

DOMBIVLI SHIKSHAN PRASARAK MANDAL'S
K. V. PENDHARKAR COLLEGE OF ARTS, SCIENCE AND
COMMERCE (AUTONOMOUS), DOMBIVLI EAST

Affiliated to University of Mumbai

Faculty of Arts

DEPARTMENT OF GEOGRAPHY

Programme: Bachelor of Arts (B.A.)

F.Y.B.A. SYLLABUS

Choice Based Credit System with effect from the academic year 2023-24

**DSPM'S K.V. PENDHARKAR COLLEGE OF ARTS, SCIENCE AND COMMERCE, DOMBIVLI (EAST),
DIST. THANE
(AUTONOMOUS)
Affiliated to University of Mumbai**

CONTENT

Programme- Bachelor of Arts (B.A.)

Sr. No.	Course	SEM	Code	Credits	No. of Lectures
1	Human Geography	I	GE23101MM	04	60
2	Geography of Environment	I	GE23102MM	02	30
3.	Geography of Environment	I	GE23103MN	02	30
4.	DISASTER MANAGEMENT AND MITIGATION	I	GE23104OE	03	45
5.	GEOSPATIAL TECHNOLOGY	I	GE23105VS	04	60
6.	Cartographic Techniques and Computer Applications-I	I	GE23106SE	04	60
7.	Environmental Studies-I	I	GE23107VE	02	30

**DSPM'S K.V. PENDHARKAR COLLEGE OF ARTS, SCIENCE AND COMMERCE,
DOMBIVLI (EAST), (AUTONOMOUS)**

F.Y.B.A. Semester- I

Human Geography-I

COURSE CODE: **GE23101MM**

Credits- **04**

Objectives:

1. To introduce the broader aspects of the Study of Human Geography
2. To familiarize students with the Changing patterns of Human Population
3. To understand the distribution and pattern of settlement and its effects on Migration
4. To prepare the graphical representation of age-sex population data.
5. To acquire the technique and Calculation of settlement pattern

Sr. No.	Modules/Units	Lectures (60)
Unit-I	Introduction to Human Geography	12
1.1	Meaning, Nature and Scope of Human	
1.2	Geography Branches of Human Geography	
1.3	Changing Nature of Man- Environment relationship	
Unit-II	Population	12
2.1	Demographic Transition Model	
2.2	Population Density, its Distribution and growth	
2.3	Concept and Problems of Under-population, over-population and optimum population	
Unit-III	Settlements	12
3.1	Concept, Types & Patterns of Rural and Urban settlement	
3.2	Settlements Site and Situation of Rural Settlement	
3.3	Functional classification of Urban Settlements	

Unit- IV	Migration	12
4.1	Concept and Types of Migration	
4.2	Causes of migration – pull and push; Consequences/effects of	
4.3	migration Patterns and processes of migration	
Unit- V	Practical Component (with Internal Assessment)	12
5.1	Map - Definition, Components, Type and Importance,	
5.2	Construction and Interpretation of Population Pyramids	
5.3	Investigation and Data collection in field of Human Geography	

Course Outcome:

1. This course will enable students to correlate the earth processes and Human evolution and understand the consequences of Human interference in natural processes.
2. It also aims to create socially aware citizens.
3. Understand the contribution of the discipline of geography to social sciences.
4. Connect theory with practice.
5. Critically analyse contemporary Human issues from a geographical perspective.

Learner Space:

1. Illustrated Human Geography Textbook – Creating a web comic textbook.
2. Wall Poster, Charts and Model
3. PPT on various Anthropogenic phenomenon
4. 3D Models of Settlements
5. Local to Global Photographs of Settlement
6. Patterns, Site and Situation of Settlements nearby areas
7. Urban and Rural settlement Model
8. Use of Google Earth Software
9. Mini Charts and Anchor
10. Models of Population
11. Population Census
12. Documentaries related distribution of Population
13. Models of Migration
14. Migration Data Portal
15. WHY? WHERE? and WHO?
16. Resource based migration.
17. Map Skill and Population Pyramid
18. Identification, mapping, Field observations and models preparation

References:

- Johnson R. J. & Others (1983) : The Dictionary of Human Geography, Blackwell England
- Singh, L. R. (2009): “Fundamentals of Human Geography”, Rawat Publications, Jaipur
- Hussain, M. (2011): “Human Geography”, Rawat Publications, Jaipur
- Dikshit, R. D. (1997): “Fundamentals of Human Geography”, Sharda Pustak Bhavan, Allahabad
- “Geographical Thought: A Contextual History of Ideas”, PHI Learning Private Limited, Delhi
- Singh, R. Y. (2002): “Geography of Settlements”, Rawat Publications, Jaipur
- Siddhartha, K. and Mukherjee, S. (2016): “Cities, Urbanisation and Urban Systems”, Kitab Mahal, Delhi
- Koser, K. (2007): “International Migration: A Very Short Introduction”, Oxford University Press, UK
- Castles, S., Haas, H., and Miller, M. (2013): “The Age of Migration: International Movements in the Modern World”, Guilford Pr.
- Leong, G. C. and Morgan, G. C. (1982): “Human and Economic Geography”, Oxford University Press, Delhi
- Knowles, R. and Warding, J. (2012): “Economic and Social Geography”, Rupa and CO., Kolkata
- Waugh, D. (2009): “The New Wider World”, Oxford University World, Oxford
- Mahmood, A. (2008): “Statistical Methods in Geographical Studies”, Rajesh Publications, New Delhi
- Singh, L. R. (2009): “Fundamentals of Practical Geography”, Sharda Pustak Bhavna, Allahabad
- Mishra, R. P. and Ramesh, A. (2002): “Fundamentals of Cartography”, Concept Publishing Company, New Delhi

Information and Communication Technology Backup:

1. <https://youtu.be/wPgpJokx-9I> - Human Geography – Nature and Scope
2. <https://youtu.be/ytPwlbp4pSU> - Dichotomy and Dualism
3. <https://youtu.be/ALnttGc4BRQ> - Population Geography
4. <https://youtu.be/JKT7cSFf2ic> - Evolution of Settlement
5. <https://youtu.be/zeqT6Oqgcks> - Settlement Geography
6. <https://youtu.be/1H3iqn55pJQ> - Urban Settlement
7. <https://youtu.be/OZk3Pb35zhI> - Demographic Transitional Model
8. <https://youtu.be/YaZ1MQI5Igw> - Migration
9. https://migrationdataportal.org/?i=stock_abs_&t=2019&cm49=180 – Migration Data Report

Universities which were referred to modify syllabi in fresh autonomy:

1. Savitribai Phule Pune University, Pune.
2. Parvatibai Chowgule College of Arts and Sciences, Margao, Goa.
3. Osaka University, Japan.

Pedagogy for F.Y.B.A. Geography –I (Sem-I):

1. Unit 1, we will learn the concepts of human geography and study different approaches and concepts of human and environment. For this we will use different study methods like Illustrated Human Geography Textbook Creating a web comic textbook. Charts and Model, Areal Differentiation and Human Activities related to Environment, Clipping from Videos.
2. Unit 2, we will study the human population, current population trends, global population change, population pattern, distribution and some concepts of population through different study methods like Mini Charts and Anchor, Models of Population, Population Census, Wall Poster, Documentaries related distribution of Population all over the World etc.
3. Unit 3, we will study human rural and urban settlements and look at their types, pattern and classification. We will study through different teaching methods like PPT, 3D Models of Settlements, Local Picture Settlement, Patterns, Site and Situation of Settlements nearby areas, Urban and Rural settlement Model, Use of Google Earth Software to differentiate the settlement pattern.
4. Unit 4, we will study the types of migration, its causes, consequences, trend of international migration, and some theories. For this we will use the following study methods like Models of Migration, Migration Data Portal, WHY? WHERE? and WHO? Concept, Resource based migration and their positive and negative impact etc.
5. Unit 5, we will study the Practical of Nearest Neighbor Analysis Construction and Interpretation of Age-Sex Pyramids, Field Investigation etc. For this we will use the following study methods Map Skill and Population Pyramid, Field observations and models preparation, Identification and mapping of different Man-Made features. Prepare and Analyze Urban and Rural Settlements with help of GIS and GPS Techniques.

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Syllabus w.e.f. Academic Year, 2021-22 (CBCS)

F.Y.B.A. Semester- I

Geography of Environment-I

COURSE CODE: **GE23102MM**

Credits- **02**

Objectives:

1. To create awareness about the dynamic environment among the students.
2. To acquaint students with the fundamental concepts of Environment Geography.
3. To develop the skill of map filling and interpreting
4. The fundamental issues and debates that circulate around the intersection of geography and environmental science, with a particular focus on how humans affect and are affected by modifications of the physical environment.

Sr. No.	Modules/Units	Le ctu res (30)
UNIT – I	Fundamentals of Environmental Geography	10
1.1	Definition, Concepts and Meaning of environment Environmental Geography	
1.2	Nature, Scope and Importance	
1.3	Relationship of Environmental geography with other sciences	
UNIT –II	Ecosystem Structure and Functions	10
2.1	Ecosystem – Meaning and Definition with its Structure.	
2.2	Functions: Energy flow in Ecosystem, Food chains, Food webs, Food pyramid	
2.3	Biogeochemical Cycles: Hydrological, Carbon and Nitrogen	
UNIT: III	Map Filling and Construction of Cartography (with Internal Assessment)	10
3.1	Map Filling – World using Point, line and Area	
3.2	Techniques. Map Filling of National Parks and	
3.3	Sanctuaries in India, Project on any Environmental Issues.	

Course Outcome:

1. Students will identify and critically analyse patterns of human-environment interactions, including perception, distribution and use of natural resources.
2. Students will be able to understand the different resources & its threat & develop the measures for the resource conservation.
3. Students will be able to critical thinking on environmental problems and need to measures for it.

4. Students will be able to develop the skill of map filling of world and India map & map reading too.

Learner Space:

1. Students will discuss on importance of Environment, man-environment relationship and the need of environmental awareness.
2. Students will prepare the mental map on various functions of ecosystem & classification of ecosystems, Biogeochemical cycles.
3. Students will prepare the assignment on different topics which are included in their syllabus, it will help them to collect and explain more information about various environmental aspects.
4. Students will develop their skills in map filling of the world and also indicate the natural parks and sanctuaries in India.

References:

- Asolekar S, Gopichandran R. 2005, 'Preventive Environmental Management -anIndianperspective', CEE, Ahmedabad, Foundation Books Pvt Ltd, Daryaganj
- Chambers N., Simons C., Wackernagel M., 2006, 'Sharing Nature's Interest – Ecologicalfootprintsas an indicator of sustainability'.
- Cunningham W., Cunningham M., 2003, 'Principles of Environmental Science –InquiryandApplications', Tata McGraw Hill Publication Company Ltd, New Delhi.
- Doniwal H. K., 'Urban Geography', GNOSIS, Delhi, 2009.
- Dresner S., 2005, 'The principles of sustainability', Earthscan publication Ltd, London.
- Gandotra V., Patel S., 2008, 'Environmental problems and strategies', SerialsPublication, NewDelhi
- Global Environment Outlook 3 -2002, 'Past, present and future perspectives', UNEP,Earthscanpublications Ltd, London, Sterling VA.
- Hulse J. H., 2007, 'Sustainable Development at risk -Ignoring the past', CambridgeUniversity PressIndia Pvt Ltd., New Delhi.
- Mohanta R., Sen A., Singh M.P., 2009, 'Environmental Education -Vol. 1', APHpublishingCorporation New Delhi.
- Nellison N., Straaten J. Van D. &Klinkers L., 2001, 'Classics in Environmental Studies –anoverview of texts in Environmental Studies', Kusum Publishing, Delhi
- Perumal M., Veerasekaran R., Suresh M., Asaithambi M., 2008, 'Environmental andEcologicalissues in India', Abhijeet Publication, Delhi
- Singh, R.B. (Eds.) (2009) Biogeography and Biodiversity. Rawat Publication, Jaipur
- Singh, M., Singh, R.B. and Hassan, M.I. (Eds.) (2014) Climate change and biodiversity: Proceedings of IGU Rohtak Conference, Volume 1. Advances in Geographical and Environmental Studies, Springer

Information and Communication Technology Backup:

1. <https://patnawomenscollege.in/upload/geographypdf/Meaning%20,Scope%20of%20Environment%20Geography%20.pdf>
2. <https://www.uv.mx/personal/fpanico/files/2011/04/AA.-VV.-Environmental-geography>
3. <https://www.conserve-energy-future.com/what-is-an-ecosystem.php>
4. <https://www.yourarticlelibrary.com/environment/ecosystem/ecosystems-concept-structure-and-functions-of-ecosystems-with-diagram/28211>
5. <https://www.yourarticlelibrary.com/notes/ecosystems-meaning-and-types-of-ecosystem/39406>
6. https://www.youtube.com/watch?v=nRi-ooLzybg&ab_channel=VEDANTUNEETMADEEJEE
7. <https://www.gktoday.in/topics/biodiversity/>
8. https://www.youtube.com/watch?v=11SFMMCfFSY&ab_channel=PrakashHajare
9. https://www.youtube.com/watch?v=Je1UDic1qn8&ab_channel=AVBhaiya

Universities which were referred to modify syllabi in fresh autonomy:

1. Bangalore University, Department of Geography Jnana Bharathi, Bengaluru-56
2. Doctor Harisingh Gour Vishwavidyalaya (A Central University) Sagar (M. P.)
3. University of Calcutta
4. Savitribai Phule Pune University

PEDAGOGY for F.Y.B.A. (Geography of Environmental-I)- Sem-I

UNIT - I: FUNDAMENTALS OF ENVIRONMENTAL GEOGRAPHY

It can be explained with the help of charts, PPT, photographs, documentaries, cross questioning, debate, brain storming, co-operative learning, quiz, puzzles and e-sources.

UNIT - II: ECOSYSTEM STRUCTURE AND FUNCTIONS

We can use Power Point Presentation, Documentaries, charts, case studies, essay competition, e-sources.

UNIT-III: MAP FILLING AND CONSTRUCTION OF CARTOGRAPH (with Internal Assessment)

Students can acquire the skill of map filling of environmental significant features in the map of India and world using point, line, Area segment.

It will develop the skill of understanding different cartographic techniques and interpretation of data which is presented on the map in various way.

Project will help to investigation and solution of problems and frequently the use and manipulate of physical and Man-made materials

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Syllabus w.e.f. Academic Year, 2021-22 (CBCS)

F.Y.B.A. Semester- I

Geography of Environment-I

COURSE CODE: **GE23103MN**

Credits- **02**

Objectives:

5. To create awareness about the dynamic environment among the students.
6. To acquaint students with the fundamental concepts of Environment Geography.
7. To develop the skill of map filling and interpreting
8. The fundamental issues and debates that circulate around the intersection of geography and environmental science, with a particular focus on how humans affect and are affected by modifications of the physical environment.

Sr. No.	Modules/Units	Lectures (30)
UNIT – I	Fundamentals of Environmental Geography	10
1.1	Definition, Concepts and Meaning of environment Environmental Geography	
1.2	Nature, Scope and Importance	
1.3	Relationship of Environmental geography with other sciences	
UNIT –II	Ecosystem Structure and Functions	10
2.1	Ecosystem – Meaning and Definition with its Structure.	
2.2	Functions: Energy flow in Ecosystem, Food chains, Food webs, Food pyramid	
2.3	Biogeochemical Cycles: Hydrological, Carbon and Nitrogen	
UNIT: III	Map Filling and Construction of Cartography (with Internal Assessment)	10
3.1	Map Filling – World using Point, line and Area Techniques.	
3.2	Map Filling of National Parks and Sanctuaries in India.	
3.3	Project on any Environmental Issues.	

Course Outcome:

1. Students will identify and critically analyse patterns of human-environment interactions, including perception, distribution and use of natural resources.
2. Students will be able to understand the different resources & its threat & develop the measures for the resource conservation.
3. Students will be able to critical thinking on environmental problems and need to measures for it.
4. Students will be able to develop the skill of map filling of world and India map & map reading too.

Learner Space:

5. Students will discuss on importance of Environment, man-environment relationship and the need of environmental awareness.
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7. Students will prepare the assignment on different topics which are included in their syllabus, it will help them to collect and explain more information about various environmental aspects.
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1. <https://patnawomenscollege.in/upload/geographypdf/Meaning%20,Scope%20of%20Environment%20Geography%20.pdf>
2. <https://www.uv.mx/personal/fpanico/files/2011/04/AA.-VV.-Environmental-geography>
3. <https://www.conserve-energy-future.com/what-is-an-ecosystem.php>
4. <https://www.yourarticlelibrary.com/environment/ecosystem/ecosystems-concept-structure-and-functions-of-ecosystems-with-diagram/28211>
5. <https://www.yourarticlelibrary.com/notes/ecosystems-meaning-and-types-of-ecosystem/39406>
6. https://www.youtube.com/watch?v=nRi0oLzybg&ab_channel=VEDANTUNEETMADEEJEE
7. <https://www.gktoday.in/topics/biodiversity/>
8. https://www.youtube.com/watch?v=1ISFMMCfFSY&ab_channel=PrakashHajare
9. https://www.youtube.com/watch?v=Je1UDic1qn8&ab_channel=AVBhaiya

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K. V. PENDHARKAR COLLEGE OF ARTS, SCIENCE AND COMMERCE
(AUTONOMOUS), DOMBIVLI EAST
F.Y.B.Com./B.Sc. OPEN ELECTIVES
DISASTER MANAGEMENT AND MITIGATION
SEMESTER-I

COURSE CODE: GE231040E

CREDIT-02

Objectives:

1. To Identify and note the disasters occurring in the World
2. To manage the risks occurring because of the Disasters
3. To understand the scenarios of Deluge and work on with the mitigation and management
4. To deliberate the process of adaptation to the situation and suggest Do's and Don'ts
5. To suggest the recovery process and means of practicing it.

UNIT - I	Meaning & Concept of Disaster & Hazard	15
1.1	Concepts of Disaster, Hazard, Vulnerability and Risks	
1.2	Typology of hazards & Disasters- Natural Disasters & Man-made Disasters	
1.3	Impacts of Disasters – Physical, Environmental and Biological	
1.4	Impacts of Disasters – Socio- Cultural, economic and political	
UNIT - II	Elements of Disaster Management	15
2.1	Disaster Management: Meaning & Concept	
2.2	Role of International Organizations for Disaster Management – UNISDR, INSARAG, Red Cross	
2.3	Role of National organizations-NIDM, NDRF, NRDM	
2.4	Role of NGOs & Community for Disaster Management	

Learning Outcome:

Upon successful completion of the course, the students:

- Will understand various types of disasters and their pathways
- Will get in-depth knowledge about how to act in these situations
- Will be able to critically analyze the current events and adhere to the mitigation measures
- will familiarize students with the concepts management of disasters and use of technology in the campaigns
- Will be able to demonstrate skills on the job trainings

Learner Space:

Students should read, observe, and analyze the disastrous situations, keep a check on the various current events and develop clues about the work process for the mitigation strategies. They should also be able to learn the Managerial skills for Disastrous situations and act as per the requirements of the same.

References:

1. Coppola, D.P. (2011): Introduction to International Disaster Management. Elsevier, Butterworth- Heinemann
2. Dasgupta R. (2007): Disaster Management and Rehabilitation, Mittal Publications. New Delhi
3. Govt. Of India: Disaster Management in India,

Ministry of Home Affairs, New Delhi 4. Murthy, D.B.N. (2008): Disaster Management, Deep & Deep Publications Pvt. Ltd., New Delhi

5. Singh, Savindra and Singh, Jeetendra (2016): Disaster Management, Pravalika Publications, Allahabad

6. ग डब ले, मराठे: आपती व्यवस्थापन सिंकल्पना, डायमिंड पब्ललके शन्स, पुणे.

7. पठारे सिंभाजी, अजय चाकाने: आपती ब्नराकरण, डायमिंड पब्ललके शन्स, पुणे.

8. म रे ज तीराम, अजोुन मुसमाडे: आपती व्यवस्थापनाचा भूग ल, डायमिंड पब्ललके शन्स, पुणे.

University referred to modify the syllabus:

1. NDRF
2. NIDM
3. TIFR
4. INSARAG
5. UNCTAD

Pedagogy:

The Paper will help in developing an understanding and nourish the idea of Disaster Mitigation and Management. How technological developments have occurred in this field for the better management of difficult situations. Paper highlights the ways of organizations and their role in acting for the better cause in the Disaster situations.

Job-Oriented/Entrepreneurship development:

- Disaster management
- Fire Departments
- Planning Departments
- UPSC
- MPSC
- Other Competitive exams
- Policy makers

MOOC units:

- Disaster Management by NIDM, NDRF, NPTEL, SWAYAM, Coursera and Unacademy

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F.Y.B.A. VOCATIONAL SKILLS COURSE
SEMESTER-I**

SUBJECT TITLE: GEOSPATIAL TECHNOLOGY

COURSE CODE: GE23105VS

CREDIT-02

Objectives:

1. The aim of this course is to apprise the students of various aspects of Aerial photographs.
2. It will teach about the important elements of Geospatial technology.
3. It gives the technical knowledge of satellite systems and open-source software.

UNIT - I	Aerial Photography	15
1.1	Aerial Photographs: Concept, Process, and Types	
1.2	Reading of Aerial Photographs	
1.3	Interpretation of Aerial Photographs	
1.4	Contouring and Area Calculation by using Google Earth	
UNIT - II	Global Positioning System	15
2.1	Global Positioning System: Concept, Segments	
2.2	Global Positioning System: Applications, and Types	
2.3	Ground Survey and Demarcation of Point, Line, and Polygon Features with GPS Device	
2.4	Transfer GPS Data to Computer with Software's like -Easy GPS and open it in QGIS	

Learning Outcome:

1. Students will demonstrate knowledge of the foundations and theories of GIS and use the tools and methods of GIS.
2. Students will demonstrate their knowledge of physical geography and the methods and techniques for observing, measuring, recording and reporting on geographic phenomena.
3. Students will demonstrate their competence to work individually and as a team to develop and present a client-driven GIS solution.
4. Students will be familiar with modern techniques in Geography.
5. Students will be prepared to apply their skills in professional careers.

Learner Space:

Students can explore the subject with a positive outlook towards Geographical expanse and vastness of subject just by drawing manual and digital maps, charts, mental maps and noting the locations manually. With that, using various online platforms and applications (Google Earth, Bhuvan App, QGIS, MapIT GIS) students can correct their geographical knowledge and explore the real essence of Geographical features.

References:

1. कार्लेकर, श्रीकांत (२००६) भौगोलिक माहिती प्रणाली, डायमंड प्रकाशन, पुणे.
2. कार्लेकर, श्रीकांत (२०१२) संवेदन, डायमंड प्रकाशन, पुणे.
3. Afzal Sharieff and et. al. (Ed.) (2010): An Introduction to Remote Sensing, SARUP Book Publishers Pvt. Limited, New Delhi.
4. Anson, R. W. and Ormeling, F. J., (Ed.) (1993): Basic Cartography for Students and Technicians, Vol.I, International Cartographic Association and Elsevier Applied Science Publishers, London.
5. American Society of Photogrammetry (1983): Manual of Remote Sensing, ASP PalisChurch, V.A.
6. Agrawal, N.K.(2006), Essentials of GPS (Second Edition), Book Selection Centre, Hyderabad
7. Bhatia (2016): Remote Sensing and GIS, Oxford University Press, New Delhi.
8. Bhatia, S. C. (2008): Fundamentals of Remote Sensing, Atlantic Publishers and Distributors (P) Limited, New Delhi.
9. Bhatta Basudeb 2016: Remote Sensing and GIS, Oxford University Press, New Delhi
10. Barrett, E.G. and Curtis, L.F. (1992): Fundamentals of Remote Sensing in Air Photo- interpretation, McMillan, New York. 7.
11. Bernhardsen, Tor (2002): Geographical Information Systems: An Introduction, Third Edition, John Wiley & Sons, Inc., New York.
12. Burrough, Peter A and McDonnell, R.A. (1998): Principles of Geographical Information Systems, Oxford University Press, Mumbai.
13. Campbell. J. (1989): Introduction to Remote Sensing, Guilford, New York.
14. Clarke, Keith C. (1998): Getting Started with Geographic Information Systems, Prentice-Hall Series in Geogl. Info. Science, Prentice-Hall, Inc. N.J.
15. Central Board of Secondary Education (New Delhi): Geospatial Technology Textbook, Class XI and XII
16. Chaisman, N. 1992: Exploring Geographical Information Systems, John Wiley and Sons Inc., New York. Lillesand, T.M. and Kiefer, R. W. 1994: Remote Sensing and Image Interpretation, 3rd edition, John Wiley and Sons, New York.
17. Dickinson, G. C. (1977) Statistical Mapping and the Presentation of Statistics, Edward Arnold Ltd., London.
18. George B and Kolte P. E. (2010): The GIS Book, Cengage Learning India Private Limited, New Delhi.
19. George Joseph (2013): Fundamentals of Remote Sensing, Second Edition, Universities Press (India) Private Limited, Himayatnagar, Hyderabad.
20. Heywood, I. et al (2002): An Introduction to Geological Systems, Pearson Education Limited, New Delhi.
21. New Delhi.

22. Iliffe, J.C (2006), Datums and Map Projections for Remote Sensing, GIS and Surveying, Whittles Publishing, New York.
23. Jonson. R. J. (2003): Remote Sensing of the Environment-An Earth Resources Perspective
24. Kang-Tsang Chang (2010): Introduction to Geographic Information Systems, Tata McGraw Hill Edition, New Delhi.
25. Lillesand and Keifer (2010) Remote Sensing and Image Interpretation, Fourth Edition, Wiley.
26. Pearson Education Series in Geographical Information Science, Keith C. Clarke (Series editor) Pearson Educators Private Limited. (Singapore), New Delhi.
27. Monkhouse, F. J. and H. R. Wilkinson, (1971): Maps and Diagrams, Methuen & Co. Ltd., London.
28. Robinson, A. H. and Others (1995): Elements of Cartography, VI Edition, John Wiley & Sons, New York.
29. Sudhakar S (1993) : Forest Type and Density Mapping in Meghalaya through Digital Image Processing of Indian Remote Sensing Satellite Data, Collaborative project report by Meghalaya State Forest Dept. and RRSSC, Kharagpur.
30. Thomson O and Frank S (2000): Time Integrative Geographic Information System, Springer, New York.
31. Training Module of Capacity Building Training Programme in Geospatial Technology sponsored by Department of Science and Technology, Government of India in collaboration of Himachal Pradesh University.

ITC:

1. National Bureau of Soil Survey and Land Use planning: www.nbsslup.in
2. Survey of India: www.surveyofindia.gov.in
3. ISRO Bhuvan 2D Platform: bhuvan.nrsc.gov.in/map/bhuvan/bhuvan2d.php
4. Tutorials from the - <http://dst-iget.in/tutorials>
5. <https://www.iirs.gov.in/>
6. <https://www.isro.gov.in>

University referred to modify the syllabus:

1. Delhi University
2. Savitribai Phule Pune University
3. University of Calcutta
4. Jaipur University

Pedagogy:

It will be introduced with help of, Maps, Charts, Photographs, Population census, Brainstorming, Comparative Study, Discussion, Lecture method, PPT, Models, Digital sources, Problem-solving method, Research papers, E- Resources, Case study, Documentaries, location-based/ geo-tagging

method, simulation and role-play, field observation/ visit, and Experiential learning and digital learning etc.

Job-Oriented/Entrepreneurship Development:

GIS analytics

GIS Surveyor

GIS Executive

Map Developer

MOOC:

<https://www.esri.com/training/mooc/>

<https://www.coursera.org/>

<https://www.gislounge.com/learn-gis-for-free/>

<https://isat.iirs.gov.in/mooc.php>

**DSPM'S K.V. PENDHARKAR COLLEGE OF ARTS, SCIENCE AND COMMERCE,
DOMBIVLI (EAST), (AUTONOMOUS)**

NEP 2020

Skill Enhancement Course (SEC)

F.Y.B.A. Sem I Cartographic Techniques and Computer Applications-I

COURSE CODE: GE23106SE Credit –02

Objectives:

- To acquaint students with various tools used in Geography for Analysis
- To create a sense of Geographical techniques and their spatial outcome
- To understand the basics of mapping, use of toposheets and creation of maps
- To inculcate the principles of map reading
- To understand the practical usage of Mapping techniques

Sr. No.	Modules/Units	Lectures
Unit-I	Map Basics	15
1.1	Basic Concepts: Definition, scale, direction, azimuth, graticule, great circle, true meridian	
1.2	Cartographic Symbols, calculation or identification of relief	
1.3	Bearing and Distance	
1.4	Area Calculation- Strip and Square Method	
Unit-II	Basics of Computer applications in Geography	15
2.1	Line Graphs, Bar Graphs, Multiple line and bar graphs	
2.2	Band Graphs, Divided Circle, Scatter Diagram	
2.3	Downloading of Google Earth Pro (Free Software)	
2.4	Identifying native location: Using Point, Line and Polygon features to add placements, Contouring	

Course Outcome:

- Will get in-depth knowledge about Tools and Techniques in Geography
- Will be able to critically analyze the techniques in Geography
- will familiarize students with the maps and their usages
- will acquire basic skills used in cartography
- Will be able to demonstrate skills in constructive analysis

Learner Space:

Students should observe and understand the tools and techniques of Geography. They will also explore the maps and its types for easy access. Learn various techniques for easy access and development. They should analyze various geographical aspects and incorporate their own innovative ideas in various fields which will help to build a scientific and jubilant environment.

References:

- Karlekar Shrikant- Bhoogol shastratil Sanshodhan Paddhati,
- Monkhouse F.J. - Maps & Diagrams, Methuen and Co., London, 1971 (3rd Edition, Revised).
- NCERT - Textbook for Class-12, Practical Work in Geography Part II
- Peter A. Rogerson - Statistical Methods for Geography, Sege Publishers - 2001 Robinson
- A.H. - Elements of Cartography, Wiley
- Sarkar Ashis - Practical Geography, Orient Black Swan 2015
- Sarkar Ashis Quantitative Geography, Orient Black Swan 2013

- Singh R.L. & Singh P. B. - Elements of Practical Geography, Kalyani Publishers 2005
- Stoddard Robert Field techniques and research methods in geography, Geography faculty publication
<http://digitalcommons.unl.edu/geographyfacpub/26>

Thakur S. A. - , Konkan Geographer s publication (2016)

**DSPM'S K.V. PENDHARKAR COLLEGE OF ARTS, SCIENCE AND COMMERCE,
DOMBIVLI (EAST), (AUTONOMOUS)**

Value Education Course (VEC)

F.Y.B. Com Semester- I

Environmental Studies-I

COURSE CODE: **GE23104OE** Credit **-02**

Objectives:

1. To increase awareness about environment, ecosystem, and resources
2. To encourage students to participate in conservation techniques
3. To understand the relation between population of human and environment, human health, and environment.
4. To understand the effects of migration and urbanization on the environment.
5. To understand the various new concepts related to Urbanization.
6. To acquire the skill of reading and interpreting the thematic maps by using various cartographic techniques.

Sr. No.	Modules/Units	Lectures
Unit-I	Environment and Ecosystem	15
1.1	Environment: Meaning, definition, scope, and its components; Ecosystem	
1.2	Characteristics, components, and types, functioning and structure	
1.3	Food Chain and Food Web- Ecological Pyramids - Human and environment relationship	
1.4	Importance and scope of Environmental Studies	
Unit-II	Natural Resources and Sustainable Development	15
2.1	Meaning and definitions; Classification and types of resources, factors influencing resource	
2.2	Resource conservation- meaning and methods- conventional and non-conventional resources	
2.3	Problems associated with and management of water, forest, and energy resources	
2.4	Resource Utilization and Sustainable Development	

Course Outcome:

1. This course will make students environmentally aware.
2. It also empowers them to positively change the environment around them by creating wise developments.
3. This course will help them to create an eco-friendly environment as the requirement of today's demand.

Learner Space:

1. Models of Ecosystem
2. Chart on types, classification
3. Examples of ecosystem
4. Games and discussion on importance of environment
5. Cooperative learning methods for problems, consequences and measures to control the environmental issues such as resources, population
6. Documentaries related to population
7. Puzzles and charts on environment and human health, HDI, Happiness Index
8. Brainstorming on resources, biodiversity, urban areas
9. Photographs, Documentaries on smart cities
10. Skill of map reading and map filling
11. Games related to environmental features in different continents

12. Identification of different cartographic techniques and calculation of data presented in thematic maps
13. Debate and use of cooperative learning strategies on economy and environmental conservation related to resources, population, biodiversity
14. Preparation of report on Sustainable development and cities

References:

1. Dr. Dipesh Karmarkar (2018-19), Environmental Studies, Vipul Publication
2. Amrite, Chakraboti, (2019), Environmental Studies, Manan Publication
3. Dr. H.M.Pednekar, P.G.Shinde, Environmental Studies, Sheth Publication
4. Ms.Dhobale Shital, Mr. Kailas Sabale, Environmental Studies, Nirali Publication

Information and Communication Technology Backup:

1. <https://www.youtube.com/watch?v=0s1Mh3HrOJU> : Environment and Ecosystem
2. <https://www.youtube.com/watch?v=7V8oFI4GYMY> : Natural Resources and Sustainable Development
3. <https://www.youtube.com/watch?v=Jr8liU5-WBs> : Population and Emerging Issues of Development
4. <https://www.youtube.com/watch?v=RYZsKV4-H-A> : Urbanisation and Environment

PEDAGOGY for F.Y.B.Com (Environmental Studies)- Sem-I

Unit – I: Environment and Ecosystem

It can be explained with the help of charts, models, PPT, photographs, movies, documentaries, cross questioning, debate, brainstorming, cooperative learning, quiz, puzzles.

Unit – II: Natural Resources and Sustainable Development

We can use Powerpoint Presentation, Documentaries, charts, case studies, essay competition, case studies, field visit and survey.