools to critically examine and measure the performance of business concerns • skills to solve investment and financial problems in the light of specified goals of the firm 		

OUTLINE

- Career opportunities in finance
- Forms of business organization
- Goals of the corporation

- Agency relationships
- Balance sheet
- Income statement
- Statement of cash flows (FASB Opinion No. 95) (IAS 7)
- Accounting income vs. cash flow
- Personal taxes
- Corporate taxes
- Ratio analysis
- Du Pont system
- Effects of improving ratios
- Limitations of ratio analysis
- Qualitative factors
- Forecasting sales
- Projecting the assets needed to support sales
- Projecting internally generated funds
- Projecting outside funds needed
- Deciding how to raise funds
- Seeing the effects of a plan on ratios
- Stand-alone risk
- Portfolio risk
- Risk & return: CAPM/SML
- Future value
- Present value
- Rates of return
- Amortization
- Key features of bonds
- Bond valuation
- Measuring yield
- Assessing risk
- Features of common stock
- Determining common stock values
- Bonus/Right shares
- Efficient markets
- Preferred stock
- Sources of capital
- Component costs
- Adjusting for flotation costs
- Adjusting for risk

Recommended Text:

- Peirson, Graham & Brown, Rob (1998), *Business Finance*, McGraw Hill, Sydney.
- Block, Stanely B. & Hirt, Geoffroy A, (2002), *Business Finance*, Irwin Book,
- Melicher, W.R & Norton, A.E, (2005), *Finance*, John Wiley and Sons, Inc.

Course	ADVANCED ACCOUNTING-I	Credit Hours	3
Pre-Requisite	Financial Accounting	Semester	III
Objectives	<ul style="list-style-type: none"> • Preparation of financial statements of companies in accordance with statutory requirements of Companies Act and International Accounting Standards (IAS) • To deal with business combinations of two or more business entities. It involves preparation of financial statements for group of undertakings, for publication in accordance with International Financial Reporting Standards (IFRS) • To deal with accounting issues of amalgamation, absorption and reconstruction. • Application and selection of accounting techniques and procedures to specific circumstances like leases, branches, departmental stores, consignment, joint venture and construction contracts. 		

OUTLINE

Preparation of final accounts under Companies Ordinance 1984

- Companies Ordinance 1984, Fourth Schedule.
- General, Trading Account, Profit and loss Account, Profit and loss appropriation account,

- Balance Sheet and treatment of certain items in preparing Companies Financial Statements like dividends, reserves, excise duty and sales tax, long term loans and current maturity, issue of shares, allowances for bad debts, rectification of errors, workers profit participation fund, worker's welfare fund, bank margins and guarantees.

Consolidated Financial Statements, IAS27.

- Prepare Consolidated Income Statement and Balance Sheet of undertakings.
- Treatment in Consolidated Financial Statements of Minority interest, Pre and Post acquisition reserves, goodwill, dividends, bonus shares, intra group transactions, preference shares, debentures and mid year acquisitions.

Business Combinations

- Amalgamation, Absorption and Reconstruction.

Departmental Accounting

- Advantages of departmental accounts.
- Departmental accounts when separate set of books are maintained and when all departments are kept together.
- Allocation of departmental expenses.
- Inter departmental transfers. Cost based transfer price, market based transfer price.

Branch Accounting

- Types of Branches, Debtor System, Stock and Debtor system,
- Sale of goods above and below invoice price,
- Final account system, whole sale and retail profit at branch.

Joint Venture and consignment

- Features of a Joint Venture, methods of maintaining accounts, abnormal and normal losses

- Valuation of unsold stock.
- Cost price method and invoice price method
- Advance made by consignee.

Accounting for Leases IAS-17

- Basic lease accounting issues and procedures,
- Accounting for finance lease in the books of lessor and lessee including financial statement disclosures, Accounting for operating lease,
- Bargain purchase option, residual value (guaranteed and unguaranteed), depreciation, initial direct costs.

Accounting for Construction Contracts and IAS-11

- Basic concepts and rules
- Contract revenues and costs
- Profit and loss recognition
- Percentage completion method- cost to cost method
- Accounting entries and financial statement disclosures
- Work certified and uncertified

Recommended Texts:

- Javed H. Zuberi , “*Advanced Accounting*”, 2009, *Petiwala Book Depot*.
- Mukherjee A. Hanif, “*Modern Accountancy*”, Volume I-II. 2ND Edition.
- Gupta, R.L. & Swamy, M. Radha, “*Advanced Accounting*”, Sultan Chand & Sons
- Shukla M.C & Grewal, T. S , “*Advanced Accounts*” Volume 1 and 2, 15th Edition. Sultan Chand & Sons.
- International Accounting Standards Committee Foundation (IASCF) 2005, International Financial Reporting Standards (IFRSs), London United Kingdom.

Course	ECONOMIC ISSUES OF PAKISTAN	Credit Hours	3
Pre-	NONE	Semester	III

Requisite		
Objectives	<ul style="list-style-type: none"> • To enable the students the understand and comprehend the real life issues of the Economy of Pakistan • To enable the students to have an understandings of the policies of The Government of Pakistan, and the State Bank of Pakistan • To enable the students to go through the data available in the latest Economic Survey of Pakistan and the federal government's Budget documents and to relate it to the economic and social indicators of industrially Developed Economies and the SAARC countries 	

OUTLINE

- Agriculture: Issues; Food security; Productivity of Land; Non-Farm employment Opportunities; Forest and Water Management; Price Support Policy; Agricultural Inputs and their impact on Cost of Production
- Industry: Issues; Large Scale; SME and Cottage Industry; Export Industry vs. Import Substitution; Public-Private partnership; Industrial Policy
- Minerals and Mining
- Energy Resources
- Transport: Issues - Air, Railways; Roads; Sea; Farms to Market Roads
- Communication
- Education and Skill Development: Issues; Basic Education; Vocational and Technical; Higher Education
- Health: Issues in Health Sector; Environmental pollution and Human Health;
- Housing : Issues and Remedies
- Poverty : Definitions; measurement and alleviation strategies; HDI (Human Development Index)
- Foreign Trade and Balance of payments: Exports; Imports; Direction of Trade; Classification of Imports and Exports; Terms of trade; Rectification of BOP
- WTO and Pakistan
- SAFTA and Regional Cooperation

- Federal Budget and Fiscal Policy
- Role of Direct Foreign Investment in Economic Growth of Pakistan
- Public Debt (External) and Debt Management Strategies of Pakistan
- Monetary Policy and Inflation

Recommended Books:

- *Economic Survey of Pakistan (Latest)*. Ministry of Finance, Government of Pakistan, Islamabad
- Husain Akmal, Dr. and Others. *Pro-Poor Growth and Governance in South Asian Economies*.
- Hussain, Ishrat. *Pakistan: The Economy of an Elitist State*. Oxford University Press, Karachi
- Kardar, Shahid. *Political Economy of Pakistan*. Progressive Publishers, Lahore
- Nasim Anjum (ed.) *Financing the Development Priorities of Pakistan in 1990's*. LUMS, Lahore
- *Poverty Alleviation Strategies of Government of Pakistan*, Government of Pakistan, Islamabad
- *Reports of State Bank of Pakistan*. State Bank of Pakistan Publications, Karachi
- *Reports of Statistical Division of Pakistan*. Government of Pakistan, Islamabad
- Sen, Amratia. *Poverty and Famine*. McMillan Publications
- *Yearly World bank Reports (2000-onwards)*. Oxford University Press, Washington DC
- Zaidi, Akbar, *Issues in Pakistan's economy*. Oxford University Press, Karachi

Course	BUSINESS PSYCHOLOGY	Credit Hours	3
Pre-Requisite	NONE	Semester	III
Objectives	<ul style="list-style-type: none"> • To equip the student with latest techniques of psychology • To introduce the basic psychological aspects to the students • To evaluate new claims about psychology by knowing psychological facts and standards for scientific evidence 		

OUTLINE

Psychologists at Work:

- Subfields of Psychology
- Working at Psychology
- Exploring Diversity
- Becoming an Informed Consumer of Psychology

Neurons: The Basic Elements of Behaviour :

- The Structure of the Neuron
- How Neurons Fire
- Where Neurons Meet: Bridging the Gap
- Neurotransmitters: Multitalented Chemical Couriers

The Nervous System

- Central and Peripheral Nervous Systems
- The Evolutionary Foundations of the Nervous System
- Behavioural Genetics

The Brain:

- Studying the Brain's Structure and Functions: Spying on the Brain

Sensing the World Around Us:

- Illuminating the Structure of the Eye
- Colour Vision and Colour Blindness

Hearing and the Other Senses:

- Sensing Sound
- Applying Psychology in the 21st Century
- Smell and Taste
- The Skin Senses

Perceptual Organization :

- The Gestalt Laws of Organization
- Feature Analysis
- Top-Down and Bottom-Up Processing
- Perceptual Constancy

- Depth and Motion Perception, perceptual illusions and subliminal perception

STATES OF CONSCIOUSNESS :

Sleep and Dreams: The Stages of Sleep

- The Function and Meaning of Dreaming
- Sleep Disturbances
- Circadian Rhythms
- Daydreams
- Becoming an Informed Consumer of Psychology

Hypnosis and Meditation

Drug Use: The Highs and Lows of Consciousness

LEARNING:

- Classical Conditioning
- Operant Conditioning
- Cognitive-Social Approaches to Learning

MEMORY:

- Encoding, Storage, and Retrieval of Memory
- Recalling Long-Term Memories
- Forgetting: When Memory Fails

COGNITION AND LANGUAGE :

- Thinking and Reasoning
- Problem Solving
- Language
-

INTELLIGENCE:

- What Is Intelligence?
- Variations in Intellectual Ability

MOTIVATION AND EMOTION:

- Explaining Motivation
- Human Needs and Motivation: Eat, Drink, and Be Daring
- Understanding Emotional Experiences
- Nonverbal Behaviour and the Expression of Emotions

SOCIAL PSYCHOLOGY:

- Attitudes and Social Cognition
- Social Influence
- Prejudice and Discrimination
- Positive and Negative Social Behavior

Recommended Text:

1. Feldman, Robert S,(2005), Understanding Psychology, 7th Edition. McGraw Hill, Boston

Course	AUDITING	Credit Hours	3
Pre-Requisite	Principles of Accounting	Semester	IV
Objectives	<ul style="list-style-type: none"> • Comprehend and Interpret Audit Reports of any organization • Start career as Auditor at initial level • Start higher professional studies. • Assess the risk of material misstatements • Assess the strengths and weaknesses of internal control systems. 		

OUTLINE

1. Nature and Purpose of Auditing:
Nature, definition, scope, objective and principles of an audit, kinds of an audit, the need and usefulness of an audit, distinction between accounting and auditing, concepts of reasonable assurance, audit risk and materiality, true and fair view, recurring audit, responsibility for financial statements, role of auditor as detector of fraud.
2. Legal and Professional Considerations:

Appointment, remuneration, resignation, removal, rights, powers, duties and liabilities, qualifications and dis-qualifications etc., of auditor, procedure for appointment of first and subsequent auditors under Companies Ordinance, 1984, provisions related to appointment of auditor by a listed company and appointment of sole proprietor chartered accountants as auditors by business name, international auditing standards and guidelines, statements of standard accounting and auditing practices and technical releases issued by local professional institute of Pakistan, professional ethics.

3. Audit Planning and Control (ISA 300, 320):

Concept of audit planning, benefits and factors of audit planning, planning procedure overall audit strategy, Review of the client's business and accounting requirements, systems and procedures, preceding year's financial statements, client generated information, determining the audit risk and materiality level, audit planning memorandum, preparation of audit plans, preparation of detailed audit programmes, documentation of audit plan, audit timetable, changes in audit plan during the course of an audit, direction, controlling, supervision and review of audit work, monitoring time and costs.

4. Audit Procedures and Techniques (ISA 210, 315, 330):

Terms of audit engagement, engagement letter and its contents, acceptance of and amendments in engagement letter, techniques of commencement of audit work, procedures affecting audit work, cut-off procedure.

Definition of audit technique, kinds of audit techniques, management representation, vouching and verification of assets and liabilities, scrutiny of trading, profit and loss account, sampling techniques, compliance techniques, substantive testing, analytical review, use of computer assisted audit techniques (CAATs), reliance on other auditors, reliance on experts.

5. Audit Evidence and Documentation (ISA 500, 230):

Concept of audit evidence, use of assertion in obtaining audit evidence, audit procedure for obtaining audit evidence, inspection of records and tangible assets, observation inquiry, confirmation from third party, recalculation, re performance, analytical procedure,

Need for documentation of work done, audit notebook, nature and types of working papers, contents of working papers, ownership and retention of working papers, recording of significant points, audit files.

6. Completion of an Audit:
Completion procedures, events after reporting period, events occurring up to the date of audit report, letter of representation, letter to management, points carried to next period, summary record of errors, contingent liabilities and commitments, review of audit work and company's financial statements, conclusions drawn and action taken.
7. Performance of Audit:
Assessment of audit risk, materiality assessment, audits sampling.
8. The Reporting of Audit:
Audit reports, their contents and qualifications, forms of qualifications, statement of compliance, dating and signatories of the auditors' report, other information in report containing audited financial statements, reports on accounts of association of persons and sole traders, special purpose reports, requisites of code of corporate governance.
9. Applicable Auditing Standards
ISA 200, 210, 230, 240, 300, 315, 320, 330, 500, 505, 700, 705, 706.
10. Understanding the Risk:
Definition of risk, liquidity risk, management risk, operational risk, credit risk, market risk, compliance /legal or regulatory risk, reputation risk, risk management, board and senior management oversight.
11. Internal Controls:
Definition, meaning objectives, types, principles and techniques of internal control, difference between internal check and internal control, categories of internal control, systems of internal control, key components and important elements of internal control, limitations on the effectiveness of internal control/audit, evaluation of internal

controls and accounting systems, substantive procedure, and analytical procedure, tests of controls: purchase system, sales system, payroll system, inventory system, cash system, capital and expenditure, controls in small entities, internal control in an EDP environment

Internal Audit:

Scope and limitations and types of internal audit, responsibilities of internal auditor, internal audit and corporate governance, internal audit assignments, outsourcing the internal audit function, impact of internal controls and audit work, issuance of management letter, relationship between internal and external audit, audit working papers, functions of chief internal auditor, reporting by internal auditors, difference between internal audit and external audit, reliance of external auditor on internal auditor' report.

Recommended Book:

- Auditing by A.H. Millichamp published by British Library Continuum
- Practical Auditing by Spicer & Pegler's by Butter worth & Co. Ltd.
- Journals/Periodicals: Journal of Management Accounting, ICAP
- Auditing, CA Examination Study Text (latest edition) Professional Business Publication, Lahore.
- Contemporary Auditing, Gupta, Kamal (2005) Tata McGraw Hills, Dehli.

Course	TECHNICAL WRITING AND PRESENTATION SKILLS	Credit Hours	3
Pre-Requisite	NONE	Semester	I V
Objectives	<ul style="list-style-type: none"> • To enhance language skills and develop critical thinking 		

OUTLINE

- Presentation skills

- Essay writing
 - Descriptive, narrative, discursive, argumentative
- Academic writing
 - How to write a proposal for research paper/term paper
 - How to write a research paper/term paper (emphasis on style, content, language, form, clarity, consistency)
- Technical Report writing
- Progress report writing

Note: Extensive reading is required for vocabulary building

Recommended Books:

Technical Writing and Presentation Skills

a) Essay Writing and Academic Writing

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

b) Presentation Skills

c) Reading

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

Course	COST ACCOUNTING	Credit Hours	3
Pre-Requisite	NONE	Semester	IV
Objectives	<ul style="list-style-type: none"> • To understand cost concepts, objectives, scope, cost flow and classification, • To prepare cost of production report and cost statement under process cost accounting system and job ~ order costing system, respectively, • To understand and explain material, labor, factory overhead costing and control, • To Prepare job order cost sheet and cost of production report 		

OUTLINE

- Concepts and Scope of Cost Accounting

Definition and concept of cost, Cost object, Cost elements, Sources and uses of cost data, Cost accounting v / s financial accounting, Costing department and its relationship with other departments, Role of cost accounting in a management information system, Uses of cost data.

- Cost Classification and Flows
Direct and indirect cost, Product and period cost, Controllable and uncontrollable cost, Fixed and variable cost, Semi-variable and step fixed cost, Cost flow, Statement of cost of goods manufactured and sold.
- Material Costing and Control

Procedure of material procurement, application of IAS-2. Two-bin system, The use of FIFO, LIFO and weighted average for material, valuation and the pricing for material issue, Stock taking periodic and perpetual inventory, Treatment of differences between physical and book stock, Economic order quantity, Effect of quantity discount on EOQ, Reorder level, safety stock and maximum stock, ABC Control.

- Labour Costing and Control

Objectives of payroll accounting. Calculations and recording of payroll, payroll taxes and deductions. Direct and indirect labour, Productivity and efficiency, Remuneration methods, Straight piece rate and differential piece rate, Incentive wage plan, Group bonus, Time sheet and job cards, Overtime and idle time; Labour turnover rate.

- Factory Overhead Costing and Control

Classification and collection of overhead, Predetermined overhead applied rate, Factory overhead cost: planned, applied and actual, Over and under applied factory overhead' and its disposal, Departmentalisation of overhead, Allocation, apportionment and reapportionment of overhead costs, Repeated distribution and algebraic method for reciprocal, service department costs.

- Types of Costing Systems

Establishment of cost accounting system, Integrated and interlocking cost accounts, Chart of account and coding for costing, Introduction to process costing, Incomplete process and concept of equivalent units, Format of process account and cost of production report, Job order costing, Operation / service costing.

Recommended Book:

- Cost Accounting by F. Usry, H. Hammer & Adolph Matz
- Cost Accounting by T. Lucy DP Publications, Aldyne Place 142-144 Uxbridge Road, Shepherds Bush Green, London W128AW
- Management and Cost Accounting by Colin Drury Thomson Learning, High Holborn House, 50-51 Bedford Row, London
Journals/Periodicals: Journal of Management Accounting, ICAP

Course	ADVANCED ACCOUNTING-II	Credit Hours	3
Pre-	Advanced Accounting-I	Semester	IV

Requisite		
Objectives	<ul style="list-style-type: none"> • This course is designed to serve the needs of modern accounting principles, procedures and methods that are applied in preparations of financial statements and the proper uses that can be made of financial data. • This course will have different relationships with the requirements of the various professional accountancy bodies like ICAP, ICMAP, PIPFA and other universities in Pakistan. • The course requires students to study how the design, operation and validation of accounting systems affects, and is affected by, individuals, organizations, markets and society. As indicated above, accounting is often studied in combination with a substantial amount of finance. Under such circumstances, the degree structure should also require the study of the operation and design of financial systems, risk, financial structures, and financial instruments. • To provide information that is useful in investment and credit decisions, • To provide information that is useful in assessing cash flow prospects, and • To provide information about enterprise resources claims to those resources, and changes in them. 	

OUTLINE

Introductory matters

- Preface of International Accounting Standards (IAS)
- The IASB's framework and objectives of financial statements

International financial reporting standards (IFRS 1 First-Time Adoption on International Financial Reporting Standard)

- First time adoption of international financial reporting standards
Income statement and related information
- Format of Income statement

- Reporting Irregular issues
- Special Reporting issues

IFRS-5 Non Current Assets held for sale and discontinued operation

Revenue recognition (IAS-18)

- The current environment
- Revenue recognition at point of sale(Delivery)
 - Sale with payback agreement
 - Sales when right of return exist
- Revenue recognition before delivery
 - Percentage of completion method
 - Completed contract method
 - Long term contract losses
 - Disclosure in financial statement
 - Completion of production basis
- Revenue recognition before delivery
 - Installment sales method
 - Cost recovery method
 - Deposit Method
- Revenue recognition for special sales transactions

Balance sheet issues

- Classification in the balance sheet
- Additional information reported
- Techniques of disclosure

Cash flow statement

- Content and format of statement of cash flow
- Preparation and usefulness of statement of cash flow
- IAS-7 for cash flow statement

Additional valuation issues of Inventory IAS-2

- Lower of cost or market
- Valuation basis
- The gross profit method

Assets:

- Depreciation,
- Impairments
- Depletion
- Intangibles

IAS-16, Property Plant and Equipment

IAS_38, Intangible Assets

Long term liabilities

- Long term notes payable
- Reporting and analysis of long term debt
- Accounting for troubled debt
- IAS-23

Stockholders' Equity

- Identify the key components of stockholders' equity.
- Describe the accounting for treasury stock.
- Explain the accounting for and reporting of preferred stock.
- Describe the policies used in distributing dividends.
- Indicate how to present and analyze stockholders' equity.

Dilutive Securities and Earnings Per Share

- Describe the accounting for the issuance, conversion, and retirement of convertible securities.
- Explain the accounting for convertible preferred stock.
- Contrast the accounting for stock warrants and for stock warrants issued with other securities.
- Describe the accounting for stock compensation plans under generally accepted accounting principles.
- Discuss the controversy involving stock compensation plans.
- Compute earnings per share in a simple capital structure.
- Compute earnings per share in a complex capital structure.

IAS-33 Earning Per Share

IAS-34 Interim Financial Reporting

Investments

- Investment in debt securities
- Investment in equity securities
- Other reporting issues

Accounting for income tax

- Fundamentals of accounting for income tax
- Accounting for net operating losses
- Financial statement presentation

Accounting changes and error analysis

- Changes in accounting estimate
- Changes in accounting principle
- Reporting a change in entity

Error Analysis

- Income statement error
- Balance sheet error
- Preparation of financial statements with error correction
- Changes from or to the equity method

IAS-8 Accounting Policies, changes in accounting estimates and errors

Full Disclosure in financial reporting

- Full disclosure principle
- Notes to the financial statements
- Disclosure issues
- Current reporting issues

Recommended Texts

- Kieso, Weygandt, and Warfield () *Intermediate Accounting*, 12th Edition Wiley higher education.
- IFRS, IASs by International Accounting Standards Board, London

Course	FINANCIAL & REGULATORY INSTITUTIONS	Credit Hours	3
Pre-Requisite	NONE	Semester	IV
Objectives	<ul style="list-style-type: none">• To understand the main goal & functions of the financial institutions & regulatory authorities.• To equip the students with latest functional & professional knowledge to cope with the practical demand of the employer.• To develop the understanding of the students about the different functions of regulatory authorities.		

OUTLINE

- An Overview of Banks and the Financial Services Sector

What is a bank? The financial system and competing financial services institutions. Services banks and many of their closest competitors offer the public. Key trend affecting banks and other financial services firms. Are traditional banks dead?

- The organisation and structure of banking and the financial services industry.

The organisation and structure of the commercial banking industry. The array of corporate organisational structures in banking. Two alternative types of banking organisations available as the 21st century opened. The changing organisation and structure of banking's principal competitors. Efficiency and size: Do bigger financial firms operate at lower cost. Banking and financial firm goals: their impact on operating cost, efficiency and performance.

- Organisation of Money Market in Pakistan.

Money market structure. State bank of Pakistan. Commercial Banks. Co-operative Banks. Cooperative credit societies. Saving banks. Micro finance institutions. The state bank of Pakistan as Central Bank. SBP banking services corporations. Prudential regulations.

- Specialized Credit Institutes
IDBP, SME BANK, HBFC.

The Securities and Exchange Commission of Pakistan

- The Securities and Exchange Commission of Pakistan Act, 1997
- The Securities and Exchange Ordinance, 1969
- The Securities and Exchange Rules, 1971
- The investment companies and investment advisers rules, 1971
- The credit rating companies rules, 1995
- The asset management companies rules, 1995
-

Oil & Gas Regulatory Authority

Ordinance No. XVII of 2002 (Chapter 1 – 7)

- Chapter 1 General
- Chapter 2 Establishment of OGRA
- Chapter 3 Policy Guidelines
- Chapter 4 Licenses
- Chapter 5 Offences
- Chapter 6 Miscellaneous
- Chapter 7 Repeal & Savings

National Electric Power Regulatory Authority
NEPRA ACT (ACT No. XL of 1997)

- Chapter 1 General
- Chapter 2 Establishment of Authority
- Chapter 3 Licenses
- Chapter 4 Administration

Monopoly Control Authority

- MONOPOLIES AND RESTRICTIVE TRADE PRACTICES
(CONTROL AND PREVENTION) ORDINANCE, 1970 -----

ORDINANCE NO. V OF 1970 [http://mca.gov.pk/law.htm -
_ftn1#_ftn1](http://mca.gov.pk/law.htm-ftn1#_ftn1) (26th February, 1970)
(As amended up to 30th June, 1983)

- Chapter 1 Preliminary
- Chapter 2 Undue concentration of economic power etc prohibited
- Chapter 3 Monopoly Control Authority
- Chapter 4 Functions & Powers of the authority
- Chapter 5 Registration
- Chapter 6 Penalties & Appeals

Recommended Text:

- All relevant Acts
- Siddiqui. H. Asrar (7th edition), *Practice and Law of Banking in Pakistan*, Royal Book Company Karachi.
- Rose S. Petert, Hudgins C Sylvia (6th edition), *Bank Management & Financial Services*, McGraw Hill International.

Course	INFERENCEAL STATISTICS	Credit Hours	3
Pre-Requisite	NONE	Semester	IV
Objectives	<ul style="list-style-type: none"> • To understand the terminology related to Inferential Statistics, and to understand the role of sampling theory in estimation of population parameters and testing of hypotheses concerning parameters. • To provide with the background in different Estimation Methods of population Parameters on the basis of a sample. • To develop an understanding about the set of rules that lead to a decision culminating in the acceptance or rejection of some statement or hypothesis about the population. • To provide with the necessary skills and competencies in using computer statistical package to assist in performing different inferential procedures required in a statistical analysis through practical application. 		

OUTLINE

Review of Sampling Theory

- Introduction to Sampling Theory
- Types of Sampling
- Sampling Error
- Sampling Distribution of Sample Means
- Properties of Sampling Distribution of Sample Means
- Central Limit Theorem
- Uses of the Sampling Distribution of the Sample Mean
- Sampling Distribution of Sample Proportion
- Properties and Application

Point and Interval Estimation

- Branches of Statistical Inference (Estimation and Testing of Hypothesis)
- Need and Significance of Estimation and Type of Estimation (Point and Interval Estimation)
- Confidence Interval Estimate for Mean and Proportion
- Finite Population Correction Factor
- Deciding the Sample Size

Testing of Hypothesis

- Introduction
- Various types of Statistical Hypotheses
- Type-I Error, Type-II Error
- Probability of Type-I error
- One Tailed and Two Tailed Tests of Significance
- Level of Significance and Concept of P-value
- General Procedure for Testing Hypothesis

One-Sample Tests of Significance

- Assumptions
- Tests of Significance for Population Mean, Proportion and Variance

Two-Sample Tests of Significance

- Assumptions
- Tests of Significance for Two Population Means under various assumptions

- Tests of Significance for Two Population Proportions under various assumptions
- Tests of Significance for Two Population Variances

Chi-Square Tests:

- Tests for Association of Attributes
- Tests for Goodness of Fit (Uniform, Binomial, Poisson, Normal Distributions)

Analysis of Variance

- Basic Concept as Testing Equality of More Than Two Means
- One-Way Analysis of Variance
- Two-Way Analysis of Variance

Computer Competency:

To achieve the practical proficiency, the computer package MINITAB and in some way the EXCEL will provide the computational assistance.

Recommended Texts:

- Lind, D.A., W.G. Marchal, S.A. Wathen (2005), “*Statistical Techniques in Business and Economics*”.
- Bowen, E.K., and M.K. Starr (2005), “*Basic Statistics Business and Economics*”.

Course	RESEARCH METHODS FOR BUSINESS	Credit Hours	3
Pre-Requisite	NONE	Semester	V
Objectives	<ul style="list-style-type: none"> • To meet the challenge of the fast pace decision making environment, • Provide the knowledge and skills a manager needs to solve the problems. • The course is designed to prepare the students to manage business, not-for-profit, and public organization in all functional areas. 		

OUTLINE

- Role of business research
- Basic research and applied research
- Managerial value of research
- Types of business research
- Decision alternatives in research process
- Influences of uncertainty on type of research
- Types of business research
- Decision alternatives in research process
- Influences of uncertainty on type of research
- Scientific investigation
- Hallmarks of scientific investigation
- Obstacles in conducting scientific research
- Theory building
- Concepts and nature of proposition
- Practical value of theory
- Deduction and Induction
- The research process.'
 - Problem discovery and definition
 - Planning research design
 - Sampling
- The research process
 - Data collection
 - Data processing and analysis
 - Conclusion and report presentation
- Ethical issues in research
- Formulating and clarifying the research topic
- Attributes of good research topic
- Importance of problem definition
- Process of problem definition
- Process of problem definition
- Assignment 1
- The research proposal
- Assignment 2
- Deciding the research approach and choosing a research strategy
- Need for a clearer research strategy
- Multi- method approaches

- Preliminary data collection
- Literature review
- Planning the literature search
- Obtaining and evaluating the literature
- Assignment 3
- Exploratory research and qualitative analysis
- Why conduct exploratory research
- Categories of exploratory research
- Focus group interviews
- Projective techniques
- Secondary data
- Objective of secondary data research design
- Classification of secondary data
- Determining the research design
- Overview of research design
- Defining research question and hypotheses
- Defining terms and variables
- Identifying limitations and delimitations
- Assignment 4
- Research method for collecting primary data
- Survey research
- Errors in survey research
- Classifying survey research methods
- Basic methods for communication with respondents
- Observation methods
- Experimental research
- Basic issues
- Internal and external validity
- Types of experimental design and internal validity
- Ethical issues in experimental design
- Measurement of variables
- Operational definitions and scales
- Measurement: Scaling, reliability, and validity
- Data collection methods
- Questionnaire design
- Overview of questionnaire designs
- Sampling design and sampling procedures
- Determining the sample size
- Population distribution, sample distribution and sampling distribution
- Fieldwork

- Principles of good interviewing
- Analyzing qualitative data
- Overview of qualitative data analysis
- Analyzing qualitative data
- Editing and coding data
- Research report
- Integral parts of report
- Discussion on research projects

Recommended Text:

- Zigmund, William G, *Business research methods*, Sixth Edition.
- Collins Jill & Hussey Roger, *Business research*, Second Edition
- Sekaran Uma, *Research Methods for Business*, Fourth Edition.

Course	MANAGERIAL ECONOMICS	Credit Hours	3
Pre-Requisite	Micro Economics	Semester	V
Objectives	<ul style="list-style-type: none"> • To enable the young managers of the future to learn to implement the economic and quantitative techniques in the world of business and commerce • To enable them to make optimal decisions in real life scenario • To enable them to collect, analysis and decipher data in real life situations 		

OUTLINE

The Nature and Scope of Managerial Economics

The Scope of Managerial Economics, the Theory of the Firm, the Nature and Function of Profits, Business Ethics, the International Framework of Managerial Economics, Managerial Economics and the Internet.

Optimization Techniques and new Management Tools

Methods of Expressing Economics Relationships, Total, Average, and Marginal Relationships, Optimization Analysis, Differential Calculus; The Derivative and Rules of Differentiation, Optimization with Calculus, Multivariate Optimization, Constrained Optimization and unconstrained Optimization, New management Tools for Optimization

Demand Theory

The demand for a commodity, Price Elasticity of Demand, Income Elasticity of Demand, Cross- Price Elasticity of Demand, Using Elasticity in Managerial Decision Making

Demand Estimation

The Identification Problem, Marketing Research Approaches to Demand Introduction to Regression Analysis, Simple Regression Analysis Multiple Regression Analysis, Problems in Regression Analysis, Demand Estimation by Regression Analysis

Demand Forecasting

Qualitative Forecasts, Time-Series Analysis Smoothing Techniques Barometric Methods, Economic Models

Production and Cost Analysis

Production Theory and Estimation, The Production Function with One Variable, Optimal Use of the Variable Input, The Production function with Two Variable, Optimal **Combination of Inputs**

Cost Theory and Estimation

The Nature of Costs, Short-Run cost Functions, Long-Run Cost Curves, opportunity Costs. Learning Curves Cost-Volume-Profit Analysis and Operating.

Linear Programming

Meaning Assumptions, and Applications of Linear Programming, Some Basic Linear Programming Concepts, and Procedure used in Formulating and Solving Linear Programming: Profit Maximization, and Cost Minimization techniques in linear programming

Risk Analysis

Risk and Uncertainty in Managerial Decision, Measuring Risk with Probability Distributions, Utility Theory and Risk Aversion, Adjusting the Valuation Model of Risk, Decision Making Under Uncertainty, Foreign-Exchange Risks and Hedging

Strategic Market decisions and Game Theory

Recommended Books: (latest edition)

- Micheal Baye, Managerial Economics.
- Dominick Salvatore, Managerial Economics in a Global Economy.
- Petersen H. Craig & Lewis. W.Cris. Managerial Economics. Macmillan Publishing Company, New York.
- Douglas, Evan J, Managerial. Economics Theory, Practice and Problems: Prentice hall Inc. New York.
- Sue. Managerial Economics. McGraw-Hill.
- Thomas, Maurice. Managerial Economics. International Edition
- Evan J.Douglas Managerial economics: theory, practice, and problems
- Howard Davies, Pun-Lee Lam Managerial economics: and analysis of business issues
- Mark Hirschey Managerial economics
Journals / Periodicals:

World Wide Web:

Course	FINANCIAL MANAGEMENT	Credit Hours	3
Pre-Requisite	Business Finance	Semester	V
Objectives	<ul style="list-style-type: none"> • To equip the students with the latest knowledge of finance helping them to make rational financial decisions and thereby to maximize the wealth of the owners. • To develop understanding of the students in making decisions relating to special situations such as merger, acquisition etc. • To equip the students with latest tools and techniques in financial decision-making. 		

OUTLINE

- Capital Budgeting Process, An overview
- Generating Investment Project Proposals
- Estimating Project "After Tax Incremental Operating Cash Flows"
- Project Evaluation & Selection: Alternative Methods
- Project Monitoring: Progress Reviews & Post Completion Audits
- The Problem of Project Risk
- Total Project Risk
- Contribution to Total Firm Risk: Firm Portfolio Approach
- Managerial Options
- Working Capital Terminology
- Cash Operating Cycle
- Alternative Current Asset Investment Policies
- Cash Management
- Cash Budget
- Marketable Securities
- Inventory
- Inventory Costs
- Receivables Management
- Credit Policy
- Financing Current Assets
- Alternative Current Asset Financing Policies
- Advantages and disadvantages of Short Term Financing
- Sources of Short Term Financing

- Accruals
- The Target Capital Structure
- Business & Financial Risk
- Determining the Optimal Capital Structure
- Capital Structure Theory
- Variations in Capital Structures
- Dividends versus Capital Gains
- Dividend Policy Issues
- Dividend Stability
- Establishing the Dividend Policy in Practice
- Dividend Reinvestment Plans
- Factors affecting Dividend Policy
- Stock Dividends & Stock Splits
- Standard Debt Provisions
- Restrictive Debt Provisions
- Cost of Long Term Debt
- Characteristics of Term Loan Agreements
- Term Lenders
- Legal Aspects of Corporate Bonds
- General Features of a Bond Issue
- Bond Rating
- Basic rights of preferred stockholders
- Features of preferred stock
- Special types of preferred stock
- Advantages & disadvantages of preferred stock
- Basic types of leases
- Leasing agreements
- The lease contract (IAS17)
- Definition of Mergers
- Motives for Mergers
- Types of Mergers
- Leveraged Buyouts

Recommended Text:

- Brigham F Eugene, Houston F Joel (Latest edition), *Fundamentals of Financial Management*, South Western Publishers, Ohio
- Jr Scott Martin, Petty J. William (Latest edition), *Basic Financial Management*, Apprentice Hall International Inc, New Jersey.

- Horne Van, Jr Wackowicz (Latest Edition), *Fundamentals of Financial Management*, Apprentice Hall International Inc, New Jersey.

Course	PRINCIPLES OF MARKETING	Credit Hours	3
Pre-Requisite	NONE	Semester	V
Objectives	<ul style="list-style-type: none"> • Introduce to students the key marketing ideas and phenomena, especially the core theme of delivering benefits to customers. • Develop students' skills in marketing analysis and planning. • Familiarize students with the tactics of the marketing (Product strategy, advertising and communications [Promotion], and distribution [Place], and Price - 4P's) and enhance problem solving and decision making abilities in these areas. • How to evaluate the attractiveness of different markets. 		

OUTLINE

- The Field of Marketing, Introductory Concepts; Adapting Marketing to the New Economy Positioning ; Marketing as the Driver in the Digital Economy
- Marketing- oriented Strategic Planning; Scanning the Marketing Environment
- Marketing research process ; Marketing information systems.
- Identifying Marketing Opportunities
- Consumer behavior; Consumer purchase decision process: Influences on consumer behavior; Social influences
- Identifying Marketing Segments and Selecting Target Markets
- Product positioning and Differentiating the Marketing Offering The Product Life Cycle
- The marketing mix: Product; Meaning and classification of product; Development of new product; Determinants of product mix; Product

adoption-diffusion process; Product portfolio classification; Product deletion strategy.

- The marketing mix: Price; Nature and importance of pricing.; Pricing objectives; Factors influencing pricing decision; Developing Price Strategies and Programs
- The marketing mix: Promotion strategy; Role of promotion in business marketing; Developing and implementing the promotional mix.
- Advertising, sales promotion and public relations; Managing The Sales Force
- The marketing mix: Distribution; Designing distribution channel.; Selecting the type of channel.
- Managing Retailing, Wholesaling and Market Logistics
- Managing The Total Marketing Effort
- Marketing plan development analysis

Recommended Books: (Latest Editions)

- Kotler, Philip. (2002) *“Marketing Management”*. 11th Edition, Prentice- Hall.
- Stanton, Etzel, Walker. (2004), *Marketing*, 13th edition, McGraw-Hill.
- Krishnamacharyulu, Ramakrishan. (2005), *Rural Marketing Text and Cases*, Pearson Education.
- Kotler, Philip, Jain C Dipak, *Marketing Moves (A New Approach to Profits, Growth, and Renewal)* ,Harvard Business School Press.

Course	PRINCIPLES OF MANAGEMENT	Credit Hours	3
Pre-Requisite	NONE	Semester	V
Objectives	<ul style="list-style-type: none"> • To expose students to the theories of management, organizational theory, and the practice of management in contemporary organizations from a conceptual, analytical, and pragmatic perspective. • The course will also allow students to develop their own framework for analyzing and understanding management as well as exploring and developing their own personal philosophy of management. • The students would be able to communicate 		

	effectively, develop people, solve problems and making decisions, organize themselves and also would be able to work in team.
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OUTLINE

- Foundation of Management Thinking
- The Evolution of Social Cognitive Theory
- Environment, National Culture and Management Practices
- Planning & Strategic Management
- The Escalation of Commitment: Step Toward an Organizational theory
- Decision Making
- Organization and Structure
- Controlling
- Human Resource Management
- Communicating
- Personality and Human Behavior
- Motivation: Theories and Styles
- How Job Characteristics Theory Happened
- On the Origins of Expectancy Theory
- Leadership & Leader's styles
- Team and Teamwork Management
- Technology, The market, Competition and the External environment
- Internationalization and Globalization
- Management Skills and Competencies
- Entrepreneurship
- Stress Management
- Change Management
- Managing Organizational Conflict, Politics and Negotiation
- Ethics and Social Responsibility
- New Management Paradigms

Recommended Books: (Latest Editions)

- Mejia, Balkin, Cardy. (2005), *Management*, 2nd Edition, McGraw-Hill.
- Morden Tony, (2004), *Principles of Management*, 2nd Edition, Ashgate.
- Bateman, Snell (2002) *Management Competing in new era*, 5th Edition, McGraw-Hill.

- Smith & Hitt A. Michael, (2005) *Great Minds in Management (The Process of Theory Development)*, Oxford University Press.
- Robbins, Coulter, Langton, *Management*, 8th Edition

Course	INTRODUCTION TO SOCIOLOGY	Credit Hours	3
Pre-Requisite	NONE	Semester	V
Objectives	<ul style="list-style-type: none"> • To build a confidence for social interaction and relationship • How they behave in social groups, community, social institutions and different personalities. 		

OUTLINE

Introduction

- Nature, scope and subject matter of Sociology
- Brief historical development of Sociology
- Introduction to Quranic Sociology
- Society and community
- Relationship with other social Sciences

Social Interaction Processes The study of social life

Exploring the global village

Sociology as a science

The Sociological imagination

The development of Sociology

Pioneers of Sociology

Social groups

Definition and functions

Types of social groups

Social institutions

Definition

Structure and function of social institutions

Inter-relationships among various social institutions

Culture and related concepts

Definition and aspects of culture

Elements of culture

Organization of culture

Other concepts, cultural relativism, sub cultures,
ethnocentrism, cultural lag

Socialization and personality

Role and status

Socialization

Culture and personality

Deviance and social control

Definition and types of deviance

Juvenile delinquency

Formal and Informal method of social control

Social stratification

Approach to study social stratification

Caste class and race as basics of social stratification

Concept of social movement

Theories of social movement

Social and cultural change

Collective behavior

Definition

Characteristics

Causes

Types

Social movements

Mob and crowd behaviour

Social and cultural change

Definition of social change

Dynamics of social change

Impact of globalization on society and culture

Resistance to Change

Quizzes and Presentations

Recommended Texts:

- Horton and Hungt, (2004), Sociology, 6th edition, McGraw Hill
- Tischler, Hnry L, (2002), Introduction to Sociology, 7th edition Horcourt
- Macionis, John J and Plummer, Ken, (2005), Sociology, A Global International, 3rd Edition, Prentice Hall.

Course	LOGICAL AND CRITICAL THINKING	Credit Hours	3
Pre-Requisite	NONE	Semester	VI
Objectives	<ul style="list-style-type: none"> • To improve the reasoning ability of the students. • To make students capable to demarcate fallacious and valid arguments. • To introduce to students application of logic in administrative sciences. • To develop decision making ability based on logical reasoning, which is crucial pre-requisite for successful managers. 		

OUTLINE

- Introduction to Philosophy & Logic
- Historical Introduction to Logic
- Aristotelian Logic
- Modern Mathematical/ Symbolic Logical
- Recent Developments in Logic
- Modal Logic
- Fuzzy Logic
- Free Logic
- Critical Thinking
- Critical Thinking and Validity of Thought
- Basic Logical Concepts
- Proposition & Sentence

- Proposition & its Analysis
- What is an argument?
- Argument Forms.
- Argument & Non Argument
- Well Crafted Argument
- Premises
- Deduction & Validity
- Induction & Probability
- Validity, Truth, Soundness, Strength, Cogency & Reasoning.
- Three Basic Functions of Language
- Forms of Discourse
- Introduction to Symbolic Logic
- Translating Statement and Punctuation
- Negation, Conjunction & Disjunction
- Conditional Statement & Implication
- Material Equivalence & Logical
- Equivalence
- Argument Forms
- Some Common Valid Argument Forms
- Some Common Invalid Argument Forms
- Categorical Proposition & Classes
- Quality, Quantity and Distribution
- Paradox, Dilemma & Fallacy
- General Schema of Standard Form
- Categorical Proposition
- Standard Form Categorical Syllogisms
- Major, Minor & Middle terms
- Mood
- Figure
- Method of Deduction
- Formal Proof of Validity
- Proof of Invalidity
- Introduction to Quantification Theory
- Quantification
- Traditional Subject – Predicate Proposition
- Nature of Inductive Argument
- Science & Induction
- Argument by Analogy
- Refutation by Analogy
- Essay Analysis

- Presentation

Recommended Text:

- Restall, G. (2006). *Logic: An Introduction*, Taylor & Francis Group, New York.
- Hurlez, P.J. (2003). *A Concise Introduction to Logic*, Woods worth /Thomason Learning Incorporation, Belmont.
- Copi, I.M. (2002) *Introduction to Logic*, (11th edition) Pearson Education Inc, Delhi.
- Vaughn, L. (2005) *The Power of Critical Thinking*, Oxford University

Course	PRINCIPLES OF RISK MANAGEMENT AND INSURANCE	Credit Hours	3
Pre-Requisite	NONE	Semester	VI
Objectives	<ul style="list-style-type: none"> • To develop and understanding of Risks and methods of Risk Transfer Mechanism • To develop an understanding of the structure of Insurance Industry • To understand the main type of Insurances available to the Individuals & Business • To gain an understanding of Principles of Insurance and their applications 		

OUTLINE

- Understanding Risk
- Introduction to Risk Management
- Advanced Topics in Risk Management
- History and evolution of Insurance Business
- Fundamental Legal Principles
- Analysis of Insurance Contracts
- Property and Liability Insurance
- Fundamentals of Life Insurance
- Types of Insurers and Marketing Systems
- Insurance Company Operations
- Insurance Pricing

- Government Regulation of Insurance

Recommended Books:

- George E. Rejda,
PRINCIPLES OF RISK MANAGEMENT AND INSURANCE, 8th
Ed.,
(Addison Wesley/Pearson Education, Inc., 2003), ISBN
0201785633
- Harrington, S. and G. Niehaus.
RISK MANAGEMENT AND INSURANCE, 2nd ed. 2004
McGraw-Hill.
- C. Arthur Williams, Michael Smith, Peter Young
RISK MANAGEMENT AND INSURANCE
McGrall-Hill, 7th Edition, 1995
- Vaughan, Emmett J. and Vaughan, Therese M.
ESSENTIALS OF INSURANCE: A RISK MANAGEMENT
PERSPECTIVE
John Wiley, 1995
- Vaughan, Emmett J. and Vaughan, Therese M.
FUNDAMENTALS OF RISK AND INSURANCE
John Wiley, 7th Edition, 1996
- Harrington, Scott E. and Niehaus, Gregory R.
RISK MANAGEMENT AND INSURANCE
McGrall-Hill, 1999
- Mark S. Dorfman
INTRODUCTION TO RISK MANAGEMENT AND INSURANCE
- CII Chartered Insurance Institute
RISK AND INSURANCE
- DGI Singapore Insurance Institute
Diploma In General Insurance Course Books:
GD 02Insurance of Property
GD 03Insurance of Liabilities
GD 04 Motor, Marine and Other Classes

Course	HUMAN RESOURCE MANAGEMENT	Credit Hours	3
Pre-Requisite	NONE	Semester	VI
Objectives	<ul style="list-style-type: none"> • To recognize and appreciate importance of effective Human Resource Management for microfinance operations • To understand the key functions of the Human Resource Management • To become familiar with systems and structures that support effective Human Resource Management • To review systems and tools used in Human Resource Management 		

OUTLINE

Introduction to Human Resource Management

- Human Resource management - What and Why
- Model of Human Resource Management
- Management and Leadership
- Organization of Human Resource Management

The Personnel Function

- ◆ Terminology
- ◆ Who does personnel work?
- ◆ Staff role of the personnel department
- ◆ Personnel (Human Resource) functions

Job Design and Analysis

- ◆ Job design
- ◆ Job information and personnel management
- ◆ Analyzing jobs-obtaining job information
- ◆ Functional job analysis
- ◆ Administration of the job analysis program

Human Resource Planning

- ◆ Reasons for human resource planning
- ◆ The planning process

Recruitment and Selections/Testing and Interview

- ◆ Labor market considerations
- ◆ Recruitment and selection policy issues
- ◆ The employment process
- ◆ Sources of people
- ◆ The selection process
- ◆ The selection procedure
- ◆ Testing: Interview

Miscellaneous

- ◆ Union and management
- ◆ Compensation administration
- ◆ Health and safety

Recommended Books: (*Latest Editions*)

- Decenzo, David A. & Robbins, S.P. (1996) Human Resource Management. John Wiley.
- Flippo E D, Principles of personnel management McGraw-Hill
- Keith Davis, Human resource management
- Bernardin H J, Human resource management McGraw Hill 1990

Course	MANAGERIAL ACCOUNTING	Credit Hours	3
Pre-Requisite	Cost Accounting	Semester	VI
Objectives	<ul style="list-style-type: none">• To develop the skills in students so that are be able to make proper distinction between different types of costs.• To equip the students with emerging new concepts and its application in the field of managerial accounting.• To develop the skills in students to design the		

	<ul style="list-style-type: none"> costing system that help in decision making
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- The changing role of managerial accounting in a dynamic business environment:

Managerial accounting; managerial vs financial accounting, managerial accounting in different types of organization, evolution and adaptation in managerial accounting ,

Service vs. manufacturing firm, emergence of new industries, global competition, focus on customer, cross functional team, computer integrated manufacturing, product life cycle and diversity, time based competition.

- Activity based Costing

Some key issues about cost drivers

Activity dictionary and bill of activities, direct vs indirect costs, when is new product –costing system needed,

Cost management systems.

- Activity based management and Cost Management Tools :
 - Two dimensional ABC,
 - Customer profitability analysis,
 - Target costing, kaizen costing,
 - Benchmarking , reengineering,
 - Theory of constraints,
- Setting of standards for costing

Basic concept of standard costing, preparation of standard cost, types of production capacities, material price and usage variances, labor rat and

efficiency variances, variable overhead expenditure and efficiency variances, Fixed overhead budget and volume variances.

- Cost Volume Profit Analysis

Meaning of Cost-Volume-profit, Break-even Point, Contribution Margin Approach, Equation Approach, Graphic Approach, Safety Margin, Angle of Incidence, PV Ratio and its uses cost structure and operating leverage, Effect of Income Taxes.

- Direct and Absorption Costing

Meaning of Direct and Absorption Costing, Direct (variable) costing income Statements, reconciling income under direct and absorption costing change in inventory, evaluation of direct and absorption costing effect of the volume variance

- Decision Making

Relevant and irrelevant costs make or buy decisions, addition and deletion of a product, lease or buy steps in the decision – making process, quantitative versus qualitative analysis, obtaining information, pitfalls to avoid i.e. common errors in decision making.

- Pricing Decisions

Major influences on pricing decision, open market pricing cost plus pricing full cost based pricing, contribution based pricing.

- Responsibility Accounting and Cost Allocation,

Responsibility centers, performance reports, cost allocation based on budget activity based, activity based responsibility accounting and behavioral effects of responsibility accounting.

- Profit Centre and Transfer Pricing

Definition of Profit Centre and Transfer pricing, general transfer-pricing rule Transfer pricing based on the external market price, Negotiated transfer price, cost based transfer prices, standard versus actual costs.

- **Budgeting**

Function and master budget-The Master Budget overall plan and a planning assumptions and predictions underlying the master budget, Flexible Budget definition and meaning advantages, fixed overhead treatment, revised budget.

- **Capital Budgeting**

Concept of Present Value, Discounted Cash Flow Method, Net Present Value Internal Rate of Returns, Payback Period. Accounting (average) Rate of Return, Effect of Income Tax in Capital Budgeting, Depreciation in Capital Budgeting, Zero-Base Budgeting

- **Financial Reporting and Changing Price**

Meaning of Financial Reporting and Financial Statements, Balance Sheet, Income Statement, Statement of Cash Flows, change in Equity, impact of changing prices on Financial Statements

- **Responsibility accounting , quality control, and environmental cost management**

Responsibility centers, performance reports

Behavioural effects of responsibility accounting,

Segmented reporting, total quality management,

Recommended Book:

- Introduction to Management Accounting, Horngren Charles T; Prentice Hall Inc. latest edition
- Managerial Accounting; Q. Compel & Ronald M. Dascher, Paul E John Wiley & Sons Latest Edition
- Hilton W. Ronald Managerial Accounting 7th edition McGraw-Hill Irwin

- Garrison H. Ray, Noreen W. Eric (2004) 11th edition Managerial Accounting Irwin publishers

Course	ENTREPRENEURSHIP	Credit Hours	3
Pre-Requisite	NONE	Semester	VI
Objectives	<p>To provide students with an understanding of the nature of business formation, growth & execution with particular reference to:</p> <ul style="list-style-type: none"> • To develop in students an understanding of the theoretical and practical aspects of Entrepreneurships literature. • To develop in students the skills of analysis, synthesis and evaluation in context of Pakistani business environment. 		

OUTLINE

Introduction

- The Nature and importance of Entrepreneurship
 - a. Nature and Development of Entrepreneurship
 - b. Entrepreneurial Decision Process
 - c. Role of Entrepreneurs in Economic development
 - d. Ethics and Social Responsibility of Entrepreneurship
 - e. The Future of Entrepreneurship
- The Entrepreneurial and Entrepreneurial Mind
 - a. The Entrepreneurship process
 - b. Managerial VS Entrepreneurial Decision Making
 - c. Entrepreneurial Leadership Characteristics
- Idea generation
- The individual entrepreneur
- Inside the entrepreneurial mind: From Ideas to reality

- a. Creativity, Innovation and Entrepreneurship
 - b. Creativity----A necessity for survival
 - c. Creative Thinking
 - d. Barriers to creativity
 - e. How to enhance creativity
 - f. The creative Process
 - g. Techniques for improving the creative process
 - h. Protecting your ideas
- Planning
- The Marketing Plan
 - d. Understanding of Marketing Plan, Characteristics of Marketing Plan
 - e. Environment Analysis and Steps in preparing the Marketing Plan
- The Financial Plan
 - f. Operating and Capital Budgets, Break Even Analysis
 - g. Cash Flows and Balance Sheets
- The Organizational Plan
 - h. Developing the management team
 - i. Building the successful Organization, The Role of BODs
- Preparing for the new Launch
- Execution & Growth
- Managing early growth of the New Venture
- Contemporary Options
 - j. Joint Venture, Acquisitions
 - k. Synergy, Mergers
 - l. Hostile Takeovers Leveraged Buyouts
 - m. Franchising
- International Entrepreneurship Opportunities

- n. The Nature of International Entrepreneurship
- o. Importance of International Entrepreneurship
- p. Entrepreneurial Entry into International Business

- Management succession and continuity: A family Business Perspective
- Woman and Minority Entrepreneurship
- Social Entrepreneurship

Recommended Texts

- Hisrich and Peters, (1998) Entrepreneurship, McGraw-Hill
- Pitts R.A. and Snow C.C., Strategies for Competitive Success, Johan Willy
- Barlett, Christopher A., and Sumantra Goshal. (1996). Strategy & Leadership.
- Carrier, Camille. (1995), Entrepreneurship in Large Firms and SMEs. A Comparative Study
- Kagan, Daniel.(1995), Why Entrepreneurs ignore good advice: A study in non-linearity and Ego. Human System Management Vol14,no4,pp327-33.
- Thomas W. Zimmer, Norman M, Essentials of entrepreneurship and small business management, Prentice Hall.
- Donald F. Kuratko, Richard M. Hodegetts, Entrepreneurship, Theory, Process and Practise

Course	E-COMMERCE	Credit Hours	3
Pre-Requisite	NONE	Semester	VII
Objectives	<ul style="list-style-type: none"> • Explore, examine, and apply Commerce concepts and principles by reading the modules, by answering the self-tests, exercises, and assignments, and by participating in the online discussions. • Decide what level of Commerce activity to pursue, and provide appropriate supporting evidence. • Determine the means, methods and strategies appropriate for establishing an Commerce business. 		

	<ul style="list-style-type: none"> • Decide whether to in-source or outsource your project design, development, installation, and/or operation, based on an increased understanding of Commerce set-up requirements. • Write a comprehensive Commerce Business Plan focused either on adding Commerce to your existing business or on implementing a new Commerce business. • Receive feedback from the facilitator and from experts on the quality of your Business Plan.
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OUTLINE

- Introduction to E-Commerce
Defining E-Commerce and E-business, Reasons for going Online, Differentiating between E-Business Categories, using the new Paradigm of E-business, Pure and Partial E-Commerce, Case Study of Amazon, Napster
- Preparing the Online Business

Competitor Analysis on the Internet, The Fourth Channel, Paradigms in the New Economy, Driving Business Process Re-engineering, Designing, Developing and Deploying the System, Supply Chain Management
- Technical Infrastructure

Exploring the IT Infrastructure, Deciding on the Enterprise Middleware, Choosing the Right Enterprise Application, Building the E-business applications, Choosing the Right Web Server
- Marketing Strategies on the Web

Internet Marketing Technologies, Web Design, Attracting Visitors to your Site, Virtual Societies, Localization, Promoting your E-business, Banner and Campaigning, Online Measurement, Direct Marketing, Search Engine Optimization Techniques

- Interactive Communication Experiences

The Basics, Moderating Online Meetings, Internet Chat Solutions, Internet-based Trainings, Discussion Forums

- Internet Information Security

Creating a Security Strategy, Cryptographic Tools, Applications of Cryptology, Privacy on the Internet, Fighting Virus and Hoax Virus Warnings, Conflicts in the Information Age. Security Threats in E-Commerce, Use of Third Party Security Services,

- Paying Via Internet

The Payment Business, Post-Paid Payment System, Instant-paid Payment System, Pre-paid Payment Systems, Merchant Accounts, Use of Third Party Payment Services , The Future of Payment

- Shopping and ORM Solutions

Online Shopping, Shopping Solutions, Implications of the new Economy Electronic Software Distribution, Operational Resources Management

- Policies, Standards and Laws

Internet Security Policies, Standards for E-Commerce Infrastructure, Cyber Laws for Secure E-Commerce Transactions, Privacy and Information Rights, Social, Legal and Ethical Issues in E-commerce

Recommended Text:

1. Kenneth C. Laudon, Carol GuercioTraver (latest edition), *E-Commerce: Business Technology, Society*, Pearson Education
2. Marilyn Greenstein, Miklos Vasarhelyi (2nd Edition), *Electronic Commerce: Security, Risk Management, and Control*
3. THE E-business (R) EVOLUTION By Daniel Amor

Course	INVESTMENT AND PORTFOLIO MANAGEMENT	Credit Hours	3
Pre-Requisite	Financial Management	Semester	VII
Objectives	<ul style="list-style-type: none"> • Understand the investment process, internal and external factors affecting the investment decisions process, • Understand the securities trading process on stock exchanges and other markets • Understand the valuation of debt and equity securities, industry, fundament and technical analysis, • Understand the concept of efficient markets and their implication in investment process • Understand the portfolio theories and their implications for investment decision processes 		

Journals/Periodicals: Business Recorder, Pakistan and Gulf Economist

Course	OPERATIONS MANAGEMENT	Credit Hours	3
Pre-Requisite	NONE	Semester	VII
Objectives	<ul style="list-style-type: none"> • To understand the role of operations management in the overall business strategy of the firm. • To understand the interdependence of the operating system with other key functional areas of the firm. • To identify and evaluate the key factors and the interdependence of these factors in the design of effective operating systems. • To identify and evaluate a range of tools appropriate for analysis of operating systems of the firm. • To identify and evaluate comparative approaches 		

	<p>to operations management in a global context.</p> <ul style="list-style-type: none"> • To understand the application of operations management policies and techniques to the service sector as well as manufacturing firms.
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- Using Operations To Compete
- Project Management
- Process Strategy
- Process Analysis
- Constraint Management
- Supplement : Waiting Line
- Process Layout
- Lean System
- Supply Chain Startegy
- Location
- Inventory Management
- Supplement D: Specila Inventory Methods
- Forecasting
- Sales And Operational Plan
- Resource Planning And Scheduling

Recommended Texts

- *Operations Management, Processes and Supply Chains*, 8th Edition, Krajewski, Ritzman, & Malhotra
- *Operations Management Theory and Practice* by Mahadevan 2001

Course	ORGANIZATIONAL BEHAVIOUR	Credit Hours	3
Pre-Requisite	Principles of Management	Semester	VII
Objectives	<ul style="list-style-type: none"> • Apply theory to application, demonstrating an understanding of the theoretical knowledge base of organizational behavior • Analyze how individual and group behaviors act as building blocks to organizational behavior • Research and analyze aspects of organizational 		

	behavior <ul style="list-style-type: none"> • Analyze team behavior and its effect on productivity • Communicate and interact with team members
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OUTLINE

- Environmental and Organizational Context
- Introduction to Organizational Behavior
- Environmental Context: Information Technology & Globalization
- Organizational Context: Design and Culture
- Cognitive Process of Organizational Behavior
- Perception and Attribution

- Personality and Attitudes
- Motivational Needs and Processes

- Dynamics of Organizational Behavior
- Communication
- Decision Making
- Stress and Conflict
- Power and Politics
- Building Teams---- Group Dynamics and Teamwork
- Valuing Diversity----- Individual Differences
- Managing and Leading for Higher Performance
- Managing Performance through Job Design and Goal Setting
- Behavioral Performance Management
- Effective Leadership Processes
- Great Leaders: Styles, Activities and Skills

Recommended Text:

- Luthans Fred. (2005), *Organizational Behavior*, 10th Edition, McGraw-Hill.
- John R. Schermerhorn, (2004), *Management and Organizational Behavior Essentials*, Wiley & Sons.

- Robbins P. Stephen. (2006), *Organizational Behavior*, 8th ed, Prentice Hall,

Course	CORPORATE GOVERNANCE	Credit Hours	3
Pre-Requisite	NONE	Semester	VIII
Objectives	<ul style="list-style-type: none"> • Apply theory to application, demonstrating an understanding of the theoretical knowledge base of organizational behavior • Analyze how individual and group behaviors act as building blocks to organizational behavior • Research and analyze aspects of organizational behavior • Analyze team behavior and its effect on productivity • Communicate and interact with team members 		

OUTLINE

Section I

- The corporate Governance Problem
- Introduction
- The conflict between managers and shareholders
- Agency Theory: The implications of the conflict
- The Principal – Principal Conflict

Section 2

- The Impact of Ownership Structure
- Ownership and agency theory
- Institutional ownership
- Inside Ownership
- Family Ownership
- Pyramidal Ownership and Business Groups
- Enlarging the Stakeholder Perspective

Section 3

- Resolving the Agency Problem

- Board of directors
- Executive Compensation

Section 4

- Corporate Governance – Broader Issues
- Additional Influences on Corporate Governance
Convergence & divergence – Issues in Corporate Governance

Recommended Text Books

- Corporate Governance 2nd edition, Christine A. Mallin, oxford University Press
- Corporate Governance and Chairmanship a personal view by Adrian Cadbury by Oxford University Press

Course	INTERNATIONAL BUSINESS	Credit Hours	3
Pre-Requisite	NONE	Semester	VIII
Objectives	<ul style="list-style-type: none"> • Understanding the historical, social, cultural and political influences shaping national and international systems and on understanding the effects of such influences on international political and commercial events. • Specifically, we will look at national and international political influences on economies, the economic foundation of markets, the cultural fabric holding business systems together, and the technological and other forces pulling them apart. • Students will see how these concepts apply in the context of real business world through the study of how fundamental government, society, business and technological changes affect different industry segments and MNCs. • Students will come to understand how and why firms in different industries choose different 		

	organizational modalities (FDI, Licensing, Joint Ventures, and Strategic Alliances etc) in different parts of the world to gain and maintain competitive advantage.
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OUTLINE

- The challenges of International Business
- Process of internationalization, a multinational enterprise
- Globalization
- Political economy and its implications in business
- International Culture and its implications in business
- Hofstede Model
- International political issues
- Economic Integrations
- International Trade Theories
- Foreign Direct Investment
- Balance of Payments
- Balance of Trade
- Global monetary system (Exchange rate determination)
- Exchange rate in practices and financial crisis
- Foreign Exchange Market
- Case Study: The Pharmaceutical Industry
- The Pharmaceutical Industry: Changing Technologies
Excerpt from: "The Pharmaceutical Industry."
- Profiles of Four Leading Pharmaceutical Firms
Pfizer, GlaxoSmithKline, Merck, and Novartis AG.
- Firm-Specific Advantages: Location-Based Advantages, Location-Bound Advantages, and Capabilities.
- Changing Models of Cross-Border Business
- Changing Dynamics of Global Competition
- Strategic alliances, Acquisition, Mergers
- Global Marketing Strategy
- Global Marketing Strategy
- Global Operations Management
- Global Operations Management
- Human Resource Management Strategy
- Human Resource Management Strategy
- Entrepreneurship

- Developing Firm-specific Advantages from Being International – The Globalization of Markets
- The Globalization of Technology
- Core competencies
- Doing Business in Europe
- Doing Business in North America
- Doing Business in Asia (Particular focus on China)
- Doing Business in Asia (Particular focus on China)

Recommended Text:

- Rugman & Hodgetts. (2003), *International Business, A strategic management approach*, McGraw-Hill.
- Hill W.L. Charles. (2004), *International Business*, 4th Edition, McGraw-Hill.

Course	STRATEGIC MANAGEMENT	Credit Hours	3
Pre-Requisite	NONE	Semester	VIII
Objectives	<ul style="list-style-type: none"> • This course gives a student the knowledge about the changing environment, it build up the skill to solve many business problems, it also changes the attitude to become the generalist rather than to become specialist. Its basic objective is to know about the opportunity and threats in the environment as well as to detect the strength and weakness within themselves 		

OUTLINE

- Concept of Strategic Management
- The Nature and Importance of Business Policy/Strategy
- The Role of Policy /Strategy in Organization
- The changing Social Role of Business

- Managerial & Organizational Style
- Strategic Management Elements
- Environmental Analysis and Diagnosis
- Strategic Advantage Analysis and Diagnosis
- Considering Strategic Alternatives
- Implementing Strategy
- Evaluating the Strategy
- Applying the Strategic Management Process – The Case Methods.

Recommended Books:

- George A. Steinar & John B. Miner Management Policy & Strategy: McMillan Pub.Co.N.Y. (Latest Edition)
 - William F. Clueck, Lawrence R. Jauch, Business Policy and Strategic Management 4th Edition McGraw-Hill (Kogakusha) Ltd., Tokyo. 1984
 - Newmann & Logan, Business Policy in Central Management. (Latest Edition)
 - Thomas L. Wheelen, J. David Hunger, Strategic Management and Business Policy, 7th Ed. Prentice Hall, Year 2000
 - Fred R. David Strategic Management, Concepts and Cases, 7th Ed. Prentice Hall. Year 2000
 - Thompson Strikland, Strategic Management, Concepts and Cases 10th Ed. McGraw Hill (Latest Edition)
- Journals / Periodicals: National and International Journals.

Newspapers/Business Recorder

World Wide Web: www.hec.gov.pk

DETAILS OF COMPULSORY COURSES

English I (Functional English)

Objectives: Enhance language skills and develop critical thinking.

Course Contents

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

Comprehension

Answers to questions on a given text

Discussion

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

Listening

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

Translation skills

Urdu to English

Paragraph writing

Topics to be chosen at the discretion of the teacher

Presentation skills

Introduction

Note: Extensive reading is required for vocabulary building

Recommended books:

1. **Functional English**

a) Grammar

1. Practical English Grammar by A.J. Thomson and A.V. Martinet. Exercises 1. Third edition. Oxford University Press. 1997. ISBN 0194313492
2. Practical English Grammar by A.J. Thomson and A.V. Martinet. Exercises 2. Third edition. Oxford University Press. 1997. ISBN 0194313506

b) Writing

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

c) Reading/Comprehension

1. Reading. Upper Intermediate. Brian Tomlinson and Rod Ellis. Oxford Supplementary Skills. Third Impression 1992. ISBN 0 19 453402 2.

d) Speaking

English II (Communication Skills)

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

Course Contents

Paragraph writing

Practice in writing a good, unified and coherent paragraph

Essay writing

Introduction

CV and job application

Translation skills

Urdu to English

Study skills

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

Academic skills

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

Presentation skills

Personality development (emphasis on content, style and pronunciation)

Note: documentaries to be shown for discussion and review

Recommended books:

Communication Skills

a) Grammar

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

b) Writing

1. Writing. Intermediate by Marie-Christine Boutin, Suzanne Brinand and Françoise Grellet. Oxford

Supplementary Skills. Fourth Impression 1993. ISBN 019 435405 7 Pages 45-53 (note taking).

2. Writing. Upper-Intermediate by Rob Nolasco. Oxford Supplementary Skills. Fourth Impression 1992. ISBN 0 19 435406 5 (particularly good for writing memos, introduction to presentations, descriptive and argumentative writing).

c) Reading

1. Reading. Advanced. Brian Tomlinson and Rod Ellis. Oxford Supplementary Skills. Third Impression 1991. ISBN 0 19 453403 0.
2. Reading and Study Skills by John Langan
3. Study Skills by Riachard Yorkey.

English III (Technical Writing and Presentation Skills)

Objectives: Enhance language skills and develop critical thinking

Course Contents

Presentation skills

Essay writing

Descriptive, narrative, discursive, argumentative

Academic writing

How to write a proposal for research paper/term paper

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

Technical Report writing

Progress report writing

Note: Extensive reading is required for vocabulary building

Recommended books:

Technical Writing and Presentation Skills

- a) Essay Writing and Academic Writing
 1. Writing. Advanced by Ron White. Oxford Supplementary Skills. Third Impression 1992. ISBN 0 19 435407 3 (particularly suitable for discursive, descriptive, argumentative and report writing).
 2. College Writing Skills by John Langan. Mc=Graw-Hill Higher Education. 2004.

3. Patterns of College Writing (4th edition) by Laurie G. Kirszner and Stephen R. Mandell. St. Martin's Press.

b) Presentation Skills

c) Reading

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

Pakistan Studies (Compulsory)

Introduction/Objectives

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

Course Outline

1. Historical Perspective

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

2. Government and Politics in Pakistan

Political and constitutional phases:

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

3. Contemporary Pakistan

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

Books Recommended

1. Burki, Shahid Javed. *State & Society in Pakistan*, The Macmillan Press Ltd 1980.
2. Akbar, S. Zaidi. *Issue in Pakistan's Economy*. Karachi: Oxford University Press, 2000.
3. S.M. Burke and Lawrence Ziring. *Pakistan's Foreign policy: An Historical analysis*. Karachi: Oxford University Press, 1993.
4. Mehmood, Safdar. *Pakistan Political Roots & Development*. Lahore, 1994.
5. Wilcox, Wayne. *The Emergence of Banglades.*, Washington: American Enterprise, Institute of Public Policy Research, 1972.
6. Mehmood, Safdar. *Pakistan Kayyun Toota*, Lahore: Idara-e-Saqafat-e-Islamia, Club Road, nd.
7. Amin, Tahir. *Ethno - National Movement in Pakistan*, Islamabad: Institute of Policy Studies, Islamabad.
8. Ziring, Lawrence. *Enigma of Political Development*. Kent England: WmDawson & sons Ltd, 1980.
9. Zahid, Ansar. *History & Culture of Sindh*. Karachi: Royal Book Company, 1980.
10. Afzal, M. Rafique. *Political Parties in Pakistan*, Vol. I, II & III. Islamabad: National Institute of Historical and cultural Research, 1998.
11. Sayeed, Khalid Bin. *The Political System of Pakistan*. Boston: Houghton Mifflin, 1967.
12. Aziz, K.K. *Party, Politics in Pakistan*, Islamabad: National Commission on Historical and Cultural Research, 1976.
13. Muhammad Waseem, *Pakistan Under Martial Law*, Lahore: Vanguard, 1987.
14. Haq, Noor ul. *Making of Pakistan: The Military Perspective*. Islamabad: National Commission on Historical and Cultural Research, 1993.

ISLAMIC STUDIES (Compulsory)

Objectives:

This course is aimed at:

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

Detail of Courses

Introduction to Quranic Studies

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

Study of Selected Text of Holly Quran

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

Study of Selected Text of Holly Quran

- 1) Verses of Surah Al-Ihzab Related to Adab al-Nabi (Verse No.6,21,40,56,57,58.)

- 2) Verses of Surah Al-Hashar (18,19,20) Related to thinking, Day of Judgment
- 3) Verses of Surah Al-Saf Related to Tafakar,Tadabar (Verse No-1,14)

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

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

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

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

Introduction to Sunnah

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

Selected Study from Text of Hadith

Introduction to Islamic Law & Jurisprudence

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

Islamic Culture & Civilization

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

Islam & Science

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

Islamic Economic System

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

Political System of Islam

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

Islamic History

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

Social System of Islam

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

Reference Books:

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

**COMPULSORY MATHEMATICS
COURSES FOR BS (4 YEAR)**

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

**1. COURSE FOR NON-MATHEMATICS MAJORS IN SOCIAL
SCIENCES**

<i>Title of subject:</i>		MATHEMATICS
<i>Discipline</i>	:	BS (Social Sciences).
<i>Pre-requisites</i>	:	SSC (Metric) level Mathematics
<i>Credit Hours</i>	:	03 + 00
<i>Minimum Contact Hours:</i>		40
<i>Assessment</i>	:	written examination;
<i>Effective</i>	:	2008 and onward

Aims : To give the basic knowledge of Mathematics and prepare the students not majoring in mathematics.

Objectives: After completion of this course the student should be able to:

- Understand the use of the essential tools of basic mathematics;
- Apply the concepts and the techniques in their respective disciplines;
- Model the effects non-isothermal problems through different domains;

Contents :

1. *Algebra* : *Preliminaries:* Real and complex numbers, Introduction to sets, set operations, functions, types of functions. *Matrices:* Introduction to matrices, types of matrices, inverse of matrices, determinants, system of linear equations, Cramer's rule. *Quadratic equations:* Solution of quadratic equations, nature of roots of quadratic equations, equations reducible to quadratic equations. *Sequence and Series:* Arithmetic, geometric and harmonic progressions. *Permutation and combinations:* Introduction to permutation and combinations, *Binomial Theorem:* Introduction to binomial theorem. *Trigonometry:* Fundamentals of trigonometry, trigonometric identities. *Graphs:* Graph of straight line, circle and trigonometric functions.

2. *Statistics* : *Introduction:* Meaning and definition of statistics, relationship of statistics with social science, characteristics of statistics, limitations of statistics and main division of statistics. *Frequency distribution:* Organisation of data, array, ungrouped and grouped data, types of frequency series, individual, discrete and continuous series, tally sheet method, graphic presentation of the frequency distribution, bar frequency diagram histogram, frequency polygon, cumulative frequency curve. *Measures of central tendency:* Mean median and modes, quartiles, deciles and percentiles. *Measures of dispersion:* Range, inter quartile deviation mean deviation, standard deviation, variance, moments, skewness and kurtosis.

Books Recommended:

1. Swokowski. E. W., '*Fundamentals of Algebra and Trigonometry*', Latest Edition.

2. Kaufmann, J. E., '*College Algebra and Trigonometry*', PWS-Kent Company, Boston, Latest Edition.
3. Walpole, R. E., '*Introduction of Statistics*', Prentice Hall, Latest Edition.
4. Wilcox, R. R., '*Statistics for The Social Sciences*',

INTRODUCTION TO STATISTICS

Credit hrs: 3(3-0)

Unit 1. What is Statistics?

Definition of Statistics, Population, sample Descriptive and inferential Statistics, Observations, Data, Discrete and continuous variables, Errors of measurement, Significant digits, Rounding of a Number, Collection of primary and secondary data, Sources, Editing of Data. Exercises.

Unit 2. Presentation of Data

Introduction, basic principles of classification and Tabulation, Constructing of a frequency distribution, Relative and Cumulative frequency distribution, Diagrams, Graphs and their Construction, Bar charts, Pie chart, Histogram, Frequency polygon and Frequency curve, Cumulative Frequency Polygon or Ogive, Histogram, Ogive for Discrete Variable. Types of frequency curves. Exercises.

Unit 3. Measures of Central Tendency

Introduction, Different types of Averages, Quantiles, The Mode, Empirical Relation between Mean, Median and mode, Relative Merits and Demerits of various Averages. properties of Good Average, Box and Whisker Plot, Stem and Leaf Display, definition of outliers and their detection. Exercises.

Unit 4. Measures of Dispersion

Introduction, Absolute and relative measures, Range, The semi-Inter-quartile Range, The Mean Deviation, The Variance and standard deviation, Change of origin and scale, Interpretation of the standard Deviation, Coefficient of variation, Properties of

variance and standard Deviation, Standardized variables, Moments and Moments ratios. Exercises.

Unit 5. Probability and Probability Distributions.

Discrete and continuous distributions: Binomial, Poisson and Normal Distribution. Exercises

Unit 6. Sampling and Sampling Distributions

Introduction, sample design and sampling frame, bias, sampling and non sampling errors, sampling with and without replacement, probability and non-probability sampling, Sampling distributions for single mean and proportion, Difference of means and proportions. Exercises.

Unit 7. Hypothesis Testing

Introduction, Statistical problem, null and alternative hypothesis, Type-I and Type-II errors, level of significance, Test statistics, acceptance and rejection regions, general procedure for testing of hypothesis. Exercises.

Unit 8. Testing of Hypothesis- Single Population

Introduction, Testing of hypothesis and confidence interval about the population mean and proportion for small and large samples, Exercises

Unit 9. Testing of Hypotheses-Two or more Populations

Introduction, Testing of hypothesis and confidence intervals about the difference of population means and proportions for small and large samples, Analysis of Variance and ANOVA Table. Exercises

Unit 10. Testing of Hypothesis-Independence of Attributes

Introduction, Contingency Tables, Testing of hypothesis about the Independence of attributes. Exercises.

Unit 11. Regression and Correlation

Introduction, cause and effect relationships, examples, simple linear regression, estimation of parameters and their interpretation. r and R^2 . Correlation. Coefficient of linear correlation, its estimation and interpretation. Multiple regression and interpretation of its parameters. Examples

Recommended Books

- 1 Walpole, R. E. 1982. "Introduction to Statistics", 3rd Ed., Macmillan Publishing Co., Inc. New York.
- 2 Muhammad, F. 2005. "Statistical Methods and Data Analysis", Kitab Markaz, Bhawana Bazar Faisalabad.

Note: **General Courses from other Departments**

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