



Date :- 01/08/2023

NOTIFICATION

Sub :- CBCS Syllabi of M.A. /M.Sc. in Geography (Sem. I & II)

Ref. :- Decision of the Academic Council at its meeting held on 26/07/2023.

The Syllabi of M.A. /M.Sc. in Geography (First and Second Semesters) as per **NATIONAL EDUCATION POLICY - 2020** and approved by the Academic Council as referred above are hereby notified for implementation with effect from the academic year 2023-24.

Copy of the Syllabi Shall be downloaded from the College Website
(www.kcesmjcollege.in)

Sd/-
Chairman,
Board of Studies

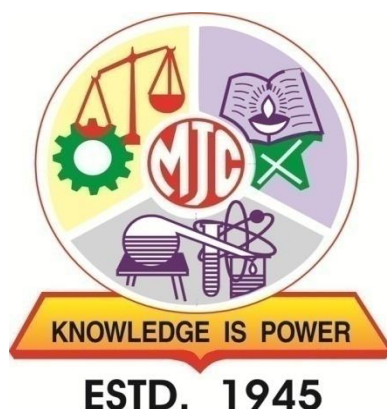
To :

- 1) The Head of the Dept., M. J. College, Jalgaon.
- 2) The office of the COE, M. J. College, Jalgaon.
- 3) The office of the Registrar, M. J. College, Jalgaon.

Knowledge is Power

Khandesh College Education Society's
Moolji Jaitha College, Jalgaon
An "Autonomous College"

Affiliated to
Kavayitri Bahinabai Chaudhari
North Maharashtra University, Jalgaon-425001



STRUCTURE AND SYLLABUS

M.A./M.Sc. Honours / Honours with Research (M.A./M.Sc. Geography)

**Under Choice Based Credit System (CBCS)
and
as per NEP-2020 Guidelines**

[w.e.f. Academic Year: 2023-24]

Preface

Geography, as a subject, is an ancient discipline that explores the interactions between humans and their environment. Over the years, geography has evolved and incorporated various technological advancements, leading to significant developments in the field. One such noteworthy transformation has been the integration of Remote Sensing (RS), Geographic Information Systems (GIS), and Global Positioning System (GPS) technologies. These cutting-edge tools have revolutionized how geographers collect, analyze, and interpret spatial data, making geography an even more dynamic and relevant subject in contemporary times.

The Department of Geography at M. J. College (Autonomous), Jalgaon, is at the forefront of embracing these recent trends in geography. Through the courses offered, including B.A. Geography, B.Sc. Geography, M.A/M.Sc. Geography, and Ph.D., the department equips students with comprehensive knowledge and practical skills to navigate the complexities of modern geography. Additionally, the Certificate Course in Geoinformatics serves as a valuable platform for students to delve deeper into the applications of RS, GIS, and GPS technologies.

One of the standout characteristics of the Department is its team of expert and qualified faculties. These educators not only possess extensive academic knowledge but also have hands-on experience in utilizing geospatial technologies effectively. Their guidance empowers students to explore and understand the intricacies of geographical phenomena using the latest tools and methodologies.

The Department boasts state-of-the-art facilities, including smart laboratories for practicals, a central library supplemented with a departmental library, and a well-equipped GIS computer lab with internet access. The availability of these resources ensures that students have ample opportunities to engage in hands-on learning and conduct research, contributing to a comprehensive understanding of geographic concepts. Moreover, the Department has been recognized as a research center for Ph.D. studies, encouraging scholarly pursuits in the realm of geography. This designation highlights the institution's commitment to pushing the boundaries of geographical knowledge and fostering innovative research in the field. The integration of technology in geography education is further augmented by the presence of smart classrooms and advanced geographical instruments. These resources enable interactive learning and support students in developing a deep appreciation for the spatial dimensions of various phenomena.

In addition to academic excellence, the Department is devoted to providing specialized coaching for national-level exams such as NET/SET and competitive examinations. This emphasis on exam preparation equips students with the necessary skills to excel in their careers and become leading professionals in the field of geography. The collaboration with the Indian Institute of Remote Sensing (IIRS) as an Outreach Training Program center is a testament to the Department's commitment to keeping abreast of the latest advancements in geospatial technology. This association allows students and faculties to participate in training programs conducted by experts in the field, enhancing their knowledge and skills in RS, GIS, and GPS applications. Furthermore, the Department of Geography at M. J. College (Autonomous), Jalgaon, proudly boasts access to the best telescopes for sky watching. This unique feature provides students with an opportunity to explore celestial phenomena and their connections with the Earth, bridging the gap between the terrestrial and astronomical realms.

Finally, the Department's focus on career opportunities in geography ensures that graduates are well-prepared to enter various professional fields. The interdisciplinary nature of geography

opens doors to careers in environmental management, urban planning, disaster management, cartography, geospatial analysis, and more. The versatility of geography as a subject makes it a rewarding and promising choice for students seeking diverse and impactful career paths.

The Department of Geography at M. J. College (Autonomous), Jalgaon, stands as a vibrant and progressive hub for geography education. The integration of RS, GIS, and GPS technologies, coupled with expert faculty, modern facilities, and extensive research opportunities, equips students to become adept geographers, ready to address the pressing challenges of our ever-changing world.

Program Outcomes (PO) for M.A./M.Sc. Program:

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

PO No.	PO
PO 1	Student possess an in-depth understanding of advanced theories, concepts, and methodologies in their specific field of study.
PO 2	Student should demonstrate advanced technical skills and proficiency in utilizing specialized equipment, software, and methodologies relevant to their field of study.
PO 3	Student should be capable of critically analyzing complex problems and synthesizing information from various sources.
PO 4	Student should be proficient in effectively communicating scientific information to both technical and non-technical audiences. They should be able to present their experimental findings through oral presentations, scientific writing, and the use of appropriate visual aids.
PO 5	Student should demonstrate leadership qualities and the ability to work effectively as part of a team.
PO 6	Student should have developed advanced research skills and the ability to independently design and conduct rigorous scientific investigations. They should be able to analyze scientific literature, formulate research questions, develop research plans, collect and analyze data, draw valid conclusions and know about IPR.
PO 7	Student should understand and adhere to ethical principles and professional standards in their field.
PO8	Student should recognize the importance of continuous learning and professional development. They should have the skills and motivation to stay updated with advancements in their field, engage in lifelong learning, and pursue further academic or professional opportunities.

Program Specific Outcome PSO (M.A./M.Sc. Geography):

After completion of this course, students are expected to learn/understand the:

PO No.	
PSO 1	Knowledge of geographical terms, concepts, and theories and will be able to explain and find out the relation between geographical factors and processes.
PSO 2	How their life is related to different geographical factors such as environmental, economic, social, and cultural at the local and global scale. He/she will be able to evaluate factors such as environmental, economic, social, and cultural, with respect to spatial dimensions from a local to global scale.

PSO 3	Present the completed research through cartographic tools and other visual formats, with an explanation of research methodology, and carry out scholarly discussions.
PSO 4	Develop a research design including hypotheses, and research questions and also will be able to do a critical analysis of both qualitative and quantitative data to find out the answers using various theoretical and methodological approaches in both physical and human geographies
PSO 5	Skills in interpretation of thematic maps through visual and/or digital interpretation of topographic maps, weather maps, aerial photographs, and satellite images.
PSO 6	apply knowledge of remote sensing and GIS concepts, and techniques in various fields of earth and environment sciences.
PSO 7	Thinking in spatial dimensions and will be able to find out the temporal change which took place over the period of time and understand the present and extrapolate for the future.
PSO 8	Geographical distribution of the global human population and factors affecting human populations including human settlement and economic activities and transport networks. The students will be able to understand the impacts of human activities on the physical environment.

Credit distribution structure for two years/one-year PG M.A./M.Sc. programme

Level	Sem	Major (Core) Subjects		Minor Subjects	OJT/Int, RP	Cumulative Credits/Sem	Degree/ Cumulative Cr.
		Mandatory (DSC)	Elective (DSE)				
6.0	I	DSC-1 (4T) DSC-2 (4T) DSC-3 (4T) DSC-4 (2P)	DSE-1(2T) A/B DSE-2(2P) A/B	RM (4T)		22	First year PG OR One year PG diploma after 3year UG
	II	DSC-5 (4T) DSC-6 (4T) DSC-7 (4T) DSC-8 (2P)	DSE-3(2T) A/B DSE-4(2P) A/B		OJT/Int (4)	22	
	Cum. Cr.	28	8	4	4	44	
	Exit option: PG diploma (44 Credits) after three-year UG degree						
6.5	III	DSC-9 (4T) DSC-10 (4T) DSC-11 (4T) DSC-12 (2P)	DSE-5(2T) A/B DSE-6(2P) A/B	--	RP (4)	22	Second year PG after 3-year UG OR PG degree after 4-year UG
	IV	DSC-13 (4T) DSC-14 (4T) DSC-15 (2P) DSC-16 (2P)	DSE-7(2T) A/B DSE-8 (2P) A/B	...	RP (6)	22	
	Cum. Cr.	54	16		4+10	88	
2 Years-4 Sem. PG Degree (80-88 credits) after Three Year UG Degree or 1 Year-2 Sem PG Degree (40-44 credits) after Four Year UG Degree							

Sem- Semester, DSC- Department Specific Course, DSE- Department Specific Elective, T- Theory, P- Practical, RM- Research Methodology, OJT- On Job Training, Int- Internship, RP- Research Project, Cum. Cr. : Cumulative Credits

Multiple Entry and Multiple Exit options:

The multiple entry and exit options with the award of UG certificate/ UG diploma/ or three-year degree depending upon the number of credits secured;

Levels	Qualification Title	Credit Requirements		Semester	Year
		Minimum	Maximum		
6.0	One-year PG Diploma program after 3 Yr Degree	40	44	2	1
6.5	Two-year master's Degree program After 3-Yr UG Or PG Degree after 4- Yr UG	80	88	4	2

M.A./M.Sc. Geography Course Structure

Semester	Course Module	Credit	Hours/ week	TH/ PR	Code	Title
I	DSC	4	4	TH	GEO-DSC-511	Principles of Geomorphology
	DSC	4	4	TH	GEO-DSC-512	Principles of Climatology
	DSC	4	4	TH	GEO-DSC-513	Social Geography
	DSE	2	2	TH	GEO-DSE-514A	Tourism Management
	DSE	2	2	TH	GEO-DSE-514B	Ecology & Environment
	DSC	2	4	PR	GEO-DSC-515	Practical I - Geomorphology
	DSC	2	4	PR	GEO-DSC-516A	Practical II - Climatology
	DSE	2	4	PR	GEO-DSE-516B	Hands on GIS Software
	DSC	4	4	TH	GEO-RM-517	Research Methodology for Geography
II	DSC	4	4	TH	GEO-DSC-521	Principles of Human Geography
	DSC	4	4	TH	GEO-DSC-522	Principles of Economic Geography
	DSC	4	4	TH	GEO-DSC-523	Watershed Management
	DSE	2	2	TH	GEO-DSE-524A	Cultural Geography
	DSE	2	2	TH	GEO-DSE-524B	Rural Morphology
	DSC	2	4	PR	GEO-DSC-525	Practicals in Human Geography
	DSE	2	4	PR	GEO-DSE-526A	Practicals in Economic Geography
	DSE	2	4	PR	GEO-DSE-526B	Interpretation of OS Sheets
	DSC	4	8	OJT	GEO-OJT-527	On Job Training/ Internship

DSC	:	Department-Specific Core course
DSE	:	Department-Specific elective
TH	:	Theory
PR	:	Practical

Examination Pattern for MSc

Theory Question Paper Pattern:

- 60 (External) +40 (Internal) for 4 credits
 - External examination will be of three hours duration
 - There shall be 5 questions each carrying equal marks (12 marks each) while the tentative pattern of question papers shall be as follows;
 - Q1 Attempt any 3 out of 4 sub-questions; each 4 marks
 - Q 2, Q3, Q4 and Q5 Attempt any 2 out of 3 sub-question; each 6 marks.
- 30 (External) +20 (Internal) for 2 credits
 - External examination will be of 1½ hours duration
 - There shall be 3 questions Q1 carrying 6 marks and Q2, Q3 carrying 12 marks each. while the tentative pattern of question papers shall be as follows;
 - Q1 Attempt any 2 out of 3 sub-questions; each 3 marks
 - Q 2 and Q3 Attempt any 2 out of 3 sub-question; each 6 marks.

Rules of Continuous Internal Evaluation:

The Continuous Internal Evaluation for theory papers shall consist of two methods:

1. Continuous & Comprehensive Evaluation (CCE): CCE will carry a maximum of 30% weightage (30/15 marks) of the total marks for a course. Before the start of the academic session in each semester, the subject teacher should choose any three assessment methods from the following list, with each method carrying 10/5 marks:

- i. Individual Assignments
- ii. Seminars/Classroom Presentations/Quizzes
- iii. Group Discussions/Class Discussion/Group Assignments
- iv. Case studies/Case lets
- v. Participatory & Industry-Integrated Learning/Field visits
- vi. Practical activities/Problem Solving Exercises
- vii. Participation in Seminars/Academic Events/Symposia, etc.
- viii. Mini Projects/Capstone Projects
- ix. Book review/Article review/Article preparation
- x. Any other academic activity
- xi. Each chosen CCE method shall be based on a particular unit of the syllabus, ensuring that three units of the syllabus are mapped to the CCEs.

2. Internal Assessment Tests (IAT): IAT will carry a maximum of 10% weightage (10/5 marks) of the total marks for a course. IAT shall be conducted at the end of the semester and will assess the remaining unit of the syllabus that was not covered by the CCEs. The subject teacher is at liberty to decide which units are to be assessed using CCEs and which unit is to be assessed on the basis of IAT.

The overall weightage of Continuous Internal Evaluation (CCE + IAT) shall be 40% of the total marks for the course. The remaining 60% of the marks shall be allocated to the semester-end examinations.

The subject teachers are required to communicate the chosen CCE methods and the corresponding syllabus units to the students at the beginning of the semester to ensure clarity and proper preparation.

Practical Examination Credit 2: Pattern (30+20)

External Practical Examination (30 marks):

- Practical examination shall be conducted by the respective department at the end of the semester.
- Practical examination will be of 3 hours duration and shall be conducted as per schedule.
- There shall be 05 marks for journal and viva-voce. Certified journal is compulsory to appear for practical examination.
- Practical examination will be of minimum 3 hours duration and shall be conducted as per schedule for 2 consecutive days in case of practical where incubation condition, allied aspects are essential.

Internal Practical Examination (20 marks):

- Internal practical examination of 10 marks will be conducted by department as per schedule given.
- For internal practical examination student must produce the laboratory journal of practicals completed along with the completion certificate signed by the concerned teacher and the Head of the department.
- There shall be continuous assessment of 30 marks based on student performance throughout the semester. This assessment can include quizzes, group discussions, presentations and other activities assigned by the faculty during regular practicals. For details refer internal theory examination guidelines.
- Finally, 40 (10+30) marks performance of student will be converted into 20 marks.

M.A./M.Sc. (Geography)**Semester I****GEO-DSC-511: Principles of Geomorphology****Total Hours: 60****Credits: 4**

Learning objectives	- To define the concepts in Geomorphology and Physical Geography - To introduce various concept to understand cycles of the solid Earth surface - To understand the dynamic nature of the Earth's surface, various processes, and landforms - To study the impact of human on geomorphic system	
Course outcomes	After successful completion of this course, students are expected to: - Define the field of Geomorphology and to explain the essential principles of it - Outline the mechanism of dynamic nature of the Earth's surface and interior of the Earth - Illustrate and explain the forces affecting the crust of the earth and its effect on it - Gain knowledge about conceptual and dynamic aspects of landform development	
Unit	Topic Particular	Hours
Unit I	Geomorphology - Introduction to Geomorphology Meaning, nature, development, scope and approaches to geomorphology - Basic concepts of geomorphology - Geological time scale - Distribution of continents and oceans	15
Unit II	Systems and Cycles of the Solid Earth - Earth's interior: - Structure and composition - Alfred Wegener's continental drift - Convectional current theory and concept of sea floor spreading - Theory of Plate Tectonics: - Plate boundaries and Subduction - Theory of Isostasy	15
Unit III	The Dynamics of Earth - Earth's Movements - Endogenetic forces Exogenetic forces; - Sudden and Diastrophic movements: - Epeirogenic and Orogenetic Movements; Process of folding and faulting; Vulcanicity and earthquake; - Rocks: Characteristics, types, importance, and rock cycle; - Weathering: meaning, types and controlling factors; - Mass Movement: meaning, controlling factors, types - landslides, rock-falls.	15
Unit IV	Evolution of Landforms - Landforms: meaning, types and factors controlling landforms development - Slope development: concept and types - Concept of Cycle of Erosion–W.M. Davis and W. Penck	15

	Agents of Denudation: river; drainage patterns, groundwater, Sea waves, Wind and Glaciers and resultant landforms.	
Study Resources	- Bloom A.L. (1978) Geomorphology: A Systematic Analysis of Late Cenozoic Landforms Prentice – Hall of India, New Delhi. - Chorley, R.J., Schumm, S. A. and Sugden, D.E. 1984: Geomorphology, Methuen, London - Dayal, P. 1996: Textbook of Geomorphology, Shukla Book Depot, Patna. - Goudie Anrew et.al. (1981) Geomorphological Techniques, George Allen & Unwin, London. - Homes A. (1965) Principles of Physical Geology, 3rd Edition, ELBSS Edn. - Kale, V. S., & Gupta, A. (2010). Introduction to Geomorphology. Hyderabad: Universities Press - Singh, S. (2002). Geomorphology, Allahabad: Prayag Pustak Bhawan. - Strahler A.N. (1968) The Earth Sciences, Harper & Row Intl. Edn, New York - Thornberry W.D. (1969) Principles of Geomorphology 2nd Edition, Wiley Intl. Edn. & Wiley, 1984. - Verstappen H. (1983) Applied Geomorphology, Geomorphological Surveys for Environmental Development, Elsevier, Amsterdam	

M.A./M.Sc. (Geography)

Semester I

GEO-DSC-512: Principles of Climatology

Total Hours: 60

Credits: 4

Learning objectives	• The aim of the course is to provide an understanding basic concept in Climatology • To acquaint concepts solar energy emission, energy budget and temperature • To Enhance the ability of student to understand the atmospheric disasters • To understand the various dynamics of global climates and generation of climatic information and their application	
Course outcomes	After successful completion of this course, students are expected to: • Gets acquainted with the basic concepts in Climatology • Understands the concepts of Insolation and temperature Realize the way atmospheric wind circulation and moisture works. • Ability of student to understand the atmospheric disasters • Familiar with weather phenomena, dynamics of global climates and compilation.	
Unit	Topic Particular	Hours
Unit I	Introduction • Weather and Climate • Nature and Scope of Climatology • Development of Climatology • Composition and Structure of the Atmosphere	15

Unit II	Insolation • Solar and terrestrial radiation • Electromagnetic spectrum • Factors affecting insolation • Distribution of the temperature • Global Energy Budget	15
Unit III	Air masses & Climatic Classification • Fronts: front genesis and frontolysis – classification of fronts • And Pressure Belts, Pressure Gradient Ferrel's Law • Air masses: Origin, classification, types • Winds: influencing factors, Types - planetary, seasonal, local winds • Variable Winds-Cyclones and anti-cyclones	15
Unit IV	Atmospheric Moisture Humidity and Climatic Classification • Atmospheric Moisture Humidity: Sources, influencing factors and types-Absolute, Relative and Specific. • Clouds- classification and precipitation processes • Koppen Climatic Classification	15
Study Resources	• Barura, A.K. (2005), “Climatology”, Dominant Publishers & Distributors, New Delhi. • Barry, R.G. and Chorley R.J., “Atmosphere, Weather and Climate” • Byers, R.H. (1974), “General Meteorology”, McGraw Hill, New York. • Critchfield, H.J. (1993), “General Climatology”, Prentice Hall, New Delhi, India • Critchfield, H.J. (2004): Principles of Climatology; Prentice Hall, London. • Das, P.K (1991), “The Monsoon”, National Book Trust, New Delhi. • K. Siddhartha (2011), “Atmosphere Weather & Climate – A text book of Climatology, Kisalaya Publications Pvt. Ltd., New Delhi. • Lal, D.S. (2011), “Climatology”, Sharda Pustak Bhawan, Allahabad. • Lutgens, F.K. and Tarbuck, E.J. (1995), “The Atmosphere:An Introduction to Meteorology” , Prentice Hall, New Jersey. • Mather, J. R. (1974): Climatology: Fundamentals and Applications, Mc Graw Hill, New York. • Pettersons (1969), “Introduction to Meteorology”, McGraw Hill, New York. • Quzi, S.A. (2009), “Principles of Physical Geography”, APH Publishing Corporation, New Delhi- 110002. • Rama Shastri, A.A.: 'Weather and Weather forecast', IMD. • Savindra Singh (2005) “Climatology” Prayag Pustak Bhavan , Allahabad. • Stringer, E.T. (1982), “Foundation of Climatology” Surjeet Publications, Delhi • Trewartha, G.T. (1980), “An Introduction to Weather and Climate”, McGraw Hill, New York.	

M.A./M.Sc. (Geography)
Semester I
GEO-DSC-513: Social Geography

Total Hours: 60

Credits: 4

Learning objectives	- To study factual knowledge about the world and its regions focusing on the diversity social landscape features. - To know some basic principles, definitions, and themes in the subject matter of social geography - To understand the scientific study of the relationship of society and space (spatial components) - To understand and appreciate current problems, trends and significant issues in society affairs locally, regionally, nationally, and globally.	
Course outcomes	After successful completion of this course, students are expected to: - Correlate the concepts in Social Geography with applied techniques. - Gain knowledge about Society and its culture. - Help students to explore and understand space and place - recognising the great differences in cultures, political systems, economies, landscapes and environments across the world. - Students will be aware of the problems in the society.	
Unit	Topic Particular	Hours
Unit I	Introduction to Social Geography - Introduction - Definition and Nature and Scope - Group Structure, Group categorization and Different groups of society - Major themes in Social Geography - Social Environment	15
Unit II	Social Theories - Classical social theory - Modern Social theory - Post Modern Social Theory	15
Unit III	Tribes & Social Process - Definitions, Tribes social formation - Nomenclature, Language variation - Distribution of the tribes - Gond - Naga - Residential location and Intra Urban Mobility - Migration - Social Change and Urbanization	15
Unit IV	Concept of Space - Pattern, Processes and Concept of space in Social Geography - Geography and Social Problems	15

Study Resources	• Aijaruddin Ahmad (1999) "Social Geography", Rawat Publication Jaipur, New Delhi. • Emrys Johns (1975) "Readings in Social Geography", Oxford University Press. • John Emry and Eyles John (1977)"An Introduction of Social Geography", Oxford University Press, U.K. • John Emrys "Regions in Social Geography" • Kaushik, Chavan, P.K. Pande (2012) Social Geography, Crescent Publishing Corporation, New Delhi. • Majid Husain (2000) Social Geography, Anmol Publication Pvt. Ltd., New Delhi • Majid Husain (2014) "Cultural Geography" Anmol Publication Pvt. Ltd., New Delhi. • Rajit Tirtha (2000) "Geography of India" 2nd Edition, Eastern Michigan University, U.S.A. & Region. • Spencer J.E. and W.L. Thomas (1978), "Introducing Cultural Geography" 2nd Edition, John Wiley & Sons; 2nd Edition. • Wagner P.L. and Mi Kesell M.W (1962), "Reading Cultural Geography", University of Chicago Press.
------------------------	---

M.A./M.Sc. (Geography)
Semester I
GEO-DSE-514 A: Tourism Management

Total Hours: 60

Credits: 2

Learning objectives	• Understand the fundamental concepts and scope of tourism management. • Analyze the factors influencing tourism demand and supply. • Evaluate the positive and negative impacts of tourism on sustainable tourism practices. • Develop knowledge and skills in tourism policy formulation in the tourism industry.	
Course outcomes	After successful completion of this course, students are expected to: • Demonstrate a comprehensive understanding of the key principles, theories, and practices of tourism management in geography. • Apply critical thinking to analyze and evaluate the tourism management. • Identify and propose sustainable strategies and practices to mitigate the negative impacts of tourism and enhance its positive contributions. • Develop proficiency in formulating effective tourism policies& management.	
Unit	Topic Particular	Hours
Unit I	Introduction to Tourism • Definition and scope of tourism • Types of tourism • Importance and economic significance of tourism • Tourism and its relationship with geography • Tourism planning and development	15
Unit II	Tourism Demand and Supply • Factors influencing tourism demand (e.g., economic, social, cultural)	15

	- Seasonality and its impact on tourism - Tourism supply chain (e.g., accommodations, transportation, attractions) - Tourism infrastructure and services - Tourism distribution channels	
Unit III	Tourism Impacts and Sustainability - Positive and negative impacts of tourism on destinations - Environmental, socio-cultural, and economic impacts - Sustainable tourism practices - Carrying capacity and tourism impacts - Community involvement and empowerment in tourism	15
Unit IV	Tourism Policy and Destination Management - Tourism policy formulation and implementation - Stakeholder management in tourism - Destination competitiveness - Destination marketing and promotion - Crisis management in tourism	15
Study Resources	- Buhalis, D., & Darcy, S. (Eds.). (2011). Tourism in the City: Towards an Integrative Agenda on Urban Tourism. Emerald Group Publishing. - Butler, R., & Suntikul, W. (2017). Tourism and Hospitality Marketing: A Global Perspective. SAGE Publications. - Dredge, D., & Jamal, T. (Eds.). (2013). Mobilities, Tourism and Travel Behavior (2nd ed.). Routledge. - Gössling, S., Scott, D., & Hall, C.M. (Eds.). (2019). Tourism and Water (2nd ed.). Channel View Publications. - Page, S.J., & Connell, J. (2020). Tourism: A Modern Synthesis (5th ed.). Cengage Learning. - Tribe, J. (2017). The Economics of Recreation, Leisure and Tourism (6th ed.). Routledge. - Weaver, D.B., & Lawton, L.J. (2014). Tourism Management (5th ed.). Wiley.	

M.A./M.Sc. (Geography)

Semester I

GEO-DSC-514 B: Ecology & Environment

Total Hours: 30

Credits: 2

Learning objectives	- Understand and apply fundamental ecological principles and concepts - Evaluate the importance of biodiversity and apply conservation strategies to protect ecosystems - Assess and propose strategies for environmental conservation and sustainability - Understand the complex interactions between humans and the environment
Course outcomes	After successful completion of this course, students are expected to: - Able to understand fundamental ecological principles and concepts - Students have capability how to protect ecosystem

	- Students will be able to in sustainable strategic planning and resource utilization. - Aware about complex interactions between humans and the environment	
Unit	Topic Particular	Hours
Unit I	Introduction to Ecology and Environmental Studies - Definition and scope of ecology and environmental studies - Basic ecological principles and concepts - Introduction to environmental issues and sustainability - Environmental Impact Assessment	8
Unit II	Biodiversity and Conservation Content - Biodiversity and its Importance - Conservation Biology - Human impacts on ecosystem services - Management and restoration of ecosystem services	8
Unit III	Human-Environment Interactions - Human population growth and its ecological implications - Urbanization and its environmental consequences - Industrialization and pollution - Agriculture and food systems	6
Unit IV	Environmental Issues and Conservation - Climate change and its impacts - Land degradation and desertification - Water scarcity and pollution - Biodiversity loss and conservation efforts - Sustainable resource management and environmental policies	8
Study Resources	- Das, R.C., et. al., 1998: The Environmental Divide: The Dilemma of Developing Countries, A.P.H. Pub., New Delhi. - Gole, P., 2001: Nature Conservation and Sustainable Development in India, Rawat Pub., Jaipur. - Hussain, M., (ed.) 1996: Environmental Management in India, Rawat Pub., Jaipur. - Hooja, R., et. al., (ed.) 1999: Desert, Drought and Development: Studies in Resource Management and Sustainability, Rawat Pub, Jaipur. - Munn, T., (ed.) 2001: Encyclopedia of Global Environmental Change, John Wiley & Sons, West Sussex - Ramakrishnan, P.S., 1998: Conservation and Management of Biological Resources in Himalaya, Oxford & IBH Pub., New Delhi. - Sapru, R.K., 1987: Environmental Management in India, A.P.H. Pub., New Delhi. - Saxena, H.M., 1999: Environmental Geography, Rawat Pub., Jaipur. - Singh, R.B., (ed.) 1990: Environmental Geography, Heritage Pub., New Delhi. - Singh R.B., (ed.) 2001: Urban Sustainability in the Context of Global Change, Science Pub., Inc., Enfield (NH), USA - Singh, S., 1997: Environmental Geography, Prayag Pustak Bhawan, Allahabad.	

M.A./M.Sc. (Geography)
Semester I
GEO-DSC-515: Practical I – Geomorphology

Total Hours: 60

Credits: 2

Learning Objectives	- To study the identification of rocks and minerals - To study the geomorphic features using topographical maps - To introduce the various methods of representation of relief - To study the river morphometric analysis	
Course Outcomes	After successful completion of this course, students are expected to: - Able to identification of rocks and minerals - Interpretation of Geomorphic information from Topographical maps - Preparation of contour map, slope analysis maps and construction of relief profiles. - Calculations of the drainage morphometric analysis and its interpretation.	
Sr. No.	Topic Particular	Hours
1	Identification of Rocks and Minerals. Mineral samples: Iron ore, Bauxite ore and Manganese. Rock Samples: Granite, Basalt, Lime Stones, Sandstone, quartzite, and marble.	12
2	Extraction and interpretation of Geomorphic information from Topographical maps	12
3	Preparation of contour map from toposheet, Construction of Relief Profiles- serial, Super imposed, Projected & Composite.	12
4	Slope Analysis - Slope Maps (Wentworth method) Slope (isotan and isosin) and aspect maps & Hypsometric curve and integral	12
5	Drainage Morphometry: delineation of watershed, stream ordering and Morphometric analysis: mean stream length, drainage density and drainage frequency.	12
Study Resources	- Chorley, R.J., Schumm, S. A. and Sugden, D.E. 1984: Geomorphology, Methuen, London - Goudie Anrew et.al. (1981) Geomorphological Techniques, George Allen &Unwin, London. - Homes A. (1965) Principles of Physical Geology, 3rd Edition, ELBSS Edn. - Kale, V. S., & Gupta, A. (2010). Introduction to Geomorphology. Hyderabad: Universities Press - Singh, S. (2002). Geomorphology, Allahabad: Prayag Pustak Bhawan. - Strahler A.N. (1968) The Earth Sciences, Harper & Row Intl. Edn, New York - Thornberry W.D. (1969) Principles of Geomorphology 2nd Edition, Wiley Intl. Edn. & Wiley, 1984. - Verstappen H. (1983) Applied Geomorphology, Geomorphological Surveys for Environmental Development, Elsevier, Amsterdam	

M.A./M.Sc. (Geography)
Semester I
GEO-DSE-516 A: Practical II – Climatology

Total Hours: 60

Credits: 2

Learning Objectives	- The aim of the course is to provide an understanding basic concept in Climatology - To know the functioning of weather instrument. - To introduce the measurement of various parameters of climate - To study the skill of interpretation of weather satellite images	
Course Outcomes	After successful completion of this course, students are expected to: - Student gets acquainted with the basic concepts in Climatology - get the knowledge of weather forecasting using meteorological data - understand the weather reports and its interpretation. - understand the methods of representation of climatic data as well as weather forecast	
Sr. No.	Topic Particular	Hours
1	Processing of weather data: Instrumentation and measurement techniques of weather elements and processing of weather data	4
	Preparation of Climatic Maps & Diagrams	
2	Simple temperature and rainfall graph	4
3	Climatograph, Climograph	4
4	Hythergraph, Foster's Climograph	4
5	Wind Roses : Simple, Compound & Octagonal	4
6	Rainfall Dispersion.	4
	Station Model	
7	Preparation of Station Mode	4
8	Synoptic data: Coding, decoding and plotting of synoptic data	4
9	Use of weather data with the help of symbols	4
10	Estimation of Potential Evapo-transpiration by Thornwaite's Method and Construction of graphs showing Surplus, Deficit Water Budget and their Analysis.	4
	Indian Daily Weather Report (IDWR)	
11	a) Study of IDWR b) Analysis of IDWR	4
12	i) Temperature, ii) Air Pressure,	4
13	iii) Humidity, iv) wind,	4
14	v) Rainfall, etc. for various stations. Interpretation of Kalpana Satellite	4
15	c) Weather forecasting	4

References	• Frederick K. Lutgen, Edward Tar buck: “The Atmosphere An Introduction to Meteorology” Prentice Hall, Englewood Cliffs ,New Jersey 0762 ,1998 • S. Lal: Climatology. Sharda Pustak BhawanUniversity road Allahabad- 211002 Edition 2003 • Trewartha : Introduction to Weather and Climate. • H.J. Critchfield (Rep.2010): General Climatology. Prentice Hall, New Delhi
-------------------	---

M.A./M.Sc. (Geography)

Semester I

GEO-DSE-516 B: Hands on GIS Software

Total Hours: 60

Credits: 2

Learning Objectives	• To study the GIS softwares and their applications. • To introduce the image georeferencing using GIS softwares. • To study the analysis of non-spatial data. • To introduce the various methods of map preparation.	
Course Outcomes	After successful completion of this course, students are expected to: • Able to handle GIS softwares. • Know the process and methods of image georeferencing. • Preparation of topology. • Able to create different thematic maps using GIS software.	
Sr. No.	Topic Particular	Hours
1	• Introduction to GIS softwares: • Types of GIS softwares and their applications for different purposes. • Introduction to GIS software selected for the practical and its significance	12
2	• Image Registration: • Creating Co-ordinate system • Geo Referencing of image	12
3	• Introduction of topology • Types of topologies • Creating a Layer of topology	12
4	• Non-Spatial data (Numerical data management) • Creation of table • Table attachment to map	12
5	• Map Generation • Slope Map • Absolute relief • Relative relief • Wentworth's Method of Average Slope • DEM	12

Note:	
Student should perform above all practical's using any open source or commercial GIS software	
References	• Andrew Cutts, Anita Graser (2018): Learn QGIS, https://www.packtpub.com/applicationdevelopment/learn-qgis-fourth-edition • Booth, B., Shaner, J., MacDonald, A., Sanchez, P. Pfaff, R. (2004): ArcGIS, Geodatabase Workbook, Redlands • Environmental Systems Research Institute, Inc. (1998): Understanding GIS: The Arc/Info Method, ESRI Press, Redlands • ERDAS (2010): ERDAS field Guide, ERDAS incorporation, Norcross, GA, USA • ESRI (2003): Introduction to ArcGIS- I, Course Lectures, GIS Education Solutions • Melania, H. M., Rhonda, P., Minami, M., Hatakeyama, A. M. (2004): ArcGIS, Using ArcMap, ESRI Press, Redlands • Mitchell, A. (1999): The ESRI guide to GIS analysis, Redlands • Zeiler, M. (1999): The ESRI guide to Geodatabase design, Redlands • http://geospatial.intergraph.com/Libraries/Tech_Docs/Erda_Field_Guide.sflb.ashx

M.A./M.Sc. (Geography)

Semester I

GEO-RM-517: Research Methodology for Geography

Total Hours: 60

Credits: 4

Learning objectives	• Understand the significance of research and its different types. • Develop skills in formulating research problems, objectives, and hypotheses. • Acquire knowledge of various research designs, sampling techniques, and data collection methods. • Gain proficiency in analyzing and interpreting research data using appropriate statistical tools.	
Course outcomes	After successful completion of this course, students are expected to: • Demonstrate a comprehensive understanding of research methodology principles and concepts. • Apply appropriate research design, sampling techniques, and data collection methods in research projects. • Perform data analysis using descriptive and inferential statistics. • Develop effective research proposals that adhere to ethical guidelines and meet scholarly standards.	
Unit	Topic Particular	Hours
Unit I	Introduction to Research Methodology • Meaning and significance of research • Types of research • Research process and steps	8

	• Research problem formulation • Research objectives and hypotheses • Literature review and its importance	
Unit II	Research Design and Sampling • Research design and its types • Variables and measurement • Sampling techniques and sample size determination • Data collection methods • Validity and reliability of research instruments • Pilot study and pre-testing of instruments	8
Unit III	Data Collection and Analysis • Data collection methods and techniques • Primary and secondary data sources • Data processing and coding • Descriptive statistics • Inferential statistics and hypothesis testing • Introduction to statistical software • Data presentation and interpretation	8
Unit IV	Research Ethics and Writing Research Proposals • Ethical considerations in research • Informed consent and confidentiality • Plagiarism and academic integrity • Institutional Review Board (IRB) • Components of a research proposal • Writing research objectives and hypotheses • Literature review and theoretical framework • Research methodology and timeline	6
Study Resources	• Bryman, A., & Bell, E. (2015). Business research methods. Oxford University Press. • Cooper, D. R., & Schindler, P. S. (2019). Business research methods. McGraw-Hill Education. • Creswell, J. W. (2014). Research design: Qualitative, quantitative, and mixed methods approaches. Sage Publications. • Hair, J. F., Wolfinbarger, M. F., Ortinau, D. J., & Bush, R. P. (2019). Essentials of marketing research. McGraw-Hill Education. • Kothari, C.R. (2004). Research Methodology: Methods and Techniques. 2nd Edition, New Age International Publishers, New Delhi. • Neuman, W. L. (2016). Social research methods: Qualitative and quantitative approaches. Pearson. • Saunders, M. N., Lewis, P., & Thornhill, A. (2019). Research methods for business students. Pearson. • Yin, R. K. (2018). Case study research and applications: Design and methods. Sage Publications.	

M.A./M.Sc. (Geography)
Semester II
GEO-DSC-521: Principles of Human Geography

Total Hours: 60

Credits: 4

Learning objectives	- To understand the relationship of human and geography - To make the student aware of the scope population growth - To acquaint concepts in cultural geography - To understand the various component of settlement geography	
Course outcomes	After successful completion of this course, students are expected to: - Aware of historical developments and contributions of various pioneers - How the subject emerges as a sub branch of human geography and its current scope - Know the diversity of world culture in a view of geography - Understand the rules applied for human settlement.	
Unit	Topic Particular	Hours
Unit I	Introduction to Human Geography - Definition and scope of human geography - Evolution of human geography as a discipline - Key concepts and approaches in human geography - Overview of research methods in human geography	15
Unit II	Population Geography and Migration - Demographic transition theory - Population growth and its implications - Patterns and trends in global population distribution - Types of migration: internal, international, voluntary, forced	15
Unit III	Cultural Geography - Nature and significance of culture in human geography - Cultural landscapes and place-making - Cultural diffusion and cultural diversity - Identity, ethnicity, and nationalism - Urban and rural cultural landscapes	15
Unit IV	Settlement of Geography - Introduction - Definitions, Nature and Scope of Settlement Geography - Approaches to the study of settlements - History and Development of settlement geography - Urban Geography - The growth and development of cities - Urbanization processes and their social, economic, and environmental consequences - Urban planning and challenges of sustainable urban development - Urban systems and their interactions at various scales - Concentric zone and multiple-nuclei - Settlement in India: Indian village, nature and characteristics	15

Study Resources	• Chandna R. C. (Rep.2010)–A Geography of Population, Concepts, Determinants and Patterns, Kalyani Publishers, New Delhi • Clark J. I. Geography of Population Approaches and Applications, Pergamon Press Ltd., Oxford • Clark J. I.(1973) –Population Geography, Pergamon Press Ltd., Oxford. • Liendsor, J. M. 1997): Techniques in Human Geography, Routledge. • Michel Chisholm–Studies in Human Geography. • Morgan. W.B.&S.C. Monton (1971)–Agricultural Geography Methuen, London. • Singh, J. and Dhillon (1984): Agricultural Geography. • Singh, R.L. Reading in Rural Settlement Geography • Singh. J. and Dhillon S.S. (1994)–Agricultural Geography. Tata McGraw Hill, Publishing Co. Ltd.
------------------------	--

M.A./M.Sc. (Geography)

Semester II

Geo-DSC-522: Principles of Economic Geography

Total Hours: 60

Credits: 4

Learning objectives	• To comprehend the concept of economic geography in various spheres of life. • The students can describe how the economic environment affects economic development. • To comprehend the challenges and economic indicators of economic progress. • To familiarise the students with the basics of transportation and communication and the effects of globalisation on India's economic development.	
Course outcomes	After successful completion of this course, students are expected to: • Become familiar with the fundamental ideas of economic geography. • Comprehends the value of resources and becomes familiar with a variety of economic activities. • Comprehend economic geography theories and models. • Learn about the contribution of transport and communication to economic growth.	
Unit	Topic Particular	Hours
Unit I	Introduction to Economic Geography • Definition, Nature and Scope. • Approaches to Economic Geography. • Recent trends in Economic Geography.	15
Unit II	Economic Activities • Definition and classification of economic activities • Factors of location of economic activities: physical, social, economic and technical • Location of economic activities: Weber's and Von Thunen's model	15
Unit III	Resources and Economic Development • Meaning of the term "Resources" • 3Classification of Resource. • Significance of natural and human Resources (Suitable Examples and Characteristics) • Role of resources in economic development	15

	- Models of economic development. - Rostow's Model. - Myrdal Model	
Unit IV	Economic Measures and Transport & Communication - Measures of economic development. - Various modes of transport - Geographical factors and transportation - Various means of communication - Role of transport and communication in economy	15
Study Resources	- Alexander, J. W. (1977): Economic Geography, Prentice Hall of India Pvt. Ltd., New Delhi. - Chorley, R. J. and Haggett, P (1970): Socio Economic Models in Geography, Methuen. - Garnier, B. J. and Delobez, A (1979): Geography of Marketing, Longman. H. M. Saxena (2013): Economic Geography, Rawat publication, Jaipur. - Janaki V.A(1985) Economic Geography, Concept Publishing Co. - Kanan Chatterjee (2015): Basics of Economic Geography*, Concept publishing Company Pvt. Ltd., New Delhi. - Mitra, A (2002): Resource Studies, Sreedhar publishers, Kolkata. - Ray, P. k. (1997): Economic Geography, New Central Book Agency (P) Ltd., Calcutta. - Sharma T.C.(2013) Economic Geography of India , Rawat Publication, Jaipur. - Shelar S. K. (2013): Principles of Economic Geography Chandralok Prakashan, Kanpur.	

M.A./M.Sc. (Geography)

Semester II

GEO-DSC-523: Watershed Management

Total Hours: 60

Credits: 4

Learning objectives	- To define the concepts of Watershed and integrated watershed management. - To introduce various concept of hydrological parameters. - To study the ground water concept in the context of watershed management. - To understand the watershed development & planning techniques.	
Course outcomes	After successful completion of this course, students are expected to: - Know the importance of integration watershed management. - To illustrate and explain the hydrological parameters. - Gain the knowledge about ground water. - Know the watershed development programs and advance techniques.	
Unit	Topic Particular	Hours
Unit I	Concept of Watershed and Integrated Watershed Management - Concept of watershed and watershed perimeters; Characteristics and Functioning of Watershed. - Concept and scope of integrated watershed management - Natural resource management at watershed level - Participatory Watershed Management - Integrating social and economic development in watershed	15

	Management.	
Unit II	Hydrological parameters I • Rainfall: ○ Intensity & duration. ○ Measurements. • Evaporation & transpiration: ○ Methods. ○ Instruments. • Infiltration: ○ Methods. • Instruments ○ Run off: ○ Measurement ○ Selection, criteria of gauging station. • Discharge: ○ Measurements ○ Unit hydrograph	15
Unit III	Ground Water • Definition • Aquifer types • Water table • Porosity • Ground water movement • Recharge & discharge	15
Unit IV	Watershed Development & Planning • Water management: ○ Rainwater harvesting techniques ○ Percolation tanks & pits ○ Sprinkle irrigation • Development programmes: ○ Artificial recharge of ground water. ○ Dams & weirs ○ Interlinking of rivers • Advance Techniques for watershed development: ○ Remote sensing data analysis ○ Application of GIS software	15
Study Resources	• Chow, V.T. (1964). Applied Hydrology, McGraw-Hill, New York. • Das, G. (2000). Hydrology and Soil Conservation Engineering, Prentice Hall of India, New Delhi, India. • Horton, R.E. (1932). Drainage-basin characteristics. Transactions, American geophysical union. • Horton, R.E. (1945). Erosional development of streams and their drainage basins: hydrophysical approach to quantitative morphology. Bulletin of the Geological Society of America. • Singh, V. P. (1992). Elementary hydrology. Pearson College Div. • Subramanya, K. (1997). Engineering hydrology. Tata McGraw-Hill Education.	

M.A./M.Sc. (Geography)
Semester II
GEO-DSE-524 A: Cultural Geography

Total Hours: 30

Credits: 2

Learning objectives	- To introduce about sub branch of human geography - To assessed the cultural identity and diversity - To identify the cultural variation in different region - To aware the Globalization and Cultural Change	
Course outcomes	- Demonstrate a comprehensive understanding of the key concepts and theories in cultural geography - Analyze and evaluate the formation and dynamics of cultural identity and diversity - Apply geographical perspectives to understand the significance of landscapes and places - Evaluate the impact of globalization on cultural change and resilience	
Unit	Topic Particular	
Unit I	Introduction to Cultural Geography - Definition and scope of cultural geography - Evolution and key concepts in cultural geography - The relationship between culture and geography - Cultural landscapes and their significance - Methodologies and approaches in cultural geography research	8
Unit II	Cultural Identity and Diversity - Understanding cultural identity and its formation - Ethnicity, race, and nationality in cultural geography - Cultural diffusion and cultural interaction - Multiculturalism and cultural diversity policies - Gender, sexuality, and cultural geography	8
Unit III	Landscape and Place - Cultural landscapes and their meaning - The concept of place and sense of place - Sacred and symbolic landscapes - Urban cultural landscapes and the built environment - Rural cultural landscapes and traditional practices	8
Unit IV	Globalization and Cultural Change - Globalization and its impact on cultures - Transnationalism and cultural flows - Cultural imperialism and hybridization - Tourism and cultural commodification - Indigenous cultures and cultural resilience	6

Study Resources	• Atkinson, D., Jackson, P., Sibley, D. and Washbourne, N. (eds.) (2005), Cultural Geography, A Critical Geography of Key Concepts, Tauris, I.B. • Bose, N.K. (1967): Culture and Society in India, Asia Publishing House • Cook, I. et. al., (2000): Cultural Turns/Geographical Turns, Prentice Hall, U.K • Dohr, F.E. and Sommers, LM, (1967): Cultural Geography: d Readings, Thomas Y, Crowell Company. • Mitchell, D. (2000): Cultural Geography: A Critical Introduction, Oxford: Blackwell, U.K • Nobal, A. G. and Dutt, A. K. (ed.) (1982): India: Cultural patterns and processes West View Press, U.S.A • Sinha, S.C. (ed.), (1976): Cultural Anthropology, Anthropological Survey of India • Sopher, D. E. (ed)(1980): Explorations of India: Geographical respective on Society and Culture, Longman. • Spencer, J.E. and Thomas, W.L. (1973): Introducing Cultural Geography, John Wiley & Sons
------------------------	---

M.A./M.Sc. (Geography)
Semester II
GEO-DSE-524 B -: Rural Morphology

Total Hours: 60

Credits: 2

Learning objectives	• Understand the fundamental concepts and theoretical frameworks in rural morphology. • Analyze and interpret spatial patterns and morphological characteristics of rural settlements. • Examine the dynamics of rural morphology and its interactions with urban areas. • Identify and evaluate contemporary issues and challenges in rural morphology for sustainable development.	
Course outcomes	After successful completion of this course, students are expected to: • Demonstrate a comprehensive understanding of rural morphology. • Apply analytical skills to assess and interpret spatial patterns and morphological characteristics of rural settlements. • Analyze the impact of urban-rural interactions on rural morphology and its implications for regional development. • Critically evaluate and propose strategies to address contemporary issues and challenges in rural morphology for sustainable rural landscapes.	
Unit	Topic Particular	Hours
Unit I	Introduction to Rural Morphology • Definition and scope of rural morphology • Historical development of rural morphology • Theoretical frameworks and approaches in rural morphology • Relationship between rural morphology and other geographical disciplines	15

Unit II	Spatial Patterns in Rural Areas • Classification of rural settlements based on size, form, and function • Types and Patterns • Analysis of rural land use patterns • Factors influencing the spatial patterns in rural areas	15
Unit III	Morphological Characteristics of Rural Settlements • Study of rural settlement forms (eg. hamlets, villages, farmsteads, etc.) • Analysis of rural housing types and architectural styles • Rural street patterns and networks • Role of infrastructure and services in shaping rural morphology	15
Unit IV	Dynamics of Rural Morphology • Processes of change and transformation in rural areas • Urban-rural interactions and their impact on rural morphology • Implications of globalization and modernization on rural landscapes • Central Place Theory and its applicability to rural areas • Christaller's hierarchy of rural settlements • Contemporary issues and challenges in rural morphology	15
References • Cloke, P., Marsden, T., & Mooney, P. (2006). Handbook of rural studies. SAGE Publications Ltd. • Woods, M., & Roberts, B. (2004). Rural geography: Processes, responses, and experiences in rural restructuring. SAGE Publications Ltd. • Cloke, P., & Little, J. (Eds.). (1997). Contested countryside cultures: Otherness, marginalisation, and rurality. Routledge. • Van der Ploeg, J. D. (2013). The new peasantries: Struggles for autonomy and sustainability in an era of empire and globalization. Earthscan. • Marsden, T., & Sonnino, R. (2008). Rural development and the regional state: Denying multifunctional agriculture in the UK. Journal of Rural Studies, 24(4), 422-431. • Halfacree, K. (2007). "Practicing the turn to the everyday: 'theory' and 'practice' in human geography." Geoforum, 38(4), 678-690. • Woods, M. (2010). Rural. Routledge. • Power, A. (2007). City survival: Planning for sustainability in rural areas. Routledge. • Murdoch, J. (2003). Cultural geography: A critical dictionary of key ideas. I. B. Tauris. • Marsden, T. (1998). New rural territories: Regulating the differentiated rural spaces. Journal of Rural Studies, 14(1), 107-117.		

M.A./M.Sc. (Geography)
Semester II
GEO-DSC-525: Practicals in Human Geography

Total Hours: 60

Credits: 2

Learning Objectives	- To Acquaint basic human and population geography analysis technique - To characterize the age sex, birth and death data using statistical technique - To define dispersion of rural and urban settlement - To study various industrial aspect in view of geography - To increase the interest of students about actual fields.	
Course Outcomes	After successful completion of this course, students are expected to: - Increase awareness about quantitative study of population and its gender. - Understand the basic rural, urban and urbanization element. - Comprehend the various methods for identification of industrial location. - Learn surveying skill in socio economic activity of human.	
Sr. No.	Topic Particular	Hours
1	Cephalic Index, Population density, Economic density, Nutritional density, Nutritional density, Caloric density	18
2	Crude birth rate, Crude death rate, General fertility rate, Age sex pyramid	12
3	Degree of concentration in rural settlement using Bernhard's Method, Concentration index of rural settlement using Debouvie's method, Growth of urban population, Degree of urbanization, Centrality index by Christaller's	15
4	Functional classification of towns by Thomson, Location quotient and Connectivity index, Functional specialization index by Weber's	09
5	Socio economics survey based study tour report.	06
Study Resources	- Beaujeu Garnier J. – Geography of Population, Longman Group Ltd. - Chandna R. C. (Rep.2010) – A Geography of Population, Concepts, Determinants and Patterns, Kalyani Publishers, New Delhi - Clark J. I. (1973) – Population Geography, Pergamon Press Ltd., Oxford - Clark J. I. Geography of Population Approaches and Applications, Pergamon Press Ltd., Oxford - Michel Chisholm – Studies in Human Geography. - Singh, R. L. Reading in Rural Settlement Geography - Singh, J. and Dhillon (1984): Agricultural Geography. - Liendsor, J. M. 1997): Techniques in Human Geography, Routledge. - Morgan. W.B. & S.C. Monton (1971) – Agricultural Geography Methuen, London.	

	Singh. J. and Dhillon S.S. (1994) – Agricultural Geography. Tata McGraw Hill, Publishing Co. Ltd.
--	---

M.A./M.Sc. (Geography)
Semester II
GEO-DSE-526 A: Practicals in Economic Geography

Total Hours: 60

Credits: 2

Learning Objectives	- To understand basic Economic geography concepts and spatial analysis - To study qualitative and quantitative techniques in Economic Geography analysis.	
Course Outcomes	After successful completion of this course, students are expected to: - Acquainted with the basic techniques to be used in the fields of Economic Geography. - Gain in-depth knowledge of the concepts and approaches; agricultural geography based concepts of crop concentration, combination; agricultural productivity and efficiency and transport costs and gain knowledge on transport.	
Sr. No.	Topic Particular	Hours
1	Agriculture	
	A) Crop Combination by Weaver's Methods	
	Data Collection	4
	Data Manipulation	4
	Data Analysis	7
	B) Crop Concentration by Bhatia's Methods	
	Data Collection	4
2	Data Manipulation	4
	Data Analysis	7
	Transportation	
	Graph Theoretic measures of transport Network, Ratio Measures	
	Alpha.	5
	Beta.	5
3	Gamma.	5
	Associated Number.	5
	Koing Index	5
3	Field work	5
Study Resources	- Alexander, J. W. (1993): Economic Geography, Prentice Hall, New Jersey - Ali, M. (1979). Dynamics of Agricultural Development in India. New Delhi: Concept Publication.	

	• Haggett, P. (1965): Locational Analysis in Geography, Edward Arnold, London. • Hussain, M. (1978). Agricultural Geography, Jaipur: Rawat Publication. • Kansky, N. T. (1965): Structure of Transport Network, Hermant Publication, New York • Singh, J., & Dhillon, S. S. (1994). Agricultural Geography. New Delhi: Tata-McGraw Hill Publication. • Yeats, M. H. (1978). An Introduction to Quantitative Analysis in Human Geography, Chicago: John and John Company.
--	--

M.A./M.Sc. (Geography)
Semester II
GEO-DSE-526 B: Interpretation of OS Sheets

Total Hours: 60

Credits: 2

Learning Objectives	• To Study basic principles topographical Topographic features of the Earth Surface • To develop the interpretative skill of student • To understand the map element of maps • To understand culture, communication and development of region	
Course Outcomes	After successful completion of this course, students are expected to: • Able to understand Topographic features of the Earth Surface • Able to understand and interpret map • Aware of different elements of map. • Know the basic terminology used to describe physical processes and landscape forms.	
Sr. No.	Topic Particular	Hours
1	Introduction to OS topographical map	4
2	Types of topographical maps	4
3	Index numbers	4
4	Grid reference	4
5	Convectional signs and symbols	4
6	Contour patterns	4
7	Relief represented by contour	4
	Interpretation of topographical maps	
8	Physical features • Plain region.	4
9	Physical features • Plateau region • Mountainous region	4
10	Cultural features • Settlement	4
11	Cultural features	4

	• Road • Agricultur	
12	• Communication • Cultural features	4
Study Resources	• Ramamurthy, K. (1982): Map Interpretation, Rex Printer, Madras • 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 • Gupta, K. K. and Tyagi, V. C. (1992): Working with Maps, Survey of India Publication • Tamaskar, B. G. and Deshmukh, V. M. (1974): Geographical Interpretation of Indian Topographical maps, Orient Longman, Kolkata • Dury, G. H. (1972): Map Interpretation, Pritman and Sons, London • Singh, G. (1996): Map Work and Practical Geography, Vikas Publication, New Delhi	

M.A./M.Sc. I (Geography)

Semester II

GEO-OJT-527: On Job Training / Internship

Hours: 120

Credits: 4

Course objectives	• To provide the students with actual work experience • To make aware prescribe standards and guidelines at work • To develop the employability of participating student • To avail an opportunity to eventually acquire job experiences	
Course outcomes	After successful completion of this course, students are expected to: • Get actual work experience with office and virtual exposure to various management styles, technical, industrial, and procedural systems • Acquaint the knowledge related to working hours, work protocols and guidelines • Understand the roles and responsibilities of employee as well as team work • Justify job experiences that match their potentials, skills, and competencies	
	Internship An internship is a professional learning experience that offers meaningful, practical work related to a student's field of study or career interest. An internship gives a student the opportunity for career exploration and development, and to learn new skills. On the job training On the job training is a form of training provided at the workplace. During the training, employees are familiarized with the working environment they will become part of. Employees also get a hands-on experience using machinery, equipment, tools, materials, etc.	