

Progressive Education Society's
Modern College of Arts, Science and Commerce (Autonomous), Shivajinagar, Pune 05
S.Y.B.A. Geography (Major)
(2024 Course under NEP 2020)
Course Code: 24ArGeoU3101

Title of the Course: Geography of Maharashtra-I

Credits: 04

Total Lectures: 60

Examination Scheme: CIA: 40 Marks

End-Sem: 60 Marks

Course Objectives:

1. To appraise the students with salient features of the Maharashtra State.
2. To familiarize the students with the physiographic characteristics of the State.
3. To make the students aware of the geographic problems of Maharashtra and prospects at the state level.

	Semester – III	Lectures
Unit 1	Introduction	10
	A. Formation of the Maharashtra State B. Geographical Location and Adjoining States C. Administrative Divisions D. Maharashtra in the Context of India	
Unit 2	Relief and Drainage	15
	A. Physical Structure: Konkan Plain, Maharashtra Plateau, Western Ghat/Sahyadri and Hill Ranges B. Major Rivers and their tributaries: i. West flowing: Narmada and Tapi ii. East flowing rivers: Godavari, Bhima and Krishna iii. Rivers in Konkan	
Unit 3	Climate and Soil	18
	A. Seasons and Associated Weather Conditions: Summer, Monsoon and Winter B. Temperature and Rainfall distribution in Maharashtra C. Koppen's and Trewartha's climatic classification: Maharashtra D. Soil: classification, distribution, problems and conservation	
Unit 4	Natural Vegetation and wildlife	15
	A. Natural vegetation: Types, Distribution and Problems. B. Role of Government in forest conservation C. Distribution of wildlife sanctuaries and national parks in Maharashtra	
Unit 5	Experiential learning and field visit	02
	A. Field visit within Maharashtra to learn about the physiography, climate, soil, natural vegetation and wildlife distribution and preparation of report	

Course Outcomes:

Students will be able to

1. Understand the location, physiography, drainage, historical and geographical features of Maharashtra.
2. Learn overall scientific and micro level analytical study of Maharashtra.
3. Acquire general information of major rivers and soil types of Maharashtra.
4. Understand the climate and natural vegetations of Maharashtra.

5. Acquaint with the distribution of wildlife within the state.
6. Get wide view of observational skills related to local, physiographical and natural phenomena through field visit

References:

1. Bhaise, S. D., & Mhaski, D. A. (n.d.). *MaharashtrachaPrakrutikBhugol*. Atharva Publication.
2. Bhamare, S. M. (2013). *Geography of Maharashtra*. Prashant Publication.
3. Deshpande, C. D. (1973). *Geography of Maharashtra*. Lawrence Verry Incorporated.
4. Dixit, K. R. (1986). *Maharashtra in maps*. Maharashtra State Board for Literature and Culture.
5. Hange, A. K., & Waghmare, H. S. (2018). *Geography of Maharashtra*. Kaila.
6. Patil, S. (2019). *Geography of Maharashtra*. Prashant Publication.
7. Sarang, S. (1997). *Maharashtra Bhugol*. Vidya Prakashan.
8. Savadi, A. B. (n.d.). *MaharashtrachaBhugol*. Nirali Prakashan.
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10. Singh, R. L. (2012). *India: A regional geography*. National Geographical Society of India.

Progressive Education Society's
Modern College of Arts, Science and Commerce (Autonomous), Shivajinagar, Pune 05
S.Y.B.A. Geography (Major)
(2024 Course under NEP 2020)
Course Code: 24ArGeoU3102
Title of the Course: Lab Course on Map Projections-I

Credits: 02

Examination Scheme: CIA: 20Marks

Total Practical: 15

End-Sem: 30Marks

Course Objectives:

1. Introduce students to the fundamental concepts of map projection, including latitude, longitude, and time zones.
2. Develop an understanding of different types of map projections and their relevance in cartography and geographical analysis.
3. Provide hands-on experience in constructing **Zenithal Projections, Conical Projection** with real-world applications.
4. Enhance problem-solving skills through time zone calculations and practical exercises.
5. Equip students with the technical knowledge to choose appropriate map projections based on geographical needs.

	Semester – III	Practicals
Unit 1	Introduction to Map Projection	03
	A. Basic Concepts of Projection: Latitude, Longitude, Parallels of Latitude, Meridians of Longitude, Prime meridian, Equator, Directions B. Classification, Choice and need of Map Projection C. Time zone calculations (Minimum two examples)	
Unit 2	Zenithal Projection	05
	Construction, properties and use A. Zenithal Polar Gnomonic Projection B. Zenithal Polar Stereographic Projection <i>*One example from each hemisphere</i>	
Unit 3	Conical Projection	07
	Construction, properties and use A. Simple Conical Projection with one standard parallel B. Simple Conical Projection with Two standard parallel C. Bonne's Projection <i>*One example from each hemisphere</i>	

Course Outcomes:

Students will be able to

1. Understand the Fundamentals of Map Projection and key geographical concepts such as latitude, longitude, equator, prime meridian, and directions.
2. Classify different types of map projections and understand their importance in geographical studies.
3. Perform time zone calculations with practical examples.
4. Understand the construction, properties, and applications of Zenithal Projections, and Conical Projections
5. Interpret and apply these projections with examples from both hemispheres.

References:

1. Basak, N. N. (2014). *Surveying and Levelling*. McGraw Hill Education (India) Pvt. Ltd.
2. Bygott, J. (1964). *Introduction to Map work and Practical Geography*. University Tutorial Press.
3. Davis, R. E., & Foote, F. S. (1940). *Surveying-theory and practice*. McGraw-Hill Book Co.
4. Deshpande, G. B. (1991). *Surveying*. Everest Publishing House.
5. Kanetkar, T. P., & Kulkarni, S. V. (2010). *Surveying and Levelling (Part I and II)*. Pune Vidyarthi Gruha Prakashan.
6. Khan, M. Z. A. (1998). *Textbook of Practical Geography*. Concept Publishing Company.
7. Mishra, R. P., & Ramesh, A. (2000). *Fundamentals of Cartography*. Concept Publishing Company.
8. Monkhouse, F. J., & Wilkinson, H. R. (1989). *Maps & Diagrams*. B.I Publications Pvt. Ltd.
9. Saha, P., & Basu, P. (2013). *Advanced Practical Geography*. Books and Allied (P) Ltd.
10. Singh, G. (2009). *Map Work and Practical Geography*. Vikas Publishing House Pvt. Ltd.
11. Singh, L. R., & Singh, R. (1973). *Map work and Practical Geography*. Central Book Depot.
12. Ahirrao, D. Y., & Karanjkehele, E. K. (2002). *प्रात्यक्षिकभूगोल*. Sudarshan Prakashan.
13. Kumbhare, A. (n.d.). *प्रात्यक्षिकभूगोल*. Kalyani Prakashan.

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S.Y.B.A. Geography (Minor)
(2024 Course under NEP 2020)
Course Code: 24ArGeoU3301

Title of the Course: Introduction to Economic Geography

Credits: 02

Exam scheme: CIE-20 Marks

Total Lectures: 30

ESE-30 Marks

Course Objectives:

1. To introduce students to the basic principles and concepts of economic geography
2. To acquaint students with the applications to economic geography for development in different areas
3. The students should be able to integrate various factors of economic development and dynamic aspect of economic geography.

	Semester – III	Lectures
Unit 1	Introduction to Economic Geography	07
	A. Definition, nature and scope of economic geography. B. Significance of economic geography	
Unit 2	Economic Activity	07
	A. Economic Activity :-Introduction and concepts B. Classification of Economic Activities	
Unit 3	Agriculture	08
	A. Role of Agriculture in Indian economy B. Factors influencing on agriculture in India C. Agro-based industries in India a) Dairy industry b Cotton industry	
Unit 4	Trade and Transport	06
	A. Modes and Significance of Transportation: Road, Rail and Air ways B. Types of Trade a) National b) International C. International trade of India	

Course Outcomes:

1. Distinguish to different types of economic activities and their utilities.
2. Appreciate the factors responsible for the location and distribution of activities.
3. Examine the significance and relevance of theories in relation to the location of different economic activities

References:

1. Gautam A., 2010, Advance Economic Geography, Sharda Pustak Bhavan, Allahabad
2. Chauhan R. N., 2007, Basic Principles of Economic Geography, ABD Publishers, Jaipur
3. Padey P. N., Economic Geography, Nirali Publication ,Pune
4. Sadhukhan S. K., 1994, Economic Geography An Appraisal of Resources, S Chand & Campany Ltd ,New Delhi
5. Roy P., Mukherjee S., 1993, Economic Geography: Resource Appraisal of resourcesNew Central Book Agency, Calcutta
6. Mannur H. G., 2008, International Economics, Vikas Publishing House PvtLtd,Noida
7. Siddharth K., 2003, Economic Geography, Theories, Processes &Patterns, Kisalaya Publications Pvt, Ltd, Noida
8. Husain M., 2008, Geography of India, Tata McGraw Hill, New Delhi
9. Bhat L. S., 1973, Regional Planning in India, Statistical Publishing Society, Kolkata
10. Desai V,1991, Fundamentals of Rural Development, Rawat Publications, New Delhi
11. Paranjape, Gupte, Karmarkar, 1974, Economic & Commercial Geography, Nirali Publication, Pune. 12. More J. C., 2014, Geography & Agriculture For MPSC Examination, Atharv Publication, Pune
12. Pagar S.D., Thorat A. M., More J. C., 2015, Agriculture Geography, Atharav Publication, Pune.

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S.Y.B.A. Geography (Minor)
(2024 Course under NEP 2020)
Course Code: 24ArGeoU3302
Title of the Course: Lab course on 24ArGeoU3301 (Introduction to Economic Geography)

Credits: 02
Examination Scheme: CIA: 20 Marks

Total Practicals: 15
End-Sem: 30 Marks

Course Objectives:

- To identify economic patterns across space and time in order to provide insight into how and why economic systems and practices develop and apply those methods in contemporary studies.

	Semester – III	Practicals
Unit 1	Techniques in Agricultural Geography: Crop- combination and agricultural	08
	A. Crop-combination methods (Weaver's method or Thomas' method) B. Crop concentration indices (Kendall's method) C. Crop diversification method (Bhatia's method)	
Unit 2	Techniques in Industrial Geography: Location Analysis	05
	A. Von Thunen's Model B. Weber's location theory	
Unit 3	Field Visit / Field Excursion:	02
	A. Experiential learning: Visit to Industrial unit- agro based Industrial Unit, Discussion and Report making.	

Course Outcome:

- Focus on building theories about spatial arrangement and distribution of economic activities.
- Explain the importance of economic geography in analyzing the ways societies and economic works.
- Discuss and critically evaluate these techniques in industrial geography.

References:

- Dreze, J., & Sen, A. (1996). *Economic development and social opportunity*. Oxford University Press.
- Hanink, D. M. (1997). *Principles and applications of economic geography: Economy, policy, environment*. John Wiley & Sons.
- Hartshorne, T. A., & Alexander, J. W. (1988). *Economic geography*. Prentice Hall.
- Janaki, V. A. (1985). *Economic geography*. Concept Publishing Co.
- Knox, P., & Agnew, J. (1998). *The geography of the world economy*. Arnold.
- Lloyd, P., & Dicken, P. (1972). *Location in space: A theoretical approach to economic geography*.
- McCarty, H. H., & Lindberg, J. B. (1966). *A preface to economic geography*. Prentice Hall.
- Thomas, Conkling, & Yeates. (1974). *Geography of economic activity*. McGraw Hill.

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S. Y. B. A. Geography (Open Elective)
(2024 Course under NEP 2020)
Course Code: 24ArGeoU3401
Title of the Course: Geography of Disaster Management-I

No. of Credits: 02
Exam scheme: CIA-20 Marks

Total Lectures: 30
ESE-30 Marks

Course Objectives:

1. To introduce students with the concept of disaster & its relation with Geography.
2. To acquaint the students with the various disaster in different areas & its management.
3. To make the students aware of disaster mitigation and resilience.

	Semester – III	Lectures
Unit 1	Introduction	08
	A. Meaning and definitions of hazard and disaster B. Geographical conditions and disasters C. Classification of disasters	
Unit 2	Disaster Management: Structure and Process	10
	A. Aims and objectives of disaster management B. Structure of disaster management cycle i. Pre-disaster management: Preparedness, Mitigation and Prevention ii. Post-disaster management: Rescue, Response, Recovery, Rehabilitation C. Disaster Management Act 2007	
Unit 3	Geological disasters and management	12
	A. Earthquake : Causes, effects, earthquake prone areas, pre and post management B. Landslide: Causes, effects, landslide prone areas, pre and post management <i>*with special reference to India</i>	

Course Outcomes:

Students will be able to:

1. Understand the natural and manmade disasters
2. Develop ability to understand local, regional and global hazards/ disaster management process.
3. Acquaint with the causes, effects, distribution and management of landslide and

Earthquake disaster.

4. Formulate rehabilitation plans for disaster affected communities and develop the skills of disaster prevention, disaster planning and management.
5. Get wide view of observation skills related to local and regional disasters through field visits.
6. Improve their socio-economic responsibilities by undertaking group discussion and effective communication.

References:

1. Alexander, D. (1993). *Natural Disasters*. UCL Press Ltd., London.
2. Alexander, D. (2000). *Introduction in Confronting Catastrophe*. Oxford University Press.
3. Andharia, J. (2008). *Vulnerability in Disaster Discourse*. JTCDM, Tata Institute of Social Sciences Working Paper no. 8.
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5. Bloom, A. L. (1998). *Geomorphology. A Systematic Analysis of Late Cenozoic Landforms*. Pearson Education (Singapore) Pte. Ltd.
6. Chandna, R. C. (2000). *A Geography of Population, Concepts, Determinants and Patterns*. Kalyani Publishers, New Delhi.
7. Copola, P. D. (2007). *Introduction to International Disaster Management*.
8. Cuny, F. (1983). *Development and Disaster*. Oxford University Press.
9. Govt. of India. (2005). *Disaster Management Act*. Government of India, New Delhi.
10. Hamblin, W. K. (1989). *The Earth's Dynamic Systems*. Macmillan Publishing Company, New York.
11. Huggett, D. A. (2004). *Fundamentals of Biogeography*. Routledge.
12. Kale, V. S., & Gupta, A. (2001). *Introduction to Geomorphology*. Orient Longman. Hyderabad.

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S. Y. B. A. Geography (VSC)
(2024 Course under NEP 2020)
Course Code: 24ArGeoU3501
Title of the Course: Lab Course on Geographical Data Acquisition and Analysis

Credits: 02

Examination Scheme: CIA: 20 Marks

Total Practicals: 15

End-Sem: 30 Marks

Course Objectives:

1. To introduce the students with the methods of geographical data acquisition from various sources.
2. To introduce the students with analyzing hands-on skills using simple computing technique like MS excel.
3. To ascertain the students with the application of various geographical open-source software, web portal and apps.
4. To acquaint the students with collection, visualization, and interpretation of geographical data.

	Semester III	Practicals
Unit 1	Introduction to Geographical Data Acquisition	04
	A. Definition of Data, Data Acquisition, and Data Analysis B. Primary and secondary Data: i. Data sources ii. Remotely sensed data iii. GPS coordinates C. Use of internet in data acquisition from web portals i. Downloading population and socio- economic data from census and Maharashtra state Data bank portal ii. Downloading satellite data from Bhuvan web portal iii. Downloading SOI Toposheets from survey of India's web portal	
Unit 2	Graphical and Diagrammatic Representation of Data	08
	Construction, Interpretation and Analysis A. Line graph B. Polyline graph C. Simple bar diagram D. Multiple bar diagram E. Pie diagram F. Use of Excel software for representation and analysis of geographical data (any two graph and diagram mentioned above)	
Unit 3	Thematic Mapping of Data	03

	Construction and interpretation	
	A. Dot map	
	B. Choropleth map	
	C. Use of QGIS software for the preparation of thematic maps	

Course Outcomes:

Students will be able to

1. Understand the concept of data acquisition and analysis in the subject of Geography.
2. Collect field data with the help of different techniques and tools.
3. Comprehend the application of various geographical apps and use of internet.
4. Access the various service of Maha Data Bank, Bhuvan web portal.
5. Learn hands-on skills by using simple computing technique like MS excel.
6. Understand the both manual as well as software-based construction and interpretation of thematic mapping of geographical data.

References:

1. Burrough, P.A. & McDonnell, R.A. (2000). *Principles of Geographical Information System*. Oxford University Press.
2. Chang Kang Sung. (2002). *Introduction to GIS*. Tata McGraw Hill, New Delhi.
3. Creswell, J. (1994). *Research Design: Qualitative and Quantitative Approaches*. Sage Publications.
4. Dikshit, R. D. (2003). *The Art and Science of Geography: Integrated Readings*. Prentice-Hall of India, New Delhi.
5. Dr. D. Y. Ahirrao & Dr. E. K. Karanjhele. (2002). *Pratyakshik Bhugol*. Sudarshan – Nashik.
6. Dr. P. G. Saptarshi & Dr. S. R. Jog. *Statistical Methods*.
7. Dr. S. N. Karlekar. (2008). *Statistical Methods*. Diamond – Pune.
8. Lo, C.P. & Yeung, A.K.W. (2002). *Concepts and Techniques of Geographic Information System*. Prentice Hall, India.
9. Phillips, R. & Johns, J. (2012). *Fieldwork for Human Geography*. Sage Publication.
10. Sarkar, A. (2015). *Practical Geography: A Systematic Approach*. Orient Black Swan.
11. Singh, G. (1996). *Map Work and Practical Geography*. Vikas Publications, New Delhi.
12. Singh, R.L. (1979). *Elements of Practical Geography*. Kalyani Publications, New Delhi.
13. Stoddard, R. (1982). *Field Techniques and Research Methods in Geography*. Kendall/Hunt Publishing Company.
14. Stoddard, R.H. (1982). *Field Techniques and Research Methods in Geography*. Kendall/Hunt.
15. Summer, G. (1978). *Mathematics for Physical Geographers*. John Wiley, New York.
16. Wolcott, H. (1995). *The Art of Fieldwork*. Alta Mira Press, Walnut Creek, CA.
17. Yeats, M.H. (1974). *An Introduction to Quantitative Analysis in Human Geography*.

Internet sources

- <https://www.wikihow.com/Create-a-Graph-in-Excel>

- <https://surveyofindia.gov.in/>(Survey of India)
- <https://bhuvan.nrsc.gov.in/home/index.php>
- <https://mahasdb.maharashtra.gov.in/>
- <https://censusindia.gov.in/census.website/>
- Microsoft Excel Manual and help file.
- Basics of Windows Operating System.

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S. Y. B. A. Geography (IKS)
(2024 Course under NEP 2020)
Course Code: 24ArGeoU3901

Title of the Course: Ancient Indian Geographical Thoughts

Credits: 02

Total Lectures: 30

Examination Scheme: CIA: 20Marks

End-Sem: 30 Marks

Course Objectives:

1. To understand contribution of Ancient Indian Philosopher.
2. To acquaint the students with idea of evolution of Indian geographical thinking and Information.
3. To understand worldwide ancient knowledge comparing to Indian philosophy.

	Semester – III	Lectures
Unit 1	Ancient Geographical Concepts	13
	Fundamental Concepts in Geography A. The Universe and its Origin B. Earth: Size of Earth C. Continents (Dwipas) D. Latitudes and Longitudes (Akshansa and Deshantar) E. Cardinal Points F. Calendar	
Unit 2	Contribution of Indian Geographers	17
	Ancient Period A. Valmiki B. Varahmihira C. Brahmagupta D. Aryabhatta E. Bhaskaracharya F. Utpala G. Vijaynandi H. Kautilya	

Course Outcomes:

Students will be able to: -

1. Understand the various ancient Indian geographical concepts and its significance in the subject matter of geography
2. Exploring philosophical perspectives and contributions of Indian philosophers in

development of geographical thoughts.

3. Learn the significance of sacred geographical features (like river, mountain, forest etc) mentioned by ancient Indian philosophers.
4. Analyze and relate the ancient Indian geographical thought with the modern environmental and cultural practices.

References:

1. Datta, B., & Singh, A. N. (1935–1938). *History of Hindu mathematics* (2 Parts). Lahore.
2. Iyengar, C. N. S. (1967). *History of Indian mathematics*. The World Press.
3. Dikshit, R. D. (2018). *Geographical thought: A contextual history of ideas* (2nd ed.). PHI Learning.
4. Sathapati, V. G. (2001). *Indian sculpture and iconography: Forms and measurements*. Auro Publications.
5. Saraswati Amma, T. A. (1979). *Geometry in ancient and medieval India*. Motilal Banarsidass.

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S.Y.B.A. Geography (Major)
(2024 Course under NEP 2020)
Course Code: 24ArGeoU4101

Title of the Course: Geography of Maharashtra- II

Credits: 04

Examination Scheme: CIA: 40 Marks

Total Lectures: 60

End-Sem: 60 Marks

Course Objectives:

1. To appraise the students with salient features of the Maharashtra State.
2. To familiarize the students with the demographic, economical and socio-cultural characteristics of the State.
3. To make the students aware of the problems and prospects of agriculture, and industrial sector at the state level.

	Semester – IV	Lectures
Unit 1	Population	15
	A. Trends of Population growth and Distribution B. Pattern of Population density, Migration in Maharashtra C. Composition of population: Age-Sex, Occupational, Religious, Literacy Rate D. Socio-cultural and economical aspects major Tribes: Bhills, Gond, Katkari, Warli, Koli	
Unit 2	Settlement	10
	A. Patterns, Growth and Problems of Rural Settlement in Maharashtra B. Distribution and Classification of Towns, Urbanization in Maharashtra	
Unit 3	Agriculture	15
	A. Major crops: location, climate, distributions and production i. Food crops: Jawar, Bajra, Rice ii. Cash Crops: Sugarcane, Cotton iii. Horticulture Crops: Mango, Banana, Grapes. B. Dry farming: regions and management C. Problems and Prospects of agriculture in Maharashtra	
Unit 4	Industries and Transportation	15
	A. Major Industries: location and distribution i. Sugar Industries ii. Chemical Industries iii. Automobile Industries B. Problems and prospects of industrial development in Maharashtra C. Modes of Transportation in Maharashtra: Roadways, Railways and Airways	
Unit 5	Experiential learning and Field Visit	05
	A. Field Visit within Maharashtra to learn the demographic, economical and socio-cultural features and preparation of report of it. B. Observational skill: Agro-based regional processing unit C. Discussion on “Drought Prone Area in Maharashtra”: Issues and Management.	

Course Outcomes:

Students will be able to

1. Understand the demographic characteristics and give emphasis on local issues and well-being of the various communities of Maharashtra.
2. Acquaint with the socio-cultural and economical aspects as well as associated issues faced by major tribes of Maharashtra.
3. Learn overall analytical study of rural and urban settlement of Maharashtra.
4. Acquire the knowledge of geographical conditions, distribution, problem and prospects of major crops, dry farming and overall agricultural development of Maharashtra.
5. Understand the distribution, problem and prospects of major industries, modes of transportation and associated developmental scenario in Maharashtra
6. Get wide view of observational skills related to agro-based regional processing unit through field visit.

References:

1. Bhamare, S. M. (2013). *Geography of Maharashtra*. Prashant Publication.
2. Dasthane, S. (n.d.). *Maharashtra*. Ramchandra and Company.
3. Diddee, J., Jog, S. R., Kale, V. S., & Datye, V. S. (n.d.). *Geography of Maharashtra*.
4. Dikshit, K. R. (n.d.). *Maharashtra in maps*.
5. Hange, A. K., & Waghmare, H. S. (2018). *Geography of Maharashtra*. Kailas.
6. Kamble, V. (2023). *Maharashtracha Bhugol*. Fern International Publications.
7. Karve, I. (n.d.). *Maharashtra: Its land and people*.
8. Magar, J. (n.d.). *Maharashtracha Bhugol*.
9. Maharashtra State Agricultural Department. (n.d.). *Agricultural atlas of Maharashtra*.
10. More, J. C. (2014). *Geography & agriculture for MPSC examination*. Atharv Publication.
11. Patil, S. (2019). *Geography of Maharashtra*. Prashant Publication.
12. Savadi, A. B., & Keche, V. (n.d.). *Maharashtra*.
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S.Y.B.A. Geography (Major)
(2024 Course under NEP 2020)
Course Code: 24ArGeoU4102
Title of the Course: Lab Course on Map Projections-II

Credits: 02

Examination Scheme: CIA: 20 Marks

Total Practical: 15

End-Sem: 30 Marks

Course Objectives:

1. Develop an advanced understanding of construction, properties, and applications of different types of map projections.
2. Provide Hands-on Training in Conical Projections and Cylindrical Projections, its real-world applications in navigation and cartography.
3. Introduce Conventional Map Projections so that students can Understand their significance in representing global geographical features.
4. Improve Map Interpretation and Application Skills

	Semester-IV	Practical
Unit 1	Conical Projection	02
	Construction, properties and use A. Polyconic Projection	
Unit 2	Cylindrical Projection	05
	Construction, properties and use A. Mercator's Projection B. Cylindrical equal area projection	
Unit 3	Conventional Map Projections	08
	A. Sinusoidal Projection B. Mollweide Projections C. International map projection	

Course Outcomes:

Students will be able to

1. Develop practical skills in drawing Bonne's Projection and Polyconic Projection.
2. Explain the properties, advantages, and limitations of conical projections.
3. Construct Cylindrical Equal-Area Projection and Mercator's Projection with accuracy and understand their applications in navigation, global mapping, and GIS.
4. Construct and evaluate the importance of interpret Sinusoidal Projection, Mollweide Projection, and International Map Projection in representing large-scale global maps.
5. Select and Use Appropriate Map Projections for specific mapping and spatial analysis applications.

References:

1. Basak, N. N. (2014). *Surveying and Levelling*. McGraw Hill Education (India) Pvt. Ltd.
2. Bygott, J. (1964). *Introduction to Map work and Practical Geography*. University Tutorial Press.
3. Davis, R. E., & Foote, F. S. (1940). *Surveying-theory and practice*. McGraw-Hill Book Co.
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5. Kanetkar, T. P., & Kulkarni, S. V. (2010). *Surveying and Levelling (Part I and II)*. Pune Vidyarthi Gruha Prakashan.
6. Khan, M. Z. A. (1998). *Textbook of Practical Geography*. Concept Publishing Company.
7. Mishra, R. P., & Ramesh, A. (2000). *Fundamentals of Cartography*. Concept Publishing Company.
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9. Saha, P., & Basu, P. (2013). *Advanced Practical Geography*. Books and Allied (P) Ltd.
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Modern College of Arts, Science and Commerce (Autonomous), Shivajinagar, Pune 05
S.Y.B.A. Geography (Minor)
(2024 Course under NEP 2020)
Course Code: 24ArGeoU4301

Title of the Course: Introduction to Population Geography

Credits: 02

Total Lectures: 30

Exam scheme: CIE-20 Marks

ESE-30 Marks

Course Objectives:

1. It introduces the basic concepts of population Geography to the students.
2. An understanding of the importance and need of Demographic data.
3. Spatial understanding of population dynamics.

	Semester – IV	Lectures
Unit 1	Introduction	06
	A. Definition, Nature and Scope of Population Geography B. Significance of Population Geography. C. Relation between Population Geography and other disciplines	
Unit 2	Population Data	08
	A. Census of India B. National Sample Survey C. Registration Survey D. NFHS E. DLHS	
Unit 3	Population Growth and Demographic Attributes	08
	A. Factors affecting on growth of Population B. Fertility, Mortality - (Concept, Measurement) C. Migration – Concept, Types, Causes and effects	
Unit 4	Problems of Population and Population Polices	08
	A. Population Problems in India. B. Population Problems in developed countries C. Population Policies in India	

Course Outcomes:

1. Understanding of Population Geography along with relevance of Demographic data.
2. The students would get an understanding of distribution and trends of population growth in the developed and less developed countries, along with population theories.
3. The students would get an understanding of the dynamics of population.
4. An understanding of the implications of population composition in different regions of the world.
5. An appreciation of the contemporary issues in the field of population studies

References:

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S.Y.B.A. Geography (Minor)
(2024 Course under NEP 2020)
Course Code: 24ArGeoU4302
Title of the Course: Lab Course on 24ArGeoU4301 (Introduction to Population Geography)

Credits: 02
Exam scheme: CIE-20 Marks

Total Practicals: 15
ESE-30 Marks

Course Objectives:

1. To introduce the students to the basic concepts in Population Geography.
2. To ascertain the students to the applications of Population Geography.
3. The student will able to get appropriate technical knowledge with appropriate concepts.

	Semester – IV	Practicals
Unit 1	Population Indices	13
	(calculations and mapping/plotting if applicable) A. Population Density B. Population Growth Rate C. Population Projections D. Age-sex pyramid E. Infant Mortality Rate F. Age Specific Mortality G. Child Women Ratio H. Life Expectancy Ratio I. Dependency Ratio J. Demographic transition – applied to Maharashtra	
Unit 2	Field Study/Excursion	02
	A. Field visit to any urban/ rural area for population data collection and preparation of report.	

Course Outcomes:

Students will be able to: -

1. Understand the basic concepts in Population Geography.
2. Learn the practical application of population geography in policy making and planning.
3. Acquaint with the collection analyzing and interpretation population data.
4. Hand on experience with the tools and techniques relating to mapping/plotting population data.
5. Address the real world population issues through case studies and field work.

References:

1. Dent, B. D. (1999). *Cartography: Thematic map design* (Vol. 1). McGraw-Hill.
2. Gupta, K. K., & Tyagi, V. C. (1992). *Working with maps*. Survey of India, DST.
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S.Y.B.A. Geography (Open Elective)
(2024 Course under NEP 2020)
Course Code: 24ArGeoU4401

Title of the Course: Geography of Disaster Management-II

No. of Credits: 02

Examination Scheme: CIA: 20 Marks

Total Lectures: 30

End-Sem: 30 Marks

Course Objectives:

- 1) To introduce students the concept of disaster & its relation with Geography.
- 2) To acquaint the students with the utility & application of hazards in different areas & its management.
- 3) To make the students aware of the need of protection & disaster management.

	Semester – IV	Lectures
Unit 1	Climatic disasters and management	10
	Causes, effects, areas and management A. Cyclones B. Droughts C. Floods	
Unit 2	Anthropogenic disasters and management	10
	Causes, effects, areas and management A. Deforestation B. Forest fire C. Soil degradation	
Unit 3	Global issues and movements	10
	Causes, effects and measures of conservation A. Global warming B. Ozone depletion C. Green house effects	

Course Outcomes:

Students will able to

1. Understand the natural and manmade disasters.
2. Prepare students for prevention of disasters.
3. In the field of disaster management students will participate to help the community problems.
4. Develop ability to understand local, regional and global hazards for reducing the problems.
5. Group discussions, effective communications and personal opinion may be improve their socio-economic responsibilities.

References:

1. Alexander, D. (1993). *Natural disasters*. UCL Press Ltd.
2. Alexander, D. (2000). *Introduction in confronting catastrophe*. Oxford University Press.
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5. Bloom, A. L. (1998). *Geomorphology: A systematic analysis of late Cenozoic landforms*. Pearson Education (Singapore) Pte. Ltd.
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S.Y.B.A. Geography (VSC)
(2024 Course under NEP 2020)
Course Code: 24ArGeoU4501

Title of the Course: Lab Course on Surveying

Credits: 02

Examination Scheme: CIA: 20 Marks

Total Practical:15

End-Sem: 30 Marks

Course Objectives:

1. To Introduce Students to the Fundamentals of Surveying
2. To provide Hands-on Training in Plane Table and Prismatic Compass Survey
3. To familiarize Students with GPS-Based Surveying
4. To develop Fieldwork and Report Writing Skills of the students

	Semester – IV	Practicals
Unit 1	Introduction of Surveying	03
	A. Definition and Importance of Surveying in Geography B. Classification and Methods of Surveys C. Directions: Various Methods of deciding North Direction D. Types of north: True, Magnetic and Grid North E. Measurement and Conversion of Area in Different Units i. Sq. Meter to Guntha ii. Sq. Meter to Acre iii. Bigha to hectare iv. Sq. Foot to Acre v. Sq. Mile to hectare	
Unit 2	Plane Table and Prismatic Compass Survey	08
	A. Plane Table Survey: i. Introduction, parts of Instruments, Merits and Demerits, ii. Methods of Plane Table Survey: Radiation and intersection method. B. Prismatic Compass Survey: - i. Introduction, Structure and functions prismatic compass with diagram, Merits and Demerits ii. Methods of Prismatic Compass Survey (Open Traverse) iii. Conversion of bearing (WCB to QB and QB to WCB)	
Unit 3	GPS Survey	02
	A. Features, Segments, and application B. Mapping using GPS	
Unit 4	Excursion/ Field visit-report writing	02
	A. Visit to any geographically significant location anywhere in the country and report writing.	

Course Outcomes:

Students will be able to

1. Understand, the importance and applications of surveying in geography.
2. Identify and classify different types of surveys and their methods.
3. Accurately determine True North, Magnetic North, and Grid North.
4. Convert area measurements between units such as square meters, acres, guntha, bigha, and hectares.
5. Demonstrate the Radiation Method in Plane Table Surveying with practical examples.
6. Use GPS for Location Mapping, explain the basic features, segments, applications of GPS And Conduct field-based location mapping using GPS technology.
7. Plan and conduct field excursions to important geographical sites.
8. Develop skills in writing structured field reports with geographic analysis.

References:

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