



GUJARAT UNIVERSITY

GUJARAT UNIVERSITY
DEPARTMENT OF GEOGRAPHY
SCHOOL OF SCIENCE, AHMEDABAD-
380009

Syllabus for B.A Geography: 2023 - 24

As per New Education Policy

Shri Shukla
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21/7/2024
A.M.

Falguni R. Patel
Patel

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B.A Geography

Semester 3

Paper Code : GEO-C-231

Paper Name: Introduction to Climatology Credit 4

Course Objective:

1. To define the field of climatology and components of the climate system
2. To introduce various dimensions of climatology like structure and composition.
3. To understand the global atmospheric pressure, temperature and wind system.
4. To study the concept of atmospheric moisture and its types.

Course Outcome: Students will develop

1. Understanding of the atmospheric composition and structure.
2. Knowledge and understanding of composition and layered structure of the atmosphere, insolation and atmospheric pressure.
3. Understanding of the process of insolation and explain the temperature distribution and variation over time and space.
4. Knowledge and understanding of wind, atmospheric humidity, air masses and cyclones.
5. Understanding of the Indian Seasons with reference to IKS and concept of Climate Change

Course Curriculum

Unit-1: Nature and Scope of Climatology – Controls of Weather and Climate, Atmospheric Composition and Structure: Variation with Altitude, Latitude and Season; Insolation and Temperature: Factors and Distribution, Temperature Inversion

Unit-2: Atmospheric Pressure and Winds: Pressure Measurement and Distribution, Forces Affecting Wind, Circulation of Air, Daily-Local-Monsoon and Planetary Winds, Jet Streams

Unit-3: Atmospheric Moisture: Evaporation, Humidity, - Hydrological Cycle -Forms of Condensation - Fog and Clouds - Types of Precipitation - Measurement of Humidity

Unit-4: Indian Seasons with reference to IKS, Climate Change: Understanding Climate Change; Greenhouse Gases and Global Warming; Global Climatic Assessment- IPCC. Causes and Impact, National Action Plan on Climate Change

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Suggested References:

- 1- Lal, D. S. (1998). Climatology. Allahabad: Chaitanya Publishing House.
- 2- P Mallappa, Physical Geography
- 3- Ranganath Principles of Physical Geography
- 4- Nanjannavar S S: Physical Geography
- 5- Hugar M R Physical Geography part I
- 6- Goudar M B, Physical Geography
- 7- Kolhapure and S S Nanjan, Physical Geography
- 8- Lutgens, Frederic K. & Tarbuck, Edward J. (2010). The Atmosphere: An Introduction to Meteorology. New Jersey: Pearson Prentice Hall.
- 9- Oliver, John E. & Hidore, John J. (2003). Climatology: An Atmospheric Science. Delhi: Pearson Education.
- 10- Singh, S. (2005). Climatology. Allahabad: Prayag Pustak Bhawan.
- 11- Barry, R.G. and Chorley, R.J. (2003): Atmosphere, Weather and Climate; Psychology Press, Hove; East Sussex.
- 12- Critchfield, H.J., (1975): general Climatology, Prentice Hall, New Jersey.
- 13- Mather, J.R. (1974): Climatology: Fundamentals and Applications; Mc Craw Hill Book Co., U.S.A.
- 14- Rumney, G.R. (1968): Climatology and the World Climates, Macmillan, London.
- 15- Trewartha, G.T. (1980): An Introduction to Climate; McGraw Hill, New York, 5th edition, (International Student Edition)

Reference Websites

1. <https://earthobservatory.nasa.gov/>
2. <https://mausam.imd.gov.in/>
3. <https://www.weatheronline.in/>
4. <https://earthexplorer.usgs.gov/>
5. <https://www.nhc.noaa.gov/satellite.php>

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Shri Shri

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Falyani R. Patel

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B.A Geography

Semester 3

Paper Code : GEO-C-232

Paper Name: India: Physical Aspects

Credit 4

Course Objective:

1. This course intends at introducing students to the physical features of India with objective to impart knowledge of physiographic divisions of India, soil, climate and arid and biotic regions of India. Understanding the detailed geography of India.

Course Outcome:

After completion of the course, the students will be able to

- Clearly demark physiographic divisions of India
- Understand characteristics and peculiarities of different types of soils, flora and fauna of the India in detail.

Course Curriculum

Unit – 1 India: Location, Size and Shape, Geological Structure, Concept of *Bharat Varsh*, Physiographic Divisions of India: Himalayas(*Sapta Sindhu*), Northern Plains, Peninsular India, Coastal Plains and Islands of Indian Ocean.

Unit-2 Drainage System of India- Himalayan and Peninsular, Climate of India- Origin of Monsoon Climate (Thermal & Recent Concepts), Seasons, Climatic Regions of India (Koppen & Trewartha).

Unit-3 Types of Major Soils, Types of Natural Vegetation of India, Minerals & Energy Resources- Iron Ore, Manganese, Bauxite, Copper, Zinc, Lead, Gypsum, Fluorspar, Mica. Coal, Oil, & Natural Gas, Uranium & Thorium.

Unit-4 Aquatic Resources and Animal Resources and Their Conservation, Hydel Power, Thermal Power, Atomic Power, and Non-Conventional Power Resources.

Suggested References:

1. Alka Gautam (2009), Geography of India, Sharda Publication, Allahabad.
2. Farmer B.H: (1983) An Introduction to South Asia, Methuen, London.
3. Government of India (2011), India year book, New Delhi.
4. Government of India (1999), National School Atlas, Natmo, Kolkata.

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5. Khullar D.R. (2023) India: A Comprehensive Geography, 7th Edition, Kalyani Publishers, New Delhi ISBN : 9789327291483
6. Majid Husain, (2020) Geography of India, McGraw Hill Education (India)
7. Singh Gopal: A Geography of India, Atmaram & son's, Delhi.
8. Singh, R.L. (Ed.) (1972): India – A Regional Geography, Varanasi.
9. Singh, S. (2023). Geography of India, Allahabad: Prayag Pustak Bhawan
10. Tiwari R. C: (2009) Geography of India, Prayg Pustak Bhandar, Allahabad.

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B.A Geography

Semester 3

Paper Code : GEO-C-233

Paper Name: Cartographic Methods Practical -I

Credit 4

Course Objective:

1. Know about cartography, nature, scope, and development.
2. Understand the maps and their function.
3. Understand the map as a tool of communication, analysis, and synthesis.

Course Outcome:

1. Understand the basic concepts of map and map making.
2. Learn to study the interpretation of weather maps.
3. Learn to study the interpretation of different type of Scale.
4. Authenticating that the student has got enough knowledge of the Practical Geography.

Course Curriculum

UNIT 1:

Nature and scope of Cartography. Basic Principles of Cartography, Map and their types, tools of Map-making, Map design.

UNIT 2:

Scale: Their use, methods of showing scale, construction of scale, conversion of scale, types of scale (Linear, Diagonal and Comparative).

UNIT 3:

Weather Maps and Charts:- Introduction of Weather instruments - Dry-Wet Thermometer, Celsius & Farenhite thermometer, Rain-gauge, Aneroid barometer, Hygrometer, Wind wane and Anemometer.

UNIT 4:

Interpretation of Indian Daily Weather Reports (IDWR) -Hyther-graph & Climo-graph

Note:

1. Paper Core - 233 on Cartographic Methods Practical-I is both a Theory & a Practical paper. This paper will have 50 marks internal and 50 marks external examination.

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2. Each one of the four units mentioned in syllabus has theoretical component and related practical sections.

3. Teaching workload should be of 4 practical periods (laboratory work) per week with each having the duration of 120 minutes.

4. Number of students in a batch for practical examination shall not be more than 15 under normal circumstances.

5. 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.

6. Students who have not completed their journal work shall not be allowed to appear in the practical examination.

7. Subject Expert, Lab Assistant, Lab Supervisor, Hamal, and Waterboy are compulsory in Gpgraphy practical Exam Duty (5 hrs Duration)

8. Theory and Practical Exam will be conducted on same day jointly in the college.

Suggested References:

1. Bygott, B: Map work and Practical Geography, University Tutorial press, London, 1969.
2. Ishtiaq, M.C : A text book of Practical Geography, Heritage Publishers, New Delhi, 1989.
3. Raisz, Erwin.: Principles of Cartography, McGraw-Hill Book, New York, 1982. 4. Singh, R.L. : Elements of Practical Geography, Kalyani Publishing Co. , New Delhi, 1989.
4. Dikshit N. G. : Naksha Shatra, University Granth Nirman Board, Ahmedabad
5. Dalal, V.G.: Prayogik Bhoogol-1 & 2. University Granth Nirman Board, Ahmedabad.
6. Sharma J.P. : Prayogik Bhugol , Rastogi Publications, Merath.

6th Sem

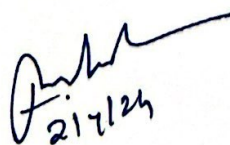

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