**GEN: 3101 Functional English Credit Hrs:** 3(3-0)

**Course Objectives:** The course is developed to enhance the language skills and critical thinking of students by

* Enabling them to correct use of grammar and language structures
* Enabling them to communicate effectively

**Course Contents:**

Grammar:

* Basics of grammar
* Parts of speech and their use in communication
* Sentence structure
* Correct use of Tenses
* Active and passive voice
* Practice in unified sentences (unity and coherence)
* Analysis of Phrase, Clause and sentence structures
* Transitive and Intransitive Verbs
* Punctuation and Spellings

Reading skills:

* Comprehension skills
* Literal understanding of text, reading between lines (interpret text), reading beyond lines ( to assimilate, integrate knowledge)
* Answers to the questions on a given text

Discussion:

* General topics and everyday conversation (topics for discussion to be at the discretion of the teacher keeping in view the level of the students)
* Introducing ourselves, describing things, recounting past events, agreeing and disagreeing, compare and contrast

Listening:

* To be improved by showing documentaries/ films carefully selected by subject teacher
* Listening and note taking

Translation Skills:

* Urdu to English

Writing Skills:

* Paragraph Writing

Basic structure of paragraph and guidelines for writing an effective paragraph

Speaking Skills:

* Presentation Skills
* Introduction (types of presentation, structure of presentation)
* Prepared and unprepared talks

*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 Francoise Grellet. Oxford Supplementary Skills. Fourth Impression 1993. ISBN 0 19 435405 7 Pages 20-27 and 35-41.

c) Reading/Comprehension

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

d) Speaking

1. Ellen, K. 2002. Maximize Your Presentation Skills: How to Speak, Look and Act on Your Way to the Top
2. Hargie, O. (ed.) Hand book of Communications Skills
3. Mandel, S. 2000. Effective Presentation Skills: A Practical Guide Better Speaking
4. Mark, P. 1996. Presenting in English. Language Teaching Publications

**GEN-3102 General Science (For Arts Subjects) Credit Hrs: 3(2-1)**

**Objectives:**

* Understand scientific concepts
* Differentiate between scientific products and scientific processes
* Understand the underlying principle of science education

**Course Outline**

**Unit I:**

Observations 1.2. Hypothesis 1.3. Theory

**Unit II:**

* Types of matters
* Atomic theory of Matter
* Elements and Compounds
* Mixtures and Solutions
* Force
* Motion
* Speed, Velocity and Acceleration
* Laws of Motion
* Light and splitting of its into its color and various phenomena associated with light i.e., refraction

**Unit III:**

* Energy and Work ,
* Types of Energy ,
* Conversion of Energy from one form to another
* Law of conversation of energy

**Unit VI:**

* Structure of animal and plant cell
* Cell division
* Cell Theory

**Unit V:**

* Blood circulatory system ,
* Digestive system ,
* Reproductive system ,
* Execratory system

**Unit VI:**

* pH
* Acids
* Bases
* Difference between metals and non metals
* Formulae of different compounds
* Extraction of Metals from its ore
* Alloys
* Rusting and corrosion

 **Unit VII:** A brief description of planets of solar system

**Lab:**

* Finding pH of samples by using pH paper
* Studying the properties of acids and bases on the basis of their reaction with metals and nonmetals
* Experimentally show that carbon dioxide is given out during respiration
* Tracing the path of ray through prism
* Tracing the path of a ray of light through a slab .Measure angle of incidence and refraction
* Onion peel experiment

**Text books**

* General Science text book for class 8th and 10th Punjab Text book Board Lahore
* **Recommended Books**
* Agha Khan University Examination Board (2002) General Science IX- X (based on National Curriculum 2002). Karachi: AGKEB. William Lewis
* Eikenberry (2008) The teaching of general science, The University of Chicago Press.

 **Or**

**GEN-3102 Environmental Science (for Sciences Subjects) Credit Hrs: 3 (2-1)**

**Objectives:**

* To understand and provide updated knowledge of environmental problems
* To provide a basic introduction sustainable environmental management.

**Course Contents**

**Unit I.** The human environment, the litho, bio and hydrospheres, the nature and composition of natural waters,

**Unit II.** Pollution: definition, classification and impact on habitats

i. Air pollution: Sources and effect of various pollutants (inorganic, organic), control, remediation. Photochemical smog. Smog. Acid rain: 1. Theory of acid rain, 2. Adverse effects of acid rains. Chlorofluorocarbons and its effects.

ii. Water pollution: Major sources of water pollution its impact. Prevention, control remediation, Heavy metal pollution. Tanneries. Hospital waste.Treatments of sewage, sludge, and polluted waters.

iii. Soil pollution: major sources of soil pollution and its impact. Prevention, control remediation.

iv. Noise pollution.

**Unit III.** Ozone layer:

i. Formation

ii. Mechanism of depletion

iii.Effects of ozone depletion

**Unit VI.** Greenhouse effect: causes, impacts.

**Practical:**

Examination of water for

i. Total dissolved solids.

ii. pH and Conductance.

iii. Alkalanity.

iv. Hardness of water

v. Determination of phosphates and sulphates

**Recommended Books:**

1. Newman, E.I. 2001. Applied Ecology.Blackwell Science. UK

2. Mooney, H.A. and Saugier, B. 2000. Terrestrial Global Productivity.Academic Press, UK.

3. Eugene, E.D. and Smith, B.F. 2000. Environmental Science: A study of interrelationships. McGraw Hill. USA.

4. French, H. 2000. Vanishing Borders: Protecting the Planet in the Age of Globalization. W.W. Norton and Company, NY.

5. Hall, C.A.S. and Perez, C.L. 2000. Quantifying Sustainable Development.Academic Press, UK.

6. Bazzaz, F.A. 2004. Plants in changing environments: Linking physiological, population, and community ecology. Cambridge Univ. Press.

7. Bush, M.B. 1997. Ecology of a changing planet.Prentice Hall, UK.

8. Marsh, M.W. and Grossa Jr., J.M. 1996 Environmental geography: Science, land use, and earth systems. John Wiley and Sons.

9. Lambers, H., T. L. Pons and F. Stuart. 2008. Plant Phyiological Ecology

 **GEN-3103 Quantitative Reasoning-I Credit Hrs: 3(3-0)**

**Objectives:** Students will get familiarized with the importance of quantitative reasoning skills in the modern age.

**Course Contents:**



**Recommended Books:**



 **Botany**

**BOT-3104 Introduction to Plant Sciences Credit Hrs: 3(2-1)**

**Objectives**

To help participants understand basic plant science fundamentals through a variety of hands-on activities and resources..

**Course Contents**

1. **History and the importance of plant sciences.** Scope of plant sciences.Renewable and non-renewable resources. Traditional uses and potentials: sources of food (cereals, legumes, root and tuber crops, vegetable crops, fruits), drug discovery and medicinal plants.
2. **Plants and SDGs:** The need for a focus on plant, SDG 1 No poverty (Use of plant to end poverty), SDG 2 Zero hunger (Role of plants to end hunger, achieve food security and improved nutrition and promote sustainable agriculture, SDG 3 Good health and well-beings (use of plants to ensure healthy life and promote well-being), SDG 13 Climate action (Role of plants to combat climate change and its impacts), SDG 15 Life on land (Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and halt and reverse land degradation and halt biodiversity loss).

**Practical**

1. Identify local ethnobotanically useful species.
2. Survey of medicinally important plants and their products
3. Medicinal plant description and processing
4. Preparation of decoctions, syrups, ointments, and dried plants for domestic medicinal use
5. Field exercises on medicinal plant specimen collection, documentation, storage and gardening

**Recommended Readings**

1. Simpson B., Ogorzaly M. (2000). Economic Botany: Plants in our world. McGraw-Hill Education.
2. Plant Science: Growth, Development, and Utilization of Cultivated Plants, 4th edition (McMahon et al., 2007).
3. Sharrock, S., & Jackson, P. W. (2016). Plant Conservation and the Sustainable Development Goals. Global Partnership for Plant Conservation. Missouri: Botanical Gardens Conservation International.
4. Odum, E. P. Fundamentals of Ecology. 3rd Edition. 1994. W.B. Saunders. Philadelphia.

 **English**

**ENG -3104 Introduction to Linguistics Credit Hrs: 3(2-1)**

 **Objectives:** To introduce students to the basic concepts of language which have immediate relation to their ordinary as well as academic life, and to sensitize students to the various shades & aspects of language, to show that it is not a monolithic whole but something that can be looked at in detail.

**Course Contents:**

**Unit I:** Introduction to Linguistics

* Linguistics and its scientific nature
* Historical development of linguistics
* Scope of linguistics
* Difference between traditional grammar and linguistics
* Schools of linguistics

**Unit II:** Introduction to language

* Origin of language
* Properties of language
* Development of writing systems
* Difference between human and animal language

**Unit III:** Sound patterns of language

* Introduction to Phonetics
* Introduction to basic concepts of Phonology
* Practice of phonetic transcription at word level

**Unit IV:** Lexis

* Word formation processes.

**Unit V:** Morphology

* Morpheme and its classification
* Allomorph and its classification

**Unit VI:** Grammar and Syntax

* Types of grammar
* Traditional grammar
* Descriptive grammar and methods of structural analysis
* (Test frames, IC analysis, labeled bracketing, tree diagrams)
* Generative grammar

**Unit VII:** Semantics

* Semantics Concepts
1. Synonyms
2. Antonyms
3. Hyponyms
4. Polysemy

**Unit VIII:** Psycholinguistics

* First language acquisition
* Second language learning

**Unit IX :** Sociolinguistics

* Language varieties

**Unit X:** Pidgin, creole, dialect

* Language, society and culture

**Recomended Books:**

1. Aitchison, J. (2000). *Linguistics.* Teach Yourself Books.
2. Akmajian, A., Demers, R.A., Farmer, A.K. &Harnish, R.M. (2001). *Linguistics: An*

 *Introduction to Language and Communication*. Massachusetts: MIT.

1. Crystal, D. (1997). *The Encyclopedia of Language*. Cambridge: CUP.
2. Farmer, A.K, & Demers, R.A. (2005). *A Linguistics Workbook*. M.I.T Press.
3. Finch, G. (2004). *How to Study Linguistics: A Guide to Understanding Linguistics*.

Palgrave.

1. Fromkin, V. A., Rodman, R. &Hymas, M. (2002).*Introduction toLanguage*. (Sixth

edition). New York: Heinley.

1. Radford, A., Atkinson, M., Briatain, D., Clahsen, H., Spencer, A. (1999). *Linguistics: An Introduction.* Cambridge: CUP.
2. Todd, L. (1987). *An Introduction to Linguistics*. Moonbeam Publications.
3. Yule, G. (2006). *The Study of Language*. C.U.P.

 **Economics**

**ECO- 3106 Principles of Micro-Economics Credit Hrs: 3(3-0)**

**Objectives:** By the end of the course, students will be able to understand introductory microeconomic theory, solve basic microeconomic problems, and use these techniques to think about a number of basic policy questions relevant to the operation of the economy. To train the students to work with others as a part of team to solve problems

**Course outline:**

**Unit I:** Introduction

* + The Economic Problem
	+ Economic Decision Makers
	+ The Circular Flow Model
	+ Distinction Between Microeconomics and Macroeconomics
	+ The Market System

## **Unit II:** Demand & Supply

* + Demand, Demand Function, Demand Curve, Engel Curve, Changes in Demand, Law of Demand, Shift in Demand, Factors Affecting Demand, Consumer Surplus
	+ Supply, Supply Function, Supply Curve, Changes in Supply, Factors Affecting Supply, Law of Supply, Producer Surplus
	+ EquilibriumofDemandandSupply,MarketEquilibrium,PriceControls,Taxes and Subsidies

## **Unit III:** Elasticity of Demand & Supply:

* + Price Elasticity of Demand & Supply
	+ Point Elasticity of Demand & Supply
	+ Arc Elasticity of demand & Supply
	+ Income Elasticity of Demand & Supply
	+ Cross Elasticity of demand & Supply

## **Unit IV:** Consumer Behavior:

* + Utility Analysis (Cardinal Approach), Marginal Utility
	+ Law of Diminishing Marginal Utility and Law of Equi-Marginal Utility, Consumer Equilibrium
	+ Ordinal Approach of Consumer Behavior, Indifference Curves, Features of Indifference Curves, Budget Line, Consumer Equilibrium, Comparison between two approaches

## **Unit V:** The Theory of production & Theory of Cost:

* + Cost of Production, Short Period and Long Period Analysis
	+ Economies of Scale, Elasticity of Cost, Graphical Representation of Long Run Cost
	+ Production, Factors of Production, Production Function, Short Period Production Relations, Total, Average and Marginal Product, Elasticity of Production
	+ Laws of Returns to Scale
	+ Duality Between Production and Cost of Production

## **Unit VI:** Market Structure:

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

 Short run and Long run Equilibrium under Monopoly

**Recommended Books:**

1. MichaelJ.Swann,WilliamA.McEachernMicroeconomics:AContemporaryIntroduction, 3rdedition(or latest available)
2. Mankiw N. Gregory, Principles of Microeconomics 7th edition (or latest available).
3. Campbell R. Mc Connell, Stanley L. Brue, Principles of Economics,17th edition (or latest available).
4. Paul A. Samuelson, William D. Nordau’s ,Economics, Latest Editio

**Geography**

**GEO- 3104 Fundaments of Geography Credit Hrs: 3(2-1)**

**Objectives:** To expose students with the founding principles of Geography and geographical knowledge.

**Course outline:**

**Unit I:** Introduction

* Definitions, scope and branches of Geography
* Roots of the discipline and basic geographic concepts
* Themes and traditions of Geography
* Tools of Geography

**Unit II:** The Universe

* Galaxies and solar system

**Unit III:** The Earth as a planet

* Celestial positions, its shape and size
* Rotation, revolution and related phenomena

**Unit IV:**  Spheres of the earth

* Lithosphere
* Atmosphere
* Hydrosphere
* Biosphere

**Unit V:** Man-environment interaction

* Population
* Major Economic activities
* Settlements
* Pollution

**Lab work:**

Comprehension of atlases, map reading skills, location of places, features and relevant work related to topics of the theoretical section.

**Recommended Books:**

* + - 1. Arbogast, A. F. (2007) Discovering Physical Geography, John Wiley and Sons, London.
1. Christopherson, R. W. (2009) Geo systems: An introduction to Physical Geography, Pearson Prentice Hall, New Jersey.
2. De Blij, H. J and Muller, P. O. (1996) Physical Geography of the Global Environment, USA, John Wiley and sons Inc., New Jersey.
3. Guinness, J. P. & Nagle, G. (2011) Geography, Hodder Education, London. King, C. (1980) Physical Geography, Basil Blackwell, Oxford.
4. Miller, G. T. (2008) Living in the Environment, Principles, connections and Solutions, Wadsworth, USA. 6. Monkhouse, F. J. (1996) Principles of Physical Geography, Hodder & Stoughton, London.
5. Scott, R. C. (1996) Introduction to physical geography, West Publishing Co, New York.
6. Small, R. J. (1989) Geomorphology and Hydrology, Longman, London. Strahler, A. (2013) Introduction to Physical Geography, John Wiley & Sons, New Jersey.
7. 9. Stringer, E. T. (2004) Modern Physical Geography, John Wiley, New York. Taylor, J. (1993) Integral Physical Geography, Longman, London.
8. Thompson, R. D. (1986) Process in Physical Geography, Longman, London.
9. Thornbury, W. D. (2004) Principles of Geomorphology, John Willy & Sons, New York.

 **History**

 **HIS-3106 Introduction to History Credit Hrs:** 3(3-0)

**Objectives:** Enable the students to develop a good historical question, one that is limited, interpretive, and in some sense original.

**COURSE CONTENTS:**

 1. What is history?

2. Concept of History

3. Nature and scope of history

4. Benefits of history

 5. History – a Science or an Art

 6. Arguments against History as a science

7. History is both a Science and an Art

 8. History as a corrective force

 9. History as a repetitive force

10. Value of teaching history

 11. Branches of history (political, cultural, social, economic, intellectual and art history, history of science etc.)

 12. Relationship of history with other disciplines

 13. Approaches to Study History

14. Kinds of history

 15. Narrative history,

16. Scientific history,

 17. Philosophy of history,

 18. Future of history;

 19. Scope of History

20. History as subject for future planning.

**Recommended books:**

 1. Carr, Edward H. "What is History? Harmonds worth." (1987).

2. Collingwood, R. G., the Idea of History, Oxford: Oxford University Press, 1978.

3. Muttahari, Murtaza, Society and History, Tr. (Urdu) Mahliqa Qarae. Tehran, 1985.

 4. Gorvranski, History Meaning and Methods, USA, 1969.

5. Muttahari, Murtaza, Society and History, Tr. (Urdu) Mahliqa Qarae. Tehran, 1985.

6. Collingwood, R. G. The Idea of History, Oxford: Oxford University Press, 1978.

 **Islamic Studies**

**ISL-3104 Uloom ul Quran Credit Hrs: 3(3-0)**

|  |  |
| --- | --- |
| Objectives of the Course | ۱۔ طلباء کو قرآن، وحی اور نزولِ قرآن کے مفہوم سے آگاہ کرنا۔۲۔ حفاظتِ قرآن سے متعلق طلبہ کو آگاہ کرنا۔۳۔ طلبہ کو اسبابِ نزول اور ناسخ و منسوخ سے متعلق معلومات فراہم کرنا۔۴۔ طلبہ کو اسلوبِ قرآن سے متعلق آگاہ کرنا۔۵۔ طلبہ کو تفسیر کے ماخذ کے بارے میں بتانا۔ |

**Course Contents**

|  |  |  |
| --- | --- | --- |
| **S.No.** | **Title** | **Description** |
| 1 | تعارف قرآن مجید | ۱۔ قرآن مجید کا لغوی اور اصطلاحی مفہوم۲۔ قرآن مجید کی خصوصیات و امتیازات۳۔ قرآن مجیدکے خصائص |
| 2 | تاریخ نزول قرآن  | ۱۔ نزول قرآن کا مفہوم۲۔ انزال اور تنزیل۳۔ نزول قرآن مجید: تدریج و حکمتیں |
| 3 | وحی | ۱۔ وحی کا مفہوم و اہمیت۲۔ وحی کی اقسام اورکیفیات |
| 4 | کتابت وحی | ۱۔ کتابت وحی کا تعارف۲۔کاتبین وحی۳۔ کتابت وحی کے اسالیب |
| 5 | حفاظت قرآن مجید | ۱۔ حفاظت قرآن کا مفہوم و تاریخی پس منظر۲۔ حفاظت قرآن کے لیے اقداماتالف۔ حفظب۔ کتابتج۔ عمل تواتر |
| 6 | حضرت ابوبکر ؓ کے دور میں تدوین قرآن | ۱۔ تدوین قرآن کی ضرورت۲۔ تدوین قرآن کی ذمہ داری۳۔ حفاظت قرآن کے لیے مدنی دور کے اقدامات |
| 7 | عہد ِ عثمانیؓ میں تدوین قرآن | ۱۔ عہد ِ عثمانی میں تدوین قرآن کے اسباب۲۔ عہد ِ عثمانی میں تدوین قرآن کے اسالیب۳۔ عہد ِ عثمانی میں تدوین قرآن کے اثرات |
| 8 | قرآن پاک کی مکی سورتیں | ۱۔ مکی و مدنی سورتوں کا تعارف، اہمیت، شان نزول۳۔ مکی و مدنی سورتوں کے اہم مضامین |
| 9 | اسباب نزول | ۱۔ اسباب ِ نزول کا تعارف و اہمیت۲۔ قرآن فہمی اور اسبابِ نزول۳۔ تشریح ِقرآن میں اسباب ِ نزول کی حیثیت |
| 10 | ناسخ و منسوخ | ۱۔ ناسخ و منسوخ کا تعارف۲۔ ناسخ و منسوخ کے اسباب۳۔ ناسخ و منسوخ کا قرآن فہمی اور قرآن پاک کی تشریحی حیثیت پر اثرات |
| 11 | تفسیر القرآن کے اہم ماخذ اور اصول تفسیر | ۱۔تفسیر قرآن بالقرآن۲۔تفسیر قرآن بالحدیث۳۔تفسیر قرآن باقوال صحابہؓ و تابعین۴۔قدیم صحف سماوی۵۔ جاہلی ادب۶۔ لغت |
| 12 | اسلوب القرآن | ۱۔ اسلوب القرآن کا مفہوم۲۔ اسلوب القرآن کی اقسام۳۔ قرآن فہمی میں اسلوب القرآن کی اہمیت |
| 13 | اعجاز القرآن | ۱۔ اعجاز القرآن کا مفہوم و تعارف۲۔ اعجاز القرآن کی مختلف جہتیں۳۔ اعجاز القرآن کے اثرات |
| 14 | علم تجوید و قرات | ۱۔علم تجوید (مفہوم، غرض و غائت، صفات، وقف)۲۔ علم القرات (مفہوم، غرض و غائت، قرات کی اقسام اور نوعیت) |
| 15 | قرآن مجید اور عصری مسائل کا حل | ۱۔ عصری مسائل اور ان کی نوعیت۲ عصری مسائل کے حل کے حوالے سے قرآن مجید کا منہج |

**نصابی کتب**

|  |  |  |
| --- | --- | --- |
| **نمبر شمار** | **نام مؤلف** | **نام کتاب** |
| 1 | مولاناتقی عثمانی | علوم القرآن |
| 2 | مولانامحمد مالک کاندھلوی |  منازل العرفان |
| 3 | محمد علی الصابونی | روائع البیان |
| 4 | علامہ شمس الحق افغانی | علوم القرآن  |
| 5 | مصطفی اعظمی | The History of The Quranic Text from revelation to compilation |
| 6 | محمد علی صابونی | التبیان فی علوم القرآن |

**حوالہ جاتی کتب**

|  |  |  |
| --- | --- | --- |
| **نمبر شمار** | **نام مؤلف** | **نام کتاب** |
| 1 | علامہ سیوطی | الاتقان |
| 2 | ڈاکٹر محمد حسین الذھبی | التفسیر والمفسرون |
| 3 | عبد الصمد صارم | تاریخ قرآن |
| 5 | مولانا گوہر رحمن | علوم القرآن |
| 6 | ڈاکٹر محمود احمد غازی | محاضراتِ قرآن |

 **Political Science**

 **POL-3105 Political Science-I Credit Hrs: 3(3-0)**

**Objectives:**

* To introduce the students with the fundamentals of political science;
* Prepare the students for advanced studies in the forthcoming semesters;

**Contents:**

1. Definition, Nature and Scope of Political Science
2. Sub-fields of Political Science.
3. Relationship of Political Science with other social sciences.
4. Approaches to the study of Political Science:
5. Traditional approaches
6. Modern approaches.
7. State: its origin and evolution and organs;
8. Western concepts of State,  Islamic Concept of Welfare State
9. Nation and Sovereignty.
10. Basic concepts of Political Science: Power, Authority, Legitimacy
11. Organs of Government
12. Legislature,
13. Executive,
14. Judiciary.

**Recommended Books:**

* + - 1. Ahmad, Sheikh Bashir. Riyasat Jo Ilm (Sindhi meaning Science of State). Jamshoro Institute of Sindhalogy, University of Sindh, 1985.
1. Mazher ul Haq. Theory and Practice in Political Science. Lahore: Bookland, 1996.
2. Ian Mackenzi (Ed.). Political Concepts: A Reader and Guide. Edinburgh, University Press, 2005.
3. Mohammad Sarwar, Introduction to Political Science, Lahore: Ilmi Kutub Khana, 1996.
4. R. C. Agarwal, Political Theory (Principles of Pol. Science). New Delhi: S. Chand & Co., 2006.
5. Robert Jackson and Dorreen Jackson, A Comparative Introduction to Political Science, New Jersey, Prentice – Hall, 1997.
6. Rodee Anderson etc. Introduction to Political Science. Islamabad: National Book Foundation, Latest Edition.
7. Roskin, Michael G. Political Science: An Introduction. London: Prentice Hall, 1997.
8. Shafi, Choudhry Ahmad. Usul-e-Siyasiat (Urdu). Lahore Standard Book Depot, 1996.
9. V. D. Mahajan. Political Theory- Principles of Political Science. New Delhi: S. Chand & Co., 2006.

**Physical Education & Sports**

**PES-3105 Philosophical Basis of Physical Education Credit Hrs: 3(3-0)**

**Objectives**:

To make students understand the basic concepts of physical education and its relation to Health Education, and provide preliminary awareness about physical, mental and social developments; interpretation of biological, psychological effects on physical activities.

**Course Contents :**

**Unit I:** INTRODUCTION

a. Historical background of Physical Education

b. Definition and scope of Physical Education

c. Aims and objectives of Physical Education

 **Unit II:** PHILOSOPHY AND PHYSICAL EDUCATION

 a. Definition

b. Components of Philosophy

c. Relationship of Physical Education with Naturalism, Idealism, Realism, Pragmatism, Extencialism

 **Unit III:** PHYSICAL EDUCATION AS DISCIPLINE

a. Physical Education, an academic discipline

b. Physical Education and Islam

c. Physical Education as a profession

 **Unit IV:** SCIENTIFIC FOUNDATION OF PHYSICAL EDUCATION

a. Biological interpretation of Physical Education

 b. Psychological interpretation of Physical Education

c. Sociological interpretation of Physical Education

 **Unit V:** PHYSICAL EDUCATION AND RECREATION

a. Definition of Recreation

b. Types of Recreation

c. Principles of Leisure

d. Outdoor pursuits

 **Unit VI:** LEADERSHIP IN PHYSICAL EDUCATION

a. Definition and kinds of leadership

b. Selection criteria of leader

c. Qualities of a good leader

d. Challenges in Physical Education profession

**Recommended Books**

* + - 1. Dr. A. Waheed Mughal, Philosophical Basis of Physical Education, Islamabad 2012.
1. Shamshad Ahmed. Education in Physical Education. New Delhi: Isha Books, 2005.
2. Syal, Meenu. Physical Education Sports and Games. New Delhi: Sports Publication, 2005.
3. Davis, M.B. Physical Training in School. New Delhi: Sport Publication, 2004.
4. Shekar, C.K. Foundation of Physical Education and Sports. New Delhi: Khel Sahitya Kendra, 2004.
5. Jain, Anoop. Physical Education Foundation. New Delhi: Sports Publication, 2003.
6. Jain, D. Physical Education for Secondary School Children. New Delhi: Khel Sahitya Kendra, 2003.
7. Gupta, A. K. Facts and Foundation in Physical Education. New Delhi: Sports Publication, 2003.
8. Seefeld, E.A. Physical Education for Children, New Delhi: Sports Publication, 2002.
9. Charles A. Bucher, Foundation of Physical Education Exercise Sciences & Sports, 14th Edition, 2003. McGraw Hill, New York

**Mathematics**

**MAT-3105 Calculus-I**  **Credit Hrs: 3(3-0)**

**Course Objectives:**

This course introduces fundamental concepts of calculus, focusing on limits, derivatives, and their applications.

**Course Contents:**

Types of functions (algebraic, trigonometric, logarithmic, exponential, hyperbolic, inverse trigonometric, inverse hyperbolic, implicit), algebra of functions (sum, difference, product, quotient, composition of functions), parametric equations, Limits (An Intuitive Approach), Computing Limits, Limits at Infinity, End Behavior of a Function, Limits (Discussed More Rigorously), Continuity, Continuity of Trigonometric, Exponential, and Inverse Functions, Tangent Lines and Rates of Change, The Derivative Function, Introduction to Techniques of Differentiation, The Product and Quotient Rules, Derivatives of Trigonometric Functions, The Chain Rule, Implicit Differentiation, Derivatives of Logarithmic Functions, Derivatives of Exponential and Inverse Trigonometric Functions, Related Rates, Local Linear Approximation, Differentials, L’Hôpital’s Rule, Indeterminate Forms, Increase, Decrease, and Concavity, Relative Extrema, Absolute Maxima and Minima, Applied Maximum and Minimum Problems, Rolle’s Theorem, Mean-Value Theorem.

**Recommended Books:**

1. Calculus: Early Transcendental” by Howard Anton, Irl Bivens and Stephen Davis
2. Calculus: Early Transcendental" by James Stewart
3. Calculus Volume 1” by Edwin Herman and Gilbert Strang
4. Thomas, *Calculus*, 11th Edition. Addison Wesley Publishing Company, 2005

**MAT-3106 Vector Mechanics and Statics**  **Credit Hrs: 3(3-0)**

**Course Objectives:**

**Introduction:**

What is Mechanics? Fundamental Concepts and Principles, Systems of Units, Conversion from one System of units to another, Method of Problem Solution, Numerical Accuracy.

 **Statics of Particles:**

Introduction, Forces in a Plane, Force on a Particle, Resultant of Two Forces, Vectors, Addition of Vectors, Resultant of Several Concurrent Forces, Resolution of a Force into Components, Rectangular Components of a Force, Unit Vectors, Addition of Forces by Summing x and y Components, Equilibrium of a Particle, Newton’s First Law of Motion, Problems Involving the Equilibrium of a Particle, Free-Body Diagrams, Forces in Space, Rectangular Components of a Force in Space, Force Defined by Its Magnitude and Two Points on Its Line of Action, Addition of Concurrent Forces in Space, Equilibrium of a Particle in Space.

**Rigid Bodies: Equivalent Systems of Forces:**

Introduction, External and Internal Forces, Principle of Transmissibility, Equivalent Forces, Vector Product of Two Vectors, Vector Products Expressed in Terms of Rectangular Components, Moment of a Force about a Point, Varignon’s Theorem, Rectangular Components of the Moment of a Force, Scalar Product of Two Vectors, Mixed Triple Product of Three Vectors, Moment of a Force about a Given Axis, Moment of a Couple, Equivalent Couples, Addition of Couples, Couples Can Be Represented by Vectors, Resolution of a Given Force into a Force at O and a Couple, Reduction of a System of Forces to One Force and One Couple, Equivalent Systems of Forces, Equipollent Systems of Vectors, Further Reduction of a System of Forces, Reduction of a System of Forces to a Wrench.

**Equilibrium of Rigid Bodies:**

Introduction, Free-Body Diagram, Equilibrium in Two Dimensions, Reactions at Supports and Connections for a Two-Dimensional Structure, Equilibrium of a Rigid Body in Two Dimensions, Statically Indeterminate Reactions. Partial Constraints, Equilibrium of a Two-Force Body, Equilibrium of a Three-Force Body, Equilibrium in Three Dimensions, Equilibrium of a Rigid Body in Three Dimensions.

**Recommended Books**

1. F. P. Beer, E. R. Johnston, D. F. Mazurek, P. J. Cornwell, Vector Mechanics for Engineers: Statics and Dynamics, 10th Edition, McGraw-Hill, New York, (2013).

 **Physics**

**PHY-3104 Mechanics and Theory of Relativity Credit Hrs: 3(3-0)**

**Course Objectives:**

1. To give the concept of vectors and their various properties.
2. To give a basic understanding of laws of motion and their applications in daily life.

**Course Contents:**

**Vector Analysis:**

Review of Vector in 3 dimensions and fundamental Operations, Direction, Cosines, Spherical polar coordinates, Cylindrical Coordinates, Vector and scalar triple products, the gradient of a scalar, Divergence, and curl of a vector, Physical significance of each type, Divergence of a vector, flux, curl, and line integral (mutual relation). Vector identities, Divergence Theorem, Stokes’s Theorem, their derivation, physical importance, and applications to specific cases.

**Particle Dynamics:**

Dynamics of uniform, circular motion, the banked curve, Equations of motion, Deriving kinetic equations for x(t), v(t) via integration, Constant and variable forces, normal forces and contact forces, special examples, Time-dependent forces, Obtaining x(t), v(t) for this case using integration method, Effect of drag forces on motion, Applying Newton’s Laws to obtain v(t) for the case of motion with time-dependent (Integration approach) drag (viscous) forces, terminal velocity, Projectile motion with and without air resistance, Non-inertial frames and Pseudo forces, Qualitative discussion to develop understanding, Calculation of pseudo forces for simple cases (linearly accelerated reference frames), Centrifugal force as an example of pseudo force, Coriolis force.

**Work, Power, and Energy:**

Work done by a constant force, work done by a variable force (1-2 dimension), (Essentially a review of grade-XII concepts via integration technique to calculate work done (e.g. in a vibration of a spring obeying Hooke’s Law), Obtaining general expression for work done (2-dimensional case) and applying to simple cases e.g. pulling a mass at the end of a fixed string against gravity, Work energy theorem, General proof of work energy theorem: Qualitative review of work energy theorem, Derivation using integral calculus, Basic formulae and applications, Power, Energy changes with respect to observers in different inertial frames, Conservation of Energy in 1, 2, and 3 dimensional conservative systems, Conservative and non-conservative forces: Conservation of energy in a system of particles, Law of conservation of total energy of an isolated system.

**Special Theory of Relativity:**

Inertial and non-inertial frame, Postulates of Relativity, The Lorentz Transformation, Derivation, Assumptions on which inverse transformation is derived, Consequences of Lorentz transformation, Relativity of time, Relativity of length, Relativity of mass, Transformation of velocity, variation of mass with velocity, mass-energy relation, and its importance, relativistic momentum and Relativistic energy, (Lorentz invariants)

**Collisions:**

Elastic Collisions, Conservation of momentum during a collision in one and two dimensions, Inelastic collision, Collisions in center of Mass reference frame (One and two dimensions), Simple applications, Obtaining velocities in C.M. frame.

**Recommended Books:**

1. Halliday, D. Resnick, Krane, Physics, Vol. I & II, John Wiley, 5th ed. 1999.
2. D. Kleppner and R. Kolenkow, An Introduction to Mechanics, McGraw Hill, 1978.
3. M. R. Speigel, Vector Analysis and an Introduction to Tensor Analysis, Mc-Graw Hill, 1959

**PHY-3107 Physics Lab-I Credit Hrs: 1(0-1)**

**Course Objectives**

To develop the experimental capability of students in understanding the concept of Mechanics.

**List of Experiments:**

1. To determine the value of ‘g’ be compound pendulum (Kater’s Pendulum).
2. To determine Vertical distance by Sextant Apparatus.
3. To determine the modulus of rigidity by Maxwell’s needles and Barton’s Apparatus.
4. To determine the surface tension of water by capillary flow method.
5. To determine the elastic constant, i.e. Modulus of rigidity of a wire by spiral spring.
6. To study the damping features of an oscillating system using a simple pendulum of variable mass.
7. Measurement of viscosity of liquid by Stoke’s / Poiseulli’s method.
8. Determination of the moment of inertia of a solid/hollow cylinder and a sphere, etc.
9. To study the conservation of energy (Hook’s law).
10. To study the dependence of Centripetal force on the mass, radius, and angular velocity of a body in a circular motion.

**Recommended Books:**

1. D. H. Marrow, Selected Experiments in Physical Sciences, Longman.

2. Nelkon and Ogborn, Advanced Level Practical Physics, Heimann Educational Books

3. Nolan and Bigliani, Experiments in Physics, Surjeet Pub Ind.

4. C. K. Bhattacharya, University Practical Physics, CBS Publishing.

 **Psychology**

**PSY-3105 Introduction to Psychology Credit Hrs: 3(3-0)**

**Objectives:** By the end of the course. Students will be able to:

* Demonstrate understanding of the terminology used in psychology
* Demonstrate understanding of the different theoretical approaches to psychology and be able to articulate the different assumptions behind them
* Use psychological techniques to explain various aspects of human cognition and behavior.
* Demonstrate understanding of the workings of their own consciousness, behavior, and interpersonal relationships.

**Course Outline:**

**Unit I:** Introduction to psychology

**Unit II:** Sensation and perception

**Unit III:** Learning

**Unit IV:** Memory

**Unit V:** Intelligence

**Unit VI:** Cognition and thinking processes

**Unit VII:** Emotion and Motivation

**Unit VIII** : Stages of Development

**Unit IX:** Abnormal behavior

**Recommended Books:**

1. Introduction to psychology. Open University press. (2013). D. G Myers
2. Foundations of psychology, Thomson learning (2010) Nick Hayes
3. Atnikson and Hilggrad’s introduction to psychology, Thompson publishers, 2003. G. R. Smith E. E., Nolen-Hoeksema,.

 **Sociology**

**SCO-3106 PRINCIPLES OF Sociology Credit Hrs: 3(3-0)**

 **Objectives:**

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

**Course Outline:**

1. **Sociological Perspectives**
	1. Structural Functionalism
	2. Conflict
	3. Symbolic Interactionism
2. **Social Institutions**
	1. Family
	2. Education
	3. Religion
	4. Economy
	5. Politics
3. **Power and Authority**
	1. Power and its Meaning
	2. Authority and its Types
	3. Authority and Status
4. **Social Interaction/ Social Processes**
	* 1. Types of Social Interaction
			1. Cooperation
			2. Competition
			3. Conflict
			4. Accommodation
			5. Acculturation
			6. Assimilation
			7. Amalgamation
5. **Socialization and Personality**
	1. Personality, Factors in Personality Formation
	2. Socialization, Agencies of Socialization
	3. Role and Status
6. **Deviance and Social Control**
	1. Deviance and its Types
	2. Forms of Social Control
	3. Methods and Agencies of Social Control
7. **Collective Behaviour**
	1. Collective Behaviour, its Characteristics and Types
	2. Social Movement
8. **Social Stratification**
	1. Meaning and Characteristics
	2. Functions
	3. Why is social stratification universal
9. **Social Change**
	1. Meaning and Definition
	2. Nature and Characteristics
	3. Process of Social Change
	4. Social versus Cultural Change

**Suggested Readings:**

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

**Statistics**

**STA- 3104 Introductory Statistics Credit Hrs: 3(3-0)**

**Objectives:**

To have introduction of statistics as a field of knowledge and its scope and relevance to other disciplines of natural and social sciences.

**Course Contents:**

 Introduction to Statistics, Descriptive Statistics, Statistics in decision making, Graphical representation of Data Stem-and Leaf plot, Box-Cox plots, Histograms and Ogive, measures of central tendencies, dispersion for grouped and ungrouped Data, Moments of frequency distribution; examples with real life, use of Elementary statistical packages for explanatory Data analysis. Counting techniques, definition of probability with classical and relative frequency and subjective approaches, sample space, events, laws of probability. Conditional probability and Bayes theorem. Binomial and Normal distributions and their special cases.

**Recommended Books:**

1. Mann, P. S. (2010). Introductory Statistics. Wiley.
2. Chaudhry, S. M. and Kamal, S. (2008), “Introduction to Statistical Theory” Parts I & II, 8th ed, Ilmi Kitab Khana, Lahore, Pakistan.
3. Clarke, G. M., and Cooke, D. (1978). A basic course in Statistics (No. 519.5 C53).
4. Spiegel, M.R., Schiller, J.L. and Sirinivasan, R.L. (2000). “Probability and Statistics”, 2nd ed. Schaums Outlines Series. McGraw Hill. New York.  Walpole, R.E., Myers, R.H and Myers, S.L. (1998). “Probability and Statistics for Engineers and Scientist” 6th edition, Prentice Hall, New York.
5. Zaman, A. (2016). “Introduction to Statistics” Online access for book and related data sets. https://sites.google.com/site/introSTAs4muslims/textbook https://sites.google.com/site/introSTAs4muslims/excel.

**Zoology**

**ZOO-3105 Principles of Animal life-I Credit Hrs: 3(2-1)**

 **Objectives**

The course aims to impart knowledge and understanding of:

1. The concept and status of Zoology in life sciences.

2. The common processes of life through their chemistry, biochemical and molecular processes.

**Course Contents**

**1.** **Scope of Zoology:**

a) Introduction.

b) Significance and applications of zoology

c) Animal diversity.

d) The scientific method.

e) Environment and world resources.

**2. Chemical Basis of Animal Life**:

Brief introduction to bio molecules.

1. Carbohydrates, b) lipids, proteins, c) nucleic acids.

**3. Cellular Organization:**

a) Structure of animal cells,

b) cell membrane,

c) cytoplasm and its organelles:

ribosomes, endoplasmic reticulum, Golgi apparatus, lysosomes, mitochondria,

cytoskeleton, cilia and flagella, centrioles and microtubules, vacuoles; ribosomes, endoplasmic reticulum, the nucleus: nuclear envelope, chromosomes and nucleolus.

4. **Animal tissues:**

a) Types: epithelial, connective, muscle and nervous tissue.

b) organs and organ systems**.**

**5. Enzymes**:

a) Structure, b) types; c) function and factors affecting their activity; d) cofactors and coenzymes.

**6. Energy Harvesting**:

a) Aerobic and anaerobic respiration: glycol sis, citric acid Cycle and electron transport chain; fermentation, the major source of ATP.

**7. Reproduction and Development:**

a) Types; asexual and sexual,

b) game to genesis, fertilization, metamorphosis, zygote and early development.

**8. Ecological Concepts:**

a) Individuals and Populations: Animals and their abiotic environment; populations and limiting factors.

b) Communities and Ecosystems: Community structure and diversity; interspecific interactions. Ecosystem, types, homeostasis, biomes, food chain, food web, energy flow and thermodynamics; biogeochemical cycles.

c) Ecological problems; human population growth, pollution, resource depletion and biodiversity.

**Practical**

1. Tests for different carbohydrates, proteins and lipids.

Note: Emphasis on the concept that test materials have been ultimately obtained from living organisms and constituted their body.

2. Study of the prepared slides of epithelial tissue (squamous, cuboidal, columnar), connective tissue (adipose, cartilage, bone, blood), nervous tissue and muscle tissue (skeletal, smooth and cardiac).

Note: Prepared microscopic and/or projection slides and/or CD ROM computer projections must be used.

3. Preparation of blood smears.

4. Plasmolysis and de plasmolysis in blood.

5. Protein digestion by pepsin.

6. Ecological notes on animals of a few model habitats.

7. Field observation and report writing on animals in their ecosystem (a terrestrial and aquatic ecosystem study).

**Recommended Books**

1. Hickman, C.P., Roberts, L.S., Keen L.S., Larson, A., I’Anson, H. and Eisenhour, D.J., Integrated Principles of Zoology, 14th Edition (International), 2004. Singapore: McGraw Hill.

2. Miller, S.A. and Harley, J.B. Zoology, 10th Edition (International), 2016. Singapore: McGraw Hill.

3. Campbell, N.A. Biology, 6 th Edition. 2002. Menlo Park, California: Benjamin/Cummings Publishing Company, Inc.

4. Miller, S.A. General Zoology Laboratory Manual. 7th Edition (International), 2013. New York: McGraw Hill.

5. Hickman, C.P. and Kats, H.L., Laboratory Studies in Integrated Principles of Zoology. 2000. Singapore: McGraw Hill.

6. Molles, M.C. Ecology: Concepts and Applications. 9th Edition. 2022. McGraw Hill, New York, USA.

 **AD Commerce**

**COM: 3104 Introduction to Business Credit Hrs: 3(3-0)**

# Course Objectives:

# The student will be able to:

# Explain what a business is and how it operates in a free market system.

# Identify and explain the three basic forms of business ownership. Identify the levels of management and skills required for managerial success.

# Describe the concept of human resource planning and outline the major steps involved in the process.

**Course Content / Weekly Plan**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Week No.** | **Lecture No.** | **Topic** | **Assignments** | **Quiz** |
| 01 | 01 | Introduction to business,The nature and goal of business |  |  |
| 02 | Scope of Business Organization. |  |  |
| 03 | The people and activities of business |  |  |
| 02 | 04 |  Types of business organizations |  |  |
| 05 | Sole proprietorship & its Characteristics. | **Assignment 01** |  |
| 06 | Advantages & Disadvantages ofsole proprietorship |  |  |
| 03 | 07 | Partnership Business & its characteristics. |  |  |
| 08 | Advantages & Disadvantages of partnership. |  |  |
| 09 | T Types of partnership |  |  |
| 04 | 10 | Partnership Agreement |  |  |
| 11 | Registration process of a firm. |  |  |
| 12 | Importance of Registration. |  |  |
| 05 | 13 | JSt Joint Stock company & its features. |  | **Quiz 01** |
| 14 | Ad Advantages & Disadvantages of JSC. |  |  |
| 15 | Joi Joint Stock company in Western and Pakistani Context  |  |  |
| 06 | 16 | ate Private Ltd Corporations  |  |  |
| 17 | Public Ltd Corporations |  |  |
| 18 | Difference B/w Public & Private Corporations |  |  |
| 07 | 19 |  Trade Agreements, Alliances, and Organizations |  |  |
| 20 | Memorandum of Association & Articles of Association |  |  |
| 21 | ProspectusShares & debentures |  |  |
|  |
| 08 | 22 | Globalization & Levels of Globalization |  |  |
| 23 | International Organization structure |  |  |
| 24 | Barriers to International trade |  |  |
| **MID TERM EXAMS** |
|  |
| 09 | 25 | Management process, Levels of Mgt |  |  |
| 26 | Areas of Mgt, Basic Mgt skills |  |  |
| 27 | Organizing the business enterprise |  |  |
| 10 | 28 | Organizational building blocks |  |  |
| 29 | Basic forms of organization structure |  |  |
| 30 | Informal organizations |  |  |
| 11 | 31 | Foundation of Human Resource Mgt |  |  |
| 32 |  Training & development |  |  |
| 33 |  Compensation & Benefits  |  |  |
| 12 | 34 | Motivating and Managing the Workforce |  |  |
| 35 | Functions & responsibilities of Directors, & Powers of Directors |  |  |
|  36 | Planning for Human Resources Needs |  |  |
| 13 | 37 | Organizing business & Entrepreneurship | **Assignment 02** |  |
|  38 | The Nature of Entrepreneurship and Small Business |  |  |
| 39 | Advantages of Small-Business Ownership |  |  |
| 14 | 40 | Theories of Employee Motivation |  |  |
| 41 | Tools of Total Quality Mgt |  |  |
| 42 |  Leadership Styles |  |  |
| 15 | 43 | Finance & Role of Financial Manager |  |  |
| 44 |  Marketing & Marketing process |  | **Quiz 02** |
| 45 | Marketing Environment & Marketing Mix |  |  |
| 16 | 46 | Macro & Micro Environment of a company |  |  |
| 47 | Research, Role of Research in Business |  |  |
| 48 | Role of Research in Business continue… |  |  |
| 17 | **Terminal Exam** |

**Recommended Books**

1. Jeff Madura, Introduction to Business, 3rd Edition.
2. Grauer, Robert T. & Barber, Maryam (2000) Exploring Office XP, Volume 1. Prentice Hall Publishers
3. Introduction to Business ProfessorM.Saeed Nasir
4. Ricky W. Griffin & Ronald J. Ebert, fourth edition, Business.
5. Ferrell,O.C., Hirt, G., and Ferrell, L. (2009). Business a changing world (7th ed.). New York, NY: McGraw Hill

**ECO-3105 Economic Theory and Practice** **Credit Hrs: 3(3-0)**

#

# Objectives:

# The basic objectives are extended to find out how the disciplines of national income, macroeconomics in closed and open economy, macroeconomic stabilization policies, macro-economic components (consumption, saving, private investment, interest etc.), public finance, money, and banking link up with conventional macroeconomics

**Course Content :**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Week**  | **Lecture**  | **Topic** | **Assignment** |  **Quiz** |
| 01 | 01 | Introduction about course/policies and procedures. |  |  |
| 02 | Concept of GDPApproaches to measure GDP  |  |  |
|  03 | Aggregate Demand and supply |  |  |
| 02 |  04 | Measuring inflationMeasuring unemployment |  |  |
| 05 | Explaining business cycle, its phases , cause and types  | **Assignment 01** |  |
| 06 | Defining moneyM1 , M2 and M3 money supply  |  |  |
| 03 | 07 | Functions of money. |  |  |
| 08 | Inflation and its types |  |  |
|  09 | Causes of inflation |  |  |
| 04 | 10 | Quantity theory of money  |  |  |
|  11 | Monetary policy and inflation |  |  |
|  12 | Stagflation |  |  |
| 05 |  13 | Philip curve |  |  **Quiz 01** |
|  14 | Concept of exchange rate  |  |  |
|  15 | Types of exchange rate |  |  |
| 06 |   16 | Concept of Balance of payment |  |  |
| 17 | Determinates of balance of payment |  |  |
| 18 | Monetary policy under fixed exchange rate |  |  |
| 07 | 19 | Purchasing power parity (PPP) |  |  |
|  20 | Purchasing power parity and interest rate parity |  |  |
| 21 | Monetary policy vs fiscal policy |  |  |
| Week 08 | 22 | Basic concept of utility , scarcity , goods and services  |  |  |
| **23** | Law of demand , Determinants of demand  |  |  |
| 24 | Law of supply, Determinants of supply  |  |  |
| 09 |  25 | Shift in demand and supply  |  |  |
| 26 | Movement in demand and supply |  |  |
| 27 | **Midterm** |  |  |
| 10 |  28 |  |  |  |
|  29 | Elasticity of demand Elasticity and revenue |  |  |
|  30 | Analysis of cost (FC, VC AC, MC) | **Assignment 03** |  |
| 11 | 31 | Competitive market structure |  |  |
|  32 | Concept of GDP, GNP, NDP |  |  |
|  33 | Personal income , disposable income  |  |  |
| 12 |  34 | Investment Types of investment | **Assignment 02** |  |
|  35 | Determinant’s of investments  |  |  |
| 36 | Investment demand curve  |  |  |
| 13 |  37 | Shifts in investment demand curve  |  |  |
| 38 | Consumption function and determinants |  |  |
| 39 | Saving function |  |  |
| 14 | 40 | Marginal propensity to consume and average propensity to consume |  |  |
| 41 | Marginal propensity to save and average propensity to save. |  |  |
| 42 | Elasticity in case of supply |  | **Quiz 02** |
| 15 | 43 | Cross elasticity cross price elasticities  |  |  |
|  44 | Income elasticities |  |  |
|  45 | .Revision |  |  |
| 16 |  46 | Project & Presentation |  |  |
| 47 | Project & Presentation |  |  |
| 48 | Project & Presentation |  |  |
| 17 |  **Terminal Exam** |

**Recommended Books**

1. Dornbusch and Fischer Macroeconomics, McGraw Hill, New York. (Latest Edition).
2. Mc Connell & Brue, Economic, Mc Graw Hill, INC (Latest Edition).
3. Muhammad Hussain Choudhry, Economic Theory Volume 2, Caravan Book House, Lahore 2002.

# Samuelson and Nordhaus, Economics, McGraw Hill, New York. (Latest Edition

1. Kennedy, P. Macroeconomic essentiaks: understanding economics in the news. 3ed edition Cambridge, MA

# Ruffin & Gregory, Principles of Economics, Scott, Foresman& Company.

**COM- 3106 Financial Accounting-I Credit Hrs: 3(3-0)**

**Objectives**

The primary aim of Financial Accounting is to provide students with an introduction to the process and function of financial reporting. Whilst a large proportion of the course is aimed at understanding accounting as a process, taking a preparer‟ perspective, we will also seek to develop an understanding of the importance of the role of accounting in today’s society.

**Course Contents:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Week** | **Lecture#** | **Topics** | **Quizes** | **Assignments** |
| 01 | Lecture 1Lecture 2Lecture 3 | **INTRODUCTION*** Book keeping
* Important terms in accounting
 |  |  |
| 02 | Lecture 4Lecture 5Lecture 6 | * Double entry book keeping
* Advantages of double entry book keeping
* Disadvantages of double entry book keeping
* Single entry vs. Double entry
* Advantages over single entry system
 |  |  |
| 03 | Lecture 7Lecture 8Lecture 9 | **Accounting and its role*** Accounting definition and meaning
* Branches of accounting
* Functions of accounting
* Accounting system
* Usersof accounting information
 |  |  |
|  04 | Lecture 10Lecture 11Lecture 12 | * Book keeping vs. Accounting
* Accounting cycle

**Accounting principles & accounting equation*** Accounting principles
* Accounting assumptions
 |  | Assignment # 1 |
| 05 | Lecture 13Lecture 14Lecture 15 | * Accounting equation
* Effects of transaction on accounting equation
* Practice Problems & Exercises

**Nature of accounts & rules of debit & credit*** Account
* Classification of accounts
 | Quiz # 1 |  |
| 06 | Lecture 16Lecture 17Lecture 18 | * Rules of debit& credit
* Practice Problems & Exercises
* The Journal
 |  |  |
| 07 | Lecture 19Lecture 20Lecture 21 | * Practice Problems & Exercises
* Practice Problems & Exercises
* The Ledger
 |  |  |
| 08 | Lecture 22Lecture 23Lecture 24 | * Practice Problems & Exercises
* Practice Problems & Exercises
* Preparing Trial Balance
* Practice Problems & Exercises
 |  |  |
|  09 | Lecture 25Lecture 26Lecture 27 | **MID TERM****Preparation of Financial Statements** * Preparing Profit and Loss Account
* Practice Problems & Exercises
* Preparing Balance Sheet
 |  |  |
| 10 | Lecture 28Lecture 29Lecture 30 | * Practice Problems & Exercises

**The adjusting and closing entries**  | Q # 3 |  |
|  11 | Lecture 31Lecture 32Lecture 33 | * Need for Adjusting Entries
* Types of Adjusting Entries
* Recording adjusting entries
 |  | Assignment # 2 |
|  12 | Lecture 34Lecture 35Lecture 36 | * Practice Problems & Exercises
* Preparing adjusted trial balance
* Practice Problems & Exercises
* Recording closing entries
 |  |  |
| 13 | Lecture 37Lecture 38Lecture 39 | * Practice Problems & Exercises
* Preparing post-closing trial balance
* Practice Problems & Exercises
 |  |  |
| 14 | Lecture 40Lecture 41Lecture 42 | * Preparing work-sheet
* Practice Problems & Exercises
* Preparation of Financial Statements
* Practice Problems & Exercises
 | Quiz # 2 |  |
| 15 | Lecture 43Lecture 44Lecture 45 | **Cash and temporary investment** * Nature and Composition of Cash
* Cash Management and Control
* Maintaining Bank Account
* Bank Reconciliation
* Practice Problems & Exercises
 |  |  |
| 16 | Lecture 46Lecture 47Lecture 48 | * Short term investments
* Practice Problems & Exercises
* Practice Problems & Exercises
 |  | A # 4 |
|  |  | **TERMINAL EXAM** |  |  |

**Recommended Books**

1. M.A Ghani latest Edition, Principles of Accounting
2. Meigs and Meigs, Accounting for Business Decision, 9th Edition/Latest Edition
3. Williams, Haka, Bettner: Financial & Managerial Accounting, Latest Edition, Prentice Hall
4. Professor Muhammad Ammanullah Khan: Financial Accounting, Latest Edition
5. Frank Wood‟s: Business Accounting 1, Eleventh Edition Sohail Afzal: Accounting, Latest Edition