



SNDT Women's University
1, Nathibai Thackersey Road, Mumbai- 400020

Syllabus

As per NEP 2020
(2023)

M.A.-Geography
(Sem I & II)

Syllabus – Approved as per Agenda Item No. 7 (8) in the
Academic Council held on 7th August 2023

Devi

SNDT WOMEN'S UNIVERSITY, Mumbai-400020**Postgraduate Programmes****Academic Year 2023-24****Programme: M.A. Geography**

Programme Degree		M.A.
Parenthesis if any		Geography
Preamble		M.A. (Geography) is a Two Year PG/ Master's Programme with one Exit Option/ One Year PG Programme. At the end of programme students will be skilled in discipline specific concepts, theories, and methodologies in Geography. They will equipped with the practical knowledge of surveying, mapping, spatial analysis and planning which can be applied in various fields and will help them to be competent for providing services related to the field, employability in various sectors etc.
Programme Specific Outcomes (POs)		After completing this programme, Learner will
	1.	Clearly understand concepts and applications in the discipline of Geography.
	2.	Able to make comprehensive analysis, interpret spatio-temporal problems, suggest proper solutions by using theoretical, methodological and instrumental knowledge of Geography.
	3.	Aware about the global to local environmental issues and enhancement of social sensitivity.
	4.	Acquire skills that will be useful in personal and professional life.
	5.	Develop research interest to solve critical and emerging issues related to geography and surrounding environment.
Eligibility Criteria for Programme		(1) For Two Year PG/ Master's Programme with one Exit Option: Any Graduate who has completed three year graduation with at least total 12 credits courses in Geography. (As per Agenda item 02, approved in Academic Council held on 17 th Oct 2023) OR Any Graduate with Geography as a major, who has completed three year Bachelor's degree programme (Level 6, minimum of 80 to maximum of 88 credits). (2) For One Year PG Programme: Any Graduate with Geography as a major, who has completed a four year degree programme with honours or honours with Research (Level 6, minimum of 40 to maximum of 44 credits)
Intake		25

Structure with Course Titles
Postgraduate Programme of 2 years

Year I

SN	Courses	Type of Course	Credits	Marks	Int	Ext
	Semester I					
110711	Advances in Geomorphology	Major (Core)	4	100	50	50
110712	Advances in Climatology	Major (Core)	4	100	50	50
110723	Map Interpretation & Weather Reports	Major (Core)	4	100	50	50
110714	Principles of Regional Planning	Major (Core)	2	50	50	0
120711	Quantitative Techniques	Major (Elective)	4	100	50	50
130711	Research Methodology	Minor Stream (RM)	4	100	50	50
			22	550	300	250
	Semester II					
210711	Advances in Economic Geography	Major (Core)	4	100	50	50
210712	Advances in Population Geography	Major (Core)	4	100	50	50
210723	Techniques in Human Geography	Major (Core)	4	100	50	50
210714	Geography of Resources	Major (Core)	2	50	0	50
220711	Regional Study of Maharashtra	Major (Elective)	4	100	50	50
240741	OJT	OJT	4	100	50	50
			22	550	250	300

Exit option: (44 credits) after Three-Year UG Degree

Year II

SN	Courses	Type of Course	Credits	Marks	Int	Ext
	Semester III					
310711	Geography of Rural Development	Major (Core)	4	100	50	50
310712	Agriculture Geography	Major (Core)	4	100	50	50
310723	Advanced Cartography	Major (Core)	4	100	50	50
310714	Fundamentals of RS and GIS	Major (Core)	2	50	0	50
320711	Regional Study of India	Major (Elective)	4	100	50	50
350731	Research Project	RP	4	100	50	50
			22	550	250	300
	Semester IV					
410711	Urban Geography	Major (Core)	4	100	50	50
410712	Soil Geography	Major (Core)	4	100	50	50
410723	Practicals in Remote Sensing	Major (Core)	4	100	50	50
420711	Gender Geography	Major (Elective)	4	100	50	50
450731	Research Project	RP	6	150	100	50
			22	550	300	250

Course Syllabus

Semester I

Major (Core): Advances in Geomorphology

Course Title	Advances in Geomorphology
Course Credits	4
Course Outcomes	After going through the course, learners will be able to
	1. Sensitise the students towards the judicious use of natural resources and particularly the land resource which is most immobile in nature.
	2. To understand the development of geomorphic thought, as well as review of fundamental geomorphic processes and theories of evolution of earth.
	3. To know various geomorphic processes and resultant landforms.
	4. To understand and application of geomorphic knowledge for land resource management and planning.
Module 1(Credit 1) Nature and Scope of Geomorphology	
Learning Outcomes	After learning the module, learners will be able to
	1. Understand basic concepts, principles and recent trends of Geomorphology.
Content Outline	1. Nature and Scope of Geomorphology 1.1 Definition, Nature and scope of Geomorphology 1.2 Approaches of Geomorphic Study 1.3 Various Fundamental concepts: Threshold, Equilibrium and Uniformitarianism 1.4 Recent Trends in Geomorphology
Module 2(Credit 1) Earth Movements	
Learning Outcomes	After learning the module, learners will be able to
	1. Understand sources of interior of the earth.
	2. Understand the developmental changes in the theories of earth evolution.
Content Outline	2. Earth Movements 2.1 Interior of the Earth, Sources of Knowledge with chronological development 2.2 Forces – Endogenic and Exogenic forces with reference to landform formation 2.3 Theories : Isostasy, Continental Drift Theory, Sea Floor Spreading, Plate Tectonics.
Module 3(Credit 1) Geomorphic Processes	

6. Cook, R.U. & Doornkamp, J.C.(1974), "*Geomorphology in Environmental Management,*" an Introduction.
7. Fairbridge, R.W., ed. (1968), "*Encyclopaedia of Geomorphology Reinhold,*" New York.
8. Goudie A.S. et.al (1990) (Edt), "*Geomorphological Techniques*", Routledge, London.
9. Goudie, A.S. (2004) (Edt), "*Encyclopedia of Geomorphology*", Routledge, London. London.
10. Hart, M.G. (1986), "*Geomorphology Pure and Applied,*" George Allen and Unwin, London.
11. Kale, V.S. and Gupta, A. (2001), "*Introduction to Geomorphology*", Orient Longman, Calcutta.
12. King C.A.M. (1967), "*Techniques in Geomorphology*", Edward Arnold Publishers Ltd.
13. Leopold, L.B. Wolman, M.G. & Miller, J.P.(1964), "*Fluvial Processes in Geomorphology,*" W.H.Freeman, San Fransisco.
14. Lobeck, A.K. (1939), "*Geomorphology,*" McGraw Hill, New York. .
15. Moor, W.G. (1949), "*A Dictionary of Geography,*" Penguin Books, England.
16. Morgan, R.S. & Wooldridge S.W (1959), "*Outline of Geomorphology the Physical basis of Geography,*" Longmans Green, London.
17. Ollier, C (1981), "*Tectonics and Landforms*", Longman Group Ltd.
18. Robinson, Harry (1969), "*Morphology and Landscape,*" University Tutorial Press Ltd. London.
19. Selby M.J. (1986), "*Earth's Changing Surface,*" Oxford University Press.
20. Singh Savindar (2002), "*Geomorphology,*" PrayagPustakBhawan, Allahabad
21. Singh, Savindra (1991), "*Environmental Geography,*" PrayagPustakBhavan , Allahabad.
22. Sparks, B.W (1972), "*Geomorphology*", Longman Group Ltd.
23. Strahler, A.H and Strahler A.N (1992), "*Modern Physical Geography,*" John Wiley and Sons (Asia) Pvt. Ltd.
24. Strahler, A.N (1969): *Physical Geography.* John Wiley & Sons Inc., NewYork.
25. Thornbury, W.D. (1960): "*Principles of Geomorphology*", John Wiley and Sons, New York
26. Wadia, D.N. (1993): *Geology of India,* Tata McGraw Hill Edition, New Delhi.
27. Worcester, P. G. (1948): *Textbook of Geomorphology,* Princeton, D.Van, Nortrand.

Major (Core)

Course Title	Advances in Climatology
Course Credits	4
Course Outcomes	After going through the course, learners will be able to
	1. To analyze Solar and Terrestrial radiation and Heat Budget.
	2. To understand vertical and horizontal distribution of temperature
	3. To make Diagrammatic representation and explanation of Hydrological cycle.
	4. To understand Mechanism of Indian monsoon.
	5. To sensitize about the climatic influence on society, emerging issues such as global climate change and its consequences.
	6. Analyze the consequences as per the advances in Climatology
Module 1(Credit 1) Heat and Temperature	
Learning Outcomes	After learning the module, learners will be able to
	1. To analyze Solar and Terrestrial radiation and Heat Budget.
	2. To understand vertical and horizontal distribution of temperature
Content Outline	Advances in Climatology: Climate, Weather, Sub-divisions of Climatology. Modern development in Climatology; Vertical structure and chemical composition of earth's atmosphere. Insolation and Heat Balance: Solar Energy; Electromagnetic spectrum; basic processes of heating and cooling (conduction, convection, radiation, absorption, reflection, scattering, transmission), Factors affecting insolation, Effects of Atmosphere, Albedo, Heat Balance of Earth- atmospheric systems. Temperature: Heat and temperature, measurement and controls; Vertical temperature patterns (lapse rate and temperature inversions), horizontal distribution of temperature.
Module 2(Credit 1) Atmospheric Pressure and Wind	
Learning Outcomes	After learning the module, learners will be able to
	1. To analyze global/ local pressure distribution patterns and formation of winds.
	2. To map the circulation of the atmosphere.
Content Outline	Atmospheric Pressure and Wind Pressure Measurement, Factors affecting air Pressure and Observed distribution of surface pressure

	<p>Wind observation and measurement, factors affecting wind (Pressure gradient, Coriolis force and frictional force), Geostrophic wind and Gradient wind, Local winds.</p> <p>Circulation of the Atmosphere</p> <p>Scales of Atmospheric Motion- Primary, Secondary, Tertiary. Local winds, Jet stream and its effect on the surface weather conditions.</p>
Module 3(Credit 1) Atmospheric Moisture and Air Masses	
Learning Outcomes	After learning the module, learners will be able to
	1. Asses the atmospheric moisture and hydrological cycle
	2. Understand the concept of airmasses and its modifications
Content Outline	<p>Humidity:</p> <p>Humidity measurement, forms of precipitation (rain, freezing rain, Sleet, Drizzle, Snow, Hail), types of precipitation (Convectonal, Orographic, Frontal, Convergent); hydrological cycle.</p> <p>Air Masses:</p> <p>Source region, classification and modifications - (a) Mechanical (b) Thermodynamic; Fronts - Characteristics and Types.</p>
Module 4(Credit 1) Monsoon and Weather Forecasting	
Learning Outcomes	After learning the module, learners will be able to
	1. To sensitize about the climatic influence on society, emerging issues such as global climate change and its consequences.
	2. Understand the weather forecasting and advances in the forecasting
Content Outline	<p>Monsoon:</p> <p>Mechanism of Indian Monsoon, Monsoon and Indian economy.</p> <p>Weather forecasting:</p> <p>Methods and advances in forecasting; Climate Change- global warming and its effects.</p>

Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)

- | | | |
|--------------------------------------|---|----------|
| 1. Seminar / Group Discussion | : | 10 Marks |
| 2. Home Assignments/Group Activities | : | 10 Marks |
| 3. Project Work and Presentation | : | 30 Marks |

Internal Assessment Total : 50 Marks

References

1. Barry, R. G. and Chorley P. J. (1998): *Atmosphere, Weather and Climate*, Routledge, London and New York.
2. Critchfield, J. H. (1993, Rep. 2010): "*General Climatology*", Prentice Hall, India, New Delhi.
3. Das, P. K. (2005): "*Monsoons*", Natinal Book Trust, New Delhi.
4. Fein, J.S. and Stephens, P.N. (1987): "*Monsoons*", Wiley Interscience.
5. India Meteorological Department (2011): "*Climatological Tables of Observatories in India*", Government of India.
6. Indian Weather Reports, (www.imdpune.gov.in)
7. Lal, D. S. (1986): "*Climatology*", Chaitanya Publications, Allahbad.
8. Lal, D. S. (Ed 2003): "*Climatology*", ShardaPustak Bhawan,11, University road Allahabad.
9. Lutgens, Frederic K. &Tarbuck, Edward J. (2010): "*The Atmosphere: An Introduction to Meteorology*", Prentice Hall, New Jersey
10. Lydolph, P. E. (1985): "*The Climate of the Earth*", Rowman, 1985.
11. McKnight T.L., (1987): 'Physical Geogrphy: A landscape appreciation, Prentice-Hall, Inc., Englewood Cliffs., N.J.
12. Navarra J. G. Atmosphere, (1979): "*Weather and Climate: An Introduction to Meteorology*", W.B. Saunders Company.
13. Pant G. B. and Rupa Kumar K. (1997): "*Climates of South Asia*", John Wiley and Sons.
14. Robinson, P. J. and Henderson S. (1999): "*Contemporary Climatology*", Henlow.
15. Savindra Singh (Rep. 2011): "*Climatology*", PrayagPustakBhawan, Allahabad.
16. Thompson, R. D. and Perry, A (1997): (edt), "*Applied Climatology, Principles and Practice*", Routledge, London.
17. Triwanta Glenn T. (1943): "*An Introduction to Weather and Climate*", New York and London.

Major (Core) Practical I

Course Title	Map Interpretation & Weather Reports
Course Credits	4
Course Outcomes	After going through the course, learners will be able to
	1. To identify identification of types of slopes, micro-geomorphic features on the ground and their interrelationship.
	2. To get skills of climatic data representation, measurement of weather parameters and weather forecasting procedure.
Module 1(Credit 1) Representation of Relief	
Learning Outcomes	After learning the module, learners will be able to
	Identify and differentiate the landforms with the help of various methods of relief representation.
Content Outline	1.Representation of Relief 1.1 Relief, Methods of relief representation 1.2 Profile- Longitudinal profile, Cross profile, Superimposed and composite profile 1.3 Methods of slope analysis
Module 2(Credit 1) Interpretation of SOI and Foreign Topographical maps	
Learning Outcomes	After learning the module, learners will be able to
	Develop the skill of Map Reading and interpretation.
Content Outline	2.Interpretation of SOI and Foreign Topographical maps 2.1 Marginal Information 2.2 Index System 2.3 Interpretation of SOI sheets 2.4 Introduction to Foreign topographical maps
Module 3(Credit 1) Representation of Climatic Data	
Learning Outcomes	After learning the module, learners will be able to
	Develop the skill of using appropriate methods to represent climatic data and interpret it.
Content Outline	3.Representation of Climatic Data 3.1 Climograph 3.2 Simple and compound wind roses 3.3 Hythergraph, Koppen's classification of climate 3.4 Water Budget
Module 4 (Credit 1) Indian Weather Reports	

Learning Outcomes	After learning the module, learners will be able to
	Develop the skill of weather report interpretation. Develop the skill of observation and interpretation.
Content Outline	4. Indian Weather Reports 4.1 Analysis of Indian weather reports (based on online data) 4.2 Field visit or survey

Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)

1. Seminar / Group Discussion	:	10 Marks
2. Home Assignments/Group Activities	:	10 Marks
3. Field visit ,Project Work and Presentation	:	30 Marks

Internal Assessment Total	:	50 Marks

References

1. Crone, G. R. (1966), "*Maps and Their Makers*", 3rd Edition, Hutchinson, London.
2. Goudie A.S. and et.al (1990): (Edt) "*Geomorphological Techniques*", Routledge, London.
3. Indian Weather Reports, (www.imdpune.gov.in)
4. Kanetkar, T. P. and Kulkarni S. V. (2014), "*Surveying and Leveling*", Pune VidyarthiPrakashan, Pune.
5. King, C. A.M (1966): "*Techniques in Geomorphology*", Edward Arnold, London
6. Lutgens, Frederic K. & Tarbuck, Edward J. (2010): "*The Atmosphere: An Introduction to Meteorology*", Prentice Hall, New Jersey
7. Miller, Austin (1953): "*The skin of the Earth*", Methuen & Co. Ltd. London
8. Monkhouse, F. J. and Wilkinson, H. R., (1976): "*Maps and Diagrams*", Methuen & Co.
9. Rashid, S. M., Ishtiaq M. (1974): "*Practical Geography*", Jawahar Publishers and Distributors, New Delhi.
10. Robinson A., Sale R., Morrison J. (1978): "*Elements of Cartography*", John Wiley and Sons, U.S.A.,
11. Sarkar Ashis (1997): "*Practical Geography: A Systematic Approach*", Orient Black-Swan.
12. Singh R. L. & Rana P. B. Singh (2005): "*Elements of Practical Geography*", Kalyani Publisher, New Delhi.
13. Singh R. L. (1979): "*Elements of Practical Geography*", Kalyani Publisher, New Delhi.
14. Tamaskar, B. G. (1974): "*Geographical Interpretation of Indian Topographical Maps*", Orient Logman.

Major (Core)

Course Title	Principles of Regional Planning
Course Credits	2
Course Outcomes	After going through the course, learners will be able to 1. To understand and evaluate the concept of region in geography and its role and relevance in regional planning and development 2. To identify the issues relating to the development of the region through the process of spatial organization of various attributes and their inter relationship 3. To identify the causes of regional disparities in development, perspectives and policy imperatives
Module 1(Credit 1) Introduction to Region	
Learning Outcomes	After learning the module, learners will be able to Understand the various concepts of regions.
Content Outline	1.Introduction to Region 1.1 Meaning of Area and Space 1.2 Concept of Region 1.3 Regions in Geography 1.4 Type of Regions 1.5 Delineation of Regions 1.6 Methods of Regionalisation
Module 2(Credit 1) Role of Geography in Regional Planning	
Learning Outcomes	After learning the module, learners will be able to Analyse the various types of planning method and its application in regional planning.
Content Outline	2.Role of Geography in Regional Planning 2.1 Concept and Need of Planning. 2.2 Objectives, Types and Hierarchy of Planning 2.3 Concept of Planning region, Regional Planning and role of Geographer 2.4 Theories in planning and their application to India

Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)

- | | | |
|---------------------------------------|---|----------|
| 1. Seminar / Group Discussion | : | 10 Marks |
| 2. Home Assignments/Group Activities: | | 10 Marks |
| 3. Project Work and Presentation | | 30 Marks |

Internal Assessment Total: 50 Marks

References

1. Chand, Mahesh and Puri, Vinay Kumar (1983): *Regional Planning in India*, Allied Publishers Pvt. Ltd., New Delhi.
2. Chandana, R.C. (2000): "Regional Planning – A Comprehensive Text", Kalyani Publishers, Ludhiana.
3. Chorley, R.J. and Hagget, P.: *Models in Geography*, Methuen, London, 1967.
4. *Glasson, John* An Introduction to *Regional Planning: Concepts, Theory and Practice*. (University of California, Berkeley) Hutchinson, 1978
5. Gosal, G.S. and Krishan, G.: *Regional Disparities in Levels of Socio-Economic Development in Punjab*, Vishal Publications, Kurukshetra, 1984.
6. Kundu, A. and Raza, Moonis: *Indian Economy- The Regional Dimension*, Spectrum Publishers, New Delhi, 1982.
7. Mishra, R.P. et. al. *Multi-Level Planning* Heritage Publishers, Delhi. 1980.
8. Misra, R.P. and Others (editors): *Regional Development Planning in India-A Strategy*, Institute of Development Studies, Mysore, 1974.
9. NangiaSudesh, *Delhi Metropolitan Region* Rajesh Publication, Delhi, 1976.
10. Rangwal, S. C. (1989): *Town Planning (Eighth Revised & Enlarged Edition)*, Charotar Publishing House, Anand-388 001, India.
11. Raza Moonis (editer) *Regional Development* Heritage Publishers Delhi. 1988.
12. Richardson, H.W.: *Regional Economics*, Weidenfeld and Nicolson, London, 1969.
13. Sundaram, K.V.(ed.): *Geography and Planning, Essays in Honour of V.L.S. Prakasa Rao*, Concept Publishing Co., New Delhi, 1985.
14. Tarlok Singh *India's Development Experience*, Mc Millan New Delhi, India, 1974.

Major (Elective) Quantitative Techniques

Course Title	Quantitative Techniques
Course Credits	4
Course Outcomes	After going through the course, learners will be able to
	1. To understand the basic concept of descriptive statistics and its applications.
	2. To get acquainted about statistical tools and techniques to be used in further research.
	3. To develop the ability of Computer application to compute and interpret data statistically.
Module 1(Credit 1) Basics of Statistics	
Learning Outcomes	After learning the module, learners will be able to
	Develop the basic concepts of statistics and its application in geographical research.
Content Outline	1.Basics of Statistics 1.1 Definitions of statistics, Importance of statistical techniques in geography 1.2 Sources of statistical data in geography 1.3 Scales of measurement: Nominal, Ordinal, Interval and Ratio; 1.4 Frequency Distribution, Typical Patterns of Frequency Distribution.
Module 2(Credit 1)	
Learning Outcomes	After learning the module, learners will be able to
	Apply the appropriate statistical tools and techniques in their further research.
Content Outline	2.Statistical Measurements and assessment 2.1 Measurement of Central Tendencies - Mean, Median and Mode 2.2 Dispersion - Variance, Standard deviation, Mean deviation, Quartiles 2.3 Normal Distribution Curve, Gaussian curve and its properties; 2.4 Computation of Index of Skewness and Kurtosis,
Module 3(Credit 1)	
Learning Outcomes	After learning the module, learners will be able to

	Apply appropriate methods of hypothesis testing.
Content Outline	3.Hypothesis Testing 3.1 Concept of Population and sample, Sampling Methods 3.2 Hypothesis- Null hypothesis and Alternative hypothesis 3.3 Testing of hypothesis 3.4 Parametric Test - Student's 't' test 3.5 Non-parametric Tests - Chi square test
Module 4(Credit 1)	
Learning Outcomes	After learning the module, learners will be able to
	Achieve the ability of computer application in data analysis and its interpretation.
Content Outline	4.Techniques of Bivariate Analysis : 4.1 Concept of covariance and correlation 4.2 Pearson's Product-moment Correlation Coefficient Spearman's Rank Correlation Coefficient 4.4 Straight line regression equation 4.5 Demonstration and Use of MS-Excel for all units.

Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)

1. Seminar / Group Discussion	:	10 Marks
2.Home Assignments/Group Activities	:	10 Marks
4. Project Work, Report writing and Presentation		30 Marks

Internal Assessment Total:		50 Marks

References

1. Alvi, Z. (1995): "Statistical Geography: Methods and Applications", Rawat Publications, Jaipur
2. David Ebdon (1989) : "Statistics in Geography-A Practical Approach", 2nd Edn., Blackwell Publishing.
3. Gupta, C.B. (1978) : "An Introduction to Statistical Methods", VikasPub.House, New Delhi.
4. Jog, S.R. and Saptharshi, Pravin (1980): " SankhykiBhugol", Narendra Prakashan Pune.
5. John Matthews, (1981) : "Quantitative & Statistical Approaches to Geography: A Practical Manual", Pergamon Press.

6. Karlekar Shrikant (2007): "*Statistical Methods in Geography*", Diamond Publication, Pune.
7. Karlekar, Shrikant and Kale, Mohan (2006) : "*Statistical Analysis of Geographical Data*", Diamond Publication, Pune.
8. King, L.J. (1991): "*Statistical Analysis in Geography*", Prentice Hall, Englewood.
9. Mahmood, A. (1977): "*Statistical Methods in Geographical Studies*", Rajesh Publications, New Delhi.
10. Mandal, R. B. (1981): "*Statistics for Geographers & Social Scientists*", Rawat Publication.
11. Pal, Saroj K. (1982): "*Statistical Techniques, A Basic Approach to Geography*", Tata McGraw Hill Publishing Comp. Ltd. New Delhi.
12. Peter Rogerson: "*Statistical Methods for Geography*", 3rd Edn. Sage Publishing New Delhi.
13. Rogerson P. A. (2001) : "*Statistical for Geography*", SAGE publication, New Delhi.
14. Shaw G. & Wheller D. (1985) : "*Statistical Techniques in Geographical Analysis*", John Wiley & Sons, New York.

Minor Stream (RM) Research Methodology

Course Title	Research Methodology
Course Credits	4
Course Outcomes	After going through the course, learners will be able to
	1. To make the students research oriented.
	2. To acquaint the students with the methods and techniques in Geographical research.
	3. To enable and encourage the students to undertake independent research work or dissertation
Module 1(Credit 1) Introduction to Research	
Learning Outcomes	After learning the module, learners will be able to
	1. Compare and classify the types of research and basic concepts of research.
Content Outline	1.Introduction to Research 1.1 Research and its types 1.2 Theories in Research 1.3 Explanation in Geography 1.4 Approaches to Geographical Research: Interdisciplinary, trans-disciplinary and multi-disciplinary
Module 2(Credit 1) Research Methods and Geographical Data	
Learning Outcomes	After learning the module, learners will be able to
	Apply the various techniques in Geographical research.
Content Outline	2.Research Methods and Geographical Data 2.1 Research Methods in Geography, 2.2 Collection of Data: Sources, Primary and secondary data, collection and classification 2.3 Sampling Methods: Techniques and types of sampling techniques 2.4 Hypothesis: Types, Characteristics, Formulation and testing
Module 3(Credit 1)	
Learning Outcomes	After learning the module, learners will be able to
	Achieve the research skill to select any research problem and design the framework of their future dissertation work.
Content Outline	3.Research design 3.1 Meaning of Research Design, 3.2 Formulation of research problem, analytical framework, 3.3 designing of a questionnaire, 3.4 Review of literature survey, types and role in research 3.5 Computer based analysis e.g. techniques of analysis spatio temporal changes etc.
Module 4(Credit 1) Report Writing /Thesis Writing	

Learning Outcomes	After learning the module, learners will be able to
	Present research report writing and academic writing.
Content Outline	4.Report Writing /Thesis Writing 4.1 Organization of a research report/ thesis. 4.2 Preliminaries (Pre writing considerations) 4.3 Format of report writing, Abstract Writing, Synopsis Writing 4.4 Techniques of writing a scientific paper, steps in report/thesis writing 4.5 Language and presentation (form and style) 4.6 References and Bibliography

Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)

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|---|---|----------|
| 1. Seminar / Group Discussion | : | 10 Marks |
| 2.Home Assignments/Group Activities | : | 10 Marks |
| 4. Research Proposal Writing and presentation | | 30 Marks |

Internal AssessmentTotal: 50 Marks

References

1. Basil Gomez and John Paul Jones, (2010): "*Research Methods in Geography: A Critical Introduction (Critical Introductions to Geography)*", Wiley-Blackwell.
2. Davies Wayne K.D. (ed.), (1972): "*The Conceptual Revolution in Geography*", University of London Press Ltd., London.
3. DydiaDeLyser, Steve Herbert, Stuart Aitken and Mike A Crang, (2009) : "*The SAGE Handbook of Qualitative Geography*", Sage Publications Ltd.
4. HarPrasad,(1992): "*Research Methods and Techniques in Geography*", Rawat Publications.
5. Harvey D., (1973): "*Explanation in Geography*", Edward Arnold, London.
6. Iain Hay, (2010): "*Qualitative Research Methods in Human Geography*", Oxford University Press, USA.
7. Keith Hoggart, Loretta Lees and Anna Davies, (2002): "*Researching Human Geography*", Oxford University Press, USA.
8. Misra R. P., (1989): "*Research Methodology: A Handbook*", Concept Publishing Company, New Delhi.
9. Murthy, K.L.Narasimha (1999): ,Geographical Research , Concept Publishing copany
10. Nicholas Clifford, Shaun French and Gill Valentine, (2010): "*Key Methods in Geography*", Sage Publications Ltd.
11. Robert Kitchin and Nick Tate, (1999): "*Conducting Research in Human Geography: theory, methodology and practice*", Benjamin Cummings.

Course Syllabus

Semester II

Major (Core)

Course Title	Advances in Economic Geography
Course Credits	4
Course Outcomes	After going through the course, learners will be able to
	1. To comprehend the basic concepts in economic geography in the view of modernization of world economy.
	2. To understand theoretical models along with technological advancement and make their application for the economic development of lagging regions of the country and people therein.
	3. To assess the association between trade and transportation and its impact on economic development.
Module 1(Credit 1) Introduction to Economic Geography	
Learning Outcomes	After learning the module, learners will be able to
	Understand various approaches and recent trends in economic geography.
Content Outline	1. Introduction to Economic Geography 1.1 Definition, Nature and Scope of Economic Geography 1.2 Approaches of Economic Geography 1.3 Classification of Economic activities 1.4 Recent trends in Economic Geography
Module 2(Credit 1) Industrial Location Theories	
Learning Outcomes	After learning the module, learners will be able to
	Understand the principle of location of industry.
Content Outline	2.Industrial Location Theories 2.1 Factors of Industrial Location 2.2 Industrial Location Theory : Weber's Least Cost Theory August Losch's Profit Maximation Theory 2.3 Industrial Regions
Module 3(Credit 1) Transportation and Trade	
Learning Outcomes	After learning the module, learners will be able to
	Analyse the association between transport and trade.
Content Outline	3.World Transportation, Communication and Trade 3.1 Roadways, Railways, Waterways, Air ways and Pipelines 3.2 GIS and Communication network 3.3 Types of Trade, Factors affecting International Trade 3.4 Trading Blocs 3.5 Changing pattern of India's foreign trade
Module 4(Credit 1) Development: Concepts and Measurements	

Learning Outcomes	After learning the module, learners will be able to
	Assess the relationship among the various development factors.
Content Outline	4. Development Measurements 4.1 Concept of Growth and Development 4.2 Measurements of Development – Geographical, Economic, Social, Demographic Measures 4.3 Rostow's Model 4.4 Application of RS and GIS in Economic Geography

Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)

- | | |
|---------------------------------------|----------|
| 1. Seminar / Group Discussion : | 10 Marks |
| 2. Home Assignments/Group Activities: | 10 Marks |
| 3. Project Work and Presentation: | 30 Marks |

Internal Assessment Total: 50 Marks

References

- Goh cheng Leong, Gillian C. Moran (2009): "*Human and Economic Geography*", Oxford Uni.Press, Honk Kong Second edition.
- Hanink, D.M. (1997): "*Principles and Applications of Economic Geography, Economy, Policy, Environment*", John Wiley and Sons, New York.
- Janaki, V.A. (1985): "*Economic Geography*", Concepts Publishing Co.
- K. Siddhartha, (2009): "*Economic Geography: Theories, Process and Patterns*", Kisalaya Publications Pvt. Ltd., Delhi.
- Kanan Chatterjee (2015): '*Basics of Economic Geography*', Concept publishing Company Pvt. Ltd., New Delhi.
- Knox P. and J. Agnew (1998): "*The Geography of the World Economy*"; Arnold, London.
- Masjid Hussain, (2008): "*Models in Geography*", Rawat Publications, New Delhi.
- Masjid Hussain, (2018): "*Economic Geography*", Rawat Publications, New Delhi.
- Mitra, A (2002): '*Resource Studies*', Sreedhar publishers, Kolkata.
- Ray, P. k. (1997): '*Economic Geography*', New Central Book Agency (P) Ltd., Calcutta.
- Saxena, H. M. (2013): '*Economic Geography*', Rawat publication, Jaipur.
- Shelar S. K. (2013): '*Principles of Economic Geography*' Chandralok Prakashan, Kanpur.
- Smith D.W.L.: "*A Geography and Industrial Location*", John Wiley, McGraw Hill Co. New York.
- Truman A Hartshorn, John W. Alexander (2010): "*Economic Geography*" PHL Learning Private Limited, New Delhi.

Major (Core) Advances in Population Geography

Course Title	Advances in Population Geography
Course Credits	4
Course Outcomes	After going through the course, learners will be able to
	1. To introduce the fundamental concepts of Population Geography.
	2. To explain determinants of population growth and distribution in Spatio - temporal perspective.
	3. To comprehend population dynamics and migration, issues and policies in developed and developing countries.
	4. To understand and analyse issues and challenges of population in the context of India.
Module 1(Credit 1) Introduction to Population Geography	
Learning Outcomes	After learning the module, learners will be able to
	Understand the historical development in population geography and sources of population data in India.
Content Outline	1. Introduction to Population Geography 1.1 Definition, Nature and Scope 1.2 Historical development of Population Geography 1.3 Approaches of Population Geography 1.4 Sources of population data with special reference to India 1.5 Brief history of Census, Census classification, Overview of census of India 2011/2021.
Module 2(Credit 1) Population Growth and Distribution Characteristics	
Learning Outcomes	After learning the module, learners will be able to
	Analyse the demographic characteristics and its impact.
Content Outline	2. Population Growth and Distribution Characteristics 2.1 Influencing Factors of Fertility and Mortality 2.2 Overview of Population growth and Density Population explosion 2.3 Demographic transition Model 2.4 Malthus and Karl Marx Theory of Population Growth 2.5 Over population, under population and optimum population 2.6 Population Projections
Module 3(Credit 1) Population Migration	
Learning Outcomes	After learning the module, learners will be able to
	Associate the push and pull factors of migration and relevance of migration theories.

Content Outline	3. Population Migration 3.1 Migration, types of migration, causes and impacts of migration 3.2 Human migration with special reference to India 3.3 Migration Theories: Lee's theory, Zelinsky's Mobility transition model 3.4 Recent issues related to Migration: Migration and Politics: Fiji Islands, reversal migration of brain drain to brain gain
Module 4(Credit 1)Population Issues and Population Policies	
Learning Outcomes	After learning the module, learners will be able to Evaluate various population issues in India and the role of population policies to overcome these issues.
Content Outline	4.Population Issues and Population Policies 4.1India: Population growth & Population Dividend 4.2 India: Gender issues & equality (Sex ratio, literacy, health) 4.3 Concept of Human Development Index: Global and national analysis 4.4 National Population Policy (NPP) 2000: Targets, achievements and challenges

Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)

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|-------------------------------------|---|----------|
| 1. Seminar / Group Discussion | : | 10 Marks |
| 2.Home Assignments/Group Activities | : | 10 Marks |
| 3. Project Work and Presentation | : | 30 Marks |

Internal Assessment Total: 50 Marks

References

1. Bhende, A. and Kanitkar, T. (2006): Principles of Population Studies, Himalaya Publishing House, Mumbai.
2. Bose Alish (2000): "India Towards Billion Plus", Vikas Publishing House.
3. Chandana, R.C. (2015) : Geography of Population: Concepts, Determination and Patterns, latest edition, Kalyani Publishers, New Delhi.
4. Clarke, J.I. (1992): Population Geography, Second Edition, Pergamon Press, Oxford England.
5. Crook, N. (1997): Principles of Population and Development, Pergamon, New York.
6. Daugherty, H.G., Kenneth C.W.K.(1998): An Introduction to Population (Second Edition), The Guilford Press, New York, London.
7. Garnier, B.J. (1970): Geography of Population, Longman, London.
8. Hassan Mohammed (2005): Population Geography, Rawat Publication, New Delhi

9. Lal Punna (2015) Population Geography Anmol Publications PVT. LTD , New Delhi
10. Majumdar P K (2013): India's Demography: Changing Demographic Scenario in India, Rawat Publication, New Delhi
11. Mamoria C.B. (1981): India's Population Problems, Kitab Mahal, New Delhi.
12. Premi M.K. (1991): India's Population: Heading Towards a Billion, B.R. Publishing, New Delhi.
13. Roy Rajeshwar (2013) Handbook Of Population Geography, Anmol Publications PVT. LTDAnmol.
14. UNDP Report (2012): Oxford University Press, Oxford.
15. Verma L.N. (2006): "*Urban Geography*", Rawat Publications, New Delhi

Major (Elective) Practical II

Course Title	Techniques in Human Geography
Course Credits	4
Course Outcomes	After going through the course, learners will be able to
	1. To understand basic concepts, techniques and application of surveying.
	2. To explain various methods and data analysis techniques in human geography.
	3. To acquire the skill of data collection, analysis and report writing.
Module 1(Credit 1) Techniques in Agriculture and Transportation	
Learning Outcomes	After learning the module, learners will be able to
	Apply the proper methods of agricultural
Content Outline	Agriculture and Transportation 1.1 Crop Combination: Weavers and Thomas Methods; 1.2 Crop Diversification : Bhatia's Method, Jasbir Singh's Method 1.3 Agricultural Efficiency: Kendall's Method; 1.3 Measures of Network Structure: Alpha, Beta and Gama;
Module 2(Credit 1) Population	
Learning Outcomes	After learning the module, learners will be able to
	Apply the appropriate methods of population analysis.
Content Outline	Population and Settlement 2.1 Fertility :General Fertility Rate, Crude Birth Rate; 2.2 Mortality : Infant Mortality Rate, Crude Death Rate; 2.3 Child women ratio, Sex Ratio, Age sex pyramid; 2.4 Population growth rate, Population projection; 2.5 Rural Settlement Dispersion Methods - Demangeon and R. B. 2.6 Mandal's Method and Rank size Rule
Module 3(Credit 1) Measures of Inequality	
Learning Outcomes	After learning the module, learners will be able to
	Apply the appropriate methods of settlement analysis.
	Apply the various measures of inequality and interpret the data.
Content Outline	3.Measures of Inequality 3.1 Lorenz Curve and its interpretation 3.2 Location quotient and its interpretation 3.3 Gini coefficient and its interpretation
Module 4(Credit 1) Field work	
Learning Outcomes	After learning the module, learners will be able to
	Develop the skill of observation and report writing.
Content Outline	Field work Socio Economic survey – Village / City Survey and Report writing

Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)

1. Seminar / Group Discussion :	10 Marks
2. Home Assignments/Group Activities :	10 Marks
3. Project Work and Presentation:	30 Marks

Internal Assessment Total:	50 Marks

References

1. AlkaGautam (2012): "*Agricultural Geography*" ShardaPustakBhawan, Allahabad.
2. Bhaduri, S. (1992) : "*Transport and Regional Development: A Case Study of Road. Transport of West Bengal*", Concept Publication, New Delhi.
3. Clarke, J.I. (1992): "*Population Geography*" Second Edition, Pergamon Press, Oxford England.
4. Crook, N. (1997): "*Principles of Population and Development*", Pergamon, New York.
5. Daugherty, H.G., Kenneth C.W.K. (1998): "*An Introduction to Population*" (Second Edition), The Guilford Press, New York, London.
6. Grigg David (1995): "*An introduction to agricultural geography*", (second edition), Routledge, London and New York
7. H. J.de Blij and Alexander. B.Murphy, (1999): "*Human Geography: Culture, Society and Space*", (6th Edition), John Wiley and Sons Inc, Newyork.
8. HaqMahbulul (2000): "*Reflections on Human Development*", Oxford University Press, New Delhi.
9. Hussain Masjid, (2008): "*Human Geography*", Rawat Publications, New Delhi.
10. Kanetkar, T. P. and Kulkarni S. V. (2014), "*Surveying and Leveling*", Pune VidyarthiPrakashan, Pune.
11. Liendsor, J. M. (1997): "*Techniques in Human Geography*", Routledge.
12. Perpillon A. (1966): "*Human Geography*", Longman, London.
13. Robinson, H. And Bamford, C.G. (1978): "*Geography of Transport*", London: Macdonald
14. Sarkar Ashis (1997): "*Practical Geography: A Systematic Approach*", Orient Black-Swan.
15. Singh Jasbir and Dhillon S.S. (1994): "*Agricultural geography*", Tata McGraw Hill Publication, New Delhi
16. Singh R. L. & Rana P. B. Singh (2005): "*Elements of Practical Geography*", Kalyani Publisher, New Delhi.
17. Singh R.L. et al (1975): "*Reading in Rural Settlement Geography*", National Geographical society of India, Varanasi.

Major (Core)

Course Title	Geography of Resources
Course Credits	2
Course Outcomes	After going through the course, learners will be able to
	1. To understand the concepts and geography of resources.
	2. To get acquainted with the changing perception about the resources with the stages of development of a region.
	3. To get comprehensive knowledge of natural resources available in the world and related crises.
	4. To analyse human resources, its strength and regional disparities.
	5. To design a plan for the conservation and management of the resources.
Module 1(Credit 1) Introduction	
Learning Outcomes	After learning the module, learners will be able to
	Understand the distribution classification of resources.
Content Outline	1. Introduction: 1.1 Definition and concept of Resources 1.2 Nature, scope and significance of the Geography of Resources, 1.3 Classification of Resources on the basis of biogenesis, renewability 1.4 Resources Availability and Distribution
Module 2(Credit 1) Natural Resources	
Learning Outcomes	After learning the module, learners will be able to
	Critically examine the importance of land and water resources.
Content Outline	2. Natural Resources: 2.1 Land Resources 2.2 Water resources 2.3 Conservation and sustainability of Land and water resources 2.4 Land and water Resource Management in India 2.5 Resource Development Policy and Planning

Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)

References

1. Adams, W. M. (1990), "Green Development", Environment and Sustainability in the Third World, Routledge, London.
2. Beck, U. (1992), "Risk Society", Towards a New Modernity, Sage, London.
3. Borton, I. and Kates, R.W. (1984), "Readings in Resource Management and Conservation, University of Chicago Press, Chicago.
4. Bruce, M. (1989), "Geography and Resource Analysis, John Wiley, New York.
5. Ehrlich P.R., Ehrlich R.H. & Holdren J.P. (1998) "Eco science, Population, Resources & Development", Freeman & Company, San Francisco.
6. Elcome D (1998): "Natural Resources: Their use and Abuse", Nelson Thomes.
7. Elliott, J.A. (1999), "An Introduction to Sustainable Development", Routledge.
8. Guha, J.L. and Chattroj, P.R. (1994), "Economic geography- A Study of Resources", The World Press, Calcutta
9. Harper, C.L. (2001), "Environment and Society", Human Perspectives on Environmental Issues, Prentice Hall, New Jersey.
10. Holechek J.L. et al (2000) "Natural Resources, Ecology, Economics & Policy", Prentice Hall, New Jersey.
11. Mather, A.S. and Chapman, K. (1995) "Environmental Resources", Longman Scientific and Technical, London.
12. Mitra A. (2000): "Resource Studies", Shridhar Publishers, Kolkata
13. Negi, B.S. (2000), "Geography of Resources", Kedar Nath and Ram Nath, Meerut.
14. Owen S. & Owens P.L. (1991): "Environment Resources & Conservation", Cambridge University Press, New York.
15. Peet, R. Watts, M. (eds.) (1996), "Liberation Ecologies: Environment, Development, Social Movements", Routledge, London.
16. Potter, R.B., Binns, T. Elliott, J.A. and Smith, D. (1999): Geographies of Development, Longman.
17. Redicliff. M. (1987), "Sustainable Development: Exploring the Contradictions", Melhuen, London.
18. Rees J (1988): "Natural Resources: Allocation, Economics & Policy", Mathuen, London.
19. Riccardo Petrella, Translated by Patrick Camiller, (2001): The Water Manifesto Arguments For A World Water Contract, Books for Change, Bangalore, India.
20. Robbias Paul, Hirtz J & Moore Sarah (2010): "Environment & Societ : A Critical Introduction", wdey, Backwell
21. Roy, P. K (2001), "Economic Geography, A Study of Resources", New Central Book Agency, Kolkata.
22. Sarre, P. and Blunder, J. (1995): An Overcrowded World Population, Resources and the Environment, the Open University, Oxford

Major (Elective)

Course Title	Regional study of Maharashtra
Course Credits	4
Course Outcomes	After going through the course, learners will be able to 1. To familiar the students with basic knowledge and to orient the physical and economic settings of Maharashtra 2. To create geographical interest in the state and motivate the students to carry out further study and research in these areas through field visits in Maharashtra. 3. To aware the students with available natural resources and need of conservation and protection. 4. To prepare students for NET, SET and competitive examinations.
Module 1(Credit 1) Introduction to Maharashtra	
Learning Outcomes	After learning the module, learners will be able to Evaluate the existing distribution of natural resources, need of conservation and planning for sustainable development
Content Outline	1. Introduction to Maharashtra 1.1 Geographical Setting Location 1.2 Geology and Mineral Wealth 1.3 Physical Divisions: Mountains, Plateaus and Plains 1.4 Climate 1.5 River Drainage systems and lakes
Module 2(Credit 1) Human Resources/ Cultural	
Learning Outcomes	After learning the module, learners will be able to Understand the contribution of human resources in overall development of Maharashtra.
Content Outline	2. Human Resources 2.1 History and creation of Maharashtra as State 2.2 Socio-Cultural Characteristics of Maharashtra 2.3 Population Characteristics - Growth and Density, Distribution, Age-sex structure, Occupational structure 2.4 Literacy and Education 2.5 Migration
Module 3(Credit 1) Resource and Development	
Learning Outcomes	After learning the module, learners will be able to Understand the distribution of resources and examine the role of resources in development.
Content Outline	3. Resources 3.1 Water Resources 3.2 Soil 3.3 Flora and Fauna 3.4 Power Resources- Hydel and Thermal 3.5 Agricultural Resources

4. Module 4(Credit 1)Development	
Learning Outcomes	After learning the module, learners will be able to
	Assess the role of technological and economic activities in development and the causes of regional disparity in Maharashtra.
Content Outline	4.Development 4.1 Irrigation Projects 4.2 Transport and Communication Network 4.3 Industrialization 4.4 Tourism 4.5 Regional Disparity in Maharashtra

Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)

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|--------------------------------------|----------|
| 1. Seminar / Group Discussion : | 10 Marks |
| 2.Home Assignments/Group Activities: | 10 Marks |
| 3. Project Work and Presentation | 30 Marks |

Internal Assessment Total:

50 Marks

References

1. Arunachalam B. (1967), Maharashtra - A Study in Physical and Regional Setting, A. R. Sheth and Co., Mumbai
2. Dasatane S. (1992), Glimpses of Maharashtra, DastaneRamchandra and Co., Pune
3. Deshpande, C.D (1971) Geography of Maharashtra National Book Trust, India;
4. DiddeeJaymala and et.al. (2002) Geography of Maharashtra Rawat Publications, New Delhi
5. Dikshit K. R. (1971), Maharashtra Region in India, A Regional Geography Singh R. H. (Ed.), Thinkers Library, Varanasi.
6. Dikshit, K.R (1981) Maharashtra in Maps Maharashtra State Board for Literature and Culture, Bombay
7. Dikshit K. R. (1981), The Western Ghats, A Geographic view in perspectives in Geography, Thinkers Library Allahabad
8. Gadgil G. and Deshpande A. (1988) Maharashtra, Problems, Potential and Prospects, Somaiya Publications Pvt. Ltd., Bombay.
9. Karve I. (1975), Maharashtra, Land and Its people, Maharashtra State, Gazetteer, Directorate of Government Printing, Stationery & Publication, Maharashtra State.
10. Savadi, A.B. (2012); The Mega State Maharashtra, NiraliPrakashan Pune