Savitribai Phule Pune University

(Formerly University of Pune)

Bachelor of Arts (B.A.) in Geography

(Faculty of Science & Technology)

New Syllabus of F.Y.B.A. Geography

(As Per National Education Policy (NEP) 2020)

For Colleges Affiliated to Savitribai Phule Pune University

To be implemented from Academic Year 2024-2025

Approved by

Board of Studies (BOS) in Geography,

Savitribai Phule Pune University, Pune

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Abbreviation Used

- **NEP**
  - National Education Policy
- **DSE**
  - Discipline Specific Courses
- **T**
  - Theory Courses
- **P**
  - Practical Courses
- **GE/OE**
  - Generic Elective/Open Elective
- **SEC**
  - Skill Enhancement Courses
- **IKS**
  - Indian Knowledge System
- **AEC**
  - Ability Enhancement Courses
- **VEC**
  - Value Education Courses
- **CC**
  - Co-curricular Courses
- **OJT**
  - On Job Training
- **CEP**
  - Community Engagement Programme
- **FP**
  - Field Projects
- **RM**
  - Research Methodology
- **RP**
  - Research Projects
- **VSC**
  - Vocational Skill Courses

Introduction to Undergraduate Degree in Geography

As per the recommendations of UGC and Savitribai Phule Pune University guidelines, the undergraduate (UG) degree course in Geography is a 6-semester course for 3-academic years or 8-semester course for 4-academic years. The curriculum framework design is as per UGC, Savitribai Phule Pune University, NEP 2020 guidelines with the approach of student-centric Teaching - Learning Process (TLP). B.A. Geography course involves theory, practicals, vocational and skill-based verticals. The expected programme specific outcomes outline with graduate attributes. The vision of NEP is followed to enable an interdisciplinary and multidisciplinary approach within the syllabus structure. Students have appropriate flexibility in pursuing various courses and multiple entry/exit at UG level.

Award of UG Certificate/ UG Diploma/ Bachelor's Degree in Geography

Sr. No.	Type of Award	Stage of Exit OR Continue with Major and Minor
1	UG Certificate in Geography	Exit Option: After successful completion of first year; Award of UG Certificate with 44 credits and an additional 4-credit NSQF course/Internship Continue Option: From the DSE courses Students will select Geography subject among the (Subject-1, Subject-2 and Subject-3) as a major and another as minor and third subject will be dropped.
2	UG Diploma in Geography	After successful completion of Second year; Award of UG Diploma in Major and Minor with 88 credits and an additional 4-credit NSQF course/Internship OR Continue with Major and Minor
3	Bachelor of Arts in Geography	After successful completion of Third year; Award of UG Degree in Major with 132 credits and an additional 4-credit NSQF course/Internship OR Continue with Major and Minor
4	Bachelor of Arts in Geography (Honors)	After successful completion of successful completion of the Fourth Year; Award of UG Degree (Honours) in Major with 176 credits and an a additional 4-credit NSQF course/Internship

Objectives of the B.A. Geography Programme

1. To familiarize students with fundamentals concepts and principles of Geography
2. To guide students in an identification and analysis of various facets of geographical features and processes.
3. To enhance students' ability in spatial analysis, relationships between people, places, and the environment.
4. To develop critical thinking and problem-solving skills, analytical and scientific reasoning, reflective thinking, moral & reflective awareness amongst the students.
5. To facilitate the students to learn skills of cartographic techniques, data analysis and interpretation, carrying out field work, use of Geoinformatics techniques, research projects, applications and applied studies.

Programme Specific Outcomes: B.A. Geography

Sr. No.	**PSO Statement :** After completing the B.A. in Geography, Students will be able to	Knowledge and Skills
PSO 1	Illustrate the geographical concepts and theories, practicals, regional approach focus on global, continental, countrywide and statewide	Disciplinary knowledge
PSO 2	Understanding the ethical consideration in geographic research and environment values in developing sustainable solutions	Moral & ethical awareness
PSO 3	Interpret the spatial relationships between places, people and environment	Spatial analysis skills
PSO 4	Apply geographic knowledge and skills to solve real-world problems and issues	Critical thinking & Problem Solving Ability
PSO 5	Analyze and interpret spatial data using GIS, Remote sensing and cartographic techniques	Analytical reasoning / digital literacy
PSO 6	Appraise geographic issues and regional to global perspectives in the context of sustainability	Scientific reasoning
PSO 7	Capability to design, conduct and present field work/survey projects and research projects	Research related skills/ self-directed learning
PSO 8	Develop team work and leadership qualities throughseminars, outdoor practicals, field work and study tours	Team work /leadership qualities
PSO 9	Evaluate human impacts on environment and develop sustainable resolves	Reflective thinking/
PSO 10	Creating skills for professional careers in the field of environmental management, rural development, urban planning, geospatial technologies, cartography, field survey techniques**,** disaster management, tourism sector etc	Preparation for livelihoods/lifelong learning

Structure of the Programme

The detailed frame work of Undergraduate (B.A.) Degree Programme in Geography

Level	Semester	DSE Subject-1	DSE Subject - 2	DSE Subject – 3	GE/OE	SEC	IKS	AEC	VEC	CC	Total
4.5/ 100	I	**GEO-101-T** Introduction to Physical Geography [2T] **GEO-102-P** Practicals in Physical Geography [2P]	2 (T) + 2 (P)	2 (T) + 2 (P)	**OE-101-GEO** Geography of Tourism [2T]	**(Select any one of the following)** **SEC-101-GEO** Introduction to Water Analysis [2T] OR **SEC-102-GEO** Geography of Natural Resources [2T]	2 (T) Generic	2 T	2	-	**22**
	II	**GEO-151-T** Introduction to Human Geography [2T] **GEO-152-P** Practicals in Human Geography [2P]	2 (T) + 2 (P)	2 (T) + 2 (P)	**OE-151-GEO** Practicals in Tourism Geography [2P]	**(Select any one of the following)** **SEC-151-GEO** Practicals in Water Analysis [2P] OR **SEC-152-GEO** Practicals in Geography of Natural Resources Conservation [2P]	-	2 T	2	2	**22**

Exit option: Award of UG certificate in major with 44 credits and an additional 4 credits course NSQF courses / internship or continue with major and minor.

Continue Option: Students will select one subject among the (subject-1, subject-2 and subject-3) as a major and another as minor and third subject will be dropped.

Important Instructions:

a. It is mandatory to have a certified journal during the practical examination for practical courses.

b. Both practical and theory courses have internal and external examination and evaluation pattern.

c. Practical course external examination pattern (Skeleton Format) will be provided by BOS Geography before the end semester examination.

d. For practical courses, the teaching batch size shall be 15 students per batch

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Structure of the Programme

The detailed framework of under graduate (B.A.) Degree Programme in Geography

Level	Semester	Credits Related to Major				Minor	GE/OE	SEC	IKS	AEC	VEC	CC	Total
		Major Core	Major Elective	VSC	FP/OJT/ CEP								
5.0/ 200	III	**GEO -201-MJ** Fundamentals of Geomorphology [4T] **GEO -202 -MJP** Practicals in Fundamentals of Geomorphology [2P]	--	**(Select any one of the following)** **GEO-221-VSC** Introduction to Cartography [2T] **OR** **GEO -222-VSC** Introduction to Surveying [2T]	**GEO - 231 - FP** Field Visit and Report Writing [2FP]	- **GEO - 241 MN** Physical Geography of India [2T] - **GEO - 242 MNP** Practicals in Map Reading [2P]	**OE-201-GEO** Political Geography [2T]	--	**GEO-201 - IKS** Indian Geographical Knowledge [2T]	[2T]	-	[2T]	**22**
	IV	**GEO -251 –MJ** Introduction to Population and Settlement Geography [4T] **GEO- 252 - MJP** Practicals in Population and Settlement Geography [2P]	--	**(Select any one of the following)** **GEO - 271-VSC** Practicals in Cartography [2P] **OR** **GEO - 272 -VSC** Practicals in Surveying [2P]	**GEO - 281-CEP** Community Engagement Programme [2CEP]	- **GEO - 291 MN** Physical Geography of Maharashtra [2T] - **GEO - 292 MNP** Practicals in Weather Observation [2P]	**OE-251 GEO-** Introduction to GPS [2P]	**SEC-251-GEO** Practical In Fundamentals of Statistics [2P]	–	[2T]	-	[2T]	**22**
Exit option: Award of UG Diploma in Major and Minor with 88 credits and an additional 4 credits Course NSQF courses / Internship or Continue with Major and Minor.													

Important instructions:

a. It is mandatory to have a certified journal during the practical examination for practical courses.
b. Both practical and theory courses have internal and external examination and evaluation pattern.
c. Practical course external examination pattern (Skeleton) will be provided by BOS Geography before the end semester examination.
d. For the practical courses batch size: **12 students** per batch.

Structure of the Programme

The detailed frame work of under graduate (B.A.) Degree Programme in Geography

Level	Semester	Credits Related to Major				Minor	DSE 2 & 3	GE / OE	SEC	IKS	AEC	VEC	CC	Total
		Major Core	Major Elective	VSC	FP/OJT/ CEP									
5.5 / 300	V	**GEO-301-MJ** Fundamentals of Climatology [4T] **GEO-302-MJ** Regional Geography of India [4T] **GEO-303-MJP** Practicals in Climatology and Soil Geography [4P]	(Select any one of the following) **GEO-310-MJ** Soil Geography [2T] OR **GEO-311-MJ** Fundamentals Of GIS [2T] (Select any one of the following) **GEO-312-MJP** Practicals in Fundamentals of Mapping [2P] OR **GEO-313-MJP** Practicals in GIS [2P]	(Select anyone of the following) **GEO-321-VSC** Introduction to Tourism Geography [2T] OR **GEO-322-VSC** Watershed Management [2T]	**GEO-331-FP/CEP** Field visit and report writing [2FP]	**GEO-341-MN** Environmental Geography [2T]	--	--	--	--	--	--	--	22
	VI	**GEO-351-MJ** Introduction to Economic Geography [4T] **GEO-352-MJ** Geography of Resource Management [4T] **GEO-353-MJP** Practicals in Spatial Analysis [4P]	(Select any one of the following) **GEO-360-MJ** Geography of Disaster Management [2T] **OR** **GEO-361-MJ** Introduction to Remote Sensing [2T] (Select any one of the following) **GEO-362-MJP** Practicals In Economic Geography [2P] **OR** **GEO-363-MJP** Practicals in Remote Sensing [2P]	(Select any one of the Following) **GEO-371-VSC** Practicals in Tour Planning [2P] **OR** **GEO-372-VSC** Practicals in Advanced Surveying [2P]	**GEO-381-OJT** [4OJT]	--	--	--	--	--	--	--	--	22
Total 3 Year		**44**	**8**	**8**	**10**	**18**	**8**	**8**	**6**	**4**	**8**	**4**	**6**	**132**

Exit option: Award of UG Degree in Major with132 credits and an additional 04credits Course NSQF courses / Internship or Continue with Major and Minor.

Important instructions:

Methods of Assessment

Examination Pattern:

2 Credits Course Examination Pattern:			
Evaluation Details	Total Marks	Internal Examination **(Continuous Internal Evaluation)**	External Examination **(End Semester University Examinations)**
Total Marks	50	20	30
Examination Evaluation Pattern		▪ Class test/examination - Short Questions, Quizzes, MCQs :Marks – 10 ▪ Home assignment /Oral examination/ Students seminar/ presentation/field visit/survey/Journal/project work :Marks – 10	Q.1 Answer the following question in 20 words (any four out of six) Marks – 08 Q.2 Answer the following question in 50 words (any two out of three) Marks – 08 Q.3 Answer the following question in 100 words (any two out of three) Marks – 14
4 Credits Course Examination Pattern:			
Evaluation Details	Total Marks	Internal Examination **(Continuous Internal Evaluation)**	External Examination **(End Semester University Examinations)**
Total Marks	100	40	60
		▪ Class test/examination - Short Questions, Quizzes, MCQs :Marks – 20 ▪ Home assignment /Oral examination/ Students seminar/ presentation/field visit/survey/Journal/project work :Marks – 20	Q.1 Answer the following question in 20 words (any seven out of nine) Marks – 14 Q.2 Answer the following question in 50 words (any four out of five) Marks – 16 Q.3 Answer the following question in 100 words (any two out of three) Marks – 14 Q.4 Answer the following question in 300 words (any one out of two) Marks – 16

Important instructions:

a. It is mandatory to have a certified journal during the practical examination for practical courses.

b. Both practical & theory courses have internal and external examination and evaluation pattern

c. Practical course external examination pattern (Skelton) will be provided by BOS Geography before the end semester examination

d. For the practical courses batch size: 15 students per batch.

Savitribai Phule Pune University, Pune
B.A. (Geography) as per NEP 2020

Name of the Programme	**:**	B.A (Geography)
Class	**:**	F.Y.B.A
Semester	**:**	I
Name of Vertical Group	**:**	DSE
Course Code	**:**	GEO-101-T
Course Title	**:**	Introduction to Physical Geography
Type of course	**:**	Theory
Total Credits	**:**	02
Workload	**:**	(15 hours/credit) 2 credits x 15 hours = 30 hours in semester

Objectives of the Course:

1. To acquaint students with basic principles of Physical Geography
2. To introduce the processes and patterns in the atmosphere, hydrosphere and lithosphere.
3. To develop scientific insights into dynamics of the earth system.

Topics and Learning Points

Topic No	Topic Name	Sub Topic	No. of Hours
1.	Introduction to Physical Geography	i. Introduction, definition and branches of Geography ii. Definition and Branches of Physical Geography iii. Nature, Scope and importance of Physical Geography	08
2	Lithosphere	i. Interior of the Earth - Structure and Composition ii. Wegener's Continental Drift Theory	06
3.	Atmosphere	i. Concept of weather and climate. ii. Composition and structure of the atmosphere iii. Factors affecting horizontal distribution of the temperature	08
4.	Hydrosphere	i. General structure of ocean floor ii. Movements of ocean water a. Tides- meaning, causes and types	08

Course Outcome:

By the end of this course, student will be able to:

CO 1 : Understand fundamental concepts, theories and approaches of Physical Geography

CO 2 : Recognize functions of complex interactive earth systems.

CO 3 : Demonstrate scientific explanations of physical processes of the atmosphere, hydrosphere and lithosphere.

CO 4 : Describe diverse human activities affecting the natural environment.

References:

1. Dayal P., (1996), Text Book of Geomorphology, Shukla Book Depot, Patna.
2. Kale V.S. and Gupta A., (2015), Introduction of Geomorphology, University Press, Kolkata.
3. Lal, D. S., (1998), Climatology, Chaitanya Publishing House, Allahabad.
4. Kale V.S. and Gupta A., (2001), Elements of Geomorphology, Oxford Univ. Press.
5. Monkhouse F.J., (1951), Principles of Physical Geography, McGraw Hill Pub - New York.
6. Singh Savindra., (2000), Physical Geography, Prayag Pustak Bhavan, Allahabad.
7. Singh Savindra., (2000), Oceanography, Prayag Pustak Bhavan, Allahabad.
8. Husain, M., (2001), Fundamentals of Physical Geography, Rawat Publication, Jaipur.
9. Siddhartha, K., (2001), The Earth's Dynamic Surface, Kisalaya Publications Pvt. Ltd, New Delhi.
10. Lutgens, F.K. and Tarbuck, E.J., (2007), The Atmosphere, Pearson Prentice Hall, New Jersey.
11. Bergwan, Edward E., (1995), Human Geography: Culture, Connections and Landscape, Prentice-Hall, New Jersey.
12. Fellman, J.L., (1997), Human Geography-Landscapes of Human Activities. Brown and Benchman Pub., U.S.A.
13. Johnston, R.J., (1994), Dictionary of Human Geography, Blackwell, Oxford.
14. Chandna, R.C., (2000), Geography of Population: Concepts, Determinants and Patterns, Kalyani Publishers, New Delhi.
15. वाणी, बी.के. आणण पाटील एन.एम., (२०२०), प्राकृतिक व मानवी भूगोल, अथर्व प्रकाशन, जळगाव.

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Savitribai Phule Pune University, Pune
B.A. (Geography) as per NEP 2020

Name of the Programme	**:**	B.A. (Geography)
Class	**:**	F.Y.B.A.
Semester	**:**	I
Name of Vertical Group	**:**	DSE
Course Code	**:**	GEO-102-P
Course Title	**:**	Practicals in Physical Geography
Type of course	**:**	Practical
Total Credits	**:**	02
Workload	**:**	2 credits x 30 hours = 60 hours in semester

Objectives of the Course:

1. To acquaint students with methods of relief representation
2. To develop skills of students in interpreting contour maps, landforms and other relief features

Topics and Learning Points

Topic No	Topic Name	Sub Topic	No. of Hours
01	Qualitative Methods of Relief Representation	Methods of Relief Representation Qualitative Methods a. Hachures b. Hill shading c. Color shading or tinting	15
02	Quantitative Methods of Relief Representation	Methods of Relief Representation Quantitative Methods a. Spot Height b. Bench Mark c. Triangulation Method d. Contours e. Form lines	15
03	Representation of slope and landforms by contours	Representation of slope by contours a. Gentle and steep slope b. Even and uneven slope c. Concave and convex slope Representation of landforms by contours a. Conical hill b. Cliff c. V shaped valley d. Ridge e. Plateau f. Pass	20

Topic No	Topic Name	Sub Topic	No. of Hours
4	Study tour/field excursion	Study tour/field excursion should be conductd (not more than four days) to identify slope and landforms using contour pattern in any geographical area within the country.	10

Course Outcome:

By the end of this course, student will be able to:

CO 1 : Identify different methods of relief representation

CO 2 : Apply both qualitative and quantitative methods in representing and interpreting geographical features

CO 3 : Draw and recognize relief and landform through contour pattern in the field.

References:

1. Ahirrao, D. Y. And Karanjkhele, E.K., (2002), Pratyakshik Bhugol, Sudarshan Publication, Nashik.
2. Chandana, R. C., (2015), Geography of Population, Kalyani Publisher, New Delhi.
3. Hans Raj, (1978), Fundamentals of Demography: (population Studies with Special Reference to India), Surjeet Publication, Delhi.
4. Jadhav, S., Chaudhari, A. and Chaudhari, A., (2020), Pratyakshik Bhugol, Prashant Publication, Jalgaon.
5. *Nagtode* P. M., and *Lanjewar* H.D., (2009), Nakashashtra, *Pimplapure Publication, Nagpur*
6. *Sarkar Ashis, (2015), Practical Geography*: A Systematic Approach, Orient Blackswan Pvt Ltd, Hydrabad
7. Singh, G., (2005), Map Work and Practical Geography, Vikas Publishing House Pvt. Ltd., New Delhi.
8. Singh, R.L., (2005), Elements of Practical Geography. Kalyani Publishers, New Delhi.
9. Singh, J. and Dhillon, S., (1994), Agricultural Geography. McGraw Hill Education India Pvt Ltd, New Delhi.

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Savitribai Phule Pune University, Pune
B.A. (Geography) as per NEP 2020

Name of the Programme	**:**	B.A. (Geography)
Class	**:**	F.Y.B.A.
Semester	**:**	I
Name of Vertical Group	**:**	OE
Course Code	**:**	**OE-101-GEO**
Course Title	**:**	Geography of Tourism
Type of course	**:**	Theory
Total Credits	**:**	02
Workload	**:**	(15 hours/credit) 2 Credits x 15 hours = 30 hours in semester

Objectives of the Course:

1. To understand the diverse nature and broad scope of Tourism Geography.
2. To provide students with a broad understanding of recent and emerging types of tourism.
3. To gain insights into specialized forms of tourism and understand their characteristics and sustainability considerations associated with them.
4. To explore the socio-cultural determinants of tourism.
5. To classify and analyze diverse tourism trends, enabling the students the dynamic nature of the tourism industry.

Topics and Learning Points

Topic No	Topic Name	Sub Topic	No. of Hours
1	**Introduction to Tourism Geography**	i. Definition, Nature and Scope of Tourism Geography ii. Concept of Tourist and Tourism iii. Importance of Tourism in Geography	10
2	**Determinants of Tourism Development**	i. Physical a. Relief b. Climate c. Forest d. Water ii. Socio-Cultural a. Religious b. Historical c. Cultural iii. Political a. Policies iv. Other a. Accessibility b. Safety of Tourists	10
3	**Classification and recent types of Tourism**	i. Classification of Tourism based on a. Nationality b. Travel Period c. Purpose of Tourism	10

Topic No	Topic Name	Sub Topic	No. of Hours
		ii. Recent types of Tourism a. Agro Tourism b. Ecotourism c. Wildlife Tourism d. Health Tourism e. Sports Tourism	

Course Outcome:

By the end of this course, student will be able to:

CO 1 : Understand the definition, nature, and scope of tourism.

CO 2 : Recognize and articulate the economic, social, and cultural importance of tourism.

CO 3 : Categorize tourism based on nationality, understanding the distinctions between domestic and international tourism.

CO 4 : Analyze the impact of physical determinants such as relief, climate, forests, and water bodies on tourism development and experiences.

CO 5 : Identify and evaluate the influence of religious, historical, and cultural factors on tourist attractions and destination choices.

References:

1. Cooper, C. and Hall, M., (2008). Tourism and Leisure: Issues and Challenges. Channel View Publications, Bristol.
2. Goeldner, C. R. and Ritchie, J. R. B., (2017). Tourism: Principles, Practices, Philosophies. John Wiley & Sons, Hoboken.
3. Singh, V. and Joshi, S., (2012). Tourism Planning and Development: Concepts and Issues. Sterling Publishers, New Delhi.
4. Page, S. and Connell, J., (2009). Tourism: A Modern Synthesis. Cengage Learning, Hampshire.
5. Seth P.N., (1985), Successful Tourism Management, Sterling Publisher Ltd., New Delhi.
6. Mhatre, S., (2015), Tourism Geography: An Integrated Approach. Himalaya Publishing House, Mumbai.
7. Kulkarni, A., and Shah, N. (2018), Tourism in Nashik: A Comprehensive Guide. Notion Press, Chennai.
8. Deshmukh, P., (2019), Tourism in Ahmednagar: Trends and Challenges. Udyog Sahayadri, Ahmednagar.
9. Patil, N. and Chavan, S., (2017), Tourism in Pune: Exploring the Cultural Capital. Sahyadri Books, Pune.
10. Sharma, S. and Gupta, M., (2013), Tourism Development in India: A Case Study Approach. PHI Learning Pvt. Ltd., New Delhi.

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Savitribai Phule Pune University, Pune
B.A. (Geography) as per NEP 2020

Name of the Programme	**:**	B.A. (Geography)
Class	**:**	F.Y.B.A
Semester	**:**	I
Name of Vertical Group	**:**	V 1
Course Code	**:**	**SEC-101-GEO**
Course Title	**:**	Introduction to Water Analysis
Type of course	**:**	Theory
Total Credits	**:**	02
Workload	**:**	Total Workload: -2 credits x 15 hours = 30 hours in semester

Objectives of the Course:

1. To understand water quality parameters.
2. To learn various types and sources of water
3. To learn various quality indices useful for drinking and irrigation water analysis.

Topics and Learning Points

Topic No	Topic Name	Sub Topic	No. of Hours
1	Parameters of water quality	i. Parameters of water quality: a. Physical, b. Chemical, c. Biological, ii. Significance of water analysis	10
2	Types of Water Sources and Pollution	i. Types of water sources, occurrence, and importance ii. Water pollution: source, types, and management	06
3	Standards of water quality	i. BIS (Bureau of Indian Standards) ii. WHO (World Health Organization)	04
4	Characteristics of Water quality indices	i. Indices for drinking water a. WQI ii. Irrigation Water Quality Indices a. Sodium Adsorption Ratio (SAR) (Richards 1954), b. Residual Sodium Carbonate (RSC) (Eaton 1950), c. Sodium Percentage (SP) (Wilcox 1955), d. Kelly's ratio (Kelly 1963)	10

Course Outcome:

By the end of this course, student will be able to:

CO 1 : Comprehensive understanding of various water quality parameters useful for assessment of water resources.

CO 2 : Understand water quality standards of BIS and WHO.

CO 3 : Comprehend the characteristics of water quality indices for drinking water and irrigation.

References:

1. Standard Methods for the Examination of Water and Wastewater - American Public Health Association, American Water Works Association, Water Environment Federation.
2. Water Quality Assessments: A Guide to the Use of Biota, Sediments and Water in Environmental Monitoring - Deborah V. Chapman (Editor).
3. Water Quality: Guidelines, Standards and Health - Lorna Fewtrell and Jamie Bartram.
4. Environmental Engineering: Water, Wastewater, Soil and Groundwater Treatment and Remediation - Nelson L. Nemerow and Franklin J. Agardy.
5. BIS 10500:2012 - Drinking Water Specification
6. BIS 2296:1982 - Specifications for Packaged Natural Mineral Water
7. BIS 3025:1983 - Methods of Sampling and Test (Physical and Chemical) for Water and Waste Water
8. BIS 3589:2001 - Methods of Sampling and Test (Physical and Chemical) for Water and Waste Water (Revision of IS 3025)
9. BIS 1622:2008 - Drinking Water - Specification
10. BIS 3025:1964 - Methods of Sampling and Test (Physical and Chemical) for Water and Waste Water

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Savitribai Phule Pune University, Pune

B.A Syllabus in Geography (as per NEP 2020)

(Syllabus from June, 2025)

(2023 Pattern)

Name of the Programme	**:**	B.A. (Geography)
Class	**:**	F.Y.B.A
Semester	**:**	I
Name of Vertical Group	**:**	V 1
Course Code	**:**	**SEC-102-GEO**
Course Title	**:**	**Geography of Natural Resources**
No. of Credits	**:**	**02 (Theory)**
No. of Teaching Hours	**:**	**30**

Objectives of the Course:

1.	To provide foundational knowledge about the types and distribution of natural resources.
2.	To introduce key environmental issues related to resource use and overexploitation.
3.	To encourage critical thinking about conservation and sustainable resource management.
4.	To connect natural resources with human development and policy frameworks.

Topics and Learning Points

Topic No	Topic Name	Sub Topic	No. of Periods
1	Introduction to Natural Resources	i. Meaning, classification (renewable, non-renewable) ii. Importance in human development iii. Resource cycle and sustainability	06
2	Land and Soil Resources	i. Types of land use ii. Major soil types in India iii. Land and soil conservation methods	08
3	Water and Forest Resources	i. Distribution and use of water resources ii. Watershed and rainwater harvesting iii. Types of forests in India iv. Deforestation and conservation	10
4	Resource Management and Policies	i. Resource conservation principles ii. Sustainable development goals (SDGs) iii. Role of institutions (UNEP, ICAR)	06

Course Outcome:

By the completion of the course, student will be able to:

COs 1	:	Understand the classification and significance of natural resources.
COs 2	:	Analyze the problems related to the overuse of land, water, and forest resources.
COs 3	:	Explain the importance of land, water, and forest resources conservation.
COs 4	:	Evaluate policy and community-based approaches to resource management.
COs 5	:	Develop awareness of sustainability in resource planning.

References:

1. Gupta, A.K. (2020) Natural Resources: Conservation and Management*, Khanna Book Publishing*
2. Sengupta, A. (2001**)** Land Resource Management.*Publisher: ICAR*
3. Zimmermann, E.W. (1951) World Resources and Industries.*Publisher: Harper & Brothers*
4. Goudie, A. (2006) The Human Impact on the Natural Environment.*Publisher: Wiley-Blackwell*
5. Sabins, F.F. (1997) Remote Sensing: Principles and Interpretation.*Publisher: Waveland Press*
6. Brady, N.C. & Weil, R.R. (2016) The Nature and Properties of Soils. *Publisher: Pearson Education*
7. Hudson, N. (1995) Soil Conservation*. Publisher: B.T. Batsford Ltd.*
8. Murthy, J.V.S. (1994) Watershed Management in India*. Wiley Eastern*
9. Michael, A.M. (2008) Irrigation: Theory and Practice. *Publisher: Vikas Publishing House*
10. Negi, S.S. (1996) Forest Policy and Law. *Publisher: Bishen Singh Mahendra Pal Singh*
11. Champion, H.G. & Seth, S.K. (1968) A Revised Survey of the Forest Types of India*. Publisher: Govt. of India*
12. Tiwari, R.C. (2021) Geography of India. *Publisher: Prayag Pustak Bhawan*
13. Burke, J.J. & Goudie, A. (2002) The Environment: An Integrated Approach. *Publisher: Routledge*

Savitribai Phule Pune University, Pune
B.A. (Geography) as per NEP 2020

Name of the Programme	**:**	B.A. (Geography)
Class	**:**	F.Y.B.A.
Semester	**:**	II
Name of Vertical Group	**:**	Main Subject
Course Code	**:**	GEO-151-T
Course Title	**:**	Introduction to Human Geography
Type of course	**:**	Theory
Total Credits	**:**	02
Workload	**:**	(15 hours/credit) 2 credits x 15 hours = 30 hours in semester

Objectives of the Course:

1. To create awareness amongst students regarding the fundamental concepts of Human Geography, including its meaning, nature and scope.
2. To understand the branches of Human Geography i.e. Population Geography, Settlement Geography and Agricultural Geography.
3. To explore different types and patterns of settlement.
4. To understand the types of agriculture with problems.

Topics and Learning Points

Topic No.	Topic Name	Sub Topics	No. of Hours
1.	**Introduction to Human Geography**	i. Meaning and definition of Human Geography ii. Nature and scope of Human Geography iii. Branches and Importance of Human Geography	08
2.	**Population and Settlement**	i. Factors affecting the distribution of population ii. Composition of Indian Population: Gender and Literacy iii. Theory of Demographic Transition iv. Types and patterns of rural settlement	12
3.	**Agriculture**	i. Types of agriculture (Intensive subsistence) ii. Factors affecting Indian agriculture iii. Problems of Indian agriculture	12

Course Outcome:

By the end of this course, student will be able to:

CO 1 : Define and explain the meaning, nature and scope of Human Geography.
CO 2 : Discuss the different branches of Human Geography
CO 3 : Appreciate the growth, distribution and composition of population in India
CO 4 : Analyze the types and patterns of rural settlements

References:

1. Chandna, R.C. (2010) Population Geography, Kalyani Publisher.
2. Daniel, P.A. and Hopkinson, M.F. (1989) The Geography of Settlement, Oliver and Boyd, London.
3. Hassan, M.I. (2005) Population Geography, Rawat Publications, Jaipur
4. Johnston R; Gregory D, Pratt G. et al. (2008) The Dictionary of Human Geography, Blackwell Publication.
5. Jordan-Bychkov et al. (2006) The Human Mosaic: A Thematic Introduction to Cultural Geography. W. H. Freeman and Company, New York.
6. Jyotiram More and Musmade Arjun (2015) Regional Geography of India Diamond Publication Pune.
7. Kaushik, S.D. (2010) Manavi Bhugol, Rastogi Publication, Meerut.
8. Maurya, S.D. (2012) Manav Bhugol, Sharda Pustak Bhawan. Allahabad.
9. Musmade Arjun, Sonawane Amit and Jyotiram More, Population & Settlement Geography, (2015), Diamond Publication Pune.
10. Sudeepta Adhikari (2016) Orient Blackswan PVT, New Delhi.

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Savitribai Phule Pune University, Pune
B.A. (Geography) as per NEP 2020

Name of the Programme	**:**	B.A. (Geography)
Class	**:**	F.Y.B.A.
Semester	**:**	II
Name of Vertical Group	**:**	Main Subject
Course Code	**:**	GEO-152-P
Course Title	**:**	Practicals in Human Geography
Type of course	**:**	Practical
Total Credits	**:**	02
Workload	**:**	Total Workload: -2 credits x 30 hours = 60 hours in semester

Objectives of the Course:

1. To understand and interpret various population indices.
2. To analyse settlement patterns using various measures of nucleation and dispersion.
3. To develop their skills in utilizing techniques in Agricultural Geography.

Topics and Learning Points

Topic No	Topic Name	Sub Topic	No. of Hours
1	Population	Population Indices i. Age Sex Pyramid ii. Dependency Ratio iii. Infant Mortality Ratio iv. Population Growth Rate	18
2	Settlement	Measures of Nucleation and Dispersion of Settlement i. Rank Size Rule ii. Types of rural settlements (clustered, linear, dispersed) – sketch and identification iii. Urban settlement distribution – dot & choropleth maps	22
3	Economic	i. Classification of economic activities: Primary, Secondary, Tertiary ii. Weaver's Crop Combination Method	20

Course Outcome:

By the end of this course, student will be able to:

CO 1	:	Identify different methods of representation of population indices.
CO 2	:	Identify patterns of nucleation and dispersion in human settlements
CO 3	:	Calculate and interpret crop combination methods to analyze spatial patterns and trends in agricultural land use

References:

1. Carter Harold (1977): The study of Urban Geography
2. Hans Raj (1978): Fundamentals of Demography
3. Hudson F.S. (1976): Geography of Settlements
4. Michael E. and E. Hurse: Transportation Geography
5. Pollard A. H. and Farhat Yusu: Demographic Techniques
6. Singh, R. L. Reading in Rural Settlement Geography
7. Yeats, M. H. (1974). An introduction to Quantitative Analysis in Human Geography
8. Singh, J. and Dhillon (1984): Agricultural Geography.
9. Liendsor, J. M. (1997): Techniques in Human Geography, Routledge.

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Savitribai Phule Pune University, Pune
B.A. (Geography) as per NEP 2020

Name of the Programme	**:**	B.A. (Geography)
Class	**:**	F.Y.B.A.
Semester	**:**	II
Name of Vertical Group	**:**	V4 VSC
Course Code	**:**	**OE-151-GEO**
Course Title	**:**	Practicals in Tourism Geography
Type of course	**:**	Practical
Total Credits	**:**	02
Workload	**:**	2 Credits x 30 hours = 60 hours in semester

Objectives of the Course:

1. To provide students with practical knowledge and skills related to tour planning and management.
2. To familiarize students with the necessary documentation required for tour planning for tour planning
3. To train the students with the essential online booking process
4. To recognize the importance of tour planning in the tourism industry.

Topics and Learning Points

Topic No	Topic Name	Sub Topic	No. of Hours
1	Introduction of Tour planning	i. Meaning of Tour planning ii. Elements of Tour planning iii. Classification of Tour planning: individual, family, group and mass level iv. Importance of tour planning.	16
2	Techniques of Tour Planning	i. Preparation of Tour Planning: Leaflet of tour planning, Passenger documentation, Insurance calculation, Currency exchange, Time exchange and calculation, Distance measurement. ii. Tourist Guide iii. Computer application for tour planning. iv. Procedure of passport & visa application. v. Booking and cancellation system: Transportation (Air, Rail, Road) and hospitality (accommodation)	24
3	Planning and visit to tourist place	Preparation of one short or long international/national/local tour plan..	20

Course Outcome:

By the end of this course, student will be able to:

CO 1 : Identify and describe the essential elements of tour planning.
CO 2 : Prepare tour planning materials, including documentation and booking and cancellation systems for transport and accommodation.
CO 3 : Develop skills required to plan and manage tours effectively.

References:

1. Bhatt H (2007) Tourism Planning and Development, Commonwealth Publishers, New Delhi
2. Bhatia AK (2002), Tourism Development: Principles and Practices, Revised edition Sterling Publishers Private Limited, New Delhi.
3. Chand, M (2002) Travel Agency Management, Anmol Publication
4. Ghosh Bishwanth (2000), Tourism & Travel Management, Second Revised Edition Vikas Publishing House Pvt Ltd, New Delhi.
5. Seth, P.N. (1998). An Introduction to Travel and Tourism, Sterling Publishers Pvt. Ltd., New Delhi.
6. Muluk, Doke, Musmade, More (2021), Geography of Tourism – II, Nirali Publication, Pune
7. Sinha, P (1998). Tourism Planning. Anmol Publication Pvt. Ltd., New Delhi.
8. Pacharne, Patil, Suryavanshi, Chaudhar (2014) Tourism Geography, Atharv Publication, Pune.

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Savitribai Phule Pune University, Pune
B.A. (Geography) as per NEP 2020

Name of the Programme	**:**	B.A. (Geography)
Class	**:**	F.Y.B.A.
Semester	**:**	II
Name of Vertical Group	**:**	SEC
Course Code	**:**	**SEC-151-GEO P**
Course Title	**:**	Practicals in Water Analysis
Type of course	**:**	Practical
Total Credits	**:**	02
Workload	**:**	Total Workload: -2 credits x 30 hours = 60 hours in semester

Objectives of the Course:

1. To identify and explain key water quality parameters.
2. To learn various quality indices useful for drinking and irrigation water analysis.
3. To train the students for the interpretation of water quality data with the comparison of regulatory standards.

Topics and Learning Points

Topic No	Topic Name	Sub Topic	No. of Hours
1	Introduction to water quality	i. Definition ii. Water quality parameters: Physical, Chemical iii. Standards of water quality assessment: BIS (Bureau of Indian Standards) and WHO (World Health Organization) iv. Classification of water quality	16
2	Water quality analysis for drinking water	i. Calculation of WQI using weighted parameters ii. Gibbs Analysis	20
3	Water quality analysis for irrigation	i. Calculate, and compare WHO standards and interpret two examples of each following indices a. Sodium Adsorption Ratio (SAR) (Richards 1954), b. Residual Sodium Carbonate (RSC) (Eaton 1950), c. Sodium Percentage (SP) (Wilcox 1955), d. Kelly's ratio (Kelly 1963),	24

Course Outcome:

By the end of this course, student will be able to:

CO 1 : Comprehensive understanding of various quality indices useful for assessment of water resources.

CO 2 : Select and calculate appropriate water quality indices based on specific objectives and available data.

CO 3 : Interpret the overall water qualities with a comparison of BIS and WHO standards.

References:

1. Standard Methods for the Examination of Water and Wastewater - American Public Health Association, American Water Works Association, Water Environment Federation.
2. Water Quality Assessments: A Guide to the Use of Biota, Sediments and Water in Environmental Monitoring - Deborah V. Chapman (Editor).
3. Water Quality: Guidelines, Standards and Health - Lorna Fewtrell and Jamie Bartram.
4. Environmental Engineering: Water, Wastewater, Soil and Groundwater Treatment and Remediation - Nelson L. Nemerow and Franklin J. Agardy.
5. BIS 10500:2012 - Drinking Water Specification
6. BIS 2296:1982 - Specifications for Packaged Natural Mineral Water
7. BIS 3025:1983 - Methods of Sampling and Test (Physical and Chemical) for Water and Waste Water
8. BIS 3589:2001 - Methods of Sampling and Test (Physical and Chemical) for Water and Waste Water (Revision of IS 3025)
9. BIS 1622:2008 - Drinking Water - Specification
10. BIS 3025:1964 - Methods of Sampling and Test (Physical and Chemical) for Water and Waste Water

Savitribai Phule Pune University, Pune

B.A. Syllabus in Geography (as per NEP 2020)

(Syllabus from June, 2025)

(2023 Pattern)

Name of the Programme	**:**	B.A. Geography
Class	**:**	FYBA
Semester	**:**	**II**
Name of Vertical Group	**:**	**SEC**
Course Code	**:**	**SEC P -152-GEO**
Course Title	**:**	**Practicals in Geography of Natural Resources Conservation**
No. of Credits	**:**	**02 (Practical)**
No. of Teaching Hours	**:**	**60**

Objectives of the Course:

1.	To develop hands-on skills in identifying, mapping, and analyzing natural resources.
2.	To apply field-based methods for resource assessment.
3.	To evaluate environmental impacts and suggest sustainable management practices.
4.	To prepare students for project work and applied research in natural resource sectors.

Topics and Learning Points

Topic No	Topic Name	Sub Topic	No. of Periods
1	Land and Soil Conservation Methods	i. Contour Ploughing (Map-based)- Definition of contour, draw contour lines and ploughing directions. ii. Terracing and Bench Terracing- Model-making or sketching of terrace structures on slopes iii. Bunding (Contour/Graded)- Identification of bund structures in the field or via images; sketching graded bunds. iv. Check Dams & Nala Plugs-Case study visit or virtual analysis using Google Earth or field photos. v. Crop Rotation Mapping -Preparing a seasonal crop rotation chart for a given area.	28
2	Forest Conservation	i. Field Identification of Tree Species- Record local species with notes on ecological and economic importance ii. Biomass Estimation- Use simple methods (diameter at breast height, height) to estimate above-ground biomass.	12

Topic No	Topic Name	Sub Topic	No. of Periods
3	Water Conservation	i. Rainwater Harvesting System Design- Sketch or model rooftop/field-based harvesting systems ii. Water Budgeting Exercise- Estimate village/field water demand vs. supply (agriculture/domestic use).	12
4	Field Visit and Observation	Not more than four days or minimum one day field visit /study tour in the watershed area to complete Biomass estimation, Field Identification of Tree Species, Field observation or mapping of water retention structures, Land and Soil conservation structures etc.	08

Course Outcome:

By the completion of the course, student will be able to:

COs 1	:	Explain land, soil, and forest conservation methods for sustainable resource management.
COs 2	:	Identify contour patterns, bunding, terraces, and other conservation features through maps and field observations
COs 3	:	Apply techniques for tree species identification and biomass estimation in forest studies
COs 4	:	Analyze the importance of soil, water, and forest conservation practices
COs 5	:	Develop practical skills in mapping, observation, and data interpretation related to natural resource conservation

References:

1. Hudson, N. (1995) – Soil Conservation. *Publisher: B.T. Batsford Ltd.*
2. Morgan, R.P.C. (2005) – Soil Erosion and Conservation. *Publisher: Blackwell Publishing*
3. Brady, N.C. & Weil, R.R. (2016) – The Nature and Properties of Soils.*Publisher: Pearson Education*
4. *Lal, R. (1990)* – Soil Erosion and Land Degradation: Processes, Measurement and Modelling. *Publisher: CRC Press*
5. Kanwar, J.S. (1997) – Soil and Water Conservation Practices.*Publisher: ICAR*
6. Chaturvedi, A.N. & Khanna, L.S. (2011) – Forest Mensuration and Management.*Publisher: Khanna Publishers*
7. Saharia, V.B. (1984) – Wildlife in India.*Publisher: Nataraj Publishers*
8. Negi, S.S. (1996) – Forest Policy and Law. *Publisher: Bishen Singh Mahendra Pal Singh*
9. Champion, H.G. & Seth, S.K. (1968) – A Revised Survey of the Forest Types of India. *Publisher: Government of India*
10. Murthy, J.V.S. (1994) – Watershed Management in India.*Publisher: Wiley Eastern Ltd.*
11. Garg, S.K. (2009) – Irrigation Engineering and Hydraulic Structures. *Publisher: Khanna Publishers*
12. Tideman, E.M. (1996) – Watershed Management: Guidelines for Indian Conditions. *Publisher: Omega Scientific Publishers*
13. Michael, A.M. (2008) – Irrigation Theory and Practice. *Publisher: Vikas Publishing*
14. GOI Reports – Manual of Rainwater Harvesting & Groundwater Recharge *(CGWB, MoWR) Publisher: Government of India*

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