DEPARTMENT OF GEOGRAPHY

BA (Hons.) Geography

Category-I

DISCIPLINE SPECIFIC CORE COURSE – 1 (DSC-1) –: PHYSICAL GEOGRAPHY

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
PHYSICAL GEOGRAPHY	**4**	**3**	**1**	**-**	**12th Pass**	**NIL**

Learning Objectives

The Learning Objectives of this course are as follows:

- To explain the concept, definition and scope of earth systems.
- To recognize the structure of the Earth and describe its characteristic features.
- To understand the atmospheric composition and structure.

Learning outcomes

The Learning Outcomes of this course are as follows:
The students will be able:

- To classify earth into various domains according to its physical features.
- To differentiate between lithosphere, hydrosphere, atmosphere and biosphere, and to understand interrelationship between them.
- To explain the atmospheric composition and structure.
- To assess the impact of anthropogenic activities on earth systems.

SYLLABUS OF DSC-1

UNIT – I (4 Hours)
Physical Geography: Definition, Nature, Scope, Earth as a System and its Components

UNIT – II (16 Hours)
Atmosphere: Composition and Structure, Energy: Insolation and Temperature, Motion in the atmosphere: pressure and circulation

UNIT – III (16 Hours)
Lithosphere: Earth's Interior, Isostasy, Earth's movement: endogenic including folding and faulting and exogenic forces

UNIT – IV (12 Hours)
Hydrosphere: Hydrological Cycle, Ocean Water Movement – Currents and Tides

UNIT – V (12 Hours)
Biosphere: Soil and Vegetation – Factors and Distribution

Practical component (if any) - NIL

Essential/recommended readings

1. Alan H. Strahler and Arthur Strahler (1992). Modern Physical Geography Fourth Edition, John Wiley & Sons, Canada.
2. Barry, R. G., and Chorley, R. J. (2009). Atmosphere, Weather and Climate (9th Edition). Routledge, New York, USA.
3. Christopherson, R. W. and Birkeland, G. H. (2012). Geosystems: An Introduction to Physical Geography (8th edition). Pearson Education, New Jersey, USA.
4. Gupta, L.S. (2000). JalvayuVigyan(Hindi). Hindi Madhyam Karyanvayan Nidishalya, Delhi.
5. Lal, D. S. (2006). JalvayuVigyan (Hindi). PrayagPustakBhavan, Allahabad, India.
6. Sharma, V.K. (2010). Introduction to Process Geomorphology. CRC Press Taylor & Francis Group.
7. Singh, S. (2009). Bhautik Bhugol ka Swaroop (Hindi). Prayag Pustak. Allahabad, India.
8. Tarbuck, E.J., Lutgens, F.K. and Tasa, D. (2012). Earth Science, Thirteenth Edition. Prentice Hall, Delhi
9. Trujillo, A.P., and Thruman, H.V. (2017). Essentials of Oceanography. PHI., New Delhi.

Suggestive readings (if any)

DISCIPLINE SPECIFIC CORE COURSE – 2 (DSC-2): HUMAN GEOGRAPHY

Credit distribution, Eligibility and Prerequisites of the Course

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
HUMAN GEOGRAPHY	4	3	1	-	12th Pass	NIL

Learning Objectives

The Learning Objectives of this course are as follows:

- To understand various dimensions of human geography and cultural landscape.
- To analyses the population growth and distribution.
- To understand the relationship between population and resource.

Learning outcomes

The Learning Outcomes of this course are as follows:

- Detailed exposure of contemporary relevance of cultural landscape.
- In-depth knowledge of space and society of cultural regions.
- Understanding the settlement pattern and population resource relationship.

SYLLABUS OF DSC- 2

UNIT – I (8 Hours)
Human Geography: Definition, Scope and Major Themes; Contemporary Relevance, Understanding Cultural Landscape.

UNIT – II (16 Hours)
Population: World Population Growth – Trends and Patterns, Population Composition (Residence, Literacy and Age).

UNIT – III (12 Hours)
Space and Society: Cultural Regions, Tribes, Religion and Language.

UNIT – IV (12 Hours)
Settlements: Types of Rural Settlements; Classification of Urban Settlements; Trends and Patterns of World Urbanization.

UNIT – V (12 Hours)
Human Development – Measurements (HDI and IHDI), Regional Variations and Sustainable Development Goals.

Practical component (if any) - NIL

Essential/recommended readings

1. Chandna, R.C. (2017). Geography of Population. Kalyani Publishers, Ludhiana, India.
2. Hassan M.I. (2020). Population Geography-A Systematic Exposition. Routledge Taylor and Francis Group, New York.
3. Human Development Reports of United Nations Development Program.
4. Hussain Majid (2021). Human Geography. Rawat Publication.
5. Majid, Hussain (2012). Manav Bhugol. Rawat Publication.
6. Maurya, S.D. (2012). Manav Bhugol. Sharda Pustak Bhawan, Allahabad, India.
7. Patra, P. et. al.(2021). Perspectives of Human Geography. Concept Publications, New Delhi.
8. Rubenstein, J.M. (2008). An Introduction to Human Geography: The Cultural Landscape. Pearson Prentice Hall, NJ.
9. Saroha, J. (2021). Jansankhya Bhugol, Janankiki evam Jansankhya Adhayan. M.K. Books, New Delhi.
10. Singh, S and Saroha, J. (2021). Human and Economic Geography. Pearson Publication.

Suggestive readings (if any)

DISCIPLINE SPECIFIC CORE COURSE– 3 (DSC-3): DIGITAL CARTOGRAPHY (PRACTICAL)

Credit distribution, Eligibility and Pre-requisites of the Course

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course(if any)
		Lecture	Tutorial	Practical/ Practice		
DIGITAL CARTOGRAPHY (PRACTICAL)	4	-	-	4	12th Pass	NIL

Learning Objectives

The Learning Objectives of this course are as follows:

- Create professional and aesthetically pleasing maps through thoughtful application of cartographic conventions digitally.
- Develop an understanding of the concepts regarding scale, map projections to suit map purposes digitally.
- Better understand the techniques of interpretation of topographical and weather maps through digital cartographic techniques.

Learning outcomes

The Learning Outcomes of this course are as follows:
This is a practical hands-on course, when the students have completed this course, they are able:

- To explain how maps work, conceptually and technically and also will be able to understand the science and art of cartography through digital techniques.
- To recognize the benefits and limitations of some common map projections and their use.
- To understand and perform interpretation of topographical maps and weather maps.

SYLLABUS OF DSC-3

UNIT – I (12 Hours)

1.1. Maps: Concepts and classification, Coordinate system, Nature and Scope-Analogue and Digital cartography)
1.2. History and evolution of Cartography: Western and Indian perspectives
1.3. Digital Cartography: Basics of Raster and Vector Data

UNIT – II (12 Hours)

Scale: Plain, Comparative and Diagonal: Construction and Applications

UNIT – III (16 Hours)
Map Projections: Concept of Datum and Spheroid, Fundamentals of Projections-Classification, Properties, Uses and limitations of Polar Zenithal-Stereographic, Conical projection with two standard parallel and Mercator's Projections. Concept and Use of UTM.

UNIT – IV (12 Hours)
Interpretation of Topographic Maps, Conventional symbols, Cross and Longitudinal Profiles, Identification and Inter-relationships between physical and cultural features in the mountain regions.

UNIT – V (8 Hours)
Concept of Map elements in Digital Cartography

Practical components – Lab Exercises **(30 Hours)**

1.1. Using online maps for place look-ups, latitude and longitudes, time zones
1.2 Refer to the text for the history and evolution of cartography as listed in the reference list
1.3 Introduction to available GIS software, raster and vector data presentation
2.1. Construction and applications
3.1. Construction of Polar Zenithal Stereographic, Conical projection with two standard parallel and Mercator's Projections (manual)
3.2. Digital demonstration of projections
5.1 Map layout preparation with the provided data

Essential/recommended readings

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. Kraak, M.J. (2010). Cartography: Visualization of Geospatial Data (3rd edition). Pearson Education Ltd., London. UK.
5. Mishra R. P. and Ramesh A. (1989). Fundamentals of Cartography. Concept Publication, New
6. Sharma J. P., 2010: Prayogic Bhugol. Rastogi Publishers, Meerut.
7. Misra, R.P. (2014). Fundamentals of Cartography (Second Revised and Enlarged Edition). Concept Publishing, New Delhi. India.
8. Monkhouse, F. J. and Wilkinson, H. R. (1973). Maps and Diagrams. Methuen.
9. Singh, R.L. and Dutta, P.K. (2012). Prayogatmak Bhugol (Hindi), Central Book Depot, Allahabad.
10. Sharma, J. P. (2010). Prayogic Bhugol (Hindi), Rastogi Publishers, Meerut.

Suggestive readings