

**Associate Degree (ADS) in Geography
(For Affiliated Colleges)**

Semester-I

| Category | Course Code | Course Title | Credit Hours | Pre-Requisite |
|----------|------------------------|--|--------------|---------------|
| GE-1 | URCG-5118 | Functional English | 3(3-0) | Nil |
| GE-2 | URCG-5105 URCG-5126 | Islamic Studies (OR) Religious Education/Ethics | 2(2-0) | Nil |
| GE-3 | URCG-5123 | Applications of Information and Communication Technologies (ICT) | 3(2-1) | Nil |
| Major-1 | GEOG-5101 | Fundamentals of Geography | 3(3-0) | Nil |
| Major-2 | GEOG-5102 | Physical Geography | 3(3-0) | Nil |
| Major-3 | GEOG-5103 | Human Geography | 3(3-0) | Nil |

Semester Total Credit Hours: 17

Semester-II

| Category | Course Code | Course Title | Credit Hours | Pre-Requisite |
|----------|-------------|---|--------------|---------------|
| GE-4 | URCG-5112 | Fables, Wisdom and EPICS | 2(2-0) | Nil |
| GE-5 | URCG-5116 | Science of Society-I | 2(2-0) | Nil |
| GE-6 | URCG-5120 | Exploring Quantitative Skills | 3(3-0) | Nil |
| GE-7 | URCG-5127 | Seerat of the Holy Prophet (SAW) | 1(1-0) | Nil |
| GE-8 (i) | URCG-5111 | Translation of Holy Quran-I | NC | Nil |
| Major-4 | GEOG-5104 | Map Work | 3(2-1) | Nil |
| Major-5 | GEOG-5105 | History and Development of Geographic Thought | 3(3-0) | Nil |
| Major-6 | GEOG-5106 | Surveying | 3(1-2) | Nil |

Semester Total Credit Hours: 17

Semester-III

| Category | Course Code | Course Title | Credit Hours | Pre-Requisite |
|----------|-------------|---------------------------------------|--------------|---------------|
| GE-9 | URCG-5119 | Expository Writing | 3(3-0) | Nil |
| GE-10 | URCG-5121 | Tools for Quantitative Reasoning | 3(3-0) | Nil |
| GE-11 | URCG-5122 | Ideology and Constitution of Pakistan | 2(2-0) | Nil |
| Major-7 | GEOG-5107 | Regional Concepts | 3(3-0) | Nil |
| Major-8 | GEOG-5108 | Geomorphology | 3(3-0) | Nil |
| Major-9 | GEOG-5109 | Climatology | 3(3-0) | Nil |

Semester Total Credit Hours: 17

Semester-IV

| Category | Course Code | Course Title | Credit Hours | Pre-Requisite |
|-----------|-------------|-----------------------------------|--------------|---------------|
| GE-8 (ii) | URCG-5111 | Translation of Holy Quran-II | NC | Nil |
| GE-12 | URCG-5114 | Basic Science | 3(2-1) | Nil |
| GE-13 | URCG-5124 | Entrepreneurship | 2(2-0) | Nil |
| GE-14 | URCG-5125 | Civics and Community Engagement | 2(2-0) | Nil |
| Major-10 | GEOG-5110 | Economic Geography | 3(3-0) | Nil |
| Major-11 | GEOG-5111 | Quantitative Methods In Geography | 3(3-0) | Nil |
| Major-12 | GEOG-5112 | Principles of Cartography | 3(1-2) | Nil |

Semester total credit hours: 16

Degree total credit hours: 67

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| URCG-5118 | Functional English | 3(3-0) |
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Course Brief:

The course aims at providing understanding of a writer's goal of writing (i.e. clear, organized and effective content and to use that understanding and awareness for academic reading and writing. The objectives of the course are to make the students acquire and master the grammatical academic writing skills. The course would enable the students to develop argumentative writing techniques. The students would be able to logically add specific details on the topics such as facts, examples and statistical or numerical values.

Course Learning Objectives:

The course will provide insight to convey the knowledge and ideas in an objective and persuasive manner. Furthermore, the course will also enhance the students' understanding of ethical considerations in writing academic assignments and topics including citation, plagiarism, formatting and referencing the sources as well as the technical aspects involved in referencing.

Course Contents:

1. Developing Analytical Skills
2. Transitional devices (word, phrase and expressions)
3. Development of ideas in writing
4. Reading Comprehension
5. Precis Writing
6. Developing argument
7. Sentence structure: Accuracy, variation, appropriateness, and conciseness
8. Appropriate use of active and passive voice
9. Organization and Structure of a Paragraph
10. Organization and structure of Essay
11. Types of Essays

Recommended Texts:

1. Bailey, S. (2011). *Academic writing: A handbook for international students* (3rd ed.). New York: Routledge.
2. Eastwood, J. (2011). *A Basic English grammar*. Oxford: Oxford University Press.
3. Swales, J. M., & Feak, C. B. (2012). *Academic writing for graduate students: Essential tasks and skills* (3rd ed.). Ann Arbor: The University of Michigan Press.
4. Swan, M. (2018). *Practical English usage* (8th ed.). Oxford: Oxford University Press.

Suggested Readings:

1. Biber, D., Johansson, S., Leech, G., Conrad, S., Finegan, E., & Quirk, R. (1999). *Longman grammar of spoken and written English*. Harlow Essex: MIT Press.
2. Cresswell, G. (2004). *Writing for academic success*. London: SAGE.
3. Johnson-Sheehan, R. (2019). *Writing today*. Don Mills: Pearson.
4. Silvia, P. J. (2019). *How to write a lot: A practical guide to productive academic writing*. Washington: American Psychological Association
5. Thomson, A. J., & Martinet, A. V. (1986). *A Practical English Grammar*. Oxford: Oxford University Press

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|-----------|------------------------------|--------|
| URCG-5105 | Islamic Studies (Compulsory) | 2(2-0) |
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Course Brief:

Introductory/compulsory foundation course

Islamic Studies engages in the study of Islam as a textual tradition inscribed in the fundamental sources of Islam; Qur'an and Hadith, history and particular cultural contexts. The area seeks to provide an introduction to and a specialization in Islam through a large variety of expressions (literary, poetic, social, and political) and through a variety of methods (literary criticism, hermeneutics, history, sociology, and anthropology). It offers opportunities to get fully introductory foundational bases of Islam in fields that include Qur'anic studies, Hadith and Seerah of Prophet Muhammad (PBUH), Islamic philosophy, and Islamic law, culture and theology through the textual study of Qur'an and Sunnah.

Course Learning Objectives

- ✓ To make students understand the relevance and pragmatic significance of Islam in their lives.
- ✓ To make learners comprehend the true spirit of Islam with reference to modern world.
- ✓ To generate a sense of Islamic principles as a code of living that guarantee the effective solutions to the current challenges of being.
- ✓ To provide Basic information about Islamic Studies
- ✓ To enhance understanding of the students regarding Islamic Civilization
- ✓ To improve Students skill to perform prayers and other worships
- ✓ To enhance the skill of the students for understanding of issues related to faith and religious life.

Course Contents

Introduction to Qur'anic Studies

- 1) Basic Concepts of Qur'an
- 2) History of Quran
- 3) Uloom-ul- Quran

مطالعہ قرآن (تعارف قرآن، منتخب آیات کا ترجمہ و تفسیر: سورة البقرہ آیات 1-5، 284-286؛ سورة الحجرات آیات 1-18؛ سورة الفرقان آیات 63-77؛ سورة المؤمنون آیات 1-11؛ سورة الاحزاب آیات 6، 21، 32-33، 40، 56-59؛ سورة الانعام آیات 151-153؛ سورة الصف آیات 1-14؛ الحشر آیات 18-20؛ آل عمران آیات 190-192؛ النحل آیات 12-14؛ لقمن آیت 20، حم السجده آیت 53)

Introduction to Sunnah

- 1) Introduction of Hadith
- 2) Legal Status of Hadith
- 3) History of the compilation of Hadith
- 4) Kinds of Hadith

حدیث کا تعارف، حدیث کی دینی حیثیت، حفاظت و تدوین حدیث، حدیث کی اقسام متن، حدیث: 1درج ذیل موضوعات پر احادیث کا مطالعہ

1. اعمال کا اجر نیت پر منحصر ہے۔ 2. بہترین انسان قرآن کا طالب علم اور اس کا معلم ہے۔ 3. کتاب و سنت گمراہی سے بچنے کا ذریعہ ہیں۔ 4. ارکان اسلام 5. اسلام، ایمان، احسان اور قیامت کی نشانیوں، 6. بچوں کی نماز کی تلقین 7. دین کا گہرا فہم اللہ کی خاص عنایت ہے 8. حصول علم، تلاوت قرآن اور عمل کی اہمیت و فضیلت، 9. روز محشر کا محاسبہ، 10. حقوق اللہ کے ساتھ ساتھ حقوق العباد کا لحاظ رکھنا بھی لازم ہے 11. حسن خلق کی عظمت اور فحش و بد گوئی کی مذمت 12. دنیا و آخرت کی بھلائی کی ضمانت چار چیزیں، 13. ہلاک کر دینے والی سات چیزیں، 14. بے عمل مبلغ کا عبرت ناک انجام 15. ہر شخص نگران ہے اور ہر شخص مسئول

- 1) Sirah of the Prohet
- 2) Importance of the Study of Sirah
- 3) Character building method of the Prophet

(سیرت النبی ﷺ) مطالعہ سیرت کی ضرورت و اہمیت ، تعمیر، سیرت و شخصیت کا نبوی منہاج اور عملی نمونے ، اقامت دین کا نبوی طریق کار ، اقامت دین بعدِ خلافت راشدہ، میثاق مدینہ ، خطبہ حجۃ الوداع، اخلاقی تعلیمات ، تشکیل اجتماعیت اور اسوہ حسنہ ، قرآن مجید میں سیرت سرور عالم کا بیان، غزوات نبوی ﷺ کے مقاصد و حکمتیں)

Islamic Culture & Civilization

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

4. اسلامی تہذیب و تمدن (اسلامی تہذیب کا مفہوم، اسلامی کے عوامل و عناصر، اسلامی تہذیب کی خصوصیات، اسلامی تہذیب ، علمی ، معاشرتی اور سماجی اثرات ، تہذیبوں کے تصادم کے نظریے کا تنقیدی جائزہ، تہذیبی تصادم کے اثرات و نتائج، طبعی ، حیاتیاتی اور معاشرتی علوم میں مسلمانوں کا کردار ، نام ور مسلمان سائنسدان)

Pre-Requisite: Nil

Recommended Books

- 1) Hameed ullah Muhammad, —Emergence of Islaml , IRI, Islamabad
- 2) Hameed ullah Muhammad, —Muslim Conduct of State
- 3) Hameed ullah Muhammad, _Introduction to Islam
- 4) Ahmad Hasan, —Principles of Islamic Jurisprudencell Islamic Research, Institute, International Islamic University, Islamabad (1993)
- 5) Dr. Muhammad Zia-ul-Haq, —Introduction to Al Sharia Al Islamial Allama Iqbal Open University, Islamabad (2001)
- 6) Dr. Muhammad Shahbaz Manj, Teleemat-e- Islam

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| URCG-5126 | ETHICS | 2(2-0) |
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Course Brief:

1. Meaning and Scope of Ethics.
2. Relation of Ethics with:
 - (a) Religion
 - (b) Science
 - (c) Law
3. Historical Development of
 - Morality: (a). Instinctive Moral Life.
 - (b). Customary Morality. (c). Reflective Morality.
4. Moral Theories:
 - (a). Hedonism (Mill) (b). Intuitionism (Butler)
 - (c). Kant's Moral Theory.
5. Moral Ethics and Society.
 - (a). Freedom and Responsibility. (b). Tolerance
 - (c). Justice
 - (d). Punishment (Theories of Punishment)
6. Moral Teachings of Major Religions:
 - a). Judaism
 - b). Christianity
 - c). Islam
7. Professional Ethics:
 - a). Medical Ethics
 - b). Ethics of Students
 - c). Ethics of Teachers
 - d). Business Ethics

Reference Books:

1. William Lille. An Introduction to Ethics., London Methuen & Co. latest edition.
2. Titus, H.H. Ethics for Today. New York: American Book, latest edition.
3. Hill, Thomas. Ethics in Theory and Practice. N.Y. Thomas Y. Crowel, latest edition
4. Ameer Ali, S. The Ethics of Islam. Culcutta: Noor Library Publishers, latest edition
5. Donaldson, D.M. Studies in Muslim Ethics. London: latest edition. 6. Sayeed, S.M.A.(Tr.) Ta' aruf-e-Akhlaqiat. Karachi: BCC&T, Karachi University of

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| URCG-5123 | Applications of Information Communication Technologies (ICT) | 3 (2-1) |
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Course Brief:

The course introduces students to information and communication technologies and their application in the workplace. Objectives include basic understanding of computer software, hardware, and associated technologies. How computers can be used in the workplace, how communications systems can help boost productivity, and how the Internet technologies can influence the workplace.

Course Learning Objectives:

Students will get basic understanding of computer software, hardware, and associated technologies. They will also learn how computers are used in the workplace, how communications systems can help to boost productivity, and how the Internet technologies can influence the workplace.

Course Contents:

1. Introduction, Overview of Information Technology.
2. Hardware: Computer Systems & Components, Storage Devices.
3. Software: Operating Systems, Programming and Application Software.
4. Databases and Information Systems Networks.
5. File Processing Versus Database Management Systems.
6. Data Communication and Networks.
7. Physical Transmission Media & Wireless Transmission Media.
8. Applications of smart phone and usage.
9. The Internet, Browsers and Search Engines.
10. Websites and their types.
11. Email Collaborative Computing and Social Networking.
12. E-Commerce.
13. IT Security and other issues.
14. Cyber Laws and Ethics of using Social media.
15. Use of Microsoft Office tools (Word, Power Point, Excel) or other similar tools depending on the operating system.
16. Other IT tools/software specific to field of study of the students if any.

Recommended Texts:

1. Discovering Computers 2022: Digital Technology, Data and Devices by Misty E. Vermaat, Susan L. sebok; 17th edition.

Suggested Readings:

1. Computing Essentials 2021 by Timothy J. O'Leary and Linda I. O'Leary, McGraw Hill Higher Education; 26th edition.
2. Computers: Understanding Technology by Fuller, Floyd; Larson, Brian: edition 2018.

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| GEOG- 5101 | Fundamentals of Geography | 3(3-0) |
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Course Brief:

This course is graduate-level course to expose students with the founding principles of Geography and geographical knowledge. A systematic descriptive introduction to the diverse elements of landscape including geomorphic, climatic, and biotic elements, human settlement and land-use patterns; cartographic approaches to the analysis of selected processes of landscape change.

Course Learning Objectives:

This course provides an opportunity for understanding part of the complex physical and biological environment in which human beings live. The nature and processes of geo-system and its constituent parts: atmosphere, lithosphere, hydrosphere and biosphere; structure and composition of the atmosphere: atmospheric circulation, weather and climate, energy transmission, spatial variation of energy inputs and energy budget; structure and composition of the earth: tectonics and related processes; hydrological cycle and its components: precipitation, evapotranspiration, groundwater, surface water and the oceans; vegetation zones of the world: world soils, ecosystems, biomes, energy and matter flows.

Course Contents:

1. Introduction, Definitions, scope and branches of Geography
2. Roots of the discipline and basic geographic concepts
3. Themes and traditions of Geography
4. Tools of Geography, The Universe, Galaxies and solar system
5. The Earth as a planet, Celestial positions, its shape and size
6. Rotation, revolution and related phenomena
7. Spheres of the earth, Lithosphere, Atmosphere, Hydrosphere
8. Biosphere
9. Man-environment interaction
10. Population
11. Major Economic activities
12. Settlements
13. Pollution

Lab. Work

1. Comprehension of atlases
2. Map reading skills, location of places
3. Features and relevant work related to topics of the theoretical section.

Recommended Texts

1. Arbogast, A. F. (2007). *Discovering physical geography*. London: John Wiley and Sons.
2. Christopherson, R. W. (2009). *Geo systems: an introduction to physical geography*. New Jersey: Pearson Prentice Hall.

Suggested Readings

1. De Blij, H. J and Muller, P. O. (1996). *Physical geography of the global environment*. London: John Wiley and Sons.
2. Strahler, A. (2013). *Introduction to physical geography*. New Jersey: John Wiley & Sons.

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| GEOG - 5102 | Physical Geography | 3(3-0) |
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Course Brief:

This course provides an opportunity for understanding part of the complex physical and biological environment in which human beings live. It introduces basic processes that influence the characteristics and spatial relationships of climate, water cycle and vegetation. The first part of the course examines the interactions of solar energy with the Earth's atmosphere and surface, and how atmospheric circulation, precipitation, and weather systems are generated. The second part of the course covers the cycling of water and other Earth resources within the living zone - the biosphere. It focuses on how these cycles, together with the flows of energy, influence the nature and distribution of ecosystems and vegetation.

Course Learning Objectives:

This course provides patterns of human activities that are in response to and have an effect upon environmental processes, and are asked to observe and interpret aspects of their local environment in light of what they have learned.

Course Contents:

1. Definition, scope and major branches
2. Realms of the physical environment
3. Lithosphere
4. Internal structure of earth
5. Rocks—origin, formation and types: Igneous, Sedimentary and Metamorphic Rocks
6. Plate tectonics, mountain building forces.
7. Geomorphic processes – endogenic and exogenic processes and their resultant landforms
8. Earthquakes and volcanic activity, folding and faulting
9. Weathering, mass wasting, cycle of erosion, erosion and deposition
10. Landforms produced by running water, ground water, wind and glaciers
11. Atmosphere
12. Composition and structure of atmosphere
13. Atmospheric temperature and pressure, global circulation
14. Atmospheric moisture and precipitation
15. Air masses and fronts
16. Cyclones and other disturbances
17. Hydrosphere
18. Hydrological cycle
19. Ocean composition, temperature and salinity of ocean water
20. Movements of the ocean water; waves, currents and tides
21. Biosphere

Recommended Texts:

1. Strahler, A. (2013). *Introduction to physical geography*. New York: John Wiley & Sons.
2. Thornbury, W. D. (2004). *Principles of geomorphology*. New Jersey: John Wiley & Sons.

Suggested Readings:

1. Strahler, A. N., & Strahler, A. H. (2004). *Physical environment*. New York: John Wiley & Sons.
2. Stringer, E. T. (2004). *Modern physical geography*. New York: John Wiley & Sons.

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| GEOG– 5103 | Human Geography | 3(3-0) |
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Course Brief:

This course provides an introduction to Human Geography. The major thrust is on the study of human societies in their relation to the habitat or environment. Dealing with the spatial distribution of societies, human geography covers a very wide field or its scope is enormous. It embraces the study of human races; the growth, distribution and density of populations of the various parts of the world, their demographic attributes and migration patterns; and physical and cultural differences between human groups and economic activities.

Course Learning Objective:

This course covers the relationship between man and his natural environment, and the way in which his activities are distributed. Human geography also takes into account the mosaic of culture, language, religion, customs and traditions; types and patterns of rural settlements, the site, size, growth and functions of urban settlements, and the functional classification of towns. The study of spatial distribution of economic activities, industries, trade, and modes of transportations and communications as influenced by the physical environment are also the important topics of human geography.

Course Contents:

1. Introduction
2. Definition, scope and branches
3. Basic approaches
4. Population and its characteristics and population distribution
5. Population structure and composition
6. Population dynamics (fertility, mortality, migration etc.)
7. Economic activities
8. Agriculture, mining, forestry, animal husbandry and poultry
9. Industries: cottage, light and heavy
10. Trade, transport and services
11. Tourism
12. Settlements
13. Theories of human settlement
14. Types of settlements

Recommended Texts:

1. Ahmed, Q. S. (2001). *Fundamentals of human geography*. Karachi: Royal Book Company.
2. Becker, A. & Secker. (2002). *Human geography: culture, society, and space.*, New Jersey: John Wiley and Sons.

Suggested Readings:

1. Benko, G. & Shorhmay. (2004). *Human geography: a history for the 21st century*. London: Hodder Arnold.
2. Blij, H. J. D. (2002). *Human geography: culture, society, and space*. New Jersey. John Wiley and Sons.
3. Cloke, P. & Crang, P. (2005). *Introducing human geographies*, (2nded.). London: Hodder Arnold.

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| URCG-5112 | Fable, Wisdom and EPICS | 2(2-0) |
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Course Brief:

The course will enable students to explore human experiences, cultivate an appreciation of the past, enrich their capacity to participate in the life of their times, and enable an engagement with other cultures and civilizations, both ancient and modern. But independently of any specific application, the study of these subjects teaches understanding and delight in the highest achievements of humanity.

Course Learning Objective:

This course includes fables, wisdom literature and epic, will enable the learners to explore and understand the classic tradition in literature. Development of personal virtue, a deep Sufi ethic and an unwavering concern for the permanent over the fleeting and the ephemeral are some of the key themes explored in the contents that will develop an intimate connection between literature and life.

Course Contents:

1. **Fables**

The Fables of
Bidpai The Lion
and the Bull The
Ring-dove
The Owls and the Crows
Selected poem from Bang-
i-Dara

2. **Gulistan-e- Sa'di**

Ten hikāyāt from John T. Platts, *The Gulistan*

3. **Epic**

THE SHĀHNĀMA OF FIRDAUSI

Recommended Texts:

1. John T. P. (1876). *The Gulistan; or, Rose Garden of Shaikh Muslihu'd- Dīn Sa'di of Shīrāz*. London: Wm. II. Allen.
2. Chishti, Y.S. (1991). *Sharaḥ-i bāng-i darā*. Lāhaur: Maktaba-i ta' mīr-i insāniyat

Suggested Readings:

1. Thackston, W. (2000). *A Millennium of Classical Persian Poetry*. Maryland: Ibex Publishers.
2. Wood, R. (2013). *Kalila and Dimna: Fables of Conflict and Intrigue*. United Kingdom: Medina Publishing, Limited.

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| URCG-5116 | Science of Society-I | 2 (2-0) |
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Course Brief:

This course will introduce students with the subject matter of social science, its scope, nature and ways of looking at social phenomenon. It will make the participants acquaintance with the foundations of modern society, state, law, knowledge and selfhood. While retaining a focus on Pakistani state and society, students will encounter theoretical concepts and methods from numerous social science disciplines, including sociology, politics, economics anthropology and psychology and make them learn to think theoretically by drawing on examples and case studies from our own social context. Students will be introduced to the works of prominent social theorists from both western and non-western contexts. Instruction will include the use of written texts, audio-visual aids and field visits.

Course Learning Objectives:

The course has following outcomes:

- ✓ Introduce student with the nature of human social behavior and foundations of human group life
- ✓ Analyze the reciprocal relationship between individuals and society.
- ✓ Make student aware with the nature of societies existing in modern world
- ✓ Make students familiar with the philosophy of knowledge of social sciences
- ✓ Introduce students with the works of prominent theories explain human group behavior
- ✓ Help students to understand the foundations of society including culture, socialization, politics and economy
- ✓ Introduce students with various dimensions of social inequalities with reference to gender, race, ethnicity and religion
- ✓ Make them aware about the understanding of various themes pertains to social science in local context
- ✓ Help them recognize the difference between objective identification of empirical facts, and subjective formulation of opinionated arguments

Course Contents:

1. Introduction to Social Sciences

- ✓ Social world, Human Social behavior, Foundations of society
- ✓ Evolution of Social sciences
- ✓ Philosophy of Science
- ✓ Scope and nature of social sciences
- ✓ Modernity and social sciences
- ✓ Branches of social science: Sociology, Anthropology, Political Science, Economics

Society and Community, Historical evolution of Society

- ✓ Types of Societies
- ✓ Foraging society, Horticultural society, Pastoralist society
- ✓ Agrarian societies, Industrial society, Postindustrial society

2. Philosophy of Knowledge in social Science and social inquiry

- ✓ Understanding social phenomenon
- ✓ Alternative ways of knowing
- ✓ Science as a source to explore social reality
- ✓ Objectivity, Value-Free research
- ✓ Positivism vs Interpretivism
- ✓ Qualitative vs Quantitative

3. Culture and Society

- ✓ Idea of Culture, Assumptions of Culture
- ✓ Types, Components, Civilization and culture
- ✓ Individual and culture. Cultural Ethnocentrism, Cultural Relativism

- ✓ Outlook of Pakistani culture
- ✓ Global Flows of culture, Homogeneity, Heterogeneity
- 4. Social Stratification and Social inequality**
 - ✓ Dimensions of inequality, Social class
 - ✓ Gender, Race, Religion, Ethnicity, Caste
 - ✓ Patterns of social stratification in Pakistan
 - ✓ Class, caste system in agrarian society
 - ✓ Ascription vs Achievement, Meritocracy
 - ✓ Global stratification in modern world, Global patterns of inequality
- 5. Personality, Self and Socialization**
 - ✓ Concept of self, Personality
 - ✓ Nature vs Nurture, Biological vs Social
 - ✓ Development of Personality
 - ✓ Socialization as a process, Agents of socialization
 - ✓ Socialization and self/group identity
- 6. Gender and Power**
 - ✓ Understanding Gender
 - ✓ Social construction of Patriarchy
 - ✓ Feminism in Historical context, Gender Debates
 - ✓ Gender and Development
 - ✓ Gender issues in Pakistani society, Women Participation in politics, economy and education
 - ✓ Toward a gender sensitive society, Gender mainstreaming
- Pakistan: State, Society, Economy and Polity**
 - ✓ Colonialism, colonial legacy, National identity
 - ✓ Transformation in Pakistani society: Traditionalism vs Modernism
 - ✓ Economy, Informality of Economy, Modern economy and Pakistan
 - ✓ Political Economy, Sociology of Economy

Recommended Texts:

1. Giddens, A. (2018). Sociology (11th ed.). UK: Polity Press.
2. Henslin, J. M. (2018). Essentials of Sociology: A Down-to-Earth Approach.(18th Edition) Pearson Publisher.
3. Macionis, J. J. (2016). Sociology (16th ed.). New Jersey: Prentice-Hall.
4. Qadeer, M. (2006) Pakistan - Social and Cultural Transformation in a Muslim Nation.

Suggested Readings:

1. Smelser, N.J. and Swedburg, R., The Handbook of Economic Sociology, Chapter 1 'Introducing Economic Sociology', Princeton University Press, Princeton.
2. Systems of Stratification | Boundless Sociology (no date). Available at: <https://courses.lumenlearning.com/boundless-sociology/chapter/systems-of-stratification/>
3. Jalal, A. (ed.) (1995) 'The colonial legacy in India and Pakistan', in Democracy and Authoritarianism in South Asia: A Comparative and Historical Perspective. Cambridge: Cambridge University Press (Contemporary South Asia)
4. Zaidi, S. A. (2015) Issues in Pakistan's Economy: A Political Economy Perspective. Oxford University Press. Chapter 26
5. Akhtar, A. S. (2017) The Politics of Common Sense: State, Society and Culture in Pakistan. Cambridge: Cambridge University Press.

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|-----------|-------------------------------|--------|
| URCG-5120 | Exploring Quantitative Skills | 3(3-0) |
|-----------|-------------------------------|--------|

Course Brief:

Since ancient times, numbers, quantification, statistics and mathematics has played a central role in scientific and technological development. In the 21st century, Quantitative Reasoning (QR) skills are essential for life as they help to better understand socio-economic, political, health, education, and many other issues, an individual now faces in daily life.

Course Learning Objectives:

This course will help the students to apply QR methods in their daily life and professional activities. This course will also change student's attitude about statistics and mathematics. It will not only polish their QR skills, but also enhance their abilities to apply these skills.

Course Contents:

1. Introduction to quantitative reasoning
2. Overview of contributions of Mathematicians and Statisticians especially Muslim scholars.
3. Types of standard numbers
4. Proportions, rates, ratio and percentages
5. Odds and odds ratio
6. Scale of measurements
7. Number sequence and series
8. Unit analysis as a problem-solving tool
9. Data handling (small and large)
10. Data errors, absolute and relative and their applications
11. Descriptive statistics
12. Rules of counting: multiplication rule, factorial, permutation and combination
13. Probability and its application in real life
14. A graphical perspective through Venn Diagram
15. Financial indicator analysis, and money management (profit, loss, simple and compound interest)
16. Practical scenarios involving algebraic expressions: linear and quadratic

Recommended Texts:

1. Akar, G. K., Zembat, İ. Ö., Arslan, S., & Thompson, P. W. (2023). *Quantitative Reasoning in Mathematics and Science Education*. 1st Ed., Springer, USA.
2. Peck, R., Olsen, C., & Devore, J. L. (2015). *Introduction to statistics and data analysis*. 5th Ed., Brooks Cole, USA.
3. Devlin, K. J. (2012). *Introduction to mathematical thinking*. Palo Alto, CA: Keith Devlin.

Suggested Readings:

1. Triola, M. F., Goodman, W. M., Law, R., & Labute, G. (2006). *Elementary statistics*. Reading, MA: Pearson/Addison-Wesley.
2. Blitzer, R., & White, J. (2005). *Thinking mathematically*. Pearson Prentice Hall.

مطالعہ سیرت النبی صلی اللہ علیہ وسلم Seerat of the Holy Prophet

Course Code

URCG-5127

| Title | Description |
|--------------------------|---|
| Semester | |
| Nature of Course | |
| No. of C.Hrs. | 1(1-0) |
| Total Teaching weeks | 18 |
| Objectives of the Course | <p>۱۔ طلباء کو مطالعہ سیرتِ مطہیہ کی ضرورت و اہمیت سے آگاہ کرنا</p> <p>۲۔ تعمیر شخصیت میں مطالعہ سیرتِ مطہیہ کے کردار کو واضح کرنا</p> <p>۳۔ بہشت نبوی کے موقع پر اقوامِ عالم کی عمومی صورت حال سے آگاہ کرنا</p> <p>۴۔ رسول اکرم صلی اللہ علیہ وسلم کی سنی اور مدنی زندگی کا اس طرح مطالعہ کروانا کہ طلباء ان واقعات سے متاثر ہو کر استنباط کر سکیں</p> <p>۵۔ طلباء کو محمد نبوی کی معاشرت، سیاست، معیشت سے آگاہ کرنا</p> |

Course Description

| S.No. | Title | Description |
|-------|--|---|
| 1 | حضور صلی اللہ علیہ وسلم کے ابتدائی حالات زندگی | ۱۔ حضور صلی اللہ علیہ وسلم کا خاندانی حسب و نسب ۲۔ پیدائش اور ابتدائی تربیت ۳۔ لڑکپن اور جوانی کے حالات زندگی |
| 2 | بہشت نبوی کے وقت دنیا کے حالات (۱) | ۱۔ بہشت نبوی کے وقت اہم تہذیبیں ۲۔ عرب، مصر، حبشہ، ہندوستانی، ساسانی |
| 3 | بہشت نبوی | ۱۔ سنی مہدیش و دعوت اسلام |
| 4 | بہشت نبوی | ۱۔ مدنی مہدیش و دعوت اسلام |
| 5 | مخصائص النبی | آپ بطور پیغمبر امن |
| 6 | مخصائص النبی | بہشت استاد و معلم |
| 7 | مخصائص النبی | بہشت تاجر |
| 8 | مخصائص النبی | بہشت سربراہ ریاست |
| 9 | مخصائص النبی | ذاتی محاسن اور عالمگیر اثرات |

| | | |
|----|------------------------|---------------------------------------|
| 10 | مخصائص النبی | ناموس رسالت |
| 11 | اسوہ حسنہ اور عمر حاضر | غیر مسلموں سے تعلقات |
| 12 | اسوہ حسنہ اور عمر حاضر | اسوہ حسنہ کی روشنی میں گھریلو زندگی |
| 13 | اسوہ حسنہ اور عمر حاضر | مستشرقین اور مطالعہ ہیرت |
| 15 | اسوہ حسنہ اور عمر حاضر | وطن سے محبت اور ہیرت |
| 16 | اسوہ حسنہ اور عمر حاضر | مستشرقین کے اعتراضات اور ان کے جوابات |

نصابی کتب

| نمبر شمار | نام مؤلف | نام کتاب |
|-----------|------------------------------------|-------------------------------|
| 1 | ابن ہشام | السیرۃ النبویہ |
| 2 | مولانا شبلی نعمانی، سید سلمان ندوی | سیرۃ النبی صلی اللہ علیہ وسلم |
| 3 | قاضی محمد سلیمان سلمان منصور پوری | رحمۃ اللعالمین |
| 4 | مولانا سید ابوالحسن علی ندوی | نبی رحمت صلی اللہ علیہ وسلم |
| 5 | ڈاکٹر یسین مظہر صدیقی | عہد نبوی کا نظام حکومت |
| 6 | ڈاکٹر خالد علوی | الانسان کامل |

حوالہ جاتی کتب

| نمبر شمار | نام مؤلف | نام کتاب |
|-----------|-------------------------------|-----------------------------------|
| 1 | سید ابوالاعلیٰ مودودی | ہیرت سرور عالم صلی اللہ علیہ وسلم |
| 2 | مولانا مفتی الرحمن مبارک پوری | ارحیق الخفوم |
| 3 | محمد محمد کرم شاہ، الازہری | فضیلا النبی صلی اللہ علیہ وسلم |
| 4 | ڈاکٹر اکرم الشیخ، العسری | السیرۃ النبویۃ الصحیحۃ |
| 5 | مولانا محمد ارفاق دانا پوری | اصح السیر |



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|-----------|-----------------------------------|------------|
| URCG-5111 | Translation of the Holy Quran – I | Non-Credit |
|-----------|-----------------------------------|------------|

| Topic | Details |
|------------------|---|
| Semester/Level | In some discipline 1 st semester and in some discipline 2 nd Semester/ ADP Program 1 st Year |
| Course Code | URCG-5111 |
| Course Title | Translation of the Holy Quran – I |
| Credit Hours | Non-Credit |
| Objectives | <ul style="list-style-type: none"> • To familiarize the students to keys and fundamentals of recitation of the holy Quran. • To develop the skill of the students of recitation the last revelation. • Students will learn the basic Arabic grammar in a practical way. • To develop an eagerness among the students to explore the last divine Book. |
| Course Contents: | <ul style="list-style-type: none"> • تیسواں پارہ - ناظرہ مع تجوید • بنیادی عربی گرامر اسم اور اسکے متعلقات : اسم فاعل ، مفعول ، تفضیل ، مبالغہ فعل اور اسکے اقسام : ماضی ، مضارع ، امر ، نہی حرف اور اسکے اقسام : حروف علت ، حروف جارہ ، مشبہ بالفعل |
| Memorization: | تیسویں پارے کی آخری بیس سورتیں (حفظ مع ترجمہ) |

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|-------------------|-----------------|---------------|
| GEOG -5104 | Map Work | 3(2-1) |
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Course Brief:

A unique aspect of geography is that it exposes students to a wide range of techniques for helping to understand human and environmental patterns and processes. Mapmaking is the study and practice of making representations of the Earth on a flat surface.

Course Learning Objectives:

This study includes everything from the gathering, evaluation and processing of source data, through the intellectual and graphical design of the map, to the drawing and reproduction of the final document. As such, it is a unique mixture of science, art and technology and calls for a variety of in-depth knowledge and skills on the part of the cartographer.

Course Contents:

1. Maps
2. Elements and types
3. Principles and methods of map making
4. Reading and reproduction
5. Scale: types and their use
6. Grid reference and indexation,
7. Map projections, Cylindrical, Conical. Zenithal
8. Construction, characteristics, and uses
9. Enlargement and reduction of maps
10. A study of the Survey of Pakistan maps
11. Physical and cultural features to be described and interpreted
12. Interpretation of weather maps of Pakistan

Recommended Texts:

1. Singh, G. (2009). *Map work and practical geography*. New Delhi: Vikas Publishing House Pvt. Ltd.
2. Singh, L. & Raghun, S. (2000) *Map work and practical geography*. New Delhi: Kalyanipublishers.

Suggested Readings:

1. Khan, M. Z. A. (1998). *Text Book of Practical Geography*. Delhi: Concept Publishing Company.
2. Bygott, J. (1952). *An introduction to mapwork and practical geography*. London: University Tutorial Press.
3. Bygott, J. (1955). *Mapwork and practical geography*. London: University Tutorial Press.

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|--------------------|--|---------------|
| GEOG - 5105 | History and Development of Geographic Thought | 3(3-0) |
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Course Brief:

This course surveys the major traditions of geographic thought from the early 20th century to the present. Attending to both ‘human’ and ‘physical’ perspectives in the discipline - as well as those that blur the lines between the social and natural sciences - we will explore the changing, contested nature of geographic knowledge in terms of its situated, historical contexts and its numerous reformulations in contemporary practice.

Course Learning Objectives:

This course provides students with the background for understanding their research in terms of the philosophies and methods, and the convergences and departures that constitute the intellectual history of the discipline in general, and Geography at Madison in particular.

Course Contents:

1. Nature of Geography
2. Evolution of Geography
3. Pre-classical and classical periods: ancient Geography
4. Medieval Geography: Muslim contributions, European contributions.
5. Modern Geography: Humboldt and Ritter, Geography from the middle of the 20th century, Dichotomies-physical and human, systematic and regional. Quantitative Revolution, Geoinformatics and Ecology.
6. Established traditions: Earth science, area study, spatial organization, man-land, system analysis and cartographic science.
7. Man-environment interaction themes: Environmental Determinism, Possibilism, Probabilism, Cognitive Behaviourism, World views on man-environment relationship.
8. Development of Nomothetic traditions: facts, concepts, hypotheses and paradigms, Ideographic vs. Nomothetic.
9. Philosophical framework: Positivism: Pragmatism, Phenomenology
10. Evolution of modern tools and models in geography
11. Development of geography in Pakistan

Recommended Texts:

1. Dikshit R.K. (1998). *Geographical thought*. Upper Saddle River: Prentice Hall.
2. Ahmad, K.S. (2000). *Geography through the Ages*. Karachi:PGR.

Suggested Readings:

1. Ayhew, S. (2008). *Geography*. London: Harmonds Worth.
2. Mitchel, B. (2000). *Geography and resources analysis*. New York: Norton & Company.
3. Tim, U. (1992). *The place of geography*. London: Longman.

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|-------------------|------------------|---------------|
| GEOG- 5106 | Surveying | 3(1-2) |
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Course Brief:

Surveying is the science of measuring and recording distances, angles, heights and sizes on the earth's surface to obtain data from which accurate plans and maps is made. It is the art and science of determining the position of natural and artificial features on, above the earth's surface or establishing such point and representing this information on paper plans, as figures, tables or computer based map. The basic concerns regarding a survey are spaces and locations within them. Survey essentially takes note of specific point locations for later reference. Surveying has been essential elements in the planning and execution of nearly every form of construction.

Course Learning Objectives:

One of the main functions of surveying is to acquire data on the shape and position of features on the ground, and to somehow delineate this information on maps, plans and drawings so as to make this data useful for other observers/users. These maps and plans can range from simple drawings in terms of sketches through to plans and maps, all based on some fundamentals of graphical communication

Course Contents:

1. Introduction
2. Instrumental survey and records
3. Surveying using the following instruments
4. Chain survey
5. Plane Table
6. Prismatic Compass
7. Determination of heights and slopes with Abney Level
8. Contouring by Indian Clinometer

Recommended Texts:

1. Singh, G. (2009). *Map work and practical geography*. New Delhi: Vikas Publishing House Pvt. Ltd.
2. Singh, L. & Raghu, N. S. (2000) *Map work and practical geography*. New Delhi: Kalyani publishers.

Suggested Readings:

1. Khan, M. Z. A. (1998). *Text Book of Practical Geography*. Delhi: Concept Publishing Company.
2. Bygott, J. (1952). *An introduction to mapwork and practical geography*. London: University Tutorial Press.
3. Bygott, J. (1955). *Mapwork and practical geography*. London: University Tutorial Press.

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|------------|--------------------|---------|
| URCG- 5119 | Expository Writing | 3 (3-0) |
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Course Brief:

This course prepares undergraduates to become successful writers and readers of English. The course helps students develop their fundamental language skills with a focus on writing so that they can gain the confidence to communicate in oral and written English outside the classroom. The course is divided into five units and takes a Project-based Learning approach. Unit themes target the development of 21st century skills and focus on self-reflection and active community engagement.

Course Learning Objectives:

The course completion will enable the students to develop communication skills as reflective and self-directed learners. They will be able to intellectually engage with different stages of writing process, and develop analytical and problem-solving skills to address various community-specific challenges.

Course Contents:

1. Self-Reflection
 - ∗ Introduction to the basics of the writing process
 - ∗ Introduction to the steps of essay writing
 - ∗ Prewriting activities: Brainstorming, listing, clustering and freewriting
 - ∗ Practicing Outlining of the essay
2. Personalized Learning
 - ∗ Learning Process, Learning Styles, Goal Setting and Learning Plan
3. Oral Presentation
 - ∗ Structure and Significance, Content Selection and Slide Presentation, Peer Review
4. Critical Reading Skills
 - ∗ Introducing Authentic Reading (Dawn and non-specialist academic books/texts)
 - ∗ Reading Strategies and Practice: Skimming, scanning, SQW3R, Annotating, Detailed reading and note-taking, Standard Test Practice: TOEFL and IELTS, Model Review Reports and Annotated Bibliographies
5. Community Engagement
 - ∗ Student-led brainstorming on local versus global issues, Identifying research problems
 - ∗ Drafting research questions, Drafting interview/survey questions for community research (in English or L1)
 - ∗ Engaging students in Critical reading, Presenting interview/ survey information, Field work
 - ∗ Writing Community Engagement Project
6. Letter to the Editor
 - ∗ Types of letters, Format and purpose of letter to the editor, Steps in writing letter-to-editor

Recommended Texts:

1. Bailey, S. (2011). *Academic writing: A handbook for international students* (3rd ed.). New York: Routledge.
2. Swales, J. M., & Feak, C. B. (2012). *Academic writing for graduate students: Essential tasks and skills* (3rd ed.). Ann Arbor: The University of Michigan Press.

Suggested Readings:

1. Cresswell, G. (2004). *Writing for academic success*. London: SAGE.
2. Johnson-Sheehan, R. (2019). *Writing today*. Don Mills: Pearson.
3. Silvia, P. J. (2019). *How to write a lot: A practical guide to productive academic writing*. Washington: American Psychological Association.

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| URCG-5121 | Tools for Quantitative Reasoning | 3(3-0) |
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Course Brief:

This course is based on quantitative reasoning 1 course. It will enhance the quantitative reasoning skills learned in quantitative reasoning 1 course. Students will be introduced to more tools necessary for quantitative reasoning skills to live in the fast paced 21st century. Students will be introduced to importance of statistical and mathematical skills in different professional settings, social and natural sciences. These quantitative reasoning skills will help students to better participate in national and international issues like political and health issues.

Course Learning Objectives:

This course will prepare the students to apply quantitative reasoning tools more efficiently in their professional and daily life activities. This course will help them to better understand the information in form of numeric, graphs, tables, and functions.

Course Contents:

1. Types of data and its graphical representation (Histogram, Stem and Leaf display, Box Plot, Scatter diagram, Histogram, Bar chart, etc)
2. Solving practical problems using linear and exponential models
3. Population growth models
4. Analytical approach to solve simultaneous equations
5. Inequalities and their application
6. Comparing quantities using analytical tools
7. Logical reasoning and their application in modern age
8. Logical reasoning and decision making
9. Data tendencies via measure of location
10. Variability and Measure of dispersion
11. Measuring relationships via Regression analysis and correlation
12. Statistical inference: sampling techniques, estimation techniques and hypothesis testing for decision and policy making

Recommended Texts:

1. Akar, G. K., Zembat, İ. Ö., Arslan, S., & Thompson, P. W. (2023). *Quantitative Reasoning in Mathematics and Science Education*. 1st Ed., Springer, USA.
2. Sharma, A. K. (2005). *Text book of elementary statistics*. Discovery Publishing House.
3. Blitzer, R. (2014). *Precalculus*, 5th Ed.. Pearson Education, Limited. New York

Suggested Readings:

1. Gupta, S. C., & Kapoor, V. K. (2020). *Fundamentals of mathematical statistics*. 12th Ed, Sultan Chand & Sons.
2. Aufmann, R. N., Lockwood, J., Nation, R. D., & Clegg, D. K. (2007). *Mathematical thinking and quantitative reasoning*. Cengage Learning
3. Blitzer, R., & White, J. (2005). *Thinking mathematically*. Pearson Prentice Hall.

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| URCG-5122 | Ideology and Constitution of Pakistan | 2(2-0) |
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Course Brief:

This course focuses on ideological background of Pakistan. The course is designed to give a comprehensive insight about the constitutional developments of Pakistan. Starting from the Government of India Act, 1935 till to date, all important events leading to constitutional developments in Pakistan will be the focus of course. Failure of the constitutional machinery and leading constitutional cases on the subject. Moreover, students will study the process of governance, national development, issues arising in the modern age and posing challenges to Pakistan.

Course Learning Objectives:

This course will cover the entire Constitution of Pakistan 1973. However, emphasis would be on the fundamental rights, the nature of federalism under the constitution, distribution of powers, the rights and various remedies, the supremacy of parliament and the independence of judiciary

Course Contents:

- ✓ **Ideology of Pakistan**
 - Ideological rationale with special reference to Sir Syed Ahmed Khan, Allama Muhammad Iqbal and Quaid-e-Azam Muhammad Ali Jinnah.
 - Two Nation Theory and Factors leading to Muslim separatism.
- ✓ **Constitutional Developments**
 - Salient Feature of the Government of India Act 1935
 - Salient Feature of Indian Independence Act 1947
 - Objectives Resolution
 - Salient Feature of the 1956 Constitution
 - Developments leading to the abrogation of Constitution of 1956
 - Salient features of the 1962 Constitution
 - Causes of failure of the Constitution of 1962
 - Comparative study of significant features of the Constitution of 1956, 1962 and 1973
- ✓ **Fundamental rights**
- ✓ **Principles of policy**
- ✓ **Federation of Pakistan**
- ✓ **President Parliament**
 - The Federal Government
- ✓ **Provinces**
 - Governors
 - Provincial Assemblies
 - The Provincial Government
- ✓ **The Judiciary**
 - Supreme Court
 - High Courts
 - Federal Shariat
 - Courts Supreme
 - Judicial Council

Administrative Courts and tribunals

- ✓ **Islamic Provisions in Constitution**
- ✓ **Significant Amendments of Constitution of Pakistan 1973**

Recommended Texts:

1. Constitutional and Political History of Pakistan by Hamid Khan
2. Mahmood, Shaukat and Shaukat, Nadeem. Constitution of the Islamic Republic of Pakistan, 3rd re edn. Lahore: Legal Research Centre, 1996.

Suggested Readings:

1. Munir, Muhammad. Constitution of the Islamic Republic of Pakistan: Being a Commentary on the Constitution of Pakistan, 1973. Lahore, Law Pub., 1975.
2. Rizvi, Syed Shabbar Raza. Constitutional Law of Pakistan: Text, Case Law and Analytical Commentary. 2nd re edn. Lahore: Vanguard, 2005.
3. The Text of the Constitution of the Islamic Republic of Pakistan, 1973 (as amended).
4. Fundamental Laws of Pakistan by A.K. Brohi

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|-------------------|--------------------------|---------------|
| GEOG -5107 | Regional Concepts | 3(3-0) |
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Course Brief:

Regional geography is a major branch of geography. It focuses on the interaction of different cultural and natural geo-factors in a specific land or landscape, while its counterpart, systematic geography, concentrates on a specific geo-factors at the global level. By the end of this course, the student will be able to describe what are geography and regional Geography and also major cultural region of the world. It focuses on major physical region and briefly explains major historical events and the impact of these events on World Geography.

Course Learning Objectives:

Students will get an introduction to the main regions of the world in terms of both their uniqueness and similarities. They will thus gain a perspective about social and cultural diversity of the world. Students will learn the relationships between the global, the regional and the local, particularly how places are inserted in regional and global processes. Students will be exposed to historical, economic, cultural, social and physical characteristics of regions, notably how they came to be, their main role and function and how they are changing. Students will see how human activities and the regional environment interact, particularly how societies reflect their regional environment.

Course Contents:

1. Introduction to Regional Concepts
2. Scope, Status, and the significance of the regional approach, Regional approach and its evolution
3. Criteria for dividing world into regions
4. Physical Attributes: Location, Physiography, Climate, Soils, Hydrology and Natural Vegetation
5. Economic attributes: Human Resources, Mineral and Power resources, Agriculture, Industry, Communication and Trade
6. Types of Regions
7. Physical Regions, Economic Regions, Political Regions, Cultural Regions
8. Special Purpose Regions
9. Major Regions of the world
10. Role of the Region in Global Development

Lab. Work

Identification and delimitation of different types of regions on maps

Recommended Texts:

1. Bradshaw, M. & White, G. W. (2007). *Contemporary world regional geography: global connections, local voices*. Boston: McGraw-Hill.
2. Deblij, H. J. D & Muller, P. O. (2011). *The world today: concepts and regions in geography*. New York : John Wiley & Sons.

Suggested Readings:

1. Hobbs, J. (2010). *Fundamentals of world regional*. Boston: Cole Cengage learning.
2. Knox, P. L. & Marston, S. A. (2003). *Places and regions in global context: human geography*. New Jersey: Prentice Hall.
3. James. & Preston, E. (2000). *One world divided*. New Jersey: Prentice Hall.

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|-------------------|----------------------|---------------|
| GEOG -5108 | Geomorphology | 3(3-0) |
|-------------------|----------------------|---------------|

Course Brief:

Geomorphology is the study of landforms, their processes, form and sediments at the surface of the Earth (and sometimes on other planets). Study includes looking at landscapes to work out how the earth surface processes, such as air, water and ice, can mold the landscape. Landforms are produced by erosion or deposition, as rock and sediment is worn away by these earth-surface processes and transported and deposited to different localities. The different climatic environments produce different suites of landforms. The landforms of deserts, such as sand dunes and ergs, are a world apart from the glacial and periglacial features found in polar and sub-polar regions. So geomorphology is a diverse discipline.

Course Learning Objectives:

The basic geomorphologic principles can be applied to all environments, Geomorphologists tend to specialize in one or two areas, such as Aeolian (desert) geomorphology, glacial and periglacial geomorphology, volcanic and tectonic geomorphology, and even planetary geomorphology. Most research is multi-disciplinary, combining the knowledge and perspectives from two contrasting disciplines, combining with subjects as diverse as ecology, geology, civil engineering, and hydrology and soil science.

Course Contents:

1. Scope and status of geomorphology
2. Introduction to geomorphic concepts/principles
3. Factors of landform development; structure, process and geological time scale
4. Endogenic Processes
5. Isostasy
6. Diastrophism
7. Continental drift
8. Plate tectonic
9. Volcanism
10. Earthquakes
11. Exogenic Processes
12. Weathering; mass wasting and their types

Recommended Texts:

1. Thompson, G. R., & Turk, J. (1998). *Introduction to physical geology*. Brooks/Cole Publishing Company.
2. Thornbury, W. D. (2004). *Principles of geomorphology*. New York: John Wiley & Sons.

Suggested Readings:

1. Englen O.D.V. (2000). *Geomorphology*. New York: Macmillan.
2. Stringer, E. T. (2004). *Modern physical geography*. New York: John Wiley.

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| GEOG – 5109 | Climatology | 3(3-0) |
|--------------------|--------------------|---------------|

Course Brief:

The course provides an overview of the physical processes responsible for determining global and regional climate. This course gives a general introduction to meteorology and climatology. Meteorology topics include energy balance, moisture and cloud development in the atmosphere, atmospheric dynamics, small and large scale circulations, storms and cyclones, and weather forecasting. Climatology topics include the interaction between the atmosphere and oceans over long time periods, climate classification, and the potential for climatic change. It brings together information from rural communities, indigenous peoples and research workers on how they use agro- biodiversity to cope with climate change.

Course Learning Objectives:

It stimulates communication between agro-biodiversity researchers, users and maintainers. It identifies tools and practices relevant to using agro-biodiversity for coping with climate change and making these widely available. It also promotes awareness of the vital role of agro-biodiversity in adapting to climate change among key audiences, including donors, development agents and the global biodiversity community.

Course Contents:

1. Introduction.
2. Key concepts in climatology and meteorology.
3. Structure and composition of atmosphere.
4. Elements and factors of climate.
5. Insolation and Terrestrial heat budget.
6. Temperature distribution.
7. Humidity and its types; Condensation and their forms, Precipitation, formation and their types.
8. Atmospheric Pressure and global pressure belts.
9. Atmospheric Circulation: (Upper and Lower) air stability and instability, storms; Cyclones (hurricanes, typhoons) and tornadoes
10. Air masses and fronts.
11. Classification of climates; critical study of the Koppen, Miller and Thornthwaite classifications of major climates.
12. Climate variability and climate change: Natural and anthropogenic; Greenhouse gasses; global warming; acid rain, ozone layer depletion El-Niño and La-Niña, impact on precipitation distribution.
13. Climatic regions of Pakistan and their characteristics
14. Climatic data: sources, collection, analysis and presentation. Problems associated with data quality (spatial, temporal).

Recommended Texts:

1. Miller A. (2001). *Climatology*. Haryana: Shubhi Publications.
2. Barry. R. (1998). *Atmosphere, weather and climate*. London: Routledge.

Suggested Readings:

1. Shamshad, K.M. (1988). *The meteorology of Pakistan*. Karachi: Royal Book Co.
2. Strahler, A. N. (1998). *Elements of physical geography*. New York: John Wiley.
3. Diwan A. P. &Arora. D. K. (1995). *Origin of ocean*. New York: John Wiley.

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|-----------|-----------------------------------|------------|
| URCG-5111 | Translation of the Holy Quran- II | Non-Credit |
|-----------|-----------------------------------|------------|

| Topic | Details |
|------------------|---|
| Semester/Level | In some discipline 3 rd semester and in some discipline 4 th Semester/ ADP Program 2 nd Year |
| Course Code | URCG-5111 |
| Course Title | Translation of the Holy Quran – II |
| Credit Hours | Non-Credit |
| Objectives | <ul style="list-style-type: none"> ▪ Students will come to know about the real nature, significance and relevance of the Islamic beliefs in light of the text of the Holy Quran. ▪ Students will seek knowledge of translation and transliteration of the Holy Book Quran. ▪ To familiarize the students with the concept of Ibādah (Its significance, scope and relevance) and its types in Islam. ▪ Students will learn literal and idiomatic way of translation of the Holy Book. ▪ Students will learn about the polytheism and its incompatibility in Islam highlighted by the Holy Quran. ▪ To highlight the significance of learning through using all human faculties provided by the almighty Allah and familiarize the students about condemnation of ignorance mentioned in the Quranic text. ▪ To develop Awareness among the students about rights and duties of different circles of society in the light of Holy Quran. ▪ To introduce the students to Quranic Arabic grammar in practical manner. |
| Course Contents: | <p>○ ایمانیات اور عبادات الله پر ایمان، فرشتوں پر ایمان، رسولوں پر ایمان، آسمانی کتابوں پر ایمان یوم آخرت پر ایمان، تقدیر پر ایمان نماز، روزہ، زکوٰۃ، حج، جہاد ○ معاشرے کے حقوق</p> <ul style="list-style-type: none"> • خاندان کی تکوین • حق مہر • رضاعت و حمل • اولاد کو قتل کرنے کے ممانعت • شوہر کی نافرمانی • طلاق • بیوہ کی عدت کے احکام • نکاح کا پیغام بھیجنا • عورت کی وراثت (اس کے شوہر کی طرف سے) • والدین کے حقوق • بیویوں اور اولاد کے بیچ عداوت ○ خاندان کے حقوق • مہمان کی عزت • اجازت طلب کرنے کے اصول • مجلس کے آداب • تعاون اور بھائی چارہ • گروہ بندی • محبت • لوگوں کے درمیان صلح • عفو و درگزر، غصہ پر قابو اور معاف کرنا • شعوب و قبائل • لوگوں کے بیچ اختلافات • حمایت و نگہبانی |
| Grammar: | • قرآنی عربی گرامر کے اصول اور ان کے اطلاقات (متن قرآنی پر اطلاق سے) |

| | توضیحات |
|--|--|
| Details of Chapters and verse Numbers: | <ul style="list-style-type: none"> ▪ منتخب آیات مع ترجمه وتجوید ▪ البقره ((١٤٤، ٢٣٨، ٣٥، ٢٤٤، ٢١٩، ١١٠، ٣٥، ١٥٣، ٢٣٤، ٢٠١، ٢٨٥، ٣٣، ٢٨٥، ١٥، ١٢٩، ٢٥٣، ٩٨، ٦٢، ١٢٦، ٢٨٥، ٢٥٦، ١٤٤، ١٣٦، ١٨٩، ٢٠٠، ١٨٣، ١٨٣، ٢١٨، ٢١٨، ١٥٨، ٢٣١، ١٩٩، ٢٢٤، ٢٢٦، ٢٣٤، ٢٢٨، ٢٢٩، ٢٣١، ٢٣٤، ٢٣٥، ٢٣٠، ٨٢، ١٨٣، ٢٣٣، ١٨٢، ١٦٠، ٨٣)) ▪ النساء (٩٥، ٩٢، ٥٩، ١٣٦، ٦٩، ٨٠، ١٣، ٦٩، ٨٠، ٨٦، ٨٠، ٣٦، ١٤٦، ١٢، ٣٥، ١٢٨، ٣٣، ١١، ٣، ١٤٦، ٢٣، ٢٥، ١١، ١١، ١١، ١٢٨، ١٩١، ٣٥، ٢٠، ٣٥، ١٩١، ٦، ١، ٢٠، ١، ١٦، ١٣٦، ٥٣، ١٢٨، ٨١) ▪ الانعام (٢٢، ١٣٤، ١٣٤، ٩٢، ١٥١، ٣٨، ٥٣) ▪ آل عمران (٩٤، ٣٩، ٨٥، ١٢٥، ٨٣، ١٣٣، ١٠٩، ١) ▪ المائده (٥٣، ٢، ٩٢، ٣٩، ١٩، ٨٢، ٢، ٥) ▪ الاعراف (٣٥، ١٨٩، ١٨٩) ▪ التوبه (٢٠، ٤١، ١٦) ▪ بود (١٢) ▪ الزمر (٦) ▪ النور (٥٣، ٢٨، ٥٢، ٢٤، ٦٠، ٢٩) ▪ محمد (٣٣) ▪ انفال (٨٢، ٢٠) ▪ الرعد (٣) ▪ الطلاق (٣) ▪ الحج (٥) ▪ ابراهيم (٢٣، ٣٣) ▪ الاسراء (٢٣، ٢٣) ▪ الاحقاف (١٥) ▪ المومنون (٢٤) ▪ العنكبوت (٢٥، ٣٨، ٨) ▪ النحل (٢٢) ▪ لقمان (١٥، ٣، ١٣) ▪ الاحزاب (٣٥، ٥٠، ٣٨، ٣٩) ▪ الشعراء (٤) ▪ الروم (٢١) ▪ مريم (١٣، ٢٦) ▪ المجادله (١٢، ١١) |

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| URCG-5114 | Basic Science | 3 (2-1) |
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Course Brief:

Life, its characteristics, natural science, biology and its branches; Importance of Flora & Fauna in biodiversity; Importance of Natural Compounds in daily life, medicine and human health; Latest developments in natural sciences (Biotechnology); Ecosystem and its components; Environment and its components; Pollutants and their effect on the environment (Greenhouse effect, global warming, acid rains, water pollution and ozone depletions etc); Introduction to micro-organism and its types (bacteria, fungi, viruses)

Practical:

- 1: Field Survey of Flora & Fauna and their identification
- 2: Study of herbarium
- 3: Study of Museum

Recommended Texts.

1. Keddy, P.A. (2017). *Plant ecology origins, processes, consequences*. Cambridge, University Press.
2. Canadell, J.G., Diaz, S., Heldmaier, G., Jackson, R.B., Levia, D.F., Schulze, E.D. & Sommer, U. (2019). *Ecological studies*. Springer.
3. Bhat, S.V., Nagasampagi, B.A. & Sirakumar, M. (2006). *Chemistry of Natural Products*. Springer Science
4. De, A.K. (2019). *Environmental Chemistry*. New Age International Press

Suggested Books

1. Fath, B. (2018). *Encyclopedia of ecology*. Elsevier.
2. Ajith, H. .. Urmas. P., Pastur, G. M & Iversion L. R. (2018). *Ecosystem services from forest landscapes: broadsclaes consideration*. 1stEdition. Springer International Publishing AG.
3. Xu, R., Ye, Y. & Zhao, W. (2011). *Introduction to Natural Product Chemistry*. CRC Press
4. Tayler, D.J., Green, N.P.O. & Stout, G.W. (1997). *Biological Science 1&2*. Cambridge University Press
5. Tayler, M.R., Simon, E.J., Dickey, D.J. & Hogan, K.A. (2020). *Campbell Biology: Concepts & Connections* (10th Edition). Pearson

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| URCG-5124 | Entrepreneurship | 2(2-0) |
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Course Brief:

This course addresses the unique entrepreneurial experience of conceiving, evaluating, creating, managing, and potentially selling a business idea. The goal is to provide a solid background with practical application of important concepts applicable to the entrepreneurial environment. Entrepreneurial discussions regarding the key business areas of finance, accounting, marketing and management include the creative aspects of entrepreneurship. This course relies on classroom discussion, participation, the creation of a feasibility plan, and building a business plan to develop a comprehensive strategy for launching and managing a new venture.

Course Learning Objectives:

1. To enhance the ‘entrepreneurial intentions’ of the students by improving their natural willingness to start a business.
2. To understand the process of entrepreneurship and learn the ways to manage it by working individually in the class and in the form of groups outside the class to conduct field assignments.
3. To educate the students about the practical underpinnings of the entrepreneurship with the aid of practical assignments and idea pitching.

Course Contents:

1. **Background:** What is an Organization, Organizational Resources, Management Functions, Kinds of Managers, Mintzberg’s Managerial Roles.
2. **Forms of Business Ownership:** The Sole proprietorship, Partnership, Joint Stock Company
3. **Entrepreneurship:** The World of the Entrepreneur, what is an entrepreneur? The Benefits of Entrepreneurship, The Potential Drawbacks of Entrepreneurship, Behind the Boom: Feeding the Entrepreneurial Fire.
4. **The Challenges of Entrepreneurship:** The Cultural Diversity in Entrepreneurship, The Power of “Small” Business, Putting Failure into Perspective, The Ten Deadly Mistakes of Entrepreneurship, How to Avoid the Pitfalls, Idea Discussions & Selection of student Projects, Islamic Ethics of Entrepreneurship.
5. **Inside the Entrepreneurial Mind:** From Ideas to Reality: Creativity, Innovation, and Entrepreneurship, Creativity – Essential to Survival, Creative Thinking, Barriers to Creativity, How to Enhance Creativity, The Creative Process, Techniques for Improving the Creative Process, Protecting Your Ideas, Idea Discussions & Selection of student Projects.
6. **Products and technology, identification opportunities**
7. **Designing a Competitive Business Model and Building a Solid Strategic Plan:** Building a strategic plan, Building a Competitive Advantage, The Strategic Management Process, Formulate strategic options and select the appropriate strategies, Discussion about execution of Students’ Project.
8. **Conducting a Feasibility Analysis and Crafting a Winning Business Plan:** Conducting

a Feasibility Analysis, Industry and market feasibility, Porter's five forces model, Financial feasibility analysis. Why Develop a Business Plan, The Elements of a Business Plan, What Lenders and Investors Look for in a Business Plan, Making the Business Plan Presentation.

9. **Building a Powerful Marketing Plan:** Building a Guerrilla Marketing Plan, Pinpointing the Target Market, Determining Customer Needs and Wants Through Market Research. Plotting a Guerrilla Marketing Strategy: How to Build a Competitive Edge, Feed Back & Suggestions on Student Project, Islamic Ethics for Entrepreneurial Marketing
10. **E-Commerce and the Entrepreneur:** Factors to Consider before Launching into E-Commerce, Ten Myths of E-Commerce, Strategies for E-Success, Designing a Killer Web Site, Tracking Web Results, Ensuring Web Privacy and Security, Feed Back & Suggestions on Student Project.
11. **Pricing Strategies:** Three Potent Forces: Image, Competition, and Value, Pricing Strategies and Tactics, Pricing Strategies and Methods for Retailers, The Impact of Credit on Pricing
12. **Attracting Venture Capitalist:** Projected Financial Statements, Basic Financial Statements, Ratio Analysis, Interpreting Business Ratios, Breakeven Analysis, Feed Back & Suggestions on Student Project,
13. **Idea Pitching:** Formal presentation, 5-minutes pitch, funding negotiation and launching.

Recommended Texts:

1. Scarborough, N. M. (2011). *Essentials of entrepreneurship and small business management*. Publishing as Prentice Hall, One Lake Street, Upper Saddle River, New Jersey 07458..

Suggested Readings:

1. Burstiner, I. (1989). *Small business handbook*. Prentice Hall Press.

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| URCG-5125 | Civics and Community Engagement | 2(2-0) |
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Course Brief:

The Civics and Community Engagement course is designed to provide students with an understanding of the importance of civic participation, culture and cultural diversity, basic foundations of citizenship, group identities and the role of individuals in creating positive change within their communities. The course aims at developing students' knowledge, skills and attitudes necessary for active and responsible citizenship.

Course Learning Objectives:

After completing this course, students will be able to

- Understand the concepts of civic engagement, community development, and social responsibility.
- Understand rights and responsibilities of citizenship
- Understand cultural diversity in local and global context
- Analyze the significance of civic participation in promoting social justice, equity, and democracy.
- Examine the historical and contemporary examples of successful civic and community engagement initiatives.
- Identify and assess community needs, assets, and challenges to develop effective strategies for community improvement.
- Explore the ethical implications and dilemmas associated with civic and community engagement.
- Develop practical skills for effective community organizing, advocacy, and leadership.
- Foster intercultural competence and respect for diversity in community engagement efforts.
- Collaborate with community organizations, stakeholders, and fellow students to design and implement community-based projects.
- Reflect on personal growth and learning through self-assessment and critical analysis of community engagement experiences.

Course Contents:

Introduction to Civics & Community Engagement

- ✓ Overview of the course: Civics & Community Engagement
- ✓ Definition and importance of civics
- ✓ Key concepts in civics: citizenship, democracy, governance, and the rule of law
- ✓ Rights and responsibilities of citizens

Citizenship and Community Engagement

- ✓ Introduction to Active Citizenship: Overview of the Ideas, Concepts, Philosophy and Skills
- ✓ Approaches and Methodology for Active Citizenship

Identity, Culture, and Social Harmony

- ✓ Concept and Development of Identity, Group identities
- ✓ Components of Culture, Cultural pluralism, Multiculturalism, Cultural Ethnocentrism, Cultural relativism, Understanding cultural diversity, Globalization and Culture, Social Harmony,
- ✓ Religious Diversity (Understanding and affirmation of similarities & differences)
- ✓ Understanding Socio-Political Polarization
- ✓ Minorities, Social Inclusion, Affirmative actions

Multi-cultural society and inter-cultural dialogue

- ✓ Inter-cultural dialogue (bridging the differences, promoting harmony)
- ✓ Promoting intergroup contact/ Dialogue
- ✓ Significance of diversity and its impact
- ✓ Importance and domains of Inter-cultural dialogue

Active Citizen: Locally Active, Globally Connected

- ✓ Importance of active citizenship at national and global level
- ✓ Understanding community
- ✓ Identification of resources (human, natural and others)
- ✓ Utilization of resources for development (community participation)
- ✓ Strategic planning, for development (community linkages and mobilization)

Human rights, constitutionalism and citizens' responsibilities

- ✓ Introduction to Human Rights
- ✓ Human rights in constitution of Pakistan
- ✓ Public duties and responsibilities
- ✓ Constitutionalism and democratic process

Social Institutions, Social Groups, Formal Organizations and Bureaucracy

- ✓ Types of Groups, Group identities, Organizations
- ✓ Bureaucracy, Weber's model of Bureaucracy
- ✓ Role of political parties, interest groups, and non-governmental organizations

Civic Engagement Strategies

- Grassroots organizing and community mobilization
- Advocacy and lobbying for policy change
- Volunteerism and service-learning opportunities

Social issues/Problems of Pakistan

- ✓ Overview of major social issues of Pakistani society

Social Action Project

Recommended Texts:

1. Kennedy, J. K., & Brunold, A. (2016). Regional context and Citizenship education in Asia and Europe. New York: Routledge, Falmer.
2. Henslin, James M. (2018). Essentials of Sociology: A Down to Earth Approach (13th ed.). New York: Pearson Education
3. Macionis, J. J., & Gerber, M.L. (2020). Sociology. New York: Pearson Education

Suggested Readings:

1. Glencoe McGraw-Hill. (n.d.). Civics Today: Citizenship, Economics, and Youth.
2. Magleby, D. B., Light, P. C., & Nemacheck, C. L. (2020). Government by the People (16th ed.). Pearson.
3. Sirianni, C., & Friedland, L. (2005). The Civic Renewal Movement: Community-Building and Democracy in the United States. Kettering Foundation Press.
4. Bloemraad, I. (2006). Becoming a Citizen: Incorporating Immigrants and Refugees in the United States and Canada. University of California Press.
5. Kuyek, J. (2007). Community Organizing: Theory and Practice. Fernwood Publishing.
6. DeKieffer, D. E. (2010). The Citizen's Guide to Lobbying Congress. TheCapitol.Net.
7. Rybacki, K. C., & Rybacki, D. J. (2021). Advocacy and Opposition: An Introduction to Argumentation (8th ed.). Routledge.
8. Kretzmann, J. P., & McKnight, J. L. (1993). Building Communities from the Inside Out: A Path Towards Finding and Mobilizing a Community's Assets. ACTA Publications.
9. Patterson, T. E. (2005). Engaging the Public: How Government and the Media Can Reinvigorate American Democracy. Oxford University Press.
10. Love, N. S., & Mattern, M. (2005). Doing Democracy: Activist Art and Cultural Politics. SUNY Press.

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| GEOG - 5110 | Economic Geography | 3(3-0) |
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Course Brief:

This course provides an introduction to economic geography. This course is an introduction to the theories, concepts, methods and data used by geographers to analyze the location of economic activities, the spatial organization of economic systems, the human use of the earth's resources and environmental issues. Topics studied include agriculture, manufacturing, transportation, retailing, urban structure, spatial diffusion and economic development. The course explores processes driving spatial patterns of economic activity at the global, national, regional, and local scales. Topic areas include economic globalization, spatial distribution of industrial sectors, multinational corporations, international trade, regional economic development, and illegal economic activities.

Course Learning Objectives:

This course looks at the development of the global marketplace in both the developed and the developing world. After the completion of this course student will be able to understand the significance of geographic concepts for socio-economic processes and the dynamics of the world economy, man's resource use and the pressure that population puts on the resource base.

Course Contents:

1. Introduction (Definition ,Scope, Approaches to Study Economic Geography)
2. Branches of Economic Geography
3. Relationship with other Branches of the Geography
4. Producer and Consumer
5. Decision Making
6. Man Against Nature
7. Comparative Advantage
8. Perception
9. Evolution of world economic systems: Medieval feudal economics, economic impacts of colonialism. Modern world economic systems
10. Concept of natural resources and reserves
11. Human resource and its development
12. Classification of economic activities

Recommended Texts:

1. Aoyama, Y., James T. M. & Susan H. (2012). *Key concepts in economic geography*. Singapore: SAGE.
2. Boyee, R. R. (2000). *The basic of economic geography*. New York: Holt, Rinehart & Winston.

Suggested Readings:

1. Khan, F.K. (1998). *An introduction to economic geography*. Karachi: Oxford Publishers.
2. Knox, P & Agnew, J. (2008). *The geography of the world economy*. London: Edward Arnold.
3. Alnwick, H. (2012). *A geography of commodities*. London: Harrap.

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| GEOG - 5111 | Quantitative Methods in Geography | 3(3-0) |
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Course Brief:

To train students in collection, analysis, interpretation and presentation of quantitative spatial data and to enable them to organize and conduct independent research. To use database software for the analysis of both Spatial and Temporal data. Quantitative techniques are the techniques that are concerned with collection, organization, presentation, analysis and interpretation of data.

Course Learning Objectives:

The quantitative techniques in geography are a recent development. The hard numbers behind any good research project are called quantitative data. Quantitative data is the language of science. It uses mathematical models, theories, and hypotheses. Quantitative data and qualitative data, in which you observe the non-numerical qualities of your subject, go hand-in-hand.

Course Contents:

1. Introduction
2. Quantitative revolution and its impact on Geography
3. Parametric and non-parametric statistics
4. Nature of geographical data and measurement scales.
5. Data summarizing techniques
6. Theory of central tendency
7. Dispersion
8. Variability.
9. Time Series: graphs, growth and decline, index numbers, logarithmic scales, trends and fluctuations
10. Components of time series.
11. Methods of drawing trend lines for linear and exponential series scatter diagrams
12. Standard errors and probability, correlation and regression.
13. Quantitative models in Geography

Lab. Work

1. Introduction to EPI-Info SPSS E-view, MS Excel, MiniTab and other relevant software database for quantitative analysis.

Recommended Texts:

1. Haring, L. L. (2002). *Introduction to scientific geographic Research*. Oxford: ECB.
2. Levin, J. (2006). *Elementary statistics in social research*. New Delhi: Pearson.

Suggested Readings:

1. Matthew, H. & Foster, I. (2001). *Geographical data. sources, presentation and analysis*. London: Oxford University Press.
2. Mckillup, S. & Melinda, D. D. (2010). *Geostatistics explained*. Cambridge: Cambridge University Press.
3. Walford, N. (2011). *Practical statistics for geographers and earth Science*. Singapore: Wiley-Blackwell.

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| GEOG -5112 | Principles of Cartography | 3(1-2) |
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Course Brief:

Cartography or mapmaking is the study and practice of making representations of the Earth on a flat surface. The discipline of cartography combines science, aesthetics, and technical ability to create a balanced and readable representation that is capable of communicating information effectively and quickly.

Course Learning Objectives:

Cartography is a complex, an ever-changing field, but at the center of it is the map-making process. Viewed in the broadest sense, this process includes everything from the gathering, evaluation and processing of source data, through the intellectual and graphical design of the map, to the drawing and reproduction of the final document. As such, it is a unique mixture of science, art and technology and calls for a variety of in-depth knowledge and skills on the part of the cartographer.

Course Contents:

1. Evolution of Cartography
2. Basic geodesy, spherical, ellipsoidal and geoidal earth, geographical and planer.
3. Coordinates, properties of the graticule and geodetic position.
4. Map projections: Major types, merits and demerits of commonly used map projections.
5. Map Datum
6. Symbolization, symbol types and graphic variables
7. The symbolization problems, symbolizing graphic features.
8. Lettering principles.
9. Mapping statistical surfaces
10. Thematic map, choropleth, dot map, isolines, area cartograms.
11. Principles of cartographic design, general design problems; design of map symbols
12. Basic procedure and designing of the thematic maps such as topographic, climatic, economic, population, settlements, urban morphology etc.
13. Map production, form of map output, construction material, output options, composing separations, proofing.
14. Introduction to Digital Cartography
15. Terrain data (Digital Elevation Model/ Digital Terrain Model)

Recommended Texts:

1. Singh, G. (2009). *Map work and practical geography*. Karachi: Vikas Publishing House Pvt Ltd.
2. Singh. L. & Raghu naadam, S. (2000). *Map work and practical Geography*. New Delhi: kalyani publishers.

Suggested Readings:

1. Ahmad.Z. (1998). *Text book of Practical geography*. Cambridge: Cambridge University Press.
2. Bygott, J. (2000). *An introduction to mapwork and practical geography*. University Tutorial Press.
3. Bygott, J. (2000). *Mapwork and practical geography*. New Delhi:University Tutorial Press.