

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**  
**B. Sc. - I (Geography)**

**Implemented from**

**Academic Year 2024-25**

Ahmednagar Jilha Maratha Vidya Prasarak Samaj's  
**New Arts, Commerce and Science College, Ahmednagar**  
**(Autonomous)**  
**Board of Studies in Geography**

<b>Sr. No.</b>	<b>Name</b>	<b>Designation</b>
1.	Dr. Anand P. Pandit	<b>Chairman</b>
2.	Prof. Bhagwan N. Kumbhar	<b>Member</b>
3.	Dr. Yogesh G. Kadam	<b>Member</b>
4.	Professor Dr. Sachin J. Deore	<b>Academic Council Nominee</b>
5.	Dr. Pandurang P. Chaudhari	<b>Academic Council Nominee</b>
6.	Prof. Sandip N. Deshmukh	<b>Vice-Chancellor Nominee</b>
7.	Dr. Asaram S. Jadhav	<b>Alumni</b>
8.	Mr. Vinit T. Bitla	<b>Industry Expert</b>
9.	Dr. Satish D. Kulakrni	<b>Member (co-opt)</b>
10.	Dr. Digambar D. Ahire	<b>Member (co-opt)</b>

**1. Prologue/ Introduction of the programme:**

Students enrolled in the program will complete a curriculum that exposes and train students in a full range of essential skills and abilities. They will have the opportunity to master the geographical knowledge. The discipline of geography is mainly concerned with changes in spatial attributes from a temporal perspective. This programme in geography is tailored to meet the student's specific educational and professional goals in mind. It focuses on spatial studies, qualitative as well as quantitative, and emphasizes the human-environment relationship. During the first year of the programme, students study the fundamental knowledge related to the subject of geography. It covers the Basics of Geography, the Fundamentals of the Earth and the Representation of Geographical Data using various techniques. In the second year, more emphasis is given to specific areas of the subject including Atmosphere, Hydrosphere, Population and Settlements. In the third year, students will study the Geography of Maharashtra and India which will help them understand our country and state and also help them for preparation for various competitive examinations. After completing the course, the students will be adequately prepared for professional careers in geography and allied disciplines like GIS and Remote Sensing. The syllabus tries to give equal importance to the two main branches of Geography: Physical and Human. The principal goal of the syllabus is to enable the students to acquire adequate geographical knowledge to secure jobs at the end of the undergraduate programme.

## **2. Programme Outcomes (POs)**

After completion of this programme students will

1. Understand the Basics of Geography, Fundamentals of the Earth.
2. Able to draw map projections and represent geographical data through various techniques.
3. Well aware about Physical and Human aspects of the Earth.
4. Understand population dynamics, population theories and the population composition of India and the world.
5. Able to use various cartographic techniques on given data.

**B. Sc. Programme Framework: Credit Distribution**

Level / Difficulty	Sem	Subject-1						Subject-2		Subject-3		(SEC)	GE/OE		IKS	AEC	VEC	CC	Total	
		T		P				T	P	P	T	P	T	P						
Certificate 4.5 / 100	I	02		02				02	02	02	02	-	02		02	02	02	02	22	
	II	02		02				02	02	02	02	02	-	02		--	02	02	02	22
		Credits Related to Major						Selected as Minor												
		Core		Elective		VSC	FP / OJT/ CEP/RP													
		T	P	T	P	P	P	T	P	-	P	T	P	-	-	-	-	-	-	
Diploma 5.0 / 200	III	04	02	--		02	02	02	02	-	02	02		-	02	-	02	22		
	IV	04	02	--		02	02	02	02	-	02		02	--	02	-	02	22		
Degree 5.5 / 300	V	06	04	02	02	2	2	02	-	-	-	-	-	02	-	-	-	22		
	VI	06	04	02	02	2	4	02	-	-	-	-	-	-	-	-	-	22		
<b>Total</b>		<b>24</b>	<b>16</b>	<b>04</b>	<b>04</b>	<b>08</b>	<b>10</b>	<b>10</b>	<b>08</b>	<b>04</b>	<b>04</b>	<b>06</b>	<b>08</b>	<b>04</b>	<b>08</b>	<b>04</b>	<b>08</b>	<b>132</b>		
6.0/400 Honours	VII	08	06	02	02	-	RM-04											22		
	VIII	08	06	02	02		OJT-04											22		
6.0/400 Honours with Research	VII	06	04	02	02		RM-04 RM-04											22		
	VIII	06	04	02	02		RM-08											22		
<b>Total</b>		<b>40/36</b>	<b>28/24</b>	<b>08</b>	<b>08</b>	<b>08</b>	<b>18/26</b>	<b>10</b>	<b>08</b>	<b>04</b>	<b>04</b>	<b>06</b>	<b>04</b>	<b>04</b>	<b>04</b>	<b>08</b>	<b>04</b>	<b>08</b>	<b>176</b>	

**B.Sc. Programme Framework: Course Distribution**

Level / Difficulty	Sem	Subject-1 (Selected as Major)						Subject-2		Subject-3		(SEC)	GE/OE		IKS	AEC	VEC	CC	Total
		T		P				T	P	P	T	P	T	P					
Certificate 4.5 / 100	I	01		01				01	01	01	01	-	01		01	01	01	01	11
	II	01		01				01	01	01	01	01	-	01	--	01	01	01	11
		Credits Related to Major						Selected as Minor											
		Core		Elective		VSC	FP / OJT / CEP/RP												
		T	P	T	P	P	P	T	P	-	P	T	P	-	-	-	-	-	
Diploma 5.0 / 200	III	02	01	--		01	FP-01	01	01	-	01	01		-	01	-	01	11	
	IV	02	01	--		01	CEP-01	01	01	-	01		01	--	01	-	01	11	
Degree 5.5 /300	V	03	02	01	01	01	FP-01	01	-	-	-	-		01	-	-	-	11	
	VI	03	02	01	01	01	OJT-01	01	-	-	-	-		-	-	-	-	10	
<b>Total</b>		<b>12</b>	<b>08</b>	<b>02</b>	<b>02</b>	<b>04</b>	<b>04</b>			<b>02</b>	<b>02</b>	<b>03</b>	<b>04</b>	<b>02</b>	<b>04</b>	<b>02</b>	<b>04</b>	<b>65</b>	
6.0/400 Honours	VII	03	03	01	01	-	RM-01											09	
	VIII	03	03	01	01		OJT-01											09	
6.0/400 Honours with Research	VII	02	02	01	01		RM-01 RM-01											08	
	VIII	02	02	01	01		RM-01											07	
<b>Total</b>		<b>20/18</b>	<b>14/12</b>	<b>04</b>	<b>04</b>	<b>04</b>	<b>06/07</b>	<b>06</b>	<b>04</b>	<b>02</b>	<b>02</b>	<b>03</b>	<b>04</b>	<b>02</b>	<b>04</b>	<b>02</b>	<b>04</b>	<b>83/80</b>	

**B. Sc. - Geography: Credit and Course Distribution in Brackets**

Level / Difficulty	Sem	Subject-1							Total
		T		P					
4.5	I	02 (01)		02 (01)				04(02)	
	II	02 (01)		02 (01)				04(02)	
		Credits Related to Major							
		Core		Elective		VSC	FP / OJT/ CEP	IKS	
		T	P	T	P	P	P	T	
5.0	III	04(02)	02(01)	--		02(01)	FP-02(01)		10(05)
	IV	04(02)	02(01)	--		02(01)	CEP-02(01)		10(05)
5.5	V	06(03)	04(02)	02(01)	02(01)	02(01)	FP-02(01)	02(01)	20 (10)
	VI	06(03)	04(02)	02(01)	02(01)	02(01)	OJT-04(01)		20(09)
<b>Total</b>		<b>12</b>	<b>08</b>	<b>(02)</b>	<b>(02)</b>	<b>04</b>	<b>04</b>	<b>(01)</b>	<b>33</b>
6.0	VII	03	03	(01)	(01)	-	RM-04(01)		22(09)
	VIII	03	03	(01)	(01)		OJT-04(01)		22(09)
6.0	VII	(02)	(02)	(01)	(01)		RM-04(01) RP-04(01)		22(08)
	VIII	(02)	(02)	(01)	(01)		RM-08(01)		22(07)
		<b>18/16</b>	<b>14/12</b>	<b>04</b>	<b>04</b>	<b>04</b>	<b>06/07</b>	<b>(01)</b>	<b>51/48</b>

## Programme Framework (Courses and Credits): B. Sc. Geography

Sr. No.	Year	Semester	Level	Course Type	Course Code	Title	Credits
1.	I	I	4.5	DSC-01	BS-GO 111T	Basics of Geography	02
2.	I	I	4.5	DSC-02	BS-GO 112P	Practicals in Cartography	02
3.	I	II	4.5	DSC-03	BS-GO 121T	Fundamentals of the Earth	02
4.	I	II	4.5	DSC-04	BS-GO 122P	Techniques of Spatial Analysis	02
5.	II	III	5.0	DSC-05	BS-GO 231T	Physical Geography	02
6.	II	III	5.0	DSC-06	BS-GO 232P	Practicals in Physical Geography	02
7.	II	IV	5.0	DSC-07	BS-GO 241T	Human Geography	02
8.	II	IV	5.0	DSC-08	BS-GO 242P	Practicals in Human Geography	02
9.	III	V	5.5	DSC-09	BS-GO 351T	Geography of Maharashtra	02
10.	III	VI	5.5	DSC-10	BS-GO 361T	Geography of India	02



Ahmednagar Jilha Maratha Vidya Prasarak Samaj's  
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**(Autonomous)**  
**Syllabus**  
**B. Sc. - I (Geography)**

Title of the Course: Basics of Geography								
Year: I				Semester: I				
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
<b>DSC-01</b>	<b>BS-GO 111T</b>	02	00	02	30	15	35	50

**Learning Objectives:**

1. To understand the origin and development of geography.
2. To make students well aware of the branches and importance of geography.
3. To understand the theories of the origin of the universe.
4. To acquaint the knowledge about the universe, solar system and allied concepts.

**Course Outcomes (COs):**

After completion of this course students will

1. Understand the origin and development of geography.
2. Well aware of branches and the importance of geography.
3. Understand the theories of the origin of the universe.
4. Acquaint the knowledge about universe, solar system and allied concepts.

**Detailed Syllabus:**

**Unit I: Introduction to Geography (09)**

- a. Definitions and Origin of Geography
- b. Approaches in Geography: Determinism, Possibilism and Neo Determinism
- c. Nature of Geography
- d. Scope of Geography

**Unit II: Branches and Importance of Geography (09)**

- a. Branches of Geography
  - i. Physical and Human Geography
  - ii. Systematic and Regional Geography
  - iii. Cartography
- b. Importance of Geography

**Unit III: The Universe and Solar System (12)**

- a. Theories of Origin of Universe

- i. Big-Bang Theory
- ii. Steady State Theory
- iii. Pulsating Universe Theory
- b. Concept of Light Day and Light Year
- c. Galaxy, Star, Constellations, Planets and Satellite
- d. Our Solar System
- e. Asteroids, Meteorites and Comets

**Suggested Readings/Material:**

1. Clyton K., (1986): Earth Crust, Adus Book, London.
2. Davis W. M., (1909): Geographical Essay, Ginnia Co.
3. Dayal P., (1996): Text Book of Geomorphology, Shukla Book Depot, Patna.
4. Kale V.S. and Gupta A., (2001): Elements of Geomorphology, Oxford Univ. Press.
5. Kale V.S. and Gupta A., (2015): Introduction of Geomorphology, University Press, PVT Kolkata.
6. Monkhouse, (1951): Principle of Physical Geography, McGraw Hill Pub – New York.
7. More, Pagar & Thorat (2014): Elements of Climatology & Oceanography, (Marathi), Atharv Publication, Pune
8. Pitty A. F., (1974): Introduction to Geomorphology, Methuen London.
9. S Mukherjee (1996): Understanding Physical Geography Through Diagrams, Orient Blackswan (Pvt) Ltd
10. Singh Savindra, (2000): Physical Geography, Prayag Pustak Bhavan, 20-A, University Road, Allahabad – 211002.
11. Steers J. A., (1964): The Unstable Earth Some Recent Views in Geography, Kalyani Publishers, New Delhi.
12. Swaroop Shanti, (2006): Physical Geography, King Books, Nai Sarak, Delhi – 110006.
13. Wooldridge S. W. and Morgan R. S., (1959): The Physical Basis of Geography and Outline of Geomorphology, Longman Green and Co. London.

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**(Autonomous)**  
**Syllabus**  
**B. Sc. - I (Geography)**

<b>Title of the Course: Practicals in Cartography</b>								
<b>Year: I</b>				<b>Semester: I</b>				
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
<b>DSC-02</b>	<b>BS-GO 112P</b>	00	02	02	60	15	35	50

**Learning Objectives:**

1. To get knowledge of basics of cartography and Maps
2. To convert map scale.
3. To make students able to represent the data using various techniques.

**Course Outcomes (Cos):**

After completion of this course students will

1. Understand basics of cartography and Maps
2. Able to convert map scale.
3. Able to represent the data using various techniques.

**Detailed Syllabus:**

**Unit I: Introduction of Cartography (15)**

- a. Meaning and Definition of Cartography
- b. Importance of Cartography
- c. Definition and Elements of Maps
- d. Types of Maps
- e. Uses of Maps

**Unit II: Map Scale (15)**

- a. Definition of Map Scale
- b. Types of Map Scale: Verbal Scale, Representative Fraction and Graphical Scale
- c. Conversion of Map Scale: British and Metric System (Minimum two examples each)
  - i. Verbal Scale into Representative Fraction
  - ii. Representative Fraction into Verbal Scale
- d. Construction of Simple Graphical Scale (At least one example from British and Metric System)

**Unit III: Map Projections (15)**

- a. Definition of map projection
- b. Classification of map projection
- c. Construction and study of the following projections (need, advantages, disadvantages, use, importance)
  - i. Zenithal projections – Zenithal polar gnomonic projection
  - ii. Conical projection – Simple conical projection with one standard parallel
  - iii. Cylindrical projection - Cylindrical equal area projection(Note: - construction of above map projections with properties and uses, for relevant group one example from each hemisphere)
- d. Choice of map projection

**Unit IV: Data Representation by various techniques using computer (15)**

- a. Simple and Multiple Line graph
- b. Simple, Multiple and Compound Bar graph
- c. Pie Chart
- d. Tally Marks, Frequency table and Histogram

**Suggested Readings/Material:**

1. Dent B.D., 1999. Cartography: Thematic Map Design, (Vol. 1), McGraw Hill.
2. Gupta K.K and Tyagi V.C., 1992. Working with Maps, Survey of India, DST, New Delhi.
3. New Delhi.
4. Mishra R.P. and Ramesh A., 1989. Fundamentals of Cartography, Concept Publishing.
5. Monkhouse, F.J. and Wilkinson, H.R., 1971. Maps and Diagrams. Methuen and Co. Ltd., London. K.
6. Singh, R.L., 2005. Elements of Practical Geography. Kalyani Publishers, New Delhi. India.
7. Ramamurthy, K., 1982. Map Interpretation, Rex Printers, Madras.
8. Robinson A. ,1953. Elements of Cartography, John Wiley.
9. Sharma J. P., 2010. Prayogic Bhugol, Rastogi Publishers.
10. Singh R.L. and Singh R.P.B., 1999. Elements of Practical Geography, Kalyani Publishers.
11. Singh R.L., 1998. Prayogic Bhugol Rooprekha, Kalyani Publication.
12. Singh, G., 2005. Map work and practical geography. Vikas Publishing House Pvt. Ltd., New Delhi
13. Singh, L.R. and Singh, R., 1973. Map work and practical geography, Central Book Allahabad
14. Siddhartha, K., 2006. Geography through maps, Kisalaya Publications Pvt. Ltd, Delhi
15. Singh, R.L., and Dutt, P.K., 1968. Elements of practical geography, Students' Friends, Allahabad

17. Steers, J.A., 1970. An Introduction to Study of Map Projections. University of London Press Ltd., London

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**Syllabus**  
**B. Sc. -I (Geography)**

Title of the Course: Fundamentals of the Earth								
Year: I				Semester: II				
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
DSC-03	BS-GO121T	02	00	02	30	15	35	50

**Learning Objectives:**

1. To understand the origin of the earth.
2. To make students well aware of the motions of the earth and allied phenomena.
3. To acquaint the knowledge of the size, shape and measurements of the earth.
4. To understand the concept of latitude, longitude and time.
5. To make students well aware of the physical regions of the earth.

**Course Outcomes (COs):**

After completion of this course students will

1. Understand the origin of the earth.
2. Well aware of the motions of the earth and allied phenomena.
3. Acquaint knowledge of the size, shape and measurements of the earth.
4. Understand the concept of latitude, longitude and time.
5. Well aware of the physical regions of the earth.

**Detailed Syllabus:****Unit I: Motions of the Earth****(10)**

- a. Origin of the Earth
- b. Motions of the Earth
  - i. Rotation
  - ii. Revolution
- c. Solstice and Equinoxes
- d. Formation of Seasons
- e. Eclipses: Solar and Lunar

**Unit II: Measurements of the Earth****(10)**

- a. Size and Shape
- b. Radius, Diameter and Circumference
- c. Latitudes and Parallels of Latitude
- d. Longitudes and Meridians of Longitudes
- e. Local time, Standard Time and International Date Line

**Unit III: Physical Regions of the Earth****(10)**

- a. Spheres of the Earth
- b. Continents and Oceans
- c. Major physical regions
  - i. Plains, Plateaus and Mountain ranges
  - ii. Forests and Deserts

**Suggested Readings/Material:**

1. Clyton K., (1986): Earth Crust, Adus Book, London.
2. Davis W. M., (1909): Geographical Essay, Ginnia Co.
3. Dayal P., (1996): Text Book of Geomorphology, Shukla Book Depot, Patna.
4. Kale V.S. and Gupta A., (2001): Elements of Geomorphology, Oxford Univ. Press.
5. Kale V.S. and Gupta A., (2015): Introduction of Geomorphology, University Press, PVT Kolkata.
6. Monkhouse, (1951): Principle of Physical Geography, McGraw Hill Pub – New York.
7. More, Pagar & Thorat (2014): Elements of Climatology & Oceanography, (Marathi), Atharv Publication, Pune
8. Pitty A. F., (1974): Introduction to Geomorphology, Methuen London.
9. S Mukherjee (1996): Understanding Physical Geography Through Diagrams, Orient Blackswan (Pvt) Ltd
10. Singh Savindra, (2000): Physical Geography, Prayag Pustak Bhavan, 20-A, University Road, Allahabad – 211002.
11. Steers J. A., (1964): The Unstable Earth Some Recent Views in Geography, Kalyani Publishers, New Delhi.
12. Swaroop Shanti, (2006): Physical Geography, King Books, Nai Sarak, Delhi –110006.
13. Wooldridge S. W. and Morgan R. S., (1959): The Physical Basis of Geography and Outline of Geomorphology, Longman Green and Co. London.

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**Syllabus**  
**B. Sc. - I (Geography)**

Title of the Course: Techniques of Spatial Analysis								
Year: I				Semester: II				
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
<b>DSC-03</b>	<b>BS-GO 122P</b>	00	02	02	60	15	35	50

**Learning Objectives:**

1. To make students able to represent various relief features by various techniques.
2. To use thematic maps to represent geographical data.
3. To understand functions and use of weather instruments.

**Course Outcomes (Cos)**

After completion of this course students will

1. Understand techniques of relief representation.
2. Able to use thematic maps to represent geographical data.
3. Understand functions and use of weather instruments.

**Detailed Syllabus:****Unit I: Methods of Relief Representation****(20)**

- a. Methods of Relief Representation
  - i. Qualitative: Hachures, Hill shading, Layer Tint.
  - ii. Quantitative: Contours, Form lines, Bench Marks, Spot Heights, Triangulation Mark, Relative Height (r)
- b. Representation of Slope by contours:
  - i. Concave slope, Convex slope, Steep slope, Gentle slope and Terraced slope
  - ii. Conical hill, Spur, Plateau, Ridge, Saddle, Pass, Cliff and Waterfall

**Unit II: Data Representation Methods****(20)**

Need, Advantages, Disadvantages, Use, Importance, Representation and Interpretation of

- a. Symbol method
- b. Dot method



- c. Choropleth method
- d. Isopleth method
- e. Flow diagram

**Unit III: Weather Instruments****(20)**

- a. Functions and Use of-
  - i. Thermometer
  - ii. Rain-gauge
  - iii. Hygrometer
  - iv. Aneroid Barometer
  - v. Wind Vane
- b. Visit to nearby Weather Station

**Suggested Readings/Material:**

1. Dent B.D., 1999. Cartography: Thematic Map Design, (Vol. 1), McGraw Hill.
2. Gupta K.K and Tyagi V.C., 1992. Working with Maps, Survey of India, DST, New Delhi.
3. New Delhi.
4. Mishra R.P. and Ramesh A., 1989. Fundamentals of Cartography, Concept Publishing.
5. Publishing.
6. Monkhouse, F.J. and Wilkinson, H.R., 1971. Maps and Diagrams. Methuen and Co. Ltd., London. K.
7. Singh, R.L., 2005. Elements of Practical Geography. Kalyani Publishers, New Delhi. India.
8. Ramamurthy, K., 1982. Map Interpretation, Rex Printers, Madras.
9. Robinson A. ,1953. Elements of Cartography, John Wiley.
10. Sharma J. P., 2010. Prayogic Bhugol, Rastogi Publishers.
11. Singh R.L. and Singh R.P.B., 1999. Elements of Practical Geography, Kalyani Publishers.
12. Singh R.L., 1998. Prayogic Bhugol Rooprekha, Kalyani Publication.
13. Singh, G., 2005. Map work and practical geography. Vikas Publishing House Pvt. Ltd., New Delhi
14. Singh, L.R. and Singh, R., 1973. Map work and practical geography, Central Book Allahabad
15. Siddhartha, K., 2006. Geography through maps, Kisalaya Publications Pvt. Ltd, Delhi
16. Singh, R.L., and Dutt, P.K., 1968. Elements of practical geography, Students' Friends, Allahabad
17. Steers, J.A., 1970. An Introduction to Study of Map Projections. University of London Press Ltd., London