



Department of Geography

**Undergraduate or B.A./B.Sc. (H) - Geography -II Year (Semester 3 & 4) Course
Structure and Syllabus**

Session 2022-23

2	III	Core 7	GRB CC A020301T	Environment, Disaster Management and Climate Change	Theory	6
		Core 8	GRB CC A020302T	Oceanography	Theory	6
		Core 9	GRB CC A020303P	Computer Mapping	Practical	6
		GE 3	GRB GE A020304T	Climate Change: Vul. & Adaptation	Theory	4
		SEC 3	GRB SEC A020305T	Statistical Techniques and Surveying	Practical	3
		AECC 3	GRB AECC A020306T	Human Values and Environmental Studies	Theory	0
Total Credit						25
2	IV	Core 10	GRB CC A020401T	Economic Geography	Theory	6
		Core 11	GRB CC A020402T	Climatology	Theory	6
		Core 12	GRB CC A020403T	Disaster Management Based Project Work	Theory	6
		GE 4	GRB GE A020404T	Sustainable Development	Theory	4
		SEC 4	GRB SEC A020405P	Weather Maps, Geological Maps and Surveying	Practical	3
		AECC 4	GRB AECC A020406T	Physical Education and Yoga	Theory	0
Total Credit						25



ख्वाजा मुईनुद्दीन चिश्ती भाषा विश्वविद्यालय, लखनऊ, उत्तर प्रदेश (भारत)
Khwaja Moinuddin Chishti Language University, Lucknow, U.P. (India)

U.P. STATE GOVERNMENT UNIVERSITY,
(Recognised Under Section 2(f) & 12(B) of the UGC Act, 1956 & B.Tech. Approved by (AICTE)



Programme/Class: Diploma/BA/B.Sc.	Year: Second	Semester: Third
Subject: Geography		
Course Code: A110301T	Course Title: Environment, Disaster Management and Climate Change	
Course outcomes: Students will be able to understand <ul style="list-style-type: none">• The course aim is to give basic understanding of concept Environment, Climate Change and Disaster Management.• Understanding of the concept of appraisal and conservation of Environment and Natural Resources.• It will help in developing understanding about various Impacts of Climate Change.• This course shall introduce the basic concepts related to disaster Management.• This paper shall help in understanding Global effort in field of disaster management.		
Credits: 6	Course Type-Core Course	
Max. Marks: 100 (30+70)	Min. Passing Marks: 40	
Total No. of Lectures-Tutorials-Practical (in hours per week): L- 2 P-4/w		
Unit	Topics	No. of Lectures Total=90
I	Concepts & components of Environment, Ecology and ecosystem. Indian traditional Knowledge in Environment and disaster Management. Bio-diversity and its conservation, sustainable development.	23
II	Ganga Action Plan, Tiger project, Tehri dam & Narmada Valley project. Science of Climate Change: Understanding Climate Change; Green House Gases and Global Warming.	23
III	Global Climatic Assessment ó IPCC, Impacts of Climate Change, National Action Plan on Climate Change.	22
IV	Disasters, Hazards, Risk, Vulnerability, Type of Disasters, Disaster Management, Disaster Management Cycle. Flood, Drought, Cyclone, Earthquake, Tsunami, Landslide, Chemical and Nuclear Disasters. Do's and Don'ts During Disasters.	22



ख्वाजा मुईनुद्दीन चिश्ती भाषा विश्वविद्यालय, लखनऊ, उत्तर प्रदेश (भारत)
Khwaja Moinuddin Chishti Language University, Lucknow, U.P. (India)

U.P. STATE GOVERNMENT UNIVERSITY,
(Recognised Under Section 2(f) & 12(B) of the UGC Act, 1956 & B.Tech. Approved by (AICTE)



Suggested Readings:

1. Casper J.K. (2010). *Changing Ecosystems: Effects of Global Warming*. New York, USA: InfobasePub.
2. Hudson, T. (2011). *Living with Earth: An Introduction to Environmental Geology*. Delhi, India: PHI Learning Private Limited.
3. Miller, G.T. (2007). *Living in the Environment: Principal, Connections, and Solutions*. Belmont, Australia: Brooks/ Cole Cengage Learning.
4. Singh, R.B. (1993) *Environmental Geography*. Delhi, India: Heritage Publishers.
5. UNEP. (2007). *Global Environment Outlook: GEO4: Environment For Development, United Nations Environment Programme*. UK: University Press, Cambridge.
6. Government of India. (2011). *Disaster Management in India*. Delhi, India: Ministry of Home Affairs.
7. Singh, Savendra (2019) *Pryavaran Bhugol*, Pravalika Publication, Allahabad
8. Kapur, A. (2010). *Vulnerable India: A Geographical Study of Disasters*. Delhi, India: Sage Publication.
9. Singh, Savendra (2019) *Apada Prabandhan*, Pravalika Publication, Allahabad.
10. Ramkumar, M. (2009). *Geological Hazards: Causes, Consequences and Methods of Containment*. New Delhi, India: New India Publishing Agency.
11. Climate Change: Understanding Climate Change; Green House Gases and Global Warming; Global Climatic Assessment-IPCC
12. Climate Change and Vulnerability: Physical Vulnerability; Economic Vulnerability; Social Vulnerability.
13. Impact of Climate Change: Agriculture and Water; Flora and Fauna; Human Health
14. Adaptation and Mitigation: Global Initiatives with Particular Reference to South Asia.
15. The Climate Change Policy Framework: Global Initiatives UNFCCC and COPs; National and Local Action Plan on Climate Change.
16. Government of India. (2008). *Vulnerability Atlas of India*. New Delhi, India: Building Materials & Technology Promotion Council, Ministry of Urban Development, Government of India
17. Modh, S. (2010). *Managing Natural Disaster: Hydrological, Marine and Geological Disasters*. Delhi, India: Macmillan.
18. Bansal SC, (2020) *Jalvayuvigyan evam Samudra Vigyan*, Meenakshi Publication, Meerut.
19. Bansal SC, (2019) *Prayavarn ek adhyan*, Meenakshi Publication, Meerut.

This course can be opted as an elective by the students of following subjects: Open for all

Suggested Continuous Evaluation Methods:

Assignment / test / Quiz (MCQ) / Seminar/ Presentations



ख्वाजा मुईनुद्दीन चिश्ती भाषा विश्वविद्यालय, लखनऊ, उत्तर प्रदेश (भारत)
Khwaja Moinuddin Chishti Language University, Lucknow, U.P. (India)

U.P. STATE GOVERNMENT UNIVERSITY,
(Recognised Under Section 2(f) & 12(B) of the UGC Act, 1956 & B.Tech. Approved by (AICTE)



Programme/Class: B.A./B.Sc.	Year: II	Semester: III
Subject- Geography		
Course Code: A020302T	Course Title: Oceanography	
Course outcomes: <ul style="list-style-type: none">• Understand the elements of ocean and relief and its impacts at different scales.• Comprehend the oceanic aspects and its bearing on planet earth.• Understand the oceanic process and availability of resources.		
Credits: 6	Course Type-Core Course	
Max. Marks: 100 (30+70)	Min. Passing Marks:40	
Total No. of Lectures-Tutorials-Practical (in hours per week): L- 2 P-4/w		
Unit	Topics	No. of Lectures Total=90
I	Basic Oceanography; Surface Bottom Relief: Pacific Ocean, Atlantic Ocean & Indian Ocean.	23
II	Physical & Chemical Properties of Sea Water; Interlink Between Atmospheric Circulation & Circulation Patterns in the Oceans; Thermohaline, Waves & Tides	23
III	Ocean Current: Cause, Types, Currents of Pacific, Atlantic & Indian Ocean; Effects of Ocean Currents; El Nino La Nina & Southern Oscillation.	22
IV	Ocean Deposits: Types & Distribution; Coral Reefs & Atolls; Theories of their Formation & Coral Bleaching; Tsunami; Sea Level Changes: Causes, Evidence & Impact	22
Suggested Readings: <ol style="list-style-type: none">1. Davis Richard J.A.: "Oceanography - An Introduction to the Marine Environment" Wm. C. Brown Low a. 1986.2. Duxbury "C.A. and Duxbury B.: An Introduction to the World's Oceans. C. Brown Low a 2nd ed. 1996.3. Garrison, T.: "Oceanography - An Introduction to Marine Science. Books/ Cole, Pacific Grove, USA, 2001.4. Gross, M. Grant: Oceanography, A View of the Earth, Prentice Hall Inc. New Jersey, 1987.5. King, C.A.M. Oceanography for Geographers, 1962.6. Sharma, R.C. "The Oceans" Rajesh N. Delhi, 1985.7. Singh, R.B. Natural Hazards and Disaster Management, Raw at Publication, Jaipur, 20068. Ummerkuty, A.N.P. Science of the Oceans and Human Life, NBT, New Delhi, 1985.		



ख्वाजा मुईनुद्दीन चिश्ती भाषा विश्वविद्यालय, लखनऊ, उत्तर प्रदेश (भारत)
Khwaja Moinuddin Chishti Language University, Lucknow, U.P. (India)

U.P. STATE GOVERNMENT UNIVERSITY,
(Recognised Under Section 2(f) & 12(B) of the UGC Act, 1956 & B.Tech. Approved by (AICTE)



Programme/Class: B.A./B.Sc.	Year: II	Semester: III
Subject- Geography		
Course Code: A020303P	Course Title: Computer Mapping	
Course outcomes: <ul style="list-style-type: none">• To enable students to use GIS as a decision support system for different geographical applications• Students will learn about Modern science and technology that have made tremendous progress in all possible fields.• Computer Mapping is a newly emerged field in Geospatial Technology.• Students will get adequate professional knowledge and computer skills so as to enable the students to take up career in the field of Geospatial Technology.• The students will be able to understand and prepare thematic maps using digital platform.		
Credits: 6	Course Type-Core Course	
Max. Marks: 100 (30+70)	Min. Passing Marks:40	
Total No. of Lectures-Tutorials-Practical (in hours per week): L- 2 P-4/w		
Unit	Topics	No. of Lectures Total=90
I	Understanding of Diagrams: Meaning and concept, Kinds of Diagrams; One Dimensional, Two Dimensional, Three Dimensional Distribution Maps and Cartograms	23
II	Methods of Drawing Distribution Maps Qualitative Methods: Simple shade method, Pictorial, Choropleth or symbol and Naming Method)	23
III	Quantitative Methods: Choropleth, Isopleth, Dot Method, Diagrammatic Method,	22
IV	Cartograms: Value area cartograms, Traffic-flow cartograms, Isochronic Cartograms, Equal cost- distance cartograms	22
Suggested Readings: <ol style="list-style-type: none">1. Monkhouse, F. J. and Wilkinson, F.J. (1985): Maps and Diagrams. Methuen, London.2. Raisz, E. (1962): General Cartography. John Wiley and Sons, New York. 5th edition.3. Robinson, A., Sale, R. Morrison, J. and Muehrcke, P. C. (1984): Elements of Cartography, John Wiley and Sons, New York		



ख्वाजा मुईनुद्दीन चिश्ती भाषा विश्वविद्यालय, लखनऊ, उत्तर प्रदेश (भारत)
Khwaja Moinuddin Chishti Language University, Lucknow, U.P. (India)

U.P. STATE GOVERNMENT UNIVERSITY,
(Recognised Under Section 2(f) & 12(B) of the UGC Act, 1956 & B.Tech. Approved by (AICTE)



4. Sarkar, A. K. (1997): Practical Geography: A Systematic Approach. Orient Longman, Kolkata.
5. Singh, R.L. and Singh, Rana P.B. (1993): Elements of Practical Geography. (Hindi and English editions). Kalyani Publishers, New Delhi,

Suggested Continuous Evaluation Methods:

- Test with multiple choice questions / short and long answer questions

Programme/Class: B.A./B.Sc.	Year: II	Semester: III
Subject- Geography		
Course Code: A020304T	Course Title: Climate Change: Vulnerability and Adaptation	
Course outcomes: <ul style="list-style-type: none">• Understand climate change with reference to the geological time scale• Assess the Origin Greenhouse gases and global warming• Global climatic assessment and Impact of climate change: Agriculture and water; flora and fauna; human health and morbidity• Learn Global initiatives to climate change mitigation: Kyoto Protocol, carbon trading, clean development mechanism, COP, climate fund.• Analysis of trends of temperatures• Analyze the rainfall variability of about three decades of climatic regions of India.• Develop concepts and skills regarding mitigation measures concerning climatic hazards.		
Credit: 4	Course Type - General Elective 1	
Max. Marks: 100 (30+70)	Min. Passing Marks:40	
Total No. of Lectures-Tutorials-Practical (in hours per week): L- 4 /w		
Unit	Topics	No. of Lectures Total=60
I	Science and Climate Change: Understanding Climate Change; Green House Gases and Global Warming; Global Climatic Assessment- IPCC	15
II	Climate Change and Vulnerability: Physical Vulnerability; Economic Vulnerability; Social Vulnerability	15
III	Impact of Climate Change: Agriculture and Water; Flora and Fauna; Human Health	15
IV	Adaptation and Mitigation: Global Initiatives with Particular References to South Asia. National Action Plan on Climate Change; Local institutions (Urban Local Bodies, Panchyats)	15



ख्वाजा मुईनुद्दीन चिश्ती भाषा विश्वविद्यालय, लखनऊ, उत्तर प्रदेश (भारत)
Khwaja Moinuddin Chishti Language University, Lucknow, U.P. (India)

U.P. STATE GOVERNMENT UNIVERSITY,
 (Recognised Under Section 2(f) & 12(B) of the UGC Act, 1956 & B.Tech. Approved by (AICTE)



Suggested Readings:

1. IPCC (2007) Climate Change 2007: Impacts, Adaptations 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, USA
3. Singh, M. Singh R.B. and Hasan, M.I. (Eds) (2014) Climate Change and Biodiversity: Proceedings of IGU Rohtak Conference, Volume 1. Advances in Geographical and Environmental Studies, Springer
4. Sen Roy, S. and Singh, R.B. (2002) Climate Variability, Extreme Events and Agricultural Productivity in Mountain Regions, Oxford and IBH Pub; New Delhi
5. Palutikof, J.P., Van Der Linden, P.J. and Hanson, CE (eds), Cambridge University Press

Suggested Continuous Evaluation Methods:

- Test with multiple choice questions / short and long answer questions

Programme/Class: Diploma/BA/B.Sc	Year: II	Semester: III
Subject: Geography		
CourseCode:A020305P	Course Title: Statistical Techniques and Surveying	
Course outcomes: Students will be able to understand <ul style="list-style-type: none"> • To differentiate between qualitative and quantitative information. • To understand the nature of various data. • To understand sampling methods for data collection. • To present data through graphical and diagrammatic formats. • To use the concept of probability mainly the normal distribution. 		
Credits: 3		Core Compulsory
Max. Marks: 100 (30+70)		Min. Passing Marks: 40
Total No. of Lectures-Tutorials-Practical (in hours per week): P - 6 /w		
Unit	Topics	No. of Lectures=45
I	Use of Data in Geography: Significance of Statistical Methods in Geography; Sources of Data, Scales of Measurement (Nominal, Ordinal, Interval, Ratio)	12



ख्वाजा मुईनुद्दीन चिश्ती भाषा विश्वविद्यालय, लखनऊ, उत्तर प्रदेश (भारत)
Khwaja Moinuddin Chishti Language University, Lucknow, U.P. (India)

U.P. STATE GOVERNMENT UNIVERSITY,
 (Recognised Under Section 2(f) & 12(B) of the UGC Act, 1956 & B.Tech. Approved by (AICTE)



II	Tabulation and Descriptive Statistics: Frequency Distribution Table, Cross Tabulation, Graphical Presentation of Data (Bar diagram, Histograms, Frequency Curve and Cumulative Frequency Curves), Measurement of Central Tendencies (Mean, Median and Mode), Measurement of Partitions (Deciles, Quartiles and Percentiles), Dispersion (Standard Deviation, Variance and Coefficient of Variation).	11
III	Sampling: Probability sampling Non-probability sampling. Correlation: Rank Correlation and Product Moment Correlation.	11
IV	Instrumental Survey: Sextant	11
<p>Suggested Readings:</p> <ol style="list-style-type: none"> Berry B. J. L. and Marble D. F. (eds.): Spatial Analysis ó A Reader in Geography. Ebdon D., 1977: Statistics in Geography: A Practical Approach. Davis, R.E. and Foote, F.S. (1953): Surveying, 4th edition, McGrawHill 		

Program/Class: Diploma /BA	Year: Second	Semester: IV
Subject: Geography		
Course Code: A1020401T	Course Title: Economic Geography	
<p>Course Learning Outcomes</p> <p>On completion of this course, learners will be able to:</p> <p style="padding-left: 40px;">Define Meaning, concepts and approaches of Economic Geography</p> <p style="padding-left: 40px;">Understand the nature of Economic activities, Resource Distribution</p> <p style="padding-left: 40px;">Understand the Effect of globalization on developing countries.</p>		
Credits: 6	Course Type-Core Course	
Max. Marks: 100 (30+70)	Min. Passing Marks:40	
Total No. of Lectures-Tutorials-Practical (in hours per week): L- 4T-2/w		
Unit	Topics	No. of Lectures Total=90
I	Meaning, concepts and approaches of Economic Geography; agricultural region of the world (Derwent Whittlesey). Resource: meaning, concept and classification. Spatial organization of economic activities.	23
II	Economic organization of space, Forestry, fishing and mining activities. Agricultural typologies, agricultural land use model (J.H. Von Thunen).	23



ख्वाजा मुईनुद्दीन चिश्ती भाषा विश्वविद्यालय, लखनऊ, उत्तर प्रदेश (भारत)
Khwaja Moinuddin Chishti Language University, Lucknow, U.P. (India)

U.P. STATE GOVERNMENT UNIVERSITY,
(Recognised Under Section 2(f) & 12(B) of the UGC Act, 1956 & B.Tech. Approved by (AICTE)



III	Types of industries; Factors of location of industries; iron and steel industry, cotton textiles and sugar; Theory of industrial location (AlfredWeber).	22
IV	World transportation: Sea routes and major trans- continental railways. WTO and International trade: Patterns and trends Effect of globalization on developing countries.	22

Suggested Readings:

1. B N Singh (2021) Manav evamArthikBhugol, Pravalika Publication,Allahabad
2. Bryson, J., Henry, N., Keeble, D. and Martin, R. (eds.) (1999): The Economic Geography Reader: Producing and Consuming Global Capitalism. John Wiley and Sons, Inc, NewYork.
- 3.Clark,G. L., Gertler, M. S. and Feldman, M. P. (eds.) (2000): The Oxford Handbook of Economic Geography. Oxford University Press,USA.
3. Coe, N. (2007): Economic Geography: A Contemporary Introduction. Blackwell Publishers, Inc., Massachusetts.
4. Gautam, A. (2006): AarthikBhugolKeMoolTattava, Sharda Pustak Bhawan, Allahabad.
5. Guha, J. S. and Chattoraj, P.R. (2002): A New Approach to Economic Geography: A Study of Resources. The World Press Private Limited, Kolkata.
6. Hanink, D. M. (1997): Principles and Applications of Economic Geography: Economy, Policy, Environment. John Wiley and Sons, Inc, New York.
7. Hartshorne, T. A. and Alexander, J. W. (1988): Economic Geography (3rd revised edition) Englewood Cliff , New Jersey, Prentice Hall
8. Hudson, R. (2005): Economic Geographies: Circuits, Flows and Spaces. Sage Publications, London.
9. Knowles, R, Wareing, J. (2000): Economic and Social Geography Made Simple, Rupa and Company, New Delhi.
10. Sokal, Martin 2011. Economic Geographics of Globalisation: A short Introduction. Cheltenham, UK : Edward Elgar.
11. Alexander, J. W. (1988): Economic Geography. Prentice-Hall, New Delhi,

Suggested Continuous Evaluation Methods: Assignment / test / Quiz(MCQ) / Seminar/Presentations

Suggested equivalent online courses:

Courses on Swayam / MOOCs https://onlinecourses.nptel.ac.in/noc21_hs50/preview

Programme/Class: B.A./B.Sc.	Year: II	Semester: IV
Subject- Geography		
Course Code: A020402T	Course Title: Climatology	



ख्वाजा मुईनुद्दीन चिश्ती भाषा विश्वविद्यालय, लखनऊ, उत्तर प्रदेश (भारत)
Khwaja Moinuddin Chishti Language University, Lucknow, U.P. (India)

U.P. STATE GOVERNMENT UNIVERSITY,
(Recognised Under Section 2(f) & 12(B) of the UGC Act, 1956 & B.Tech. Approved by (AICTE)



Course outcomes:

- Understand the elements of weather and climate, different atmospheric phenomena and climate change.
- Learn to associate climate with other environmental and human issues. Approaches to climate classification.
- To analyze the dynamics of the Earth's atmosphere and global climate. Assessing the role of man in global climate change.
- Prepare various climatic maps and charts and interpret them.
- Learn to use of various meteorological instruments.
- Learn the interaction between the atmosphere and the earth's surface. Understand the importance of the atmospheric pressure and winds.
- Understand how atmospheric moisture works.

Credits: 6	Course Type-Core Course	
Max. Marks: 100 (30+70)	Min. Passing Marks:40	
Total No. of Lectures-Tutorials-Practical (in hours per week): L- 4 T-2/w		
Unit	Topics	No. of Lectures Total=90
I	Meaning and scope of climatology; Atmosphere: Composition and structure; Insolation: determinants and distribution; Temperature: Controlling factors and Distribution; Processes of heating and cooling of the atmosphere, Inversion of Temperature	23
II	Atmospheric Pressure and Winds- Planetary Winds, Forces affecting Winds, General Circulation , Jet Streams	23
III	Atmospheric Moisture- Evaporation, Humidity, Condensation Fog and Clouds, Precipitation Types, Stability and Instability: Climatic Regions (Koppen)	22
IV	Cyclones- Tropical Cyclones, Extra Tropical Cyclones, Monsoon- Origin and Mechanism	22

Suggested Readings:

1. Barry, R.G. and Carleton, M. (2001): Synoptic and Dynamic Climatology, Routledge, London.
2. Chorley, R.J. (2001): Atmosphere, Weather and Climate. Methuen, London.
3. Critchfield, H.J. (2002): General Climatology. Prentice-Hall of India, New Delhi..
4. Finch, J. C. and Trewartha, G. T.: Elements of Weather and Climate. Prentice-Hall, London.
5. Kendrew, W.C. (1998): Climatology. Edward Arnold, London. 5th edition.
6. Lal, D.S.(1986): Climatology. Chaitanya Publications, Allahabad.
7. Oliver, J.E. and Hidore, J.J. (2003): Climatology: An Atmospheric Science, Pearson Education Private Ltd, Patparganj, Delhi.
8. Robinson, P. J. and Henderson, S. (1999): Contemporary Climatology, 2nd edition, Pearson Education Ltd., Harlow, UK.
9. Singh, S. (2005): Climatology. Prayag Pustak Bhawan, Allahabad.



ख्वाजा मुईनुद्दीन चिश्ती भाषा विश्वविद्यालय, लखनऊ, उत्तर प्रदेश (भारत)
Khwaja Moinuddin Chishti Language University, Lucknow, U.P. (India)

U.P. STATE GOVERNMENT UNIVERSITY,
(Recognised Under Section 2(f) & 12(B) of the UGC Act, 1956 & B.Tech. Approved by (AICTE)



Suggested Continuous Evaluation Methods:

- Test with multiple choice questions/short and long answer questions.

Programme/Class: B.A./B.Sc.	Year: II	Semester: IV
Subject- Geography		
Course Code: A1020403T	Course Title: Disaster Management Based Project Work	
Course outcomes: <ul style="list-style-type: none">• Understand the definition, classification of hazards and disasters• Gain knowledge about approaches to hazard study.• Develop an idea about factors, consequences and management of earthquake, landslide, flood and riverbank erosion.• Acquire knowledge about human induced disaster.• The students will learn to write a project report / dissertation		
Credits: 6	Course Type-Core Course	
Max. Marks: 100 (30+70)	Min. Passing Marks:40	
Total No. of Lectures-Tutorials-Practical (in hours per week): L- 2 P-4/w		
Unit	Topics	No. of Lectures Total=90
	The Project Report Based on ant two Field case studies among following Disasters and one Disaster preparedness plan of respective college or locality <ul style="list-style-type: none">• Flood/ Drought• Cyclone or Hailstorms• Earthquakes• Landslide Human Induced Disaster: Fire, Chemical and Industrial Hazards.	90
Suggested Readings: <ol style="list-style-type: none">1. Government of India (1997) Vulnerability Atlas of India. New Delhi, Building Materials &Technology Promotion2. Kapur, A. (2010) Vulnerable India: A Geographical Study of Disasters, Sage Publication, New Delhi3. Modh, S. (2010) Managing Natural Disaster: Hydrological, Marine and Geological Disasters, MacMillan, Delhi4. Singh, R. B. (2005) Risk Assessment and Vulnerability Analysis, IGNOU, New Delhi, Chapter 1,2 and 35. Singh R.B. (2006) Natural Hazards and Disaster Management : Vulnerability and Mitigation, Rawat Publication, New Delhi6. Sinha A., (2001) Disaster Management : Lesson Drawn and Strategies for future, New United Press, New Delhi		



ख्वाजा मुईनुद्दीन चिश्ती भाषा विश्वविद्यालय, लखनऊ, उत्तर प्रदेश (भारत)
Khwaja Moinuddin Chishti Language University, Lucknow, U.P. (India)

U.P. STATE GOVERNMENT UNIVERSITY,
(Recognised Under Section 2(f) & 12(B) of the UGC Act, 1956 & B.Tech. Approved by (AICTE)



7. Stolman, J.P. et, al. (2004) International Perspectives on Natural Diasaters, Kluwer Academic Publication, Dordrecht
8. Singh Jagbir (2007) "Disaster Management Future Challenges and Opportunities", 2007 Publisher, I.K. International Pvt Ltd S-25, Green Park Extension Uphaar Cinema Market, New Delhi. Company, New Delhi.

Suggested Continuous Evaluation Methods:

- Test with multiple choice questions / short and long answer questions

Programme/Class: B.A./B.Sc.	Year: II	Semester: IV
Subject- Geography		
Course Code: A020404T	Course Title: Sustainable Development	
Course outcomes: <ul style="list-style-type: none"> • Understand the impact of the acquired knowledge in societal and environmental contexts, and demonstrate the knowledge of need for sustainable development. • Gain knowledge about Sustainable Development Policies and Programmes 		
Credit: 4	Course Type - General Elective 1	
Max. Marks: 100 (30+70)	Min. Passing Marks:40	
Total No. of Lectures-Tutorials-Practical (in hours per week): L- 4 /w		
Unit	Topics	No. of Lectures Total=60
I	Sustainable Development: Definition, Components, Limitations and Historical Background, The Millennium Development Goals: National Strategies and International Experiences,	15
II	Sustainable Regional Development: Need and Examples from different Ecosystem	15
III	Inclusive Development: Education, Health; Climate Change: The Role of Higher Education in Sustainable Development; Human Rights to Health: Poverty, Diseases; the challenges of Universal Health Coverage; Policies and Global Cooperation for Climate Change	15
IV	Sustainable Development Policies and Programmes: The Proposal for SDGs at Rio+20; illustrative SDGs; Goal Based Development; Financing for Sustainable Development,	15



ख्वाजा मुईनुद्दीन चिश्ती भाषा विश्वविद्यालय, लखनऊ, उत्तर प्रदेश (भारत)
Khwaja Moinuddin Chishti Language University, Lucknow, U.P. (India)

U.P. STATE GOVERNMENT UNIVERSITY,
(Recognised Under Section 2(f) & 12(B) of the UGC Act, 1956 & B.Tech. Approved by (AICTE)



Principles of Good Governance; National Environmental Policy, CDM
Suggested Readings: <ol style="list-style-type: none">1. Agyeman, Julian, Robert D. Bullard and BOB Evans (eds) (2003) Just Sustainabilities: Development in an Unequal World, London,: Earthscan2. Baker, Susan (2006) Sustainable Development, Milton Park, Abingdon, Oxon, New York Routledge3. Brosius, Peter (1997) Endangered Forest, endangered People: Environmentalist Representations of indigenous Knowledge, Human Ecology4. Lohman, Larry (2003) Re-imagining the population Debate, Corner House Briefing 28 Robbins, Paul (2004) Political Ecology: A Critical Introduction, Blackwell Publishing
Suggested Continuous Evaluation Methods: <ul style="list-style-type: none">• Test with multiple choice questions / short and long answer questions

Program/Class: Diploma /BA/B.Sc	Year: II	Semester: IV
Subject: Geography		
Course Code: A020405P	Course Title: Weather Maps, Geological Maps and Surveying	
Course Learning Outcomes On completion of this course, learners will be able to: Identify the various Survey Operations and Survey Instruments To understand the idea of Basic and applied Instrumental surveying		
Credits: 3	Skill Enhancement Course	
Max. Marks: 100 (30+70)	Min. Passing Marks: 40	
Total No. of Lectures-Tutorials-Practical (in hours per week): P - 6 /w		
Unit	Topics	No. of Lectures=45
I	Weather Maps, Study and Interpretation of Weather Map, Weather Forecasting.	12
II	Geological Maps: Types, Signs, Bed and Bedding plane, Rock Outcrop, Dip, Strike etc. Construction of Geological Sections.	11
III	Instrumental Survey: Indian Clinometer.	11
IV	Instrumental Survey: Theodolite	11



ख्वाजा मुईनुद्दीन चिश्ती भाषा विश्वविद्यालय, लखनऊ, उत्तर प्रदेश (भारत)
Khwaja Moinuddin Chishti Language University, Lucknow, U.P. (India)

U.P. STATE GOVERNMENT UNIVERSITY,
(Recognised Under Section 2(f) & 12(B) of the UGC Act, 1956 & B.Tech. Approved by (AICTE)



Suggested Readings:

1. Sharma, JP (2001) PrayogikBhugol, Rastogi Publication, Meerut
2. Jones, P.A.(1968): Fieldwork in Geography, Longmans, Green and Company Ltd., First Publication,London
3. Kanetker, T.P. and Kulkarni, S.V.(1967): Surveying and Levelling, Vol I and II V.G. Prakashan,Poona.
4. Natrajan, V. (1976): Advanced Surveying, B.I. Publications.,Mumbai.
5. Pugh, J.C. (1975): Surveying for Field Scientists, Methuen and Company Ltd., London, FirstPublication.
6. Punmia, B.C.(1994): Surveying, Vol I, Laxmi Publications Private Ltd, NewDelhi.
7. Shephard, F.A. (1968): Surveying Problems and Solutions, Edward Arnold (Publishers) Ltd,London
8. Singh, R.L. and Singh, Rana P.B. (1993): Elements of Practical Geography. (Hindi and English editions), Kalyani Publishers, Ludhiana and NewDelhi.
9. Venkatramaiah, C. (1997): A Text Book of Surveying, Universities Press,Hyderabad.
10. Davis, R.E. and Foote, F.S. (1953): Surveying, 4th edition, McGraw Hill Publication, NewYork.