

GEOG. 403-419 ELECTIVE PAPER-IV

*****Elective Paper I, III and IV: Students are allowed to select any three electives' courses from the given groups.**

GEOG. 403 AGRICULTURAL GEOGRAPHY

I- Introduction to Agricultural Geography:

- i. Introduction
- ii. Nature and Scope
- iii. The Origins and Development of Agriculture
- iv. Theoretical aspects of Geographical Location relevant to agriculture

II- Approaches to the Study of Agriculture in Geography:

- i. Introduction
- ii. Approaches: Commodity, Regional, deterministic, systematic

III- Factors Influencing Agricultural Patterns:

- i. Physical Factors: The Terrain, Climate, Soil, Water Resources
- ii. Socio-Economic Factors: Technological, Population, Cultural, Infrastructure
- iii. Land, Labour and Capital
- iv. Government and Regional Policies

IV- Models in Agricultural Geography:

- i. The Nature and Need of Models
- ii. Classification of Models
- iii. Models of agricultural activity
 - a. Economic Models
 - b. Descriptive Models

V- Agricultural Regions: Concepts and Techniques:

- i. Concept and Methodology
- ii. Techniques: Normative, Empirical, Single Element, Statistical
- iii. Methods of Agricultural Regionalization
- iv. Data Classification and Distribution
 - v. Agricultural Types
 - vi. Agricultural systems of the World

VI- Field Studies and Surveys:

- i. Land Use Survey: Techniques of Land use survey
- ii. Land Capability Survey
- iii. Land Suitability evaluation Survey
- iv. Land Classification

Books Recommended:

- Bowler, I. R. 1979 Government and Agriculture: a spatial perspective Longman London.
- Bowler, I. R. 1985 Agriculture under the Common Agricultural Policy: a geography. University Press Manchester.
- Bowler, I. R. 1992 The industrialization of Agriculture. In Bowler I. R. (ed). The Geography of Agriculture in Developed Market Economies. John Wiley & Sons, New York.

- Briggs, D. J. & Courtney, F. M. 1989 Agriculture and Environment. Longman, Singapore.
- Dube, R. S. 1987 Agricultural Geography: Issues and Applications, Gian Publishing House, Delhi.
- Grigg, D. 1984 An Introduction to Agricultural Geography, Hutchinson, London.
- Ilbery, B. W. 1985 Agricultural Geography: A social and economic analysis Oxford University press, Oxford.
- Munton, R. J. C. & Morgan, W. B. 1971 Agricultural Geography, Methuen & Co., Cambridge.
- Newbury, P. A. R. 1999 Agricultural Geography, Longman London.
- Rhind, D. & Hudson, R. 1980 Land use, Methuen and Co. London.
- Shukla, L. 1991 Readings in Agricultural Geography, Scientific Publisher, Jaipur.
- Singh, J. & Dhillon, S. S. 1984 Agricultural Geography, Tata McGraw-Hill, New Delhi.
- Symons, L. 1967 Agricultural Geography, Frederick New York.

Assessment			
Sr. No.	Elements	Weightage	Details
1.	Midterm Assessment	35%	Written Assessment at the mid-point of the semester.
2.	Formative Assessment	25%	Continuous assessment includes Classroom participation, assignments, presentations, viva voce, attitude and behavior, hands-on-activities, short tests, projects, practical, reflections, readings, quizzes etc.
3.	Final Assessment	40%	Written Examination at the end of the semester. It is mostly in the form of a test, but owing to the nature of the course the teacher may assess their students based on term paper, research proposal development, field work and report writing etc.

GEOG. 404 CONSERVATION OF RESOURCES

I- Scope of the subject:

Its importance, problems created by the expanding population, advancing technology, increasing standings of living and greater demand for space and goods thereof. Relation of subject to other disciplines.

II- Agricultural Resources:

Agriculture and man. Types of agriculture, agricultural land use and cropping pattern. Efficiency of agriculture, problems relating to agricultural land. Agricultural regions of the work.

III- Animal Resources:

Ranching and pasture, problems of overgrazing, carrying capacity of land, recent changes in ranching brought about by scientific agriculture feedlots and custom feeding, modern range management.

IV- Problems of Human Population:

Population distribution in different ecosystems, and different societies (with different technical skill), rate of growth of population. Relationship between man, his skills and natural resources. Rural land planning in developed and developing countries. Differences in interpretation of resources. Control of population size, dangers of over population.

Book Recommended:

- Caurtnary, P.P. 1965 Plantation Agricultural, G. Bell, London.
- Laut, P. 1968 Agricultural Geography, Nelson, Melbourne.
- Leakey, C.L.A. 1977 Food Crops of the Lowland Tropics: Oxford University Press London.
- Steila, D. 1976 The Geography of Soils Formation, Distribution and Management, Cliffs Prentice Hall Englewood.
- Symons, L. 1965 Agricultural Geography, Frederic A Preager New York.
- Tempany, H. 1958 Tropical Agriculture, Longman London.
- Webster, C.C. 1966 Agriculture in the Tropics: Long man, London.

Assessment			
Sr. No.	Elements	Weightage	Details
1.	Midterm Assessment	35%	Written Assessment at the mid-point of the semester.
2.	Formative Assessment	25%	Continuous assessment includes Classroom participation, assignments, presentations, viva voce, attitude and behavior, hands-on-activities, short tests, projects, practical, reflections, readings, quizzes etc.
3.	Final Assessment	40%	Written Examination at the end of the semester. It is mostly in the form of a test, but owing to the nature of the course the teacher may assess their students based on term paper, research proposal development, field work and report writing etc.

GEOG. 405 CULTURAL GEOGRAPHY

I- Introduction:

- i. Definition of Culture & Cultural Geography.
- ii. Scope of Cultural Geography & its relationship with other Disciplines.

II- Basic themes of cultural geography:

- i. Cultural Ecology
- ii. Cultural Diffusion
- iii. Cultural Regions/Area
- iv. Cultural Integration
- v. Cultural Landscape.

III- Cultural History:

- i. Palaeolithic Age: Hunting & Gathering Culture
- ii. Neolithic Age: Agricultural World Revolution.
- iii. Industrial Revolution & Urbanization
- iv. Detailed Study of Stages of Social Cultural Change

IV- Geo-Cultural Study of the following:

- i. Religion
- ii. Language
- iii. Rural & Urban Communities

V- Study of Pakistani Culture:

- i. History, Present Patterns and Future Prospects.

VI. CURRENT ISSUES:

- i. Terrorism, Green Politics, Globalization, Human rights Revolution of Information, Gender Geography and Cultural problems.

Books Recommended:

- Carter, G.F. 1964. Man and the Land: A Cultural Geography, Halt New York.
- Fellmann, G.G. 1995. Human Geography Landscapes of Human Activities, WCB Publishers.
- Forde, C. D. 1963 Habitat, Economy and Society, Methuen, London.
- Blij H.J. 2000. Human Geography, John Wiley & Sons, Inc, Canada.
- James M. R. 1998. The Cultural Landscape An Introduction to Human Geography, Merrill Publishing Co.
- James, P. E. 1964. One World Divided, Blaisdel Publishing Co., New York
- Johnston, R.J. et al. 1996. Geographies of Global Change, Blackwell Publishers Inc.
- Leighly, J. 1965. Land and Life, Barkley; University of California Press.
- Sauer, C. O. 1952 Agricultural Origins and Dispersal, American Geographical Society New York.
- Qudus S. A. 1989. The Cultural Patterns of Pakistan, Ferozsons (Pvt.) Ltd., Lahore.
- Terry G. J. Lester R. 2000. Human Mosaic, Harper Collins Publishers, New York.
- Wagner, 1959. Readings in Cultural Geography, University of Chicago Press Chicago.
- Wheeler, M. 1962. Indus Civilization University Press Cambridge.
- White, L. A. 1959. Evolution of Culture, McGraw Hill New York.

Assessment			
Sr. No.	Elements	Weightage	Details
1.	Midterm Assessment	35%	Written Assessment at the mid-point of the semester.
2.	Formative Assessment	25%	Continuous assessment includes Classroom participation, assignments, presentations, viva voce, attitude and behavior, hands-on-activities, short tests, projects, practical, reflections, readings, quizzes etc.
3.	Final Assessment	40%	Written Examination at the end of the semester. It is mostly in the form of a test, but owing to the nature of the course the teacher may assess their students based on term paper, research proposal development, field work and report writing etc.

GEOG. 406: NATURAL HAZARDS AND DISASTER MANAGEMENT

I.Definitions of Natural Hazards and Disasters

II.Classification of Natural hazards

III.Classification of Disasters

IV.Disaster risks

V.Vulnerabilities

VI.Capacities

VII.Hydro-Meteorological Hazards

VIII.Geo Hazards

IX.Complex and Biological Hazards

X.Disaster Risk Reduction and Disaster Risk Transfer

Books Recommended:

- Burton, I.; Kates, R.W. and White, G.F. (1993) The Environment as Hazard, The Guildford Press, London, UK.
- Damon, P. C. (2006) Introduction to International Disaster Management. Butterworth-Heinemann, UK.
- Dille, Maxx (2005) Natural Disaster Hotspots: A Global Risk Analysis. World Bank and University of Columbia, US.
- Elliot, J.E. (2006) An Introduction to Sustainable Development. Third Edition. Routledge, London, UK
- Smith, Keith; and Petley, David N. (2009) Environmental Hazards: Assessing Risk and Reducing Disaster. Routledge, London, UK

Assessment			
Sr. No.	Elements	Weightage	Details
1.	Midterm Assessment	35%	Written Assessment at the mid-point of the semester.
2.	Formative Assessment	25%	Continuous assessment includes Classroom participation, assignments, presentations, viva voce, attitude and behavior, hands-on-activities, short tests, projects, practical, reflections, readings, quizzes etc.
3.	Final Assessment	40%	Written Examination at the end of the semester. It is mostly in the form of a test, but owing to the nature of the course the teacher may assess their students based on term paper, research proposal development, field work and report writing etc.

GEOG. 407: GEOGRAPHY OF MANUFACTURING

I- Introduction to Geography of Manufacturing:

- i. Definitions and concepts, and organization.
- ii. Classification of industrial activities.

II- Historical Development of Industrial Activity:

- i. From industrial revolution to green paradigm.
- ii. Modern trends in manufacturing.

III- Industrial Location:

- i. Approaches to location dynamics.
- ii. Location factors.
- iii. Location models.
- iv. Location theories.

IV- Geographical Analysis of Selected Industries:

- i. Light industries (Cotton textiles, sugar industry)
- ii. Heavy industries (Iron and steel, petro-chemicals, cement)

V- Modern Issues in Manufacturing:

- i. Patterns of international production and the industrialization process.
- ii. De industrialization.
- iii. Industry and environmental problems.
- iv. Industrial planning and management.

Recommended Books:

- Alexanderson, G. 1967. Geography of Manufacturing, Prentice Hall, Publications Englewood Cliffs.
- Altaf, Z. 1988. Entrepreneurship in the Third World Risk and Uncertainty in Industry in Pakistan, Croom Helm, Ltd. London.
- Aziz, S. 1969. Industrial Location Policy in Pakistan, 1st edition; National Publishing House Ltd. Karachi.
- Chapman, K. & Walker, D.F. 1991. Industrial Location, 2nd edition; Wiley Eastern Ltd. Oxford.
- Emery, J.S. & Shaw, J.H. 1968. Cities and Industries, Milton, 1st edition; Jacaranda Press.
- Hayter, R. 1962. The Dynamics of Industrial Location, John Wiley & Sons New York.
- Miller, E.W 1962. A Geography of Manufacturing, Prentice Hall Publications Englewood Cliffs.
- Smith & Phillips 1961. Industrial and Commercial Geography, 4th edition; Constable & Company, Ltd. London.
- Smith, D.M. 1981. Industrial Location, 2nd edition, John Wiley & Sons New York.
- United Nations 1962. Industrial Districts – The Physical Planning of Industrial Estates, Department of Economic and Social Affairs New York.
- United Nations 1966. Industrial Estates: Policies, Plans and Progress, Department of Economic and Social Affairs New York.
- Watts, H.D. 1987. Industrial Geography, 1st edition, Longman Scientific and Technical London.

Assessment			
Sr. No.	Elements	Weightage	Details
1.	Midterm Assessment	35%	Written Assessment at the mid-point of the semester.
2.	Formative Assessment	25%	Continuous assessment includes Classroom participation, assignments, presentations, viva voce, attitude and behavior, hands-on-activities, short tests, projects, practical, reflections, readings, quizzes etc.
3.	Final Assessment	40%	Written Examination at the end of the semester. It is mostly in the form of a test, but owing to the nature of the course the teacher may assess their students based on term paper, research proposal development, field work and report writing etc.

GEOG. 408 HYDRO GEOGRAPHY

I- Introduction:

- i. Definition and Scope
- ii. Development of Hydro Geography
- iii. Muslim's Contribution

II- Hydrological Cycle and Water Balance:

- i. Water Reservoirs
- ii. Hydrological Cycle
- iii. Water Balance

III- Precipitation and Rainfall:

- i. Forms of Precipitation
- ii. Rainfall Data and its measurement
- iii. Evaporation and Transpiration
- iv. Synoptic Meteorology of Rain
- v. Space time Characteristics of Rainfall
- vi. Statistical Analysis and Cartographic Representation of Rain Fall Data
- vii. Geographical Distribution of Rainfall

IV- Runoff:

- i. Factor affecting the Runoff
- ii. Runoff Cycle and Phases of Runoff
- iii. Measurement of Runoff

V- Ground Water:

- i. Occurrence Origin and Discharge of Ground Water
- ii. Ground Water Reservoirs
- iii. Water Table Water Logging and Salinity
- iv. Porosity Permeability and Transmission
- v. Ground Water Movement

VI- Floods:

- i. Causes and Seasonal Distribution of Floods
- ii. Flood Protection and Planning
- iii. Geographical Distribution of Floods

VII- Glacial Water:

- i. Glacial Nourishment and Wattage
- ii. Glacial Runoff
- iii. Glacial Flow
- iv. Response of Glacier to Climatic Changes

VIII- Droughts:

- i. Extent and Distribution of Droughts
- ii. Drought Severity, Frequency and Duration
- iii. Hydrological Relations in Draughts

IX- Lakes:

- i. Origin and Diversity
- ii. Hydrological Cycle and Water Balance Lakes

iii. Geographical Distribution

X- Water Pollution:

- i. Classification of Water Pollutants
- ii. Extent and Distribution of Water Pollutants
- iii. Effects of Water Pollution on Fauna and Flora

XI- Quantitative Hydro Geography:

- i. Basis Concepts
- ii. Areal Aspects of Drainage Basins

XII- GIS and RS Application:

- i. RS-based Hydrological Data Acquisition
- ii. GIS-base Hydrological Mapping

Books Recommended:

- Aronoff, S. 1995 Geographic Information Systems: A Management Perspective, Wdl Publications, Ottawa, fourth edition Canada.
- Chow, V. T. 1964 A Handbook of Applied Hydrology, McGraw Hill New York.
- Water Resources Use and Management – Proceedings of a Symposium held at Canberra, Cambridge University Press London.
- Drwry S.A. 1990 A Guide to Remote Sensing and Image Processing, Press Oxford.
- Hill, E.S. (ed.) 1966 Arid Lands, Methuen London.
- Hutchinson, G.E. 1960 A Treatise on Limnology, Chapman Hall Ltd. London.
- John. R.J. 1996 Introduction to Digital Image Processing. Prentice Hall.
- Meinzer, O.E. 1942 Hydrology, McGraw Hill New York.
- Curran P. J. 1985 Principles of Remote Sensing. Longman Group Ltd.
- Steel, E.W. 1966 Water Supply and Sewerage (4th ed.) McGraw Hill New York.
- Strahler, A.N. 1963 The Earth Sciences, Harper & Row New York.
- Lillesand T. M. & Kiefer R. W. 2004 Remote sensing and image interpretation. John Wiley & Sons Inc.
- Todd, D.E. 1959 Ground water, John Wiley New York.
- Tolm, C.F. Ground water, McGraw Hill New York.
- Wisner, C.O. 1959 Hydrology, John Wiley New York.

Assessment			
Sr. No.	Elements	Weightage	Details
1.	Midterm Assessment	35%	Written Assessment at the mid-point of the semester.
2.	Formative Assessment	25%	Continuous assessment includes Classroom participation, assignments, presentations, viva voce, attitude and behavior, hands-on-activities, short tests, projects, practical, reflections, readings, quizzes etc.
3.	Final Assessment	40%	Written Examination at the end of the semester. It is mostly in the form of a test, but owing to the nature of the course the teacher may assess their students based on term paper, research proposal development, field work and report writing etc.

GEOG. 409 MEDICAL GEOGRAPHY

I- Introduction to Medical Geography:

- i. Definitions, themes, concepts, Nature & scope of Medical Geography
- ii. The Historical Development of Medical Geography
- iii. The status of Medical Geography.

II- Factors inflecting the Patterns of Health & Disease:

- i. Geographical Factors.
- ii. Physical Factors / Environmental Factors.
- iii. Cultural Factors.
- iv. Socio – Economic & Political Factors.

III- Patterns & Processes of Health & Disease:

- i. Spatial variations in health & welfare patterns.
- ii. Role of Geography in exploring the impacts of diseases.
- iii. Models in Medical Geography
 - a. Epidemiological Transition
 - b. Health & inequalities
 - c. Inverse care law.
- iv. Global Patterns of health & Disease.
- v. Global Eradication of disease.

IV- Progress in Medical Geography:

- i. Recent Issues & Developments in Medical Geography.
- ii. GIS, Remote Sensing & Health studies.
- iii. Changing Societies & future Health care.
- iv. Geography, Health care & Planning.

Recommended Books:

- Izhar, F. 2004. Geography & Health: A study in medical Geography, A.P.H. Publishing Corporation New Delhi.
- Leninan, J.& Fletcher, W.W. 1976. Health & the Environment, 1st edition, Blacker & Sons Ltd. Glasgow.
- Lloyd, J. 2002 Health & welfare, Holder & Stoughton London.

Assessment			
Sr. No.	Elements	Weightage	Details
1.	Midterm Assessment	35%	Written Assessment at the mid-point of the semester.
2.	Formative Assessment	25%	Continuous assessment includes Classroom participation, assignments, presentations, viva voce, attitude and behavior, hands-on-activities, short tests, projects, practical, reflections, readings, quizzes etc.
3.	Final Assessment	40%	Written Examination at the end of the semester. It is mostly in the form of a test, but owing to the nature of the course the teacher may assess their students based on term paper, research proposal development, field work and report writing etc.

GEOG. 410: PLEISTOCENE GEOMORPHOLOGY

- I. Pleistocene period in general. Major characteristics of climate and landforms. Glacial, interglacial and stadial
- II. Pleistocene of Pakistan. Major glacial and Periglacial zones. Climate and geomorphological processes and material produced.
- III. Landforms and their characteristics in relation of lithology.
- IV. Chronology of landform development. Problems of boulder conglomerate and loess. Correlation: Potwar and Himalayas etc.
- V. Pleistocene approach and advent of man and human culture, major areas of settlement and associated problems. Deforestation, erosion and bad land topography. National problem of land utilization.

Books Recommended:

- Embleton C & King C.A.M. 1968. Glacial & Periglacial Geomorphology, Edward Arnold, John Wiley, New York
- Flint R.F. 1957. Glacial & Pleistocene Geology, N.Y., John Wiley.
- Patterson 1962. Soan the Paleolith of Pakistan, GOP, Lahore

Assessment			
Sr. No.	Elements	Weightage	Details
1.	Midterm Assessment	35%	Written Assessment at the mid-point of the semester.
2.	Formative Assessment	25%	Continuous assessment includes Classroom participation, assignments, presentations, viva voce, attitude and behavior, hands-on-activities, short tests, projects, practical, reflections, readings, quizzes etc.
3.	Final Assessment	40%	Written Examination at the end of the semester. It is mostly in the form of a test, but owing to the nature of the course the teacher may assess their students based on term paper, research proposal development, field work and report writing etc.

GEOG. 411 POLITICAL GEOGRAPHY

I- Nature and objectives of Political Geography, Definition and development of political geographic thought.

II- A critical examination of the following:

- i. Concept of environmental relationship in political geography.
- ii. The concept of geopolitics its development and shortcomings (views of Karl Ritter. Freidrich Ratzel, Rudoll Kjellen, Vidal de la Blache, jean Brunches, Alfred Thayer Mahan, Sir Hal ford Mac kinder, Karl House offer, Nicholas J. Spykman and Alexander-de-Surversky).
- iii. National deterministic theories of Germans and French possibilities.

III- State as a Politico-geographic Phenomenon:

- i. Concept of the state and its classification. Chief political-geographic characteristics of states.
- ii. Hierarchy of political area.
- iii. Frontiers and boundaries: their concepts, functions and classification.
- iv. Core areas, ecumenical area and capitals.

IV- Approaches and forces in the politico geographic study of state:

- i. A critical examination of the following approaches:
 - a. Simple descriptive approach.
 - b. Historical approach.
 - c. Morphological approach.
 - d. Functional approach.
- ii. Forces affecting the internal functioning of a state:
 - a. Centrifugal forces.
 - b. Integrating factors.
- iii. Factors affecting the external relations of a state:
 - a. Territorial considerations.
 - b. Economics factors.
 - c. Political relations.
 - d. Strategic consideration.
 - e. Ideological and cultural factors.

V- A study of the foreign relations of the following states in relation to the above

factors:

- i. U.S.A.
- ii. U.K
- iii. Russia
- iv. China

VI- A detailed politico geographical study of Pakistan

VII- World Organization:

- i. United Nations.
- ii. Analysis of the World Political Patters in terms of their economic, strategic, ideological and cultural relationships with special consideration of British

Commonwealth, European Common Market, North Atlantic Treaty organization, Southeast Asia Treaty Organization Central Treaty Organization and the Arab League.

Books Recommended:

- Alexander D. M. 1963 World Political Patterns, Rand McMally, Chicago.
- Blij, H.J. 1967 Systematic Political Geography, John Wiley New York.
- Bowman, I. 1928 The New World Problems in Political Geography, Ginn New York.
- C. L. 1958 Geography and World Politics, Prentice Hall New Jersey.
- Cohen, Saul B. 1975 Geography and Politics in World Divided, Random House New York.
- G. Y.M. 1956 Political Geography and the World Map, Fredrick A. Praeger New York.
- M. A.E. 1949 Geography Behind Politics, Huntington’s University Library London.
- Saul Rose 1963 Politics in Southern Asia, Macmillan London.
- W. H.W. 1957 Principles of Political Geography, Appleton.

Assessment			
Sr. No.	Elements	Weightage	Details
1.	Midterm Assessment	35%	Written Assessment at the mid-point of the semester.
2.	Formative Assessment	25%	Continuous assessment includes Classroom participation, assignments, presentations, viva voce, attitude and behavior, hands-on-activities, short tests, projects, practical, reflections, readings, quizzes etc.
3.	Final Assessment	40%	Written Examination at the end of the semester. It is mostly in the form of a test, but owing to the nature of the course the teacher may assess their students based on term paper, research proposal development, field work and report writing etc.

GEOG. 412 REGIONAL PLANNING & DEVELOPMENT

I. Principles and Scope of Planning and Development

- i. Planning: A Geographer's View
- ii. Planning Processes
- iii. Planning as an Activity
- iv. Objectives in Planning
- v. Objectives of Regional Development Efforts

II. Implications of Regional Development

- i. Defining Regions
- ii. Regional Hierarchy and Classification
- iii. Regionalism or Administrative Boundaries?
- iv. Determining Regional Boundaries
- v. Factors contributing to Uniformities and Disparities in Regions
- vi. Types of Development Regions
- vii. The Problem of Regional Growth.
- viii. Locational Theory and Regional Growth
- ix. Criteria for the Choice of Regional Projects

III. Resources and Planning

- i. The Resource Base
- ii. Resource Evaluation
- iii. Utilization of Resources for Planning and Development

IV. Urban and Regional Planning

- i. Urban Growth Patterns
- ii. Impact of Industrialization
- iii. Phenomenon of Urban Spread
- iv. Planning for Cities and City Regions

V. Rural Planning

- i. Agricultural Planning and Rural Development
- ii. The Human Factor in Agricultural Development
- iii. Agrovilles and New Rural Settlements

VI. Examples of Urban/Rural/Regional Planning with Special Reference to Pakistan:

- i. Las-Bela Mekran Region
- ii. Kulu Region.
- iii. Multan-Bahawalpur Region
- iv. Sargodha Region.
- v. Barani Region.

VII. Students shall be required to choose a region and develop conceptual hierarchy and planning models for the region. The report shall accompany all regional data with a master regional plan.

Books Recommended:

- Birmingham, W., & Ford, A.G. (editors), 1966: Planning and Growth in Rich and Poor Countries, George Allen and Unwin Ltd., London.
- Cox, K. R. 1979 Location and Public Problems, Basil Black-Well, Oxford.

- Frey H. 1999 Designing the city towards a more sustainable Urban Form, Routledge London.
- Goodall, B. & Kirby, A, (editors), 1979, Resources and Planning Pergamon Press, Ltd., Oxford.
- Hall P. 1989 Urban and Regional Planning, 2nd edition Allen & Unwin London.
- Hancock J. 1978 Urban Development & Planning, Basil Blackwell Publisher London.
- Hudson R. & Lewis J.R. 1982 Regional Planning in Europe, Pion Ltd. London.
- Keeble, L. 1969 Principles & Practice of Town & country Planning, The Estate Gazette Ltd. London.
- Mc Loughlin, B.J. 1969 Urban and Regional Planning: A System Approach, Faber and Faber, London.
- Weitz, R. 1965 (general editor) Rural Planning in Developing Countries, Routledge and Kegan Paul, London.

Assessment			
Sr. No.	Elements	Weightage	Details
1.	Midterm Assessment	35%	Written Assessment at the mid-point of the semester.
2.	Formative Assessment	25%	Continuous assessment includes Classroom participation, assignments, presentations, viva voce, attitude and behavior, hands-on-activities, short tests, projects, practical, reflections, readings, quizzes etc.
3.	Final Assessment	40%	Written Examination at the end of the semester. It is mostly in the form of a test, but owing to the nature of the course the teacher may assess their students based on term paper, research proposal development, field work and report writing etc.

GEOG. 413 RURAL SETTLEMENT GEOGRAPHY

- I. Introduction: Geographical Approaches to Settlement Geography.
- II. Geographic Bases of rural settlements.
- III. Cultural bases of rural settlements.
- IV. Spatial Patterns and classification of rural settlements.
- V. Location of settlements-Central and new Central place.
- VI. Architecture and Housing.
- VII. Rural Land Use Patterns.
- VIII. Population and Social Organization.
- IX. Pioneer Settlement, Planning and pre-development.

Books Recommended:

- Kariel, H.G. & Kariel, P.E. 1972 Explorations in Social Geography, Addison, Wesley.
- Trewartha, G.T. 1967 Physical Elements of Geography, 5th ed. McGraw Hill New York.
- Blaut, Jame M. 1969 Rural Landscapes of the New Western, Prentice Hall New York.
- Rapport, Ano 1969 House Form and Culture, Englewood Cliff, Prentice-Hall New Jersey.
- Spencer, J.E.T. W.L. 1969 Cultural Geography, John Wiley New York.
- Chisholm, M. 1967 Rural Settlement and Land Use, John Wiley New York.
- Christaller, W. 1966 Central Places in Southern Germany, Prentice-Hall New Jersey.
- Taylor, R. & Jones, A.B. 1964 Rural Life and Urbanized Society, Oxford University Press New York.
- Takes, H.P. 1958 Physical Planning in connection with land reclamation and improvement, International.
- Sauer, C. O. 1952 Agricultural Origin & Dispersals, American Geographical Society New York.
- Blache De la 1926 Principles of Human Geography, English Ed.
- McGaugh, Maurice (1977) A Geography of Population and Settlement, Brown.
- Hart, J. F. Rural Landscapes of the Western World, Prentice Hall New York.
- Malik R.A. & Ven-deshill, B.G. Readings in Rural Settlement Geography, Manuscript prepared by the authors for publication.

Assessment			
Sr. No.	Elements	Weightage	Details
1.	Midterm Assessment	35%	Written Assessment at the mid-point of the semester.
2.	Formative Assessment	25%	Continuous assessment includes Classroom participation, assignments, presentations, viva voce, attitude and behavior, hands-on-activities, short tests, projects, practical, reflections, readings, quizzes etc.
3.	Final Assessment	40%	Written Examination at the end of the semester. It is mostly in the form of a test, but owing to the nature of the course the teacher may assess their students based on term paper, research proposal development, field work and report writing etc.

GEOG. 414 TOURISM GEOGRAPHY

I. Introduction to Tourism Geography

- i. Definitions, themes, concepts, nature and scope of tourism geography
- ii. The Historical Development of the Geography of Tourism and Recreation
- iii. The status of Tourism Geography

II. Modern Tourism and Recreation:

- i. The demand for Tourism and Recreation
- ii. The supply for Tourism and Recreation
- iii. The impact of Tourism and Recreation
 - a. Socio-Economic Impacts
 - b. Physical-Environmental Impacts

III. Resources and Tourism

- i. Trends and themes in the use of tourism resources
- ii. Nature as recreational resource
 - a. Urban tourism
 - b. Rural tourism
 - c. Coastal and resort tourism

IV. The Tourism Geography of World

- i. Patterns and processes of world tourism
- ii. Factors influencing tourism
- iii. Tourism & recreation in Pakistan

V. Tourism and Recreation Planning and Policy

- i. Planning and management of tourism and recreation
- ii. Principles processes and planning models
- iii. Approaches to tourism planning
- iv. Assessment and monitoring
- v. Tourism policy initiatives and decision-making
- vi. Sustainable development and tourism geography

Recommended Books:

- Brunt, P. & Page, S.J. (2001) *Tourism a Modern Synthesis*, London, 1st edition; Thomson learning.
- Jafari, J. (2000) *Encyclopedia of Tourism*, London, 1st edition, Routledge.
- Hall, C.M. & Page, S.J. (1999) *The Geography of Tourism and Recreation*, London, 1st edition, Routledge.
- Hudman, L. & Jackson, R. (1998) *Geography of Travel and Tourism*, London, 3rd edition Delmar Publishers.
- Williams, S. (1998) *Tourism Geography*, London, 1st edition Routledge.
- Davidson, R. & Maitland, R. (1997) *Tourism Destinations*, London, 1st edition, Hodder and Stoughton.
- Wahab, S. & Pigram, J.J. (1997) *Tourism, Development and Growth*, London, 1st edition, Routledge.
- Herbert, D. (1995) *Heritage, Tourism and Society*, London, 1st edition, Mansell Publishing Ltd.
- Sidhu, S.S. (1995) *New Horizons in travel and Tourism*, 1st edition; Har-Anand Publications New Delhi.

- Vellas, F. & Bechercl, L. (1995) International Tourism, London, Ist edition, Macmillan Business
- Williams, A.M & Shaw, G. (1994) Critical Issues in Tourism, Cornwall, Ist edition, Black Well Publishers.

Assessment			
Sr. No.	Elements	Weightage	Details
1.	Midterm Assessment	35%	Written Assessment at the mid-point of the semester.
2.	Formative Assessment	25%	Continuous assessment includes Classroom participation, assignments, presentations, viva voce, attitude and behavior, hands-on-activities, short tests, projects, practical, reflections, readings, quizzes etc.
3.	Final Assessment	40%	Written Examination at the end of the semester. It is mostly in the form of a test, but owing to the nature of the course the teacher may assess their students based on term paper, research proposal development, field work and report writing etc.

GEOG. 415 TRANSPORTATION GEOGRAPHY

I. Basic concepts of Transportation Geography

- i. Definition, Growth and Scope of Transportation Geography
- ii. Theory of Transportation

II. Spatial Variations in Transportation Costs

- i. Location of Transportation Routes and Networks
- ii. The Structure of Transportation Costs
- iii. Transportation Costs and the Location of Economic Activity
- iv. Transportation Improvements and their Spatial Impact

III. Transportation Network Analysis (Study & application of the following)

- i. Aggregate Measures
 - a. Graph Theoretic Concepts: Non-Ratio Measures, (cyclomatic Number, Diameter), Ratio Measures (Alpha, Beta, Gamma, Eta, Pi, Theta, Jota)
 - b. Measures of Individual Elements of Transportation Network: Associated Number, connectivity Dispersion, Accessibility, and circuitry
 - c. Measures of Nodal Accessibility
- i. Nodal Accessibility
- ii. The Shortest Path Matrix
- iii. Network as Valued Graph
- iv. Graph Theory Interpretation of Hierarchies

IV. Linkage Importance in a Regional Highway Network

V. Design and Performance of Network

- i. Costs and Benefits in Path Design
- ii. Traveling Salesman Problem
- iii. Other Minimum Distance Networks
- iv. The Best Path in a Network

VI. The Best Path on Irregular Surfaces

VII. Other Irregular Surfaces and Isochrones

VIII. Flow Analysis

- i. Concepts and Methods in Flow Analysis
- ii. Gravity Model
 - a. Basic Gravity Model
 - b. Gravity Model and Traffic
 - c. Gravity Model and Hinterland Analysis
 - d. Gravity Model and Potential Maps
 - e. Jilman's Triade
 - f. Weakness of the Gravity Model

IX. Model Systems

- i. Characteristics and Comparison of the following Model System
 - a. Railroad
 - b. Motor Transport
 - c. Water Ways

- d. Air Transport
- e. Pipelines

X. Transportation Planning in Developing Countries

- i. The Need for Comprehensive Planning & Analysis
 - a. System Approach.
 - b. Comprehensive Planning
 - c. Pricing Policies
- ii. Transport-Alternatives Evaluation Model
 - a. Regional Consumption, Incomes, Prices
 - b. Aggregate Demand, Production and Growth
 - c. Input-Output Relationship
 - d. Investment and Capacity
 - e. Transportation Sector

Books Recommended:

- Edward J. Taafee, (1996). Geography of Transportation, New Jersey, Prentice Hall.
- Michael E. Eliot H. (ed.) (1974) Transportation Geography, New York, McGraw Hill.
- Ronald, (1971) Gould, Spatial Organization, New Jersey, Prentice Hall.
- Cole & King, (1968) Quantitative Geography, London, John Wiley & Sons.
- Haggett, P. A.D. (1965) Locational Analysis in Human Geography, London, Edward Arnold.
- Haggett P. & J. Chorley (1967), Network Analysis in Geography, London, Edward Arnold.
- Kansky, K.J(2002)., Structure of Transportation Networks.
- Peter E. Lloyd P. D. (1998) Location in Space, New York, McGraw Hill.

Assessment			
Sr. No.	Elements	Weightage	Details
1.	Midterm Assessment	35%	Written Assessment at the mid-point of the semester.
2.	Formative Assessment	25%	Continuous assessment includes Classroom participation, assignments, presentations, viva voce, attitude and behavior, hands-on-activities, short tests, projects, practical, reflections, readings, quizzes etc.
3.	Final Assessment	40%	Written Examination at the end of the semester. It is mostly in the form of a test, but owing to the nature of the course the teacher may assess their students based on term paper, research proposal development, field work and report writing etc.

GEOG. 416 POPULATION GEOGRAPHY

I. Nature and Scope of Population Geography

- i. Historical outline of World Population growth
- ii. Importance and Development of Population Geography
- iii. Different views and theories
- iv. Relations of the subject to other discipline

II. World Distribution of Population

- i. Diversity of distribution
- ii. Factors influencing population distribution physical factors, cultural and technological factors, temporal and political factors

III. Measures of Population Distribution

- i. Advantages and disadvantages of arithmetic density
- ii. Physiological and economic densities of population
- iii. Measures of central tendency of population distribution
- iv. Measures of population dispersion and potential

IV. Population Composition

- i. Urban and rural character
- ii. Biological characteristics
- iii. Cultural characteristics

V. Components of Population Growth

- i. Patterns and trends of fertility
- ii. Patterns and trends of mortality
- iii. Causes and consequences of migration

VI. Problems of Population Data

- i. Sources of population data
- ii. Methods of Census, vital registration and sample surveys
- iii. Major errors and omissions in population data

VII. Population Analysis

- i. Analysis of fertility
- ii. Analysis of mortality
- iii. Analysis of migration

Books Recommended:

- Matras, J. 1977. Introduction to Population: A Sociological Approach, Cliffs, Prentice Hall, Englewood.
- Heer, D. M 1968. Readings on Population, Cliffs Prentice Hall, Inc. Englewood.
- Glass, D.V. 1967. Population; Politics and Movements in Europe, Frank Cass & Co. London.
- Garnier, J. B. 1966. Geography of Population, Longman, London.
- Zelinsky, W. 1966 A Prologue to Population Geography, Cliffs, Prentice Hall, Inc. Englewood.
- Clarke, J.I 1965. Population Geography, Pergamon Press Oxford.
- Barrette, J. & Louw, M. 1962. International Aspects of Overpopulation, London, Macmillan.
- Barclay, G. W. 1958. Techniques of Population Analysis, John Wiley& sons, New York.
- Demko, G. J & Rose H. M. & Schnell, G. A.1970. Population Geography: A Reader, McGraw Hill Book Company New York.

Assessment			
Sr. No.	Elements	Weightage	Details
1.	Midterm Assessment	35%	Written Assessment at the mid-point of the semester.
2.	Formative Assessment	25%	Continuous assessment includes Classroom participation, assignments, presentations, viva voce, attitude and behavior, hands-on-activities, short tests, projects, practical, reflections, readings, quizzes etc.
3.	Final Assessment	40%	Written Examination at the end of the semester. It is mostly in the form of a test, but owing to the nature of the course the teacher may assess their students based on term paper, research proposal development, field work and report writing etc.

GEOG. 417 ECONOMIC GEOGRAPHY

I. Introduction

- i. Definition
- ii. Scope
- iii. Approaches to Study
- iv. Branches of Economic Geography
- v. Relationship with other Branches of the Geography

II. Economic Activities

- i. Classification
- ii. General Distribution

III. Production and Consumption

- i. Producer and Consumer
- ii. Decision Making
- iii. Man against Nature
- iv. Comparative Advantage
- v. Perception

IV. Historical Evolution of World Economic Systems

- i. Medieval Feudal Economics
- ii. Industrial Revolution
- iii. Economic Benefits from Colonialism
- iv. Modern World System

V. Various Types of Economic Activities

- i. Subsistence
- ii. Commercial

VI. World Population and Urbanism

- i. Geographic Distribution of Population
- ii. Population Characteristics its Growth and Structure
- iii. The Demographic Transition
- iv. Population Density
- v. Overpopulation
- vi. The Future Population
- vii. The Malthusian Dilemma

VII. Agriculture, Forestry and Fishing

- i. Conditions of Agriculture
- ii. The Physical Constraints on Agriculture
- iii. Land Factors in Agriculture
- iv. Agricultural Systems
- v. Problem and Policies in Agriculture
- vi. The Economic Status of Farmer Scarcity and Abundance
- vii. Types of Agriculture and their Distribution
- viii. The Role of Selected Commodities (Wheat, Rice, Sugarcane, Cotton, etc.)

VIII. Minerals and Mining

- i. Economic Factors in Mining

- ii. Metalliferous Minerals
- iii. Mineralized Regions
- iv. The Size of the Reserves
- v. The Non-metallic Minerals
- vi. Water as a Resource

IX. Fuel and Power

- i. Forms of Power
- ii. The Solid Fuels
- iii. Oil and Natural Gas
- iv. Non-Exhaustible Sources of Energy

X. The Structure and Location of Industry

- i. Industrial Location Theory
- ii. Factors of Industrial Location
- iii. Locational Analysis of Selected Industries
 - a. Iron and Steel
 - b. Cotton Textile
 - c. Petroleum Refinery Industry
- iv. Industrial Regions

XI. Trade and Services Functions

- i. Tertiary Activities
- ii. Distribution of Services
- iii. Service Industries and Central Place Theory

XII. Transport and Trade

- i. Characteristics of Transport System
- ii. Networks
- iii. Modes of Transport
- iv. International Trade and Specialization
 - v. Multilateral and Bilateral Trade
- vi. Free Trade Areas and Common Markets
- vii. Balance of Trade
- viii. Terms of Trade
- ix. The Pattern of Trade

Books Recommended:

- Atlas of the World's Resources, Agriculture Resources of the world, (latest) ed., by Royen W.V. 1954, Printice Hall New York.
- Hartshorne T.A. & Alexander J.W. (1988) Economic Geography, Prentice Hall, Inc. Englewood Cliffs, New York.
- Thoman, Conkling and Yeats (1988) The Geography of Economic Activity Mc grew Hill Inc. USA.
- Sadhukhamn S.K. (1986) Economic Geography, An Appraisal of Resources. S. Chand & Co. Ltd. New Delhi.
- Norman P. (1981) Success in Economic Geography John Murray (publishers) Ltd.
- Khan F. (1977). An Introduction to Economic Geography. Siur Syad Academy, Karachi.
- London, C. E. 1939, Industrial Geography, Prentice Hall New York.
- Alexanderson, G. 1947 Geography of Manufacturing, Englewood Cliffs,
- Boyee, R. R. 1947 The Basic of Economic Geography, Holt, Rinehart & Winston New York.

- Hover, E. M., 1948 The Location of Economic Activity, McGraw Hill New York.
- Zimmerman, E.W. 1951, World Resources and Industries, Henry Holt New York
- Royen, W. V. 1953 Fundamentals of Economic Geography, Englewood Cliffs, Prentice-Hall.
- Smith J.R. 1955 Industrial and Commercial Geography, Henry Holt.
- Thomas, H. G. 1955, Using the World's Wealth: Ginn & Co. London
- Carlson A. S, 1956 Economic Geography of Industrial Materials: Reinhold Publishing Corporation New York.
- Pounds, N. J.G. 1959, The Geography of Iron and Steel, Hutt Chinson University Library.
- Miller & Willard 1962, A Geography, of Manufacturing, Englewood Cliffs, Prentice Hall
- Alexander, J.W., 1963 Economic Geography, Prentice Hall New Jersey.
- Highsmith R.M. 1963, Geography of Commodity Production, Philadelphia, Lippincott.
- Boesch, H. 1964 A Geography of World Economy, Princeton: D. Van Nostrand,
- White C.L. & Griffin 1964: World Economic Geography, Blement; Wardsworth.
- Fryer, D.W. 1965 World Economic Development, McGraw Hill New York.
- Jones, C.F. & Darkenwald, 1965 Economic Geography, Macmillan New York.
- Thomas, R. S. 1965 The Geography of Economic Activity: McGraw Hill New York.
- Prentice Hall, 1967, London.
- Jarrett, H.R. 1969, A Geography of Manufacturing, MacDonald & Evans Ltd. London.
- Hodder, B.W. & Bogar Lee 1974, Economic Geography, Methuen London.
- Alnwick, H. 1981, A Geography of Commodities: Harrap London.

Assessment			
Sr. No.	Elements	Weightage	Details
1.	Midterm Assessment	35%	Written Assessment at the mid-point of the semester.
2.	Formative Assessment	25%	Continuous assessment includes Classroom participation, assignments, presentations, viva voce, attitude and behavior, hands-on-activities, short tests, projects, practical, reflections, readings, quizzes etc.
3.	Final Assessment	40%	Written Examination at the end of the semester. It is mostly in the form of a test, but owing to the nature of the course the teacher may assess their students based on term paper, research proposal development, field work and report writing etc.

GEOG. 418 Urban Ecology

Course Outline

- Study of urban environment,
- urban pollution and management,
- solid waste management,
- air pollution and its effects on health,
- heat islands, Green areas deterioration,
- Culture and Ecological indicators,
- Green verses Grey areas,
- Dynamic segmentation of Land cover and Land use,
- Environmental Justice,
- Distribution of Pollutants and Civic amenities

Lab

Study of selected urban areas with special reference to environmental problems.

Suggested Readings

- 1- Herbert, T. D. and Thomas, J. C. 2005. Cities in space: City as Place, 3rd Edition, David Fulton Publishers: London.
- 2- Lackey, R.T. 2005. Economic growth and salmon recovery: an irreconcilable conflict? Fisheries 30(3): 30- 32.
- 3- Gleick, P. 2000. The changing water paradigm: A look at twenty-first century water resources development' Water International 25(1), 127 – 138.
- 4- Guha, R. 2000. Environmentalism: A global history, Longman: New York
- 5- Ludwig, D. Hilborn, R. and Walters, C, 1993 Uncertainty, resource exploitation, and conservation: lessons from history Science 260: 36.
- 6- Davies, K. W. and Herbert, D.T. 1993. Communities within Cities: An Urban Social Geography, Bellhaven Press: New York.
- 7- Herbert, D. and Thomas, J. C. 1982. Urban Geography, John Wiley: New York.
- 8- Herbert, T. D and Thomas, J. C. 1982. Urban Geography, John Wiley: New York.
- 9- Freedman, B. 1998. Environmental Science: A Canadian perspective, Scarborough, Prentice Hall: Canada.

Assessment			
Sr. No.	Elements	Weightage	Details
4.	Midterm Assessment	35%	Written Assessment at the mid-point of the semester.
5.	Formative Assessment	25%	Continuous assessment includes Classroom participation, assignments, presentations, viva voce, attitude and behavior, hands-on-activities, short tests, projects, practical, reflections, readings, quizzes etc.
6.	Final Assessment	40%	Written Examination at the end of the semester. It is mostly in the form of a test, but owing to the nature of the course the teacher may assess their students based on term paper, research proposal development, field work and report writing etc.