



Karmaveer Bhaurao Patil University, Satara

(State Public University)

Rayat Shikshan Sanstha's

Chhatrapati Shivaji College, Satara

Department of Geography

M. A. /M.Sc. Part -I, Semester-I (Geography)

Syllabus as per NEP 2020

Implemented From

Academic Year: 2023-2024

Course Structure of M. A. I Geography (Semester- I & II)

Sr. No.	Semester	Name of the Course	Subject code	Credit
1	I	Principles of Climatology -I	MMGEO05101	4
2	I	Practical in Geomorphology & Field Surveying	MMGEO05102	4
3	I	Analysis of Socio-Economic and Climatic Data	MEGEO05103	4
4	I	Fundamentals of Geomorphology	MMGEO05104	2
5	I	Economic Geography (A) or Geography of Population & HRD (B)	MEGEO05101	4
6	I	Research Methodology in Geography	MMGEO05104	4
			Cr	22
SEMESTER II				
7	II	Applied Climatology & Climate Change	MMGEO05205	2
8	II	Computer Application in Geography	MMGEO05206	4
9	II	Statistical Techniques in Geography	MMGEO05207	4
10	II	Applied Geomorphology	MMGEO05208	2
11	II	Geography of India A or Political Geography	MMGEO05202	4
12	II	OJT	OJGEO05201	4
			Cr	22



Rayat Shikshan Sanstha's
Chhatrapati Shivaji College, Satara (Autonomous)
Department of Geography
National Education Policy (NEP-2020)
M. A. Part-I, Semester I (Geography)
GEOGRAPHY- (MAJOR SUBJECT)
GEOGRAPHY COURSE: II PRINCIPLES OF CLIMATOLOGY
Subject Code:- MMGEO05101
(Teaching Hours -60, Credit- 04)
(Syllabus to be implemented from June 2023 onwards)

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Preamble: The climate system is a set of environmental systems including the atmosphere, ocean, and biosphere that are coupled to one another and vary over time and space and climatology is the study of that system. This course covers the basics of composition and structure of atmosphere, energy and moisture in the climate system, atmospheric circulation processes and patterns, and the spatial and temporal variations of climate, including those produced by human action. The course will also trace the development of our understanding of the physical basis of climatology, the development of conceptual and numerical models of climate.

Course Objectives: To enable the student-

1. To understand the meaning, definition, nature, scope, various branches and importance of Climatology
2. To introduce the students concepts in Climatology
3. To distinguish between weather and climate.
4. To describe the origin and composition of atmosphere.
5. To explain comprehensive knowledge about the heat and temperature.
6. To know the concept of air pressure, wind, monsoon and El-Nino
7. To adopt the knowledge of hydrological cycle, humidity and precipitation.
8. To acquaint the students concepts of air mass, cyclone and atmospheric disturbances.

Course Outcomes: After studying the course the student will be able to...

- CO - 1 Distinguish between the weather and climate.
- CO- 2 Understand the composition and structure of atmosphere
- CO - 3 Know the concept of heat, insolation and temperature.
- CO - 4 Explain variations in wind pattern of the earth and pressure belt
- CO - 5 Analyze the relationship between El-Nino and monsoon
- CO - 6 Familiar with the vertical and horizontal distribution of atmospheric air.
- CO - 7 Understand the process and types of precipitation.
- CO - 8 Analyze the atmospheric disturbances in terms of cyclones and anti-cyclones.

Expected Skills impartation (Through theory and Practical's)

1. Understanding Skill
2. Evaluative Skill
3. Interpretation Skill
4. Analytical Skill

M. A. Part-I Semester-I
GEOGRAPHY PAPER: II
Title of the Paper: Principles of Climatology

Sr. No.	Content	Description of Credit	Periods	CoS
1	Unit-1 Introduction to Climatology 1.1 Meaning and definition, Significance of Climatology 1.2 Recent trends in Climatology, Composition and Structure of Atmosphere 1.3 Heat and Temperature, Temperature distribution 1.4 Insolation, Heat budget and latitudinal heat balance	1	15	1,2 & 3
2	Unit-2 Atmospheric Motions 2.1 Air Pressure –Pressure measurement and distribution 2.2 Winds - Factors affecting wind, Pressure belts & planetary winds 2.3 Monsoon-Classical, Local winds and jet stream 2.4 El Nino & Monsoon.	1	15	4,5 & 6
3	Unit- 3 Atmospheric Moisture 3.1 Changes in State of Atmospheric moisture 3.2 Humidity – types and measurements Stability and Instability of atmosphere 3.3 Forms of Condensation 3.4 Precipitation - processes, types and forms	1	15	7
4	Unit-4 Air Masses and Atmospheric Disturbances a. Air Masses - Classification and modifications of Air Masses b. Fronts: characteristics and types, Frontogenesis & Frontolysis, Theory of Frontogenesis c. Atmospheric Disturbances -Tropical Cyclones, Anticyclones d. Tornadoes, Hurricanes, Water spouts	1	15	8

• **Reference Books**

1. Byers R.H. : “General Meteorology “McGraw Hill BKCo New York 1974
2. Critchfield, H.J,2004 : Principles of Climatology; Prentice Hall, London.
3. Das P. K. : The Monsoon, Prayag pustak Bhavan, Allahabad.
4. Hobbs J.E. (1980) : Applied Climatology, Butterworth, London
5. Lal D. S.: Climatology. Prayag pustak Bhavan, Allahabad.
6. Lutgens, F.K & Tarbuck, E.J (5th Ed): The Atmosphere – an introduction to meteorology. Prentice Hall, New Jersey.
7. Mather J. R. (1975) : Climatology : Fundamentals & Applications. Mc Gray Hills, Book Co., New York.
8. Miller A., et, al. 1983; “Elements of Meteorology”, Merrill, Columbus.
9. Navarra, J. G. (1979): Atmosphere, Weather and Climate, W. B. Saunders Company, Philadelphia

10. Oliver J. E. (1973) : Climate & Mans Environment, John Wiley & Sons; New York.
11. Ramashatri: Weather & Weather forecasting, Ministry of Information & Broadcasting.
12. Savindra Sing (2000): Climatology, Prayag Pustak Bhavan, Allahabad.
13. Sellers W.D: “Physical Climatology”University of Chicago Press. 1965
14. Shastri Rama: Weather and Weather Forecasting, Ministry & Information NBT, Delhi.
15. Trewartha G.T: An Introduction to climate “McGraw Hill BK Co. New York, 1968.

Suggested Research Journal

1. Bulletin of the American Meteorological Society <https://journals.ametsoc.org/toc/bams/current>
2. Climate Dynamics <https://link.springer.com/journal/volumesAndIssues/382>
3. International journal of Climatology <https://rmets.onlinelibrary.wiley.com/journal/10970088>
4. Journal of Climate <https://journals.ametsoc.org/toc/clim/current>
5. Nature Climate Change <https://www.nature.com/nclimate/>
6. Weather and Climate Extremes <https://www.sciencedirect.com/journal/weather-and-climate-extremes>

Additional readings:

1. Atmospheric and Climate Sciences.
2. International Journal of Research in Chemistry and Environment.
3. Diversity.
4. Journal of Earth Science & Climatic Change.
5. Climate.
6. Climate of the Past Discussions.
7. IOP Conference Series: Earth and Environmental Science.

Medium of Instruction: English

Special instructions, if any: English

Library and laboratory equipment's:

Reference Books (Departmental Library)



**Rayat Shikshan Sanstha's
Chhatrapati Shivaji College, Satara (Autonomous)
Department of Geography**

National Education Policy (NEP) 2020
M. A. /M.Sc. Part -I, Semester-I (Geography)
GEOGRAPHY- (MAJOR SUBJECT)
Major Course --Practical in Geomorphology & Field Surveying
Subject Code- MMGEO05102 Credit-04
(Syllabus to be implemented from June, 2023-24 onwards)

Preamble: The scientific study of the origin of landforms based on a cause and effect relationship. Geomorphology is closer to geology and is moving away from geography. A landform is an individual topographic feature, of whatever size; thus the term could refer to something as minor as a cliff or a sand dune, as well as to something as major as a peninsula or a mountain range. The plural-landforms- is less restrictive and is generally considered synonymous with topography.

Course Objectives: To enable the student-

1. To introduce the Methods of representation of relief features.
2. To simplify the concept of drainage patterns.
3. To determine the drainage basin Morphometry.
4. To understand the concept of Surveying and field visit.

Course Outcomes: After studying the course the student will be able to ...

1. CO1: Explain the terms and concept in practical geomorphology.
2. CO2: Analyze the aims of quantitative analysis of channel planform.
3. CO3: Calculate the drainage basin Morphometry.
4. CO4: Distinguish drainage basin patterns.

Expected Skills impartation (Through theory and Practical's)

1. Observation skill
2. Interpretation skill
3. Calculating S

M.A. Part-I Semester: I	
Paper Code	MMGEO05102
Geography Major Practical Paper	: I
Title of the Paper	: Practical in Geomorphology & Field Surveying

Sr. No.	Contents	Distributi on of Credit	Period	CoS
1	<p>Unit-1 1.1.Methods of Representation of Relief:i) Pictorial ii) ii).Mathematical. 1.2.Identification & Mapping of landforms from topographical Maps:-i) Ridge ii) Col. iii) River terrace iv) Plateau v) Cliff vi)Waterfall vii) VshapedValley viii) U Shaped Valley</p>	1	30	CO1
2	<p>Unit-2 1.1.Identification & Mapping of drainage patterns: i) Dentritic Drainage Patterns ii) Trellis Drainage Patterns iii) Radial Drainage Patterns. iv) Parallel Drainage pattern 1.2.Quantitative analysis of Channel Planform: Sinuosity Index of Straight, Sinuous and Meandering channels</p>	1	30	CO2
3	<p>Unit-3 Drainage Basin Morphometry: Linear, Aerial and Relief Aspect; Delineating Drainage Basin Perimeters & Measurement of Drainage basin area, Strahler Stream Order system,Calculation of Bifurcation Ratio , Circularity ratio(Rc),Elongation ratio (Re) & Drainage density(Dd),Stream Frequency(Fs) &Drainage texture (T).</p>	1	30	CO3
4	<p>A.Field Surveying: Definitions, uses of surveying C.Classification of surveying. B. Introduction to Electronic Total Station, (ETS) Components Used in Total Station Surveying; Ploting of small area C.Introduction of UAV (Unmanned Aerial Vehicle) technology in surveying D.Field Survey &Field Visit.</p>	1	30	CO 4

Practical work: Case Study / Field Survey / Field Visit / Project

1. Practical Examples

2. Home Assignment

Reference Books:

1. Davis, Peter. (1974) Science in Geography Data Description & presentation, Vol.3, Oxford University Press, London.
2. Hanwell, J.D. & Newson, M.D. (1973) Macmillan Education Ltd, London.
3. Mishra, R.P. (1973) : Elements of Cartography, Prasaranga, University of Mysore.
4. Monkhouse, F.JR & Wilkinson, H.R. Maps & Diagrams, Mathwn & Company, London.
5. Robinson, A.H. & Sale R.D. : Elements of Cartography. Johns House & Sons, London.
6. Sing R. L. (1996) : Map Work & Practical Geography, Central Book Dept. Allahabad.
7. Singh & Kannujin (1973) : Map Work & Practical Geography, Central Book Dept. Allahabad.
8. Singh,S.(1998):Geomorphology,PrayagPustakBhawan,Allahabad.
9. Strahler, A. N. (1964): Quantitative Geomorphology of Drainage Basins and Channel Networks, In:Handbook of Applied Hydrology, Ven Te Chow, Ed., Section 4-II, McGraw Hill Book Company, NewYork.
10. TrewarthaG.T:AnIntroductiontoclimate“McGrawHillBK Co.NewYork, 1968.

Research Journals-**Additional readings:**

1. Elements of Cartography
2. Science in Geography Data Description & Presentation
- 3.

Medium of Instruction: English

Special instructions, if any: English

Library and laboratory equipment`s:

Reference Books (Departmental Library)



Rayat Shikshan Sanstha's

Chhatrapati Shivaji College, Satara (Autonomous)

Department of Geography

National Education Policy (NEP-2020)

M. A. Part-I, Semester I (Geography)

GEOGRAPHY- (MAJOR SUBJECT)

GEOGRAPHY COURSE: Practical Paper-I Analysis of Socio-economic and Climatic Data

Subject Code: - MMGEO05103

(Teaching Hours -120, Credit- 04)

(Syllabus to be implemented from June 2023 onwards)

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Preamble: This course opens with the motive of introducing Analysis of Socio-economic and Climatic Data. To provide with the basic understanding of the relation between climate and socio-economic Geography. To understand the main practical backgrounds of Analysis of Socio-economic and Climatic Data. It focuses on the role of different techniques in economic, agriculture, and population geography To enable the learner to understand the practical issues of the population, agriculture, climatic and economic data analysis.

Course Objectives: To enable the student-

1. To identify various sources of Population data
2. To understand the sources of agricultural data.
3. To represent economic data analysis technique diagrammatically and interpretation of results.
4. To Know methods of measurement of climatic elements and interrelationship between various meteorological elements

Course Outcomes: After studying the course the student will be able to...

CO - 1 Identify various sources of Population data

CO - 2 Understand the sources of agricultural data.

CO - 3 Represent economic data analysis technique diagrammatically and interpretation of results.

CO - 4 Know methods of measurement of climatic elements and interrelationship between various meteorological elements

Expected Skills impartation (Through theory and Practical's)

1. Understanding skill
2. Evaluative skill
3. Interpretation Skill
4. Analytical Skill

M. A. Part-I Semester-I
GEOGRAPHY PAPER: Practical Paper –I
Title of the Paper: Analysis of Socio-economic and Climatic Data

Sr. No.	Content	Description of Credit	Periods	CoS
1	Unit- I Population Data Analysis 1. Fertility measures: Crude Birth Rate, 2. Mortality measures: Crude Death Rate, 3. Literacy measures: Gross Enrolment Ratio 4. Measures of population Growth: rates, ratios- arithmetic 5. Human Development Inde	1	30	1
2	Unit II - Agricultural Data analysis 1.Crop Concentration –Jasbi Singh’s Method 2. Crop Diversification – Gibb’s Method 3. Crop Combination - Weavers Method 4. Agricultural Productivity- Bhatia’s /Kendall’s Method	1	30	2
3	Unit III - Economic Data analysis 1. Nearest Neighbor Analysis of market centers 2. Trade area delimitation: Law of Retail Gravitation by Breaking Point method 3. Flow line charts & maps of transport flows. 4. Triangular graph- tri-linear relationship among three variables.	1	30	3
4	Unit IV -Climatic Data Analysis 1. Representation of Weather Data 2. Analysis of upper air data-Tephigram (Temperature Height diagram). 3. Comfort diagrams- Climograph. 4. Dispersion graphs: Temperature and rainfall dispersion Diagram	1	30	4

Reference Books

1. Lawrence, G.R.P. (1973): Cartographic methods, Methuen & Co. London.
2. Mishra, R.P. (1982): Fundamentals of cartography, Prasaranga, University of Mysore.
3. Monkhouse, F.J.R& Wilkinson, H.R: Maps & diagrams, Methuen & company, London.
4. Raisz, Erwin: Principles of cartography, McGraw – hill Book Co., New York.
5. Robinson A.H. & Sale R.D. Element of Cartography, John House & Sons Ltd., London.
6. Singh R. L.: Elements of Practical Geography.
7. Bhende A., Kanitkar T. (2006): Principles of Population Studies, Himalaya Publishing House, Bombay. 18th revised
8. Bogue, Donald (1969): Principles of Demography, John Wiley & Sons Inc, New York
9. Newell C. (1990): Methods and Models in Demography. The Guilford Press; 1st edition
10. Bruce Newbold, K. (2010): Population Geography: Tools and Issues. Rowman& Littlefield Publishers, Inc., UK.
11. Preston S., Heuveline P., Guillot M. (2000): Demography: Measuring and Modeling Population Processes. Wiley-Blackwell; 1st edition.
12. Rowland DT. (2003): Demographic Methods and Concepts. Oxford University Press, USA
13. Swanson DA., Siegel JS. (2004): Methods and Materials of Demography. Emerald Group Publishing; 2nd edition.
14. Toyne, Peter; Newby P.T (1971): Techniques in Human Geography, Nelson Thornes Ltd
15. United Nation Development Program (UNDP) (1990): Human Development Reports (1990-2012)

Medium of Instruction: English

Special instructions, if any: English

Library and laboratory equipment's:

Reference Books (Departmental Library)



**Rayat Shikshan Sanstha's
Chhatrapati Shivaji College, Satara (Autonomous)
Department of Geography**

**National Education Policy (NEP) 2020
M. A. /M.Sc. Part -I, Semester-I (Geography)**

GEOGRAPHY- (MAJOR SUBJECT)

GEOGRAPHY COURSE: I FUNDAMENTALS OF GEOMORPHOLOGY

Subject Code- MMGEO05104

(Teaching Hours -30, Credit- 02)

(Syllabus to be implemented from June, 2023 onwards)

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Preamble: Geomorphology is the important branch of Physical Geography. Geomorphology is the study of landforms. A fundamental of Geomorphology begins with a consideration of the nature of geomorphology, process and form, history, and geomorphic systems. The Subject matter of Geomorphology incorporates structure, process, systematic analysis and evolution of landforms. Fundamentals of Geomorphology provide a stimulating and innovative perspective on the key topics and debates within the field of geomorphology. The topic traditionally has been studied both qualitatively, which is the description of landforms, and quantitatively, which is process-based and describes forces acting on Earth's surface to produce landforms and landform change.

Course objectives: To enable the student-

1. To understand the definition, nature, scope and various branches of Geomorphology.
2. To describe the development of geomorphic thought.
3. To evaluate the various geomorphic processes and resultant landforms.

Course Outcomes: After studying the course the student will able to ...

- CO1: Explain definition, nature, scope and various branches of Geomorphology.
CO2: Summarize the development of geomorphic thought.
CO3: Compile the geomorphic process and landforms associated with it.

Expected Skills impartation (Through theory and Practical's)

5. Evaluative skill
6. Interpretation skill
7. Critical thinking skill
8. Analytical skill

M.A. / M.Sc. Part-I

GEOGRAPHY PAPER: I, SEMESTER-I

TITLE OF THE PAPER: FUNDAMENTALS OF GEOMORPHOLOGY

Sr. No.	Content	Description of Credit	Periods	CoS
1	Unit:1: Introduction to Geomorphology 1.1 Meaning, nature and scope of Geomorphology 1.2 Branches of Geomorphology 1.3 Fundamental concepts in Geomorphology 1.4 Development of geomorphic thought	1	15	1 & 2
2	Unit:2: Denudational Processes & Landforms 1.1 Fluvial 1.2 Glacial 1.3 Coastal 1.4 Aeolian	1	15	5 & 6

Practical work: Case Study / Field Survey / Field Visit / Project

1. Field Visit: 1. Geomorphic features e.g. Fluvial Landforms
2. Visit to Nighoj – to see the pot holes in Kukadi river.
2. Home Assignment

Reference Books

1. Allaby, Michael (2008): Oxford Dictionary of Earth Science, Oxford University Press, New York.
2. Bloom, A. L. (1991): Geomorphology, 2nd Ed Englewood Cliffs, M.J. Prentice Hall.
3. Chorley, R. J. Schumm, S.A. & Sugden, D.E. (1985): Geomorphology, Methuen & Co. Ltd; London, New York
4. Brierley, G. J. & Fryirs, K. A. (2005): Geomorphology and River Management, Blackwell Publishing, Oxford UK.
5. Briggs, K. (1985): Physical Geography Process and System, Hodder and Stoughton, London.
6. Christopherson, R.W. (1995) Elemental Geosystem: A Foundation of in Physical Geography, Prentice Hall Englewood Cliffs, New Jersey.
7. Cook, R. U. & Doornkamp, J.C. (1974): Geomorphology in Environmental Management, an Introduction, Clarendon Press. Oxford.
8. Dayal, P. (1996): A text of Geomorphology, Shukla Book Depot, Patana.
9. Fairbridge, R.W., ed. (1968): Encyclopedia of Geomorphology Reinhold, New York.

10. Hart, M. G. (1986): Geomorphology Pure and Applied, George Allen and Unwin, London.
11. Leopold, L. B. Wolman, M.G. & Miller, J.P. (1964): Fluvial Processes in Geomorphology, W.H. Freeman, San Fransisco.
12. Lobeck, A. K. (1939): Geomorphology, McGrew Hill, New York.
13. Moor, W. G. (1949): A Dictionary of Geography, Penguin Book, England.
14. Morgan, R. S. & Wooldridge S.W. (1959): Outline of Geomorphology the Physical Basis of Geography, Longmans Green, London.
15. Robinson, Harry (1969): Morphology and Landscape, University Tutorial press Ltd. London.
16. Singh, Savindra (1998): Geomorphology, Prayag Pustak Bhavan, Allahabad.
17. Singh, Savindra (1991): Environmental Geography, Prayag Pustak Bhavan, Allahabad.
18. Spark, B.W. (1986): Geomorphology, Longman London.
19. Strahler, A. N. (1969): Physical Geography, John Wiley & Sons Inc., New York.
20. Thomas, M. F. (1974): Tropical Geomorphology, Macmillan, London.
21. Thornbury, W. D. (1969): Principles of Geomorphology, Wiely Eastern Ltd. New Delhi.
22. Wadia, D. N. (1993): Geology of India, Tata McGraw Hill Edition, New Delhi.
23. Worcester P. G. (1968): Text book of Geomorphology, Princeton, D.Van, Nortran

Suggested Research Journal

1. Lithosphere
2. The Cryosphere
3. Antipode, Soil and Tillage Research
4. Geography Compass
5. Solid Earth
6. Earth Surface Dynamics
7. Geomorphology
8. Progress in Physical Geography
9. Journal of Geology

Additional Reading:

1. Down to Earth Magazine
2. Daily news related to this paper

Medium of Instruction: English

Library and Laboratory equipments:

Reference Books (Departmental Library)



Rayat Shikshan Sanstha's
Chhatrapati Shivaji College, Satara (Autonomous)
Department of Geography
National Education Policy (NEP-2020)
M. A. Part-I, Semester I (Geography)
GEOGRAPHY- (MAJOR SUBJECT)
GEOGRAPHY COURSE: III (A) ECONOMIC GEOGRAPHY
Subject Code:- MEGEO05101
(Teaching Hours -60, Credit- 04)
(Syllabus to be implemented from June 2023 onwards)

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Preamble:

Economic geography is the subfield of human geography which studies economic activity and factors affecting them. It can also be considered a subfield or method in economics. There are four branches of economic geography. There is, primary sector, Secondary sector, Tertiary sector, & Quaternary sector. Economic Geography is the study of how people earn their living, how livelihood systems vary by area and how economic activities are spatially interrelated and linked. However, from the early 1970s a new generation of economic geographers began to question quantitative economic geography. As part of the radical geography movement inspired by the worldwide political protests of 1968, these geographers offered four criticisms of the research pursued by an older generation. First, it was accused of a naive objectivism, or belief that the 'facts' could provide a value-free, unbiased test of a theory. Second, it was criticized for its theoretical assumptions, notably the assumption that economic actors are governed by a universal form of reason. Third, it was accused of focusing on phenomenal forms not underlying economic processes. Fourth, it was criticized for treating the world's economic geography as if it should (or would) display a spatial order, such that place and regional differences were mere 'noise' to be filtered out in the search for general patterns.

Course Objectives: To enable the student-

1. To understand the various concept in economic geography
2. To understand theories of Industrial location.
3. To able to classify resources.
4. To know importance of resources in development.
5. To familiar with methods of resource conservation.
6. To understand concept of trade, trade policy and various trade organization in world.

Course Outcomes: After studying the course the student will be able to...

CO - 1 Understand the various concept in economic geography

CO - 2 Understand theories of Industrial location.

CO - 3 Able to classify resources.

CO - 4 Know importance's of resources in development.

CO - 5 Familiar with methods of resource conservation.

CO - 6 Understand concepts of trade, trade policy and various trade organizations in world.

Expected Skills impartation (Through theory and Practical's)

1. Understanding skill
2. Evaluative skill
3. Interpretation skill
4. Analytical Skill

**M. A. Part-I Semester-I
GEOGRAPHY PAPER: III (A)
Title of the Paper: Economic Geography**

Sr. No.	Content	Description of Credit	Periods	CoS
1	Unit-1: Economic Geography: 1.1 Nature and scope economic geography 1.2 Approaches to the study of economic geography 1.3 Basis of economic processes: Production, exchange & consumption 1.4 Classification of economic activities. Special Economic Zones	1	15	1
2	Unit-2: Industrial Geography: 2.1 Nature, scope and content of Industrial Geography 2.2 Principles of Industrial Location: – Profit maximization, least cost location 2.3 Factors of Industrial Location, Industrial regionalization; A. Weber theory, Substitution, Interdependence 2.4 New industrial policies in India, FDI and Decentralization.	1	15	2 & 3
3	Unit-3: Resources: 3.1 Concept of resources, Classification of resources 3.2 Renewable & Non-renewable energy resources 3.3 Sources of Energy: Coal, Oil, Natural gas and Nuclear energy 3.4 OPEC-energy crisis. Carbon Credit, Energy Conservation.	1	15	4 & 5

4	Unit-4: Transportation & Trade: 4.1 Modes of transportation, Accessibility and connectivity 4.2 national and foreign trade, Trade Policy 4.3 International Trade and Characteristics, patterns of world trade 4.4 Trade Organization EEC, EFTA, WTO, GATT.	1	15	6
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Reference Books

1. Alexander J.W. (1976): Economic Geography, Prentice Hall of India. New Delhi.
2. Alexanderson G. (1988): Geography of manufacturing, Prentice Hall of India. New Delhi.
3. Berry, Conkling & Ray (1988): Economic Geography Prentice Hall of India, New Jersey.
4. Hurst Elliott (1986): Geography of Economic Behaviour, Unwin, London.
5. Johnson R.J. & Taylor D.J. (1989): A world in crisis, Basil-Blackwell, Oxford.
6. Losch (1954): Economics of Location, Yale University Press New York.
7. Redcliff, M. (1987): Development & the environmental crisis. Methuen. London.
8. Sinha B.N.(1971): Industrial geography of India
9. Watts H.D. (1987): Industrial Geography, Longman scientific and Technical, New York.
10. Haggett, Peter: Modern Synthesis in Geography.
11. Robinson H & Bamford C. G. (1978): Geography of Transport, Macdonald & Evans USA.
12. Misra R. P.: Regional Planning, concepts, New Delhi.
13. Jones & Darkenwald : Economic geography

Suggested Research Journal

1. Journal of Economic Geography
2. Economic Geography Journal
3. Journal of Transport Geography

Medium of Instruction: English

Special instructions, if any: English

Library and laboratory equipment's:

Reference Books (Departmental Library)



Rayat Shikshan Sanstha's
Chhatrapati Shivaji College, Satara (Autonomous)

Department of Geography

National Education Policy (NEP) 2020

M. A. Part-I, Semester I (Geography)

GEOGRAPHY- (MAJOR SUBJECT)

**GEOGRAPHY COURSE III (B): GEOGRAPHY OF POPULATION AND HUMAN RESOURCE
DEVELOPMENT**

Subject Code:- MEGEO05101

(Teaching Hours -60, Credit- 04)

(Syllabus to be implemented from June 2023 onwards)

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Preamble: Population geography is a branch of human geography that is focused on the scientific study of people, their spatial distributions and density. To study these factors, population geographers examine the increase and decrease in population, peoples' movements over time, general settlement patterns and other subjects such as occupation and how people form the geographic character of a place. Population geography is closely related to demography (the study of population statistics and trends). Overall population growth and change is another area of importance for population geographers. This is because the world's population has grown dramatically over the last two centuries.

Course Objectives:

1. To understand the meaning, definition, nature, scope, various branches and importance of Population geography.
2. To introduce the students population distribution and density.
3. To Compute and explore fertility, mortality and human development levels for micro, meso and macro regions.
4. To the population-resource regions and discover problems arising due to over and under population.
5. To Understand and create awareness about provincial aspects of gender equity, social well-being and quality of life.

Course Outcomes:

- CO - 1 Infer factors influencing population distribution and density;
- CO - 2 Acquire skill to describe regional patterns of population composition;
- CO - 3. Compute and explore fertility, mortality and human development levels for micro, meso and macro regions.
- CO - 4. Analyse the population-resource regions and discover problems arising due to over and under population.
- CO - 5. Understand and create awareness about provincial aspects of gender equity, social well-being and quality of life.

Expected Skills impartation (Through theory and Practical's)

1. Understanding skill
2. Data Collection
3. Interpretation skill
4. Comparative Study Skill
5. Population Analysis Skill

M. A. Part-I**GEOGRAPHY PAPER: III (B), SEMESTER-I****Title of the Paper: Geography of Population and Human Resource Development**

Sr. No.	Content	Description of Credit	Periods	CoS
1	Unit-1: Introduction to Population Geography 1.1 Nature, scope and significance of Population Geography Demography and Population Geography Types and sources of population data : Census, UID, NPR Factors influencing population distribution and density, Population distribution patterns and Density – World	1	15	1,2 & 3
2	Unit-2: Population Characteristics Population composition and structure - Age Composition, Sex ratio, Fertility, Mortality, Literacy, Economic Composition and work force with special reference of India Migration-types, trend, Determinants, Consequences Collection of primary data of Population characteristics at village level (Field work)	1	15	4,5 & 6
3	Unit-3: Population Development and Policies Population as resources : over population, optimum population and Under population, Population resource region Human development : Meaning, Indicators, Approaches Human Development Index : Measurements, World Scenario with comparison of India,	1	15	7

	State level HDI Population Policies of India			
4	Unit-4: Population Theories Theories of population growth: Malthus, The theory of Optimum population, Demographic Transition Model, Application of Demographic Transition Model Migration theories: Ravenstein, Everette Lee and Zelinsky	1	15	8

Practical work:

Online Data Collection of Population at micro scale

Reference Books

1. Barrett H.R. (1992): Population Geography, Oliver and Boyd Longman House, Harlow.
2. Bhende A., Kanitkar T. (2006): Principles of Population Studies, Himalaya Publishing House, Bombay. 18th revised.
3. Birdsall N., Kelley A.C., Sinding S. (2003): Population Matters: Demographic Change, Economic
4. Growth and Poverty in Developing Countries. Oxford University Press.
5. Bruce Newbold, K. (2010): Population Geography: Tools and Issues. Rowman & Littlefield Publishers, Inc., UK.
6. Clark, J. I. (1972): Population Geography. Pergamon Press, Oxford.
7. Crispin J., Jegede J. (2000): Population, Resource and Development. Harpercollins Education; 2nd
8. edition.
9. Chandana, R.C. (1984): Geography of Population, Kalyani Publisher, Ludhiana.
10. Dyson T. (2010): Population and Development: Demographic Transition. Zed Books Ltd.; 1st edition.
11. Ehrlich, P.R. and Ehrlich, A.H. (1996): Ecoscience: Population, Resources, Environment. 6th edition, W.H. Freeman and Company, San Francisco.
12. Gould WTS. (2009): Population and Development: Routledge Perspective on Development. Routledge: 1st edition.
13. Garnier, J.B. (1976): Geography of Population, Longman Group Ltd., London.
14. George, J. Demlo et.al. (1970): Population Geography: A Reader, McGraw Hill Book Co. New York.
15. Hausier, Philip M & Duncan (Eds.) (1959): The Study of Population, University Press, Chicago.
16. Davis K. (1951): Population of India and Pakistan, Princeton University Press, Princeton.
17. Meadow, D.H., Meadows D.L., Randers J., and Behrens W.W. III. (1973): The Limits to Growth. I Report of the Club of Rome. The New American Library, New York.
18. Meadows, D.H., Meadows, D.L. and Randers, J. (1992): Beyond the Limits. Confronting Global Collapse, Envisioning a Sustainable Future. (A sequel to The Limits to Growth). Chelsea Green Publishers, Post Mills VT, USA.
19. Newell C. (1990): Methods and Models in Demography. The Guilford Press; 1st edition.

20. Pacione M. (2011): Population Geography: Progress and Prospects. Routledge; Reissue edition.
21. Peters G.L., Larkin R.P. (2008): Population Geography: Problems, Concepts and Prospects. 9th edition. Dubuque, IA: Kendall Hunt Publishing.

Suggested Research Journal

1. Population, Space and Place
2. Cartography and Geographic Information Science
3. Goa Geographer
4. Maharashtra Bhugolshastra Sanshodhan Patrika

Additional readings:

1. Preston S., Heuveline P., Guillot M. (2000): Demography: Measuring and Modeling Population Processes. Wiley-Blackwell; 1st edition.
2. Rowland DT. (2003): Demographic Methods and Concepts. Oxford University Press, USA.
3. Swanson DA., Siegel JS. (2004): Methods and Materials of Demography. Emerald Group Publishing; 2nd edition.
4. Smith, T.L (1960): Fundamental of Population Studies. Lipineott, London.
5. Srinivasan, K, and Vlassoff, M. (2001): Population Development Nexus in India: Challenges for the New Millennium. Tata McGraw Hill, New Delhi.
6. Trewartha, G.T. (1959): A Geography of Population-World Patterns. John Wiley & Sons Inc. New York.
7. Todaro MP, Smith S. (2011): Economic Development. 11th edition Printice Hall.
8. United Nation Development Program (UNDP) (2012): Human Development Reports (1990-2012) <http://hdr.undp.org/en/>.
9. Weeks JR. (2004): Population: An Introduction to Concepts and Issues. Wadsworth Publishing; 9th edition.
10. Woods, R. (1979): Population Analysis in Geography. Longman, London.
11. Zelinsky, M. et. al. (1970) : Geography and Crowding World, Oxford University Press New York.
12. Zelinsky, W (1966): A Prologue of Population Geography, Prentice Hall Inc, M.J.

Medium of Instruction: English

Special instructions, if any: English

Library and laboratory equipment's:

Reference Books (Departmental Library)



Rayat Shikshan Sanstha's
Chhatrapati Shivaji College, Satara (Autonomous)

Department of Geography

National Education Policy (NEP) 2020

M. A. Part-I, Semester I (Geography)

GEOGRAPHY- (MAJOR SUBJECT)

RESEARCH METHODOLOGY (RM): RESEARCH METHODOLOGY IN GEOGRAPHY

Subject Code:- RMGEO05101

(Teaching Hours -60, Credit- 04)

(Syllabus to be implemented from June 2023 onwards)

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Preamble: A wide variety of research is being completed and published in geography education. The purpose of this paper is to provide a general overview of the different types of methodologies, research designs, and techniques used by geography researchers. Learning about research should be a rewarding experience that allows students to pursue their own interests, learn more about a chosen topic and, above all, examine a subject from different perspectives. The best reason for researching a topic in depth is that one finds it stimulating and important. Many prominent geographers have been attracted to the field precisely because of its wide remit, and some topics, that are now considered mainstream were, as recently as a generation ago, not considered to be part of the discipline. Therefore, we encourage students to let their imagination run free as they select objects of analysis and ways to study them.

Course Objectives: To enable the student-

1. To understand the conceptual background of research methodology in geography.
2. To inculcate the skill of various research methods in view of research design, collection and analysis of data.
3. To develop the research writing ability among students by considering the research ethics.

Course Outcomes: After studying the course the student will be able to...

- CO-1. Explain the basic concept of research
- CO-2. Categorize of hypothesis and sampling techniques
- CO-3. Distinguish between various data sources
- CO-4. Formulate clearly and briefly applied research problems
- CO-5. Conduct applied research by systematically processing
- CO-6. Write the research report in various formats

Expected Skills impartation (Through theory and practical`s)

1. Data collection skill
2. Data analysis skill
3. Research Writing skill
4. Interpersonal communication

5. Comprehension skills
6. Thinking ability

M. A. Part-I
GEOGRAPHY PAPER: (RM), SEMESTER-I
RESEARCH METHODOLOGY (RM): RESEARCH METHODOLOGY IN GEOGRAPHY

Sr. No.	Content	Description of Credit	Periods	CoS
1	Module -I: Introduction to Research Methodology 1.1 Definition and Meaning of research; 1.2 Types and Methods of research: Empirical, Diagnostic, Active research 1.3 Research Design: meaning, characteristics 1.4 Stages of Research Design	1	15	1,2 & 3
2	Module -II: Research Hypothesis and Sampling 2.1. Meaning and relevance of Hypothesis 2.2 Types of hypothesis 2.3. Sampling: Meaning and importance 2.4 Types of sampling	1	15	4,5 & 6
3	Module –III: Nature and Analysis of Geographical Data 3.1 Nature and type of Geographical data 3.2. Significance of spatial and temporal data in geographical studies 3.3 Conventional methods and sources of geographical data collection 3.4 Modern methods and sources of geographical data collection	1	15	7
4	Module -IV: Scientific Report Writing 4.1. Introduction, aim and objectives, data and methodology, study area/region, research scheme /			8

outline	1	15	
4.2. Data analysis, result, conclusion			
4.3. APA Referencing system			
4.4. Plagiarism, concept of impact factor, citation.			

REFERENCES:

1. Burrough P.A. and McDonnell R.A. (2000): Principle of Geographical Information System, Oxford
2. Burt, J.E. and Barber, G.M.(1996): Elementary statistics for Geographers, The Guilford press, New York.
3. Clark, W.A.V. and Hosking, P.C(1986): Statistical Methods for Geographers, John Wiley & Sons, New York.
4. Geoge Joseph (2003): Fundamental of Remote Sensing, Universities Press, Hyderabad.
5. Gregory, S.(1963) : Statistical Methods and Geographer Longman Group Ltd; London
6. Hammerton, M.(1975) Statistics for Human Sciences, Longman Group Ltd, Barlow.
7. Jones, Christopher (1997): Geographical Information System and computer Cartography, Addison Wesley Longman Limited, England
8. Kanetkar T. P. &Kulkarni S.V. (1986):. Surveying & leveling, VidyarthiGrihaPrakshan, Pune.
9. Karlekar,Shrikant and Kale Mohan (2005): Statistical analysis of Geographical data, Dimond publication
10. Keates, J.S.(1973) : Cartographic design and production 2ndEdn;. Longman group Limited, London.
11. Keates, J.S.(1996) : Understanding Maps, 2ndEdn; Longman group limited, London.
12. King, (1975): Statistical Geography
13. Kothari C.R. (2004): Research Methodology: Methods and Techniques, new age international (p) limited, publishers, 4835/24, Ansari Road, Daryaganj, New Delhi - 110002
14. Maling .H. (1973) : Co-ordinates systems and map projections, George Philip, London.
15. Misra R.P. (1991): Research Methodology in Geography, concept pub. New Delhi.
16. Norcliff, G.B.(1982) Inferential Statistics for Geographers Hutchinson, London.
17. Norcliffe G. B. (1977): Inferential statistics for Geographers (Hutchinson, London)
18. Prasad, H.(1992): Research Methods and Techniques in Geography,Rawat Publications,Satyam Apartments, Sector 3, Jawahar Nagar, Jaipur 302 004
19. Richardus P., Adler Ron K (1972) : Map projections, North Holland publ. Co. Amsterdam
20. Robinson, A.H.et al.(1985): Elements of Cartography, Vol.VI, John Wiley and Sons, New York.
21. Rogerson P. A. (2001): Statistics for Geography (SAGE pub., London, New Delhi.

Suggested Research Journal

1. Deccan Geographer
2. Cartography and Geographic Information Science
3. Goa Geographer

4. Maharashtra Bhugolshastra Sanshodhan Patrika

Additional readings:

1. Shaw G and Wheller D. (1985): Statistical techniques in geographical analysis. John Wiley and sons,
2. Singh & Kanauja : Map work and Practical Geography.
3. Sumner G J (1978): Mathematics for physical geographers. Edward Arnolds
4. Taylor, P.J.(1977): Quantitative Methods in Geography. HoughtonMifflin Company, Boston University Press.
5. V. Natarajan P., Adler Ron K.: Advanced Surveying, B. 1 Publ. Bombay
6. Watson, G. and McGraw, D.(1980): Statistical Inquiry, John Wiley and sons, New York.
7. Wilsons, A.G. & Bennet, R.J.(1985): Mathematical Methods In Human Geography And Planning, John Wiley & Sons, New York
8. Yeates, M. (1974). An Introduction to Quantitative Analysis in Human Geography, McGraw Hill, New York.

Medium of Instruction: English

Special instructions, if any: English

Library and laboratory equipment's:

Reference Books (Departmental Library)

M. A. I / Sem.-II



Rayat Shikshan Sanstha's
Chhatrapati Shivaji College, Satara (Autonomous)
Department of Geography
National Education Policy (NEP-2020)
M. A. Part-I, Semester II (Geography)
GEOGRAPHY- (MAJOR SUBJECT)
GEOGRAPHY COURSE: Paper-V APPLIED CLIMATOLOGY AND CLIMATE CHANGE
Subject Code:- MMGEO05205
(Teaching Hours -60, Credit- 04)
(Syllabus to be implemented from June 2023 onwards)

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Preamble: This course covers the fundamentals of climatic data, impact of climate on human life, climatic classification, world climatic issues like ozone depletion, acid rain, climate change etc. Applied climatology is the study of the effects of climate on natural and social systems. Sources of climatic data are broadly divided into two types, that is, primary and secondary sources. We have studied the effect on climate on natural systems which consists of five spheres. Applied climatology has long been a niche domain, straddling the intersection between the social and natural sciences and populated largely by geographers explicitly interested in reframing human activities around climate.

Course Objectives: To enable the student-

9. To understand the importance of climate
10. To introduce the students sources and types of climatic data
11. To explain the impact of climate on human life, agriculture, soil and human health.
12. To describe the world climatic classification.
13. To analyze the vegetation zone and climate zone of the world
14. To understand the agro-climatic zones of India
15. To explain comprehensive knowledge about air pollution and its impact on society.
16. To know the concept of Green House Gasses (GHG), ozone depletion and acid rain
17. To adopt the knowledge of Climate change.

Course Outcomes: After studying the course the student will be able to...

- CO - 1 Understand the importance of climate.
- CO- 2 Categorize sources and types of climatic data
- CO- 3 Explains the impact of climate on human life, agriculture, soil and human health.
- CO - 4 Identify and categorize climate types and climatic regions of the world;
- CO - 5 Understand and analyze the regional and seasonal variations of weather systems in India;
- CO - 6 Explain about causes and impacts of atmospheric pollution, GHGs emission, ozone layer depletion, acid rain.
- CO- 7 Adopt the knowledge of human responsibilities regarding pollution and GHG
- CO – 8 Know the impacts and dynamics of climate change on earth
- CO - 9 Analyze future risks of climate change and the adaptation and mitigation options

Expected Skills impartation (Through theory and Practical's)

1. Understanding Skill
2. Evaluative Skill
3. Interpretation Skill
4. Analytical Skill

**M. A. Part-I Semester-II
GEOGRAPHY PAPER: V**

Title of the Paper: Applied Climatology and Climate Change

Sr. No.	Content	Description of Credit	Periods	CoS
1	Unit-1 Climatic Data and Impact of Climate 1.1 Sources and types of climatic data 1.2 Impact of climate on human life 1.3 Impact of climate on soils & agricultural activities 1.4 Impact of climate on health.	1	15	1,2 & 3
2	Unit -2 Climatic Classification 2.1 Approaches to climatic classification and climatic regions, 2.2 Climatic classification of Koppen, and Thornthwaite; World pattern of temperature and precipitation 2.3 Characteristics of general weather systems of India – spatial and seasonal variation of temperature, humidity, wind and precipitation 2.4 Agro climatic Zones in India	1	15	4 & 5
3	Unit-3 – Air Quality and Atmospheric Pollution 3.1 Causes, impacts and society's response to change in air quality and atmospheric pollution 3.2 Causes and impacts of greenhouse gas (GHGs) emission 3.3 Global Climatic Issues- ozone layer depletion 3.4 Global Climatic Issues- acid rain	1	15	6 & 7
4	Unit -4 Climate Change 4.1 General overview of the climate change – Theories of Climate Change 4.2 observed changes and its impacts on nature and human Significant climate anomalies - notable events of recent times, extreme	1	15	8 & 9

	weather and climate 4.3 climate changes – risks and impacts with special reference to India 4.4 Adaptation and mitigation options of climate change.			
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Reference Books

1. Aguado, E., and Burt, J.E. (2013): Understanding Weather and Climate, Pearson, New York, 552pp.
2. Ahrens, C.D. (2008): Essentials of Meteorology – An Invitation to the Atmosphere, Thomson Learning, Belmont, 485pp.
3. Ahrens, C.D., and Samson, P. (2011): Extreme Weather and Climate, Brooks/Cole, Belmont, 508pp.
4. Barry, R.G., and Chorley, R.J. (2010): Atmosphere, Weather and Climate, Routledge, London, 516pp.
5. Christopherson, R.W. (2012): Geosystems – An Introduction to Physical Geography, Prentice Hall, Boston, 623pp.
6. Hobbs, J.E. (1980): Applied Climatology, Butterworth, London.
7. IPCC 5th Assessment report on Climate Change: <http://www.ipcc.ch/report/ar5/>
8. Lal, D.S.: Climatology. Prayag pustak Bhavan, Allahabad.
9. Lutgens, F.K., and Tarbuck, E.J. (2013): The Atmosphere – An Introduction to Meteorology. Prentice Hall, Boston, 506pp.
10. Ruddiman, W.F. (2008): Earth's Climate – Past and Future, W. H. Freeman, New York, 388pp.
11. World Development Report 2010 – Development and Climate Change, The World Bank, Washington D.C., 417pp.

Suggested Research Journal

1. Atmospheric Environment (<https://www.sciencedirect.com/journal/atmospheric-environment>)
2. Climatic Change (<https://link.springer.com/journal/volumesAndIssues/10584>)
3. Global Environmental Change (<https://www.sciencedirect.com/journal/global-environmental-change>)

Additional readings:

1. International journal of Climatology (<https://rmets.onlinelibrary.wiley.com/journal/10970088>)
2. Journal of Climate (<https://journals.ametsoc.org/toc/clim/current>)
3. Mausam (<http://metnet.imd.gov.in/imdmausam/>)

4. Weather and Climate Extremes (<https://www.sciencedirect.com/journal/weather-and-climate-extremes>)

Medium of Instruction: English

Special instructions, if any: English

Library and laboratory equipment's:

Reference Books (Departmental Library)



Rayat Shikshan Sanstha's

Chhatrapati Shivaji College, Satara (Autonomous)

(A Constituent College of Karmaveer Bhaurao Patil University, Satara)

Department of Geography

National Education Policy (NEP) 2020

M. A. Part -I, Semester-II (Geography)

GEOGRAPHY PRACTICAL PAPER- I-(MAJOR SUBJECT)

MAJOR COURSE – Paper-III- COMPUTER APPLICATIONS IN GEOGRAPHY

Subject Code- MMGEO05206

Credit-04

(Syllabus to be implemented from June, 2023-24 onwards)

Preamble: The scientific study of the origin of landforms based on a cause and effect relationship. Geomorphology is closer to geology and is moving away from geography. A landform is an individual topographic feature, of whatever size; thus the term could refer to something as minor as a cliff or a sand dune, as well as to something as major as a peninsula or a mountain range. The plural-landforms-is less restrictive and is generally considered synonymous with topography.

Course Objectives: To enable the student-

1. *To introduce the fundamentals of computers.*
2. *To understand the geographical data and its type and structure.*
3. *To acquire the skill of using microsoft programmes*
4. *To apply the skill of MS-Excell for statistical analysis.*
5. *To introduce the SPSS for advanced social statistical studies.*

Course Outcomes: After studying the course the student will be able to ...

5. CO1: Explain the geographic data using various computational methods
6. CO2: Analyze the Sources and uses of online educational resources and e-learning methods
7. CO3: Develop writing, editing, and presentation skill for representation of geographical information
8. CO4: Compute statistical parameters with the help of computer
9. CO5 : Prepare and design maps and graphs with the help of computer software
- 10.CO6: Apply computational techniques relevant in the discipline of Geography

Expected Skills impartation (Through theory and Practical's)

1. Understanding skill
2. Evaluative skill
3. Interpretation skill
4. Presentation skill
5. Statistical skill

M.A. Part-I Semester: II	
Geography Major Practical Paper	: III
Course Code	: MMGEO05207
Title of the Paper	: Computer Application in Geography

Sr · No.	Contents	Distrib ution of Credit	Peri od	CoS
1	Unit-1 Introduction to Computer 1.1. Definition, Characteristics, Structure of Computer 1.2. Computer hardware's and software's 1.3. Operating System 1.4. Use of Internet in Geography	1	30	CO1
2	Unit-2 Computer Application 2.1. Computer Application in Geography 2.2. MS word - Writing / formatting of text, graphs, tables, and references 2.3. MS power point - Preparation of power point presentation 2.4. MS excel - bar graph, line graph, multiple line graph, scatter diagram, pie diagram, and trend line.	1	30	CO2
3	Unit-3-Computation of statistical parameters using MS excel 3.1. Measures of central tendency: average, median, mode 3.2. Measures of position: Maximum , Minimum, quartiles, deciles and percentage 3.3. Measures of variation: range, variance, and standard deviation; Co-relation coefficient.	1	30	CO3

	3.4.Introduction of SPSS in Geography			
4	Unit-4 Online educational resources 4.1.E-Learning Platform:MOOC, SWAYAM 4.2..Google Classroom as a learning platforms 4.3.Google Products: Google Forms, Google Scholar, Google Doc, Sheets, Slides, You Tube Channel and Google Jambord 4.4.Geographic Websites	1	30	CO 4

Practical work: Case Study / Field Survey / Field Visit / Project

1. Practical Examples
2. Home Assignment

1. **Reference Books:** Burt, J.E., Barber, G.M., and Rigby, D.L. (2009): Elementary Statistics for Geographers (3rd Ed.), The Guilford Press, 653pp.
2. Dale, N., and Lewis, J. (2002): Computer Science Illuminated, Jones and Bartlett Publishers, Sudbury, MA, USA, 656pp.
3. Maguire, D.J. (1989): Computers in Geography, Longman, London, 272pp.
4. Mather, P.M. (1991): Computer Applications in Geography, Wiley, New York, USA, 270pp.
5. McFedries, P. (2007): Formulas and Functions with Microsoft Office Excel 2007, Que/Pearson, Indianapolis, Indiana, USA, 523pp.
6. McGrew, J.C., and Monroe, C.B. (2009): An Introduction to Statistical Problem Solving in Geography (2nd Ed.), Waveland PrInc, 254pp.
7. Miller, M. (2007): Absolute beginner's guide to computer basics (4th Ed.), Que/Pearson, Indianapolis, Indiana, USA, 430pp.
8. Monmonier, M.S. (1982): Computer Assisted Cartography: Principles and Prospects, Prentice Hall, 214pp.
9. Pal, S.K. (1998): Statistics for Geoscientists: Techniques and Applications, Concept Publishing, New Delhi, India, 610pp.
10. Robinson, A.H., Morrison, J.L., Muehrcke, P.C., Kimerling, A.J., and Guptill, S.C. (1995): Elements of Cartography (6th Ed.), Wiley, New York, 688pp.

Research Journals-

Additional readings:

1. Sarkar, A. (2009): Practical Geography: A Systematic Approach, Orient BlackSwan, Hyderabad, India, 408pp.
2. Ulrich, L.A. (2003): How to Do Everything with Microsoft Office 2003, McGraw-Hill/Osborne, Emeryville, California, USA, 456pp.
3. Unwin, D.J., and Dawson, J.A. (1985): Computer Programming for Geographers, Longman, London, 264pp.
4. Walkenbach, J., Tyson, H., Wempen, F., Prague, C.N., Groh, M.R., Aitken, P.G., Irwin, M.R., Powell, G., and Bucki, L.A. (2007): Office 2007 Bible, Wiley, Indianapolis, Indiana, USA, 1224pp.

Medium of Instruction: English

Special instructions, if any: English

Library and laboratory equipment's: Reference Books (Departmental Library)



Rayat Shikshan Sanstha's

Chhatrapati Shivaji College, Satara (Autonomous)

Department of Geography

National Education Policy (NEP-2020)

M. A. Part-I, Semester II (Geography)

GEOGRAPHY- (MAJOR SUBJECT)

GEOGRAPHY COURSE: Practical Paper-IV Statistical Techniques in Geography

Subject Code:- MMGEO05207

(Teaching Hours -120, Credit- 04)

(Syllabus to be implemented from June 2023 onwards)

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Preamble: Statistical Methods for Geography is a systematic introduction to the essential techniques that all students must understand to complete a module in statistical analysis. It provides an integrated overview of spatial data and spatial data analysis. Statistical geography is the study and practice of collecting, analyzing and presenting data that has a geographic or areal dimension, such as census or demographics data. It uses techniques from [spatial analysis](#), but also encompasses geographical activities such as the defining and naming of geographical regions for statistical purposes. Student knows the Measures of central Tendency: Calculation of mean, median, mode, and quartile. Measures of dispersion: Absolute measurements, Mean deviation, Quartile deviation, and Standard deviation. Relative measurements-Coefficient of mean deviation. This paper focus on Correlation Analysis: Rank order correlation and Product moment correlation, Regression Analysis: linear regression, Time Series Analysis: Moving average, Least square method and drawing of line of best fit. Statistical techniques in geography concerning to Probability - normal, Poisson and binomial, Test of significance: Chi-square test, Student's t-test etc.

Course Objectives: To enable the student-

5. To understand the importance and use of statistical techniques in geography
6. To measure central tendency and dispersion of data.
7. To calculate the Relative measurements-Coefficient
8. To examine relationship between two or more variables with correlation analysis and regression analysis.
9. To apply comprehensive knowledge of Probability.

Course Outcomes: After studying the course the student will be able to...

CO-1 Understand the importance and use of statistical techniques in geography

CO-2 Measure central tendency and dispersion of data.

CO-3 Calculate the Relative measurements-Coefficient

CO-4 Examine relationship between two or more variables with correlation analysis and regression analysis.

CO-5 Apply comprehensive knowledge of Probability.

Expected Skills impartation (Through theory and Practical's)

9. Understanding Skill
10. Evaluative Skill
11. Interpretation Skill
12. Analytical Skill

**M. A. Part-I Semester-II
GEOGRAPHY PAPER: IV**

Title of the Paper: Practical Paper-IV Statistical Techniques in Geography

Sr. No.	Content	Description of Credit	Periods	CoS
1	Unit- I 1.1 .Definitions of statistics 1.2 Importance and use of statistical techniques in geography 1.3 Sources of statistical data in geography 1.4 Graphical representation of frequency distribution using Histogram, Frequency Polygon	1	30	1
2	Unit- II Measures of central Tendency & dispersion 2.1 Mean, median, mode, quartile. 2.2 Mean deviation 2.3 Quartile deviation 2.4 Standard deviation	1	30	2
3	Unit- III 3.1 Relative measurements-Coefficient of mean deviation, coefficient of quartile deviation 3.2 Coefficient of variations 3.3 Index variability and relative variability 3.4 Skewness: Karl Pearson's Method	1	30	3
4	Unit- IV 4.1 Correlation Analysis: Rank order correlation 4.2 Regression Analysis: linear regression, 4.3 Time Series Analysis: Moving average 4.4 Basics of Probability	1	30	4 & 5

Reference Books

1. Cole, J.P. & King, C.A.M. (1968): Quantitative Techniques in Geography. John Wiley & sons Inc. New York.
2. Elhance, D.N. (1972): Fundamentals of statistics, Kitab Mahal, Allahabad.
3. Gregory, S.(1968): Statistical methods and the geographer. Longman, London.
4. Gupta, C.B.(1978); An introduction to statistical Methods, Vikas Pub.House,New Delhi.
5. Hemawati: Statistical Methods for Geographers.
6. Hoel P.G.: Elementary Statistics, Wiley, New York.
7. King, L.J. (1991): statistical Analysis in geography. Prentice Hall, Englewood Cliff N.J.
8. Singh R. L.: Elements of Practical Geography.

Medium of Instruction: English

Special instructions, if any: English

Library and laboratory equipment's:

Reference Books (Departmental Library)



Rayat Shikshan Sanstha's
Chhatrapati Shivaji College, Satara (Autonomous)
Department of Geography
National Education Policy (NEP) 2020
M. A. / M.Sc. Part -I, Semester-II (Geography)
GEOGRAPHY COURSE: IV APPLIED GEOMORPHOLOGY
Subject Code- MMGEO05208
(Teaching Hours: 30 Credit-02)
(Syllabus to be implemented from June, 2023 onwards)

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Preamble: Applied geomorphology is a field of science where the research outcomes provide information geomorphic landforms or processes that may be of concern to society, and, where relevant, provides solutions to problems of geomorphic context. Some of the areas of enquiry where geomorphology has been applied include: natural hazards (landslides, floods, earthquakes, and tsunamis), ecosystem management, site anthropology, land-use planning, engineering geology, expert witness testimony, and hazard reduction, assessment, and perception. The role of applied geomorphology relates mainly to the problems of analyzing and monitoring landscape forming processes that may arise from human interference. Human beings have over time tried to tame and modify geomorphic/environmental processes to suit their economic needs.

Course objectives:

1. To know the application of Geomorphology in various fields.
2. To discuss geomorphic disaster and reduce the intensity of future environmental disasters

Course Outcomes: After studying the course the student will be able to...

CO1: Describe the applications of Geomorphology in various fields.

CO4: Create the awareness about geomorphic disaster, management and planning.

Expected Skills impartation (Through theory and Practical's)

1. Evaluative skill
2. Interpretation skill
3. Analytical skill
4. Critical thinking

M.A. / M.Sc. Part-I
GEOGRAPHY PAPER: IV, SEMESTER-II
TITLE OF THE PAPER: APPLIED GEOMORPHOLOGY

Sr. No.	Content	Description of Credit	Periods	CoS
1	Unit:1: Introduction to Applied Geomorphology 1.1 Meaning of Applied Geomorphology 1.2 Applications of Applied Geomorphology in various field: Urban, Environment, Regional Planning, Engineering Work, Hydrology and Mineral Exploration 1.3 Concept of Geomorphic Threshold.	1	15	1
2	Unit:2: Geomorphic Disaster and its management (Causes, effects and remedies) 2.1 Earthquakes 2.2 Tsunami 2.3 Floods 2.4 Drought 2.5 Landslide	1	15	4

<p>Practical work: Case Study / Field Survey / Field Visit / Project</p> <ol style="list-style-type: none"> 1. To visit disaster / hazard affected area e.g. Flood, Landslide, Drought 2. Home Assignment
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Reference Books

1. Allaby, Michael (2008): Oxford Dictionary of Earth Science, Oxford University Press, New York.
2. Bloom, A.L. (1991): Geomorphology, 2nd Ed Englewood Clifis, M.J. Prentice Hall.
3. Brierley, G.J. & Fryirs, K.A.(2005): Geomorphology and River Management, Blackwell Publishing. Oxford UK.
4. Briggs, K. (1985): Physical Geography Process and System, Hodder and Stoughton, London.
5. Chorley, R.J. Schumm,S.A. &Sugden, D.E. (1985): Geomorphology, Methuen & Co. Ltd., London, New York.
6. Christopherson, R.W. (1995): Elemental Geosystems: A Foundation in Physical Geography, Prentice Hall Englewood Cliffs, New Jersey.
7. Cook, R.U.& Doornkamp, J. C.(1974): Geomorphology in Environmental Management, an Introduction. Clarendon Press. Oxford.

8. Dayal, P. (1996): A Textbook of Geomorphology, Shukla Book Depot, Patna.
9. Fairbridge, R.W., ed. (1968): Encyclopedia of Geomorphology Reinhold, New York.
10. Hart, M.G.(1986): Geomorphology Pure and Applied, George Allen and Unwin, London.
11. Leopold, L.B. Wolman, M.G. & Miller, J.P.(1964): Fluvial Processes in Geomorphology, W.H.Freeman, San Fransiseo.
12. Lobeck, A.K.(1939): Geomorphology, McGraw Hill, New York.
13. Moor, W.G.(1949): A Dictionary of Geography, Penguin Books, England.
14. Morgan, R.S. & Wooldridge S.W (1959): Outline of Geomorphology the Physical basis of Geography, Longmans Green, London.
15. Robinson, Harry (969): Morphology and Landscape, University Tutorial Press Ltd. London.
16. Singh, Savindra (1998): Geomorphology, Prayag Pustak Bhavan , Allahabad.
17. Singh, Savindra (1991): Environmental Geography, Prayag Pustak Bhavan ,Allahabad.
18. Spark, E. W. (1986): Geomorphology, Longman, London.
19. Strahler, A.N (1969): Physical Geography. John Wiley & Sons Inc., NewYork.
20. Thomas, M.F. (1974): Tropical Geomorphology, Macmillan, London.
21. Thornbury, W.D. (1969): Principles of Geomorphology, Wiley Eastern Ltd. New Delhi.
22. Wadia, D. N. (1993): Geology of India, Tata McGraw Hill Edition, New Delhi.
23. Worcester, P. G. (1948): Textbook of Geomorphology, Princeton, *D. Van Nostrand* Company, New York.

Research Journal:

Lithosphere, Cryosphere, Antipode, Soil and Tillage Research, Geography Compass, Solid Earth, Earth Surface Dynamics, Geomorphology.

Additional reading:

Daily new related to this paper

Medium of Instruction: English

Special Instruction, if any: English

Library and laboratory equipments:

Reference Books (Departmental Library)



Rayat Shikshan Sanstha's
Chhatrapati Shivaji College, Satara (Autonomous)
Department of Geography
National Education Policy (NEP-2020)
M. A. Part-I, Semester II (Geography)
GEOGRAPHY- (MAJOR SUBJECT)
GEOGRAPHY COURSE: VI (A) GEOGRAPHY OF INDIA
Subject Code:- MEGEO05202 (A)
(Teaching Hours -60, Credit- 04)
(Syllabus to be implemented from June 2023 onwards)

Preamble:

India Geography boasts a unique terrain and diverse regional climate. The geography of India includes snowy mountains, vast open plains, dry hot deserts and beautiful beaches. India boasts one of the world's most diverse land layouts. The central northernmost border of India and Northeastern India is defined by the majestic Himalayan Mountain Range. Himalaya is a Sanskrit word that means "abode of snow", which is fitting because these tall mountains are snowcapped and reside in a tundra climate. India is a land of unity in diversity and it is not only true about its people, languages, religions, customs and occupations but it holds true about its geographical features also. The Indian peninsula has all the variety of relief features which makes India a remarkable country. The Himalayas in the North act like sentinels and separate us from Tibet and China. The Karakoram Range, Vindhya Range in the Central Indian region and the Satpura Range in the eastern Gujarat, The Aravali Range in Rajasthan and the Western Ghats are known as Sahyadris make these regions different from the Plains which are found in the northern plains and are called Indo-Gangetic Plains.

Course Objectives: To enable the student-

1. To able to understand the physical as well as economic aspects of India.
2. To know importance of agriculture in Indian economy.
3. To able to classify resources.
4. To know importance of resources in development of India.
5. To familiar with importance of non-conventional energy and methods of resource conservation.
6. To able to think critically on various contemporary issues.

Course Outcomes: After studying the course the student will be able to...

- CO - 1 Able to understand the physical as well as economic aspects of India.
- CO - 2 Know importance of agriculture in Indian economy.
- CO - 3 Able to classify resources.
- CO - 4 Know importance's of resources in development of India.
- CO - 5 Familiar with importance of non-conventional energy and methods of resource conservation.
- CO - 6 Able to think critically on various contemporary issues.

Expected Skills impartation (Through theory and Practical's)

1. Understanding skill

2. Evaluative skill
3. Interpretation skill
4. Analytical skill

M. A. Part-I Semester-II
GEOGRAPHY PAPER: VI (A)
Title of the Paper: Geography of India

Sr. No.	Content	Description of Credit	Periods	CoS
1	Unit-1: India-Location and Physiography 1.1 Location: - Absolute Location, Relative location and Strategic Location, Space relationship of India with neighboring countries 1.2 Physiographic divisions of India, 1.3 Natural drainage system 1.4 Natural vegetation, Soil Types and their distribution	1	15	1
2	Unit-2: Agriculture 2.1 Salient features of Indian Agriculture, Importance of Agriculture in Indian economy 2.2 Irrigation, Agro-climatic Regions of India, 2.3 Problems of Indian Agriculture, 2.4 Green and White Revolution.	1	15	2
3	Unit-3: Resources 3.1 Mineral Resource:-Iron Ore, Manganese, Bauxite 3.2 Conventional Power resource: - Coal, Petroleum. 3.3 Non-Conventional Power resource:-Solar, Wind 3.4 Conservation Water Resource, Rain Water Harvesting, River Linking.	1	15	3 & 4
4	Unit-4: Contemporary Issues 4.1 Environmental hazards-floods and droughts, landslides, earthquakes 4.2 Environmental degradation, Changes in patterns of land use 4.3 Population explosion and food security, Epidemic diseases, Population Problems 4.4 Regional disparities, Globalization and India	1	15	5 & 6

Reference Books

1. Majid H., (2013): Geography of India, Tata Mcgraw Hill Education (India) Private
2. Khullar R. D. (2007): India- A Compressive Geography, Kalayani Publisher.
3. Tiwari, R.C. (2007) Geography of India. Prayag Pustak Bhawan, Allahabad.

4. Tirtha, R., (2002): Geography of India, Rawat Publs., Jaipur & New Delhi.
5. Sharma, T.C. (2013): Economic Geography of India. Rawat Publication,
6. Savadi, Kolekar: Bharatacha Samarag Bhugol, Nirali Prakashan, Pune.
7. Khatib K. A.,: Geography of India
8. Pawar C.T. & Others : Geography of India.
9. Chapman, G. and Baker, K.M. (eds.) (1992): The Changing Geography of Asia. Routledge, London.
10. Farmer, B.H. (1983): Introduction to South Asia. Methuen and Company Ltd. and Company Ltd., London.
11. Gole, P. N. (2001): Nature Conservation and Sustainable Development in India. Rawat publications, Jaipur and New Delhi
12. Johnson, B.L.C. (1983): Development in South Asia. Penguin Books, Harmondsworth.
13. Khullar, D. R. (2006): India. A Comprehensive Geography. Kalyani Publishers., New Delhi.
14. Krishnan, M. S. (1968): Geology of India and Burma. 4th edition. Higgin Bothams Private. Ltd., Madras.
15. Nag, P. and Gupta S. S. (1992): Geography of India. Concept Publishing. Company, New Delhi.
16. Sharma, T. C. (2003): India: Economic and Commercial Geography. Vikas Publication., New Delhi.
17. Singh, J. (2003): India: A Comprehensive and Systematic Geography. Gyanodaya Prakashan, Gorakhpur.
18. Singh, R. L. (ed.) (1971): India. A Regional Geography. National Geographical Society of India, Varanasi.
19. Spate, O.H.K., Learmonth, A.T.A. and Farmer, B. H. (1979): India and Pakistan. Methuen and Company Ltd. and Company Ltd., London.
20. Subbarao, B. (1959): The Personality of India. University of Baroda Press, Baroda.
21. Sukhwai, B.L. (1987): India. Economic Resource Base and Contemporary Political Patterns. Sterling Publication, New Delhi.
22. Tiwari, R. C. (2007): Geography of India, Prayag Pustak Bhawan, Allahabad .
23. Wadia, D. N. (1959): Geology of India. MacMillan and Company, London and Madras, Student edition.

Medium of Instruction: English

Special instructions, if any: English

Library and laboratory equipment's:

Reference Books (Departmental Library)



Rayat Shikshan Sanstha's
Chhatrapati Shivaji College, Satara (Autonomous)
Department of Geography
National Education Policy (NEP-2020)
M. A. Part-I, Semester II (Geography)
GEOGRAPHY- (MAJOR SUBJECT)
Paper VI (B): POLITICAL GEOGRAPHY
(Subject Code-MEGEO05202)
(Teaching Hours -60, Credit- 04)
(Syllabus to be implemented from June, 2023 onwards)

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Preamble:

Political geography is a subfield within human geography that provides comprehensive understanding of political and geographical phenomena at local and global level to the students. A strict definition of political geography is difficult due to the diversity of ways in which political geographers approach their sub discipline. This subject enables students to use geographic elements an understanding of geo-strategy, socio-cultural conflicts, electoral behaviours, politics of resources, economic relationships. In this paper, we will focus specifically on how political geographers have tried to make sense of the intimate link between space and power; or, the ways that power relationships are at once spatial relationships, and vice versa.

Course Objectives:

1. To study the Political Geography as a fundamental branch of Geography.
2. To familiarize the students with the basics and fundamental concepts and theories of Political Geography.
3. To aware the students about resources conflicts and politics of displacement.

Course Outcomes:

- CO1: Learn the fundamental concepts of political geography.
CO2: Understand the different dimensions of political geography and geopolitical issues.
CO3: Learning human perception and behavior with reference to geographical and political phenomena.
CO4: Identification of the political problems and spatial issues related to the geographical factors.
CO5: Understand the relevance of geographical knowledge to everyday life.
CO6: Students will be familiar with major approaches to studying and analyzing power and space in political geography.

Expected Skills impartation (Through theory and Practical's)

13. Knowledge of political map of the world.
14. Discussion, presentation, and critical evaluation skills
15. Evaluating geographical problems effectively.
16. Understanding the Geo-political issues of the world.

M. A. Part-I, Semester II (Geography)
Paper VI (B): POLITICAL GEOGRAPHY

Sr. No.	Content	Description of Credit	Periods	CoS
1	Unit 1: Introduction to Political Geography 1.1 Definition, Nature, Scope, Significance and Approaches to Political Geography 1.2 Elements of Political Geography: Physical and Human 1.3 Concept of State, Nation and Nation-State 1.4 Federalism	1	15	1
2	Unit 2: Geostrategic Views 2.1 Frontiers and Boundaries 2.2 Concepts of Eco politics and Geopolitics 2.3 Geopolitics of World Resources 2.4 Geo-politics of India Ocean	1	15	2, 3
3	Unit 3: Electoral Geography 3.1 Concepts of Electoral Geography 3.2 Geographic Influences on Voting Pattern 3.3 Electoral Scenario and Reforms in India 3.4 World electoral scenario – USA, China	1	15	4, 5
4	Unit 4: Contemporary Issues in Political Geography 4.1 The changing patterns of World Powers 4.2 Reorganization on Indian state and demands of new state 4.3 Interstate conflicts in India, Internal and External security Threats 4.4 Changing Foreign Policy of India	1	15	5, 6

Practical work:

1. Prepare map of the reorganization of Indian state (1947 to 2022)
2. Classify Indian border.
3. Prepare a map of dispute area of India and neighboring countries.

Reference Books

1. Adhikari, S. (2007): Political Geography, Rawat Publication, NewDelhi.
2. Adhikari, S. (2013): Political Geography of India –Sharda Pustak Bhawan, Allahabad.
3. Agnew, J., (2002): Making Political Geography, Arnold.
4. Agnew, J., Mitchell K. and Total G., (2003): A Companion to Political Geography, Blackwell.
5. Cohen S.B., (1973): Geography and Politics in a divided world. Oxford, New York.
6. Cox, K. R., Low M. and Robinson J., (2008): The Sage Handbook of Political Geography, Sage Publications.

7. Cox, K., (2002): *Political Geography: Territory, State and Society*, Wiley-Blackwell, 108, Cowely Road, Oxford, UK.
8. Dixit R. D., (1982): *Political Geography*. Tata McGraw Hill New Delhi.
9. Dwivedi R.L., (1996): *Political Geography*. Chaitanya Prakashan Allahabad.
10. Fahrer C., Glassner M. (2001): *Political geography*, Wiley.
11. Gallaher, C., et al, (2009): *Key Concepts in Political Geography*, Sage Publications.
12. Glassner, M., (1993): *Political Geography*, Wiley.
13. Jones, M., (2004): *An Introduction to Political Geography: Space, Place and Routledg* .
14. Moor R., (1981): *Modern Political Geography*. McMillan, London.
15. Painter, J. and Jeffrey, A., (2009): *Political Geography*, Sage Publications.
16. Pounds N.G., (1972): *Political Geography*. McGraw Hill, London.
17. Taylor P. (1998): *Political Geography*, Prentice Hall.
18. Taylor, P. and Flint, C., (2000): *Political Geography*, Pearson Education.
19. Valkenberg S.U. & Stoz C., (1963): *Elements of Political Geography*. Prentice Hall of India, New Delhi.

Suggested Research Journal

1. Down To Earth, Publisher: Centre for Science and Environment.
2. *Political Geography*, peer-reviewed academic journal published by Elsevier.
3. *Trends in political geography*, South African Geographical Journal.
4. *Geopolitics*, Taylor & Francis
5. *Geographical Review*, Wiley

Additional readings:

1. YouTube video related to Political Geography
2. Daily News paper
3. Blogs of Political Geography



Rayat Shikshan Sanstha's
Chhatrapati Shivaji College, Satara (Autonomous)
A Constituent College of
Karmaveer Bhaurao Patil University, Satara
Choice Based Credit System
DEPARTMENT OF GEOGRAPHY
M.A. Part -I Semester -II
FIELD PROJECT :(FP)
(Introduced from June, 2023 onwards)

Course Type: FIELD PROJECT

Course Name: FIELD PROJECT (FP)

Course Number: X

Course Code: FPGEO05201

Course Credits: 4

Examination Pattern: End Semester Examination : 60

Comprehensive Continuous Evaluation : 40

Total Marks: 100

Preamble: Field project integrates theory and practice by providing students with an opportunity to work on real-world challenges. The field project is designed to provide students with practical experience in the field of geography. This course aims to bridge the gap between theoretical knowledge and real-world application by engaging students in field survey. Through this field project, students will gain field based knowledge.

Objectives:

- To apply theoretical knowledge gained in the classroom to real-world scenarios.
- To develop skills in gathering primary data through field surveys, interviews, and direct observations.
- To gain practical experience in using geographical instruments and tools for data collection.
- To apply spatial analysis techniques and to understand the spatial patterns and relationships within a specific geographic area.
- To explore cultural landscapes, traditions, and the interaction between human

societies and their environments.

- To investigate cultural practices, beliefs, and their geographical implications.
- To prepare students for future careers in geography or related fields by exposing them to real-world applications of their knowledge.
- To develop practical skills and experiences that can be valuable in various professions.
- To encourage students to engage with local residents, authorities, and organizations to understand community dynamics.

Course Outcomes: *After studying the course the student will be able to ...*

CO-1: Carry out field project on their own;

CO-2: Formulate project design and methodologies;

CO-3: Organize and carry out field visits, collect field data and/or conduct review of literature

CO-4: Effective writing and dissemination of project output having scientific and/or social relevance.

Expected Skills impartation (Through theory and practical's)

1. Understanding skills
2. Analytical skill
3. Comparison skills
4. Professional Skills

Module	No. of Hours	No. of credits
Field Project (FP)	120	04
Course Description	Periods	Cos
<p>Course Description:</p> <p>Topic: Project topic should be related to finding, reporting and/or disseminating geographical knowledge having scientific and/or social relevance. Field project integrates theory and practice by providing students with an opportunity to work on real-world challenges. Selection procedures, specific tasks, credits, the year in which the field project will</p>	120	CO1-5

be carried out, and whether it is mandatory, are defined by the course study plan.		
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Instructions for teachers and students while doing Field project:-

Duration: The field project must be carried out in the semester defined by each study plan.

1. Two Copies of field project Report in BOUND FORMAT should be submitted before Viva-Voce. One copy will be kept by department and the remaining will be returned to student.
2. Students need to submit report of their work in prescribed format.
3. Internal assessment of field project will be done by the job supervisor and need to be forwarded to the Department/ College/University

Important Notes for Teachers:

1. Field project is applicable only to those students who are unable to find placement for on job training.
2. They have to work under the guidance of a supervisor to carry out the field project.
3. Students are expected to carry out field work and use primary data, analyse it and prepare / submit the project report for evaluation.
4. They are also expected to make a presentation on the project work details.
5. Once a field project has been completed, the departmental faculty will proceed with the evaluation. Students from the same group could receive a different evaluation when duly justified.
6. The field project evaluation must be notified to the relevant department responsible of keeping records of the grades.
7. Credits for the field project will be assigned only when the field project is completed.

FORMAT OF THE FIELD PROJECT/ DISSERTATION

STUDENT FINAL WRITTEN REPORT

Student's Name: -----

Name of the College: -----

Class: -----Semester: -----

Paper Name: -----Seat Number: -----

Year -----

Topic of Field project: -----

Supervisor's Name: -----

Points to be Covered :-

SPECIMAN FORMAT OF FIELD PROJECT (DISSERTATION)

Sr.No	Particulars
1	Title
2	Introduction
3	Objectives
4	Significance of the study
5	Research Methodology
6	Chapter Scheme: (Tentative structure)
	1.Introduction and Research Methodology
	2. Profile of the Study
	3. Data Analysis
	4. Findings, Recommendations and Conclusion
7	Appendices
8	Bibliography

SCHEME OF MARKING FOR OJT EXAMINATION

END SEMESTER EXAMINATION: SEE (60 MARKS)

1. OJT Project/ Dissertation =60 Marks (Marks assessment by HOD/ Concerned teacher)

CONTINUOUS COMPREHENSIVE EVALUATION INTERNAL EVALUATION (40 MARKS)

1. OJT Project/ Dissertation Presentation= 20 Marks (Marks assessment by HOD/ Concerned teacher)
2. Voce Viva=10 Marks (Marks assessment by HOD/ Concerned teacher)
3. Attendance and Feedback=10 Marks (Marks assessment by HOD/ Concerned teacher)

Medium of Instruction – Marathi/English



Rayat Shikshan Sanstha`s

Chhatrapati Shivaji College, Satara (Autonomous)

A Constituent College of

Karmaveer Bhaurao Patil University, Satara

Choice Based Credit System

DEPARTMENT OF GEOGRAPHY

M.A. Part -I Semester -II

ON JOB TRAINING :OJT (Internship)

(Introduced from June, 2023 onwards)

Course Type: On Job Training

Course Name: On Job Training (Internship)

Course Number: X

Course Code: OJGEO05201

Course Credits: 4

Examination Pattern: End Semester Examination : 60

Comprehensive Continuous Evaluation : 40

Total Marks: 100

Preamble On Job Training integrates theory and practice by providing students with an opportunity to work on real-world challenges. The on job training is designed to provide students with practical experience in the field of geography. This course aims to bridge the gap between theoretical knowledge and real-world application by engaging students in field survey. Through this enternship, students will gain practical

knowledge of geographical phenomena.

Objectives:

- To apply theoretical knowledge gained in the classroom to real-world scenarios.
- To develop skills in gathering primary data through field surveys, interviews, and direct observations.
- To gain practical experience in using geographical instruments and tools for data collection.
- To apply spatial analysis techniques and to understand the spatial patterns and relationships within a specific geographic area.
- To explore cultural landscapes, traditions, and the interaction between human societies and their environments.
- To investigate cultural practices, beliefs, and their geographical implications.
- To prepare students for future careers in geography or related fields by exposing them to real-world applications of their knowledge.
- To develop practical skills and experiences that can be valuable in various professions.
- To encourage students to engage with local residents, authorities, and organizations to understand community dynamics.

Course Outcomes: *After studying the course the student will be able to ...*

CO-1: Apply theoretical knowledge and skills in a practical setting.

CO-2: Develop and enhance professional skills necessary for a career in geography.

CO-3: Gain exposure to various geographical settings and specialties.

CO-4: Foster professional networking and collaboration opportunities in surveying or GIS industries.

CO-5: Reflect on professional growth.

CO-6 . Improve their professional skills related to their employability;

CO-7 Do team work and manage on job practical difficulties.

Expected Skills impartation (Through theory and practical`s)		
<ol style="list-style-type: none"> 5. Understanding skills 6. Analytical skill & Surveying skill 7. Comparison skills 8. Professional Skills 		
Module	No. of Hours	No. of credits
ON JOB TRAINING :OJT (Internship) Project	120	04
Course Description	Periods	Cos
<p>Course Description: On Job training should be related to finding, reporting and/or disseminating geographical knowledge having scientific and/or social relevance. Internship (OJT) integrates theory and practice by providing students with an opportunity to work on real-world challenges. Selection procedures, specific tasks, credits, the year in which the internship will be carried out, and whether it is mandatory, are defined by the course study plan.</p>	120	CO1-5
<p>Instructions for teachers and students while doing On-the-Job Training: Joining Report of On Job Training: Students are expected to join for their on job training with prior intimation to the department. They are expected to carry out work under the guidance of job supervisor.</p> <ol style="list-style-type: none"> 4. Selection of Institute/Organization/Consultant/Professional/ Hospital/Health Care Center etc. should be based on the areas in the mandatory or elective courses in the concerned subject. 5. The Institute/Organization/Consultant/Professional/ Hospital/Health Care Center etc., under whom the Training/Internship/ Apprenticeship is expected, should be FORMALLY ASSIGNED (In Written Form) by concerned teacher to every student. 6. Submission of On-the-Job-Training Report duly signed and certified by concerned teacher/guide is A PRE-REQUISITE FOR APPEARING TO VIVA-VOCE EXAMINATION. 7. TWO COPIES of On-the-Job-Training Report in BOUND FORMAT should 		

be submitted before Viva-Voce. One copy will be kept by department and the remaining will be returned to student.

8. Students need to submit report of their work in prescribed format.
9. Internal assessment while on job training will be done by the job supervisor and need to be forwarded to the Department/ College/University

Important Notes for Teachers:

1. Prepare a Draft Letter for getting permission from the appropriate authority within the Institute/Organization or from Consultant/Professional/ Hospital/Health Care Center etc. for the On-the-Job-Training/Internship/Apprenticeship.
2. Prepare an Appropriate Format for Writing the On-the-Job Training Report. Kindly see that the First Page and Certificate Page are common for all students. In the remaining part, try to maintain uniformity.
3. Joining Report of On Job Training: Students are expected to join for their on job training with prior intimation to the department. They are expected to carry out work under the guidance of job supervisor.
4. On Job Training Placement: Students can join any institution/ corporation/ industry as per their choice but within the scope of the subject area.

**FORMAT OF THE OJT-INTERNSHIP: PROJECT/ DISSERTATION
STUDENT FINAL WRITTEN REPORT**

Student's Name: -----

Name of the College: -----

Class: -----Semester: -----

Paper Name: -----Seat Number: -----

Year -----

Internship Site/ Name of the Institution: -----

Supervisor's Name: -----

• Introduction:

This section should provide an overview of the internship experience, including the organization where the internship took place, the duties and responsibilities of the

internship, and the student's goals and objectives.

- **Description of the organization:**

This section should provide a brief overview of the organization where the internship took place, including its mission, goals, and services.

- **Duties and responsibilities:**

This section should describe the specific tasks and responsibilities the student had during the internship, as well as any notable projects or activities they were involved in.

- **Learning and accomplishments:**

This section should highlight the key learning and accomplishments the student achieved during the internship, including any skills or knowledge they gained, and any notable achievements or contributions they made to the organization.

- **Challenges and areas for improvement:**

This section should address any challenges or areas for improvement the student encountered during the internship, and should reflect on how they overcame these challenges or developed strategies for improvement.

- **Reflection:**

This section should provide a more in-depth reflection on the student's overall learning and growth during the internship, and should consider how the experience has impacted their future goals and aspirations.

- **Conclusion:**

This section should summarize the key takeaways from the internship experience, and should discuss any future plans or goals that have been influenced by the internship.

- **Appendices:**

This section should include any supporting materials, such as reports, presentations, or Documents that were produced during the internship.

SCHEME OF MARKING FOR OJT EXAMINATION

END SEMESTER EXAMINATION: SEE (60 MARKS)

4. OJT Project/ Dissertation =60 Marks (Marks assessment by HOD/ Concerned teacher)

CONTINUOUS COMPREHENSIVE EVALUATION INTERNAL EVALUATION (40 MARKS)

2. OJT Project/ Dissertation Presentation= 20 Marks (Marks assessment by HOD/ Concerned teacher)

5. Voce Viva=10 Marks (Marks assessment by HOD/ Concerned teacher)
6. Attendance and Feedback=10 Marks (Marks assessment by HOD/ Concerned teacher)

Medium of Instruction – Marathi/English

For Post Graduate

Examination Pattern: 60:40

(60 Weightage for End Semester Examination & 40 Weightage for Continuous and comprehensive Evaluation)

Nature of Question Paper:

End Semester Examination Question Paper Pattern for 60 Marks

- Instruction:** 1) All Questions are Compulsory.
2) All Questions carry equal marks.
3) Figures to the right indicate full marks.

Day and Date:

Total Marks: 60

Time: Two Hours

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Q. 1. Choose the correct alternatives from the following 15

प्रश्न १. खालीलपैकी योग्य पर्याय निवडा.

Q.2. Write short Notes (Three out of Four) 15

प्रश्न २. टीपा लिहा (चार पैकी तीन)

Q.3. Write short answer (Three out of Four) 15

प्रश्न ३. थोडक्यात उत्तरे लिहा (चार पैकी तीन)

Q.4. Answer the following question in broad. (One out of Two) 15

प्रश्न ४. खालील प्रश्नाचे सविस्तर उत्तर लिहा. (दोनपैकी एक)

End Semester Examination Question Paper Pattern for 30 Marks

- Instruction:** 1) All Questions are Compulsory.
2) Figures to the right indicate full marks.

Day and Date:

Total Marks: 30

Time: One Hours

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Q. 1. Choose the correct alternatives from the following 08

प्रश्न १. खालीलपैकी योग्य पर्याय निवडा.

Q.2. Write short Notes (Two out of Three) 10

प्रश्न २. टीपा लिहा (तीन पैकी दोन)

Q.3. Answer the following question in broad. (One out of Two) 12

प्रश्न ३. खालील प्रश्नाचे सविस्तर उत्तर लिहा.(दोन पैकी एक)

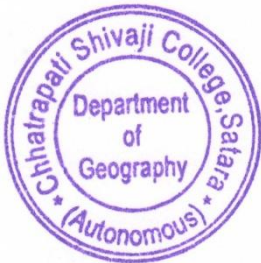
1. CCE (Continuous and comprehensive Evaluation):

4.1. Activities 40 Marks: 4 credit

1. Seminar Presentation with Written Draft - 20 Marks
2. Subject Specific Activity - 20 Marks

4.2. Activities 20 Marks: 2 Credit

1. Subject Specific Activity - 20 Marks




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