

Kavayitri Bahinabai Chaudhari
North Maharashtra University, Jalgaon



'A' Grade
NAAC Re-Accredited
(3rd Cycle)

SYLLABUS

For

M.A. / M. Sc.- Ist YEAR (Sem. Ist and IInd)

Subject: Geography

Under

Choice Based Credit System

(With Effect from June - 2021)

**Summary of Distribution of Credits under CBCS Scheme
for
M. A /M.Sc. (Geography)**

Sr. No	Type of course	Sem I	Sem II	Sem III	Sem IV
01	Core	16	16	16	12
02	Skill based	04	04	-	-
03	Elective	-	-	04	04
04	Project	-	-	-	04
05	Audit	02	02	02	02
06	Total Credits	22	22	22	22

Subject Type	Core	Skill based	School Elective	Project	Audit	Total
Credits	60	08	08	04	08	88

Total Credits = 88

Kavayitri Bahinabai Chaudhari North Maharashtra University Jalgaon

M.A / M. Sc. Geography

Choice Based Credit System (Outcome Based Curriculum) with effect from 2021 -2022

Course credit scheme

Semester	(A) Core Courses			(B) Skill Based / Elective Course			(C) Audit Course (No weightage in CGPA)			Total Credits (A+B+C)
	No. of Courses	Credits (T+P)	Total Credits	No. of Courses	Credits (T+P)	Total Credits	No. of Courses	Credits (Practical)	Total Credits	
I	4	8 + 8	16	1	4 + 0	4	1	2	2	22
II	4	12 + 4	16	1	0 + 4	4	1	2	2	22
III	4	8 + 8	16	1	4 + 0	4	1	2	2	22
IV	4	8 + 8	16	1	4 + 0	4	1	2	2	22
Total Credits	64			16			8			88

(T, Theory; P, Practical)

Structure of Curriculum

		First Year				Second Year				Total Credit Value
		Semester I		Semester II		Semester III		Semester IV		
		Credit	Course	Credit	Course	Credit	Course	Credit	Course	
(A)	Prerequisite and Core Courses									
	Theory	4	2	4	3	4	2	4	2	36
	Practical	4	2	4	1	4	2	4	2	28
(B)	Skill Based / Subject Elective Courses									
1	Theory /Practical	4	1	4	1	4	1	4	1	16
(C)	Audit Course (No weightage in CGPA calculations)									
1	Practicing Cleanliness	2	1							2
2	Personality and Cultural Development Related Course			2	1					2
3	Technology Related + Value Added Course					2	1			
4	Professional and Social + Value Added Course							2	1	2
	Total Credit Value	14	6	14	6	14	6	14	6	88

List of Audit Courses (Select any ONE course of Choice from Semester II; Semester III and Semester IV)

Semester I (Compulsory)		Semester II (Choose One)		Semester III (Choose One)		Semester IV (Choose One)	
		Personality and Cultural Development		Technology + Value Added Course		Professional and Social + Value Added Course	
Course Code	Course Title	Course Code	Course Title	Course Code	Course Title	Course Code	Course Title
AC-101	Practicing Cleanliness	AC-201A	Soft Skills	AC-301A	Computer Skills	AC-401A	Human Rights
		AC-201B	Sport Activities	AC-301B	Cyber Security	AC-401B	Current Affairs
		AC-201C	Yoga	AC-301C	Rainwater Harvesting	AC-401C	Green Audit
		AC-201D	Music	AC-301D	Geo-Tourism	AC-401D	Review of Research Paper.

Semester-wise Course Structure of M.A M.Sc. Geography

Semester I

Course	Course Type	Course Title	Teaching Hours/ Week			Marks (Total 100)				Credits
			T	P	Total	Internal		External		
						T	P	T	P	
GG.-101	Core	Principles of Economic Geography	4	--	4	40	--	60	--	4
GG.-102	Core	Principles of Population Geography	4	--	4	40	--	60	--	4
GG.103	Core	Practical in Interpretation of SOI Topographical maps and Surveying by GPS	--	4+4	8	--	40	--	60	4
GG.-104	Core	Practical in Human Geography	--	4+4	8	--	40	--	60	4
GG.-105	Skill Based	Tourism Management	4	--	4	40	--	60	--	4
AC-101	Audit Course	Practicing Cleanliness	-	2	2	--	100	--	--	2
Total Credit for Semester I: 22 (T = Theory: 8; P = Practical:8; Skill Based:4; Audit Course:2)										

Semester II

Course	Course Type	Course Title	Teaching Hours/ Week			Marks (Total 100)				Credits
			T	P	Total	Internal		External		
						T	P	T	P	
GG.201	Core	Geographical Thoughts	4	--	4	40	--	60	--	4
GG.-202	Core	Social and Cultural Geography	4	--	4	40	--	60	--	4
GG.-203	Core	Remote Sensing	4	--	4	40	--	60	--	4
GG.-204	Core	Practical in Cartographic Techniques with the help of GIS	--	4+4	8	--	40	--	60	4
GG.205	Skill Based	Practical in Geo-Statistical Methods.	--	4+4	8	--	40	--	60	4
AC-201 A/B/C/D	Audit Course	(Choose one out of Four) AC-201A - Soft Skills / AC-201B - Sport Activities/ AC-201C -Yoga / AC-201D- Music	--	2	2	--	100	--	--	2
Total Credit for Semester II: 22 (T = Theory: 12; P = Practical:4; Skill Based:4; Audit course:2)										

Semester III

Course	Course Type	Course Title	Teaching Hours/ Week			Marks (Total 100)				Credits
			T	P	Total	Internal		External		
						T	P	T	P	
GG. -301	Core	Regional Geography of India	4	--	4	40	--	60	--	4
GG.-302	Core	Research Methodology	4	--	4	40	--	60	--	4
GG.303	Elective	(Choose one out of Three.)								
		GG.303 A Watershed Management and Planning								
		GG.303 B Geographical Information System	4	-	4	40	-	60	-	4
		GG.303 C Agricultural Geography								
GG. -304	Core	Practical in Remote Sensing - Interpretation of Aerial Photographs and Satellite Imageries	--	4+4	8	--	40	--	60	4
GG. -305	Core	Practical of Computerize Data Analysis Techniques in Geography	-	4+4	8	-	40	-	60	4
AC-301 A/B/C/D	Audit Course	(Choose one out of Four) AC-301A - Computer Skills / AC-301B - Cyber Security / AC-301C – Rainwater Harvesting / AC-301D- Geo-tourism		2	2		100	--	--	2
Total Credit for Semester III: 22 (T = Theory: 8; P = Practical:8; Skill Based:4; Audit Course:2)										

Semester IV

Course	Course Type	Course Title	Teaching Hours/ Week			Marks (Total 100)				Credits
			T	P	Total	Internal		External		
						T	P	T	P	
GG. -401	Core	Geomorphology	4	--	4	40	--	60	--	4
GG.-402	Core	Climatology	4	--	4	40	--	60	--	4
GG.-403	Elective	(Choose one out of Three.)								
		GG.403 A Geography of Rural Settelments.	4	-	4	40	-	60	-	4
		GG.403 B Geography of Resourses.								
		GG.403 C Industrial Geography								
GG.-404	Core	Practical in Physical Geography	--	4+4	8	--	40	--	60	4
GG.405	Core	Project work	-	4+4	8	-	40	-	60	4
AC-401 A/B/C/D	Audit Course	(Choose one out of Four)								
		AC-401A Human Rights /								
		AC-401B Current Affairs /		2	2	100	--	--	2	
		AC-401C Green Audit /								
		AC-401D Review of Research Paper								
Total Credit for Semester IV: 22 (T = Theory: 8; P = Practical:8; Skill Based:4; Audit Course:2)										

Program at a Glance

Name of the program (Degree)	: M.A / M. Sc. (Geography)
Faculty	: Science and Technology
Duration of the Program	: Two years (four semesters)
Medium of Instruction and Examination	: English
Exam Pattern	: 60 : 40 (60 marks University exam and 40 marks continuous internal assessment)
Passing standards	: 40% in each exam separately (separate head of passing)
Evaluation mode	: CGPA
Total Credits of the program	: 88 (64 core credits including 4 credits of project/dissertation, 08 skill enhancement credits, 08 subject elective credits and 08 audit credits)

➤ **Program Objectives:**

1. To produce skilled experts with various aspects of Geography employable for positions in the field of education, industry, and government and non-government organizations.
2. To impart knowledge on advances and challenges in Geographical challenges.
3. To enhance the quality and standards of Geography Education.
4. To provide a broad common framework, for exchange, mobility, and free dialogue across the Indian Geography and associated community.
5. To prepare our graduates to become effective scientific communicators/collaborators in multidisciplinary teams providing technical leadership to engage with the challenging Geographical problems of local, national, and global nature.

➤ **Program Outcomes:**

Upon successful completion of the M.A/M.Sc program in Geography, student will be able to;

1. Understand the unifying themes of both human and physical geography as well as have a working knowledge of the discipline's diverse conceptual and methodological approaches.
2. Demonstrate an ability to develop research questions, critically understand quantitative and qualitative data sources, data bias, and data analysis and presentation, and conduct research using primary and/or secondary source material.
3. Students will be able to apply geographical knowledge for the exploration of GIS, Remote Sensing, and geographical resources.
4. M.A / M. Sc. Geography programme is structured for providing advances and by considering the overall development of students.
5. Students will be able to work in public and private sector companies working in the field of GIS, Tourism, and Cartographer.

Equivalences for old courses of M. A / M. Sc Geography (Part I)

Semester – Ist

Old Courses (June 2017)		New Courses (June 2021)	
Code of Courses	Title of the courses	Code of Course	Title of the courses
Gg.111	Principles of Economic Geography	GG. 101	Principles of Economic Geography
Gg.112	Principles of Population and Settelement Geography.	GG.102	Principles of Population Geography
Gg.113	Principles of Climatology.	GG.402	Climatology
Gg.114	Principles of Geomorphology.	GG. 401	Geomorphology
Gg.115	Practical in Geography	GG.103	Practical in Interpretation of SOI Topographical maps and Surveying by GPS

Semester – IInd

Old Courses (June 2017)		New Courses (June 2021)	
Code of Courses	Title of the courses	Code of Courses	Title of the courses
Gg.211	Geographical Thoughts	GG. 201	Geographical Thoughts
Gg.212	Social and Cultural Geography	GG.202	Social and Cultural Geography
Gg.213	Remote Sensing.	GG.203	Remote Sensing
Gg.214	Geo-Statistical Methods	GG. 205	#
Gg.215	Practical of Computerize Data Analysis Techniques in Geography	GG.204	Practical in Cartographic Techniques with the help of GIS

No equivalent course is available for this paper, so students may be allowed to appear by old course.

Distribution of Course papers for M.A / M. Sc. Part I (Geography)

Subject Code	Title of the Paper		Duration (Hrs./Wk)	Max. Mark	Exam. Time (Hrs.)
M.A / M.Sc. Part I					
Semester I : Theory Courses					
GG.-101	Principles of Economic Geography	Core course	04	100	03
GG -102	Principles of Population Geography	Core course	04	100	03
GG -105	Tourism Management	Skill based	04	100	03
Semester I : Practical Courses					
GG -103	Practical in Interpretation of SOI Topographical maps and Surveying by GPS	Core course	04+04	100	06
GG -104	Practical in Human Geography	Core course	04+04	100	06
AC-101	Practicing Cleanliness	Audit Course	02	100	
Semester II : Theory Courses					
GG -201	Geographical Thoughts	Core course	04	100	03
GG -202	Social and Cultural Geography	Core course	04	100	03
GG -203	Remote Sensing	Core course	04	100	03
Semester II : Practical Courses					
GG -204	Practical in Cartographic Techniques with the help of GIS	Core course	04+04	100	06
GG -205	Practical in Geo-Statistical Methods	Skill based	04+04	100	06
AC-201A/B/C/D	Choose one out of Four AC-201A - Soft Skills / AC-201B - Sport Activities/ AC-201C -Yoga / AC-201D- Music	Audit Course	02	100	

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New Syllabus M.A./M.Sc. Geography
Semester-I (CBCS Pattern)
Core-Course

Gg. 101: Principles of Economic Geography

(With Effect from June 2021)

Total Marks-100

Credit Points- 04

Teaching Hours/Week: 04
Clock Hours : 60

Course Objectives:

- 1) To understand concept Economic Geography in different walks of the life.
- 2) The students are able to explain the role of economic landscape in economic development.
- 3) To understand the economic measures and problems of economic development.
- 4) To acquaint the students with fundamental knowledge of international trade and impact of globalization on economic development of India

Course Outcomes:

After completion of this course, the students will be able to

1. Evaluate the applicability and importance of economic geography in analyzing the modes of societies and economies' operation.
2. Establish and analyze spatial patterns of economic development.
3. Explain the role of natural and cultural factors in determining economic development of India.

Unit No.	Units	Sub-units	Lectures
I	Introduction to Economic Geography	A) Definition, Nature and Scope. B) Approaches to Economic Geography. C) Recent trends in Economic Geography.	06
II	Resources and Economic Development	A) Meaning of the term 'Resources' B) Classification of Resource. C) Significance of natural and human Resources (Suitable Examples and Characteristics) D) Role of resources in economic development E) Models of economic development. i). Rostow's Model. ii) Myrdal Model	14

III	Economic Landscape	A) Land, labour, capital, organization. B) Significance of land, labour and capital in different economic activities. C) Spatial variation in the factor cost. D) Location of economic activity- Von Thunen's Model of agricultural location.	10
IV	Economic Measures and Economic Development Region	A) Measures of economic development. B) Problems of economic development. C) Economic development in developed and underdeveloped countries. D) Economic Regions; i) Definition and concept, types of economic region. ii). Stages in the development of economic regions iii) Economic development regions in India.	10
V	International Trade	A) Definition of international trade. B) Role of international trade in world economic growth. C) Factors affecting international trade D) India's foreign trade. E) Changing forms of international trade.	10
VI	Economic Development in India	A) Natural and cultural factors influencing economic development in India. B) Impact of green revolution on economic development in India. C) Impact of globalization on economic development of India. D) Free trade initiatives.	10

Weightage

Marks	
Internal Assessment	40 marks
External Assessment	60 marks

Suggested readings:

- 1) Alexander, J. W. (1977) : 'Economic Geography', Prentice Hall of India Pvt. Ltd., New Delhi.
- 2) Chorley, R. J. and Haggett, P (1970) : 'Socio Economic Models in Geography', Methuen.
- 3) H. M. Saxena (2013) : 'Economic Geography', Rawat publication, Jaipur.
- 4) Mitra, A (2002) : 'Resource Studies', Sreedhar publishers, Kolkata.
- 5) Kanan Chatterjee (2015) : 'Basics of Economic Geography', Concept publishing Company Pvt. Ltd., New Delhi.
- 6) Ray, P. k. (1997) : 'Economic Geography', New Central Book Agency (P) Ltd., Calcutta.
- 7) Shelar S. K. (2013) : 'Principles of Economic Geography' Chandralok Prakashan, Kanpur.
- 8) Garnier, B. J. and Delobez, A (1979), : 'Geography of Marketing', Longman.
- 9) Janaki V.A(1985) Economic Geography, Concept Publishing Co.
10. Sharma T.C.(2013) Economic Geography of India , Rawat Publication, Jaipur

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Syllabus for M.A. /M.Sc. Geography
Semester-I (CBCS Pattern)
Core-Course

Gg. 102 : Principles of Population Geography.
(With Effect from June 2021)

Total Marks-100

Credit Points- 04

Teaching Hours/Week: 04
Clock Hours : 60

Course Objectives:

- 1) To enable students to acquire knowledge of Population Geography.
- 2) To study the population structure and characteristics of population.
- 3) To study the various theories in Population Geography.
- 4) To understand the World and Indian Population distribution.

Course Outcomes:

After completion of this course, the students will be able to,

- 1) To understand the concepts in Population geography.
- 2) Students able to evaluate different theories of population growth.
- 3) Students compare different population zones.
- 4) Students know the various problems of population.

Unit No.	Units	Sub - Units	Lectures
I	Introduction to Population Geography	A) Definitions and Meaning. B) Development of Population Geography as discipline. C) Nature and Scope of Population Geography. D) Population geography and Demography. E) Approaches to study the Population Geography.	08
II	Population Distribution	A) Factors affecting on distribution of population. i) Physical factors – topography, climate, soil, availability of water, natural vegetation , geographical location. ii) Cultural/ Human factors – religion, family system, Industrial development, transportation , economic factors, government policy, political and	10

		<p>agriculture system.</p> <p>B) Population Density - Definitions and meaning.</p> <p>C) Types of density – arithmetic, economic, agricultural, physiological and critical.</p> <p>D) Population distribution in India (According to census 2011).</p> <p>E) World population distribution.</p> <p>F) Problems of over, optimum and under population.</p>	
III	Population Structure and Characteristics	<p>A) Sex structure.</p> <p>B) Age structure (importance of age composition and determinants of age structure, age pyramid and age groups.)</p> <p>C) Sex ratio in India, causes of decreasing sex ratio and its impact</p> <p>D) Marital status.</p> <p>E) Literacy and educational attainment.</p> <p>E) Literacy in India.</p> <p>F) Religions in India ((According to census 2011).</p>	10
IV	Fertility and Mortality	<p>A) Fertility – definitions, social and cultural factors affecting fertility, crude birth rate.</p> <p>B) Mortality – definitions, measures of mortality- Crude death rate, Infant mortality, levels and trends of mortality.</p>	12
V	Dynamics of Migration- Trends and Pattern	<p>A) Definitions and importance of migration.</p> <p>B) Types of migration – internal migration and types, international migration.</p> <p>C) Causes and effects of migration.</p> <p>D) Brain drain of human resource.</p> <p>E) Lee’s theory of Migration.</p>	10
VI	Population Theories	<p>A) Theory of demographic transition.</p> <p>B) Malthusian theory of population growth.</p> <p>C) Karl Marx’s theory of population.</p>	10

Weightage

Marks	
Internal Assessment	40 marks
External Assessment	60 marks

Suggested readings:

- 1) Mohammad Hassan (2005) – Population Geography, Rawat publication, Jaipur.
- 2) Asha A. Bhende and Tara Kanitakar (2006) – Principles of Population Studies, Himalaya Publishing House, Mumbai.
- 3) Chandana R.C. and Jagjit S.S. (1980) – Introduction to Population geography, Kalyani Publishers, New Dehli.
- 4) Majid Hussain (1991) – Anmol Publication, New Dehli.
- 5) Sawant S.B and Athavale A.S. (1994) – Population Geography, Mehat publishing house, Pune.

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**Syllabus M.A./M.Sc. Geography
Semester-I (CBCS Pattern)
Core-Course**

**GG-103 : Practical in Interpretation of SOI Topographical Maps and Surveying by
GPS.**

**(With Effect from June 2021)
(10 Students Per Batch)**

Total Marks-100

Credit Points- 04

**Teaching Hours/Week: 08
Clock Hours : 96**

Course Objectives:

1. To introduce the students with basic knowledge of topographical maps.
2. To know the importance and techniques of interpretation of topographical maps.
3. To introduce the students with basic principles of GPS and its functioning.
4. To give practical knowledge about survey using GPS receiver and to prepare the survey layout using post-processing software.

Course Outcomes:

After completion of this course, the students will be able to,

1. Enhance interpretative skills of the students.
2. Identify the physical and cultural features in SOI topographical maps.
3. Adopt the knowledge of drawing profiles.
4. Understand the GPS and its functions, work, types and components for a filed survey.

Unit No.	Units	Sub-Units	Lectures
I	SOI Topographical Maps	A) Arrangement of toposheet on map of India i) Indexing of topographical map. B) Marginal information and grid references . i) Marginal information . ii) Grid references: four and six figure. C) Conventional signs and symbols on SOI topographical map.	14
II	Relief Features by Contours	A) Relief features by contours. i) Conical hill ii) Plateau iii) Ridge iv) Gorge. v) U Shaped valley vi) V Shaped valley. vii) Waterfall. B) Slopes: Concave and Convex Slopes, Gentle and Steep Slopes, Terraced Slope.	17
III	Profiles	A) Drawing of Longitudinal Profile, Cross Profile. B) Intervisibility.	14

IV	Interpretation of SOI Topographical Maps	(Any Three) A) Plain Region. B) Plateau Region. C) Mountainous Region . D) Coastal Region. E) Desert Region.	17
V	Fundamental Concepts of GPS	A) Introduction, Components, types and applications of GPS. B) GPS Satellites. C) Constellation of GPS Satellites. D) Segments.	14
VI	Data Collection and Mapping Using GPS	A) GPS Survey on field. B) Area measurement using GPS. C) Data Import. D) Processing and Mapping. E) Project work using GPS.	20

Weightage

Marks	
Internal Assessment	40 marks
External Assessment	60 marks

Suggested readings:

1. Tamaskar B.G. and Deshmukh V.M. (1974), Geographical Interpretation of Indian Topographical Maps. Orient Longman Limited Bombay
2. Petrie N. (1992), Analysis and Interpretation of Topographical Maps. Orient Longman Limited Calcutta.
3. Meux A. H. (1960), Reading Topographical Maps. University of London Press Limited
4. Wheeler K.S. Ed (1970), Geography in the field. Blond Educational, London.
5. Gupta, K. K. and Tyagi, V. C. (1992): Working with maps, Survey of India Publication, Dehradun
6. Ramamurthy, K. (1982): Map Interpretation, Rex Printer, Madras
7. Vaidyanadhan, R. (1968): Index to a Set of Sixty Topographic Maps: Illustrating Specified Physiographic Features From India, Council of Scientific and Industrial Research, Ministry of Education, Government of India
8. Gupta, K. K. and Tyagi, V. C. (1992): Working with Maps, Survey of India Publication, Dehradun
9. Basudeb Bhatta (2014): Remote Sensing and GIS, Oxford University Press, New Delhi.
10. Atiqur R. & Shahab A. (2017): Global Positioning System: Concept, Technique and Application, New Age International Publisher, New Delhi
11. Ben L. & Lawrence H. (2016): GPS Systems: Technology, Operation, and Applications, Discover Net Publishing, Walnut Street, USA

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New Syllabus M.A./M.Sc. Geography

Semester-I (CBCS Pattern)

Core-Course

GG-104 : Practical in Human Geography.

(With effect from 2021)

(10 Students Per Batch.)

Total Marks-100

Credit Points- 04

Teaching Hours/Week: 08

Clock Hours : 96

Course Objectives:

1. To introduce some basic research method to the students to be applied to various themes in Human Geography.
2. To indicate the assumptions, limitations, and interpretation of these methods and results.

Course Outcomes:

After completion of this course, the students will be able to,

1. Evaluate and investigation the population data.
2. Understand the data analysis techniques in Human Geography
3. Understand the various basics statistical Techniques for analysis of the geographical data.

Unit No.	Units	Sub-Units	Lectures
I	Introduction to Research Data in Human Geography and Data Collection Techniques	A) Introduction to research data. B) Questionnaire: meaning and types. C) Planning, designing of questionnaire for field work. D) Data compilation and analysis.	15
II	Data Analysis Techniques in Population Geography	A). Density: i) Arithmetic density of population. ii) Economic density of population. iii) Nutritional density of population. iv) Agricultural density of population. v) Critical density of population. B) Measures: I) General fertility rate. II) Crud death rate. III) Infant mortality rate. C) Sex Ratio: i) Sex ratio of all groups of population.	18

		ii) Age- sex pyramids.	
III	Data Analysis Techniques in Settlement Geography	A) Rural Settlement Geography i). Dispersion of rural settlements: Bernhard’s method, Demangeon method, Debouvrie’s method. B) Urban Settlement Geography i) Nearest neighbour analysis- Clerk and Evan’s method. ii) Rank size rule.	16
IV	Data Analysis Techniques in Agricultural Geography	A) Crop concentration by Bhatia. B) Crop diversification by Bhatia. C) Crop combination by Weaver’s method. D) Agricultural efficiency by Jasbirsing’s method.	16
V	Data Analysis Techniques in Transport and Industrial Geography	A) Transport Geography i) Graph theoretic measures of transport Network, Ratio Measures: a) Alpha b) Beta c) Gamma. B) Industrial Geography i) Measurement of industrial activity. a) Location Quotient. b) Lorenz curve.	15
VI	Cartographic Techniques Maps	A) Literacy Rate (Choropleth method). B) Dispersion of settlements (Dot method) C) Functional classification of towns (Use different signs and symbols) D) Land use and Land classification.	16

Weightage

Marks	
Internal Assessment	40 marks
External Assessment	60 marks

Suggested readings:

1. R.B.Mandal: "Statistic for Geography and Social Science".
2. Monkhouse: "Maps and Diagram".
3. Masjid Husen "Agricultural Geography".
4. Hudson F.S. (1976): "Geography of Settlement".
5. Yeats, M.H. (1974): "An Introduction to Quantitative Analysis in Human Geography".
6. Sing J. and Dhillon (1984) "Agricultural Geography".
7. Sing R.L. "Readings in Rural Settlement Geography".
8. Michael E. and E. Hulse: "Transportation Geography".
9. Edward Arnold: "The Study of Urban Geography".
10. George Omura: Mastering Auto CAD, BPB Publication, b14 Conneaut place, New Delhi
11. Grini Courter and Annette Marquis (1999): "OFFICE 2000" BPB Publication
12. Dr. Sanjay Bhaise and Prof. Devendra Maski: 'LoksankhyaBhugol'
Pattern of question paper
 1. All questions will be compulsory.
 2. A mark for Viva-voce is 10 marks.

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**New Syllabus M.A./M.Sc. Geography
Semester-I (CBCS Pattern)**

Skill Based Course

**GG: 105, Tourism Management
(With effect from June 2021)**

Total Marks-100

Credit Points- 04

**Teaching Hours/Week: 04
Clock Hours : 60**

Course Objectives:

To understand concept of tourism management:

1. To provide training, skill development and education needed to prepare individuals for effective job in the tourism and entertainment industries.
2. To understand the management functions of tourism industry including human resource management, financial management, marketing and technology applications.
3. To identify potential career opportunities of our students through internship programs.

Course Outcomes:

After completion of this course, the students will be able to,

1. Tourism Management graduates are hired by both private and government sector companies.
2. Tourism Management course helps students specialize in the industry-specific knowledge and make them business ready for fields such as hotels, vacation resorts, retreat hotels, campgrounds,

Unit No.	Units	Sub-Units	Lectures
I	Introduction to Geographical Tourism Management	A) Concept of tourism and geo-tourism. B) Need and importance of tourism management. C) Scope and future of tourism management. D) Types of tourism management. General problems of tourism management.	10
II	Tourism Planning	A) Types of tourism planning. B) Problem of tourism planning. C) National and International Tourism planning. D) Components of tourism planning. Programme implementation.	10
III	Tourism Marketing & Management	A) Defining of tourism marketing. B) Need of marketing in tourism. C) Components of Tourism Marketing	12

		& Management- i) The tourist product, ii) Special features of tourism marketing, iii) Marketing process, iv) Marketing research, v) The segmentation, targeting, positioning (STP) marketing model. vi) Tourism promotion, vii) Advertising.	
IV	Role of Infrastructure and Transport in Tourism	A) Infrastructure facilities. B) Tourism accommodation & Food Services. C) Resort and Event Management. D) Transportation-Tourism management.	08
V	Sale Services in Tourism	A) Sales and marketing and Public relations. B) Tour and travel documentation services. C) Language skill and Business communications. D) Tourism management information system. E) Customer care and interpersonal skills. F) ICT in tourism management.	10
VI	Tourism impact and Tourism Policy of India	A) Tourism impacts. B) Sustainable and green tourism. C) Role of Travel agency & Tour operations. D) National tourism policy in india-2016.	10

Weightage

Marks	
Internal Assessment	40 marks
External Assessment	60 marks

Suggested readings:

- 1) A. K. Bhatia. (1908): Tourism Management and Marketing
- 2) Alston, A., (1979): Working in the Travel Business, Batsford Publications, London.
- 3) Anthony, Edwards (1985) International Tourism Forecasts to 1995, EIU, 40 Duke Street, London W1M 5 DG, UK.
- 4) Balsdon, J. P. V. D. (1966): Life and Leisure in Ancient Rome, London, Bodley Head.
- 5) Beazely. E. (1970): Designed for Recreation, London: Faber.
- 6) Bernecker, Paul, Methods and Media of Tourist Publicity, Vienna, Austrian National Tourist Office, 1961.
- 7) Bhatia, A.K. : Tourism Development, Sterling Publishers Pvt. Ltd., New Delhi 110016
- 8) Brownell. G. G., Travel Agency Management, Birmingham, Southern University Press, 1975
- 9) Lancaster G. and Massingham, L. (1988) *Essentials of Marketing*. Maidenhead, Berkshire, England. McGraw-Hill.
- 10) Law B. C. (1968 ed) - Mountain and Rivers of India, Calcutta
- 11) Mill and Morrison (1992) : The Tourism system an Introductory Text , Prentice Hall
- 12) P.S. Gill: Dynamics of Tourism (4 Vols) Anmol Publication. New Delhi,
- 13) R. M. Desai (1988) : Strategy of food and agriculture – Bombay
- 14) Robinson H.A.A. -Geography of Tourism, MacDonal and Evans, London.
- 15) Seth: Tourism Management : Sustainable Tourism Development, Guide for Local Planners by WTO, Sterling Publishers Pvt. Ltd., New Delhi-110016
- 16) Smith, W. R. (1956). Product differentiation and market segmentation as alternative marketing strategies. *Journal of Marketing*. (Vol. 21, Issue 1, July). p3-8.

Model Question Paper Format

For

GG. 103 Practical in Interpretation of SOI Topographical Maps and Surveying by GPS

Note: All questions are compulsory.

Que. 1 – Interpretation of SOI topographical map with the help of following points. (09 Marks)

(a)

(b)

(c)

Que. 2 (A) – Drawing of relief features and slopes with the help of contours. (06 Marks)

(a)

(b)

(c)

(B) Drawing and identification of conventional signs and symbols of SOI topographical maps. (03 Marks)

(C) Drawing of profile. (05 Marks)

(D) Write short note on (any one out of 03). (Chapter I and III) (02Marks)

Que. 3- Survey the given area with the help of GPS (as per instructions of examiner given to you.) (12 Marks)

Que.4-(A) Write shorts notes (any three out of 05) (Chapter V and VI) (09 Marks)

(B) Descriptive Question (Chapter V and VI) (04 Marks)

Que. 5 Journal (05 Marks)

Oral (05 Marks)

Model Question Paper Format

For

GG-104 : Practical in Human Geography.

Note: All questions are compulsory.

Que. 1 Solve Example (Attempt any 01 out of 02) (10 Marks)

Que.2 Solve Examples (Attempt A and B)

(12 Marks)

(A)

(B)

Que.3 Solve Example(Attempt any 01 out of 02) (12 Marks)

Que.4 (A) Solve Example(Attempt any 01 out of 02) (10Marks)

(B)Write short notes on(Attempt any two out of 04) (06 Marks)

Que. 5 Journal (05 Marks)

Oral (05 Marks)

M.A / M.Sc. Part I

(Semester I)

Subject: Audit Course

AC-101: Practicing Cleanliness (Compulsory; Audit Course; Practical; 2 Credits)	
Course Objectives (COs):	
<ul style="list-style-type: none">• To make students aware of Clean India Mission and inculcate cleanliness practices among them.	
<ul style="list-style-type: none">• Awareness program on<ul style="list-style-type: none">○ Swachh Bharat Abhiyan (Clean India Mission)○ Clean Campus Mission○ Role of youth in Clean India Mission• Cleaning activities inside and surroundings of Department buildings.• Tree plantation and further care of planted trees• Waste (Liquid/Solid/e-waste) Management, Japanese 5-S practices• Planning and execution of collection of Garbage from different sections of University campus• Role of youth in power saving, pollution control, control of global warming, preservation of ground water and many more issues of national importance.• Cleanest School/Department and Cleanest Hostel contests• Painting and Essay writing competitions	

Course Outcomes (COs):

On completion of this course, the student will be able to:

CO No.	CO	Cognitive level
AC101.1	Identify need at of cleanliness at home/office and other public places.	2
AC101.2	Plan and observe cleanliness programs at home and other places.	4
AC101.3	Practice Japanese 5-S practices in regular life.	3

Kavayitri Bahinabai Chaudhari North Maharashtra University, Jalgaon

**Syllabus M.A./M.Sc. Geography
Semester-II (CBCS Pattern)
Core- Course
GG-201: Geographical Thoughts.
(With Effect from June 2021)**

Total Marks-100

Credit Points- 04

**Teaching Hours/Week: 04
Clock Hours : 60**

Course Objectives:

1. To understand the evolution of geographical, concept, ideas and knowledge.
2. To generalize the valuable contribution of pioneers in the geography
3. To study the major schools of geography in ancient and modern period.
4. To elaborate the trends of historical development of geography.

Course Outcomes:

After completion of this course, the students will be able to,

1. Appreciate the contribution of the thinkers in Geography.
2. Strengthen point presentations on different schools of geographical thought.
3. Know relationship of geography with other disciplines and man-environment relationships.

Unit No.	Units	Sub-Units	Lectures
I	Nature of Pre- Modern Geography	A) Impact of 'Dark Age' in Geography. B) Development of Geography: i) Greek Geographers- a) Homer b) Aristotle c) Erasthennis ii) Arabian Geographers- a) Ibn Batuta b) Al Idrisi c) Al Masudi iii) Indian Geographers - a) Aryabhatta b) Varahamihira c) Brahamgupta d) Bhaskarachrya	12
II	Role of Ancient Explorers & Discoveries in Geography	A) Marco Polo. B) Christopher Columbus. C) Vasco da Gama. D) Captain James Cook.	08
III	History of Modern Geographical Thoughts	Contribution of modern geographers in the world: A) Contribution of modern geographers- i) Alexander Von Humboldt ii)	12

		Fredrich Ratzel iii) Vidal-de-La-Blache iv) Griffith Taylor B) Roman Geographers- i) Strabo ii) Ptolemy.	
IV	Dualism in Geography	Dualism/ Dichotomies in Geography. i) Physical Geography v/s Human Geography. ii) General Geography v/s Regional Geography. iii) Determinism v/s Possibilism.	08
V	Evolution of Critical Geography	Trends in geographic thoughts and methodology. i) Quantitative revolution. ii) Behavioural approach. iii) Humanistic approach. iv) Human welfare approach.	10
VI	Post Modern trends in Geography	A) Structuralism in Geography. B) Historical materialism. C) Changing concept of 'Space' (with special reference to Harvey) D) Geography in the 21st Century : towards post modernism.	10

Weightage

Marks	
Internal Assessment	40 marks
External Assessment	60 marks

Suggested readings:

- 1) Taylor G. (1951): Geography in 20th Century, Methuen & Co. London.
- 2) Husain Majid (1984): Evolution of Geographical Thoughts, Rawat Publication, Jaipur
- 3) David Harvey: Explanation in Geography
- 4) Hart M.G. (1986): Geomorphology- Pure and Applied, George Allen & Unwin.
- 5) Robert E Dickinson: The Makers of Modern Geography.
- 6) Peter Hagget: Geography, A Modern Syntesis.
- 7) Saroj K Pal: Statistical Techniques, A Basic Approach to Geography, Mc. Graw Hill.
- 8) Floyd Sabins: Remote Sensing, Principles and Application, Freeman and Co. New York

- 9) Hartshorn T A & Alexander (1988): Economic Geography, Prentice Hall, International Inc.
- 10) Brian P Fit Gerald: Development in Geographical Method” Science in Geog. Oxford Uni. Press
- 11) Kang- tsung : Introduction to Geographic Information System (2002) McGraw Hill.
- 12) George Joseph : Fundamentals of Remote Sensing (2004) ,University Press Pvt. Ltd. Hyderabad.
- 13) J.R. Jensen : Remote Sensing of Environment, An Earth Resources, Perspective (2003) ,Person Education Pvt. Ltd. New Delhi.
- 14) Dr. Sawant,Prakash (1999) Thought and Concepts in Geography, Phadake Prakashan, Kolhapur
- 15) James, P.E.(1980) All possible Worlds: A History of Geographical ideas, Sachin Publication Jaipur (Indian Reprint)
- 16) Free Man, T.W, (1965) : Geography as Social Science, Harper International Edition, Harper & Row Publishers, New York.
- 17) Adhikari, S. 2015. Fundamentals of Geographical Thought, Orient Black swan.
- 18) Clifford, N. Holloway S.L., Rice, S.P., Valentine, G. 2009. Key Concepts in Geography, 2nd ed, Sage.
- 19) Couper, P. 2015. A Student’s Introduction to Geographical Thought: Theories, Philosophies, Methodologies, Sage.
- 20) Cresswell, T. 2013. Geographic Thought: A Critical Introduction, Wiley-Blackwell.
- 21) Dikshit, R.D. 2004. Geographical Thought: A Contextual History of Ideas, Prentice Hall India.
- 22) Holt-Jensen, A. 2011. Geography: History and Concepts: A Student’s Guide, Sage

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**New Syllabus M.A./M.Sc. Geography
Semester-II (CBCS Pattern)**

Core-Course

GG. 202 : Social and Cultural Geography.

(With Effect from June 2021)

Total Marks-100

Credit Points- 04

**Teaching Hours/Week: 04
Clock Hours : 60**

Course Objectives:

- 1) To study the Social as well as Cultural situation in the different parts in the world.
- 2) To analyze the relationship between the geography and socio-cultural factors.
- 3) To aware the students about various socio-cultural phenomenon.

Course Outcomes:

After completion of this course, the students will be able to,

- 1) Acquire skills related with socio-cultural factors.
- 2) Familiar to information about various social factors.
- 3) Identify various types of cultural landscape of the world.

Unit No.	Units	Sub Units	Lectures
I	Introduction to Social & Cultural Geography	A) Meaning B) Definitions C) Nature and Scope of Social & Cultural Geography D) Development of Social & Cultural Geography	08
II	Social Theories	A) Classical Social Theory i) Modern Social Theory ii) Post Modern Social Theory iii) Social Structure	08
III	The Cultural Complex	A) Cultural landscape i) Development of cultural landscape ii) Cultural Regions of the world	08
IV	Tribes	A) Definition, Tribal social formation B) Nomenclature, Language variation C) Distribution at state and district level D) Distribution of the tribes i) Gond ii) Naga iii) Bhill iv) Bushmen	10

V	Themes in Cultural Geography	A) Themes in cultural geography i) Cultural region ii) Formal cultural region iii) Functional cultural region iv) Cultural diffusion v) Cultural ecology	12
VI	Cultural System	A) Geography and religion B) Geography and language C) Cultural Nationalism D) Globalization and cultural change E) Cultural Convergence & divergence	14

Weightage

Marks	
Internal Assessment	40 marks
External Assessment	60 marks

Suggested readings:

- 1) Ajaruddin Ahmad- "Social Geography", Rawat Publication Jaipur, New Delhi.
- 2) Emrys Johns (1975) - "Readings in Social Geography", Oxford University Press.
- 3) Rajit Tirtha: "Geography of India", Eastern Michigan University, U.S.A. & Region.
- 4) Spencer J.E. and W.L. Thomas: "Introducing Cultural Geography"
- 5) Wagner P.L. and Mi Kesell M.W.: "Reading Cultural Geography"
- 6) Majid Husain: "Cultural Geography", Anmol Publication Pvt. Ltd., New Delhi.
- 7) John Emrys: "Regions in Social Geography"
- 8) John Emry and Eyles John: "An Introduction of Social Geography"
- 9) Dr. Jain: "VishwakaSanskrutikBhugol"
- 10) Majid Husain - Social Geography
- 11) Kaushik, Chavan, P.K. Pande - Social Geography

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**Syllabus M.A./M.Sc. Geography
Semester-II (CBCS Pattern)**

Core- Course

**Gg. 203 : Remote Sensing.
(With Effect from June 2021)**

Total Marks-100

Credit Points- 04

**Teaching Hours/Week: 04
Clock Hours : 60**

Course Objectives:

- 1) To introduce students with advance techniques of survey and data collection.
- 2) To acquaint the students with fundamental knowledge and principles of Remote Sensing.
- 3) To familiar students with variety of applications of Remote Sensing.
- 4) To acquaint the students with fundamental concepts and importance of Aerial Photographs and satellite imageries.

Course Outcomes:

After completion of this course, the students will be able to,

- 1) Recognize and explain basic principles of remote sensing including electromagnetic spectrum; the emission, scattering, reflection and absorption of electromagnetic radiation (EMR); variations in EMR interactions with many substances.
- 2) Recognize and explain properties of remote sensing data acquisition, storage and processing.
- 3) Recognize properties of aerial photographs and satellite imageries.
- 4) Recognize and describe applications of remote sensing data in different fields.

Unit No.	Units	Sub units	Lectures
I	Introduction to Remote Sensing	A) Introduction. B) Definitions of remote sensing. C) History of remote sensing. D) Process of remote sensing' E) Applications of remote sensing techniques in different fields.	10
II	Fundamentals of Remote Sensing	A) Concept of energy. B) Electromagnetic energy and radiation. C) Properties of electromagnetic waves. i) Wave velocity. ii) Wave length. iii) Wave frequency. D) Electromagnetic spectrum. E) Interaction of EMR with atmosphere:	12

		<p>absorption, scattering [Selective (Rayleigh, Mie and Raman Scattering) and Nonselective], reflection, refraction, and transmission of energy.</p> <p>F) Interaction of EMR with earth surface - Reflection, Absorption, Emission.</p>	
III	Types of Remote Sensing and Platforms.	<p>A) Types of remote sensing.</p> <p>i) Based on energy source.</p> <p>a) Passive remote sensing.</p> <p>b) Active remote sensing.</p> <p>ii) Based on use of wavelength regions of electromagnetic spectrum.</p> <p>a) Optical.</p> <p>b) Thermal.</p> <p>c) Microwave.</p> <p>B) Remote sensing platforms.</p> <p>i) Definition of platform.</p> <p>ii) Types of platforms.</p> <p>a) Ground based platform.</p> <p>b) Air borne platform.</p> <p>c) Space borne platform.</p>	10
IV	Aerial Photographs	<p>A) Introduction to Aerial Photographs.</p> <p>B) Types of aerial photographs.</p> <p>C) Types of camera.</p> <p>D) Types of film.</p> <p>E) Geometry of aerial photographs.</p> <p>F) Equipments used for the interpretation of aerial photographs (Parallax bar, Stereoscope (Mirror and Pocket Stereoscope)).</p> <p>G) Stereoscopic overlapping.</p> <p>H) Methods of scale determination.</p> <p>I) Average scale of aerial photographs.</p> <p>J) Elements of interpretation of aerial photographs.</p>	12
V	Satellite Remote Sensing	<p>A) Satellite orbit.</p> <p>i) Definitions.</p> <p>ii) Types of orbit.</p> <p>a) Geostationary / Geosynchronous.</p> <p>b) Polar / Sun synchronous.</p> <p>B) Satellite swath.</p> <p>C) Scanning techniques.</p> <p>i) Across-track</p> <p>ii) Along track.</p> <p>D) Sensor - definition and types of Sensor.</p>	08

		E) Resolution of sensors (Spectral, Spatial, Radiometric and Temporal). F) Elements of image interpretation.	
VI	Development of Indian Remote Sensing.	A) History of IRS development. B) NRSA organization (NRSC). C) Satellites launched by India and their functions. D) Recent development of India in Space Technology.	08

Weightage

Marks	
Internal Assessment	40 marks
External Assessment	60 marks

Suggested readings:

1. Abbasi S.A., K.B. Chari K.B. (2005): Applications of GIS and Remote Sensing in Environmental Management, Discovery Publication House, New Dehli.
2. Agarwal C.S. and Garg P.K. (2002): Text Book on Remote Sensing, Wheeler Publishing Delhi.
3. Prithvish Nag and M. Kudrat (1998): Digital remote Sensing, Concept Publishing Company, New Delhi.
4. Bhatta Basudeb (2011): Remote Sensing and GIS, Oxford University Press.
5. Chang, Kang-Taung (2000): Introduction to Geographic information System, Tata McGraw Hill.
6. Joseph George, 2003, Fundamentals of remote sensing. Universities Press.
7. Lillesand, Thomas M. & Kiefer Ralph (2000): Remote Sensing and Image Interpretation, John Willey.
8. Prithvish Nag and M. Kudrat (1998) : Digital remote Sensing , Concept Publishing Company, New Delhi.
9. Sabbins, F.F., 1985, Remote sensing Principles and interpretation. W.H. Freeman & Company
10. American Society for Photogrammetry and Remote Sensing, 1999, Remote Sensing for the Earth Sciences, Manual of Remote Sensing, 3rd ed., vol. 3, Wiley, New York.

Kavayitri Bahinabai Chaudhari North Maharashtra University Jalgaon

New Syllabus for M.A./M.Sc. Geography

Semester-II (CBCS Pattern)

Core- Course

Gg. 204 : Practical in Cartographic Techniques with the Help of GIS

(With Effect from June 2021)

(10 Students Per Batch)

Total Marks-100

Credit Points- 04

Teaching Hours/Week: 08

Clock Hours : 96

Course Objectives:

- 1) To acquaint the students with basic concepts of GIS.
- 2) To familiar the students with open-source software, QGIS and its importance in cartography.
- 3) To acquire the skill of georeferencing process in QGIS.
- 4) To enable the students to create different political and physical maps using QGIS
- 5) To acquire the skill of making choropleth maps based on attribute tables.

Course Outcomes: After completion of this course, the students will be able to,

- 1) Explain the importance concept of GIS and importance of QGIS in Cartography.
- 2) Undertake the process of georeferencing a toposheet or a scanned map.
- 3) Create different Political and Physical maps using QGIS.
- 4) Create choropleth maps based on attribute data tables.

Unit No.	Units	Sub - units	Lectures
I	Introduction to GIS	A) Introduction to GIS: Definitions, Evolution, Components and Objectives. B) Computer fundamentals for GIS. C) Spatial data models – raster and vector. D) Non spatial data. E) Metadata.	10
II	Introduction to Quantum GIS (QGIS)	A) Concept of Open-source software. B) Introduction to QGIS. C) Difference between ArcGIS and QGIS. D) Downloading and Installation of QGIS. E) Introduction to basic tools and panels in QGIS.	10

<p style="text-align: center;">III</p>	<p style="text-align: center;">Georeferencing</p>	<p>A) Scanning a map or toposheet with required dpi (Raster). B) Downloading a toposheet from SoI website. C) Uploading map / satellite image in QGIS. D) Selecting Georeferencing points (3 or 4). E) Georeferencing the map or image with the help of selected points.</p>	<p style="text-align: center;">18</p>
<p style="text-align: center;">IV</p>	<p style="text-align: center;">Creating a map using readymade data (packages) Part - I</p>	<p>A) Download the Natural Earth Quickstart Kit. B) Select an appropriate area for a map. C) Creating map layout. D) Grid and Coordinates. E) Legends.</p>	<p style="text-align: center;">18</p>
<p style="text-align: center;">V</p>	<p style="text-align: center;">Creating a map using readymade data (packages). Part - II</p>	<p>A) Adding Title and sub-title to the map. B) Formation of appropriate graphical scale. C) Adding Direction (North arrow). D) Exporting the map as image (set appropriate dpi) and as pdf file.</p>	<p style="text-align: center;">20</p>
<p style="text-align: center;">VI</p>	<p style="text-align: center;">Attribute Data and Data Exploration Digitization and map making</p>	<p>A) Creation of vector data model using line, polygone and point. B) Digitization and creating an outline map. C) Adding attribute data to a map. D) Symbology based on attribute data. E) Creating map layout and addition coordinates, title, direction, scale and legend.</p>	<p style="text-align: center;">20</p>

Weightage

Marks	
Internal Assessment	40 marks
External Assessment	60 marks

Suggested readings:

- 1) “*Geographic Information System Basics*” by Jonathan E. Campbell, UCLA, Michael Shin, UCLA.
Available for free: <http://2012books.lardbucket.org/books/geographic-information-system-basics/index.html>
- 2) Kang-tsung Chang (2007), 'Introduction to Geographic Information Systems' Tata MCGraw Hill, New Delhi.
- 3) C.P.Lo and Albert K.W. Yeung (2006) "Concepts and Techniques of Geographic information Systems" Prentice Hall of India, New Delhi
- 4) Burrough, Peter A. and Rachael McDonnell, (1998), 'Principles of Geographical Information Systems' Oxford University press, New York.
- 5) Maguire, D.J. Goodchild, M.F. and Rhind, D.M., (2005), 'Geographical Information Systems: Principles and Applications', Longman Group, U.K.
- 6) Burrough, P.A., 1986, Geographical Information System for land Resources System, Oxford Univ. Press, UK.
- 7) Fotheringham, S.; Rogerson, P. (ed.), 1994. Spatial analysis and GIS. Taylor and Francis, London, UK.
- 8) Laurini, Robert and Dierk Thompson, 1992, Fundamentals of Spatial Information Systems, Academic Press, ISBN 0-12-438380-7.
- 9) Maguire, D.J.; Goodchild, M.F.; Rhind, D.W. 1991. Geographical information System, Longman, London, UK
- 10) Siddiqui, M.A.; 2006, Introduction to Geographical Information System, Sharda Pustak Bhavan, Allahabad.
- 11) Siddiqui, M.A.; 2011, Concepts and Techniques of Geoinformatics, Sharda Pustak Bhavan, Allahabad.
- 12) <https://www.qgistutorials.com/en/index.html>
- 13) https://docs.qgis.org/3.4/en/docs/training_manual/index.html

Kavayitri Bahinabai Chaudhari North Maharashtra University, Jalgaon

Syllabus M.A./M.Sc. Geography

Semester-II (CBCS Pattern)

Skill Based Course

Gg-205 : Practical in Geo-Statistical Methods.

(With Effect from June 2021)

(10 Students Per Batch)

Total Marks-100

Credit Points- 04

Teaching Hours/Week: 08

Clock Hours : 96

Course Objectives:

1. To introduce some basic research methods to the students.
2. To introduce the importance of statistical techniques in Geography.
3. To introduce the skill and practical approach of Geo Statistical Methods.

Course Outcomes:

After completion of this course, the students will be able to,

1. Understand the importance and use of statistical methods in geography.
2. Use of sampling methods in Geo-statistical data.
3. Examine the relationship between two or more variables with the help of Correlation and regression analysis.
4. Measure probability using some probability distributions.
5. Apply large and small sample tests in Geo-statistical data.

Unit No	Topic	Sub Topic	Periods
I	Introduction to Geo-Statistical Methods	A) Introduction. B) Meaning and Definition of Geo-Statistical Methods. C) Importance and use of statistical methods in geography.	12
II	Sampling and Sample Planning in Geo-Science	A) Population and Sample. B) Sampling: Objectives, Advantages. C) Methods of Sampling. i). Simple Random Sampling. ii). Stratified Random Sampling. iii.) Systematic Sampling. iv). Cluster Sampling.	18
III	Bivariate Analysis	A) Bivariate Data. B) Covariance. C) Correlation: Karl Pearsons Correlation Coefficient. D) Regression: Meaning.	18

		E) Linear Regression. F) Non Linear Regression : Power, Exponential, Logarithmic	
IV	Probability Distributions	A) Probability functions and Computation of Probabilities using following distributions B) Binomial Distribution. C) Poisson Distribution. D) Normal Distribution. E) Standard Normal Distribution ($Z \sim N(0,1)$).	16
V	Testing of Hypothesis - I	A) Introduction. B) Types of Hypothesis. C) Type of Errors, Critical Value, Level of Significance, Concept of p-value. D) One tailed and two tailed test. E) Large Sample Tests (Based on Normal Distribution) – i) Test of Significance between sample mean and population mean. ii) Test of Significance between sample proportion and population proportion	16
VI	Testing of Hypothesis - II	A) Chi-square test. B) Student's t-test. C) Snedecor's variance ratio test (F test).	16

Weightage

Marks	
Internal Assessment	40 marks
External Assessment	60 marks

Suggested readings:

- 1) Cole, J.P., King, C.A.M. (1968): Quantitative Techniques in Geography. John Wiley & sons Inc. New York.
- 2) Gregory, S. (1968): Statistical methods and the geographer. Longman, London.
- 3) Elhance, D.N. (1972): Fundamentals of statistics, Kitab Mahal, Allahabad.
- 4) Mahmood, A. (1977): Statistical Methods in Geographical Studies, Rajesh Publications, New Delhi

- 5) Hammond,R., McCullagh P. (1978): Quantitative techniques in Geography An Introduction (2nd Ed.), Oxford University Press, USA.
- 6) Gupta, C.B. (1978); An introduction to statistical Methods, Vikas Pub.House,New Delhi.
- 7) 7.King, L.J. (1991): Statistical Analysis in geography. Prentice Hall, Englewood Cliff N.J.
- 8) Frank, H., & Althoen, S. C. (1994). *Statistics: Concepts and Applications*. Cambridge: Cambridge University Press.
- 9) Alvi, Z. (1995): Statistical Geography: Methods and Applications, Rawat Publications, Jaipur
- 10) Mann, P. S. (2007). *Introductory Statistics*. New Delhi: John Wiley and Sons
- 11) Burt, J.E., Barber, G.M., and Rigby, D.L. (2009): Elementary Statistics for Geographers (3rd Ed.), TheGuilford Press, 653pp.
- 12) Harris, R., Jarvis,C.(2011): Statistics for Geography and Environmental Science, Prentice Hall.
- 13) Acevedo, M.F.(2012): Data Analysis and Statistics for Geography, Environmental Science and Engineering, CRC Press.
- 14) Rogerson,P.A.(2015): Statistical Methods for Geography: A Student's Guide, 4th ed,Sage.

Model question paper format

For

Gg. 204: Practical in Cartographic Techniques with the Help of GIS

Note:

- 1. Question 1 is compulsory.**
- 2. Solve any two questions from 2 to 4.**

Question 1. Georeference the given part of toposheet / map. (10 Marks)

Question 2. Prepare the map of (any country) by using the given dataset. The map must include Title, coordinates, north, scale and legend. (20 Marks)

Question 3. Prepare a choropleth map using the given outline and attribute data. (Jalgaon, Dhule, Nandurbar maps) (20. Marks)

Question 4. Prepare a outline map (vector) with help of given map (raster) using polygons or lines. The map must include Title, coordinates, north, scale etc. (20 Marks)

Question-5 Journal (05 Marks)

Oral (05 Marks)

Model Question Paper Format
For Gg-205 : Practical in Geo-Statistical Methods

Note: All questions are compulsory.

Que. 1 Solve Example (Attempt any 01 out of 02) (10 Marks)

Que.2 Solve Examples (Attempt A and B) (12 Marks)

(A)

(B)

Que.3 Solve Example (Attempt any 01 out of 02) (12 Marks)

Que.4 (A) Solve Example (Attempt any 01 out of 02) (10Marks)

(B)Write short notes on (Attempt any two out of 04) (06 Marks)

Que. 5 Journal (05 Marks)

Oral (05 Marks)

M.A/ M.Sc. Part I

Semester II

Audit Courses

AC-201(A): Soft Skills (Personality and Cultural Development Related Audit course; Practical; 2 Credits) (Optional:)		
	Course Objectives (COs): •	
Unit 1	Introduction to soft skills Formal definition, Elements of soft skills, Soft vs. Hard skills, Emotional quotient, Goal setting, life skills, Need for soft skills, Communication skills, Etiquettes & Mannerism.	2 h
Unit 2	Self-Assessment Goal setting, SWOT analysis, attitude, moral values, self-confidence, etiquettes, non-verbal skills, achievements, positive attitude, positive thinking and self-esteem. Activity: The teacher should prepare a questionnaire which evaluate students in all the above areas and make them aware about these aspects.	4 h
Unit 3	Communication Skills Types of communication: Verbal, Non-verbal, body language, gestures, postures, gait, dressing sense, facial expressions, peculiarity of speaker (habits). Rhetoric speech: Prepared speech (topics are given in advance, students get 10 minutes to prepare the speech and 5 minutes to deliver, Extempore speech (students deliver speeches spontaneously for 5 minutes each on a given topic), Storytelling (Each student narrates a fictional or real-life story for 5 minutes each), Oral review (Each student orally presents a review on a story or a book read by them) Drafting skills: Letter, Report & Resume writing, business letters, reading & listening skills Activity: The teacher should teach the students how to write the letter, report and build resume. The teacher should give proper format and layouts. Each student will write one formal letter, one report and a resume.	8 h
Unit 4	Formal Group Discussion, Personal Interview & Presentation skills Topic comprehension, Content organization, Group speaking etiquettes, driving the discussion & skills. Preparation for personal interview: dress code, greeting the panel, crisp self-introduction, neatness, etiquettes, language tone, handling embarrassing & tricky questions, graceful closing. Activity: Each batch is divided into two groups of 12 to 14 students each. Two	4 h

	rounds of a GD for each group should be conducted and teacher should give them feedback. Mock interview are to be conducted.	
Unit 5	Aptitude and analytical skills Quantitative aptitude, Numerical reasoning, verbal reasoning, diagrammatic test, situational tests, logical thinking. Analytical skills: Definition, Types, problem solving	8 h
Unit 6	Life skills Time management, critical thinking, sound and practical decision making by dealing with conflicts, stress management, leadership qualities Activity: The teacher can conduct a case study activity to train students for decision making skills. The teacher should conduct a session on stress management and guide students on how to manage stress. The teacher may conduct a stress relieving activity in the class. He/she may counsel students individually to know their problems and guide them on dealing with them effectively.	4 h
Suggested readings:		
<ol style="list-style-type: none"> 1. Basics of Communication In English: Francis Sounderaj, MacMillan India Ltd. 2. English for Business Communication: Simon Sweeney, Cambridge University Press 3. An Introduction to Professional English and Soft Skills: Das, Cambridge University Press 4. Quantitative Aptitude: R.S. Agrawal 		

AC-201(B): Practicing Sports Activities (Personality and Cultural Development Related Audit course; Practical; 2 Credits) (Optional: Campus-level)				
Course Objectives (CObs): <ul style="list-style-type: none"> To motivate students towards sports and provide them required training. 				
SR NO.	NAME OF THE SPORT/GAME (Select ONE of the Following)	SYLLABUS OF THE COURSE	TIMING (02 Hours in a Week)	SEMESTER
1	Volleyball	<ul style="list-style-type: none"> General Fitness Basic Fitness Specific Fitness History of the Game Basic Skill of the Game Major Skill of the Game Technique & Tactics of the Game Game Practice 	Morning : 07 to 09 AM OR Evening : 05 to 07 PM	Total 30 Hours in Each Semester
2	Athletics			
3	Badminton			
4	Cricket			
5	Basketball			
6	Handball			
7	Kabaddi			
8	Kho-Kho			
9	Table-Tennis			
10	Swimming			

AC-201(C): Practicing Yoga (Personality and Cultural Development Related Audit course; Practical; 2 Credits) (Optional)	
	<p>Course Objectives:</p> <ul style="list-style-type: none"> • To motivate students towards yoga and provide them required training.
	<ul style="list-style-type: none"> • Yog: Meaning, Definition & Introduction, Objectives • Primary Introduction of Ashtanga Yoga • Preparation of Yogabhyas • Omkar Sadhana, Prayer, Guru Vandana • Sukshma Vyayamas • Suryanamaskar (12 Postures) • Asanas : <ul style="list-style-type: none"> ▪ Sitting (Baithaksthiti) - Vajrasana, Padmasan, Vakrasan, Ardha-Pashchimotanasanan ▪ Supine (Shayansthiti) - Uttan Padaasan(Ekpad/Dwipad), Pavanmuktasana, Viparitakarani Aasan, Khandarasan, Shavasana ▪ Prone (Viparitshayansthiti) - Vakrahasta, Bhujangasana, Saralhasta Bhujangasana, Shalabhasana(Ekpad/Dwipad), Makarasana ▪ Standing (Dhandsthiti) - Tadasana , TiryakTadasana, Virasana, Ardh Chakrasana • Primary Study of Swasana: Dirghaswasana, Santhaswasana, JaladSwasana - 6 Types • Pranayama : Anuloma-viloma, Bhramari

AC-201(D): Introduction to Indian Music (Personality and Cultural Development Related Audit course; Practical; 2 Credits) (Optional: Campus-level)	
	<p>Course Objectives:</p> <ul style="list-style-type: none"> • To motivate students towards Indian music and provide them minimum required training.
	<ul style="list-style-type: none"> • Definition and brief about generation of Swar, Saptak, Thaata, Raag, Aavartan, Meend, Khatka, Murkee, Taal, Aalaap etc. • Taal and its uses - Treetaal, Daadraa, Zaptaal, Kervaa. • Information of Badaakhyaal, Chhotaakhyaal (one), Sargam, Lakshangeet (information) • Detailed information of Tambora • Detailed information of Harmonium and Tablaa. • Five filmy songs based on Indian Classical Music (Theory and Presentation) • Sound Management - Basic information of Sound Recording (including Practicals) • Composition of Music as per the Story • Preparing news write-ups of the Seminars, Library Musical Programmes held at the nearest Akashwani, by personal visits.

Course Outcomes (COs):

On completion of this course, the student will be able to:

CO No.	CO	Cognitive level
AC201D.1	Identify different types of Indian music.	3
AC201D.2	Develop more interest to learn and practice Indian music.	4
