||शिक्षण हाच धर्म||

Shri Aillak Pannalal Digambar Jain Pathashala's

(Jain Minority Institute)

WALCHAND COLLEGE OF ARTS AND SCIENCE (AUTONOMOUS), SOLAPUR

(Affiliated to Punyashlok Ahilyadevi Holkar Solapur University, Solapur)

NEP COURSE STRUCTURE-2023

NEP Syllabus

Name of Faculty: Science and Technology

Name of the Course: M.A./M.Sc.-I

Subject: Geography

w. e. f. June 2023

M.A./M.Sc. I – Geography NEP Syllabus w.e.f. June 2023 (New Syllabus)								
Sem.-I	**Code**	**Title of the Paper**	**Semester Exam.**			**L**	**P**	**Credits**
		DSC	**ESE**	**IE**	**Total**			
Geog.	DSC-I	Agricultural Geography	60	40	100	4	--	4
	DSC-II	Settlement Geography	60	40	100	4	--	4
	DSC-III	Geography of Transportation	30	20	50	2	--	2
DSE (Any one)								
	DSE-I-A	Cultural Geography	60	40	100	4	--	4
	DSE-I-B	Commercial Geography	60	40	100	4	--	
Practical (DSC-P)								
	DSC-P-I	Landforms Analysis Techniques	30	20	50	--	2	2
	DSC-P-II	Study of Climatic Data	30	20	50	--	2	2
RM								
	RM-I	Research Methodology in Geography	60	40	100	4	--	4
	Total for First Semester		**330**	**220**	**550**	**18**	**4**	**22**
Semester II								
Sem-II	**Code**	**Title of the Paper**	**Semester Exam**			**L**	**P**	**Credits**
Geog		**DSC**	**ESE**	**IE**	**Total**			
	DSC-IV	Resource Geography	60	40	100	4	-	4
	DSC-V	Geography of Manufacturing	60	40	100	4	-	4
	DSC-VI	Physical Geography of India	30	20	50	2	-	2
DSE (Any one)								
	DSE-II-A	Biogeography	60	40	100	4	-	4
	DSE-II-B	Geography of Health	60	40	100	4	-	
Practical (DSC-P)								
	DSC-P-III	Analysis of Socio-Economic Data	30	20	50	--	2	2
	DSC-P-IV	Statistical Techniques in Geography	30	20	50	--	2	2
On Job Training (OJT)								
	OJT	On Job Training	60	40	100	--	4	4
	Total for Second Semester		**330**	**220**	**550**	**14**	**8**	**22**

L= Lecture, P= Practical, DSC=Department Specific Core-Major, DSE= Department Specific Electives-Major, OE= Open Electives, VSC= Vocational Skill Courses, VSEC= Vocational Skill Enhancement Courses, SEC= Skill Enhancement Courses, AEC= Ability Enhancement Courses, IKS= Indian Knowledge System, VEC= Value Education Courses, OJT= On job Training, FP= Field Projects, CES= Community Engagement and Service, CC= Co-curricular Courses, RM= Research Methodology, RP= Research Project

Walchand College of Arts and Science, Solapur

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Department of Geography

M.A. Part I

Semester I – Agricultural Geography (DSC-I)

With effect from 2023

Course Credits: 04 **Allotted Lectures: 60**

1.1 Preamble:

The Geography students of M. A. Part-I can better understand all latest concepts in Agricultural Geography in brief but in adequate manner. Agricultural Geography is part of these courses deals with the study of origin, development and types of agriculture. In this subject also included the Primitive agriculture, which is found in middle part of Africa continents, South America and SE Asia which is in primitive stage of agriculture.

1.2 Objectives of the Course:

1. To familiarize the students with concept origin and development of agriculture.
2. To examine the role of agricultural determinants.
3. To make familiarize the students with the application of various theories, models, Agricultural system, and productivity.
4. To reexamine green revolution in India, contemporary issues and agricultural problems in Solapur district.

1.3 Learning Outcomes of the Course: The students will be able to

1. The course will provide an understanding of the conceptual and dynamic aspects of Agriculture.
2. Students became aware of types of agriculture and regions in the world.
3. Student will identify the basic concept of crop combination and crop diversification.

1.4. Programme Specific Outcomes:

1. Understand the nature and basic concepts of agriculture geography.
2. Identify the different factors affecting on agriculture development.
3. Understand the meaning and concept of Food, Nutrition and Hunger.

1.5 Programme Outcomes:

1. The Students are enabling to show the various agriculture systems on world map.
2. Students acquire the understanding of agricultural land use model.
3. The students identify the green revolution and its impact on environment.
4. Students acquire the understanding of agricultural policies in India.

1.6 Eligibility for Admission: Students who have passed B.A. Geography or similar exams will be admitted to this class.

1.7 Programme Duration: The structure of M.A. in Geography has four semesters in total covering a period of two years.

1.8 Duration of the Course: M. A. First Year comprises two semesters. First semester will have **five theory** (four papers four credits and one paper two credits) and **two practical** (two papers two credits) papers. The theory papers have 60 marks (4 credits) and 30 marks (2 credits) for End Semester Examination and 40 and 20 marks for Internal Evaluation of the paper. The practical papers have 30 marks for End Semester Examination and 20 marks for Internal Evaluation for each paper.

1.9 Modes of Internal Evaluation: Assignment, Seminar, Tutorial, Presentation, MCQs via Google, Field Visits, any other suitable mode along with marks for Attendance of the students.

1.10 Medium of Instruction: Marathi, English

Title of the Course/Paper

Agricultural Geography

Semester I

DSC-I

[Credits: 4]

Unit No.	Descriptions	No. of. Lectures
I	**Agricultural Geography:** 1.1 Definition, Nature and Scope of Agricultural Geography 1.2 Origin and Evaluation of Agriculture 1.3 Approaches to the study of Agricultural Geography: 1) Systematic 2) Regional	15
II	**Determinants and Types of Agriculture:** 2.1 Physical, economic and technological Determinants, 2.2 World Agricultural systems: Location, distribution, types and characteristics ofa) Shifting Cultivation, b) Intensive Agriculture, c) Extensive Agriculture,e) Plantation agriculture, f) Mixed Agriculture g) Dairy Farming, and h) Primitive Farming.	15
III	**Concepts and techniques of delimitation of agricultural regions**: 3.1 Crop combination, Crop diversification, 3.2 Measurements of agricultural Productivity, 3.3 Agricultural land use Model- a) Von Thunen's Model, and b) Jonasson's Model.	15
IV	**Green Revolution in India:** 4.1 Nature and impact of Socio-Economic, 4.2 Problems and prospects in the adoption of Green Revolution, 4.3 Ecological implications of the green revolution, 4.4 Organic Farming, Agro clinic 4.5 Contemporary issues: Food, Nutrition and Hunger, 4.6 Agricultural policies in India.	15

References:

Sr. No.	Name of Books	Name of Authors
1	Geography of Agriculture; Thems in Research. Prentice-Hall Englewood cliff. London.	Gregor H. F. (1970)
2	Agricultural Geography. Oxford University Press, London	Ilbury B.W. (1983)
3	Agriculture and Environment Change John Wiely, London.	Mannlon A. M. (1995)
4	Studies in Agricultural Geography/Rajesh Publication New Delhi	Mohammed Ali. (1978)
5	Agricultural Geography, New Delhi	Singh Jasbir&Dhillon S. S.
6	Agricultural Geography, Newton Abbot	Tarrant J. R. (1974)
7	Poverty Agriculture & Economic Growth, Vikas Publication New Delhi	Bhatia B. M. (1977)
8	The agricultural Systems of the World, Cambridge University Press	Grigg D. B. (1973)
9	Systematic Agricultural Geography, Rawat Publication Jaipur (India)	Hussain Majid (1999)
10	Agricultural Geography, London	Symon. (1968)
11	Perspective in Agricultural Geography, Six Volume	Noor Mohammed
12	Green-Revolution How is it? Vishal Publication Kurukshetra.	Jasbir Singh (1973)

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Department of Geography

M.A. Part I

Semester I- Settlement Geography (DSC-II)

With effect from 2023

Course Credits: 04 **Allotted Lectures: 60**

1.1 Preamble:

The Geography students of M. A. Part-I can better understand all latest concepts and themes Settlement Geography in brief but in adequate manner. Settlement part of this courses deals with the study of settlement processes and evolution and history of human settlement. In this subject also included the site and situations as well as factors impacting on settlements. Also studied the different settlement patterns and theories.

1.2 Objectives of the Course:

1. The objective of this course is to introduce the settlement types in world.
2. To study the students with Rural and urban settlement.
3. To introduce functional classifications of towns in urban and rural area.
4. To get the students identified zone of urban, market centre's, urban agglomeration and transport communication.

1.3 Learning Outcomes of the Course: The students will be able to

1. The course will provide an understanding of physical factors and cultural factors of settlement development.
2. Students will also teach the concern of applied wholesaler and retail trader's fields.
3. Students became aware of urban sprawl and urban pollution.
4. Student will identify the basic concept of central business district and concentric zone theory.

1.4. Programme Specific Outcomes:

1. Understand the nature and scope and concepts of settlement.
2. Identify the different settlement patterns and structure landforms in physical manner.
3. Identify the various towns of functional characteristics with historical background.
4. Understand the concepts of nearest neighbor analysis.

1.5 Programme Outcomes:

1. The Students are enabling to sketch the various diagrams of settlement structure.
2. Students acquire the understanding primary activities in rural settlement
3. The students identify the primate cities in the world
4. Students acquire the knowledge of policies of human settlement.

1.6 Eligibility for Admission: Students who have passed B.A. Geography or similar exams will be admitted to this class.

1.7Programme Duration: The structure of M.A. in Geography has four semesters in total covering a period of two years.

1.8 Duration of the Course: M. A. First Year comprises two semesters. First semester will have **five theory** (four papers four credits and one paper two credits) and **two practical** (two papers two credits) papers. The theory papers have 60 marks (4 credits) and 30 marks (2 credits) for End Semester Examination and 40 and 20 marks for Internal Evaluation of the paper. The practical papers have 30 marks for End Semester Examination and 20 marks for Internal Evaluation for each paper.

1.9 Modes of Internal Evaluation: Assignment, Seminar, Tutorial, Presentation, MCQs via Google, Field Visits, any other suitable mode along with marks for Attendance of the students.

1.10 Medium of Instruction: Marathi, English

Title of the Course/Paper

Settlement Geography

Semester I

DSC-II

[Credits: 4]

Unit No.	Title of the Unit	No. of Lecture	No. of Credits
1	1.1 Settlement Geography: -Definitions, nature and scope. 2.2 Significance and evolution of human settlement; 2.3 Trend and growth of Human Settlement.	15	1
2	2.1 Rural Settlement: Site and situation, types & pattern, size and growth of Rural settlement, 2.2 Functional Classification of Rural settlement, House types based on building material, 2.3 Environmental, socio-economic, & Cultural Factors influencing the dynamics structure of Rural Settlement.	15	1
3	3.1 Urban Settlement: Meaning, nature and scope of Urban Geography, 3.2 Functional classification of Urban centers, Morphological structure of cites 3.3 The Concentric Zone Theory, The Sector Theory, The multi nuclei Theory	15	1
4	4.1 Theories of Chris taller and August Losch and their applications. 4.2 Measurement of centrality and hierarchy, Concept of Primate city, city region and Rank–size rule. 4.3 Issues, perspective and polices on population & human Settlement. 4.4 Sustainable development of rural settlement	15	1

References:

1 Ambrose, Peter, Concepts in Geography Vol.-I Settlement Pattern, Longman 197.

2 Census of India, House types and Settlement Patterns of Villages in India, GOI, New Delhi 1961.

3 Singh R. L. and Kashi Nath Singh (Editors); Readings in Rural Settlements Geography, National Geographical Society of India. Varanasi, 1975.

4 Ucko, M.J., Ruth Tringham and G.W. Dimbleby (editors), Man, Settlement and Urbanism, Duckworth 1972.

5 United Nations Centre for Human Settlements (HABITAT), An Urbanising World, Global Report on Human Settlements, Oxford University Press for HABITAT 1996.

6 Hudson, F. S. (1977) Geography of Settlement Mcdonadls and Evaus New York

7 Singh R. V. Geography of settlement, Rawat Pub. Jaipur

8 Mandel R B (1979): Introduction to Rural settlement

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Department of Geography

M.A. Part I

Semester I- Geography of Transportation (DSC-III)

With effect from 2023

Course Credits: 02 **Allotted Lectures: 30**

1.1 Preamble:

The Geography students of M. A. Part-I can better understand all latest concepts and themes of Geography of transportation in brief but in adequate manner. Transportation of any region determines the development of any region. This courses deals with the study of various types of transportation. In this subject also included the regional density and transportation as well as factors impacting on transportation. In this subject also studied the different modes of transportation.

1.2 Objectives of the Course:

1. The objective of this course is to introduce the modes of transport.
2. To study the students with various types of transport in India and World.
3. To introduce economic significance of Transportation.
4. To get the students identified zone of waterways and airways in world.

1.3 Learning Outcomes of the Course: The students will be able to

1. The course will provide an understanding of physical factors affecting on transport network
2. Students became aware of government policy in development of transportation.
3. Students became aware of development and transport network connectivity.
4. Student will identify the distribution of transportation in India and World.

1.4. Programme Specific Outcomes:

1. Understand the nature and scope and concepts of geography of transportation.
2. Identify the different modes of transportation.
3. Identify the world's major waterways.
4. Understand the importance of inland waterways.

1.5 Programme Outcomes:

1. The Students are enabling to sketch the major waterways in world.
2. Students acquire the understanding tertiary activities of man.
3. The students identify the airways in the world

4. Students acquire the knowledge of railways and pipeline in India.

1.6 Eligibility for Admission: Students who have passed B.A. Geography or similar exams will be admitted to this class.

1.7Programme Duration: The structure of M.A. in Geography has four semesters in total covering a period of two years.

1.8 Duration of the Course: M. A. First Year comprises two semesters. First semester will have **five theory** (four papers four credits and one paper two credits) and **two practical** (two papers two credits) papers. The theory papers have 60 marks (4 credits) and 30 marks (2 credits) for End Semester Examination and 40 and 20 marks for Internal Evaluation of the paper. The practical papers have 30 marks for End Semester Examination and 20 marks for Internal Evaluation for each paper.

1.9 Modes of Internal Evaluation: Assignment, Seminar, Tutorial, Presentation, MCQs via Google, Field Visits, any other suitable mode along with marks for Attendance of the students.

1.10 Medium of Instruction: Marathi, English

Title of the Course/Paper

Geography of Transportation

Semester I

DSC-III

[Credits: 2]

Unit No.	Title of the Unit	No. of Lecture	No. of Credits
1	1.1 Meaning, Characteristics and Scope of Transportation 1.2 Transportation as tertiary activity 1.3 Approaches of transportation geography 1.4 Importance of transportation geography 1.5 Geographical factors affecting the development of transportation	15	1
2	2.1 Modes of Transportation- Land, Road, Railway, Airways and Pipelines 2.2 Regional Density and distribution of Transportation in India and World 2.3 Economic significance of transportation in India and World 2.4 Water ways: World's major inland waterways and sea routes	15	1

References:

1. H.M. Saxena: Transport Geography, Rawat Publication
2. Moonis Raza and Yash Aggrarwal: Transport Geography of India
3. Concept publicationing Company, New Delhi
4. H &Bamford C.G.: Geography of Transport Robinson
5. Macdonald and Evans
6. Feulks R.W. Lan Allen: Principals of Transport -1973
7. Majiid Hussain (199) Human Geography, Rawat Publication, Jaipur

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Department of Geography

M.A. Part I

Semester I –Cultural Geography (DSE-I-A)

With effect from 2023

Course Credits: 04 **Allotted Lectures: 60**

1.1 Preamble:

The Geography students of M. A. Part-I can better acquire the knowledge the cultural landscapes and cultural variations. This course deals with the study of various cultural structures of Race, Religion and languages originated in the world. In this subject also included sub contents of racial classification in this course also studied the nature and scope of Cultural Geography and Social Concept.

1.2 Objectives of the Course:

1. The objective of this course is to introduce Cultural variations and meaning of cultural Geography.
2. To study the students with distribution religion its sub branches and racial classification in different nation.
3. To introduce characteristics of racial elements.
4. To get the students familiar with tribal festivals and locations.

1.3 .Learning Outcomes of the Course: The students will be able to

1. The course will provide an understanding the concept of social well-being.
2. Students will also learn the different type language families.
3. Students will be achieving the knowledge of religious communities with special identity.
4. Student will identify major cultural regions and hearths in the world.

1.4. Programme Specific Outcomes:

1. Understand the social well-being for old age peoples and female welfare programmes.
2. Identify the different types of race.
3. Student well knowing the knowledge about tribal society system.
4. Understand the major different religious founders and its work.

1.5 Programme Outcomes:

1. The Students are enabling to draw cultural realm and regions.
2. Students acquire the understanding of Indian tribal groups.
3. The students identify the specific geographic location of cultural heritage sites.

4. Students acquire the understanding of major Primitive peoples in the world.

1.6 Eligibility for Admission: Students who have passed B.A. Geography or similar exams will be admitted to this class.

1.7 Programme Duration: The structure of M.A. I in Geography have fourth semesters in total covering a period of two years.

1.8 Duration of the Course: M. A. First Year comprises two semesters. First semester will have **five theory** (four papers four credits and one paper two credits) and **two practical** (two papers two credits) papers. The theory papers have 60 marks (4 credits) and 30 marks (2 credits) for End Semester Examination and 40 and 20 marks for Internal Evaluation of the paper. The practical papers have 30 marks for End Semester Examination and 20 marks for Internal Evaluation for each paper.

1.9 Modes of Internal Evaluation: Assignment, Seminar, Tutorial, Presentation, MCQs via Google, Field Visits, any other suitable mode along with marks for Attendance of the students.

1.10 Medium of Instruction: Marathi, English

Title of the Course/Paper

Cultural Geography

Semester I

DSE-I-A

[Credits: 4]

Unit No.	Title of the Unit	No. of Lecture	No. of Credits
1	**Introduction to Cultural Geography** 1.1 Introduction, evolution, definition, nature, scope and element. 1.2 Component of culture, significance of cultural Geography. 1.3 Difference between Social and culture	15	1
2	**Culture ,Race and Religion** 2.1 Concept of culture, Bases of cultural diversity. 2.2 Race, Religion and language, cultural diversity and regionalization in India. 2.3 Concept of cultural hearths and cultural diffusion, world cultural realms.	10	3
3	**Social wellbeing and Cultural Process** 3.1 Socio-Cultural development and well-being indicators. 3.2 Cultural pattern of rural and urban society. 3.3 Social and cultural processes in the developing countries with special reference to India.	15	
4	**Tribal Groups and cultural adaptation** 4.1 Tribal groups, diffusion of Religion and Ethnic traits in the world. 4.2 Economic activities and cultural adaptation- 4.3 Agricultural, Industrial and modern technological changes and their geographic implications	20	

References:

1. Social Geography, Rawat Publication Jaipur Ahmad Aijarudin (1999)
2. A Geography of Mankind, Mc-grew-K Book Co. New York Broek, Jan O. M. & Webb. John W. (1973)
3. An introduction to cultural Geography, Unwin Hyman London. Jackson Peter (1989)
4. Cultural geography, - People places and Environment west Publishing Co. New york. Jackon, Richard H and Loyd E. Hudman (1990)
5. An Introduction to Social Geography, - Oxford University Press Oxford. Jones, Emrys and Eyles John (1997)
6. Human Geography – Rawat Publication Jaipur. Majid Hussain (1994)
7. India culture Society and economy Inter India Publication, New Delhi Mukherjee A. B.K. Arijazuddin A (1985)
8. A place in the world cultures and Globalization, Oxford University, New York Massey D. K. Jess P. (1995)
9. Cultural Geography – Rout, leldge, Publication, London. Crag Mike (1998)

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Department of Geography

M.A. Part I

Semester I –Commercial Geography (DSE-I-B)

With effect from 2023

Course Credits: 04 **Allotted Lectures: 60**

1.1 Preamble:

The Geography students of M. A. Part-I can better acquire the knowledge the trades in India. This courses deals with the study of major industrial region of India. In this subject also included the contribution of economic activities in national development.

1.2 Objectives of the Course:

1. To understand the basic concept of commercial Geography.
2. To make the student of commerce aware about the relationship between the geographical factors and economic activities.
3. To acquaint the student about dynamic aspect of commercial Geography.
4. To provide the information about concept of population and tourism.

1.3 **.Learning Outcomes of the Course:** The students will be able to

1. Student will describe basic concept of Commercial Geography
2. Student will illustrate the Correlation between Geographical environment and Commerce
3. Student will explain the roll of trade, transport and industries in commercial Geography.
4. Student will explain an importance of Population dimensions and tourism industries in Commercial Geography.

1.4. Programme Specific Outcomes:

1. Understand the Major International Rail, Sea & Air routes.
2. Identify the different types industries in India.
3. Student well knowing the Importance of transportation in commercial development.
4. Understand the Concept of optimum population, over population and under population.

1.5 Programme Outcomes:

1. The Students are enabling to draw major international rail, sea and air routes.
2. Students acquire the understanding of India’s foreign trade.
3. The students identify the Tourism industry and Agro-tourism in India.
4. Students acquire the understanding IT Industries in the world.

.**1.6 Eligibility for Admission**: Students who have passed B.A. Geography or similar exams will be admitted to this class.

1.7Programme Duration: The structure of M.A. I in Geography have fourth semesters in total covering a period of two years.

1.8 Duration of the Course: M. A. First Year comprises two semesters. First semester will have **five theory** (four papers four credits and one paper two credits) and **two practical** (two papers two credits) papers. The theory papers have 60 marks (4 credits) and 30 marks (2 credits) for End Semester Examination and 40 and 20 marks for Internal Evaluation of the paper. The practical papers have 30 marks for End Semester Examination and 20 marks for Internal Evaluation for each paper.

1.9 Modes of Internal Evaluation: Assignment, Seminar, Tutorial, Presentation, MCQs via Google, Field Visits, any other suitable mode along with marks for Attendance of the students.

1.10 Medium of Instruction: Marathi, English

Title of the Course/Paper

Commercial Geography

Semester I

DSE-I-B

[Credits: 4]

Unit No.	Title of the Unit	No. of Lecture	No. of Credits
1	**Introduction to Commercial Geography** 1.1 Definition, Nature and Scope of Commercial Geography 1.2 Approaches to the study of Commercial Geography 1.3 Importance of Commercial Geography	15	1
2	**Geographical environment and Commerce** 2.1 Physical and Cultural Environment 2.2 Classification of economic activities 2.3 Contribution of economic activities in national development	15	1
3	**Trade, Transport and Industries** 3.1 Geographical factors affecting on international trade 3.2 India's foreign trade 3.3 Major International Rail, Sea & Air routs 3.4 Importance of transportation in commercial development 3.5 Major industries in India-Iron &steel, Cotton Textile, Automobile, IT Industries	15	1
4	**Population and Tourism** 4.1 Concept of optimum population, over population and under population 4.2 Geographical factor influencing tourism 4.3 Tourism industry and Agro-tourism in India.	15	1

References:

1. Alexander J.W. (1976): Economic Geography, Prentice hall of India, New Delhi.
2. Robinson H &Bamford C.G. (1978): Geography of Transport, Macdonald &Evans USA.
3. Commercial Geography – Sir Dudley Stamp
4. Economic and Commercial Geography – Gupta
5. Watts H.D.(1987) : Industrial Geography, Longman Scientific & Technical New York

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Department of Geography

M.A. Part I

Semester I –Landform Analysis Techniques (DSC-P-I)

With effect from 2023

Course Credits: 02 **Allotted Lectures: 30**

1.1 Preamble:

The Geography students of M. A. Part-I can better understand all basic and latest concepts of cartography. Cartography is the part of these courses deals with the draw the various types landforms and profiles. In this subject also included the river stream order, bifurcation ratio and drainage density for the analysis of river channel. Slope determinant is another part also studied to draw various types of slope and it's measurement to using C.K. Wentworth and Smith's method. Profiles are also shows for using counter lines from toposheets.

1.2 Objectives of the Course:

1. The objective of this course is to introduce the latest technology in cartography.
2. To study the students history of map and representation of relief features.
3. To get the students information about indexing of toposheets.
4. To get the students familiar with profiles, identification of landforms from toposheets and river drainage pattern.

1.3 Learning Outcomes of the Course: The students will be able to

1. The course will provide an understanding difference between old and new techniques cartography.
2. Students will also learn the various types of slopes and landforms.
3. Students became aware of river channel and counter lines from toposheets.
4. Student will identify drainage pattern and bifurcation ratio.

1.4. Programme Specific Outcomes:

1. Understand the history of map making.
2. Identify the different landforms from toposheets.
3. Identify the different types of landforms and profiles.
4. Understand the various method of slope determinant.

1.5 Programme Outcomes:

1. The Students are enabling to draw the various types of landforms and slopes.
2. Students acquire the understanding the concept of profile.
3. The students identify the slopes using counters from toposheets.
4. Students acquire the understanding of river pattern and associated factors i.e. slopes, counters.

1.6 **Eligibility for Admission**: Students who have passed B.A. Geography or similar exams will be admitted to this class.

1.7 **Programme Duration**: The structure of M.A. in Geography has four semesters in total covering a period of two years.

1.8 **Duration of the Course**: M. A. First Year comprises two semesters. First semester will have **five theory** (four papers four credits and one paper two credits) and **two practical** (two papers two credits) papers. The theory papers have 60 marks (4 credits) and 30 marks (2 credits) for End Semester Examination and 40 and 20 marks for Internal Evaluation of the paper. The practical papers have 30 marks for End Semester Examination and 20 marks for Internal Evaluation for each paper.

1.9 **Modes of Internal Evaluation:** Assignment, Seminar, Tutorial, Presentation, MCQs via Google, Field Visits, any other suitable mode along with marks for Attendance of the students.

1.10 **Medium of Instruction:** Marathi, English

Title of the Course/Paper

Landforms Analysis Techniques

Semester I

DSC-P-I

[Credits: 2]

Unit No	Title of the Unit	No of Lectures	No of Credits
I	**1.1 Maps and Relief** A) Maps- Definitions, History and Types B) Indexing of Topographical Sheets, Methods of Representation of Relief- i) Pictorial ii) Mathematical **1.2Identification of Landforms from Topographical Maps** i) Ridge ii) Saddle iii) Col iv) Pass v) Spur vi) Plateau vii) Escarpment viii) Cliff ix) 'V' Shaped Valley, x) U Shaped Valley, xi) Waterfall **1.3Identification and Mapping of Slopes** A) Types of Slope- Steep, Gentle, Uniform, Undulating, Concave, Convex and Terraced (Two Examples each) B) Calculation of Gradient- By Gradient, By Degree, By Per cent and By Mills	15	1
II	**2.1 Identification and Mapping of Drainage Pattern** A) Types of Drainage Pattern- Dendritic, Trellies, Radial and Centrifugal B) Strahler Stream Ordering, Calculation of Bifurcation Ratio C) Calculation of Drainage Density **2.2 Profiles:** Serial, Superimposed, Projected, Composite, Transverse and Longitudinal **2.3 Slope Determination** A) G. H. Smith's Method B) C.K. Wentworth C) Other methods of Slope Analysis i) Area Height Diagram and ii) Hypsometric Curve	15	1

References:

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.

Walchand College of Arts and Science, Solapur

(Autonomous)

Department of Geography

M.A. Part I

Semester I –Analysis of Climatic Data (DSC-P-II)

With effect from 2023

Course Credits: 02 **Allotted Lectures: 30**

1.1 Preamble:

The Geography students of M. A. Part-I can better understand all basic graphical techniques using in climatic data variation. Climatic data is the part of these courses deals with the draw the various graphs and diagrams different stations related to weather and climatic conditions and interpretation with analyzing. In this subject properly mentioned moving average lines with trend lines and its data analysis. Otherwise some dispersion graphs very useful to show clear climatic data variables its indicates several topics about weather climatic information in statistical format odd and even data formula.

1.2 Objectives of the Course:

1. The objective of this course is to introduce the student with interpretation and construction of climatic graph and diagram.
2. To study the students different trend line graphical analysis with data tabulation.
3. To get the student's knowledge about draw the temperature and rainfall climatic dispersion graph
4. To get the students well knowing with correlation variables numbers plotting on the graph pages with typical formula calculation using in research sectors in various region. .

1.3 Learning Outcomes of the Course: The students will be able to

1. The course will provide an understanding difference between correlation and dispersion graph pattern.
2. Students will also attain the knowledge about semi –average line graphs with odd and even techniques.
3. Students became creative in field of calculation, tabulation, and digitalization in spatial climatic data with represent and interpretation.
4. Student will identify temperate zones, subtropical zone and monsoon seasonal zone help with weather maps.

1.4. Programme Specific Outcomes:

1. Understand the proper techniques and skills about calculation of rainfall dispersion graph.
2. Identify the different hill stations and dry region in specific region through graphical analysis.
3. Collect the knowledge about line graphs and correlation graphs with different techniques.

1.5 Programme Outcomes:

1. The Students are enabling to draw the various types graphs of semi average in odd and even data.

2. Students achieve the skill about find out dry and wet region with spatial zone.
3. The students identify the moving average lines and correlation climatic variables with special formulas.

1.6 Eligibility for Admission: Students who have passed B.A. Geography or similar exams will be admitted to this class.

1.7 Programme Duration: The structure of M.A. in Geography has four semesters in total covering a period of two years.

1.8 Duration of the Course: M. A. First Year comprises two semesters. First semester will have **five theory** (four papers four credits and one paper two credits) and **two practical** (two papers two credits) papers. The theory papers have 60 marks (4 credits) and 30 marks (2 credits) for End Semester Examination and 40 and 20 marks for Internal Evaluation of the paper. The practical papers have 30 marks for End Semester Examination and 20 marks for Internal Evaluation for each paper.

1.9 Modes of Internal Evaluation: Assignment, Seminar, Tutorial, Presentation, MCQs via Google, Field Visits, any other suitable mode along with marks for Attendance of the students.

1.10 Medium of Instruction: Marathi, English

Title of the Course/Paper

Study of Climatic Data

Semester I

DSC-P-II

[Credits: 2]

Unit No	Title of the Unit	No of Lectures	No of Credits
I	**Nature and Sources of Climatic Data** I) Indian Daily Weather Reports-Formats, Reading elements And Interpretation II) Weather symbol system of Beaufort III) Interpretation of weather broadcasting on television news Forecast IV) Analysis of Upper Air Data (Tephigraph). V) Satellite Images: Interpretation and Forecast	15	1
II	**Trend Line Graphs and its Graphical Analysis** 1.1Moving Averages Line- Three and Five Years 1.2 Semi Average Line- Odd and Even Years		
III	**Climatic Diagrams and Maps** I) Wind Roses- Simple, Compound and Octagonal II) Climograph III) Isolines Interpretation-Isotherms, Isobars and Isohyets	15	1
IV	**Graphical Analysis** 2.1 Dispersion Graphs- Rainfall and Temperature 2.2 Hythergraph		

References:

1. Ashis Sarakar : Practical Geography A Systematic approach, Orient Longman Ltd. Kolkatta.
2. Critchifield : Principles of Climatology.
3. Lawrence, G.R.P. : Cartographic methods, Mathur Co. London.
4. Mather J.R. (1974) Climatology, Fundamental & applications. McGraw Hill Book Co. New York.
5. Monkhouse, F.J.R. : Maps & Diagrams, Wilkinson, H.R. Methuen & Co.London.
6. R. L. Singh &Rana P.B. Singh: Element of Practical Geography, Kalyani Pub. New Dehli. (1999)
7. Trewartha G.T. : An Introduction to climate McGraw – Hill Book Co. , New

Walchand College of Arts and Science, Solapur

(Autonomous)

Department of Geography

M.A. Part I

Semester I –Research Methodology in Geography (RM-I)

With effect from 2023

Course Credits: 04 **Allotted Lectures: 60**

1.1 Preamble:

The Geography students of M. A. Part-I can improve the knowledge about research skill and project design with understand all basic fieldwork techniques and research data. Primary and secondary data is the part of these courses deals with the collecting and presentation of various data. In this subject properly mentioned types of sampling methods and importance of sampling in research. Otherwise frame work of project reports with text and references. The individual or group wise project report prepares with representing and interpretation of data analysis by selected problematic area. The course intended to provide post graduate students with a thorough knowledge and practice in conducting research development projects and to serve as presentation for carrying gout studies in projects and theses.

1.2 Objectives of the Course:

1. The objective of this course is to introduce the student some basic concept of research and its methodologies
2. To identify appropriate research topics.
3. To select and define suitable research problem and parameters
4. Students so that they are capable prepare a project proposal by individual or team research work. Besides organize and conduct of research framework appropriate manner.

1.3 Learning Outcomes of the Course: at the end of the course the student should be able to

1. To identify and describe researchable ideas, projects and themes.
2. Students will also design and specify methods for carrying out a scientific research demonstrate of skills and research attitude.
3. Students to be able to analyze data using scientific methodologies.
4. Student will to present research results in a systematic and objectives way.

1.4. Programme Specific Outcomes:

1. Understand the proper methods of data collection and skills about calculation.
2. Identify the different sampling methods and modes of data analysis.
3. Collect the knowledge about fieldwork through Micro, Meso and Macro region.

1.5 Programme Outcomes:

1. The Students are enabling to manipulate the collected data the various types of techniques applied

2. Students achieve the skill about preparation of questionaries, schedules and interviews of relevance topic.
3. The students explains and represents problematic issues in particular location with better suggestions lines and correlation climatic variables with special formulas.

1.6 Eligibility for Admission: Students who have passed B.A. Geography or similar exams will be admitted to this class.

1.7 Programme Duration: The structure of M.A. in Geography has four semesters in total covering a period of two years.

1.8 Duration of the Course: M. A. First Year comprises two semesters. First semester will have **five theory** (four papers four credits and one paper two credits) and **two practical** (two papers two credits) papers. The theory papers have 60 marks (4 credits) and 30 marks (2 credits) for End Semester Examination and 40 and 20 marks for Internal Evaluation of the paper. The practical papers have 30 marks for End Semester Examination and 20 marks for Internal Evaluation for each paper.

1.9 Modes of Internal Evaluation: Assignment, Seminar, Tutorial, Presentation, MCQs via Google, Field Visits, any other suitable mode along with marks for Attendance of the students.

1.10 Medium of Instruction: Marathi, English

Title of the Course/Paper

Research Methodology in Geography

Semester I

RM-I

[Credits: 4]

Unit No.	Title of the Unit	No. of Lecture	No. of Credits
1	**Research Methodology: An Introduction** 1) Meaning and Objectives of Research 2) Types of Research and Research Approaches 3) Significance of Research in Geography 4) Research and Scientific Method 5) Criteria of Good Research	15	1
2	**Research Problem and Research Design** 1) Meaning of Research Problem 2) Necessity of Defining the Problem and Technique Involved in Defining a Problem 3) Meaning of Research Design 4) Need for Research Design 5) Features of a Good Design and Important Concepts Relating to Research Design	15	1
3	**Sampling Design** 1) Census and Sample Survey 2) Implications of a Sample Design and Steps in Sampling Design 3) Criteria of Selecting a Sampling Procedure 4) Characteristics of a Good Sample Design 5) Different Types of Sample Designs	15	1
4	**Data Collection and Data Analysis** 1) Methods of Data Collection 2) Processing and Analysis of Data 3) Testing of Hypothesis 4) Interpretation and Report Writing	15	1

References:

1. Johnes P. A.: Field work in Geography, – Longman
2. Ahuja Ram, – Research Method
3. Kothari C. R. (1996): Research Methodology, – Vishwas Prakashan, New Delhi
4. Misra R. P. (1991): Research Methodology in Geography, Concept publication New Delhi
5. Archet J. E. Dalton T. H. (1968): The field work in geography, Batsford Ltd., London.
6. Haming Lioyed (1975): Scientific Geographic Research, W C Brow Company U.S.A.
7. Borase: An Introduction of Research Method, (2005)
8. Hans Raj (1988): Theory and Practice in Social Research, Surjeet Publication, 7-K,Kolhapur

Walchand College of Arts and Science (Autonomous), Solapur
M. A. Part – I Sem-II
Title of the Course/Paper
Resource Geography
DSC-IV
NEP

1.1 Preamble:

The course provides analysis of world resources distribution, conservation and preservation and problems resulting from their natural occurrence and utilization. The Resource Geography of is part of these courses deals with the study of various types of natural resources in world with India. In this subject also included concepts of conventional and non-conventional resources and its classifications. The forest and water resources role is very significant in India. The Resources economics deals with the supply, demand and allocation of the earth natural resource.

1.2 Objectives of the Course:

1. To understand the concept and classification of Resources.
2. To examine the major resources (water, forest, energy and human) with their distribution, utilization and problems.
3. To study the sustainable resource development.

1.3 Learning Outcomes of the Course: The students will be able to

1. The course will provide to understand the different types of resources in world.
2. Students became aware of natural resources and its effect on environment.
3. Students will familiar the concepts of sustainable resource development.
4. Analyze the decadal changes in state-wise production of coal and iron ore

1.4. Programme Specific Outcomes:

1. Understand the main resources of renewable and non-renewable
2. Develop the skill of mapping forest cover from satellite images
3 Understand the basic process of resources and its utilization, problems and conservation.

1.5 Programme Outcomes:

1. The Students are enabling to show the major resource regions on the world map
2. Students achieve the knowledge of human resource development.
3. The students identify the major difference between land and water resources and its importance.
4. The Students understanding the contribution of mineral resources in to the economic development process.

1.6 Eligibility for Admission: Students who have passed B.A. Geography or similar exams will be admitted to this class.

1.7 Programme Duration: The structure of M.A. in Geography has four semesters in total covering a period of two years.

1.8 Duration of the Course: M. A. First Year comprises two semesters. Second semester will have **four theory** (three papers four credits and one paper two credits) and **three practical** (two papers two credits and one paper four credits) papers. The theory papers have 60 marks (4 credits) and 30 marks (2 credits) for End Semester Examination and 40 and 20 marks for Internal Evaluation of the paper. The practical papers have 60 marks (4 credits) and 30 marks (2 credits) for End Semester Examination and 40 and 20 marks for Internal Evaluation for each paper.

1.9 Modes of Internal Evaluation: Assignment, Seminar, Tutorial, Presentation, MCQs via Google, Field Visits, any other suitable mode along with marks for Attendance of the students.

1.10 Medium of Instruction: Marathi, English

Title of the Course/Paper

Resource Geography

Semester II

DSC-IV

[Credits: 4]

Unit No.	Title of the Unit	No. of Lecture	No. of Credits
1	**Introduction to Resource Geography** 1.1 Definition, Nature, and Scope of Resource Geography. 1.2 Concept and Classification of Resource. 1.3 Importance of Resource.	15	1
2	**Natural Resource** 2.1 Soil Resource–Distribution, Utilization, Problems and Conservation. 2.2 Water Resources-Distribution, Utilization, Problems and Conservation. 2.3 Forest Resource-Distribution, Production, Problems and Conservation.	15	1
3	**Energy Resource** 3.1ConventionalResource-Distribution,Utilization, Problems and Conservation. 3.2 Non-Conventional Resources Distribution Utilization, Problems and Conservation.	15	1
4	**Sustainable Resource development** 4.1 Concept of sustainable Resource Development. 4.2 Sustainable Natural Resource Development-Land, Water, Forest, Mineral and Energy. 4.3 Human Resource Development	15	1

References:

1. Cutter S. N., Renwich H. L. and Renwick W., 1991: Exploitation, Conservation, Preservation: A Geographical Perspective on Natural Resources Use, John Wiley and Sons, New York.
2. Gadgil M. and Guha R., 2005: The Use and Abuse of Nature: Incorporating This Fissured Land: An Ecological History of India and Ecology and Equity, Oxford University Press. USA.
3. Holechek J. L. C., Richard A., Fisher J. T. and Valdez R., 2003: Natural Resources: Ecology, Economics and Policy, Prentice Hall, New Jersey.
4. Jones G. and Hollier G., 1997: Resources, Society and Environmental Management, Paul Chapman, London.
5. Klee G., 1991: Conservation of Natural Resources, Prentice Hall, Englewood.
6. Mather A. S. and Chapman K., 1995: Environmental Resources, John Wiley and Sons, New York.
7. Mitchell B., 1997: Resource and Environmental Management, Longman Harlow, England.
8. Owen S. and Owen P. L., 1991: Environment, Resources and Conservation, Cambridge University Press, New York.

Walchand College of Arts and Science, Solapur

Department of Geography

M.A. Part I

Semester II –Geography of Manufacturing

DSC-V

NEP

Course Credits: 04 **Allotted Lectures: 60**

1.1 Preamble:

The Geography students of M. A. Part-I can better understand all concepts in geography of manufacturing with brief but in adequate manner. Geography of manufacturing is part of these courses deals with the study of various types of industries in India and world as well as the theories and models of industrial location. In this subject also included concepts of Localization, Centralization and Decentralization. The tourism industry in India is also included due to emerging industry in India.

1.2 Objectives of the Course:

1. To introduce the nature, development and significance of manufacturing and its links with the world economy.
2. To understand the location of major manufacturing activities with the support of various industrial location theories and models.
3. To discuss problems and impact of manufacturing industries with respect to relocation environmental pollution and occupational health and industrial hazard.

1.3 Learning Outcomes of the Course: The students will be able to

1. The course will provide to understand the major industry in world.
2. Students became aware of industrial policy and tourism industry in India.
3. Student will identify the fundamental concepts of Localization, Centralization and Decentralization.

1.4. Programme Specific Outcomes:

1. Understand the major industrial regions in India.
2. Identify the changing industrial policies in India.
3. Understand the role of industries in socio economic development of any regions.

1.5 Programme Outcomes:

1. The Students are enabling to show the major industrial regions on the map of India.
2. Students acquire the understanding theories and models in industrial location.

3. The students identify the Inter-relationship between the manufacturing and economic development.
4. Students acquire the understanding of tourism industry in India.

1.6 Eligibility for Admission: Students who have passed B.A. Geography or similar exams will be admitted to this class.

1.7 Programme Duration: The structure of M.A. in Geography has four semesters in total covering a period of two years.

1.8 Duration of the Course: M. A. First Year comprises two semesters. Second semester will have **four theory** (three papers four credits and one paper two credits) and **three practical** (two papers two credits and one paper four credits) papers. The theory papers have 60 marks (4 credits) and 30 marks (2 credits) for End Semester Examination and 40 and 20 marks for Internal Evaluation of the paper. The practical papers have 60 marks (4 credits) and 30 marks (2 credits) for End Semester Examination and 40 and 20 marks for Internal Evaluation for each paper.

1.9 Modes of Internal Evaluation: Assignment, Seminar, Tutorial, Presentation, MCQs via Google, Field Visits, any other suitable mode along with marks for Attendance of the students.

1.10 Medium of Instruction: Marathi, English

Title of the Course/Paper

Geography of Manufacturing

Semester II

DSC-V

[Credits: 4]

Unit No.	Descriptions	No. of. Lectures	No. of. Credits
I	**Introduction** 1.1 Meaning, Nature, Scope and Recent developments of Manufacturing 1.2 Factors of localization of manufacturing industries 1.3 Inter-relationship between the manufacturing and economic development 1.4 Localization, Centralization and Decentralization	15	01
II	**Theories and Models** 2.1 Theories and models of industrial location:- (a) A. Webar, (b) A. Losch, (c) Sargent Florence's; Modern refinements to Least cost-theory 2.2 Critical review and application of industrial location theories 2.3 Methods of measuring the spatial distribution of manufacturing industries:- (a) Standard Industrial classification, (b) Neo-classical theory	15	01
III	**Major Industries** 3.1 Distribution and spatial pattern of manufacturing industries: (a) Iron and steel,(b) Textiles, (c) Chemicals,(d)Automobiles, (e) Hardware and software- industries, with special references to U.S.A., Japan, U.K. and India 3.2 Methods of delineating manufacturing regions 3.3 Major manufacturing regions of the world	15	01
IV	**Industries in India** 4.1 Environmental degradation caused by manufacturing industries: (a) Industrial Hazards (b) Occupation and health 4.2 Impact of manufacturing industries on economic development in India 4.3 Tourism industry in India 4.4 Effects of Privatization, Liberalization and Globalization on Indian Industries 4.5 Changing Industrial Policy in India	15	01

References:

1. Alexander, J.W.: Economic Geography, Prentice Hall, Englewood Cliffs, 1988.

2. Alexanderson, C: Geography of Manufacturing, Prentice Hall, Bombay, 1967.

3. Hoover, E,M.- The location and space economy, McGraw Hill, New York 1948.

4. Isard, W.: Methods of Regional Analysis, The Technology Press of M.I.T. & John Wiley & Sons, New York 1956.

5. Miller, E. A., Geography of Manufacturing, Prentice Hall, Englewood Cliffs, New Jersey. 1962.

6.Weber, Alfred: Theory of Location of Industries, Chicago University Press, Chicago, 1957.

Walchand College of Arts and Science (Autonomous), Solapur

Department of Geography

M.A./M.Sc. Part I

Semester II

Physical Geography of India

DSC-VI

NEP

Course Credits: 02 **Allotted Lectures: 30**

1.1 Preamble:

The Geography students of M.A./M.Sc. Part-I can better understand all concepts all commercial crops and its productions, exemption and distribution of several minerals, energy resources state wise distribution mainly in India. This courses deals with the study of Indian Physiographic divisions with size and extension. In this subject also included emerging new states as well as natural regions in Indian subcontinent. In this course also studied and exercises of map different physical and political mapping pattern with own characteristics.

1.2 Objectives of the Course:

1. The objective of this course is to introduce Indian territory region with land border and ocean border shares with neighboring countries of Indian subcontinent.
2. To understand the students of several soil topography natural vegetation and coastal regions in India.
3. To introduce the Climatic regions according of Koppens' and Triwartha with basically in Indian Territory.
4. To get the students familiar with different minerals resources and it's related to industrial sites.

1.3 Learning Outcomes of the Course: The students will be able to

1. The course will provide an understanding of drainage pattern of India.
2. Students will also learn the different type of soils texture and natural vegetation different geographical location in India.
3. Students will be achieving the knowledge conventional agriculture crops and cash crops types in India.

1.4. Programme Specific Outcomes:

1. Students introduce different types of cereal crops and cash crops.
2. Student identifies the classification of climatic regions in India.
3. Students familiars agro-climatic zones in Indian subcontinent.

1.5 Programme Outcomes:

1. The Students are enabling to understand the relative location of India on globe model.

2. Students acquire the understanding of knowledge main mountain chains of Himalaya with different geographical location.
3. Students acquire the understanding the knowledge of Irrigation modes in India.

1.6 Eligibility for Admission: Students who have passed B.A. Geography or similar exams will be admitted to this class.

1.7 Programme Duration: The structure of M.A./M.Sc. in Geography has four semesters in total covering a period of two years.

1.8 Duration of the Course: M. A. First Year comprises two semesters. Second semester will have **four theory** (three papers four credits and one paper two credits) and **three practical** (two papers two credits and one paper four credits) papers. The theory papers have 60 marks (4 credits) and 30 marks (2 credits) for End Semester Examination and 40 and 20 marks for Internal Evaluation of the paper. The practical papers have 60 marks (4 credits) and 30 marks (2 credits) for End Semester Examination and 40 and 20 marks for Internal Evaluation for each paper.

1.9 Modes of Internal Evaluation: Assignment, Seminar, Tutorial, Presentation, MCQs via Google, Field Visits, any other suitable mode along with marks for Attendance of the students.

1.10 Medium of Instruction: Marathi and English

Title of the Course/Paper

Physical Geography of India

Semester II

DSC-VI

[Credits: 2]

Unit No.	Title of the Unit	No. of Lecture	No. of Credits
1	**Physiography of India** 1.1 Location and Extent 1.2 Physiographic divisions 1.3 Climatic types 1.4 Drainage system 1.5 Types of Nature Vegetation 1.6 Types of Soils and its conservation	15	1
2	**Agriculture** 2.1Importance of Agriculture in Indian Economy 2.2 Irrigation – Mode of irrigation (wells, tanks, canals) 2.3 Cereal crops – Rice, Wheat and Maize 2.4 Cash crops – sugar cane, cotton and Tea 2.5 Agro Climatic regions of India	15	1

References:

1. Center for science & Environment (1988) state of India's Environment New Delhi
2. Deshpande C.D. India: a regional Interpretation ICSSR and Northern Book Center 1992.
3. Dreze, Jean and Amartyasen (Ed.) India Economic Development and social opportunity: Oxford University press, New Delhi1996.
4. Kundu A. Raza Moonis: Indian Economy: The Regional Dimension, Spectrum Publishers New Dehli.1982.
5. Robinson Francis: The Cambridge encyclopedia of India, Pakistan, Bangladesh, Sri Lanka, Nepal, Bhutan & Maldives, Cambridge University Press London1989.
6. Sing R. L. (ed) : India Regional Geography National Geography Society, India , Varanasi1971.
7. Spate OHK and ATA Learmonth – India and Pakistan Menthuen London 1997.
8. Tirtha R. & Gopal Krishna, Emerging India Reprinted by Rawat Publication, Jaipur1986.

Walchand College of Arts and Science, Solapur (Autonomous)

Department of Geography

M.A. Part I

Semester II – Biogeography

DSE-II-A

NEP

Course Credits: 04 **Allotted Lectures: 60**

1.1 Preamble:

The Geography students of M. A. Part-I can better understand all latest concepts in Biogeography in brief but in adequate manner. Biogeography is part of these courses deals with the study of origin and development plants and animals. In this subject also included the Biomes of Taiga and Tundra forest.

1.2 Objectives of the Course:

1) To introduce the student the concept of Biogeography and its interpretation.
2) To introduce the students with physical environment and their interactions with the living organisms.
3) To introduce the students with the living and non-living environments and their interactions.
4) To make awareness about conservation of biodiversity and biotic resources.

1.3 Learning Outcomes of the Course: The students will be able to

1. The course will provide an understanding of Ecosystem.
2. Students will also learn the significant and development of biogeography.
3. Students became aware of functions of ecosystem.
4. Student will identify the basic concept of biogeography region and biomes.

1.4. Programme Specific Outcomes:

1. Understand the nature and basic concepts of Biogeography.
2. Identify the major biomes in world.
3. Identify the migration and dispersal of animals.
4. Understand the National forest policy in India.

1.5 Programme Outcomes:

1. Students acquire the understanding of approaches of biogeography.
2. The students identify the various types of consumer.
3. Students acquire the information of legal protection to plants and animals.

1.6 Eligibility for Admission: Students who have passed B.A. Geography or similar exams will be admitted to this class.

1.7 Programme Duration: The structure of M.A. in Geography has four semesters in total covering a period of two years.

1.8 Duration of the Course: M. A. First Year comprises two semesters. Second semester will have **four theory** (three papers four credits and one paper two credits) and **three practical** (two papers two credits and one paper four credits) papers. The theory papers have 60 marks (4 credits) and 30 marks (2 credits) for End Semester Examination and 40 and 20 marks for Internal Evaluation of the paper. The practical papers have 60 marks (4 credits) and 30 marks (2 credits) for End Semester Examination and 40 and 20 marks for Internal Evaluation for each paper.

1.9 Modes of Internal Evaluation: Assignment, Seminar, Tutorial, Presentation, MCQs via Google, Field Visits, any other suitable mode along with marks for attendance of the students.

1.10 Medium of Instruction: Marathi, English

Title of the Course/Paper

Biogeography

Semester II

DSE-II-A

[Credits: 4]

Unit No.	Sub Unit	No. of. Lectures
I	**Biogeography:-** 1.1 Introduction, Definition, Nature and Scope of Biogeography 1.2 Significance and Development of Biogeography 1.3 Approaches of Biogeography 1.4 Branches of Biogeography	15
II	**Ecosystems :-** 2.1 Ecosystem: Concept and Meaning, Elements and types, Habitat, Plant and Animal association 2.2 Functions of Ecosystem: Food Chain, Food Web, Energy Pyramid with examples 2.3 Concept of Biogeographic Region and Biomes; Major Biomes in the World- Tropical, Temperate, Tundra and Taiga Forest, Grassland, Desert and Mountain	15
III	**Introduction to Plant and Zoo Geography:** **A. Plant Geography:** 3.1 Factors Influencing on Plants 3.2 World Distribution of Forests 3.3 Plant-evolution, adoption, speciation, extinction, colonization and dispersal importance of Plants **B. Zoo Geography**: 3.4 Relationship of Zoo geography with the environment. 3.5 Migration and dispersal of animals (Wild Attack on human Settlement) 3.6 Causes of migration and their effects	15
IV	**A. Paleo records:** 4.1 Paleo records of plants and animals 4.2 Paleo records of climatic changes 4.3 Paleo records of environmental changes in India **B. Conservation of Biotic Resources:** 4.4 National Forest Policy of India. 4.5 Conversation of Biotic Resources. 4.6 Legal Protection to Plants and Animals	15

References:

Sr. No.	Name of Books	Name of Authors
1	Man & Environment in India through ages, Books & Books	Agarwal D. P. 1972
2	Earth an living planet, ELBS, London.	Bradshaw M. J. 1979
3	Biogeography an ecological and evolutionary approach	Cox C.D. & Moore P.D. 1993
4	Environment and Ecology of early man in northern India, R.B. Publication Corp.	Gaur R.1987
5	Fundamentals of Biogeography Rout ledge, USA	Huggett R. J. 1998
6	Indian geosphere – biosphere, Her Anand Publication Delhi	Khoshoo T.N. & Sharma M. (edi) 1991
7	Encyclopedia of Environmental Science. Megrew Hill.	Lapedes D. N. (edi) 1974
8	Basic Biogeography 2nd edition Longman, London	Pears N. 1985
9	Biogeography, English Language Book Society, London.	Robinson H. 1982
10	Biogeography: - Natural & Cultural Longman, London	Simmon I. G. 1994
11	Biogeography: - A study of plants & ecosphere. 3rd edition. Oliver & Boyd, USA.	Tivyj. 1992

Walchand College of Arts and Science (Autonomous), Solapur

Department of Geography

M.A./M.Sc. Part I

Semester II

Geography of Health

DSE-II-B

NEP

Course Credits: 04 **Allotted Lectures: 60**

1.1 Preamble:

The Geography students of M.A./M.Sc. Part-I can better understand health issues related to communicable and non-communicable diseases. This courses deals with the study of geographical factors affecting on human health and diseases arising from them. In this subject also studied environmental degradation and urbanization with it's affected on human health as well as studied the nature, scope and significance of Health geography.

1.2 Objectives of the Course:

1. The objective of this course is to introduce various diseases related to viz physical, demographic, social and economic influencing the spatial distribution of diseases.
2. To understand the students with relation of health with nutrition, environmental degradation and urbanization.
3. To make the students a breast of existing heath care facilities, so as train them with better health care planning for the countries.
4. To get the students familiar with different types food nutrition.

1.3 Learning Outcomes of the Course: The students will be able to

1. The course will provide an understanding of occupational and deficiency diseases.
2. Students will also learn the different type of transmittable of major diseases and preventation.
3. Students will be achieving the knowledge about problems of mal-nutrition in India and its major causes with eradication process.

1.4. Programme Specific Outcomes:

1. Understand the meaning of etiology and medical sciences.
2. Student will understand the diseases patterns.
3. Understand the diffusion of diseases and its causes.

1.5 Programme Outcomes:

1. The Students are able to understand the distinction from medical science and deficiency diseases.
2. Students acquire the understanding WHO classification of diseases.
3. Students acquire the understanding the terms of AIDS, Malaria T.B. and Leprosy.

1.6 Eligibility for Admission: Students who have passed B.A. Geography or similar exams will be admitted to this class.

1.7 Programme Duration: The structure of M.A./M.Sc. in Geography has four semesters in total covering a period of two years.

1.8 Duration of the Course: M. A. First Year comprises two semesters. Second semester will have **four theory** (three papers four credits and one paper two credits) and **three practical** (two papers two credits and one paper four credits) papers. The theory papers have 60 marks (4 credits) and 30 marks (2 credits) for End Semester Examination and 40 and 20 marks for Internal Evaluation of the paper. The practical papers have 60 marks (4 credits) and 30 marks (2 credits) for End Semester Examination and 40 and 20 marks for Internal Evaluation for each paper.

1.9 Modes of Internal Evaluation: Assignment, Seminar, Tutorial, Presentation, MCQs via Google, Field Visits, any other suitable mode along with marks for Attendance of the students.

1.10 Medium of Instruction: Marathi and English

Title of the Course/Paper

Geography of Health

Semester II

DSE-II-B

[Credits: 4]

Unit No.	Title of the Unit	No. of Lecture	No. of Credits
1	**Introduction to Geography of Health.** 1.1 Nature, Scope and significance of geography of health 1.2 Development of this area of specialization 1.3 Its distinction from medical science.	15	1
2	**Geographical factors affecting human health and diseases arising from them.** 2.1 Physical factors: relief, climate, soils and vegetation 2.2 Social factors: Population density, literacy, social customs and poverty 2.3 Economic factors: food and nutrition 2.4 Environmental factors: Urbanization and pollution.	15	1
3	**Classification of diseases** 3.1 Communicable and non-communicable 3.2 Occupational and deficiency diseases 3.3 WHO's classification of diseases 3.4 Pattern of World distribution of major diseases	15	1
4	**Ecology, etiology and transmission of major diseases** 4.1 COVID-19, Malaria, Tuber culosis, Hepatits, Cancer, and AIDS 4.2 Diffusion of diseases and causes. 4.3 Problems of mal-nutrition in India.	15	1

References:

1. Banerjee B. and Hazra J: Geo-Ecology of Cholera in West Bengal, University of Calcutta,1980
2. Hazra J. (ed): Health care planning in Developing countries, university of Calcutta,1997
3. Learmonth A. T. A: Patterns of Disease and hunger, A study in medical Geography; David & Charles Victoria,1978.
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6. May J. M.: The World Atlas of Diseases, Nal Book Trust, New Delhi,1970.
7. MC Glashan, N. D.: Medical Geography; Methuen, London,1972.
8. Pyle G: Applied medical Geography, Winston Halsted Press, Silver springs Md, U.S.A.,1979.
9. Rais, A and Learmonth, A.T.A. Geographical Aspects of Health and Diseases in India.
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12. Narayan K. V.: Health and Development. Inter Sectoral Linkages in India. Rawat Pub. Jaipur,1997.
13. Phillips, D. R: Health and Health care in the third world, Longman, London, 1990.
14. Shanon, G.M. et. al: The Geography of AIDS, Guilford press, New York,1987.
15. Smit, D: Human Geography – A welfare Approach, Arnold Heinemann, London 1997.
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18. S. C. Sinha- Medical Geography, Rawat Publication, Jaipur
19. Ishtiaq A. Mayer- Medical Geography, Rawat Publication, Jaipur

Walchand College of Arts and Science (Autonomous), Solapur

Department of Geography

M.A./M.Sc. Part I

Semester II

Analysis of Socio –Economic Data

DSC-P-III

NEP

Course Credits: 02 **Allotted Lectures:30**

1.1 Preamble:

The Geography students of M.A./M.Sc. Part-I can better understand all basic and latest concepts of socio economic mapping phenomena this is new techniques including of analyzing to socio – economic representation. Socio-Economic data is the part of different varieties of dimension pictograph. These courses deal with the draw the several types of Pyramids, triangular graph and its relevance to distribution maps. Otherwise Representation of socio –economic data included the various socio-economic graphical analysis used in different techniques and skills. The various cartographic techniques analysis in compound pyramids, Cumulative graphs and deviational graphs these diagrams indicates population exchanges size and dynamic numbers in spatial regions.

1.2 Objectives of the Course:

1. To familiarize the students various techniques of analysis of Socio-Economic data.
2. To understand the students various cartographic techniques of analysis of Socio-Economic data.
3. To get the students identify and drawing the deviational graphs, scatter diagram and its variable relationship.

1.3 Learning Outcomes of the Course: The students will be able to

1. The course will provide an understanding difference between Socio- Economic and geographical variability.
2. Students will also achieve the skill of different cartographic techniques and representation.
3. Student will indicate different information of Socio-Economic data analysis with tabulation and digitalization.

1.4. Programme Specific Outcomes:

1. Understand the difference of Socio-Economic and statistical techniques used in graphical analysis.
2. Identify the various data analysis of triangular graph and linear graph.
3. Introduce to one dimensional and two dimensional diagrams and graphical techniques used to several sector.

4. Understand the various representation methods of relevance distribution maps.

1.5 Programme Outcomes:

1. The Students are enabling to draw the various types of diagrams.
2. Students acquire the understanding the concept of Cumulative graph and scatter diagram.
3. The students identify superimposed pyramids techniques in Socio-Economic data analysis.

1.6 Eligibility for Admission: Students who have passed B.A. Geography or similar exams will be admitted to this class.

1.7 Programme Duration: The structure of M.A./M.Sc. in Geography has four semesters in total covering a period of two years.

1.8 Duration of the Course: M. A. First Year comprises two semesters. Second semester will have **four theory** (three papers four credits and one paper two credits) and **three practical** (two papers two credits and one paper four credits) papers. The theory papers have 60 marks (4 credits) and 30 marks (2 credits) for End Semester Examination and 40 and 20 marks for Internal Evaluation of the paper. The practical papers have 60 marks (4 credits) and 30 marks (2 credits) for End Semester Examination and 40 and 20 marks for Internal Evaluation for each paper.

1.9 Modes of Internal Evaluation: Assignment, Seminar, Tutorial, Presentation, MCQs via Google, Field Visits, any other suitable mode along with marks for Attendance of the students.

1.10 Medium of Instruction: Marathi and English

Title of the Course/Paper

Analysis of Socio-Economic Data

Semester II

DSC-P-III

[Credits: 2]

Unit No.	Title of the Unit	No. of Lecture	No. of Credits
1	Choropleth Maps: Mapping of Socio- Phenomena	3	01
2	Dot Method and its relevance to Distribution Maps	2	
3	Flow Line Charts and Maps of Transport Flow	3	
4	Maps with Proportional Circles	2	
5	Maps with Divided Proportional Circles.	3	
6	Maps with Proportional Spheres.	2	
7	Compound Pyramids	3	01
8	Superimposed Pyramids	3	
9	Triangular Graph-Linear- relationship Variables	3	
10	Cumulative Graph	2	
11	Deviational Graph	2	
12	Scatter Diagram	2	

References:

1. Lawrence, G.R.P. (1973) : Cartographic methods, Methuen &Co. London.

2. Mishra, R. P. (1982) : Fundamental of cartography, Prasaranga, University Mysore.

3. Monkhouse, F.J.R & Wilkinson, H.R.: Maps & diagrams, Methuen & Co. London.

4. Raisz , Erwin : Principles of cartography, McGraw- Hill Book Co. , NewYork.

5. Robinson A.H. & Sale R.D. : Element of Cartography, John House &Sons Ltd. London.

6. Singh R. L.: Elements of Practical Geography.

Walchand College of Arts and Science, Solapur

(Autonomous)

Department of Geography

M.A./M.Sc. Part I

Semester II

Statistical Techniques in Geography

DSC-P-IV

NEP

Course Credits: 02 **Allotted Lectures: 30**

1.1 Preamble:

The Geography students of M.A./M.Sc. Part-I can better understand all basic and latest techniques and skill of basic statistical methods. Statistical techniques are one of the most revolutionary and advance techniques use in geographical information with socio-economic data analysis. Statistical techniques the major branch is of human and scientific geography. The part of these courses deals with the majors of central tendency and calculation of different type's distribution graphs its related to other geographical variations of production, population, climatic numbers and some research.

1.2 Objectives of the Course:

1. To introduce some basic Statistical techniques to the students to be applied to various themes in Geography.
2. To familiarizes the relative measures and coefficient of correlation techniques.
3. To get the students knowledge about applied to various themes in statistical geography with different formulas.
4. To get the students indicates and narrate of different graphical analysis in Frequency distribution.

1.3 Learning Outcomes of the Course: The students will be able to

1. The course will provide an understanding difference between Absolute Measurement.
2. Students will also teach the various type of graphical method in frequency distribution.
3. Students became aware of calculation and dispersion numbers in grouped and ungrouped data.

1.4. Programme Specific Outcomes:

1. Understand the use of statistical techniques in graphical pattern.

2. Narrates and computing Quartile and quartile deviation comparative study related to socio-economic data.

3. Understand the various components of Measures of Central Tendency with grouped and ungrouped data.

1.5 Programme Outcomes:

1. The Students are capable to calculate several numerical analyses in Measure of Dispersion.
2. The student's tabulation the median and mode pattern statistical analysis.
3. Students represent and described Polygon and Ogive Curve with different geographical information.

1.6 Eligibility for Admission: Students who have passed B.A. Geography or similar exams will be admitted to this class.

1.7 Programme Duration: The structure of M.A./M.Sc. in Geography has four semesters in total covering a period of two years.

1.8 Duration of the Course: M. A. First Year comprises two semesters. Second semester will have **four theory** (three papers four credits and one paper two credits) and **three practical** (two papers two credits and one paper four credits) papers. The theory papers have 60 marks (4 credits) and 30 marks (2 credits) for End Semester Examination and 40 and 20 marks for Internal Evaluation of the paper. The practical papers have 60 marks (4 credits) and 30 marks (2 credits) for End Semester Examination and 40 and 20 marks for Internal Evaluation for each paper.

1.9 Modes of Internal Evaluation: Assignment, Seminar, Tutorial, Presentation, MCQs via Google, Field Visits, any other suitable mode along with marks for Attendance of the students.

1.10 Medium of Instruction: Marathi and English

Title of the Course/Paper

Statistical Techniques in Geography

Semester II

DSC-P-IV

[Credits: 2]

Unit No.	Title of the Unit	No. of Lecture	No. of Credits
1	**Introduction to Statistical Techniques** 1.1 Definition of Statistics 1.2 Importance and Use of Statistical Techniques in Geography 1.3 Basis of Statistical Data Classification 1.4 Frequency Distribution- Histogram, Polygon and Ogive Curve	05	01
2	**Measures of Central Tendency** 2.1 Calculation of Mean 2.2 Calculation of Median 2.3 Calculation of Mode 2.4 Calculation of Quartiles	05	
3	**Measure of Dispersion** 3.1 Absolute Measurements of Mean Deviation 3.2 Absolute Measurements of Quartile Deviation 3.3 Absolute Measurements of Standard Deviation	05	
4	**Relative Measurements** 4.1 Co-efficient of Mean Deviation 4.2 Co-efficient of Quartile Deviation, Co-efficient of Range, Co-efficient of Variations	05	01
5	**Index Variability and Relative Variability** 5.1 Karl Pearson's Method 5.2 Bowley's Method	05	
6	**Correlation Analysis** 6.1 Karl Pearson's Product Moment 6.2 Co-relation co-efficient Spearman's Rank order	05	

References:

1. Cole, J.P,& King, C.A.M.(1968) : Quantitative Techniques in Geography, John Wiley &Sons.
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. Hoel P.G. : Elementary Statistics, Wiley, New York.
6. King, L.J(1991) : Statistical Analysis in Geography, Printice Hall, Englewood Cliff N.J.
7. Hemawati : Statistical Methods for Geographers.
8. Singh R. L. : Elements of Practical Geography.

Walchand College of Arts and Science (Autonomous), Solapur

Theory Question Paper Pattern (ESE) (02 Credits)

(Courses as per NEP 2020) w.e.f. 2023-24

Examination: M.A./M.Sc.

Class: I **Semester:** I

Subject: Geography **Paper:** Geography of Transportation

Time: 1.5 hrs. **Marks:** 30

Introductions:

1. *All questions are compulsory.*
2. *Draw neat diagrams wherever necessary.*
3. *Use of stencils is allowed.*
4. *Figure to the Right indicates full marks.*

Que.1: Rewrite the following sentence by choosing correct alternatives given below. 06

1)

A) B) C) D)

2)

A) B) C) D)

3)

A) B) C) D)

4)

A) B) C) D)

5)

A) B) C) D)

6)

A) B) C) D)

Que.2 Answer the following questions. (Any Three) 06

1)
2)
3)
4)
5)

Que.3 Answer the following questions. 06

1)
2)

OR

Que.3 Answer the following questions. 06

1)
2)

Que.4 Answer the following questions. 06

1)
2)

OR

Que.4 Answer the following questions. 06

1)
2)

Que.5 Answer the following questions. 06

1)

……

Walchand College of Arts and Science (Autonomous), Solapur

Theory Question Paper Pattern (ESE) (04 Credits)

(Courses as per NEP 2020) w.e.f. 2023-24

Examination: M.A./M.Sc.

Class: I **Semester:** I

Subject: Geography **Paper:** Agricultural Geography

Time: 2.5 hrs. **Marks:** 60

Introductions:

1. *All questions are compulsory.*
2. *Draw neat diagrams wherever necessary.*
3. *Use of stencils is allowed.*
4. *Figure to the Right indicates full marks.*

Que.1: Rewrite the following sentence by choosing correct alternatives given below. **08**

1)

A) B) C) D)

2)

A) B) C) D)

3)

A) B) C) D)

4)

A) B) C) D)

5)

A) B) C) D)

6)

A) B) C) D)

7)

A) B) C) D)

8)

A) B) C) D)

Que.2 Answer the following questions. (Any Three) **12**

1)

2)

3)

4)

5)

Que.3 Answer the following questions. **12**

1)

2)

OR

Que.3 Answer the following questions. **12**

1)

2)

Que.4 Answer the following questions. **12**

1)

2)

OR

Que.4 Answer the following questions. **12**

1)

1)

Que.5 Answer the following questions. **16**

1)

2)

……

Walchand College of Arts and Science (Autonomous), Solapur

Practical Question Paper Pattern (ESE) (02 Credits)

(Courses as per NEP 2020) w.e.f. 2023-24

Examination: M.A./M.Sc.

Class: I **Semester:** I

Subject: Geography **Paper:** DSC-P-I

Time: 2.0 hrs. **Marks:** 30

Introductions:

1. *Attempt Questions in Serial Order.*
2. *Attempt each Question on a Separate Answer book.*
3. *Use of Calculator and log table are allowed.*
4. *Figures to the Right indicate full marks.*

Que.1: Representation/Analysis/Calculation **10**

A)

B)

Que.2 Representation/Analysis/Calculation **10**

A)

B)

Que.3 Short Notes. (Any two of Three) **06**

1.

2.

3.

Que.4 Journal. **04**

……