

Ahmednagar Jilha Maratha Vidya Prasarak Samaj's

**New Arts, Commerce, and Science College  
Ahmednagar (Autonomous)**

(Affiliated to Savitribai Phule Pune University, Pune)



**National Education Policy (NEP)**

**Choice Based Credit System (CBCS)**

**Programme Framework and Syllabus for**

**Skill Enhancement Courses: Geography**

**कौशल्य वृद्धी अभ्यासक्रम: भूगोल**

**Implemented from**

**Academic Year 2024-25**

Ahmednagar Jilha Maratha Vidya Prasarak Samaj's  
**New Arts, Commerce and Science College, Ahmednagar**  
**(Autonomous)**

### **Introduction of Skill Enhancement Courses: Geography**

The introduction of a Skill Enhancement Course in Geography marks a significant stride towards equipping students with practical knowledge and technical skills essential for contemporary geographic analysis and fieldwork. This course integrates various aspects of geography with modern tools and techniques, thereby bridging the gap between theoretical learning and real-world application. Among the key components of this course are computer applications in geography and practical training in land measurement and surveying.

The integration of computer applications in geography offers students a comprehensive understanding of how technology can enhance spatial analysis and decision-making processes. Digital maps, web-based GIS (Geographic Information Systems), and GPS (Global Positioning System) tools are fundamental in modern geographical research and analysis. Digital maps enable the visualization and interpretation of spatial data, providing insights into patterns, trends, and relationships within geographic phenomena. Web-based GIS platforms facilitate the creation, manipulation, and analysis of spatial data over the internet, fostering collaboration and accessibility. GPS technology enables precise positioning and navigation, essential for fieldwork, resource management, and disaster response.

By combining computer applications with practical fieldwork, the Skill Enhancement Course in Geography provides students with a holistic learning experience that prepares them for diverse career opportunities in fields such as environmental management, urban planning, disaster management, and geospatial analysis. The integration of modern technologies and traditional surveying techniques equips students with the skills necessary to address contemporary challenges in geography and contribute to sustainable development efforts. Moreover, by fostering hands-on experience and critical thinking skills, this course empowers students to become proficient geographers capable of making meaningful contributions to society. Overall, the introduction of this course represents a proactive approach towards enhancing the skill sets of geography students and fostering innovation in geographic research.

**Skill Enhancement Courses: Framework and Course Distribution:  
Subject: Geography**

Sr. No.	Year	Semester	Level	Course Type	Course Code	Title	Credits
1.	I	II	4.5	SEC-01	SEC-GO 01P	Data Representation using Computer Techniques	02
2.	II	III	5.0	SEC-02	SEC-GO 02P	Practicals in Land Measurment and Surveying I	02
3.	II	IV	5.0	SEC-03	SEC-GO 03P	Practicals in Land Measurment and Surveying II	02
<b>Total</b>							<b>06</b>

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**Skill Enhancement Courses: Geography**

Title of the Course: Data Representation using Computer Techniques								
Year: I				Semester: II				
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
<b>SEC-01</b>	<b>SEC-GO01P</b>	00	02	02	60	15	35	50

**Learning Objectives:**

1. To introduce the students to the use of web based digital maps
2. To enable students with basic use of MS excel for representation of geographical data through graphs and charts
3. To enable students with use of computer in mapping and surveying with GPS
4. To acquaint students with use of Bhuvan /Google Earth and GPS Programme in Geography

**Course Outcomes (Cos)**

After completion of this course students will

1. Able to use of web based digital maps
2. Able to basic use of MS excel for representation of geographical data through graphs and charts
3. Able to use of computer in mapping and surveying with GPS
4. Acquaint with use of Bhuvan /Google Earth and GPS Programme in Geography

**Detailed Syllabus:**

**Unit I: Introduction to Digital maps (20)**

- a. Application and uses of digital maps (Web based GIS)
  - i. Google Earth
  - ii. Bhuvan Portal
  - iii. Mahabhumi
  - iv. Bharat Maps
- b. Digitization of vector layers and preparation of map layout of the above web based portal using open source softwares

**Unit II: Preparation of Geographical Diagrams using Computer (20)**

Geographical data and its representation using Graphs and Diagrams in the Microsoft excel and interpretation of the results

- a. Types of line graph
- b. Types of bar graph
- c. Pie chart
- d. Clustered column and line graph

**Unit III: Use of GPS**

**(20)**

- a. Introduction of GPS device and its functions
- b. GPS survey
- c. Plotting of GPS data  
(Point, line and Polygon on Google Earth/ Bhuvan Portal)
- d. Conversion of SHP file to KML

**Suggested Readings/Material:**

1. Chaudhar , et.al (2014) Fundamental of Geographical Analysis, Atharva publication, Pune
2. D. J. Maguire (1989), Computers in Geography, Longman, London, England
3. Dr. R. Khullar,(2000), Essentials of Practical Geography, New academic publishing co. Mai Hiran Gate, Jalandhar- 144008.
4. Singh R. L. and Singh R. P. B., 1999, Elements of Practical Geography, Kalyani Publishers.
5. Singh R. L. and Dutta P. K., 2012, Prayogatama Bhugol, Central Book Depot, Allahabad
6. Sarkar A., 2015, Practical Geography: A Systematic Approach, Orient Black Swan Private Ltd., New Delhi
7. <https://mahabhumi.gov.in>
8. <https://bhuvan.nrsc.gov.in>
9. <https://earth.google.com>