University of Gour Banga

FOUR-YEAR UNDERGRADUATE PROGRAMME
(Honours/ honours with research)

Curriculum of Disciplinary Minor Course (DCM) in Geography

GEOGRAPHY (Minor)

2024

UNDER NEP-2020

[To be opted by the student of other than Geography (Major) Course]

Semester (I+II+III+IV+V+VI+VII+VIII)

University of Gour Banga
P.O. – Mokdumpur
District – Malda
West Bengal
PIN - 732103

Descriptive Type Question Pattern

For Discipline Specific Course/ Major Core (DSC) and Disciplinary Minor Course (DCM) in Geography

Total Marks: 75 (Each Course)

Theory (Semester End Written Examination)

Full Marks = 30

(10 Marks x 1 Question) + (5 Marks x 3 Questions) + (1 Mark (MCQ) x 5 Questions)

(Question(s) containing 10 marks will be divided into three parts
Question(s) containing 5 marks will be divided into two parts)

Internal Assessment

Full Marks = 25

(Tentative Mode: Tutorial/Assignment/Term paper Preparation 10 marks and Presentation 5 marks; Class Attendance 5 marks and Classroom Activities 5 marks)

Practical (Semester End Laboratory Based Test)

Full Marks = 20

((07 Marks x 1 Question) + (05 Marks x 1 Question) + (04 Marks x 1 Question) + (04 Marks for Laboratory Notebook (2) & Viva-voce (2)))

Word limits for descriptive type questions (Theory)

10 marks: 600 – 700 Words
5 marks: 300 – 350 Words

Duration of Examination

Theory paper of 30 marks: 2 hours

Practical paper of 20 marks: 2 hours

SEMESTER WISE COURSE STRUCTURE

for

4-Year Undergraduate Programme under NEP (2020)-2024

Semester	Discipline Specific Course/ Major Core (DSC)	Disciplinary Minor Course (DCM)	Multidisciplinary Course (MDC)	Ability Enhancement Course (AEC)	Skill Enhancement Course (SEC)	Value Added Course (VAC)	Internship / Apprenticeship /Project/ Community Engagement	Total Credits
I	DSC-100 (4)	DCM-100 (4)	MDC 100 (3)	AEC-1 (2)	SEC-1 (3)	VAC-1 (2)	IAPC-1 (2)	20
II	DSC-200 (4)	DCM-200 (4)	MDC 200 (3)	AEC-2 (2)	SEC-2 (3)	VAC-2 (2)	IAPC-2 (2)	20
III	DSC-301 (4) DSC-302 (4)	DCM-300 (4)	MDC 300 (3)	AEC-3 (2)	SEC-3 (3)		IAPC-3 (2)	22
IV	DSC-401 (4) DSC-402 (4) DSC-403 (4)	DCM-400 (4)		AEC-4 (2)		VAC-3 (2)		20
V	DSC-501 (4) DSC-502 (4) DSC-503 (4) DSC-504 (4)	DCM-500 (4)						20
VI	DSC-601 (4) DSC-602 (4) DSC-603 (4) DSC-604 (4)	DCM-600 (4)						20
VII	DSC-701 (4) DSC-702 (4) DSC-703 (4) DSC-704 (4)	DCM-700 (4)						20
VIII	DSC-800 (4)	DCM-800 (4)				Research Project/Dissertation (12)		20
Total								**162**

Disciplinary Minor Course (DCM) in Geography/Geography (Minor) Course Distribution

Semester	Disciplinary Minor Course (DCM)		Credit		Total Marks
	Paper Code	Paper Name	Theory	Practical	
SEMESTER-I	DCM-GEOG-100	Geotectonics	03	01	75
SEMESTER-II	DCM-GEOG-200	Geomorphology	03	01	75
SEMESTER-III	DCM-GEOG-300	Human Geography	03	01	75
SEMESTER-IV	DCM-GEOG-400	Geography of India	03	01	75
SEMESTER-V	DCM-GEOG-500	Social & Cultural Geography	03	01	75
SEMESTER-VI	DCM-GEOG-600	Field work techniques in Geography	03	01	75
SEMESTER-VII	DCM-GEOG-700	Hydrology & Oceanography	03	01	75
SEMESTER-VIII	DCM-GEOG-800	Research Methodology in Geography	03	01	75

Semester-I

Curriculum of Disciplinary Minor Course (DCM)) in Geography (DCM-GEOG-100) for UG Program

Title of the Course:	**GEOTECTONICS (THEORY)**
Discipline Specific Minor Paper Code:	**DCM-GEOG-100A (Theory)**
Semester – I (Theory)	
Credit = 03	
Objectives of the Course:	• To inculcate fundamental knowledge of the different aspects of Geotectonic. • To enrich the student's knowledge about the interiors of the Earth, which is not visual. • To understand the magnetism of the Earth, and its dynamics. • Developing the concept of Earth's broken and moving crust, in the name of Plate Tectonic. • To clarify the idea about earthquake and volcanoes, with their internal mechanism and world-wide distribution.
Learning Outcomes of the Course	• Learners will gain a comprehensive understanding of the fundamental principles and concepts of Geotectonic and they will understand the earth's tectonic and structural evolution. • Gain knowledge about earth's interior. Develop an idea about concept of plate tectonics, and resultant landforms. • Acquire knowledge about types of folds and faults and earthquakes, volcanoes and associated landforms. • Identification of rocks and minerals.
Course Content	
Module: -1: Origin of the universe and solar system	i) Big bang theory ii) Classical theories regarding origin of the solar system: Monastic and dualistic concepts iii) Tidal hypothesis
Module: -2: Interior of the Earth	i) Direct and indirect sources understanding the earth's interior ii) Seismology and seismic waves iii) Earth's interior with special reference to seismological evidences
Module: -3: Origin of the continents, oceans and mountains	i) Continental drift theory after Alfred Wegner ii) Plate Tectonic Theory iii) Geosyncline Theory of Kober
Module: -4: Endogenetic process and landforms	i) Volcanoes: Concept and types ii) Folding: Concept, classification and resulting landforms iii) Faulting: Concept, classification and resulting landforms

Suggestive Readings:	1. Basu, A. & Kar, N.S. (2022): Geotectonics & Geomorphology: (Theory & Lab), Global Net Publications, Delhi. 2. Beloussov V. V. (1980): Geotectonics, Springer-Verlag Berlin and Heidelberg GmbH & Co. KG, New York. 3. Das, C & Pramanik, T. (2021): Bhugathan O Bhumirup (Geotectonics And Geomorphology), Enova Publications, Kolkata 4. Garg, S. (2017): Geotectonics and Geomorphology, Random Publications, Delhi. 5. Maiti, R. (2023): Geotectonics and Geomorphology, an insight into process- form relationship, Nabodaya publications, Kolkata. 6. Maity, A.K. & Manna, S. (2021): Approches to geotectonics and geomorphology, Dev Prakashani, Kolkata. 7. Sil, A. (2021): Geotectonics & Geomorphology, Himalayan Books, Kolkata. 8. Singh, S. (2020): Physical Geography, Pravalika Publications, Allahabad 9. Summerfield, M.A. (2018): Geomorphology & Global Tectonics, John Wiley, New York 10. Thori. S. (2024): Geotectonics and geomorphology, Academic University Press
Method of Assessment, Measurement, & Evaluation:	**Semester End Examination: 30 Marks** **Mode:** Written Examination **Exam duration**: 2 Hours **Question Pattern:** Students shall answer ***One*** question carrying 10 marks out of ***Two*** given questions; ***Three*** questions carrying 5 marks each out of given ***Six*** questions; ***Five*** MCQ types questions carrying 1 mark. Questions carrying 10 marks will have at least three parts and questions carrying 5 marks will have at least two parts. **Internal Assessment: 25 Marks** **Mode:** Tutorial/Assignment/Term paper Preparation 10 marks and Presentation 5 marks; Class Attendance 5 marks and Classroom Activities 5 marks.

Curriculum of Disciplinary Minor Course (DCM)) in Geography (DCM-GEOG-100) for UG Program

Title of the Course:	**GEOTECTONICS (PRACTICAL)**
Discipline Specific Minor Paper Code:	**DCM-GEOG-100B (PRACTICAL)**
Semester – I (Practical)	
Credit = 01	
Objectives of the Course:	• To understand the concept of Scale in Map and Scale conversion • To Understand the importance and use of scale in Geography • To construct the normal scale to interpret ate the geographical space
Learning Outcomes of the Course	• Learners will gain a comprehensive understanding of the fundamental principles on map scale • Gain knowledge about the rock and minerals and their characteristics • Acquire knowledge about geological maps and how to construct it.

Course Content	
Module: -1: Map Scale	i) Concept of Map scale ii) Scale Conversion iii) Construction of plain and comparative linear scale
Module: -2: Identification of Minerals & Rocks	i) Concept of Minerals ii) Concept of Rocks iii) Megascopic identification of Minerals (quartz, chalcopyrite, galena, calcite, mica, and talc) and Rocks (Sandstone, shale, basalt, granite, gneiss, marble, quartzite and conglomerate).
Module: -3: Understanding of Geological Map	i) Concept and importance of Geological map ii) Construction of Geological Section (with given dip and direction in Horizontal, uniclinal and folded structure). iii) Interpretation of the prepared geological section
Suggestive Readings:	1. Bennison, George, Moseley, and Keith (2003): An Introduction to Geological Structures and Maps 7ed.,Arnold Publication 2. Borradaile, Graham (2014): Understanding Geology through Maps, Elsevier, Inc. 3. Khan, MD.Z.A. (1998): Textbook of Practical Geography: Concept Publishing Company. 4. Maltman, A. (1990): Geological Map: An Introduction, Open University Press. 5. Monkhouse F. J and Wilkinson, H.R. (1971): Maps and Diagrams B.I. publications private limited, new Delhi 6. Platt, J.I., Selected Exercises upon Geological Map, Part I, Unwin, Londan. 7. Roy, A. K. (1966): Introduction to the study of geological maps, World Press Private Ltd 8. Saha, P.K. and Basu P. (2004): Advanced Practical Geography: Books and Allied, Kolkata 9. Sarkar, A. (2015): Practical Geography: A Systematic Approach, 3rd ed, Orient Blackswan Private Ltd. 10. Singh, R.L., Singh, R.P.B. (2008): Elements of Practical Geography, Kalyani Publishers. 11. Spencer, Edger W. (2006): Geologic Maps – A Practical Guide to Preparation and Interpretation, Waveland Press, Inc.
Method of Assessment, Measurement, & Evaluation:	**20 Marks** **Mode:** Laboratory-based Examination **Exam duration**: 2 Hours **Question Pattern:** Students shall perform ***One*** Practical carrying 7 marks; ***One*** Practical carrying 5 marks; and ***One*** practical carrying 4 marks. 4 marks for submission of the Laboratory Notebook duly signed by the Teacher(s) followed by the performance in a viva-voce

Semester-II

Curriculum of Disciplinary Minor Course (DCM)) in Geography (DCM-GEOG-200) for UG Program

Title of the Course:	**GEOMORPHOLOGY (THEORY)**
IDC Minor Paper Code:	**DCM-GEOG-200A (THEORY)**
Semester = II (Theory)	
	Credit = 03
Objectives of the Course:	• To inculcate fundamental knowledge of the different aspects of physical geography and geomorphology. • To gain expertise in discerning and acknowledging the dynamic tectonic and structural evolution of Earth's geosphere. • To enhance the ability to distinctly identify and characterize the various Earth surface processes and resulting landforms.
Learning Outcomes of the Course	• Learners will gain a comprehensive understanding of the fundamental principles and concepts of geomorphology. • Learners will be able to acquire a comprehensive understanding of the composition and dynamics of the earth's surface. • Learners will gain insight into the dynamic nature of the earth's crust and its significance in the formation of landforms and will be able to summarize and critically evaluate different models explaining how landforms develop. • Learners will be able to identify various types of landforms and establish their connections.
Course Content	
Module: -1: Introduction to Geomorphology	i) Definition of Geomorphology ii) Scope and Content of Geomorphology iii) Significance of Geomorphology
Module: -2: Denudational processes	i) Concept of Denudation ii) Weathering: Process and Controlling Factors iii) Mass Wasting: Process and controlling factors
Module: -3: Models of landscape evolution	i) Davisian concept of cycle of erosion ii) Penk's concept of cycle of erosion
Module: -4: Geomorphic processes and landforms	i) Fluvial processes and landforms ii) Glacial processes and landforms iii) Aeolian processes and landforms
Suggestive Readings:	1. Bloom, A. L. (2001): Geomorphology - A Systematic Analysis of Late Cenozoic Landforms, Prentice-Hall of India, New Delhi. 2. Bridges, E. M. (1990): World Geomorphology, Cambridge University Press, Cambridge.

	3. Christopherson, Robert W. (2011): Geosystems - An Introduction to Physical Geography, 8 Ed., Macmillan Publishing Company 4. Fairbridge, R.W. (1968): The encyclopaedia of geomorphology, (Edge). Reinhold Book, New York 5. Huggett, R.J. (2011): Fundamentals of Geomorphology. Routledge, New York 6. Kale, V. S. and Gupta A. (2001): Introduction to Geomorphology, Orient Longman, Hyderabad. 7. Knighton, A. D. (1984): Fluvial Forms and Processes, Edward Arnold Publishers, London. 8. Selby, M.J. (2005): Earth's Changing Surface, Indian Edition, OUP 9. Singh, S., (2018): Geomorphology, Pravalika Publications, Allahabad 10. Singh, S., (2020): Physical Geography, Pravalika Publications, Allahabad 11. Skinner, Brian J., and Stephen C.P (2000): The Dynamic Earth: An Introduction to Physical Geology, 4th Edition, John Wiley, and Sons. 12. Summerfield, M.A. (1991): Global Geomorphology: An Introduction to the Study of Landforms. Longman, London. 13. Thornbury, W. D. (1969): Principles of Geomorphology, Wiley.
Method of Assessment, Measurement, & Evaluation:	**Semester End Examination: 30 Marks** **Mode:** Written Examination **Exam duration**: 2 Hours **Question Pattern:** Students shall answer ***One*** question carrying 10 marks out of ***Two*** given questions; ***Three*** questions carrying 5 marks each out of given ***Six*** questions; ***Five*** MCQ types questions carrying 1 mark. Questions carrying 10 marks will have at least three parts and questions carrying 5 marks will have at least two parts. **Internal Assessment: 25 Marks** **Mode:** Tutorial/Assignment/Term paper Preparation 10 marks and Presentation 5 marks; Class Attendance 5 marks and Classroom Activities 5 marks.

Curriculum of Disciplinary Minor Course (DCM)) in Geography (DCM-GEOG-200) for UG Program

Title of the Course:	**GEOMORPHOLOGY (PRACTICAL)**
Discipline Specific Minor Paper Code:	**DCM-GEOG-200B (PRACTICAL)**
Semester = II (Practical)	
Credit = 01	
Objectives of the Course:	• To provide the idea of topographical map. • To analyse and interpret the morphometric aspects of the SOI topographical map. • Use SOI Topographical Maps to conduct a detailed relief analysis, identifying broad physiographic divisions and specific relief characteristics, as well as completing a variety of profile analyses such as representative, serial, composite, superimposed, projected, long, and cross profiles.

	• Perform morphometric analysis by delineating watersheds and river basins.
Learning Outcomes of the Course	• Students will develop a thorough understanding of topographical maps and their applications in geomorphology, which will help them prepare for future academic and professional endeavours in geography and related subjects. • Learners will be able to identify and analyse the survey of India topographical map and they will be able to interpret the features and their interrelationship which will help them in future research in practical fields. • Learners will be able to prepare the different types of morphometric maps in the applied geomorphology and they can interpret the structural features of any area.
Course Content	
Module: -1: Introduction to Survey of India (SOI) topographical map	i) Layout- old and new scheme ii) Conventional symbols and marginal information
Module: -2: Relief analysis using SOI topographical Map	i) Broad physiographic division and interpretation ii) Identification of relief features iii) Profile analysis (serial, superimposed, projected and composite)
Module: -3: Morphometric analysis	i) Delineation of river basin ii) Stream ordering (Strahler)
Suggestive Readings:	1. Gupta K. K. and Tyagi V. C., (1992): Working with Maps, Survey of India, DST, New Delhi. 2. Mishra R.P. and Ramesh, A., (1989): Fundamentals of Cartography, Concept, New Delhi. 3. Saha, P.K. and Basu, P. (2009): Advanced Practical Geography, Books and Allied (P) Ltd., Kolkata. 4. Sarkar, A. (2015): Practical geography: A systematic approach. Orient Black Swan Private Ltd., New Delhi 5. Sen, P.K. (1989): Geomorphological Analysis of Drainage Basin: An Introduction to Morphometric and Hydrological Parameters, University of Burdwan. 6. Singh, R.L. and Singh, P.B. (2009): Elements of Practical Geography, Kalyani Publishers, New Delhi.
Method of Assessment, Measurement, & Evaluation:	**20 Marks** **Mode:** Laboratory-based Examination **Exam duration**: 2 Hours **Question Pattern:** Students shall perform ***One*** Practical carrying 7 marks; ***One*** Practical carrying 5 marks; and ***One*** practical carrying 4 marks. 4 marks for submission of the Laboratory Notebook duly signed by the Teacher(s) followed by the performance in a viva-voce

Semester-III

Curriculum of Disciplinary Minor Course (DCM)) in Geography (DCM-GEOG-300) for UG Program

Title of the Course:	**HUMAN GEOGRAPHY (THEORY)**
IDC Minor Paper Code:	**DCM-GEOG-300A(THEORY)**
Semester = III (Theory)	
Credit = 3	
Objectives of the Course:	• To acquire knowledge of Nature and Scope of Human Geography and Explore Human Races and Ethnicity • To Identify cultural regions based on language and religion, and analyze how these factors influence human interactions and societal structures. • To trace the evolution of human societies from hunting and gathering to industrial and urban societies, identifying key characteristics and transitions in each stage. • To explore concepts of population dynamics, including underpopulation, overpopulation, and optimum population, and their implications for resource management.
Learning Outcomes of the Course	• Learners will acquire knowledge and develop an understanding of concepts, processes, elements, and methods of Human Geography. • Learners will also acquire knowledge on the history and evolution of humans. • It helps learners understand the relationship between man and environment in the light of development-environment conflict. • Ideas about space, society and culture shall be developed among learners. • Overall, Students will receive a thorough understanding of human races, demographic dynamics, and development indices, providing them with critical knowledge for future courses in geography, anthropology, and social science.
Course Content	
Module: -1: Introduction to Human geography	i) Definition, nature and scope of human geography ii) Elements of human geography iii) Recent trends in human geography
Module: -2: Human Races	i) Concept of Race ii) Major Races of the World (characteristics and distribution)
Module: -3: Human adaptation to environment	i) Eskimo ii) Masai iii) Jarawa
Module: -4: Population–Resource Relationship	i) Concept of Underpopulation, overpopulation, optimum population; ii) Population-resource region of the World (Ackerman) iii) Malthusian theory of population
Suggestive Readings:	1. Bergman, E.F (1995): Human Geography-Culture, Connections and Landscape, Prentice Hall, New Jersey 2. Chisholm. (1975): Human Geography, Penguin Books, Harmondsworth.

	3. Daniel, P.A. and Hopkinson, M.F. (1989): The Geography of Settlement, Oliver & Boyd, London. 4. Hussain M (2018): Human Geography, Rawat Publications 5. Johnston R; Gregory D, Pratt G. et al. (2008): The Dictionary of Human Geography, Blackwell Publication. 6. Jordan-Bychkov et al. (2006): The Human Mosaic: A Thematic Introduction to Cultural Geography. W. H. Freeman and Company, New York. Page 11 7. Norton. W. (2001): Human Geography, 4th Edition Oxford University press, Oxford 8. Pearce D. (1995): Tourism Today: A Geographical Analysis, 2nd edition, Longman Scientific & Technical, London 9. Pickering K. and Owen A. A. (1997): An Introduction to Global Environmental Issues, 2nd edition Rutledge, London. 10. Raw, M. (1986): Understanding Human Geography: A Practical Approach, Bell and Hyman. London 11. Rubenstein, J.M. (2002): The Cultural Landscape, 7th edition, Prentice Hall, Englewood Cliffs 12. Smith D M (1982): Human Geography: A Welfare Approach, Edward Arnold, London
Method of Assessment, Measurement, & Evaluation:	**Semester End Examination: 30 Marks** **Mode:** Written Examination **Exam duration:** 2 Hours **Question Pattern:** Students shall answer ***One*** question carrying 10 marks out of ***Two*** given questions; ***Three*** questions carrying 5 marks each out of given ***Six*** questions; ***Five*** MCQ type questions carrying 1 mark each. Questions carrying 10 marks will have at least three parts and questions carrying 5 marks will have at least two parts. **Internal Assessment: 25 Marks** **Mode:** Tutorial/Assignment/Term paper Preparation 10 marks and Presentation 5 marks; Class Attendance 5 marks and Classroom Activities 5 marks.

Curriculum of Disciplinary Minor Course (DCM)) in Geography (DCM-GEOG-300) for UG Program

Title of the Course:	**HUMAN GEOGRAPHY (PRACTICAL)**
Discipline Specific Minor Paper Code:	**DCM-GEOG-300B (PRACTICAL)**
Semester = III (Practical)	
Credit = 01	
Objectives of the Course:	• To identify Human Races Using Anthropometric Indices. • To analyse the Interrelationship Between Population and Development. • To analysis population dynamics using through various index and diagrams.
Learning Outcomes of the Course	• Learners will be able to identify the different human races by using different human body measurement index.

	• Learners will be able to identify and analyse the spatial dynamics of human population and able to apply the techniques of population potential, mean and median centres of population.
Course Content	
Module: -1: Identification of human race	i) Cephalic Index ii) Nasal Index
Module: -2: Population composition	i) Decadal Growth Rate ii) Age-sex pyramid diagram
Module: -3: Population density	i) Arithmetic density ii) Agricultural density
Suggestive Readings:	1. Eroje, M. A., Fawehinmi, H. B., Jaja, B. N., & Yaakor, L. (2010). Cephalic index of Ogbia tribe of Bayesla state. *Int J Morphol*, *28*(2), 389-392. 2. Mohan, S. M., Leander, D., Roopesh, R., Abiraj, K. R., Ali Fathima, S., Pratheesh, A. P., & Krishna, A. S. Evaluation and establishment of norms for facial index in Kerala population-a cross sectional study. 3. Craig, J. (1972): Population Potential and Population Density. *Area*, *4*(1), 10–12. http://www.jstor.org/stable/20000603 4. Craig, J. (1987): Population Potential and Some Related Measures. *Area*, *19*(2), 141–146. http://www.jstor.org/stable/20002432 5. Gaye, A., Klugman, J., Kovacevic, M., Twigg, S., & Zambrano, E. (2010): Measuring key disparities in human development: The gender inequality index. *Human development research paper*, *46*(10). 6. Omotoso, D. (2019). Anthropometric evaluation of nasal height, nasal breadth and nasal index among Bini children in Southern Nigeria. 7. Pal S. K. (1998): Statistics for Geoscientists, Tata McGraw Hill, New Delhi. 8. Sarkar A (2013): Quantitative Geography Techniques And Presentations 1st Edition, Orient Blackswan 9. UNDP technical notes (2021): https://hdr.undp.org/system/files/documents/technical-notes-calculating-human-development-indices.pdf
Method of Assessment, Measurement, & Evaluation:	**20 Marks** **Mode:** Laboratory-based Examination **Exam duration**: 2 Hours **Question Pattern:** Students shall perform ***One*** Practical carrying 7 marks; ***One*** Practical carrying 5 marks; and ***One*** practical carrying 4 marks. 4 marks for submission of the Laboratory Notebook duly signed by the Teacher(s) followed by the performance in a viva-voce

Semester-IV

Curriculum of Disciplinary Minor Course (DCM)) in Geography (DCM-GEOG-400) for UG Program

Title of the Course:	**GEOGRAPHY OF INDIA (THEORY)**
IDC Minor Paper Code:	**DCM-GEOG-400A (THEORY)**
Semester = IV (THEORY)	
	Credit = 03
Objectives of the Course:	• To provide detailed ideas about the physiography, drainage, soil and climate of India and West Bengal. • To gain a knowledge of India's and West Bengal's regional geography, consider their population and economy.)
Learning Outcomes of the Course	• Learners will understand our country's geography, including the relationship between physiography and drainage, climate, and soil. They will also learn about India's various physiographic, economic, and agricultural regions, as well as a solid understanding of the concept of region and its importance in planning and development. • Learners will understand different mineral and power resources and become aware of the resources and their conservation.
Course Content	
Module: -1: Physiography	i) Physiographic divisions of India: Concept and classification ii) Himalayan Mountain region iii) Northern Great Plain of India
Module: -2: Climate, vegetation and soil	i) Controlling factors of Indian climate ii) Climatic regions of India after Koppen iii) Classification of natural vegetation after Champion & Seth iv) Soil zones in India after ICAR and importance in agriculture
Module: -3: Drainage system	i) Himalayan drainage system (Indus and Ganga) ii) Peninsular drainage system (Godavari)
Module: -4: Power and mineral resources	i) Distribution of coal and petroleum ii) Distribution of iron ore and manganese
Suggestive Readings:	1. Chatterjee, A., (2021): Bharat O Paschimbanger Bhugol, Nabodaya Publication, Kolkata, 1st ed. 2. Deshpande C. D. (1992): India - A Regional Interpretation, ICSSR, New Delhi. 3. Guha G.S. and Basu D.N. and Kashyap S.P. (ed.) (1996): Agro-Climatic Regional Planning in India, Concept Publishing Company Pvt. Ltd. 4. Johnson, B. L. C., (ed.) (2001): Geographical Dictionary of India. Vision Books, New Delhi.

	5. Khullar, D. R. (2018): India a Comprehensive Geography. Kalyani Publishers, New Delhi 6. Mandal R. B. (ed.) (1990): Patterns of Regional Geography – An International Perspective. Vol. 3 – Indian Perspective. 7. Mondal K.C. (2023): Geography India, West Bengal and World, Oriental book company private limited 8. Pathak, C. R. (2003): Spatial Structure and Processes of Development in India. Regional Science Assoc., Kolkata. 9. Pattrea M. and Chakraborty G. (2023): Know Your State West Bengal, Arihant Publications; Eighth edition. 10. Sdyasuk Galina and P Sengupta (1967): Economic Regionalisation of India, Census of India 11. Sharma, T.C. (2013): Economic Geography of India. Rawat Publication, Jaipur. 12. Singh R. L. (1971): India: A Regional Geography, National Geographical Society of India. 13. Singh, Jagdish (2003): India - A Comprehensive & Systematic Geography, Gyanodaya Prakashan, Gorakhpur. 14. Spate O. H. K. and Learmonth A. T. A. (1967): India and Pakistan: A General and Regional Geography, Methuen. 15. Tirtha, Ranjit (2002): Geography of India, Rawat Pubs., Jaipur & New Delhi. 16. Tiwari, R.C. (2007): Geography of India. Prayag Pustak Bhawan, Allahabad
Method of Assessment, Measurement, & Evaluation:	**Semester End Examination: 30 Marks** **Mode:** Written Examination **Exam duration:** 2 Hours **Question Pattern:** Students shall answer ***One*** question carrying 10 marks out of ***Two*** given questions; ***Three*** questions carrying 5 marks each out of given ***Six*** questions; ***Five*** MCQ type questions carrying 1 mark each. Questions carrying 10 marks will have at least three parts and questions carrying 5 marks will have at least two parts. **Internal Assessment: 25 Marks** **Mode:** Tutorial/Assignment/Term paper Preparation 10 marks and Presentation 5 marks; Class Attendance 5 marks and Classroom Activities 5 marks.

Curriculum of Disciplinary Minor Course (DCM)) in Geography (DCM-GEOG-400) for UG Program

Title of the Course:	**GEOGRAPHY OF INDIA (PRACTICAL)**
Discipline Specific Minor Paper Code:	**DCM-GEOG-400B (PRACTICAL)**
Semester = IV(Practical)	
Credit = 01	
Objectives of the Course:	• To provide the knowledge about the different types of maps and their uses in different fields. • To know the concept, typology, terminologies, uses and properties of different types of Map projections. And also, to choose the right one for specific mapping tasks. • To provide the knowledge about the different cartograms and thematic mapping.
Learning Outcomes of the Course	• The learners will be able to use of different types of maps in their livelihood as well as academic purposes.

	• Learners will be able to applied different types of map projection for map making in their academic purposes. • Learners will be able to represents the different physical and socio-cultural data using different cartograms and thematic mapping.
Course Content	
Module: -1: Map pointing	i) Physical features (Mountain ranges, mountain peaks, major rivers and lakes) ii) Political and cultural features (capital cities, major producing centres-coal and iron ore) on the map of India.
Module: -2: Map projections	i) Planar projection (Polar Zenithal Gnomonic Projection) ii) Conical projection (Simple Conical Projection with One Standard Parallel) iii) Cylindrical projection (Cylindrical Equal Area Projection)
Module: -3: Representation of socio-economic data of India	i) Line diagram ii) Bar diagram iii) Dot and sphere diagram
Suggestive Readings:	1. Das, D.C & Roy, P. (2024): An Analytical Study of Map Projections, Bharti Publicatios, New Delhi 2. Kennedy, M., Kopp, S. (2001): Understanding Map Projections, Esri Press. 3. Khan, Z.A. (1998): Text Book Of Practical Geography, Concept Publishing Company,New Delhi 4. Kimerling, A.J., Buckley, A.R., Muehrcke, P.C., Muehrcke, J.O. (2011): Map Use: Reading, Analysis, Interpretation, 7th ed, Esri Press. 5. Mishra, R.N & Sharma, P.K. (): Practical Geography-Methods and Techniques, Pareek Publication, New Delhi. 6. Monkhouse, F.J., Wilkinson, H.R. (1971): Maps and Diagrams: Their Compilation and Construction, 3rd ed (2017 reprint), Alphaneumera-Kolkata. Pearson II, 7. Pearson, F. (1990): Map Projections: Theory and Applications 2nd ed, CRC Press. 8. Robinson, A.H., Morrison, J.L., Phillip, C.M., Kimerling, A.J., Guptill, S.C. (1995): Elements of Cartography, 6th ed, Wiley. 9. Saha, P.K. and Basu P. (2004): Advanced Practical Geography: Books and Allied, Kolkata 10. Sarkar, A. (2015): Practical Geography: A Systematic Approach, 3rd ed, Orient Blackswan Private Ltd. 11. Singh, R.L., Singh, R.P.B. (2008): Elements of Practical Geography, Kalyani Publishers.
Method of Assessment, Measurement, & Evaluation:	**20 Marks** **Mode:** Laboratory-based Examination **Exam duration**: 2 Hours **Question Pattern:** Students shall perform ***One*** Practical carrying 7 marks; ***One*** Practical carrying 5 marks; and ***One*** practical carrying 4 marks. 4 marks for submission of the Laboratory Notebook duly signed by the Teacher(s) followed by the performance in a viva-voce

Semester-V

Curriculum of Disciplinary Minor Course (DCM)) in Geography (DCM-GEOG-500) for UG Program

Title of the Course:	**SOCIAL AND CULTURAL GEOGRAPHY (THEORY)**
Discipline Specific Minor Paper Code:	**DCM-GEOG- 500A (THEORY)**
Semester –V (Theory)	
	Credit = 03
Objectives of the Course:	• To acquire knowledge about the key concepts of social and cultural geography. • To critically evaluate and understand various dimensions of social geography and cultural geography. • To identify different social and cultural elements. • To know different social and cultural processes. • To provide a theoretical and empirical framework for understanding the evolution and characteristics of individual types of cultural landscapes. • To improve understanding about the contemporary social issues.
Learning Outcomes of the Course	• Learners will gain a broad overview of the major concepts of social and cultural geography. • Students will develop a thorough understanding and in-depth knowledge of space and the society of different cultural regions which will help them in future research.
Course Content	
Module: -1: Introduction to Social Geography	i) Definition, scope and content of Social Geography ii) Concept of society, community and social space iii) Social processes
Module: -2: Social Elements & Contemporary Social Issue	i) Castes and Tribes ii) Social Wellbeing: concept and indicators iii) Gender discrimination with special reference to India
Module: -3: Introduction to Cultural Geography	i) Nature & scope of Cultural Geography ii) Culture: Definition, characteristics & types iii) Cultural landscape
Module: -4: Cultural Identity and Processes	i) Cultural realm of world ii) Cultural diffusion & acculturation iii) Language with special reference to India
Suggestive Readings:	1. Ahmed, A. (1999): Social Geography, Rawat Publications. 2. Casino, V. J. D., Jr. (2009): Social Geography: A Critical Introduction, Wiley Blackwell. 3. Cater, J. and Jones T. (2000): Social Geography: An Introduction to Contemporary Issues,

	4. Hodder, A., Gregory, D., Johnston, R., Pratt, G., Watts., Whatmore, S. (Eds) 2009: The Dictionary of Human Geography, 5th ed, Wiley. 5. Holt, L. (2011): Geographies of Children, Youth and Families: An International Perspective, Taylor & Francis. 6. Majumdar, P.K. (2013): India's Demography: Changing Demographic Scenario in India, Rawat Publications. 7. Majumdar, S. (2020): Human Geography, Sandhya Prakashani, Kolkata-19. 8. Mukherji, S. (2013): Migration in India: Links to Urbanization, Regional Disparities and Development Policies, Rawat Publications. 9. Panelli, R. (2004): Social Geographies: From Difference to Action, Sage. 10. Rachel, P., Burke, M., Fuller, D., Gough, J., Macfarlane, R. and Mowl, G. (2001): Introducing Social Geographies, Oxford University Press. 11. Roy, T., Mondal, B. & Maity, M. (2022): An Exploration to Human Geography, Kalyani Publishers, New Delhi. 12. Rubenstein, J.M. (2008): An Introduction to Human Geography: The Cultural Landscape. Pearson Prentice Hall, NJ. 13. Smith, D. M. (1994): Geography and Social Justice, Blackwell, Oxford. 14. Smith, S.J., Pain, R., Marston, S. A., Jones, J. P. (2009): The SAGE Handbook of Social Geographies, Sage Publications. 15. Valentine, G. (2014): Social Geographies: Space and Society, Routledge.
Method of Assessment, Measurement, & Evaluation:	**Semester End Examination: 30 Marks** **Mode:** Written Examination **Exam duration**: 2 Hours **Question Pattern:** Students shall answer ***One*** question carrying 10 marks out of ***Two*** given questions; ***Three*** questions carrying 5 marks each out of given ***Six*** questions; ***Five*** MCQ types questions carrying 1 mark. Questions carrying 10 marks will have at least three parts and questions carrying 5 marks will have at least two parts. **Internal Assessment: 25 Marks** **Mode:** Tutorial/Assignment/Term paper Preparation 10 marks and Presentation 5 marks; Class Attendance 5 marks and Classroom Activities 5 marks.

Curriculum of Disciplinary Minor Course (DCM)) in Geography (DCM-GEOG-500) for UG Program

Title of the Course:	**SOCIAL AND CULTURAL GEOGRAPHY (PRACTICAL)**
Discipline Specific Minor Paper Code:	**DCM-GEOG- 500B (PRACTICAL)**
Semester – V (Practical)	
Credit = 01	
Objectives of the Course:	• To develop competency to represent and analyse socio-cultural data using different cartograms. • To analyse the comparison of different socio-cultural aspects through the application of different measures of concentration and disparity.
Learning Outcomes of the Course	• Learners will be able to represent different socio-cultural related aspects, which will help them in practical applications and future research.
Course Content	

Module: -1: Representation & Interpretation of Socio-Cultural Data	i) Pie and Proportional pie diagram ii) Proportional squares diagram
Module: -2: Measure of Concentration and Analysis	i) Location quotient ii) Choropleth
Module: -3: Index of Disparity	i) Gender Parity Index (GPI) ii) Index of Dissimilarity
Suggestive Readings:	1. Alvi, Z: Statistical Geography (2002): Methods and Applications, Rawat Pub. 2. Anson R. and Ormelling F. J., (1994): International Cartographic Association: Basic Cartographic Vol. Pregmen Press. 3. Dent B. D., Torguson J. S., & Holder T. W. (2008): Cartography: Thematic Map Design (6th Edition), McGaw Hill Higher Education. 4. Jana, M., Khan, A., Chatterjee, S., Sar, N. and Das, A. (2014): Variability of Transition Rate and Gender Parity in Rural Primary School Level in Gopiballavpur Circle (West), Paschim Medinipur, West Bengal: A Case Specific Study, Scientific Research, 2041-2025. 5. Mahmood, A. (1999): Statistical Methods in Geographical Studies: Student Edition, Rajesh; New Edition. 6. Mondal, R.B. (2014): Statistics for Geographer and Social Scientist, Concept Publishing Company Pvt Ltd., New Delhi. 7. Monkhouse F. J. and Wilkinson H. R., (1973): Maps and Diagrams, Methuen, London. 8. Myers, M. R. & Griffin, L.A., (2018): The Geography of Gender Inequality in International Higher Education, Journal of studies of International Education,1-22, European association for International Education. 9. Robinson, Arthur H. & Morrison, Joel L. (2009): Elements of Cartography, Wiley. Sarkar, A. (2015): Practical geography - A systematic approach. Orient Black Swan Private Ltd., New Delhi 10. Singh, L.R. (2010): Fundamentals of Practical Geography, Sarada Pustak Bhavan, Allahabad. 11. Singh, R. L. and Singh R. P. B. (2005): Elements of Practical Geography, Kalyani Publishers.
Method of Assessment, Measurement, & Evaluation:	**Semester End Examination: 20 Marks** **Mode:** Written Examination **Exam duration**: 2 Hours **Question Pattern:** Students shall answer ***One*** question carrying 7 marks; ***One*** question carrying 5 marks and ***One*** question carrying 4 marks. 4 marks for submission of Laboratory Note Book duly signed by the Teacher(s) followed by the performance in a viva-voce.

Semester-VI

Curriculum of Disciplinary Minor Course (DCM)) in Geography (DCM-GEOG-600) for UG Program

Title of the Course:	**FIELD WORK TECHNIQUES IN GEOGRAPHY (THEORY)**
Discipline Specific Minor Paper Code:	**DCM-GEOG-600A (THEORY)**
Semester = VI (Theory)	
	Credit = 03
Objectives of the Course:	• To understand the basic statistical methods and skills for cartographic representation. • Skills in tabulation and graphical representation of data pertaining to geography will be given.
Learning Outcomes of the Course	• Understand the collection, classification and processing of geographical data. • Comprehend the graphical representation and interpretation of the results • Students will be able to apply basic statistical analysis to geographical data and their day-to-day uses.
Course Content	
Module: -1: Concept of Field Work in geography	i) Concept and Objectives of field work ii) Significance of Field work in Geography iii) Modes of field work in Geography
Module: -2: Data collection and Sampling techniques	i) Concept and types of data ii) Methods of data collection iii) Preparation of model questionnaire/survey schedule iv) Sampling techniques (random sampling)
Module: -3 Data processing and Analysis	i) Data tabulation ii) Data representation iii) Data analysis (Qualitative and Quantitative)
Module: -4: Field Report Writing	i) Different steps of report writing ii) Layout of report iii) Precautions for field report writing
Suggestive Readings:	1. Clifford, N., Cope, M., Gillespie, T.W., French, S. (Eds) (2016): Key Methods in Geography, 3rd ed, Sage. 2 Shil. A. K (2019): Statistical Method in Geography, The Himalayan Book, Kolkata. 3. Adhikari.S (2013): Honours Baboharik Bhugol, Dove Publishing House, Kolkata. 4. Monkhouse, F.J., Wilkinson, H.R. (1971): Maps and Diagrams: Their Compilation and Construction, 3rd ed (2017 reprint), Alphaneumera-Kolkata 5. Northey, N., Draper, D., Knight, D.B. (2015): Making Sense in Geography and Environmental Sciences: 6. A Student's Guide to Research and Writing, 6th ed, Oxford University Press. 7. Saha, P.K. and Basu, P. (2009): Advanced Practical Geography, Books and Allied (P) Ltd., Kolkata

Method of Assessment, Measurement, & Evaluation:	**Semester End Examination: 30 Marks** **Mode:** Written Examination **Exam duration**: 2 Hours **Question Pattern:** Students shall answer ***One*** question carrying 10 marks out of ***Two*** given questions; ***Three*** questions carrying 5 marks each out of given ***Six*** questions; ***Five*** MCQ types questions carrying 1 mark. Questions carrying 10 marks will have at least three parts and questions carrying 5 marks will have at least two parts. **Internal Assessment: 25 Marks** **Mode:** Tutorial/Assignment/Term paper Preparation 10 marks and Presentation 5 marks; Class Attendance 5 marks and Classroom Activities 5 marks ,

Curriculum of Disciplinary Minor Course (DCM)) in Geography (DCM-GEOG-600) for UG Program

Title of the Course:	**FIELD WORK TECHNIQUES IN GEOGRAPHY (PRACTICAL)**
Discipline Specific Minor Paper Code:	**DCM-GEOG-600B (PRACTICAL)**
Semester = VI (Practical)	
Credit = 01	
Objectives of the Course:	• To understand the collection, classification and processing of geographical data. • To Comprehend the graphical representation and interpretation of the results
Learning Outcomes of the Course	• At the end of this practical course, the students will be able to collect the field data and represent the collected information through tables and cartograms. • After doing this they become immersed in geographical thinking and draw together different form of geographical knowledge
Course Content	
Module: -1: Preparation of Field Report	i) Field Report Preparation (Introduction, Objectives, Data base and Methodology, Study area, Discussion, Conclusion and References) and Viva-voce
Instruction of Field Report Writing	**1.** Field report will be conducted using any relevant topic from Physical and Human Geography. Any specific issue could be addressed. **2.** The report is to be prepared for a C.D. Block /P.S./ Mouza/ G. P./ Municipality/ Sub- division/ Drainage Basin area or any other physical units primarily on the basis of field survey. **3.** Participation of each student in the Field Work is mandatory & Certificate of field coordinator regarding the participation in Field Work is to be attached in the Report. **4.** Field report is to be prepared by the student in his/her own hand writing but maps and diagrams may be prepared with the aid of software. **5.** No part of the report should contain any photocopied or Printed/typed material. **6.** Length of the report not to exceed 1500 words. **7.** The Field Report should contain up to 3 pages for diagrams and maximum of 2 pages for photographs.

	8. Questionnaire(s)/ schedule(s) are to be prepared for collection of primary data and one of the same as filled in during the field work, duly signed by the concerned teacher, be annexed with the field report. **9.** 9. The report should be prepared normally with primary data collected by field survey.
Suggestive Readings:	1. Clifford, N., Cope, M., Gillespie, T.W., French, S. (Eds) (2016): Key Methods in Geography, 3rd ed, Sage. 2. Shil. A. K (2019): Statistical Method in Geography, The Himalayan Book, Kolkata. 3. Adhikari. S (2013): Honours Baboharik Bhugol, Dove Publishing House, Kolkata. 4. Monkhouse, F.J., Wilkinson, H.R. (1971): Maps and Diagrams: Their Compilation and Construction, 3rd ed (2017 reprint), Alphaneumera-Kolkata 5. Northey, N., Draper, D., Knight, D.B. (2015): Making Sense in Geography and Environmental Sciences: 6. A Student's Guide to Research and Writing, 6th ed, Oxford University Press. 7. Saha, P.K. and Basu, P. (2009): Advanced Practical Geography, Books and Allied (P) Ltd., Kolkata
Method of Assessment, Measurement, & Evaluation:	**Semester End Examination: 20 Marks** **Mode:** Field report preparation 15 marks and viva-voce 5 marks **Exam duration**: 2 Hours (Time duration for field report evaluation and viva-voce should not be more than 5 minutes for each candidate)

Semester-VII

Curriculum of Disciplinary Minor Course (DCM)) in Geography (DCM-GEOG-700) for UG Program

Title of the Course:	**HYDROLOGY AND OCEANOGRAPHY (THEORY)**
DCM Minor Paper Code:	**DCM-GEOG-700A (THEORY)**
Semester = VII (Theory)	
	Credit = 03
Objectives of the Course:	• To impart fundamental knowledge of hydrology and oceanography. • To develop an understanding of the global hydrological cycle and its components. • To enhance the ability to identify and analyze various hydrological and oceanographic processes.
Learning Outcomes of the Course	• Learners will gain a comprehensive understanding of the fundamental principles and concepts of hydrology and oceanography. • Learners will be able to explain the dynamics of the hydrosphere and its interactions with other Earth systems. • Learners will gain insight into the processes of water movement on and beneath the Earth's surface, and in the oceans. • Learners will be able to identify various hydrological and oceanographic phenomena and their impacts on the environment.
Course Content	
Module: -1 Introduction to Hydrology	i) Definition and scope of hydrology ii) Modes of occurrence of water in the earth iii) The Hydrological Cycle: components, processes, and significance
Module: -2 Surface and Ground Water Hydrology	i) Runoff: Concept, Factors affecting runoff process ii) Flood: Concept, types, Factors affecting flood iii) Ground water: Concept and types of aquifers, movement,
Module: -3 Introduction to Oceanography	i) Definition and scope of Oceanography, ii) Ocean Floor Characteristics and Features: Indian Ocean iii) Physical Properties of Seawater: Temperature and Salinity
Module: -4 Marine Ecosystem	i) Pelagic and Benthic Ecosystems ii) Coral Reefs and Atolls

Suggestive Readings:	1. Davie, T. (2008): Fundamentals of Hydrology, Routledge. 2. Dooge, J.C.I. (2004): Elements of Physical Hydrology, John Hopkins University Press. 3. Garrison, T. (2012): Essentials of Oceanography, Cengage Learning. 4. Pinet, P.R. (2013): Invitation to Oceanography, Jones & Bartlett Learning. 5. Raghunath, H.M. (2006): Hydrology: Principles, Analysis and Design, New Age International. 6. Reddy, P.J.R. (2021): A Textbook of Hydrology, Laxmi Publications. 7. Singh, V.P. (1992): Elementary Hydrology, Prentice Hall. 8. Thurman, H.V. and Trujillo, A.P. (2013): Essentials of Oceanography, Pearson. 9. Todd, D.K. and Mays, L.W. (2005): Groundwater Hydrology, Wiley. 10. Viessman, W. and Lewis, G.L. (2003): Introduction to Hydrology, Pearson.
Method of Assessment, Measurement, & Evaluation:	**Semester End Examination: 30 Marks** **Mode:** Written Examination **Exam duration:** 2 Hours **Question Pattern:** Students shall answer ***One*** question carrying 10 marks out of ***Two*** given questions; ***Three*** questions carrying 5 marks each out of given ***Six*** questions; ***Five*** MCQ type questions carrying 1 mark each. Questions carrying 10 marks will have at least three parts and questions carrying 5 marks will have at least two parts. **Internal Assessment: 25 Marks** **Mode:** Tutorial/Assignment/Term paper Preparation 10 marks and Presentation 5 marks; Class Attendance 5 marks and Classroom Activities 5 marks.

Curriculum of Disciplinary Minor Course (DCM)) in Geography (DCM-GEOG-700) for UG Program

Title of the Course:	**HYDROLOGY AND OCEANOGRAPHY (PRACTICAL)**
IDC Minor Paper Code:	**DCM-GEOG-700B (PRACTICAL)**
Semester = VII (Practical)	
Credit = 01	
Objectives of the Course:	• comprehend the principles and applications of annual and flood hydrographs in hydrology. • To learn and apply the Rational Method for estimating runoff in various hydrological scenarios. • To develop skills in plotting and interpreting physical and chemical properties of the ocean
Learning Outcomes of the Course	• Students will be able to analyze and interpret annual and flood hydrographs, understanding their components and significance in water resource management. • Students will demonstrate the ability to estimate runoff using the Rational Method

	• Students will be proficient in plotting thermocline and TS diagrams, and interpreting the data to understand oceanographic processes. • Students will be able to critically evaluate hydrological and oceanographic data, applying their knowledge to real-world scenarios and research
Course Content	
Module: -1 Hydrograph and determination of flood year	i) Annual Hydrograph ii) Flood year determination (CWC, 2018)
Module: -2 Runoff Estimation	i) Runoff estimation: Rational method
Module: -3 Plotting of Ocean water Properties	i) Thermocline and Halocline ii) Temperature-salinity (TS) diagram
Suggestive Readings:	1. Raghunath, H.M. (2006): Hydrology: Principles, Analysis and Design, New Age International. 2. Reddy, P.J.R. (2021): A Textbook of Hydrology, Laxmi Publications. 3. Singh, V.P. (1992): Elementary Hydrology, Prentice Hall. 4. Subramanya, K. (2017): Engineering hydrology, McGraw-Hill, New Delhi. 5. Thurman, H.V. and Trujillo, A.P. (2013): Essentials of Oceanography, Pearson. 6. Todd, D.K. and Mays, L.W. (2005): Groundwater Hydrology, Wiley. 7. Viessman, W. and Lewis, G.L. (2003): Introduction to Hydrology, Pearson.
Method of Assessment, Measurement, & Evaluation:	**20 Marks** **Mode:** Laboratory-based Examination **Exam duration**: 2 Hours **Question Pattern:** Students shall perform ***One*** Practical carrying 7 marks; ***One*** Practical carrying 5 marks; and ***One*** practical carrying 4 marks. 4 marks for submission of the Laboratory Notebook duly signed by the Teacher(s) followed by the performance in a viva-voce

Semester-VIII

Curriculum of Disciplinary Minor Course (DCM)) in Geography (DCM-GEOG-800) for UG Program

Title of the Course:	**RESEARCH METHODOLOGY IN GEOGRAPHY (THEORY)**
Discipline Specific Minor Paper Code:	**DCM-GEOG-800A (Theory)**
Semester = VIII (Theory)	
Credit = 03	
Objectives of the Course:	• To understand essentials of research in Geography and its significance. • To understand the ways of data collection, classified, tabulation and analysis. • To makes students aware about fundamentals of sampling techniques in geographical research. • To make students proficient about quality of research. • To make students aware about the basics of research writing.
Learning Outcomes of the Course	• Acquaintance with basics of research, its typology and conceptualization. • Understanding of sources, types and tools of data collection and data analysis. • Understanding about project writing in geography.
Course Content	
Module: -1: Introduction to Research in geography	i) Meaning, type & significance ii) Literature review, Research proposal, Research question iii) Research design, objectives & hypothesis,
Module: -2: Data collection and analysis	i) Source of data and Data collection: Primary and secondary data ii) Measurement and scaling techniques iii) Data Tabulation and analysis (central tendency & dispersion)
Module: -3: Quality of Research	i) Research ethics ii) Plagiarism check in research iii) References & Bibliography, Citation, Citation indexing
Module: -4: Research report writing	i) Report writing: Structure, methodology and steps ii) Criteria for good research report writing
Suggestive Readings:	1. Burt, J.E. and Barber, G.M.(1996): Elementary statistics for Geographers, TheGuilford press, New York. 2. Hay, I. (ed.) (2000): Qualitative Research Methods in Human Geography. Oxford University Press, New York. 3. Karlekar Shrikant and Kale Mohan (2005): Statistical analysis of Geographical data, Dimond publication 4. Kitchin, R. and Tate, N., (2001): Conducting Research into Human Geography. Theory, Methodology and Practice. Prentice-Hall, London.

	5. Kothari, C. R.(2008): Research Methodology, Methods & Techniques, New Age International Publisher, New Delhi. 6. Krishan, G. and Singh, N., (2020): Researching Geography- The Indian Context, Second Edition, Routledge, London and New york. 7. Limb, M. (2001): Qualitative Methodologies for Geographers. Issue and Debates. Edward Arnold, London. 8. Mishra, H.N. & Singh, V.P. (2002): Research Methodology in Geography, Rawat Publications, Jaipur. 9. Misra, R.P. (1985): Research Methodology, Concept Publishing Co., New Delhi. 10. Stoddart, R.H. (1982): Field, Techniques and Research Methods in Geography, Kendall Hunt, Dubuque. 11. Taylor, P.J.(1977): Quantitative Methods in Geography. Houghton Mifflim Company,Boston University Press. 12. Yeates, M. (1974). An Introduction to Quantitative Analysis in Human Geography,McGraw Hill, New York.
Method of Assessment, Measurement, & Evaluation:	**Semester End Examination: 30 Marks** **Mode:** Written Examination **Exam duration**: 2 Hours **Question Pattern:** Students shall answer ***One***question carrying 10 marks out of ***Two*** given questions; ***Three*** questions carrying 5 marks each out of given ***Six*** questions; ***Five*** MCQ types questions carrying 1 mark. Questions carrying 10 marks will have at least three parts and questions carrying 5 marks will have at least two parts. **Internal Assessment: 25 Marks** **Mode:** Tutorial/Assignment/Term paper Preparation 10 marks and Presentation 5 marks; Class Attendance 5 marks and Classroom Activities 5 marks ,

Curriculum of Disciplinary Minor Course (DCM)) in Geography (DCM-GEOG-800) for UG Program

Title of the Course:	**RESEARCH METHODOLOGY IN GEOGRAPHY (PRACTICAL)**
Discipline Specific Minor Paper Code:	**DCM-GEOG-800B (PRACTICAL)**
Semester = VIII (Practical)	
Credit = 01	
Objectives of the Course:	• To explain the students about need and use of statistical techniques in geographic research • To explain the students about the nature and degree of relationship between variables. • To understand the cause and effect relationship among the variables
Learning Outcomes of the Course	• Determining the need and use of quantitative techniques in Geography • Understanding and evaluating the nature of data and their spatial distribution • Understanding the nature, degree and casual effect of relationship among variables
Course Content	

Module: -1: **Graphical Representation of data in research**	i) Preparation of Frequency Distribution Table ii) Representation of data: Histogram and Frequency polygon and frequency curve
Module: -2: **Basic statistics in Research**	i) Mean, Median, ii) Standard Deviation,
Module: -3: **Testing of Hypothesis**	i) T-test (one sample), Chi-square test ii) Correlation: Pearson and Scatter Diagram
Suggestive Readings:	1. Bhattacherjee, A. (2012). *Social science research: Principles, methods, and practices*. University of South Florida. 2. Cooper, D. R., & Schindler, P. (2014). *Business research methods*. Mcgraw-hill. 3. Kothari, C. R.(2008): Research Methodology, Methods & Techniques, New Age International Publisher, New Delhi. 4. Krishan, G. and Singh, N., (2020): Researching Geography- The Indian Context, Second Edition, Routledge, London and New York. 5. Kumar, R. (2018). Research methodology: A step-by-step guide for beginners. 6. Limb, M. (2001): Qualitative Methodologies for Geographers. Issue and Debates. Edward Arnold, London. 7. Reddy, C. R. (2008). Research Methodology in Social Sciences**.** *Kalyani Publishers.* New Delhi
Method of Assessment, Measurement, & Evaluation:	**20 Marks** **Mode:** Laboratory-based Examination **Exam duration**: 2 Hours **Question Pattern:** Students shall perform ***One*** Practical carrying 7 marks; ***One*** Practical carrying 5 marks; and ***One*** practical carrying 4 marks. 4 marks for submission of the Laboratory Notebook duly signed by the Teacher(s) followed by the performance in a viva-voce

****