



**GOVERNMENT COLLEGE FOR WOMEN (A)  
KUMBAKONAM - 612001**



***M.SC. APPLIED GEOGRAPHY***

**Curriculum Structure**

**&**

**Syllabus**

**(under CBCS)**

(Applicable to the candidates admitted from the academic year  
2018-19 onwards)

**GOVERNMENT COLLEGE FOR WOMEN (A) KUMBAKONAM**  
**M.Sc. APPLIED GEOGRAPHY – COURSE STRUCTURE UNDER CBCS**

(Applicable to the candidates admitted from the academic year 2018-2019 onwards)

**Eligibility:** Pass in B.Sc. Geography of this University or from a recognized University or an Examination accepted by the syndicate as equivalent thereto

Sem.	Sub. Code	Course Title	Ins. Hrs./ Week	Credit	Exam Hrs.	Marks		Total
						Int.	Ext.	
I	P18GC101	CC I – Applied Geomorphology	6	5	3	25	75	100
	P18GC102	CC II – Climatology and Oceanography	6	5	3	25	75	100
	P18GC103	CC III – Environmental Geography	6	5	3	25	75	100
	P18GC104P1	CC IV - Practical – I Terrain And Climatic Data Analysis	6	4	3	40	60	100
	P18G1EC1:1	EC I-Thematic Cartography	6	4	3	25	75	100
	P18G1EC1:2	Geography of Economic Activities						
	<b>Total</b>		<b>30</b>	<b>23</b>				<b>500</b>
II	P18GC205	CC V - Agricultural Geography	6	5	3	25	75	100
	P18GC206	CC VI – Urban Geography	6	5	3	25	75	100
	P18GC207	CC VII – Quantitative Techniques in Geography	6	5	3	25	75	100
	P18GC208P2	CC VIII - Practical – II Socio-Economic Data Analysis	6	5	3	40	60	100
	P18G2EC2:1	EC II Geography of India	6	4	3	25	75	100
	P18G2EC2:2	EC II Transport Geography						
		<b>Total</b>		<b>30</b>	<b>24</b>			
	INT	Internship	-	2	-	-	-	-
III	P18GC309	CC IX - Geographic Thought	6	5	3	25	75	100
	P18GC310	CC X – Research Methodology in Geography	6	5	3	25	75	100
	P18GC311	CC XI - Population and Settlement Geography	6	5	3	25	75	100
	P18GC312P	CC XII - Practical – III Interpretation of Topographical Maps, Aerial Photos and Satellite Images	6	4	3	40	60	100
	P18G3EC3:1	EC-III Regional Planning	6	4	3	25	75	100
	P18G3EC3:2	EC-III Disaster Analysis						
		<b>Total</b>		<b>30</b>	<b>23</b>			
IV	P18GC413	CC XIII – Social and Cultural Geography	6	5	3	25	75	100
	P18GC14P4	CC XIV - Practical – IV Spatial Analysis	6	5	3	40	60	100
	P18PWG415	Project Work	12	6	-	-	-	100
	P18G4EC4	EC-IV Remote Sensing, GIS and GNSS	6	4	3	25	75	100
		<b>Total</b>		<b>30</b>	<b>20</b>			
<b>GRAND TOTAL</b>			<b>120</b>	<b>90</b>				<b>1900</b>

**APPLIED GEOMORPHOLOGY**

***OBJECTIVES: The aims of Applied Geomorphology are to assist in the efficient discovery, assessment and region wise management of the earth's surface. Geomorphology can be applied to solve problems and environment management.***

**UNIT I**

Nature – Scope and Content of Geomorphology – Fundamental Concepts – Geological Time Scale - Continental Drift theory – Plate tectonics.

**UNIT II**

Internal Processes: Diastrophism – Folds and Faults – Earthquake, Volcanism.  
External Processes: Weathering, Mass Wasting and Soil Formation.

**UNIT III**

Denudation Processes: Erosional, Transportational and Depositional  
Landforms: Fluvial, Glacial, Aeolian,, Coastal and Karst.

**UNIT IV**

Cycle of Erosion: W.M. Davis and Penck. Slope Development Theories : W.M. Davis, Penck, King and Wood.

**UNIT V**

Applied Geomorphology: Meaning – Application in Mineral Exploration – Hydrology, Engineering and Landuse Planning.

**Reference Books**

1. Thornbury D. Principles of Geomorphology, Wiley Eastern Ltd. New Delhi – 1984.
2. Dayal P. A Text book of Geomorphology, Shukla book Deprt, Patna – 1995.
3. Worcester P.G., A Text book of Geomorphology, Van Nostrand Rein holds Company, New york, 1948.
4. Strahler, A.H and Strahler, A.N., Modern Physical Geography, New York, John Wiley & sons.INC.
5. Dr. Alka Gautam – Geomorphology, Sharda Pustak Bhawan, Allahabad.

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**CLIMATOLOGY AND OCEANOGRAPHY**

**OBJECTIVES:** *Climatology aims to study the nature of climate, the causes and interpretations of its spatial variation. The main aim of the Oceanography is to promote understandings of ocean systems from various aspects.*

**UNIT I**

Climatology: Definition, Scope and Significance - Atmosphere – Composition and Structure - Solar radiation - Air temperature – heat balance - Atmospheric Pressure - General circulation of the atmosphere – Monsoon - Jet streams – Stability and instability of the atmosphere.

**UNIT II**

Air masses – Fronts – Precipitation – Atmospheric disturbances – temperate and tropical cyclones – Thunderstorms – World Climatic Regions – Koppen’s and Thornthwaite’s Classification.

**UNIT III**

Climatic changes – evidences and theories – Applied climatology – micro climate – agro climate - urban climate – global warming – heat island – health hazards.

**UNIT IV**

Origin of Ocean basins - Bottom relief of Atlantic, Indian and Pacific Oceans - Ocean deposits – Origin, Types and Distribution - Coral reef - Conditions for growth - types and distribution.

**UNIT V**

Temperature and Salinity: vertical and horizontal distribution – Density of the Sea Water; Movement of Sea Water: Currents, Waves, Tides and Tsunami.

**Reference Books**

1. Lal. D.S., Climatology, Chatianya Publishing House, Allahabad, 1990
2. Howard J. Chritchfield, General Climatology, Prentice – Hall of India Pvt Ltd, 1987
3. Trewartha G.T. and Lyes H. Horn, An introduction to Climate, McGraw Hill Company, 1980.
4. Berry R.G & Chorely R.J., - Atmosphere, Weather and climate , Mathew & co, London 1978
5. Lal D.S., Oceanography, Chatianya Publishing House, Allahabad.
6. Grant Gross – Oceanography, Prentice – Hall International Editions , 1987
7. Sharma.R.C., and M.Vital – Oceanography for Geographers , Chatianya publishing house , Allahabad , 1987
8. Paul R. Pinet – Oceanography, West Publishing Company, 1992

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**ENVIRONMENTAL GEOGRAPHY**

**OBJECTIVES:** *To understand the man and environment relationship of the world, To learn about ecosystem and climate change.*

**UNIT I**

Environment – Elements and Types - Man and environment relationships – determinism – Possibilism, changing nature of concept – lithosphere – hydrosphere – biosphere – multi disciplinary approach

**UNIT II**

Concept of Ecosystem – Forms and functions of Ecosystem — classification: forest, grassland, marine and mountain ecosystem – Biomes – food web – food pyramid – nutrient cycle – biodiversity – types.

**UNIT III**

Natural disruptions of the ecosystem – Natural hazards – landslide, earthquake, volcano, floods and droughts – Pollution – Ozone Depletion - Human interference on ecosystem – Population growth and its impact – Man's modifications of the biosphere – agriculture – Green Revolution.

**UNIT IV**

Environmental planning and management; objectives and strategies; natural resource management and conservation (land, water and forest) – sustainable development concept - need, problems and strategies – EIA principles and procedures.

**UNIT V**

Climate change - causes and consequences - Stockholm conference, Earth summits and Round tables and Kyoto Protocol - world climate data monitoring programme - Environment related policies and programmes in India - Environment Governances.

**Reference Books**

- 1 Trivedi, R.N - A Text Book of Environmental Sciences, Anmol Publications Pvt.Ltd New Delhi, 1997
- 2 Sexna, H.M – Environmental Geography, Rawat Publications Jaipur, 1999
- 3 Savindhra Singh – Environmental Geography Prayag Pushtak Bhawan University Road, Alagabad 1991
- 4 Gillbert White – Environment as a Hazard, Toronto, 1978
- 5 Bruce Mitchell – Resources and Management Orient Long Man London, 1991

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**SEMESTER – I**

**CORE COURSE - IV**

**PRACTICAL – I TERRAIN AND CLIMATIC DATA ANALYSIS**

***OBJECTIVES: To understand the representation of relief and slope analysis. To practice learn about curves and drainage analysis.***

**UNIT I**

Profiles – Serial and Super imposed – Projected and Composite – River Profile – Thalweg.

**UNIT II**

Slope analysis – Smith, Wentworth and Robinson Methods

**UNIT III**

Drainage basin analysis – Stream ordering – Strahler's method – Bifurcation ratio, Drainage density – Drainage Shape Analysis: Simple Method, Miller's Circulatory Ratio and Boy's Clark Method.

**UNIT IV**

Climatic Diagrams – E.E.Foster's Climograph - Climatograph – Isopleths (Isotherms, Isobars and Isohyets) – Rainfall Dispersion Diagram.

**Reference Books**

- 1 R.L. Singh - Elements of Practical Geography, Kalyani Publishres, New Delhi
- 2 F.J. Monkhouse and H.R Wilkinson, Maps and Diagrams, B.I. Publications, Madras
- 3 Gopal Singh – Map work and Practical Geography, Vikas publishing house Ltd
- 4 V.P. Subrahmanyam and Subramaniam,A.R. Application of water balance concept for a climatic study of droughts in south India, 1964

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## **SEMESTER – I**

## **ELECTIVE COURSE**

### **THEMATIC CARTOGRAPHY**

**OBJECTIVES:** *To understand about historical development of cartography, map projection and generalization. To learn reproduction methods.*

#### **UNIT I**

Meaning, Nature, Scope and content of Cartography – Arts and Science of Cartography – Cartography as a system of communication. Maps – Classification and their uses.

#### **UNIT II**

Growth, Development and Modern Trends in Cartography. Cartographic Drawing and Measuring Techniques: Map Setting – The Earth and System of Coordinates – Base Map – Compilation and Generalization.

#### **UNIT III**

Symbolization – Mapping the Qualitative and Quantitative Data – Representation of Relief, Physical and Cultural Features

#### **UNIT IV**

Map Design and Layout – General design problems – Principles and Techniques of Map Design and layout – Design of Map Symbols – Lettering and Toponymy – Lettering Methods – Types and Characteristics.

#### **UNIT V**

Map Reproduction – Production Planning – Reproduction Processes – Printing and Non-Printing Processes – Modern Techniques.

#### **Reference Books**

1. Misra.R.P., and Ramesh, (1989) Fundamentals of Cartography, Concept Publishing Company, New Delhi.
2. Robinson A.A. and R.D.Sale – Elements of Cartography – HJohn Wiley and Sons, New York.
3. Keats, J.S. – Cartographic Desing and Pro0duction Longman, London 1980.
4. Raisz. E. – Principles of Cartography, McGraw Hill Company, New York 1970.

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## **SEMESTER – I**

## **ELECTIVE COURSE**

### **GEOGRAPHY OF ECONOMIC ACTIVITIES**

**OBJECTIVES:** *This paper deals with the human's economic activities under varying sets of conditions which is associated with production, location, distribution, consumption, exchange of resources and spatial organization of economic activities across the world.*

#### **UNIT – I**

Economic activities – factors affecting spatial organization of economic activities - Primary, secondary, tertiary and quaternary.

#### **UNIT – II**

Natural resources – Renewable and non-renewable - classification – World distribution and associated problems – Resource management -World energy crises in developed countries.

#### **UNIT- III**

Classification of industries – bases and characteristics – factors of industrial localization – concepts and theories – Weber, Hoover, August Losh, Pres and Smith - World industrial regions.

#### **UNIT- IV**

Models of Transportation and Transport Cost – Accessibility and Connectivity Measures and Indices – Comparative Cost Advantages - Spatial Flow Models Gravity and Allocation Models – Ideas of Edward Ullman and Hurst.

#### **UNIT-V**

Information and Communication Technology – World Distribution and Growth – World Trade Organizations – Globalization and Liberalization - World Trade Patterns – Problems and Prospects.

#### **Reference Books**

- 1.Gopal Singh – Geography of India, Atma Ram & Sons, New Delhi, 1995
- 2.Sharma T.C. and Countinho. O – Economic and Commercial Geography of India, Vikas publishing house Pvt. Ltd, New Delhi, 1998
- 3.Memoria, C.B, Economic and Commercial Geography of India, Sivalal agrawal and company, Agra 1995
- 4.Tirtha, Geography of India, 1996
- 5.Dubey and Negi – economic and commercial geography 1999



**AGRICULTURAL GEOGRAPHY**

***OBJECTIVES: To understand the scope, nature and development of agricultural geography. To learn about factors, causes, data sources and regionalization of agriculture.***

**UNIT I**

Nature, Scope and significance of agricultural geography – Approaches - Agricultural types and their Characteristics; Major Crops: Rice, Wheat, Cotton, Jute, Coffee and Tea.

**UNIT II**

Determinants of Agriculture – Physical, Economic, Social Institutional and technological factors – Green Revolution – First and Second - Implications.

**UNIT III**

Agricultural productivity – Determinants - Measurements - Cropping Pattern – Crop combinational Analysis: Weaver’s, Doi’s and Rafiullah’s Method. Crop diversification – Bhatia.

**UNIT IV**

Von Thunen’s model - Modification and Application of Von Thunen’s theory – Land use - Types – Land use survey - Land capability classification – Remote sensing in land use analysis.

**UNIT V**

Agricultural systems of the World, India and Agricultural Regions of Tamil Nadu – Whittlessey’s agricultural classification.

**Reference Books**

1. Hussain, M. – Agricultural Geography, India Publications, New Delhi
2. Morgan, W.B & Muntan, R.J.C. – Agricultural Geography
3. Singh Jasbir, and Dhillon - Agricultural Atlas of India - A Geographical Analysis, Vista Publishers, Krukshetra.
4. Symons, I – Agricultural Geography, G. Bells & Sons, London
5. Savindra Singh and Dhillon - Agricultural Geography

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**URBAN GEOGRAPHY**

***OBJECTIVES: To understand the nature and development of urban geography. To learn about the urbanization, urban morphology, urban theories and problems.***

**UNIT I**

Nature and scope of urban geography – development of urban geography - recent trends - origin and growth of urban settlements – urbanization - classification of urban settlements.

**UNIT II**

Urban growth and theories - Primate City – Rank-size rule – Settlement hierarchy - Central Place Theory of Christaller - August Losch theory of market centers - Urban economic base: Basic and non-basic functions.

**UNIT III**

Urban morphology and landuse structure - CBD - Umland and periphery - urban expansion – Theoretical models: Concentric zone model, Sector model and Multiple Nuclei model – Social area analysis – Applications.

**UNIT IV**

Contemporary urban issues - urban poverty, urban renewal, urban sprawl, slums and transportation - urban infrastructure - environmental pollution: air, water, noise and solid waste - urban crime - issues of environmental health.

**UNIT V**

Urban policy and planning - city planning - urban policy - contemporary issues in urban planning - globalization and urban planning in the Third World - urban landuse planning.

**Reference Books**

1. Carter - The Study of Urban Geography, Edward Arnold Publishers, London, 1972.
2. Chorley, R.J.O., Haggett P. (ed.) - Models in Geography, Methuen, London, 1966.
3. Hall P. - Urban and Regional Planning, Routledge, London, 1992.
4. Dickinson, R.E. - City and Region, Routledge, London, 1964.

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## **SEMESTER – II**

## **CORE COURSE - VII**

### **QUANTITATIVE TECHNIQUES IN GEOGRAPHY**

**OBJECTIVES:** *The subject provides an introduction to quantitative methods used by geographers to analyze and interpret geographic data and solve geographic problems. Topics include descriptive statistics, hypothesis formulation and testing, sampling strategies, correlation, regression and spatial patterns.*

#### **UNIT I**

Introduction – Significance of the Quantitative Techniques in Geographical Studies – Geographical Data – Physical, Social, Cultural and Demographic Data. Data Collection and Sources : Types of Data – Sources – Tools. Measurement of Data – Levels of Measurement – Nominal, Ordinal, Interval and Ratio Scales.

#### **UNIT II**

Tabulation and Summarizing of Geographical Data – Classification – Class limits – Class Interval – Matrix – Frequency Grouping – Curve – Graphs and Their Application in Geography.

#### **UNIT III**

Measures of Central Tendency: Mean, Median, Mode.  
Measures of Dispersion: Range, Quartile Deviation, Mean Deviation, Standard Deviation and Variability.

#### **UNIT IV**

Correlation and Regression Analysis: Pearson's Product Movement and Spearman's Rank Correlation – Simple Linear Regression Analysis.

#### **UNIT V**

Formulation and Testing of Hypothesis: Chi square Test, 't' Test and 'F' Test.  
Probability: Meaning – Approaches – Theorems of Probability

#### **Reference Books**

1. Aslam Mahamood, Statistical Methods in Geographical Studies, Rahesh Publications, New Delhi 1977.
2. Cole.J.P. and C.A.M. King – Quantitative Geography, Willey International, New York, 1968.
3. Gregory, S. Statistical Methods and the Geographer, London, 1963.
4. King. L.J. Statistical Analysis in Geography, Prentice Hall, New Jersey, 1969. .
5. R. Hammond,R & McCullagh P.S. (178) “Quantitative Techniques in Geography – An Introduction Clarendon Press – Oxford University Press.
6. R.S.N. Pillai & Bagavathi – Statistics – S.Chand & Company Ltd., New Delhi, 2010.

**PRACTICAL – II**

**SOCIO-ECONOMIC DATA ANALYSIS**

**OBJECTIVES:** *To understand the mapping techniques of socio-economic data. To learn about graphs, curves and agricultural data.*

**UNIT I**

Diagram : Line Graph – Multiple Line Graph – Simple Bar Diagrams – Multiple Bar Diagram - Compound Bar Diagrams.

**UNIT II**

Mapping of Population Data: Located Bar Diagram – Located Sphere Diagram – Located Pie Diagram – Dot Map – Choropleth Maps – Isopleths Maps – Age and Sex Pyramids.

**UNIT III**

Mapping of Settlement Analysis – Triangular Method – Occupational Data: Core Periphery Models – Nearest Neighbour Analysis.

**UNIT IV**

Mapping of Agricultural Data: Index of Concentration – Index Diversification; Crop Combination Analysis – Weaver's, Doi's and Rafiuallah's Methods.

**Reference Books**

1. F.J.Monkhouse & H.R.Wilkinson – Maps and Diagrams, Dirton Co- New York 1971.
2. R.L Singh – Elements of Practical Geography – Kalyani Publishers New Delhi, 1979.
3. Kansy, Y. – The Structure of Transportation Network.
4. Tafee, E.J.& H.L Gauthier – Geography of Transportation, Prentice Hall, New York.

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**GEOGRAPHY OF INDIA**

***OBJECTIVES: To understand about the location, physiographic and climate of India. To learn about agriculture, minerals, industries and human resources of India.***

**UNIT I**

Location – Physiographic divisions - Climate – Climatic regions - Soils – Drainage System - Natural Vegetation.

**UNIT II**

Irrigation - Types and Multipurpose projects - Agriculture – Agro-climatic regions – Distribution of food and commercial crops – Rice, Wheat, Cotton, Sugarcane, Oil Seeds, Tea, Coffee, Rubber and Jute.

**UNIT III**

Mineral resources – Iron ore, Manganese, Mica, Bauxite and Copper; Power resources – Hydrel, Thermal, Atomic; Major industries – Cotton, Iron and Steel, Sugar, Cement, Textile, Paper and Shipbuilding - Small scale and cottage industries – Industrial regions.

**UNIT IV**

Population – Distribution and density – growth – Trends – Problems – Regional disparities in social and economic development.

**UNIT V**

Transport and communication – Land, Water and Airways – Ports and Harbours – Economic significance of Transport – Trade – volume – direction.

**Reference Books**

- 1) Gopal Singh – Geography of India, Atma Ram & Sons, New Delhi, 1995.
- 2) Sharma T.C. and Countinho. O – Economic and Commercial Geography of India, Vikas Pub. House, New Delhi, 1998.
- 3) Memoria, C.B, Economic and Commercial Geography of India, Sivalal agrawal and company, Agra 1995.
- 4) Tikka, Bali, Sekhon - Geography of India, New Academic Publishing Company, Jalandhar, 1994.

**TRANSPORT GEOGRAPHY**

***OBJECTIVES: To transportation is fundamental to the economic activity of exchange. The aim of this study is detects, describes and explains the earth's surface transportation spaces regarding location, substance, form, function and genesis. Main aim is understand the role of transport in urban and regional planning.***

**UNIT I**

Nature, Scope and Significance of Transport Geography – Theoretical framework of Transport Geography – Distance and Human Interaction – Technological Changes and Transport Development.

**UNIT II**

Characteristics and Relative Significance of different Modes of Transport – Surface, Water Development of National Highways and National Permit Systems.

**UNIT III**

Structure of Network – Route Density – Slope, Pattern and Route Efficiency and Capacity of the Network – Measures of Connectivity and Accessibility.

**UNIT IV**

Concepts and Methods of Flow Analysis Application of Linear Programming in Geographic Problems – Aggregation & Gravity Potential Models – Least Cost Flow Analysis of Network.

**UNIT V**

Transport and Development Planning – Role of Transport in National Organization in Socio-economic integration – Planning of Transport Systems and impact of Regional Development.

**Reference Books**

1. Eliot Hust M.E. (1974) Transportation Geography, McGrawhill.
2. Garrison W. Berry BJL, et,al (1959) Studies of Highway, Development and Geographic Change, University of Wasshington, Seatle.
3. Grossman W.L. (1959) Fundamentals of Transportation, New York.
4. Maps, Charts and Other Information Published by Government of Tamil Nadu.

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EXTRA CREDIT COURSE  
**INTERNSHIP**  
SUBJECT CODE: INT Credit: 2 credits (Extra credits)

The curriculum includes the internship for students for 30 hours during the summer vacation after the second semester of all PG programs.

**OBJECTIVES**

The following are the intended objectives of internship training:

- To enhance the employability skills of the students.
- To expose students to the industrial/Societal environment, which cannot be simulated in the classroom hence creating competent professionals for the industry and other organizations.
- To Provide possible opportunities to learn, understand, and sharpen the real-time technical/managerial skills required at the job.

**Duration:** 30 hours at the minimum

**Period:** During the summer vacation which could be completed within the third semester.

**Assessment:**

1. The assessment of the internship will be based on the feedback given by the internship provider and the report submitted by the student by the mentor.
2. After completion of the internship, the mentor has to make arrangements to get a proper training certificate from the industry/institution.
3. An abstract for details of the internship in the prescribed format has to be submitted by the departments to the COE on time.
4. Two credits are provided for the Internship as extra credits included under the Non-CGPA course for all PG programs.

**LETTER FORMAT**

**GOVERNMENT COLLEGE FOR WOMEN (AUTONOMOUS), KUMBAKONAM  
REQUEST LETTER FROM THE COLLEGE TO INTERNSHIP PROVIDER**

To

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Subject: REQUEST FOR INSTITUTIONAL/INDUSTRIAL TRAINING  
of M.A./M.Com/M.Sc Degree Programme,

Dear Sir/Madam,

You must be aware that our College has made internship mandatory for all M.A./M.Com/M.Sc students.

In view of the above, I request your good self to allow following students of our college for practical training in your esteemed organization. Kindly accord your permission and give at least 30 hours of training for the students to complete the internship.

<b>S.NO</b>	<b>NAME OF THE STUDENT</b>	<b>REG.NO</b>	<b>DISCIPLINE</b>

If vacancies exist, kindly plan for Campus/Off Campus Interviews for\_\_\_\_\_ batch passing out students in above branches.

A line of confirmation will be highly appreciated.

With warm regards,

Yours sincerely,

Head of the Department.





**FORM - 1**

**INTERNSHIP DETAILS**

(THIS WILL BE PREPARED IN CONSULTATION WITH FACULTY MENTOR AND TO BE MAINTAINED BY THE DEPARTMENT)

**Student**

Name: \_\_\_\_\_ Reg.No. \_\_\_\_\_ Class \_\_\_\_\_

Campus Address: \_\_\_\_\_

\_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

**Internship Provider**

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Company/Organization: \_\_\_\_\_

Internship Company Address \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

**Faculty Mentor**

Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Designation: \_\_\_\_\_ Department: \_\_\_\_\_

**Academic Credit Information**

Internship Title: \_\_\_\_\_

Date of Initiation: \_\_\_\_\_ Date of Completion: \_\_\_\_\_

Total Hours: \_\_\_\_\_

**FORM - 2**  
**STUDENT'S DAYWISE LOG ENTRY**

Name and Reg.No. of the Student:

Name and address of the  
Internship Provider:

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<b>Period of Internship: From:</b>				<b>To:</b>
<b>Date</b>	<b>Hours</b>	<b>Details of work done</b>	<b>Signature of the Student</b>	<b>Signature of the Supervisor</b>

Signature of the Mentor:

Signature of the Internship Provider:

**FORM -3**  
**SUPERVISOR EVALUATION OF CANDIDATE**

Student Name: \_\_\_\_\_ Date: \_\_\_\_\_

Work Supervisor: \_\_\_\_\_ Title: \_\_\_\_\_

Company/Organization: \_\_\_\_\_

Internship Address: \_\_\_\_\_

Dates of Internship: From \_\_\_\_\_ To \_\_\_\_\_

Please evaluate your candidate by indicating the frequency with which you observed the following behaviors:

<b>Parameters</b>	<b>Needs improvement</b>	<b>Satisfactory</b>	<b>Good</b>	<b>Excellent</b>
Interest in work				
Punctuality				
Reliability				
Responsibility				
Communication				
Team work				
Overall performance				

Additional comments, if any:

Signature of Internship Provider

**FORM - 4**

**STUDENT FEEDBACK OF INTERNSHIP (TO BE FILLED BY STUDENTS AFTER INTERNSHIP COMPLETION)**

Student Name: \_\_\_\_\_ Class: \_\_\_\_\_

Internship Provider: \_\_\_\_\_

Address: \_\_\_\_\_

Title of Internship : \_\_\_\_\_

Supervisor Email: \_\_\_\_\_

Faculty Mentor: \_\_\_\_\_

Indicate the degree to which you agree or disagree with the following statements.

<b>This experience has</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>
Given me the opportunity to explore a career field			
Allowed me to apply classroom theory to Practice			
Expanded my knowledge			
Helped me develop my written and oral communication skills			
Given me a chance to improve my interpersonal skills			
Provided me with contacts which may lead to future employment			
Helped me clarify my career goals			

Considering your overall experience, how would you rate this internship?  
(Tick one).(Satisfactory/ Good/ Excellent)

Signature of the Student

**FORM - 5**  
**EVALUATION SHEET (FOR MENTOR)**

<b>S.NO</b>	<b>NAME OF THE STUDENT</b>	<b>REG.NO</b>	<b>NO. OF ACTUAL INTERNSHIP HOURS</b>	<b>GRADE*</b>

\* Evaluation based on report submitted by the student and evaluation by Internship provider. (Excellent/ Very good/ Good)

Signature of the Head of the Department

Signature of the Mentor

**GEOGRAPHIC THOUGHT**

***OBJECTIVES: To understand the evolution of geographical thought covers a wide canvas of the story of geographical thoughts, ideas and knowledge right from the early Greek period to modern contemporary geography.***

**UNIT I**

Geographic knowledge during the ancient, medieval and modern period - Foundations of modern geography – Contributions of Greek, Roman, Arab and Indian scholars to geography.

**UNIT II**

German, French, British and American schools of geographical thought - Major geographic traditions – earth science, man & environment relationship – area studies and spatial analysis.

**UNIT III**

Dualism in Geography - physical Vs human, regional Vs systematic, determinism Vs possibilism, qualitative Vs quantitative and ideographic Vs nomothetic

**UNIT IV**

Forms of explanations in geography – Models, Theories and laws in geography – Quantitative revolution.

**UNIT V**

Perspectives in geography – positivism, humanism, radicalism, behaviouralism, Marxism, structuralism, and feminism.

**Reference Books**

1. Negi B.S. Geographical thought – Karinath Ramnath meerat 1994.
2. Freeman. R. Hundred Years of geography – Hutchinson London 1970.
3. Harvey D. explanation to geography Edward Arnold publication, London.
4. Majid Husain – Evolution of Geographical Thought, Rawat Publications, Jaipur, 2013.

**RESEARCH METHODOLOGY IN GEOGRAPHY**

***OBJECTIVES: To understand the significances, types and methods of geographical research. To learn about research planning, design, data processing and report writing.***

**UNIT I**

Research: Meaning, Objective and Significance – Research and Scientific Methods – Types and Methods of Research.

**UNIT II**

Logic in Research – Hypothesis – Concept & Facts – Principles in Geographical Research.

**UNIT III**

Data Acquisition – Analysis – Collection of Data – Source of Data – Primary data – Secondary data – Sampling Methods – Structure of data base – Data Transformation.

**UNIT IV**

Research Design – Literature Survey – Selection of the Topic – Statement of Problem – Formulation of Hypothesis – Testing of Hypothesis – Time Schedule – Bibliography – Role of Internet.

**UNIT V**

Organization of Thesis – Preliminaries – Text and Reference Materials – Drafting of Thesis – First – Second and Final Evolution – Language & Presentation – Form - Style – Writing of Abstracts – Research Papers – Seminar – Journals & Publications.

**Reference Books**

1. Kothari C.R. Research Methodology, Methods & Techniques, 2004, New Age International Private Limited, Chennai.
2. Mishra .R.P Research Methodology in Geography, Gopal Lal J.2003 Research Methodology, Tools and Techniques, Mangal Deep Publishers, New Delhi.



**POPULATION AND SETTLEMENT GEOGRAPHY**

**OBJECTIVES:** *Population geography is the study of the ways in which spatial variations in the distribution, composition, migration and growth of populations are related to the nature of places, its involves demography in geographical perspective. The primary aim of studying settlement geography is to acquaint with the spatial and structurally characteristics of human settlements under varies environmental conditions.*

**UNIT I**

Nature, scope and significance of population geography – Sources of populations data – Reliability of population data - World population - Factors - Distribution and Density.

**UNIT II**

Dynamics of population – Fertility and Mortality – Measures and Determinants - world trend – World population growth– Theories of populations growth - Malthus, Ricardo and Marx – Migration: Types – Determinants – Causes and Consequences of migrations – Laws and policies of migrations.

**UNIT III**

Population composition characteristics – age, sex, rural, urban, occupation and education – population resources relationship – population resource regions, population policies.

**UNIT IV**

Nature, scope and development of settlement geography – site, situation, types, size, spacing and internal morphology of rural settlements – Functional classification of rural settlements.

**UNIT V**

Urban Settlements: Definition – Origin Cities – Stages of Urban Growth - Site, Situation and Types – Urban Morphology; Urbanization.

**Reference Books**

1. Chandna R.S – A Geography of Population Concepts, Determinants and Patterns, Kalyani Publishers, New Delhi 1980.
2. Clark John.I. - Population Geography Pergamon Press Ltd. Oxford 1981.
3. Gosh, B.N – Population Geography, Streling Publications. 1987.
4. Beauju- Garneir.J – Geography of Population, Longman group Ltd, 1978.
5. H. Carter - The Study of Urban Geography, Edward Arnold, London.
6. J.H.Johnson- Urban Geography of Towns, Hutchinson University Library, London.
7. Mayer & Kohn – Readings in Urban Geography, Central Book Depot, Alahabad.
8. Northam – Urban Geography. John Wiley & Sons Inc; 2nd edition 1979.

**PRACTICAL – III**

**INTERPRETATION OF TOPOGRAPHICAL MAP, AERIAL PHOTOS AND  
SATELLITE IMAGES**

***OBJECTIVES: To understand about survey of Indian topographical sheet, U.S and O.S map. To learn about weather report, aerial photos and satellite imageries.***

**UNIT I**

Appreciation and Interpretation of S.O.I. Map and O.S. Sheets: Physical and Cultural Features.

**UNIT II**

Interpretation of U.S. Map, National Atlas of India and Census Atlas.

**UNIT III**

Aerial Remote Sensing: Elements of Visual Interpretation – Marginal Information of Aerial Photographs – Interpretation of Aerial Photographs (Physical & Cultural Features)

**UNIT IV**

Satellite Remote Sensing: Marginal Information of Satellite Imageries – Interpretation of Satellite Imageries (Physical & Cultural Features).

**Reference Books**

1. Robinson A.H. and R.D.Sale - Elements of Cartography - John Wiley and Sons, New York.
2. Lillisand T.M., and Kiefer P.W. - Remote Sensing and Image Interpretation, John Wiley & Sons, New York.
3. Wolf P. R - Elements of Photogrammetry, McGraw Hill books Co., London.
4. Rampal K.K - Hand Book of Aerial Photography and Interpretation, Concept Publishing Company, New Delhi.

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**REGIONAL PLANNING**

**OBJECTIVES:** *To study the physical, socio-economic and infrastructural characteristics of the state. To identifying the development needs of various parts of the state and identify the environmental resources.*

**UNIT I**

Geography and Regional planning: Basic concepts – Geographic space and regions – growth pole and growth centre - regional units – types of regions – goals and objectives of regional planning process – interdisciplinary nature of regional planning - nationalization and sectionalism.

**UNIT II**

Approaches to regional planning analysis: systems concept; Geographic data matrix: spatial and temporal dimensions – grouping of dimensions in regional analysis – regional science – methods to study Indian regional problems.

**UNIT III**

Planning in India: historical development – appraisal of five year planning and annual plans – dimension- regional imbalances - development programme: command area , drought prone , metropolitan , river valley, tribal and hill area

**UNIT-IV**

Regional planning in Tamil Nadu: evaluation of regional planning - planning regions – backward area development – metropolitan, rural planning – local planning authorities – 73<sup>rd</sup> and 74<sup>th</sup> amendment of constitution of India.

**UNIT-V**

Town planning: basic concepts of town planning - need of town planning – Powers and functions of Nagar Panchayat, municipal council and Municipal Corporation - functions of town planning authority in Tamil Nadu.

**Reference Books**

1. Misra R.P. (1971) Regional Planning: Concept Techniques. Politics and case studies. University Mysore, Mysore.
2. Misra R.P., Sundaram K.V. and V.L.S Prakasa Rao (1974); regional development in India, Vikas publishing house, New Delhi.
3. Prakasa Rao V.L.S. (1963); Regional Planning, Asia publishing house, Kolkatta.

**DISASTER ANALYSIS**

***OBJECTIVES: The purpose of this paper is to provide a historical analysis of the disaster management structure and policies. To reduce, or avoid, losses from hazards, assure prompt and appropriate assistance to victims of disaster and achieve rapid and effective recovery.***

**UNIT I**

Meaning, Definition – Types: Natural, Man-made and Geological Disasters.

**UNIT II**

Atmospheric Disaster – Cyclones – Hurricanes – Tornadoes - Acid rain – Lightning and Thunderstorms.

**UNIT III**

Hydrological and Marine Disaster – Flood Hazard – Sea Level Changes – Tsunami – Coastal Zone Management.

**UNIT IV**

Biological Disaster – Desertification – Human Impact –Mitigate Desertification – Loss of Biodiversity – Forest Fire – Loss of Species.

**UNIT V**

Assessment and Management – Ground and Satellite Data Usage – Monitoring Disasters – Nuclear – Disaster Mitigation.

**Reference Books**

1. Agarwal S.K. 2004, Global Warming and Climatic Change, APH Publications, New Delhi.
2. Patick A.L.1996, Natural Disaster WMC. Brown Publisher.
3. Saxena H.M.1996, Natural Disasters WM. Brown Publishers.

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## **SEMESTER – IV**

## **CORE COURSE – XIII**

### **SOCIAL AND CULTURAL GEOGRAPHY**

**OBJECTIVES:** *The primary objective of social and cultural geography is to help students make informed and reasoned decisions for the public good as citizens of a culturally diverse, democratic society in an interdependent world.*

#### **UNIT I**

Social Geography – Nature and Scope – Social Structure and Processes – Concept of Space and Place – Social Well Being – Quality of Life – Social Exclusion and Inclusion.

#### **UNIT II**

Ethnicity, Tribe, Dialect, Language, Caste and Religion – Spatial Distribution – World and Indian.

#### **UNIT III**

Concept of Culture, Culture Complex, Culture Areas and Cultural Regions, Cultural Heritage, Cultural Interactions, Cultural Diffusion and Cultural Ecology – Cultural Imperialism.

#### **UNIT IV**

Health – Factors Affecting Human Health – Nutritional Status, Diseases – Etiological Condition, Classification and Distribution patterns – Health Care Planning and Policies in India.

#### **UNIT V**

Human Development – Measurement of Human Development – Social, Economic and Environmental Indicators – Contemporary Issues – Regional Disparity, Poverty, Population Explosion and Globalization – Impact of Development on Environment – Social and Ethnic Tension – Gender Discrimination – Empowerment of Women.

#### **Reference Books**

1. Majid Husain – Human Geography – Rawat Publications 1994.
2. Gillian C. Morgan – Human and Economic Geography, Oxford University Publications, 1999.
3. Aime Vincent Perpillou – Human Geography, Longman Group Limited London 1977.
4. C. Daryll Forde – Habitat, Economy and Society, Methuen Publishers, 1977.
5. Chandna – Population Geography, Kalyani Publishers.
6. Ray M. Northam – Urban Geography, John Wiley and Sons Publications, 1979.
7. Dikshit R. – Political Geography, 3<sup>rd</sup> Edition, Tata McGraw Hill.

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**PRACTICAL – IV**

***SPATIAL ANALYSIS***

***OBJECTIVES: To understand the statistical techniques, numerical data in geography. To familiarize about probabilistic treatment, parametric statistics and regression analysis.***

**UNIT I**

Frequency distribution – Graphical Representation: Histogram, Frequency Polygon, Frequency Curve – Cumulative Frequency or Ogive Curve.

**UNIT II**

Measures of central tendency – Mean, Median and Mode – Measures of dispersion: Range, Quartile Deviation, Mean Deviation, Standard Deviation and Lorenz Curve.

**UNIT III**

Correlation: Rank Correlation and co-efficient of Correlation – Regression – Scatter Diagram.

**UNIT IV**

Hypothesis Testing – Parametric and Non-parametric test – Chi-Square testing, 'F'-test and 't'-test.

**Reference Books**

1. Monkhouse F.J. and Wilkinson H.R.-Maps and Diagrams-Dirton Co.,Newyork.
2. Singh R.L. and P.K.Dutt - Elements of Practical Geography.
3. Aslam Mahmood, and Moonis Raza, (1986). Statistical Methods in Geographical Studies, Rajesh Publications, New Delhi.
4. David Unwin - Introductory Spatial Analysis, Methuen, London, 1981.
5. Gregory S. - Statistical Methods and the Geographer, Longman, London, 1978.
6. Hammond R and P.S. McCullagh - Quantitative Techniques in Geography: An Introduction, Clarendan Press, Oxford, 1974.
7. John P. Cole and Cuchlaine A. M. King, Quantitative Geography, John Wiley, London, 1968.
8. Johnston R. J., Multivariate Statistical Analysis in Geography, Longman, London. 1973.

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**PROJECT WORK**

***OBJECTIVES: To understand about the various research methods and its applications. To learn about the collection of data, types, analysis, interpretation and report with suggestion.***

1. The students should select a specific topic from the following broad areas for conducting the Project Work.
  - a. Land Resources
  - b. Landuse / Land cover Analysis
  - c. Water Resources
  - d. Disaster Studies
  - e. Climatic Analysis
  - f. Urban Studies
  - g. Pollution and EIA Studies
  - h. Demography and Health Analysis
  - i. Transport and Service Area Analysis
  - j. Social Area Analysis
  - k. Perception Studies
2. Integration of primary and secondary data may be used, wherever possible.
3. The students should read Geographical Research Methodology books before conducting the Project Work.
4. The Project Report should be between 50 and 60 pages.
5. Sufficient maps, diagrams and graphs and appropriate interpretation should be incorporated in the report.
6. The Report should be divided as:
  - a. Introduction
  - b. Study Area
  - c. Materials and Methods
  - d. Results and Discussion
  - e. Summary and Conclusion
  - f. References
  - g. Appendices

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**REMOTE SENSING, GIS AND GNSS**

**OBJECTIVES:** *To understand about the history and types of remote sensing, GIS and GNSS. To obtain about aerial, satellite remote sensing and recent development.*

**UNIT I**

Remote Sensing – definition - Types – Ideal Remote Sensing System – Aerial Photography - Types of Photographs – elements - Photo Interpretation – Photogrammetry.

**UNIT II**

Space borne Remote Sensing – EMR – Platforms – Sensors – Resolution – Spectral signatures – visual image interpretation - Fundamentals – equipments – digital image processing - Development of Remote Sensing programs in the world – USA, USSR, FRANCE, U.K and India – Development of remote sensing in India

**UNIT III**

GIS – Definition – Components – DBMS – Vector and Raster models – Spatial Data Input and Editing - GIS analysis – Queries, Buffering and Overlay.

**UNIT IV**

GNSS/GPS – Historical development – Segments – Space Segment: GPS Satellite Systems – new Programmes - Control Segment - User segment: land and marine navigation - Sources of errors - differential GPS.

**UNIT V**

Applications of RS, GIS and GNSS/GPS - Resource mapping – land and water resources, urban studies, disaster management and land use planning.

**Reference Books**

1. C.S.Agarwal & P.K.Grag – Text Book of Remote Sensing – Wheeler Publishing 2000.
2. Barrette & Burough – Principles of GIS for Land Resource Assessment – Clarendon Press – Oxford.
3. Campbell. James B.I - Introduction to Remote Sensing – The Guild Press, New York.
4. Ian Heywod, Sarah Cornelines, An Introduction to Geographical Information System I Addison – Wesley, Longman Ltd, 2000.
5. Robinson A.H. and R.D.Sale - Elements of Cartography - John Wiley and Sons, New York.
6. Lillisand T.M., and Kiefer P.W. - Remote Sensing and Image Interpretation, John Wiley & Sons, New York.
7. Wolf P. R - Elements of Photogrammetry, McGraw Hill books Co., London.

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