

SARDAR PATEL UNIVERSITY  
BACHELOR OF ARTS GEOGRAPHY  
BA GEOGRAPHY Semester 04  
Implementing from 2024-25

Course Code	Major	Title of the Course	Elements of Oceanography	
Total Credits of the Course	04	Hours per Week	04	UA04MAGEO01
Course Objectives:	1. The objectives of the course are to introduce students to the many facets of Oceans, such as, evolution of the oceans, physical and chemical properties of Sea water. 2. Atmospheric and oceanographic circulation, the fascinating world of marine life and the characteristic of marine Environment and the impact of man on the marine environment.			
Course Content				
Unit	Description			Weight age %
1.	Meaning of Oceanography, Concept of Hydrological Cycle Distribution of Land and Water. Tetrahedral theory, Sea floor Spreading theory.			25%
2.	Hypsographic Curve and Ocean Floor Topography, Surface Bottom Relief, Pacific Ocean, Atlantic Ocean, Arctic Ocean & Indian Ocean.			25%
3.	Coral reefs and atolls, Theories of Origin of Coral reefs, Physical & Chemical Properties of Sea Water, Ocean Salinity and Temperature – Distribution and Determinants.			25%
4.	Ocean Current: Cause, Types, Currents of Pacific, Atlantic & Indian Ocean, Effects of Ocean Currents. Ocean Deposits: Types & Distribution. Ocean Resources - biotic and minerals			25%
Teaching-Learning Methodology		ICT, Group Discussion Lecture method, Class room Seminar, quiz		
Evaluation Pattern				
Sr. No.	Details of the Evaluation			Weight age
1.	Internal Written / Practical Examination (As per CBCS R.6.8.3)			15%
2.	Internal Continuous Assessment in the form of Practical, Viva-voce, Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)			15%
3.	University Examination			70%
Course Outcomes: Having completed this course, the learner will be able to				
1.	Understand the elements of weather and climate and its impacts at different scales.			

2.	Comprehend the climatic aspects and its bearing on planet earth.
3.	Understand the oceanic process and availability of resources.

Suggested References:	
Sr.	References
1.	M. R. Shah and K.N. Jasani (2016) - Physical Geography, Uni. Granth Nirman Board, Ahmedabad (Gujarati)
2.	Alan Strahler - Physical Geography, John Wiley and Sons
3.	Savindra Singh (2018): Physical Geography, Pravalika Pub. Allahabad (Hindi, English)
4.	Bryant, H. Richard (2001): Physical Geography Made Simple, Rupa and Company. New Delhi
5	K.N. Jasani(2016) -: Oceanography, Uni. Granth Nirman Board, Ahmedabad. (Gujarati)
On-line resources to be used if available as reference material	
On-line Resources: <a href="https://en.m.wikipedia.org/wiki/Structure_of_Earth">https://en.m.wikipedia.org/wiki/Structure_of_Earth</a>	
<a href="https://en.m.wikipedia.org/wiki/mountain_formation">https://en.m.wikipedia.org/wiki/mountain_formation</a>	
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Course Code	Major	Title of the Course	Cultural Geography of India	
Total Credits of the Course	04	Hours per Week	04	UA04MAGEO02
Course Objectives:	1. Various dimensions of the geographical features of India and their spatial Distribution. 2. Detailed analysis of economic resources of India, Understanding of regional Divisions of India.			
Course Content				
Unit	Description	Weight age %		
1.	Geographical advantages of India and its contribution in Indian economy, Minerals and power resources - Ironore, manganese and bauxite - Coal, Petroleum, Natural Gas -Hydro, Thermal, Atomic power projects	25%		
2.	Significance of agriculture in Indian Economy - Salient features of Indian Agriculture -Problems of Indian Agriculture- Green Revolution, White revolution & Blue revolution.	25%		
3.	Industrial regions and Major industries of India-Location factors, development and distribution of iron, steel and cotton industries.	25%		
4.	Racial and ethnic diversities - Major tribes – Language – Religion in India. Growth & distribution of population - Composition of population -Rural – Urban migration -Urbanization and related problems. Network of roads, railways, waterways, airways and pipelines: their complementary role in regional development - Growing importance of ports in national and foreign trade. Trade balance - Developments in communication technology.	25%		
Teaching-Learning Methodology	ICT, Group Discussion Lecture method, Class room Seminar, quiz			
Evaluation Pattern				
Sr. No.	Details of the Evaluation	Weight age		
1.	Internal Written / Practical Examination (As per CBCS R.6.8.3)	15%		
2.	Internal Continuous Assessment in the form of Practical, Viva-voce, Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	15%		
3.	University Examination	70%		

Course Outcomes: Having completed this course, the learner will be able to	
1.	Understand the physical profile of the country.
2.	Study the resource endowment and its spatial distribution and utilization for sustainable Development.
3.	Synthesize and develop the idea of regional dimensions.

Suggested References:	
Sr.	References
1.	Prof. Y. P. Pathak, Dr. J. G. Rangiya,(2014) Gujarat Granth Nirman board, Ahmedabad. (Gujarati)
2.	Alka Gautam (2009): Geography of India, Sharda Publication, Allahabad
3.	R. C. Chandra (1986): Regional Geography of India, Kalyani pub. Delhi.
4.	Sharma and Coutinho (1980) Economics and Commercial Geography of India, Vikas Publication, New Delhi.
5	Das, P.K : Monsoons National Book Trust, new Delhi,1987
On-line resources to be used if available as reference material	
On-line Resources: <a href="https://en.wikipedia.org/wiki/Geography_of_India">https://en.wikipedia.org/wiki/Geography_of_India</a>	
<a href="https://en.wikipedia.org/wiki/Geography_of_India">https://en.wikipedia.org/wiki/Geography_of_India</a> <a href="https://en.wikipedia.org/wiki/Climate_of_India">https://en.wikipedia.org/wiki/Climate_of_India</a> <a href="https://www.thrillophilia.com/wildlife-india">https://www.thrillophilia.com/wildlife-india</a>	

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Course Code	Major	Title of the Course	Thematic Cartography (Practical)	
Total Credits of the Course	04	Hours per Week	04	UA04MAGEO03
Course Objectives:	<p>1. The objectives of this course are to train the students in the art of representing demographic and Socio-economic database of any area through simple statistical techniques and cartograms.</p> <p>2. The techniques of surveying and map projections necessary for accurate geographical positioning and preparing physical plans of an area also form parts of the practical exercises.</p> <p>3. This course thus trains the students in preparing different types of maps.</p>			
Course Content				
Unit	Description			Weight age %
1.	Conversion of Scale: R.F. To verbal and Verbal to R.F. Construction of scale Simple, Time and Distance scale			25%
2.	Representation of different landforms by contours Slopes, Conical hill, Plateau, Ridge, Pass, Cliff, 'U' shaped valley, "V" shaped valley and ether Types. Construction of climatic diagrams, Line graph & polygraph, Simple and compound bar diagram, Wind Rose diagrams, Hythergraph, Climograph and ether.			25%
3.	Study and interpretation of January and July Indian weather maps in respect of temperature, pressure, wind direction, velocity, Cloud cover and precipitation. Study of Weather Instruments.			25%
4.	Enlargement and Reduction of Maps, Field Visit and Preparation of Report. Students to be taken on a field visit for one day to nearby areas. Main objectives of field visit are: To prepare contour plan by using Dumpy level. To measure height by using Abney level Indian clinometers To identify the landforms on the surface, - while in the field. (Also note the agents, of erosion, transportation and deposition associated With the landforms).			25%
Teaching-Learning Methodology	ICT, Group Discussion Lecture method, Class room Seminar, quiz			

Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weight age
1.	Internal Written / Practical Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Practical, Viva-voce, Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%
Course Outcomes: Having completed this course, the learner will be able to		
1.	Read and prepare maps.	
2.	Comprehend locational and spatial aspects of the earth surface.	
3.	Use and importance of maps for regional development and decision making.	

Suggested References:	
Sr.	References
1.	Dixit, N.G. (2016) „NAKSHA VIGYAN -1“ (IN GUJARATI) University Granth Nirman Bhavan, Ahmedabad.
2.	Singh, R.L. and Dutt, P.K. (1968) Elements of Practical Geography, Students Friends, Allahabad
3.	Gopal Singh, (1996) Map Work and Practical Geography, Vikas Publishing House, New Delhi
4.	Misra, R.P. and Ramesh, A (1999) Fundamental of Cartography, McMillan, New Delhi.
5	R.N.Mishra (2023) Practical Geography method and techniques, Jaipur
On-line resources to be used if available as reference material	
On-line Resources: <a href="https://en.wikipedia.org/wiki/Geography_of_India">https://en.wikipedia.org/wiki/Geography_of_India</a>	
<a href="https://en.wikipedia.org/wiki/Geography_of_India">https://en.wikipedia.org/wiki/Geography_of_India</a> <a href="https://en.wikipedia.org/wiki/Climate_of_India">https://en.wikipedia.org/wiki/Climate_of_India</a> <a href="https://www.thrillophilia.com/wildlife-india">https://www.thrillophilia.com/wildlife-india</a>	

Note:

1. Paper UA03MAGEO03- Principals of Cartography (Theory) & Paper UA04MAGEO03 Thematic Cartography (Practical) both are theory and a practical paper. Each one of the five units mentioned in the syllabus has a theoretical component and related practical sections.
2. The theory Component shall have 100 marks weight age (50 mark: external and 50 marks internal) in the final examination worth the duration of three hours. The practical component shall have 100 marks weight age (70 marks external including journal assessment (10 marks) and viva-voce examination (10 marks) and 30 marks internal) in final practical examination having 5 hours duration.
3. Number of students in a batch for a practical examination shall not have more than 15 under normal circumstance.
4. Students are required to keep a record of practical work in journal form duly signed by the teacher in-charge on all exercises and certified by Head of the department and principal of the college.
5. Candidates who have not completed their journal work shall not be allowed to appear in the practical examination.
6. Students to be taken on a field visit for minimum one day to nearby- areas and have to submit field report.

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Course Code	Minor	Title of the Course	Transportation Geography	
Total Credits of the Course	04	Hours per Week	04	UA04MIGEO01
Course Objectives:	1. To provide clarity about elements of transport as an infrastructure that facilitates linkages among locations and areas with varied demographic socio-cultural and economic attributes and natural and agricultural resources. 2. To acquaint the students with scope, content and theoretical framework relating to transport routes. Hierarchies, accessibility (physical and economic)			
Course Content				
Unit	Description			Weight age %
1.	Meaning, Characteristics and Scope of Transportation Geography – Transportation as Tertiary activity – Approaches of Transportation Geography.-Importance of Transportation Geography.			25%
2.	Elements of Transportation - Geographical Factors affecting the Development of transportation: Physical –Cultural – Technological- government policy in development of transportation.			25%
3.	Mode of Transportation: Land - Road, Railway, Air ways and Pipelines, Regional density, Distribution and Economic significance of Transportation in India and world.			25%
4.	Water Ways: World’s major Inland Waterways and Sea Routes. Regional density and distribution of Air Transportation – Role of Indian Railway in Regional Development, Role of Technology in the Development of Transportation and Regional Development – Transportation and World trade.			25%
Teaching-Learning Methodology	ICT, Group Discussion Lecture method, Class room Seminar, quiz			
Evaluation Pattern				
Sr. No.	Details of the Evaluation			Weight age
1.	Internal Written / Practical Examination (As per CBCS R.6.8.3)			15%
2.	Internal Continuous Assessment in the form of Practical, Viva-voce, Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)			15%
3.	University Examination			70%



Course Outcomes: Having completed this course, the learner will be able to	
1.	Understand the spatial variations in movement of commodities, and trade relations within and between regions.
2.	Relate the characteristics of flow pattern and their intensity with levels of functional economic organization in space.
3.	

Suggested References:	
Sr.	References
1.	Hurst, M.E.(ed.): Transportation Geography, McGraw-Hill, 1974
2.	Hay, A.: Transport Economy, MacMillan, London, 1973
3.	Hoyle, B.S.(ed.): Transport and Development, MacMillan, London, 1973
4.	Majid hussain : Human Geography, Rawat, Jaipur,1999
5	Raza, M. and Agrawal Y.P : Transport Geography of India, Concept. New Delhi, 1985
On-line resources to be used if available as reference material	
On-line Resources: <a href="https://en.m.wikipedia.org/wiki/Structure_of_Earth">https://en.m.wikipedia.org/wiki/Structure_of_Earth</a>	
<a href="https://en.m.wikipedia.org/wiki/mountain_formation">https://en.m.wikipedia.org/wiki/mountain_formation</a>	
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Course Code	Skill-Enhancement	Title of the Course	Thematic Atlas	
Total Credits of the Course	02	Hours per Week	02	UA04SEGEO01
Course Objectives:	After the completion of course, the students will have ability to: <ol style="list-style-type: none"> <li>1. To develop a skill among the students to prepare maps, keeping in view the principles of cartography and also user requirements.</li> <li>2. To make the student understand the techniques of mapping.</li> </ol>			
Course Content				
Unit	Description			Weight age%

1.	Maps-classification and types: principles of Map Design. Diagrammatic Data Presentation – Line bar and circle, Thematic mapping techniques – properties, uses and limitations Areal data. Choropleth, dot proportional circles: point data- isopleths.	50%
2.	Cartographic Overlays-point, line and areal data. Thematic Maps – preparation and interpretation.	50%

Teaching-Learning Methodology	ICT, Group Discussion Lecture method, Class room Seminar, quiz
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weight age
1.	Internal Written / Practical Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Practical, Viva-voce, Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Have sound knowledge regarding the classification and elements of maps.
2.	Have proper utilization of maps for the development.
3.	Appreciate the preparation of various thematic maps with the application of various techniques.
Sr.	References

1.	Singh, R. L, and Dutta, P. K., (2012): Prayogatama Bhugol, Central Book Depot. Allahabad
2.	Cuff, J. D. and Mattson, M. T., (1982): Thematic Maps: Their Design and Production Methuen Young Books
3.	3. Dent, B. D., Terguson, J. S., and Holder, T. W., (2008): Cartography: Thematic Map Design (6 <sup>th</sup> Edition), McGraw Hill Higher Education
4.	Gupta, K. K. and Tyagi, V. C., (1992): Working with Maps, Survey of India, DST, New Delhi
5.	5. Kraak, M.J. and Ormeling, F, (2003): Cartography: Visualization of Geo-Spatial Data, Prentice-Hall
6.	6. Mishra, R. P. and Ramesh, A., (1989); Fundamentals of Cartography, Concept, New Delhi.
On-line resources to be used if available as reference material	
On-line Resources: <a href="https://en.m.wikipedia.org/wiki/Ecosystem_ecology">https://en.m.wikipedia.org/wiki/Ecosystem_ecology</a> <a href="https://en.m.wikipedia.org/wiki/Biodiversity">https://en.m.wikipedia.org/wiki/Biodiversity</a> <a href="https://en.m.wikipedia.org/wiki/Physical_impacts_of_climate_change">https://en.m.wikipedia.org/wiki/Physical_impacts_of_climate_change</a>	

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Course Code	Value Added Course	Title of the Course	Environmental Education-II	
Total Credits of the Course	02	Hours per Week	02	UA04VAGEO01
Course Objectives:	After the completion of course, the students will have ability to: <ol style="list-style-type: none"> <li>1. The objective of this paper is to provide an overview of resource geography and its interface with environment.</li> <li>2. The course aims to provide an understanding of the existing reality of resource utilization and environmental depletion; further aims to sensitize the students to the concept of sustainable resource use and sustainable development.</li> </ol>			
Course Content				
Unit	Description			Weight age%
1.	Environmental Hazard and Disaster Meaning of Environmental Hazards, Environmental Disaster & Stress, Classification of Environmental Hazards, and Environmental conservation Movements. Hazards Zone, Risk and Awareness Concept of Management of Environmental Hazards, Hazards Zones & Risk Analysis, Hazard Awareness; Pre- Hazard Conditions: Warning & Precautions, Post Hazard Condition: Rescue, Assessment & Rehabilitation			50%
2.	Natural Disaster Atmospheric Hazards & Disaster: Causes, Effects & Management Cyclone Cloudburst and Floods, Drought, Green House effect & Global Warming. Management Terrestrial Hazards: Causes, Effects & Management, Earthquake, Landslide and Tsunami, Man- Induced Hazards: Causes, Effects & Management, Desertification, Forest Fire, Soil degradation & Population Explosion			50%
Teaching-Learning Methodology	ICT, Group Discussion Lecture method, Class room Seminar, quiz			
Evaluation Pattern				
Sr. No.	Details of the Evaluation			Weight age
1.	Internal Written / Practical Examination (As per CBCS R.6.8.3)			15%
2.	Internal Continuous Assessment in the form of Practical, Viva-voce, Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)			15%
3.	University Examination			70%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Appreciate the structure and functions of ecosystems with examples.
2.	Understand the environmental problems and relevant management strategies.
3.	Acquire knowledge about the new environmental policies and the need to revise policies to tackle the environmental issues of India, in particular
Sr.	References
1.	Dr.N.G.Dixit,(2015): Man And Environment. Arunoday Prakashan, Ahmednabad
2.	Savindra Singh, (2000): Environmental Geography. Prayag Pustak Bhavan, Allahabad
3.	Singh R.B. & Mishra S. (1996) Environmental Laws in India ,Issues & Responses Rawat Publication, New Delhi.
4.	Dr. N. G. Dixit.(2012) Disaster Management. Arunoday Prakashan, Ahmedabad
On-line resources to be used if available as reference material	
On-line Resources: <a href="https://en.m.wikipedia.org/wiki/Ecosystem_ecology">https://en.m.wikipedia.org/wiki/Ecosystem_ecology</a> <a href="https://en.m.wikipedia.org/wiki/Biodiversity">https://en.m.wikipedia.org/wiki/Biodiversity</a> <a href="https://en.m.wikipedia.org/wiki/Physical_impacts_of_climate_change">https://en.m.wikipedia.org/wiki/Physical_impacts_of_climate_change</a>	