

**Department of Geography, Faculty of Science**  
**Aligarh Muslim University, Aligarh**  
**Revised Syllabus of B.A./B.Sc. (Hons) I Semester 2020-2021**

Name of the Teacher: (06 Section)	Dr. Mohammad Taufique, Dr. Fazlur Rahman, Dr. S. Kausar Shamim, Dr. Md. Naiyer Zaidy, Dr. Hasibur Rahaman, Dr. Naushaba Naseem Ahmad.
Course Title:	<b>GEOMORPHOLOGY</b>
Course Number:	GGB151
Credit:	04
Course Category:	GGB
Content of Course:	
Type of Course:	Theory
Course Assessment:	Sessional: 30% End Term: 70%
Course Objective:	The objectives of this course are to introduce basic concepts of lithospheric Earth. Further, this course synthesizes meaning, identification, evaluation and interpretation of landforms and geomorphic processes.
Course Outcomes:	after end of the lesson students able to hone their scientific understanding, illustration, skill and developed themselves as self-confidant coveted learner in the field of landforms study.

<b>Syllabus</b>	<b>No. of Lectures</b>
<b>1. Nature and scope of Geomorphology:</b> Constitution of earth interior on the basis of evidence from seismology, temperature, density, pressure and chemical composition. Isostasy: concept of Airy and Pratt. Continental Drift Theory and its limitations.	<b>12</b>
<b>2. Earth Movements:</b> Orogenetic and epirogenetic movement and their resultant structure- folds and faults, Earthquakes and Volcanoes- their distribution, causes, consequences and preparedness. Plate Tectonics Theory.	<b>12</b>
<b>3. Geomorphic Processes:</b> Rocks-Types and characteristics, Weathering, Mass Wasting, A Critical Analysis of the Concept of Cycle of Erosion by Davis and Penck.	<b>10</b>
<b>4. Geomorphic Agents and Process:</b> The work of running water, erosional and depositional landforms of the Fluvial, Aeolian, Coastal, Glacial and Karst topography.	<b>14</b>
<b>Reading List</b>	
1. Bloom A. L., 2003: <i>Geomorphology: A Systematic Analysis of Late Cenozoic Landforms</i> , Prentice-Hall of India, New Delhi.	
2. Bridges E. M., 1990: <i>World Geomorphology</i> , Cambridge University Press, Cambridge.	
3. Christopherson, Robert W., (2011), <i>Geosystems: An Introduction to Physical Geography</i> , 8 Ed., Macmillan Publishing Company	
4. Kale V. S. and Gupta A., 2001: <i>Introduction to Geomorphology</i> , Orient Longman, Hyderabad.	
5. Knighton A. D., 1984: <i>Fluvial Forms and Processes</i> , Edward Arnold Publishers, London.	
6. Richards K. S., 1982: <i>Rivers: Form and Processes in Alluvial Channels</i> , Methuen, London.	

7. Selby, M.J., (2005), *Earth's Changing Surface*, Indian Edition, OUP
8. Skinner, Brian J. and Stephen C. Porter (2000), *The Dynamic Earth: An Introduction to physical Geology*, 4th Edition, John Wiley and Sons
9. Thornbury W. D., 1968: *Principles of Geomorphology*, Wiley.
10. Gautam, A (2010): *Bhautik Bhugol*, Rastogi Publications, Meerut
11. Tikkaa, R N (1989): *Bhautik Bhugol ka Swaroop*, Kedarnath Ram Nath, Meerut
12. Singh, S (2009): *Bhautik Bhugol ka Swaroop*, Prayag Pustak, Allahabad

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**Revised Syllabus of B.A./B.Sc. (Hons) I Semester 2020-2021**

Name of the Teacher: (06 Section)	Prof. S. Naushad Ahmad, Dr. Mohammad Taufique, Dr. Saleha Jamal, Dr. Fazlur Rahman, Dr. Mashkooor Ahmad, Dr. S. Kausar Shamim, Dr. Shamshad, Dr. Nikhat Bano, Dr. Md. Naiyer Zaidy, Dr. Hasibur Rahaman, Dr. Naushaba Naseem Ahmad.
Course Title:	Cartographic Techniques (Practical)
Course Number:	GGB-1P1
Credit:	02
Course Category:	GGB
Content of Course:	
Type of Course:	Practical
Course Assessment:	Continuous Evaluation: 40 % End Term: 60 %
Course Objective:	To introduce basic concept of cartography and develop the understanding about different type of maps, scales, relief features and surveying.
Course Outcomes:	After end of this course, individuals will be able to identify, describe, create, construct and prepare different cartographic features such as maps, scales, relief and will be adept of conduct survey.

<b>Syllabus</b>	<b>No. of Lectures</b>
<b>1. Maps and Scale:</b> Nature and Scope of Cartography, classification and significance of maps. Scales – Concept and applications; Graphical Construction of Plain, Comparative and Diagonal Scales.	<b>18</b>
<b>2. Interpretation of Topographical Map:</b> Study and interpretation of Plain and Mountainous areas. Cross section and longitudinal profile of different relief features (slope-uniform, concave, convex; waterfall, conical hill, volcanic, gorges, U-shape & V-shape valley).	<b>10</b>
<b>3. Basic Principles of Surveying:</b> Plain Table survey: general principles, radiation and intersection methods.	<b>12</b>
<b>Practical Record:</b> A Project File in pencil, comprising one exercise <i>each</i> , on scale, map projection, interpretation of topographic sheet.	<b>10</b>
<b>Reading List</b>	
1. Anson R. and Ormelling F. J., 1994: <i>International Cartographic Association: Basic Cartographic Vol.</i> Pregmen Press.	

2. Gupta K.K. and Tyagi, V. C., 1992: *Working with Map*, Survey of India, DST, New Delhi.
3. Khan Jabir, Hasan, T & Shamshad, Scales, Academic Publications, 2014
4. Mishra R.P. and Ramesh, A., 1989: *Fundamentals of Cartography*, Concept, New Delhi.
5. Monkhouse F. J. and Wilkinson H. R., 1973: *Maps and Diagrams*, Methuen, London.
6. Rhind D. W. and Taylor D. R. F., (eds.), 1989: *Cartography: Past, Present and Future*, Elsevier, International Cartographic Association.
7. Robinson A. H., 2009: *Elements of Cartography*, John Wiley and Sons, New York.
8. Sharma J. P., 2010: *Prayogic Bhugol*, Rastogi Publishers, Meerut.
9. Singh R. L. and Singh R. P. B., 1999: *Elements of Practical Geography*, Kalyani Publishers.
10. Sarkar, A. (2015) *Practical geography: A systematic approach*. Orient Black Swan Private Ltd., New Delhi
11. Singh R L & Rana P B Singh(1991) *Prayogtmak Bhugol ke Mool Tatva*, Kalyani Publishers, New Delhi
12. Sharma, J P (2010) *Prayogtmak Bhugol ki Rooprekha*, Rastogi Publications, Meerut
13. Singh, R L & Dutta, P K (2012) *PrayogatmakBhugol*, Central Book Depot, Allahabad.

**Department of Geography, Faculty of Science**  
**Aligarh Muslim University, Aligarh**  
**Revised Syllabus of B.A./B.Sc. (Hons.) II Semester 2020-2021**

Name of the Teacher: (06 Section)	Dr. Mohammad Taufique, Dr. Fazlur Rahman, Dr. Shamshad, Dr. Hasibur Rahaman, Dr. Nikhat Bano.
Course Title:	HUMAN GEOGRAPHY
Course Number:	GGB251
Credit:	04
Course Category:	GGB
Content of Course:	
Type of Course:	Theory
Course Assessment:	Sessional: 30 % End Term: <b>70 %</b>
Course Objective:	To introduce and make them understand about different human dimensions related to culture, society, settlement and resources with their types and distribution.
Course Outcomes:	the expected learning outcome would be; the student will able to understand, identify and describe social, cultural and economic dynamics of society.

<b>Syllabus</b>	<b>No. of Lectures</b>
<b>1.</b> Introduction: Meaning and Scope of Human Geography; Major Themes; Environmental Determinism, Possibilism, Neo-determinism, their contemporary relevance.	<b>12</b>
<b>2.</b> Space and Society: Major Cultural Realms of the World. Distribution and Characteristics of Race, Religion and Language.	<b>15</b>
<b>3.</b> Population-Resource Relationship; Optimum, Over Population, Under Population, their problem and prospects. Ackerman's Population –Resource Region, Population Growth and Distribution; Population Composition; Demographic Transition Theory.	<b>10</b>
<b>4.</b> Settlements: Types of Rural Settlements; Patterns of Rural Settlements; Classification of Urban Settlements based on Function and Size; Trends and Patterns of World Urbanization.	<b>12</b>
<b>Reading List</b>	
1. Chandna, R.C. (2010) Population Geography, Kalyani Publisher.	
2. Hassan, M.I. (2005) Population Geography, Rawat Publications, Jaipur	
3. Daniel, P.A. and Hopkinson, M.F. (1989) The Geography of Settlement, Oliver & Boyd, London.	
4. Johnston R; Gregory D, Pratt G. et al. (2008) The Dictionary of Human Geography, Blackwell Publication.	

5. Jordan-Bychkov et al. (2006) *The Human Mosaic: A Thematic Introduction to Cultural Geography*. W. H. Freeman and Company, New York.
6. Kaushik, S.D. (2010) *Manav Bhugol*, Rastogi Publication, Meerut.
7. Maurya, S.D. (2012) *Manav Bhugol*, Sharda Pustak Bhawan. Allahabad.
8. Hussain, Majid (2012) *Manav Bhugol*. Rawat Publications, Jaipur

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**Revised Syllabus of B.A./B.Sc. (Hons) II Semester 2020-2021**

Name of the Teacher: (06 Section)	Prof. S. Najmul Islam Hashmi, Prof. Nizamuddin Khan, Dr. Rashid Aziz Faridi, Dr. Mumtaj Ahmad, Dr. Fazlur Rahman, Dr. S. Kausar Shamim, Dr. Shamshad, Dr. Nikhat Bano, Dr. Md. Firoz Ahmed, Dr. Hasibur Rahaman, Dr. Naushaba Naseem Ahmad,
Course Title:	Thematic Cartography (Practical)
Course Number:	GGB-2P1
Credit:	02
Course Category:	GGB
Content of Course:	
Type of Course:	Practical
Course Assessment:	Continuous Evaluation: 40 % End Term: 60 %
Course Objective:	To make familiar with different types of map, their uses and also educate them about spatial measurements and representation data generated through surveying.
Course Outcomes:	At the end of this course, students are expected to understand different types of cartographic tools and techniques such as maps, graphs, charts and able to do field survey.

<b>Syllabus</b>	<b>No. of Lectures</b>
1. <b>Concept of Thematic Cartography:</b> Importance of Thematic Maps.	<b>05</b>
2. <b>Diagrammatic Data Presentation</b> – Line graph- Simple, Polygraph, Combined Line Graph, Band Graph, Climograph, Hythergraph. Erograph’.	<b>15</b>
3. <b>Representation of Data:</b> Choropleth, Isopleths, Dot & Point Data.	<b>12</b>
4. Prismatic Compass Survey; Open and Closed.	<b>12</b>
<b>Practical Record:</b> A Thematic Atlas should be prepared on a specific theme with five plates of any state in India.	

## Reading List

1. Cuff J. D. and Mattson M. T., 1982: *Thematic Maps: Their Design and Production*, Methuen Young Books
2. Dent B. D., Torguson J. S., and Holder T. W., 2008: *Cartography: Thematic Map Design* (6th Edition), Mcgraw-Hill Higher Education
3. Gupta K. K. and Tyagi V. C., 1992: *Working with Maps*, Survey of India, DST, New Delhi.
4. Khan Jabir, Hasan, T & Shamshad, Scales, Academic Publications, 2014
5. Kraak M.-J. and Ormeling F., 2003: *Cartography: Visualization of Geo-Spatial Data*, Prentice-Hall.
6. Mishra R. P. and Ramesh A., 1989: *Fundamentals of Cartography*, Concept, New Delhi.
7. Sharma J. P., 2010: *Prayogic Bhugol*, Rastogi Publishers, Meerut.
8. Singh R. L. and Singh R. P. B., 1999: *Elements of Practical Geography*, Kalyani Publishers.
9. Slocum T. A., McMaster R. B. and Kessler F. C., 2008: *Thematic Cartography and Geovisualization* (3rd Edition), Prentice Hall.
10. Tyner J. A., 2010: *Principles of Map Design*, The Guilford Press.
11. Sarkar, A. (2015) *Practical geography: A systematic approach*. Orient Black Swan Private Ltd., New Delhi
12. Singh, L R & Singh R (1977): *Manchitra or Pryaogatamek Bhugol* , Central Book, Depot, Allahabad.
13. Bhopal Singh R L and Duttta P K (2012) *Prayogatama Bhugol*, Central Book Depot, Allahabad.



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**Revised Syllabus of B.A./B.Sc. (Hons) III Semester 2020-2021**

Name of the Teacher: (06 Section)	Dr. Mashkoor Ahmad, Dr. Md. Firoz Ahmed, Dr. Shamshad, Dr. Nikhat Bano, Dr. Md. Naiyer Zaidy, Dr. Ahmad Mujtaba
Course Title:	CLIMATOLOGY
Course Number:	GGB351
Credit:	04
Course Category:	GGB
Content of Course:	
Type of Course:	Theory:
Course Assessment:	Sessional: 30 % End Term: 70 %
Course Objective:	This paper aims to develop the conceptual knowledge about atmospheric component of physical earth. To acquaint with the elements of weather and climate and its association with human life is another aim of this course.
Course Outcomes:	At end of this course, students will be able to know about daily weather and climatic phenomenon determining the atmosphere of local, regional and global level.

<b>Syllabus</b>	<b>No. of Lectures</b>
<b>1.</b> Nature and Scope of Climatology: Weather and climate, Elements of Climate-Controlling Factors: Composition and Structure of Atmosphere; Insolation; Heating and Cooling of the Atmosphere. Heat Budget and Latitudinal Heat Balance. Adiabatic Processes, Stability and Instability.	<b>10</b>
<b>2.</b> Atmospheric Temperature; Factors controlling the temperature; horizontal and vertical distribution of temperature. Inversion of Temperature. Atmospheric Pressure: Vertical and Horizontal Distribution of Pressure: Atmospheric Moisture - forms of Precipitation and types of Rainfall.	<b>12</b>
<b>3.</b> Winds: Planetary, periodic and local winds (Loo, Mistral, Fohn, and Chinook), factors affecting the winds; General circulation of winds. Origin of the Monsoon and its relation with Jet streams.	<b>12</b>
<b>4.</b> Air Masses and Fronts: concepts, classification and properties. Tropical and Temperate cyclones (Polar front theory); Anti-cyclone. Basis of Koppen's classification; Types and characteristics.	<b>10</b>
<b>Reading List</b>	
1. Barry R. G. and Carleton A. M., 2001: <i>Synoptic and Dynamic Climatology</i> , Routledge, UK.	

2. Barry R. G. and Corley R. J., 1998: *Atmosphere, Weather and Climate*, Routledge, New York.
3. Critchfield H. J., 1987: *General Climatology*, Prentice-Hall of India, New Delhi
4. Lutgens F. K., Tarbuck E. J. and Tasa D., 2009: *The Atmosphere: An Introduction to Meteorology*, Prentice-Hall, Englewood Cliffs, New Jersey.
5. Oliver J. E. and Hidore J. J., 2002: *Climatology: An Atmospheric Science*, Pearson Education, New Delhi.
6. Trewartha G. T. and Horne L. H., 1980: *An Introduction to Climate*, McGraw-Hill.
7. Gupta L S (2000): *Jalvayu Vigyan, Hindi Madhyam Karyanvay Nidishalya*, Delhi Vishwa Vidhyalaya, Delhi
8. Lal, D S (2006): *Jalvayu Vigyan*, Prayag Pustak Bhavan, Allahabad
9. Vatal, M (1986): *Bhautik Bhugol*, Central Book Depot, Allahabad
- 10. Singh, S (2009): *Jalvayu Vigyan*, Prayag Pustak Bhawan, Allahabad.**

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**Revised Syllabus of B.A./B.Sc. (Hons) III Semester 2020-2021**

Name of the Teacher: (06 Section)	Prof. S. Najmul Islam Hashmi, Dr. Tariq M. Usmani, Dr. Saleha Jamal, Dr. Fazlur Rahman, Dr. S. Kausar Shamim, Dr. Mashkooor Ahmad, Dr. Md. Firoz Ahmed, Dr. Nikhat Bano, Dr. Shmshad, Dr. Hasibur Rahaman, Dr. Naushaba Naseem Ahmad, Dr. Md. Naiyer Zaidy.
Course Title:	STATISTICAL METHODS IN GEOGRAPHY (PRACTICAL)
Course Number:	GGB-3P1
Credit:	02
Course Category:	GGB
Content of Course:	
Type of Course:	Practical
Course Assessment:	Continuous Evaluation: 40 % End Term: 60 %
Course Objective:	To introduce the basic statistical techniques, theoretical context and its application in the field of geography.
Course Outcomes:	After end of the lesson students able to determine basic quantitative data, techniques and its appropriate uses in geographical studies.

Syllabus	No. of Lectures
1. <b>Use of Data in Geography:</b> Geographical Data Matrix, Significance of Statistical Methods in Geography; Sources of Data, Scales of Measurement (Nominal, Ordinal, Interval, Ratio).	<b>10</b>
2. <b>Tabulation and Descriptive Statistics:</b> Frequencies - Deciles, Quartiles, Percentile, Cross Tabulation	<b>12</b>
3. <b>Measurement of Central Tendencies:</b> Mean, Median and Mode, Centro-graphic Techniques.	<b>12</b>
4. <b>Measures of Dispersion:</b> Standard Deviation, Variance and Coefficient of Variation.	<b>10</b>
5. <b>Sampling:</b> Purposive, Random, Systematic and Stratified.	<b>10</b>

**Class Record:** Each student will submit a record containing five exercises:

- Construct a data matrix of about (10 x 10) with each row representing an areal unit (districts or villages or towns) and about 10 columns of relevant attributes of the areal units.
- Based on the above table, a frequency table, measures of central tendency and dispersion would be computed and interpreted for any two attributes.
- Histograms and frequency curve would be prepared **on the entire data set** and attempt to fit a normal curve and interpreted for one or two variables.
- From the data matrix a sample set (20 Percent) would be drawn using, random - systematic and stratified methods of sampling and locate the samples on a map with a short note on methods used.

**Reading List**

- Berry B. J. L. and Marble D. F. (eds.): *Spatial Analysis – A Reader in Geography*.
- King L. S., 1969: *Statistical Analysis in Geography*, Prentice-Hall.
- Mahmood A., 1977: *Statistical Methods in Geographical Studies*, Concept.

4. Pal S. K., 1998: *Statistics for Geoscientists*, Tata McGraw Hill, New Delhi.
5. Sarkar, A. (2013) *Quantitative geography: techniques and presentations*. Orient Black Swan Private Ltd., New Delhi.
6. Silk J., 1979: *Statistical Concepts in Geography*, Allen and Unwin, London.
7. Spiegel M. R.: *Statistics, Schaum's Outline Series*.
8. Yeates M., 1974: *An Introduction to Quantitative Analysis in Human Geography*, McGraw Hill, New York.

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**Revised Syllabus of B.A./B.Sc. (Hons) IV Semester 2020-2021**

Name of the Teacher: (05 Section)	Dr. Saleha Jamal, Dr. Fazlur Rahman, Dr. Mashkoor Ahmad, Dr. M. Naiyer Zaidy, Dr. Naushaba Naseem Ahmed.
Course Title:	GEOGRAPHY OF INDIA
Course Number:	GGB451
Credit:	04
Course Category:	GGB
Content of Course:	
Type of Course:	Theory
Course Assessment:	Sessional: 30 % End Term: 70 %
Course Objective:	To provide basic knowledge about physiography, demography and cultural attributes of Indian landscapes.
Course Outcomes:	The expected learning outcome would be; the conceptual clarity about physical, demographic, social, cultural and economic spheres of Indian regions.

Syllabus	No. of Lectures
<b>1. Physiography and Drainage:</b> Physiographic Divisions-The Great Himalayas, Indo-Gangetic Plain and the Peninsular Plateau. Nature and characteristics of Himalayan Drainage and Peninsular Drainage; Differences between Himalayan Drainage and Peninsular Drainage.	<b>10</b>
<b>2. Climate, Soils and Natural Vegetation:</b> characteristics of climate; origin of Monsoon-Halley's and Flohn's concepts, classification of climate given by Koppen: Soils-factors of soil formation; types and characteristic of soils: Natural Vegetation-factors for the growth and distribution of Natural Vegetation; types and characteristics of Natural Vegetation.	<b>12</b>
<b>3. Population and Social Geography;</b> Population distribution, growth, and structure, distribution of race, caste, religion, language, tribes and their correlates.	<b>14</b>
<b>4. Economic Geography:</b> Distribution and utilization of iron ore, coal, petroleum; Agricultural production and distribution of rice and wheat, problems and prospects of cotton textile industry; Trends and Development of Iron and Steel Industry.	<b>12</b>

## Reading List

1. Deshpande C. D., 1992: *India: A Regional Interpretation*, ICSSR, New Delhi.
2. Johnson, B. L. C., ed. 2001. *Geographical Dictionary of India*. Vision Books, New Delhi.
3. Mandal R. B. (ed.), 1990: *Patterns of Regional Geography – An International Perspective. Vol. 3 – Indian Perspective*.
4. Sdyasuk Galina and P Sengupta (1967): *Economic Regionalisation of India*, Census of India
5. Sharma, T. C. 2003: *India - Economic and Commercial Geography*. Vikas Publ., New Delhi.
6. Singh R. L., 1971: *India: A Regional Geography*, National Geographical Society of India.
7. Singh, Jagdish 2003: *India - A Comprehensive & Systematic Geography*, Gyanodaya Prakashan, Gorakhpur.
8. Spate O. H. K. and Learmonth A. T. A., 1967: *India and Pakistan: A General and Regional Geography*, Methuen.

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**Revised Syllabus of B.A./B.Sc. (Hons) IV Semester 2020-2021**

Name of the Teacher: (02 Section)	Dr. Mohammad Taufique, Dr. S. Kausar Shamim.
Course Title:	BASICS OF GEOGRAPHY
Course Number:	GGB491
Credit:	02
Course Category:	GGB
Content of Course:	
Type of Course:	Theory
Course Assessment:	Sessional: 30 % End Term: 70 %
Course Objective:	To make them understand about basic concepts of physical geography.
Course Outcomes:	The expected learning outcome would be; understanding, identification and description of physical aspects of basic geographical phenomenon.

<b>Syllabus</b>	<b>No. of Lectures</b>
<b>1. Meaning and Scope of Geography</b> , Solar System, Rotation and Revolution of Earth, International Date Line (IDL), Latitude and Longitude, Calculation of Time.	<b>08</b>
<b>2. Lithosphere</b> -Structure of Earth, Types of rocks-Igneous rock, Metamorphic rock and sedimentary rock and their importance.	<b>06</b>
<b>3. Atmosphere</b> - Structure and Composition of Atmosphere, Wind System, Cyclone and Anticyclone, Jet Stream, Monsoon, El-Nino, La-Nina, Global Warming.	<b>10</b>
<b>4. Hydrosphere</b> – Hydrological Cycle, Ocean Current, Tide, Waves, Tsunami.	<b>08</b>
<b>5. Biosphere</b> - Biosphere as an Ecosystem, Biogeochemical Cycle, Bio-diversity and its importance, Forest conservation and Management, National Forest Policy.	<b>08</b>
<b>Reading List:</b>  1. Majid Hussain, Fundamentals of Physical Geography, Rawat Publication, New Delhi. 2. Goh Cheng Leong, Certificate of Physical and Human Geography. 3. D.R. Khullar, India- A Comprehensive Geography. 4. D.R. Khullar, Practical Geography.	

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**Revised Syllabus of B.A./B.Sc. (Hons) IV Semester 2020-2021**

Name of the Teacher: (06 Section)	Dr. Tariq M. Usmani, Dr. Rashid Aziz Faridi, Dr. Fazlur Rahman, Dr. Mashkooor Ahmad, Dr. S. Kausar Shamim, Dr. Shamshad, Dr. Nikhat Bano, Dr. Md. Firoz Ahmed, Dr. Hasibur Rahaman, Dr. Naushaba Naseem Ahmed, Dr. Md. Naiyer Zaidy.
Course Title:	Cartography and Surveying (Practical)
Course Number:	GGB-4P2
Credit:	02
Course Category:	GGB
Content of Course:	
Type of Course:	Practical
Course Assessment:	Continuous Evaluation: 40 % End Term: 60 %
Course Objective:	To develop cartographic skills such as map works, diagram construction, graphic representation of data and physical surveying.
Course Outcomes:	At end of this course, students will be able to constructs and draw maps, graphs and diagrams based on socioeconomic data and also able to conduct specific field survey.

<b>Syllabus</b>	<b>No. of Lectures</b>
1. Representation of socio-economic data with the help of diagram. * Bar diagram (simple, multiple and divided). * Wheel diagram	<b>10</b>
2. Importance of dumpy level and its uses. Plotting of longitudinal sections by rise and fall method.	<b>10</b>
3. Study and Interpretation TWO weather maps of India.	<b>12</b>
4. Sextant - Use of Sextant – calculation of horizontal and vertical distance.	<b>08</b>
<b><u>BOOKS RECOMMENDED:-</u></b>	
<ol style="list-style-type: none"> <li>1. Bygott, J. , Mapwork and Practical Geography.</li> <li>2. Ishtiaque, M. , A Textbook of Practical Geography.</li> <li>3. Mahmood, Aslam, Statistical Techniques in Geographical Studies, Rajesh publishers, New Delhi.</li> <li>4. Misra, R.P. , &amp; Ramesh, A. , Fundamentals of Cartography, Mac Millan, New Delhi, 1986.</li> <li>5. Monkhouse, F.J. , Maps and Diagrams.</li> <li>6. Singh, R. , &amp; Singh, L.R. , Mapwork and Practical Geography.</li> <li>7. Singh, R.L., Elements of Practical Geography.</li> </ol>	



**Department of Geography, Faculty of Science**  
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**Revised Syllabus of B.A./B.Sc. (Hons) V Semester 2020-2021**

Name of the Teacher: (03 Section)	Dr. Saleha Jamal, Dr. Fazlur Rahman, Dr. S. Kausar Shamim.
Course Title:	REGIONAL PLANNING AND DEVELOPMENT
Course Number:	GGB551
Credit:	04
Course Category:	GGB
Content of Course:	
Type of Course:	Theory
Course Assessment:	Sessional: 30 % End Term: 70 %
Course Objective:	To developed the analytical understanding of regional concepts, approaches and demarcation and to make the students aware about various plans adopted for regional developments.
Course Outcomes:	At the end of the course, students will be able to critically evaluate the formal, functional and planning regions as well as they can evolve theoretical input for regional development.

Syllabus	No. of Lectures
1. <b>Concept, Need and Types of Regions:</b> Formal and Functional Regions; Planning Regions; Need and types of Regional Planning.	<b>14</b>
2. <b>Characteristics of an Ideal Planning Region;</b> Delineation of Planning Region; Regionalization of India for Planning (Agro Ecological Zones and Agro Climatic Regions).	<b>12</b>
3. <b>Models for Regional Planning:</b> Growth Pole Model of Perroux; Growth Foci Model in Indian Context; Village Cluster.	<b>12</b>
4. <b>Backward Regions and Regional Plans:</b> Special Area Development Plans in India- Hilly Area Development Programme; DVC: The Success Story and the Failures.	<b>10</b>

**RECOMMENDED BOOKS**

1. Bhat, L.S., 1973, *Regional Planning in India*, Statistical Publishing Society, Calcutta.
2. Chandana, R.C., 2000, *Regional Planning*, Kalyani Publishers, Ludhiana.
3. Chand, M., Puri, & V.K., 1983, *Regional Planning in India*, Allied Publishers, ND.
4. Friedman, J., & Alonso, W., 1967, *Reg. Dev. and Planning – A Reader*, MIT Press, Cam, Hars.
5. Glasson, 1980, *Regional Planning*, Hutchinson, London
6. Glikson, A., 1955, *Regional Planning and Development*, Netherlands, Universities Foundation of International Co - operation, London.

7. Mishra, R.P., 1969, *Regional Planning*, Concepts, Techniques and Policies, University of Mysore, Mysore.
8. Mishra, R.P., et. al., 1974, *Regional Development and Planning in India*, Institute of Development Studies, Mysore.
9. Mitra, A., 1965, *Levels of Regional Development, Census of India*, Vol. 1, Part I (A) and (B).
10. Ray Chaudhary, J., 2001, *An Introduction to Development and Regional Planning*, Orient Longman, Hyderabad.

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Name of the Teacher: (03 Section)	Prof. Jabir Hasan Khan, Dr. Mashkooor Ahmad, Dr. Shamshad.
Course Title:	POPULATION GEOGRAPHY
Course Number:	GGB552
Credit:	04
Course Category:	GGB
Content of Course:	
Type of Course:	Theory
Course Assessment:	Sessional: 30 % End Term: 70 %
Course Objective:	To build a theoretical understanding of population dynamic and its linkage with contemporary demographic issues.
Course Outcomes:	The expected learning outcome of this course would be; understanding and application of demographic concepts with emerging contemporary population and health challenges.

Syllabus	No. of Lectures
<b>1. Defining the Field:</b> Nature and Scope; Sources of Data with special reference to India (Census, Vital Statistics and NSS).	<b>10</b>
<b>2. Population Size, Distribution and Growth:</b> Determinants and Patterns; Theories of Growth – Malthusian Theory and Demographic Transition Theory.	<b>12</b>
<b>3. Population Dynamics:</b> Fertility, Mortality and Migration – Measures, Determinants and Implications.	<b>12</b>
<b>4. Population Composition and Characteristics:</b> Age-Sex Composition; Rural and Urban Composition; Literacy.	<b>08</b>
<b>5. Contemporary Issues:</b> Ageing of Population; Declining Sex Ratio; HIV/AIDS.	<b>09</b>

**BOOKS RECOMMENDED:**

1. Clarke, J.I., Population Geography, Pergamon Press, Oxford, 1972.
2. Trewartha, G.T., A Geography of Population, World patterns, John Wiley & Sons, Inc., New York.
3. Khan, J.H. Scio-Economic & Structural Analysis of Internal Migration, New Delhi 2010.
4. Trewatha, G.T., The Less Developed Realm - A Population Geography, McGraw Hill, New York, 1972.
5. Chandna, R.C., A Geography of Population: Concepts, Determinants and patterns, Kalyani publishers, New Delhi, 1986.
6. Singh, R.L., et., al. Readings in Rural Settlement Geography, Varanasi 1972.

7. Chisholm, M., Rural Settlements and Landuse, London, 1970.
8. Hudson, F.S., A Geography of Settlements, McDonald and Evans., N.D., 1976.
9. Wanmali, S., Service Centers in Rural India, B.R. Publication, Delhi, 1983.

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Name of the Teacher:	Dr. Nashaba Naseem Ahmed
Course Title:	RESOURCE GEOGRAPHY
Course Number:	GGB561
Credit:	02
Course Category:	GGB
Content of Course:	
Type of Course:	Theory
Course Assessment:	Sessional: 30 % End Term: 70 %
Course Objective:	The basic and prime objective is to make them aware about the values and importance of natural and human resources and its utilization.
Course Outcomes:	This course is designed to achieve; understanding, applying and evaluate different types resources and their judicious and sustainable uses.

Syllabus	No. of Lectures
<b>1. Concept:</b> Concept of Resource: Nature and Classification: Role of Technology in Natural Resource Development.	<b>08</b>
<b>2. Natural Resource:</b> Forest Resources- Classification, Deforestation, Economic and Ecological Significance of Forests: Soil Resources- Classification and Distribution of World Soils, Soil Erosion and its Causes: Water Resources- Utilization of Fresh Water and Marine Water Resources.	<b>10</b>
<b>3. Human Resources:</b> Concept of Human Resources, Factors Affecting the Human Resource Development; Role of Human Resources in Socio-Economic Development.	<b>10</b>
<b>4. Conservation of Natural Resources:</b> Soil Conservation, Water Conservation, Forest Conservation and Energy Conservation. Sustainable Resource Development	<b>08</b>

**Reading List**

1. Cutter S. N., Renwick H. L. and Renwick W., 1991: *Exploitation, Conservation, Preservation: A Geographical Perspective on Natural Resources Use*, John Wiley and Sons, New York.
2. Gadgil M. and Guha R., 2005: *The Use and Abuse of Nature: Incorporating This Fissured Land: An Ecological History of India and Ecology and Equity*, Oxford University Press. USA.
3. Holechek J. L. C., Richard A., Fisher J. T. and Valdez R., 2003: *Natural Resources: Ecology, Economics and Policy*, Prentice Hall, New Jersey.

4. Jones G. and Hollier G., 1997: *Resources, Society and Environmental Management*, Paul Chapman, London.
5. Klee G., 1991: *Conservation of Natural Resources*, Prentice Hall, Englewood.
6. Mather A. S. and Chapman K., 1995: *Environmental Resources*, John Wiley and Sons, New York.
7. Mitchell B., 1997: *Resource and Environmental Management*, Longman Harlow, England.
8. Owen S. and Owen P. L., 1991: *Environment, Resources and Conservation*, Cambridge University Press, New York.
9. Rees J., 1990: *Natural Resources: Allocation, Economics and Policy*, Routledge.London.

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Name of the Teacher:	Dr. Rashid Aziz Faridi
Course Title:	URBAN GEOGRAPHY
Course Number:	GGB562
Credit:	02
Course Category:	GGB
Content of Course:	
Type of Course:	Theory
Course Assessment:	Sessional: 30 % End Term: 70 %
Course Objective:	To illustrate the urban systems and its associate linkages with contemporary issues and problem.
Course Outcomes:	At the end of the course, students will be able to evaluate the urban challenges and can perform actively in making urban as a better living space.

Syllabus	No. of Lectures
1. Nature and Scope of Urban Geography, History of Urbanization, Definition of Urban Places; Census Town, Urban Agglomeration (UA) Urban Outgrowths (OUGS): Bases of Urbanization, Urban Density, Evolution of Urban Morphology.	<b>12</b>
2. Trends and Patterns of Level of Urbanization in Developed and Developing Counties, Urbanization in India, An Overview of Temporal Urban Growth, Qualitative and Quantitative Classification of Towns; Nelson's Classification of Towns, Classification of Towns by C.D. Harris.	<b>10</b>
3. Contemporary Urban Issues; Urban Poverty, Urban Congestion, Urban Sprawl, Slums; Transportation, Housing, Inclusion of Open Spaces and Parking Space in City Planning, Problems of Urban Pollution, Urban Crime.	<b>10</b>
4. Case Studies of Delhi, Mumbai and Kolkata with reference to Land use and Urban Issues.	<b>12</b>

**BOOKS RECOMMENDED:-**

1. Carter, Herold, The study of urban Geography, Edward Arnold, London , 1972.
2. Turner, Roy (ed), India's urban future, Oxford University Press, Bombay 1962.
3. Dickinson, R.E., City region and regionalism, Paul, Trench, Trubner & Co. Lond , 1947
4. Mayer, H.M. & Kohn, C.F., Readings in urban Geography, Chicago printing press, Chicago.
5. R.C. Putham etc, Geography of urban places.
6. Ashish, Bose, Studies in India's urban, 1961 – 1971.

7. Friedann, J & Alonson, W. Regional development and planning.
8. Mitra, A., Levels of regional development in India.
9. Sengupta, P., & Sadasyuk, G.U., Economic regionalization of India: Problems & Approaches.
10. Munir, A., Agricultural Productivity and regional development, Delhi, 1992.
11. Sayeed, A. Khan, Hierarchy of service center in Trans – Ghaghara plain.



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Name of the Teacher:	Dr. Mumtaj Ahmad
Course Title:	AGRICULTURAL GEOGRAPHY
Course Number:	GGB563
Credit:	02
Course Category:	GGB563
Content of Course:	
Type of Course:	Theory
Course Assessment:	Sessional: 30 % End Term: 70 %
Course Objective:	The objective of this course is to introduce the basic concept, theme, classification, issues, problems and determinants involved in Agricultural Geography with special reference to Indian Agriculture system.
Course Outcomes:	After the end of the syllabus students will able to conceptualize the various agricultural regions with respect to climate. Further it is expected that they will be able to critically examine the issues concerned of agricultural activities at global and Indian level.

Syllabus	No. of Lectures
<b>1.</b> Definition, Nature and Scope of Agricultural Geography, Origin and Development of Agricultural Geography.	<b>12</b>
<b>2. Determinants of Agriculture:</b> Soil, Mechanization, High Yielding Variety of Seeds, NPK fertilizers, Irrigation and Pests control, size of land holding and Kisan Credit Card.	<b>10</b>
<b>3. Agricultural Regions:</b> Agro-climatic Regions and Agricultural Productivity Regions. Whittlesey's classification and Von Thuenen model and its relevance.	<b>12</b>
<b>4. Agricultural Revolutions in India:</b> Green Revolution with special reference to Wheat, Paddy and Maize. History and Development of Dairy Farming and Fisheries- Causes and Consequences.	<b>10</b>

**BOOKS RECOMMENDED:**

1. Hussain, M., Agricultural Geography, New Delhi, 1979.
2. Symons, I., Agricultural Geography, London, 1964.
3. Leong & Morgan, Human and Economic Geography, Hong Kong,
4. Deman, N.L., Agriculture and Rural Development in India.
5. Clont, S.D., Rural Geography.
6. Murthy, W.L. & Narayana, K.V., Rural Economy of India, Delhi.

7. Tewari, R.T., & Sinha, R.C., Rural Development in India, New Delhi, 1988.
8. Alexander, T.W., Economic Geography, Prentice Hall, Englewood cliffs, N.J. (Latest Edition).
9. Gregory, Howard, F., Geography of Agriculture: Themes in Research, Prentice Hall Englewood cliffs, N.J., 1970.
10. Singh A.L. and Fazal. S., Agriculture and Rural Development, B.R. Publishers, New Delhi-1998

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Name of the Teacher:	Dr. Nikhat Bano
Course Title:	DISASTER MANAGEMENT
Course Number:	GGB564
Credit:	02
Course Category:	GGB564
Content of Course:	
Type of Course:	Theory
Course Assessment:	Sessional: 30 % End Term: 70 %
Course Objective:	This course aims to develop the knowledge about meaning, types, causes, responses, migration, management and preparedness of natural and man made disaster at global level as well as at India.
Course Outcomes:	After completing this course, students will be able to visualize and recognize the various vulnerable zone often affected by disaster in India. They will be also able to examine various mechanism to address these problems.

Syllabus	No. of Lectures
1. Disasters: Definition and Concepts: Hazards, Disasters; Risk and Vulnerability; Classification.	<b>10</b>
2. Disasters in India: (a) Flood: Causes, Impact, Distribution and Mapping; Landslide: Causes, Impact, Distribution and Mapping; Drought: Causes, Impact, Distribution and Mapping.	<b>12</b>
3. Disasters in India: (b) Earthquake and Tsunami: Causes, Impact, Distribution and Mapping; Cyclone: Causes, Impact, Distribution and Mapping, Manmade disasters: Causes, Impact, Distribution and Mapping.	<b>12</b>
4. Response and Mitigation to Disasters: Mitigation and Preparedness, NDMA and NIDM; Indigenous Knowledge and Community-Based Disaster Management; Do's and Don'ts During and Post Disasters.	<b>10</b>

**Reading List**

- Government of India. (1997) Vulnerability Atlas of India. New Delhi, Building Materials & Technology Promotion Council, Ministry of Urban Development, Government of India.
- Kapur, A. (2010) Vulnerable India: A Geographical Study of Disasters, Sage Publication, New Delhi.
- Modh, S. (2010) Managing Natural Disaster: Hydrological, Marine and Geological Disasters, Macmillan, Delhi.
- Singh, R.B. (2005) Risk Assessment and Vulnerability Analysis, IGNOU, New Delhi. Chapter 1, 2 and 3.
- Singh, R. B. (ed.), (2006) Natural Hazards and Disaster Management: Vulnerability and Mitigation, Rawat Publications, New Delhi.

6. Sinha, A. (2001). Disaster Management: Lessons Drawn and Strategies for Future, New United Press, New Delhi.
7. Stoltman, J.P. et al. (2004) International Perspectives on Natural Disasters, Kluwer Academic Publications. Dordrecht.
8. Singh Jagbir (2007) "Disaster Management Future Challenges and Oppurtunities", 2007. Publisher- I.K. International Pvt. Ltd. S-25, Green Park Extension, Uphaar Cinema **Market, New Delhi, India (www.ikbooks.com)**.

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Name of the Teacher:	Dr. Md. Firoz Ahmed
Course Title:	ECOLOGY AND ENVIRONMENT
Course Number:	GGB565
Credit:	02
Course Category:	GGB
Content of Course:	
Type of Course:	Theory
Course Assessment:	Sessional: 30 % End Term: 70 %
Course Objective:	To make them aware about different types of environment, ecological setting and their issues and challenges.
Course Outcomes:	The expected learning outcome of this course would be; make them understand and take role in environmental conservation and management.

<b>Syllabus</b>	<b>No. of Lectures</b>
1. Principles of Ecology and Environment: <ul style="list-style-type: none"> <li>- Meaning and concept of Ecology and Environment.</li> <li>- Biosphere, Ecosystems, habitat and man environmental relationship.</li> <li>- Human Ecology and Adaptations.</li> </ul>	<b>10</b>
2. Biomes of the World (Equatorial and Tundra), Biodiversity and its Significance with reference to India, Hot Spot in India. Case Study of Western Ghat, Conservation Measures.	<b>12</b>
3. Environmental Degradation; Pollution (water and air), causes and consequences of Environmental Imbalances, Environment and development.	<b>12</b>
4. Environmental Movement; Legislation and Policies, concept of Sustainable Development.	<b>08</b>
<b>BOOKS RECOMMENDED:</b>	
<ol style="list-style-type: none"> <li>1. Charles, J. krebs; Ecology, 2016.</li> <li>2. Eugene P., Odum : Ecology: A Bridge between Science and Society, 2018.</li> <li>3. S.V.S. Rana: Essentials of Ecology and Environmental Science, Prentice Hall of India, New Delhi, 2003.</li> <li>4. Sexena, S.M. : Environmental Geography, Rawat Pub., 2004.</li> <li>5. 5. Savinder Singh, Environmental Geography, Prawartika Pub. 2006.</li> </ol>	

6. Puri, G.S., Indian forest Ecology, New Delhi.

7. Odum, Eugene P., Fundamentals of Ecology, Philadelphia, 2004.

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Name of the Teacher:	Dr. Hasibur Rahaman
Course Title:	CLIMATE CHANGE: Vulnerability and Adaptation
Course Number:	GGB566
Credit:	02
Course Category:	GGB
Content of Course:	
Type of Course:	Theory
Course Assessment:	Sessional: 30 % End Term: 70 %
Course Objective:	To make them understand about the vulnerability related to climate change and possible future mitigation and adoption of climate change threat.
Course Outcomes:	At the end of the course, students will be able to sensitize the issues of climate change among peer group, local people and academia with personal and possible group effort.

Syllabus	No. of Lectures
1. Science of Climate Change: Understanding Climate Change; Green House Gases and Global Warming; Global Climatic Assessment- IPCC.	<b>11</b>
2. Climate Change and Vulnerability: Physical Vulnerability; Economic Vulnerability; Social Vulnerability.	<b>10</b>
3. Impact of Climate Change: Agriculture and Water; Flora and Fauna; Human Health.	<b>09</b>
4. Adaptation and Mitigation: Global Initiatives Problem and prospects.	<b>06</b>
5. National Action Plan on Climate Change; Local Institutions to mitigate and Adaptations towards resilience path.	<b>10</b>

**BOOKS RECOMMENDED:**

1. IPCC. (2007) Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.
2. IPCC (2014) *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.
3. IPCC (2014) *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects.*

*Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

4. Palutikof, J. P., van der Linden, P. J. and Hanson, C. E. (eds.), Cambridge University Press, Cambridge, UK.
5. OECD. (2008) *Climate Change Mitigation: What Do we Do?* Organisation and Economic Cooperation and Development.
6. UNEP. (2007) *Global Environment Outlook: GEO4: Environment for Development*, United Nations Environment Programme.
7. Singh, M., Singh, R.B. and Hassan, M.I. (Eds.) (2014) *Climate change and biodiversity: Proceedings of IGU Rohtak Conference, Volume 1. Advances in Geographical and Environmental Studies*, Springer
8. Sen Roy, S. and Singh, R.B. (2002) *Climate Variability, Extreme Events and Agricultural Productivity in Mountain Regions*, Oxford & IBH Pub., New Delhi.



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Name of the Teacher: (03 Section)	Dr. Mumtaj Ahmad, Dr. Mohammad Taufique, Dr. M. Firoz Ahmed.
Course Title:	BASICS OF GEOGRAPHY
Course Number:	GGB591
Credit:	02
Course Category:	GGB591
Content of Course:	
Type of Course:	Theory
Course Assessment:	Sessional: 30 % End Term: 70 %
Course Objective:	To make them understand about basic concepts of Physical Geography.
Course Outcomes:	The expected learning outcome would be; understanding, identification and description of physical aspects of basic geographical phenomenon.

<b>Syllabus</b>		<b>No. of Lectures</b>
<b>1.</b>	<b>Meaning and Scope of Geography</b> , Solar System, Rotation and Revolution of Earth, International Date Line (IDL), Latitude and Longitude, Calculation of Time.	<b>08</b>
<b>2.</b>	<b>Lithosphere</b> -Structure of Earth, Types of rocks-Igneous rock, Metamorphic rock and sedimentary rock and their importance.	<b>10</b>
<b>3.</b>	<b>Atmosphere</b> - Structure and Composition of Atmosphere, Wind System, Cyclone and Anticyclone, Jet Stream, Monsoon, El-Nino, La-Nina, Global Warming.	<b>12</b>
<b>4.</b>	<b>Hydrosphere</b> – Hydrological Cycle, Ocean Current, Tide, Waves, Tsunami.	<b>07</b>
<b>5.</b>	<b>Biosphere</b> - Biosphere as an Ecosystem, Biogeochemical Cycle, Bio-diversity and its importance, Forest conservation and Management, National Forest Policy.	<b>03</b>

**Reading List:**

1. Majid Hussain, Fundamentals of Physical Geography, Rawat Publication, New Delhi.
2. Goh Cheng Leong, Certificate of Physical and Human Geography.
3. D.R. Khullar, India- A Comprehensive Geography.
4. D.R. Khullar, Practical Geography.

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Name of the Teacher: (03 Section)	Dr. Mumtaj Ahmad, Dr. Mohammad Taufique, Dr. Saleha Jamal, Dr. S. Kausar Shamim, Dr. Hasibur Rahaman, Dr. Ahmad Mujtaba
Course Title:	Remote Sensing and GIS (Practical)
Course Number:	GGB-5P1
Credit:	02
Course Category:	GGB
Content of Course:	
Type of Course:	Practical
Course Assessment:	Continuous Evaluation: 40 % End Term: 60 %
Course Objective:	To expose the students towards the basic knowledge about GIS and Remote sensing applications.
Course Outcomes:	This course expects the analysis, assessments and application of aerial photographs and satellite based data.

<b>Syllabus</b>	<b>No. of Lectures</b>
<b>1.</b> Remote Sensing: Definition, Stages of Remote Sensing. Principles of Remote Sensing, Platform and Sensors.	<b>08</b>
<b>2.</b> Aerial Photography: Types of Aerial Photograph, Chief Elements of Aerial Photo Interpretation.	<b>10</b>
<b>3.</b> Image Processing (Digital and Manual); Pre-processing (Radiometric and Geometric Correction), Enhancement; Classification (Supervised and Un-supervised).	<b>10</b>
<b>4.</b> GIS: Definition and Components, GIS Data Structures: Types; spatial and Non-spatial, Raster and Vector Data Structure.	<b>07</b>
<b>5.</b> Application of Remote Sensing and GIS; Land use/ Land cover/ Urban sprawl /Agriculture and environment.	<b>05</b>
<b>Practical Record:</b> A project file consisting of two exercises will be done from aerial photos and satellite images (scale, orientation and interpretation).	

### **BOOKS RECOMMENDED:-**

- 1 Barrett & Curtis., Introduction to Environmental Remote Sensing.
- 2 Chauniyal, D.D. (2010) Sudur Samvedan evam Bhogolik Suchana Pranali, Sharda Pustak Bhawan, Allahabad.
- 3 Campbell J. B., 2007: *Introduction to Remote Sensing*, Guildford Press.
- 4 Jensen J. R., 2004: *Introductory Digital Image Processing: A Remote Sensing Perspective*, Prentice Hall.
- 5 Joseph, G. 2005: *Fundamentals of Remote Sensing*, United Press India.
- 6 Lillesand T. M., Kiefer R. W. and Chipman J. W., 2004: *Remote Sensing and Image Interpretation*, Wiley. (Wiley Student Edition).
- 7 Michael, R.H., Remote Sensing: Methods and Applications.
- 8 Nag P. and Kudra, M., 1998: *Digital Remote Sensing*, Concept, New Delhi.
- 9 Rees W. G., 2001: *Physical Principles of Remote Sensing*, Cambridge University Press.
- 10 Singh R. B. and Murai S., 1998: *Space-informatics for Sustainable Development*, Oxford and IBH, Pub.
- 11 Sarkar, A. (2015) Practical geography: A systematic approach. Orient Black Swan Private Ltd.,New Delhi
- 12 Sabin., Remote Sensing.
- 13 Wolf P. R. and Dewitt B. A., 2000: *Elements of Photogrammetry: With Applications in GIS*, McGraw-Hill.

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Name of the Teacher: (03 Section)	Dr. Tariq M. Usmani, Dr. Rashid Aziz Faridi, Dr. Fazlur Rahman, Dr. Mashkoor Ahmad, Dr. Nikhat Bano, Dr. M. Firoz Ahmad.
Course Title:	Advanced Spatial Statistical Techniques (Practical)
Course Number:	GGB-5P2
Credit:	02
Course Category:	GGB
Content of Course:	
Type of Course:	Practical
Course Assessment:	Continuous Evaluation: 40 % End Term: 60 %
Course Objective:	To enhance the potential of advance statistical techniques and its application in geographical studies.
Course Outcomes:	The expected learning outcome of this course would be; appropriate use of statistical techniques in varying avenues of geographical studies.

<b>Syllabus</b>		<b>No. of Lectures</b>
<b>1.</b>	Statistics and Statistical Data: Spatial and non-spatial; indices of inequality (Range, Lorenz curve, Coefficient of variation, Gini's Coefficient).	<b>15</b>
<b>2.</b>	Chi-square test, Normal distribution and characteristics of normal curve.	<b>15</b>
<b>3.</b>	Correlation Analysis: Definition ad concept of correlation: Rank order correlation and product moment correlation, Scattered Diagram.	<b>15</b>
<b>4.</b>	Regression Analysis: Definition and concept of regression: linear regression.	<b>15</b>
<b><u>BOOKS RECOMMENDED:-</u></b>		
<ol style="list-style-type: none"> <li>1. Mahmood, Aslam., Statistical Methods in Geographical studies.</li> <li>2. Alvi Zamiruddin., Statistical Geography.</li> <li>3. Ebden, D., Statistics in Geography (Practical Approach).</li> <li>4. Gregory, S., Statistical Methods and the Geographer.</li> <li>5. King, L.J., Statistical Analysis in Geography</li> <li>6. Simpson, G. &amp; Kafka, F., Analysis in Geography.</li> <li>7. Mathematics for Physical Geographers.</li> </ol>		

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Name of the Teacher:	Prof. Jabir Hasan Khan, Dr. Rashid Aziz Faridi, DR. Mumtaj Ahmad, Dr. Shamsha, Dr. Mohd. Firoz Ahmed, Dr. Hasibur Rahaman.
Course Title:	Astronomy and Map Projection (Practical)
Course Number:	GGB-5P3
Credit:	02
Course Category:	GGB
Content of Course:	
Type of Course:	Practical
Course Assessment:	Continuous Evaluation: 40 % End Term: 60 %
Course Objective:	To introduce about basic concepts of astronomy, celestial bodies and to develop the understanding on cartographic techniques and skills of map projection.
Course Outcomes:	At the end of the lesson, students should be able to determine different and appropriate uses of map projection in various aspects of geographic representation.

<b>Syllabus</b>	<b>No. of Lectures</b>
<p><b><u>Astronomy</u></b>            History and development of Astronomy: General explanation of the objects of field of astronomy. History and development of Astronomy, latitudes, longitudes, altitudes, declination, azimuth, celestial horizon, great circles and small circles, zenith, nadir, hour angle, right ascensions.  <b><u>Time:</u></b> Types, local and standard times, longitude and time, International Date Line.</p>	<b>12</b>
<p><b><u>Map Projection</u></b>            General principles, classification, Construction, properties, limitations and uses of the following projections:</p>	<b>08</b>
<p><b>a. Cylindrical:</b> Equal Area and Mercator's.</p>	<b>08</b>
<p><b>b. Conical Projections:</b> One standard conical, two standard, Conical, Bonne's.</p>	<b>08</b>
<p><b>c. Zenithal Projections:</b> Gnomonic, Stereographic, Orthographic.</p>	<b>06</b>
<p><b><u>BOOKS RECOMMENDED:-</u></b></p> <ol style="list-style-type: none"> <li>1. Kellewey, George, P., Map Projections</li> <li>2. Steers, J.A., Map Projections</li> <li>3. Singh, R.L., Elements of Practical Geography</li> <li>4. Gernet, William, Map Projection</li> <li>5. James, A.H., &amp; Ormsay, M.T.M. Mathematical Geography</li> </ol>	

6. Singh, L.R., Map work and Practical Geography

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Name of the Teacher: (03 Section)	Prof. Ateeque Ahmad, Prof. Jabir Hasan Khan, Dr. M. Firoz Ahmed.
Course Title:	EVOLUTION OF GEOGRAPHICAL THOUGHT
Course Number:	GGB651
Credit:	04
Course Category:	GGB
Content of Course:	
Type of Course:	Theory
Course Assessment:	Sessional: 30 % End Term: 70 %
Course Objective:	To make them understand about historical development of geographical concepts, philosophies and approaches.
Course Outcomes:	The learning outcome of this course would be comprehend, correlate and connect geographical ideas and concepts with historical as well as contemporary context.

Syllabus	No. of Lectures
<b>Unit I</b> General characteristics of geography in ancient period. Contribution of Herodotus, Strabo, Eratosthenes and Ptolemy in the development of geographical thought.	<b>10</b>
<b>Unit II</b> General characteristics of geographical thought during Arab period. Dark-age. Contribution of important philosophers - Al - Masaudi, Al - Biruni and Ibn- Khaldun.	<b>10</b>
<b>Unit III</b> Founders of modern geographical thought. Contribution of Humboldt and Ritter; Contribution of French and British schools of geography with special reference to Vidal-De-Ia- Blache and Mackinder.	<b>10</b>
<b>Unit IV</b> Concepts in geography: Environmental determinism, possibilism, and stop and go determinism. Development of geographical thought after Second World War- A critical study of Quantitative revolution, Radical Geography and behavioral geography.	<b>14</b>



**BOOKS RECOMMENDED:**

1. Adhikari, S., Fundamentals of Geographical Thought, Allahabad.
2. Ali, S.M., Arab Geography. Aligarh.
3. Ali, S.M.Z., Arab's Contribution to the Geography during 9th and 10th Centuries, A.D. Aligarh.
4. Dickinson, R.E. The Makers / Modern Geography, London.
5. Dixit, R.D. Geographical Thought' A Contextual History / Ideas, Delhi.
6. Hartshorne, R, Perspective on the Nature of Geography, Chicago.
7. Hussain, M., Evolution of Geographical thought. Delhi.
8. James, R.E., All possible world: A History of Geographical Ideas, New York.

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Name of the Teacher: (03 Section)	Dr. S. Kausar Shamim, Dr. Nikhat Bano, Dr. Naushaba Naseem Ahmed.
Course Title:	ECONOMIC GEOGRAPHY
Course Number:	GGB658
Credit:	04
Course Category:	GGB
Content of Course:	
Type of Course:	Theory
Course Assessment:	Sessional: 30 % End Term: 70 %
Course Objective:	To educate the students about nature and types of economic activities with relation to location, space, place and geographical resources.
Course Outcomes:	At the end of the lesson, students should be able to conceptualize, demarcate and analyze the geographical determinates of various economic activities.

<b>Syllabus</b>	<b>No. of Lectures</b>
1. Concept; Nature and scope of Economic Geography; Economics and Economic Geography; Concept and classification of economic activity.	<b>10</b>
<b>2. Primary Activities:</b> Factors Affecting location of Economic Activity with special reference to Agriculture Subsistence and Commercial Agriculture, Forestry, Fishing and Mining; Von Thunen theory of Agriculture Location.	<b>12</b>
<b>3. Secondary Activities:</b> Manufacturing (Cotton Textile, Iron and Steel), Concept of Manufacturing Regions, Special Economic Zones and Technology Parks; Weber's theory of Industrial Location.	<b>12</b>
<b>4. Tertiary Activities:</b> Transport, Trade and Services and their role in Economic Development: Christaller and Losch's Model.	<b>10</b>
<b>Reading List</b>	
1. Alexander J. W., 1963: <i>Economic Geography</i> , Prentice-Hall Inc., Englewood Cliffs, New Jersey.	
2. Coe N. M., Kelly P. F. and Yeung H. W., 2007: <i>Economic Geography: A Contemporary Introduction</i> , Wiley-Blackwell.	
3. Hodder B. W. and Lee Roger, 1974: <i>Economic Geography</i> , Taylor and Francis.	
4. Combes P., Mayer T. and Thisse J. F., 2008: <i>Economic Geography: The Integration of Regions and Nations</i> , Princeton University Press.	

5. Wheeler J. O., 1998: *Economic Geography*, Wiley..
6. Durand L., 1961: *Economic Geography*, Crowell.
7. Bagchi-Sen S. and Smith H. L., 2006: *Economic Geography: Past, Present and Future*, Taylor and Francis.
8. Willington D. E., 2008: *Economic Geography*, Husband Press.
9. Clark, Gordon L.; Feldman, M.P. and Gertler, M.S., eds. 2000: *The Oxford*

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Name of the Teacher:	Dr. Mumtaj Ahmad
Course Title:	GEOGRAPHY OF HEALTH AND WELLBEING
Course Number:	GGB661
Credit:	02
Course Category:	GGB
Content of Course:	
Type of Course:	Theory
Course Assessment:	Sessional: 30 % End Term: 70 %
Course Objective:	The objective of this course is to develop the understanding of students about concepts, perspective geographical aspects of health and wellbeing. To create basic awareness about various disease and health risk caused due to exposure to poor geographical environment and degraded quality of air, water and housing.
Course Outcomes:	After the end of the syllabus, students will be able to analyse and conceptually correlate with geographical environment and pattern of various communicable and non communicable diseases.

Syllabus	No. of Lectures
<b>1. Perspectives on Health:</b> Definition; linkages with environment, development and health; driving forces in health and environmental trends - population dynamics, urbanization, poverty and inequality.	<b>10</b>
<b>2. Pressure on Environmental Quality and Health:</b> Human activities and environmental pressure land use and agricultural development; industrialization; transport and energy.	<b>12</b>
<b>3. Exposure and Health Risks:</b> Air pollution; household wastes; water; housing; workplace.	<b>10</b>
<b>4. Health and Disease Pattern</b> in Environmental Context with special reference to India, Types of Diseases and their regional pattern (Communicable and Lifestyle related diseases).	<b>10</b>
<b>5. Climate Change and Human Health:</b> Changes in climate system – heat and cold; Biological disease agents; food production and nutrition.	<b>08</b>
<b>Reading List:</b>	
1. Akhtar Rais (Ed.), 1990 : Environment and Health Themes in Medical Geography, Ashish Publishing House, New Delhi.	
2. Avon Joan L. and Jonathan A Patzed.2001 : Ecosystem Changes and Public Health,Baltimin, John Hopling Unit Press(ed).	

3. Bradley,D.,1977: Water, Wastes and Health in Hot Climates, John Wiley Chichester.
4. Christaler George and Hristopoles Dionissios, 1998: Spatio Temporal Environment Health Modelling , Boston Kluwer Academic Press.
5. Cliff, A.D. and Peter,H., 1988 : Atlas of Disease Distributions, Blackwell Publishers, Oxford.
6. Gatrell, A.,and Loytonen, 1998 : GIS and Health, Taylor and Francis Ltd, London.
7. Hardham T. and Tannav M.,(eds): Urban Health in Developing Countries; Progress, Projects, Earthgoan, London.
8. Murray C. and A. Lopez, 1996 : The Global Burden of Disease, Harvard University Press.
9. Moeller Dade wed., 1993: Environmental Health, Cambridge, Harward Univ. Press.
10. Phillips, D.and Verhasselt, Y., 1994: Health and Development, Routledge, London.
11. Tromp, S., 1980: Biometeorology: The Impact of Weather and Climate on Humans and their Environment, Heydon and Son.

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Name of the Teacher:	Dr. M. Firoz Ahmed
Course Title:	POLITICAL GEOGRAPHY
Course Number:	GGB662
Credit:	02
Course Category:	GGB
Content of Course:	
Type of Course:	Theory
Course Assessment:	Sessional: 30 % End Term: 70 %
Course Objective:	To develop the ideas of political concepts like states, nation, boundary and elections with reference to geographical perspective.
Course Outcomes:	At the end of this course students will able to demonstrate knowledge about the role of political processes with respect to geography.

Syllabus	No. of Lectures
<b>1. Introduction:</b> Concepts, Nature and Scope.	<b>08</b>
<b>2. State, Nation and Nation State:</b> Concept of Nation and State, Attributes of State – Frontiers, Boundaries, Shape, Size, Territory and Sovereignty, Concept of Nation State; Geopolitics; Theories (Heartland and Rimland).	<b>12</b>
<b>3. Electoral Geography:</b> Geography of Voting, Geographic Influences on Voting pattern, Geography of Representation, Gerrymandering.	<b>12</b>
<b>4. Political Geography of Resource Conflicts:</b> Water Sharing Disputes, Disputes and Conflicts Related to Forest Rights and Minerals.	<b>10</b>
<b>5. Politics of Displacement:</b> Issues of relief, compensation and rehabilitation: with reference to Dams and Special Economic Zones.	<b>12</b>
<b>Reading List</b>	
1. Agnew J., 2002: <i>Making Political Geography</i> , Arnold.	
2. Agnew J., Mitchell K. and Toal G., 2003: <i>A Companion to Political Geography</i> , Blackwell.	
3. Cox K. R., Low M. and Robinson J., 2008: <i>The Sage Handbook of Political Geography</i> , Sage Publications.	
4. Cox K., 2002: <i>Political Geography: Territory, State and Society</i> , Wiley-Blackwell	
5. Gallaher C., et al, 2009: <i>Key Concepts in Political Geography</i> , Sage Publications.	
6. Glassner M., 1993: <i>Political Geography</i> , Wiley.	
7. Jones M., 2004: <i>An Introduction to Political Geography: Space, Place and Politics</i> , Routledge.	
8. Mathur H M and M M Cernea (eds.) <i>Development, Displacement and Resettlement – Focus on Asian</i>	

Experience, Vikas, Delhi

9. Painter J. and Jeffrey A., 2009: *Political Geography*, Sage Publications.

10. Taylor P. and Flint C., 2000: *Political Geography*, Pearson Education.

11. Verma M K (2004): *Development, Displacement and Resettlement*, Rawat Publications, Delhi

12. Hodder Dick, Sarah J Llyod and Keith S McLachlan (1998), *Land Locked States of Africa and Asia* (vo.2), Frank Cass

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Name of the Teacher:	Dr. Rashid Aziz Faridi
Course Title:	SOCIAL GEOGRAPHY
Course Number:	GGB663
Credit:	02
Course Category:	GGB
Content of Course:	
Type of Course:	Theory
Course Assessment:	Sessional: 30 % End Term: 70 %
Course Objective:	To make them understand about various social attributes and its relation with geography.
Course Outcomes:	This course expects the interpretation, analyses and evaluation of social issues through geographical dimensions.

Syllabus	No. of Lectures
1. Social Geography: Concept, Origin, Nature and Scope, Social space, social groups, ethnicity, religion as a social group, language as social factor, urban social fabric.	<b>12</b>
2. Peopling Process of India: Technology and Occupational Change; Migration as Factor of peopling, Migration Theories; Gravity Model of Migration, Push Pull theory of Migration, Contemporary social issues in India.	<b>10</b>
3. Social Categories: Caste, Class, Religion, totemism, concept of religion- major religions of the World and India, Minority Population and issues of communalism, Race and Gender and their Spatial distribution, distinction between sex and gender, concept of clan and gotra, Social and Biological concept of race, tribes of India.	<b>12</b>
4. Geographies of Welfare and Well being: Concept and Components – Healthcare, Housing and Education. Types of wellbeing, social geographies of Inclusion and Exclusion, Slums, Gated Communities, Communal Conflicts and Crime.	<b>10</b>

**Reading List**

1. Ahmed A., 1999: *Social Geography*, Rawat Publications.
2. Casino V. J. D., Jr., 2009) *Social Geography: A Critical Introduction*, Wiley Blackwell.
3. Cater J. and Jones T., 2000: *Social Geography: An Introduction to Contemporary Issues*, Hodder Arnold.
4. Holt L., 2011: *Geographies of Children, Youth and Families: An International Perspective*, Taylor & Francis.
5. Panelli R., 2004: *Social Geographies: From Difference to Action*, Sage.



6. Rachel P., Burke M., Fuller D., Gough J., Macfarlane R. and Mowl G., 2001: *Introducing Social Geographies*, Oxford University Press.
7. Smith D. M., 1977: *Human geography: A Welfare Approach*, Edward Arnold, London.
8. Smith D. M., 1994: *Geography and Social Justice*, Blackwell, Oxford.
9. Smith S. J., Pain R., Marston S. A., Jones J. P., 2009: *The SAGE Handbook of Social Geographies*, Sage Publications.
10. Sopher, David (1980): *An Exploration of India*, Cornell University Press, Ithaca
11. Valentine G., 2001: *Social Geographies: Space and Society*, Prentice Hall.

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Name of the Teacher:	Dr. Mashkooor Ahmad
Course Title:	HYDROLOGY AND OCEANOGRAPHY
Course Number:	GGB664
Credit:	02
Course Category:	GGB
Content of Course:	
Type of Course:	Theory
Course Assessment:	Sessional: 30 % End Term: 70 %
Course Objective:	To understand and analyze the hydrological cycle and different dimension of oceans.
Course Outcomes:	The expected learning outcome of this course would be; construct and compare different hydrological cycles and ocean's dynamic at spatial context.

<b>Syllabus</b>	<b>No. of Lectures</b>
1. Definition and System Approach in Hydrology; Hydrological Cycle: Processes in hydrological Cycle, human impact on the hydrological cycle; Precipitation, interception, evaporation, evapo-transpiration, infiltration, ground-water, run off and over land flow; Hydrological input and output, floods and drought, causes and consequences.	<b>16</b>
2. Ocean Bottom Topography; Continental shelf, slope, Deep Ocean Basins and associated features; Factors of formation of waves; currents: Origin and development; Current of Atlantic, Pacific and Indian Ocean. Origin and types of Tides.	<b>14</b>
3. Ocean Salinity and Temperature – Factors and distribution of Vertical and Horizontal Salinity and Temperature; Distribution and Determinants.	<b>12</b>
4. Coral Reefs- Factors for the growth of Corals; Types of Coral, Coral bleaching; Source and Types of marine Deposits.	<b>10</b>
<b>Reading List</b>	
1. Andrew. D. ward and Stanley, Trimble (2004): Environmental Hydrology, 2 <sup>nd</sup> edition, Lewis Publishers, CRC Press.	
2. Karanth, K.R., 1988 : Ground Water: Exploration, Assessment and Development, Tata-Hill, New Delhi. <span style="float: right;">McGraw</span>	
3. Ramaswamy, C. (1985): Review of floods in India during the past 75 years: A Perspective. Indian National Science Academy, New Delhi.	
4. Rao, K.L., 1982 : India's Water Wealth 2 <sup>nd</sup> edition, Orient Longman, Delhi,.	

5. Singh, Vijay P. (1995): Environmental Hydrology. Kluwar Academic Publications, The Netherlands.
6. Anikouchine W. A. and Sternberg R. W., 1973: *The World Oceans: An Introduction to Oceanography*, Prentice-Hall.
7. Garrison T., 1998: *Oceanography*, Wordsworth Company, Belmont.
8. Kershaw S., 2000: *Oceanography: An Earth Science Perspective*, Stanley Thornes, UK.
9. Pinet P. R., 2008: *Invitation to Oceanography* (Fifth Edition), Jones and Barlett Publishers, USA, UK and Canada.
10. Sharma R. C. and Vatal M., 1980: *Oceanography for Geographers*, Chaitanya Publishing House, Allahabad.
11. Sverdrup K. A. and Armbrust, E. V., 2008: *An Introduction to the World Ocean*, McGraw Hill, Boston.
12. Singh, M., Singh, R.B. and Hassan, M.I. (Eds.) (2014) Landscape ecology and water management. Proceedings of IGU Rohtak Conference, Volume 2. Advances in Geographical and Environmental Studies, Springer.

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Name of the Teacher:	Dr. Hasibur Rahaman
Course Title:	SUSTAINABLE DEVELOPMENT
Course Number:	GGB665
Credit:	02
Course Category:	GGB
Content of Course:	
Type of Course:	Theory
Course Assessment:	Sessional: 30 % End Term: 70 %
Course Objective:	To make them aware about issues, concerns and importance of sustainable development and also to realize the program, policies and strategies of developmental goals.
Course Outcomes:	After end of this lesson, it is expected that students will share their theoretical experiences in social life to make this world more sustainable.

<b>Syllabus</b>	<b>No. of Lectures</b>
1. Sustainable Development: Definition, Components, Limitations and Historical Background.	<b>06</b>
2. The Millennium Development Goals: National Strategies and International Experiences.	<b>05</b>
3. Sustainable Regional Development: Need and examples from different Ecosystems.	<b>04</b>
4. Inclusive Development: Education, Health; Climate Change: The role of higher education in sustainable development; The human right to health; Poverty and disease; The Challenges of Universal Health Coverage; Policies and Global Cooperation for Climate Change.	<b>11</b>
5. Sustainable Development Policies and Programmes: The proposal for SDGs at Rio+20; Illustrative SDGs; Goal-Based Development; Financing for Sustainable Development; Principles of Good Governance; National Environmental Policy, CDM.	<b>10</b>

**Reading List**

1. Agyeman, Julian, Robert D. Bullard and Bob Evans (Eds.) (2003) Just Sustainabilities: Development in an Unequal World. London: Earthscan. (Introduction and conclusion.).
2. Ayers, Jessica and David Dodman (2010) "Climate change adaptation and development I: the state of the debate". Progress in Development Studies 10 (2): 161-168.
3. Baker, Susan (2006) Sustainable Development. Milton Park, Abingdon, Oxon; New York, N.Y.: Routledge. (Chapter 2, "The concept of sustainable development").
4. Brosius, Peter (1997) "Endangered forest, endangered people: Environmentalist representations of

indigenous knowledge”, *Human Ecology* 25: 47-69.

5. Lohman, Larry (2003) “Re-imagining the population debate”. *Corner House Briefing* 28.
6. Martínez-Alier, Joan et al (2010) “Sustainable de-growth: Mapping the context, criticisms and future prospects of an emergent paradigm” *Ecological Economics* 69: 1741-1747.
7. Merchant, Carolyn (Ed.) (1994) *Ecology*. Atlantic Highlands, N.J: Humanities Press. (Introduction, pp 1-25.).
8. Osorio, Leonardo et al (2005) “Debates on sustainable development: towards a holistic view of reality”. *Environment, Development and Sustainability* 7: 501-518.
9. Robbins, Paul (2004) *Political Ecology: A Critical Introduction*. Blackwell Publishing.
10. Singh, R.B. (Eds.) (2001) *Urban Sustainability in the Context of Global Change*, Science Pub., Inc., Enfield (NH), USA and Oxford & IBH Pub., New Delhi.

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Name of the Teacher:	Dr. Shamshad
Course Title:	RURAL GEOGRAPHY
Course Number:	GGB666
Credit:	02
Course Category:	GGB
Content of Course:	
Type of Course:	Theory
Course Assessment:	Sessional: 30 % End Term: 70 %
Course Objective:	To comprehend the students about concepts, approaches, economy and provisions of rural development.
Course Outcomes:	Outcomes will include an understanding and visualization of rural developmental problems, issues and challenges.

<b>Syllabus</b>	<b>No. of Lectures</b>
1. Defining Development: Inter-Dependence of Urban and Rural Sectors of the Economy; Need for Rural Development, Gandhian Approach of Rural Development.	<b>14</b>
2. Rural Economic Base: Panchayatiraj System, Agriculture and Allied Sectors, Seasonality and Need for Expanding Non-Farm Activities, Co-operatives, PURA.	<b>14</b>
3. Area Based Approach to Rural Development: Drought Prone Area Programmes, PMGSY.	<b>12</b>
4. Target Group Approach to Rural Development: SJSY, MNREGA, Jan Dhan Yojana and Rural Connectivity.	<b>12</b>
5. Provision of Services – Physical and Socio-Economic Access to Elementary Education and Primary Health Care and Micro credit.	<b>12</b>

**Reading List**

1. Gilg A. W., 1985: *An Introduction to Rural Geography*, Edwin Arnold, London.
2. Krishnamurthy, J. 2000: *Rural Development - Problems and Prospects*, Rawat Pubs., Jaipur
3. Lee D. A. and Chaudhri D. P. (eds.), 1983: *Rural Development and State*, Methuen, London.
4. Misra R. P. and Sundaram, K. V. (eds.), 1979: *Rural Area Development: Perspectives and Approaches*, Sterling, New Delhi.
5. Misra, R. P. (ed.), 1985: *Rural Development: Capitalist and Socialist Paths*, Vol. 1, Concept, New Delhi.
6. Palione M., 1984: *Rural Geography*, Harper and Row, London.
7. Ramachandran H. and Guimaraes J.P.C., 1991: *Integrated Rural Development in Asia – Learning from Recent*

*Experience*, Concept Publishing, New Delhi.

8. Robb P. (ed.), 1983: *Rural South Asia: Linkages, Change and Development*, Curzon Press.
9. UNAPDI 1986: *Local Level Planning and Rural Development: Alternative Strategies*. (United Nations Asian & Pacific Development Institute, Bangkok), Concept Publs. Co., New Delhi.
10. Wanmali S., 1992: *Rural Infrastructure Settlement Systems and Development of the Regional Economy in South India*, International Food Policy Research Institute, Washington, D.C.
11. Yugandhar, B. N. and Mukherjee, Neela (eds.) 1991: *Studies in Village India: Issues in Rural Development*, Concept Publs. Co., New Delhi.

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Name of the Teacher: (03 Section)	Prof. S. Najmul Islam Hashmi, Prof. Shahab Fazal, Dr. Saleha Jamal, Dr. Fazlur Rahman, Dr. M. Naiyer Zaidy.
Course Title:	Disaster Management based Project Work (Practical)
Course Number:	GGB-6P1
Credit:	02
Course Category:	GGB
Content of Course:	
Type of Course:	Practical
Course Assessment:	Continuous Evaluation: 40 % End Term: 60 %
Course Objective:	To develop the skill of understanding about natural calamities and disaster and, also realize the consequences as well as preparedness.
Course Outcomes:	After end of this lesson, it is expected that students will prepare project on given topic varying from natural calamities to disaster impact region.

<b>Syllabus</b>	<b>No. of Lectures</b>
<p>The Project Report based on any two field based case studies among following disasters and one disaster preparedness plan of respective college or locality:</p> <ol style="list-style-type: none"> <li>1. Flood</li> <li>2. Drought</li> <li>3. Cyclone and Hailstorms</li> <li>4. Earthquake</li> <li>5. Landslides</li> <li>6. Human Induced Disasters: Fire Hazards, Chemical, Industrial accidents</li> </ol>	<b>45</b>



## **Reading List**

1. Government of India. (1997) Vulnerability Atlas of India. New Delhi, Building Materials & Technology Promotion Council, Ministry of Urban Development, Government of India.
2. Kapur, A. (2010) Vulnerable India: A Geographical Study of Disasters, Sage Publication, New Delhi.
3. Modh, S. (2010) Managing Natural Disaster: Hydrological, Marine and Geological Disasters, Macmillan, Delhi.
4. Singh, R.B. (2005) Risk Assessment and Vulnerability Analysis, IGNOU, New Delhi. Chapter 1, 2 and 3.
5. Singh, R. B. (ed.), (2006) Natural Hazards and Disaster Management: Vulnerability and Mitigation, Rawat Publications, New Delhi.
6. Sinha, A. (2001). Disaster Management: Lessons Drawn and Strategies for Future, New United Press, New Delhi.
7. Stoltman, J.P. et al. (2004) International Perspectives on Natural Disasters, Kluwer Academic Publications. Dordrecht.
8. Singh Jagbir (2007) "Disaster Management Future Challenges and Oppurtunities", 2007. Publisher- I.K. International Pvt. Ltd. S-25, Green Park Extension, Uphaar Cinema Market, New Delhi, India ([www.ikbooks.com](http://www.ikbooks.com)).

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Name of the Teacher: (03 Section)	Dr. Tariq M. Usmani, Dr. S. Kausar Shamim, Dr. Nihkat Bano, Dr. Shamshad, Dr. Mashkooor Ahmad, Dr. M. Firoz Ahmed.
Course Title:	SOCIO-ECONOMIC SURVEY AND REPORT WRITING (Practical)
Course Number:	GGB-6P2
Credit:	02
Course Category:	GGB
Content of Course:	
Type of Course:	Practical
Course Assessment:	Continuous Evaluation: 40 % End Term: 60 %
Course Objective:	To provide the students with the understanding of socioeconomic conditions of chosen rural/urban dwellers through means of observations, surveying and interview with the households.
Course Outcomes:	Students will be able to write a report/project on living environment of rural/urban dwellers from chosen village.

<b>Syllabus</b>	<b>No. of Lectures</b>
<b>Objective:</b> The main objective of field studies is to provide the students with the understanding of ground reality of a chosen Village/Town by observation, Conducting socio-economic survey of the Urban household/village with the help of a questionnaire, mapping of data, landuse and cropping pattern.	<b>10</b>
UNIT I: Methods of Field work: Types of data, Techniques of primary data collection: Sampling, Preparation of a questionnaire. Significance of field work in Geographical studies.	<b>14</b>
UNIT II: Conduct a socio-economic survey of the Urban Households with the help of a questionnaire. Supplement the information by personal observations and perceptions.	<b>06</b>
UNIT III: Procure a Cadastral map of the Village for field mapping of the features of the landuse, settlement and other prominent features. Conduct a socio-economic survey of the Village. Supplement the information by personal observations and perceptions.	<b>06</b>
UNIT IV: Based on the results of socio-economic and landuse enquiry, prepare a Field Survey Report both for Urban and Village survey. Maps, diagrams, photographs and sketches should support the report.	<b>14</b>
<b>RECOMMENDED BOOKS</b>	
<ol style="list-style-type: none"> <li>1. Archer, J.E. and Dalton, T.H. Fieldwork in Geography, London, 1968.</li> <li>2. Glodard, R.H., Field Techniques and Research Methods in Geography, Dubuque, 1982.</li> <li>3. Jones, P.A., Fieldwork in Geography, London, 1968</li> </ol>	

4. Mohammad, A.C., Statistical Methods in Geographical Studies, Rajesh Publication, Delhi, 1977.
5. Wheeleso, K.S. and Harding, M., Geographical Fieldwork, London, 1965.

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Name of the Teacher: (03 Section)	Prof. Ateeque Ahmad, Prof. Nizamuddin Khan, Dr. Rashid Aziz Faridi, Dr. Mohammad Taufique, Dr. S. Kausar Shamim, Dr. Naushaba Naseem Ahmed.
Course Title:	SEMINAR PRESENTATION
Course Number:	GGB-6S1
Credit:	02
Course Category:	GGB
Content of Course:	
Type of Course:	Practical
Course Assessment:	Continuous Evaluation: 40 % End Term: 60 %
Course Objective:	To develop presentation and communication skill of the students on assign topics.
Course Outcomes:	After end of this course, students will be confident over their communicative as well as presentation skills.

<b>Syllabus</b>	<b>No. of Lectures</b>
<p><b><u>Topics</u></b>            1. Regional imbalances in India: Its causes and Consequences. 2. Problems of Urbanization in India. 3. Poverty and Inequality in India. 4. Population Explosion - Causes and Consequences. 5. Rural Development: Its Programmes and Policies. 6. Disaster Management with reference to Earthquake/Drought/Flood. 7. Air Pollution and Human Health. 8. Water Pollution and Human Health. 9. Climate Change and its Impact. 10. Impact of Green Revolution on Indian Agriculture.</p> <p><b>Note:</b>            1. The topic will be assigned by the teacher for report Writing &amp; presentation. The report should not exceed 25 pages (A4 size, Times New Roman size 12 font, 1 inch all sides margin).            2. Report should cover the following points                i. Introduction &amp; Significance ii. Conceptual Framework                iii. Analysis/Discussion iv. Conclusion &amp; Suggestions</p>	<b>32</b>