

Choice Based Credit System (CBCS)

OSMANIA UNIVERSITY
DEPARTMENT OF GEOGRAPHY

UNDERGRADUATE PROGRAMME
(Courses effective from Academic Year 2019-20)



SYLLABUS OF COURSES TO BE OFFERED

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Department of Geography
Osmania University

B.A. / B.Sc. CBCS Common Core Syllabi for All Universities in Telangana
(w.e.f 2019-2020)

SCHEME FOR CHOICE BASED CREDIT SYSTEM IN
B.A./B.Sc. PROGRAMME IN GEOGRAPHY

FIRST YEAR / SEMESTER -I

Code	Course Title	Course Type	HPW	Credits
BS101	Elements of Geomorphology	DSC-1A	4T	4
BS102	Practical-I: Elements of Mapping and Interpretation		3P	1
			07	5

SEMESTER-II

Code	Course Title	Course Type	HPW	Credits
BS201	Elements of Climatology & Oceanography	DSC-1B	4T	4
BS202	Practical-II: Basic Statistics and weather Map		3P	1
			07	5

SECOND YEAR / SEMESTER-III

Code	Course Title	Course Type	HPW	Credits
BS301	Human Geography	DSC-1C	4T	4
BS302	Practical-III: Maps and Diagrams		3P	1
BS303	Travel And Tourism	SEC-1	2	2
BS304	Surveying Techniques and Cartography	SEC-2	2	2
			11	9

SEMESTER-IV

Code	Course Title	Course Type	HPW	Credits
BS401	Economic Geography	DSC-1D	4T	4
BS402	Practical-IV: Map Projections		3P	1
BS403	Remote Sensing and GPS	SEC-3	2	2
BS404	Fundamentals of GIS	SEC-4	2	2
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B.A./B.Sc (Programme) Geography, Osmnia University

Discipline Specific Core (DSC) Course (4 Compulsory Papers)

Semester I

1. **Elements of Geomorphology** (4 Credits)
Elements of Mapping and Interpretation (practical) (1 Credit)

Semester II

2. **Elements of Climatology & Oceanography** (4 Credits)
Basic Statistics and Weather Map (practical) (1 Credit)

Semester III

3. **Human Geography** (4 Credits)
Maps and Diagrams (practical) (1 Credit)

Semester IV

4. **Economic Geography** (4 Credits)
Map projections (practical) (1 Credit)

Skill Enhancement Course (SEC)

Semester III : Travel And Tourism (2 Credits)

Semester III : Surveying Techniques and Cartography (2 Credits)

Semester IV : Remote Sensing and GPS (2 Credits)

Semester IV : GIS based Project Report (2 Credits)

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B.A. / B.Sc. GEOGRAPHY FIRST YEAR

SEMESTER -I

(BS101) Paper I: ELEMENTS OF GEOMORPHOLOGY (4 Credits)

Unit-1:

1. Land and Sea: Formation and distribution.
2. Theories: Isostasy, Continental Drift, Plate Tectonics.

Unit-2:

3. Interior of Earth: Earthquakes, Volcanoes Rocks.
4. Denudation – Erosion, Weathering and Mass-wasting.

Unit-3:

5. Fluvial landforms – Erosion and depositional
6. Aeolian landforms- Erosion and depositional

Unit-4:

7. Karst Topography- Erosion and Depositional landforms
8. Glacial Topography- Erosion and Depositional landforms

Basic Texts:

1. Critchfield (1997): General Climatology, Prentice Hall of India, New Delhi.
2. Strahler A. H. and Strahler A. N. (1971): Physical Geography, Willey eastern, New Delhi.
3. Trewartha (1968): An Introduction to Climate, Mc Graw Hill, New Delhi.

Additional Texts:

1. Tikka R. N. (1999): Physical Geography, Kedarnath & Ramnath & Co., Meerut.
2. Dasgupta and Kapoor (1998): Physical Geography, Chand & Co., Delhi.
3. Lal, D. S. (1996): Climatology, Chaitanya Publishing House, Allahabad.
4. Savinder Singh (2013): Geomorphology, Prayag Pustak Bhavan, Allahabad.
5. Sparks B. W. (1965): Geomorphology, Brill Academic Publishers.

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SEMESTER -II

(BS201) Paper II: ELEMENTS OF CLIMATOLOGY & OCEANOGRAPHY

(4 Credits)

Unit-I:

1. Atmosphere – Structure and Composition.
2. Insolation – Factors influencing the incidence and distribution.
3. Temperature – Horizontal and Vertical Distribution.
4. Pressure – Influencing factors- High and Low Pressure Areas, Global Pressure Belts.

Unit-II:

5. Winds – Local, Periodic and Planetary.
6. Cyclones – Formation, Distribution and Impacts, Tropical and Temperate.
7. Humidity – Absolute and Relative.
8. Clouds – Types, Formation and Potentials Precipitation, Types, Formation and Distribution.

Unit-III:

9. Submarine relief: Continental Shelf, Continental Slope, Abyssal Plain, Ocean Deeps and Trenches, Mid-Oceanic ridges.
10. Temperature: Horizontal and Vertical Distribution.
11. Salinity: Factors and Distribution.

Unit-IV:

12. Waves & Tides: Types and Formation.
13. Ocean Currents: Types and Factors Responsible - Currents of Atlantic, Pacific and Indian Oceans.
14. Ocean deposits: Types and Distribution.
15. Marine Resources and their economic significance.

Basic Texts:

1. Cole and King (1975): Oceanography for Geographers, E. Arnold, London.
2. Ken Briggs (1985): Physical Geography: Process and System, Holder and Stoughton, London.
3. Rice R. J. (1996): Fundamentals of Geography Addison - Wesley.
4. Sharma, R. C. and Vatal M. (1997): Oceanography for Geographers, Chaitanya Publishing House, Allahabad.

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SECOND YEAR SYLLABUS OF B.A. / B.Sc. GEOGRAPHY

SEMESTER-III

(BS301) Paper III: HUMAN GEOGRAPHY

(4 Credits)

Unit-I:

1. Nature and Objectives of Human Geography.
2. Man and Environment- Physical and Cultural environment.

Unit-II:

3. Human activities- Primary, Secondary, Tertiary and Quaternary
4. Resources- Classification, Conservation Utilization and Management, Sustainability.

Unit-III:

5. Human Races- Origin, Classification, Characteristics and Distribution, Cultural Realms of the World.
6. Population- World population, Growth and Distribution, Demographic Transition.

Unit-IV:

7. Human Migration- Types, Causes and Consequences of migration, Indian Diaspora
8. Human Settlements: Forms, Structure, Functions and Patterns, Rural and Urban settlements, Urbanization, Impacts of urbanization.

Basic Texts

1. Leong G.C. and Morgan C.C. (1975): Human and Economic Geography, Oxford University Press, London.
2. Alexander J.W. (1963): Economic Geography, Prentice Hall, New Delhi.
3. Hartshorn T.A. and Alexander (1988): Economic Geography, Prentice Hall, New Delhi.

Additional Texts

1. Majid Hussain (1999): Human Geography, Rawat, Jaipur.
2. Ghosh B.N. (1995): Fundamentals of Population Geography, Sterling Publishers, Bangalore.
3. Guha J. L. and Chatoraj P.R. (1978): Economic Geography, World Press, Kolkata.
4. Bhende A.A. & Kanitkar T. (2006): Principles of Population Studies, Himalaya Publishing House, Hyderabad.

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(BS102) Practical-I: ELEMENTS OF MAPPING AND INTERPRETATION

(1 Credit)

1. Types of Maps: Cadastral, Topographical, Atlas, General Maps, Thematic Maps.
2. Construction of scale: simple, diagonal and comparative.
3. Relief features of geological landforms and profile drawing : serial, superimposed, projected and composite.
4. Interpretation of toposheet.

Basic Texts

1. Monkhouse F. J. and Wilkinson H. R. (1968): Maps and Diagrams, Methuen, London.
2. Mishra R. P. and Ramesh A. (1999): Fundamentals of Cartography, Mac Millan, New Delhi.

Additional Texts

1. Gopal Singh (1996): Map Work and Practical Geography, Vikas Publishing House, New Delhi.
2. Singh R. L. and Dutt P.K. (1968): Elements of Practical Geography, Students Friends, Allahabad.
3. Negi B. S. (1998): Practical Geography, Kedarnath and Ramnath, Meerut.

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Skill Enhancement Course (SEC 1)
Semester III

BS-303: Travel and Tourism (2 Credits)

Unit - I

1. Type of Tourism- Nature Tourism, Cultural Tourism, Medical Tourism, Pilgrimage.
2. Recent Trends of Tourism- International and Regional, Domestic (India), Eco-Tourism, Sustainable Tourism, Meetings, Incentives, Conventions and Exhibitions (MICE).

Unit - II

3. Travel Formalities- Travel Agency and Tour Operation Business, Functions.
4. Tourism in India: Tourism Infrastructure; Case Studies of Himalaya, Desert and Coastal and Heritage, National Tourism Policy.

Reading List

1. Dhar, P.N. (2006) International Tourism: Emerging Challenges and Future Prospects. Kanishka, New Delhi.
2. Hall, M. and Stephen, P. (2006) Geography of Tourism and Recreation – Environment, Place and Space, Routledge, London.
3. Kamra, K. K. and Chand, M. (2007) Basics of Tourism: Theory, Operation and Practise, Kanishka Publishers, Pune.
4. Page, S. J. (2011) Tourism Management: An Introduction, Butterworth-Heinemann- USA. Chapter 2.
5. Raj, R. and Nigel, D. (2007) Morpeth Religious Tourism and Pilgrimage Festivals Management: An International perspective by, CABI, Cambridge, USA, www.cabi.org.
6. Tourism Recreation and Research Journal, Center for Tourism Research and Development, Lucknow
7. Singh Jagbir (2014) "Eco-Tourism" Published by - I.K. International Pvt. Ltd. S-25, Green Park Extension, Uphaar Cinema Market, New Delhi, India

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(BS302) Practical-III: Maps and Diagrams (1 Credit)

1. One Dimensional- Line Graph, Poly Graph, Bar Graph, Pyramid Graph, Pie Diagram.
2. Two Dimensional- Squares and Rectangles.
3. Three dimensional- Spheres and Blocks, Climatic Diagrams, Climograph, Hythergraph, Wind Rose.
4. Thematic Maps: Class intervals, Choropleth, Isopleth, Dot Maps, Flow Maps.

Basic Texts

1. Monkhouse F. J. and Wilkinson H.R. (1968): Maps and Diagrams, Methuen, London.
2. Robinson A.H. et al (1995): Elements of Cartography, John Wiley, New York.

Additional Texts

1. Singh R.L. and Dutt P.K. (1968): Elements of Practical Geography, Students Friends, Allahabad.
2. Misra R.P. and Ramesh A. (1989): Fundamentals of Cartography, Concept, New Delhi.

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SEMESTER-IV

(BS401) Paper IV: ECONOMIC GEOGRAPHY

(4 Credits)

Unit-I:

1. Definition, Approaches and Fundamental Concepts, Patterns of Development.
2. Types of Agriculture- Land use, Cropping Pattern and Production, Location Model of Von Thunen.
3. Livestock- Development and Distribution, Animal Products (Dairying, Meat and Wool).

Unit-II:

4. Fisheries: Major Fishing areas of the World, Production and Trade
5. Forest : Types and Distribution, Forest Products, Wild Life.
6. Minerals: Metallic (Iron Ore, Copper), Non-metallic (Limestone and Mica), Fuel (Coal and Petroleum, Natural gas).

Unit-III:

7. Industry- Locational Factors, Weber's Industrial location theory,
8. Major Industries - Iron and Steel, Cotton Textile and Information and Communication Technology Industry.
9. Industrial Regions of the World – Changing pattern.

Unit-IV:

10. Transport- Roadways, Railways, Waterways and Airways.
11. Trade- International Trade, Major Imports and Exports, Balance of Trade.
12. WTO and Developing Countries.

Basic Texts

1. Leong G.C. and Morgan C.C. (1975): Human and Economic Geography, Oxford University Press, London.
2. Alexander J.W. (1963): Economic Geography, Prentice Hall, New Delhi.
3. Hartshorn T.A. and Alexander (1988): Economic Geography, Prentice Hall, New Delhi.

Additional Texts

1. Guha J. L. and Chatoraj P.R. (1978): Economic Geography, World Press, Kolkata.

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(BS202) Practical-II: Basic Statistics and Weather Map (1 Credit)

1. Sources of data: Classification and Tabulation of data.
2. Central Tendencies – Mean, Median and Mode
3. Measures of Dispersion - Mean Deviation and Standard deviation
4. Correlation- Karl Pearson and Spearman.
5. Weather Map: Weather symbols and Interpretation of Indian daily weather maps (July, October and January).

REFERENCES:

1. Aslam Mohmood: Statistical Methods in Geographical Studies. Rajesh Publication, New Delhi.
2. Singh, L.R. (2006): Practical Geography, Sharada Pustak Bhavan.
3. Gregory, S (1963): Statistical Methods and the Geographer, Longmans, London
4. King, L.J.: Statistical Analysis in Geography, Prentice Hall, Englewood Cliffs, New Jersey.
5. Zamir, A. (2002): Statistical Geography: Methods and Applications, Rawat Publications, Jaipur.
6. Monkhouse, F. J. and Wilkinson, F.J. (1985): Maps and Diagrams. Methuen, London
7. Sarkar, A. K. (1997): Practical Geography: A Systematic Approach. Orient Longman, Kolkata.

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(BS402) Practical-IV: Map Projections (1 Credit)

1. Constructions and Uses.
2. Conical Projections: One Standard Parallel, Two Standard Parallel.
3. Bonne's Cylindrical Projections: Equal area, Equal distant.
4. Zenithal Projections (Polar cases only)- Stereographic, Gnomonic, Zenithal Equidistant and Equal Area.

Basic Texts:

1. Monkhouse F. J. and Wilkinson M. R. (1963): Maps and Diagrams, Methuen. London.
2. Misra R. P. and Ramesh A. (1989): Fundamentals of Cartography, Concept, New Delhi.
3. Robinson A. H. (1995): Elements of Cartography, John Willey. New York.

Additional Texts:

1. Gopal Singh (1996): Map work and Practical Geography, Vikas Publishing, New Delhi.
2. Negi B.S. (1998): Practical Geography, Kedarnath and Ramnath, Meerut.

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Skill Enhancement Course (SEC 3)
Semester IV

BS-403: Remote Sensing and GPS (2 Credits)

Unit - I

1. Remote Sensing- Definition, Development, Platforms and Types.
2. Satellite Remote Sensing- Principles, EMR Interaction with Atmosphere and Earth Surface, Satellites (Landsat and IRS) and Sensors.

Unit - II

3. Interpretation and Application of Remote Sensing- Land use/ Land Cover.
4. Global Positioning System (GPS) – Principles and Uses

Reading List

1. Campbell J. B., 2007: *Introduction to Remote Sensing*, Guildford Press.
2. Jensen J. R., 2004: *Introductory Digital Image Processing: A Remote Sensing Perspective*, Prentice Hall.
3. Joseph, G. 2005: *Fundamentals of Remote Sensing*, United Press India.
4. Lillesand T. M., Kiefer R. W. and Chipman J. W., 2004: *Remote Sensing and Image Interpretation*, Wiley. (Wiley Student Edition).
5. Nag P. and Kudra, M., 1998: *Digital Remote Sensing*, Concept, New Delhi.
6. Rees W. G., 2001: *Physical Principles of Remote Sensing*, Cambridge University Press.
7. Singh R. B. and Murai S., 1998: *Space-informatics for Sustainable Development*, Oxford and IBH Pub.
8. Wolf P. R. and Dewitt B. A., 2000: *Elements of Photogrammetry: With Applications in GIS*, McGraw-Hill.

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Skill Enhancement Course (SEC 2)
Semester IV

BS-304: Surveying Techniques and Cartography (2 Credits)

Unit - I

1. Surveying: Chain Survey - Triangulation Method, Open & Closed Traverse.
2. Prismatic Compass Survey- Open & Closed Travers, Intersection method.
3. Plane Table Survey- Intersection method.

Unit - II

4. Maps: Map Scale – Types and Application, Reading distances on a map.
5. Representation of Data – Symbols, Dots, Choropleth, Isopleth and Flow Diagrams, Interpretation of Thematic Maps.

Basic Texts:

1. Monkhouse F. J. and Wilkinson M. R. (1963): Maps and Diagrams, Methuen, London.
2. Misra R. P. and Ramesh A. (2015): Fundamentals of Cartography, Concept, New Delhi.
3. Robinson A. H. (1995): Elements of Cartography, John Willey, New York.

Additional Texts:

4. Gopal Singh (1996): Map work and Practical Geography, Vikas Publishing, New Delhi.
5. Negi B.S. (1998): Practical Geography, Kedarnath and Ramnath, Meerut.

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Skill Enhancement Course (SEC 4)

Semester IV

BS-404: Fundamentals of GIS (2 Credits)

Unit - I

1. Geographical Information System (GIS)- Definition and Components.
2. GIS Data Structures- Types (spatial and Non-spatial), Raster and Vector Data Structure.

Unit - II

3. GIS Data Analysis- Input; Geo-Referencing; Editing and Output, Overlays
4. Application of GIS in Land Use/Land Cover, Urban Sprawl and Forests Monitoring

Reading List

1. Bhatta, B. (2010) Analysis of Urban Growth and Sprawl from Remote Sensing, Springer, Berlin Heidelberg. 41
2. Burrough, P.A., and McDonnell, R.A. (2000) Principles of Geographical Information System-Spatial Information System and Geo-statistics. Oxford University Press
3. Chauniyal, D.D. (2010) Sudur Samvedan evam Bhogolik Suchana Pranali, Sharda Pustak Bhawan, Allahabad .
4. Heywoods, I., Cornelius, S and Carver, S. (2006) An Introduction to Geographical Infromation system. Prentice Hall.
5. Jha, M.M. and Singh, R.B. (2008) Land Use: Reflection on Spatial Informatics Agriculture and Development, New Delhi: Concept.
6. Nag, P. (2008) Introduction to GIS, Concept India, New Delhi.
7. Sarkar, A. (2015) Practical geography: A systematic approach. Orient Black Swan Private Ltd., New Delhi
8. Singh, R.B. and Murai, S. (1998) Space Informatics for Sustainable Development, Oxford and IBH, New Delhi.

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