THREE YEAR DEGREE COURSE

GEOGRAPHY SYLLABUS

(General Course)

Gauhati University

1st Year					
Semster	**Paper**	**Marks**	**Class**	**Credit**	**per week**
1st	101 (Theory)	75	6	6	
2nd	201 (Theory)	75	6	6	
2nd year					
Semester	**Paper**	**Marks**	**Class**	**Credit**	**per week**
3rd	301 (Theory)	50	4	4	
	302 (Practical)	50	4	4	
4th	401 (Theory)	50	4	4	
	402 (Practical)	50	4	4	
3rd year					
Semester	**Paper**	**Marks**	**Class**	**Credit**	**per week**
5th	501 (Theory)	100	8	8	
	502 (Practical)	100	8	8	
6th	601 (Theory)	100	8	8	
	602 (Practical)	100	8	8	
		750	**60**	**60**	

Total marks : 750 (Theory marks : 450 & Practical marks: 300)

Paper	**Paper**	**Marks**
101	Physical Geography I	75
201	Physical Geography II	75
301	Human Geography	50
302	Practical on Physical Geography	50
401	Cartographic and Quantitative Techniques in Geography	50
402	Practical on Human Geography	50
501	Regional Geography	100
502	Cartographic and Quantitative Techniques (Practical)	100
601	Economic, Political and Environmental Geography	100
602	Map Work and Interpretation (Practical)	100

FIRST SEMESTER
PAPER 101 : PHYSICAL GEOGRAPHY - I

Total Marks: 75
(Including 10 marks for internal assessment)
Total Credit: 6 (Total number of classes: 60)
Time : 3 hours

(5 questions carrying 13 marks each taking one from Unit 1, three from Unit 2 and one from Unit 3)

Unit 1 : The Field of Physical Geography (12 classes) **13**

(1 question carrying 13 marks)

- Nature and scope of Physical Geography, Branches of Physical Geography and their interrelations

Unit 2 : Geomorphology **(36 classes**) 39

(3 questions carrying 13 marks each)

- Types of landform – First order, second order and third order
- Forces for landform development - endogenetic and exogenetic
- Landform development processes-weathering, erosion, transportation and deposition
- Landform development under different conditions – fluvial, arid and glacial
- Cycle concept in geomorphology

Unit 3 : Oceanography (12 classes) **13**

(1 question carrying 13 marks)

- Relief features of the ocean bottom
- Marine resources and their economic importance
- Major ocean currents and their impact on climate and economy

Books Suggested :

1. Borkotoky, T.N. and Saikia, R.: *Prakritik Bhugol*, Vol. I, G.U.
2. Monkhouse, F.J.: *Principles of Physical Geography*, Hodder and Staighton
3. Singh, Savindra: *Physical Geography*, Prayag Pustakalaya
4. Thornburry, W.D.: *Principles of Geomorphology*, John Wiley
5. Strahler, A.N.: *Physical Geography*, John Willey
6. Dayal, P.: *A Textbook of Geomorphology*, Shukla Book Depot

SECOND SEMESTER
PAPER 201 : PHYSICAL GEOGRAPHY-II

Total Marks – 75
(Including 10 marks for internal assessment)
Total Credit: 6 (Total number of classes:60)
Time : 3 hours

(5 questions carrying 13 marks each taking two from Unit 1, two from Unit 2 and one from Unit 3)

Unit 1 : Climatology (24 classes) **26**

(2 questions carrying 13 marks each)

- Atmosphere – Composition and vertical structure
- Elements of weather – Temperature, pressure, wind, humidity and precipitation

- Heat zones and global wind system
- Factors of weather and climate
- Mechanism of monsoon with reference to Indian monsoon and its characteristics

Unit 2 : Biogeography (24 classes) **26**

(2 questions carrying 13 marks each)

- Meaning and scope of biogeography
- Ecosystem : Components and functioning
- Factors influencing plant growth
- Distribution of plants and animals in different ecosystems
- Major Biomes of the world

Unit 3 : Soil Geography (12 classes) **13**

(one question of 13 marks)

- Nature and scope of soil geography
- Soil profiles and their significance
- Process of soil formation and soil types

Books Suggested :

1. Borthakur, M.: *Prakritik Bhugol*, Vol. II, G.U.
2. Bhattacharyya, N.N.: *Prakritik Bhugol*, Vol. IV, G.U.
3. Singh, Savindra: *Physical Geography*, Prayag Pustakalaya
4. Trewartha, G.T.: *An Introduction to Weather and Climate*
5. Strahler, A.N.: *Physical Geography*, John Willey
6. Robinson, H.: *Biogeography*, McDonald and Evans.
7. Lal, D.S.: *Climatology*, Chanakya Pustak Bhawan, Allahabad.

THIRD SEMESTER
PAPER 301 : HUMAN GEOGRAPHY

Total Marks: 50
(Including 5 marks for internal assessment)
Total Credit: 4
(Total number of classes: 40)
Time : 2 hours

(4 questions taking one from Unit 1 carrying 10 marks, one from Unit 2 carrying 10 marks, one from Unit 3 carrying 15 marks and one from Unit 4 carrying 10 marks)

Unit 1: Field of Human Geography

(one question of 10 marks) (10 classes) **10**

- Meaning and scope; approaches in human geography with special reference to determinism and possibilism

Unit 2: Man-environment relationship

(one question of 10 marks) (10 classes) **10**

- Human adjustment in mountain, plain and hot desert environment
- Recent changes in man-environment relationship
- Impact of man on environment-environmental degradation

Unit 3 : Population

(one question of 15 marks) (10 classes) **15**

- Growth, distribution and density of population in the global context and factors associated with them
- Concept of over population, under population and optimum population
- Migration : Causes and consequences

Unit 4 : Settlement

(one question of 10 marks) (10 classes) **10**

- Origin and growth of rural and urban settlements
- Types and pattern of rural settlement
- Urban settlement : morphology and functional classification

Books Suggested :

1. Bhuyan, M.C.: *Manab Bhugol,* G.U.
2. Hussain, M.: *Human Geography*, Rawat Publications, Jaipur.
3. Memona, C.B. and Singh, P.: *Principles of Human Geography,* Kitab Mahal
4. Freeman, J.: *Human Geography*; Landscape of Human Activities, Brown and Benchman
5. Debliz, H.J.: *Human Geography: Culture, Society and Space,* John Willey
6. Carr, M.: *New Patterns, Processes and Change in Human Geography,* Thomas Nelson and Sons Ltd.
7. Chandna, R.C.: *Geography of Population*, Kalyani Publishers
8. Clarke, J.I.: *Population Geography,* Pergamon Press
9. Singh, R.Y.: *Geography of Settlements*, Rawat Publications
10. Ghosh, B.N.: *Fundamentals of Population Geography,* Sterling Publishers

THIRD SEMESTER
PAPER 302: PRACTICAL ON PHYSICAL GEOGRAPHY

Total Marks: 50

(Including 5 marks for internal assessment)

Total Credit: 4

(Total number of classes :40)

Time : 3 hours

(4 questions carrying 10 marks each taking two from Unit 1, one from Unit 2 and one from Unit 3)

Unit 1: Relief and Topography

(2 questions of 10 marks each) (20 classes) **20**

- Relief representation techniques: Hachuring, shading, contour and profile drawing of different physical features and their interpretation
- Drawing of conventional symbols used in topographic maps
- Identification and interpretation of physical and cultural features from topographical maps; interpretation of relationship of physical and cultural features

Unit 2: Weather data interpretation and instrument handling
(one question of 10 marks) (10 classes) 10

- **Drawing and interpretation of weather chart with special reference to monsoon and winter season**
- Drawing and interpretation of rainfall- temperature- humidity graphs
- Handling and use of weather instruments: Maximum and minimum thermometer, hygrometer, barometer, rain gauge and anemometer

Unit 3: Biogeography
(one question of 10 marks) (10 classes) 10

- Drawing and interpretation of distributional maps: Natural vegetation, national parks and sanctuaries, soil types and forest cover of Assam

Unit 4: Practical Note Book and Viva-voce
Unit 5 : Practical Note-Book & Viva-voce (3 + 2 marks)

Books Suggested

1. Deka, P. and Bhattacharya, N.N.: *Byavaharik Bhugol Bijnan*, G.U.
2. Monkhouse, F.J. and Wilkinson, H.R.: *Maps and Diagrams*, B.I. Publications, New Delhi
3. Singh, R.L. and Singh, Rana, P.B.: *Elements of Practical Geography*, Kalyani Publishers, Ludhiana and New Delhi

FOURTH SEMESTER
PAPER 401: CARTOGRAPHIC AND QUANTITATIVE TECHNIQUES IN GEOGRAPHY

Total Marks: 50
(Including 5 marks for internal assessment)
Total Credit: 6
(Total number of classes: 40)
Time : 2 hours

(3 questions carrying 15 marks each taking two from Unit 1 and one from Unit 2)

Unit 1: Cartographic Techniques
(2 questions of 15 marks each) (25 classes) 30

- Importance of cartography in geographical studies
- Map as a tool in geographical studies; types and characteristics of maps; scale factor in mapping; map projection
- Thematic mapping : Types and characteristics of thematic map, concept of isopleth and choropleth
- Spatial data : nature, types and sources
- Surveying : Geodetic surveying and plane surveying; Principles of plane surveying using prismatic compass
- Remote sensing, Global Positioning System and GIS and their importance in Geographical studies

Unit 2: Quantitative Techniques
(1 question of 15 marks) (15 classes) **15**

- Need of quantification in geography
- Geographic attributes and their level of measurement

- Measures of central tendency (Mean, Median and Mode) and Dispersion (Range, Mean Deviation and Standard Deviation) and their usefulness in geographical studies.
- Correlation co-efficient and its usefulness in geographical studies.

Books Suggested :

1. Das, M.M. and Sarma, M. C.: *Ganit Bhugol*, G.U.
2. Deka, P. and Bhattacharya, N. N.: *Byavaharik Bhugol Bijnan*, G.U.
3. Singh, R.L. and Singh, Rana, P.B.: *Elements of Practical Geography*, Kalyani Publishers, Ludhiana and New Delhi
4. Misra, R.P. and Ramesh, A.: *Fundamentals of Cartography*, Concept Publishing Co., New Delhi
5. Mahmood, A.: *Statistical Methods in Geographical Studies*, Rajesh Publications, New Delhi
7. Deka, P.: *Sankhyik Bhugol*, University Publication Department, Gauhati University

FOURTH SEMESTER
PAPER 402 : PRACTICAL ON HUMAN GEOGRAPHY

Total Marks: 50
(Including 5 marks for internal assessment)
Total Credit: 6
Total number of classes: 40)
Time : 3 hours

(4 questions carrying 10 marks each taking two from Unit 1 and two from Unit 2)

Unit 1: Population data representation and interpretation 20

(2 questions of 10 marks each) (20 classes)

- Trend of population growth in Assam/NE India/India by line graph
- Choropleth mapping of decennial growth of population in Assam/N.E. India
- Population distribution map using simple and multiple dots
- Choropleth mapping of population density in Assam/N.E. India/India
- Territorial distribution of tribal communities in Assam/N.E. India
- Composition of population/work-force in Assam/N.E. India (Pie-graph)

Unit 2: Settlement data representation and interpretation 20

(Two questions of 10 marks each) (20 classes)

- Drawing of different types and patterns of settlements (compact and dispersed; rectangular, linear, star like and circular)
- Major house types of India/N.E. India in different physical and cultural contexts
- Distribution of urban centers in Assam/N.E. India/India by spheres
- Morphological drawing of rural and urban settlements

Unit 3: Practical Note-Book and Viva-voce 5

- Practical note book evaluation & Viva-voce (3+2=5)

Books Suggested :

1. Deka, P. and Bhattacharya, N.N.: *Byavaharik Bhugol Bijnan*, G.U.
2. Monkhouse, F.J. and Wilkinson, H.R.: *Maps and Diagrams*, B.I. Publications, New Delhi
3. Singh, R.L. and Singh, Rana, P.B.: *Elements of Practical Geography*, Kalyani Publishers, Ludhiana and New Delhi

FIFTH SEMESTER
PAPER 501 : REGIONAL GEOGRAPHY

Total Marks: 100
(Including 10 marks for internal assessment)
Total Credit: 8
(Total number of classes: 60)
Time : 3 hours

(6 questions carrying 15 marks each taking two from Unit 1, three from Unit 2 and one from Unit 3)

Unit 1: World Regional Geography

(2 questions of 15 marks each) (24 classes) 30

- Regional profile of the world at continent level with respect to broad physical, population and economic characteristics
- Regional geography of Asia – Location, physiography, climate, population growth and distribution, agriculture and industries.

Unit 2: Regional Geography of India

(3 questions of 15 marks each) (36 classes) 45

- India in the context of South Asia
- Physiography, climate, forest cover, mineral resources, population growth and distribution, agriculture (distribution and production of major crops- rice, wheat, cotton and tea), industries (iron and steel, cotton textile and petro- chemical), urbanization
- Transport system
- Patterns of regional disparity in development

Unit 3: Regional Geography of Assam

(2 questions of 15 marks each) (24 classes) 15

- Location, physiography, climate, population growth and distribution, agriculture (distribution and production of major crops – rice and tea)

Books Suggested :

1. Cole, J.: *A Geography of the World's Major Regions*, Routledge, London
2. Dickenson, J.P. *et. al*.: *The Geography of the Third World*
3. Ward, P.W., Miller, A.: *World Regional Geography*, John Willy
4. Despande, C.D.: *India- A Regional Interpretation*, Northern Book Center, New Delhi
5. Singh, R.L. (ed): *India- A Regional Geography*, National Geographical Society, India.
6. Mamoria, C.B.: *Economic and Commercial Geography of India*, Shivlal Agarwal and Co., Agra
7. Routray, J.K.: *Geography of Regional Disparity*, AIT, Bangkok
8. Khullar, D.R.: *India: A Comprehensive Geography*, Kalyani Publishers, Ludhiana and New Delhi

FIFTH SEMESTER
PAPER 502 : PRACTICAL ON CARTOGRAPHIC AND QUANTITATIVE METHODS

Total Marks : 100
(Including 10 marks for internal assessment)
Total Credit: 8
(Total number of classes: 60)
Time : 5 hours

(4 questions carrying 20 marks each taking three from Unit 1 and one from Unit 2)

Unit 1: Cartographic Methods
(Three questions of 20 marks each) (45 classes) 60

- Representation and interpretation of Socio-economic data (20 marks)
  (a) Trend of agricultural and industrial production by moving average method
  (b) Trend of industrial production/agricultural production/ export/import/energy utilization in N.E. India/India by compound bar graph/ Band graph
  (c) Pattern of general land use/ agricultural land use/ crop production in Assam/N.E. India by pie graph
- Construction of map projection and their properties, uses, etc (20 marks)
  (a) Zenithal polar gnomonic and stereographic projections
  (b) Simple cylindrical and Gall's stereographic cylindrical projection
  (c) Simple conical projection with one standard parallel Surveying and mapping (20 marks)
  (a) Plane table surveying by radiation and intersection methods
  (b) Traverse survey (Close and open) with prismatic compass

Unit 2: Quantitative Methods
(one question of 20 marks) (15 classes) 20

- Grouping of geographical data and preparation of histogram, frequency polygon, frequency curve and ogive
- Computation of mean, median, mode and standard deviation of geographical data (both grouped and ungrouped data)
- Graphical representation of median and mode
- Determination of shape index of selected countries (India, Nepal, Bhutan) and Indian states

Unit 3: Practical Note-book and Viva-voce 10

- Practical note book & Viva-voce (5+5=10)

Books Suggested :

1. Das, M.M. and Sarma, M. C.: *Ganit Bhugol*, G.U.
2. Deka, P. and Bhattacharya, N. N.: *Byavaharik Bhugol Bijnan*, G.U.
3. Singh, R.L. and Singh, Rana, P.B.: *Elements of Practical Geography*, Kalyani Publishers, Ludhiana and New Delhi
4. Misra, R.P. and Ramesh, A.: *Fundamentals of Cartography*, Concept Publishing Co., New Delhi
5. Mahmood, A.: *Statistical Methods in Geographical Studies*, Rajesh Publications, New Delhi
6. Deka, P.: *Sankhyik Bhugol*, University Publication Department, Gauhati University

SIXTH SEMESTER
PAPER 601: ECONOMIC, POLITICAL AND ENVIRONMENTAL GEOGRAPHY

Total Marks: 100
(Including 10 marks for internal assessment)
Total Credit: 8
(Total number of classes: 60)
Time: 3 hours

(7 questions taking one from Unit 1 carrying 10 marks, two from Unit 2 carrying 15 and 10 marks, two from Unit 3 carrying 15 and 10 marks, one question from Unit 4 carrying 15 marks, and one question from Unit 5 carrying 15 marks)

Part A: Economic Geography *60 marks*

Unit 1:The Field of Economic Geography

(one question of 10 marks) (10 classes) 10

- Meaning and scope, approaches in economic geography (regional and systematic approaches)

Unit 2: Geography of Resources (15 classes) 25

(Two questions, one carrying 15 marks and another carrying 10 marks)

- Concept of resources and classification – natural and human, renewable and non renewable, biotic and abiotic; conservation of resources
- Distribution and production potential of resources (Global context) : forest, coal, petroleum, iron ore and water

Unit 3: Geography of Economic Activity (15 classes) 25

(Two questions, one carrying 15 marks and another carrying 10 marks)

- Classification of economic activity-primary, secondary and tertiary activities
- Agriculture – physical and socio-economic factors influencing agriculture, types of agriculture, major food and cash crops, their distribution and production (global context)
- Industry – factors of industrial location, classification of industries, distribution and production of iron and steel, textile, petro-chemicals industries (global context)

Part B: Environmental Geography **15**

Unit 4: Field of Environmental Geography and Environmental Problems 15

(one question carrying 15 marks) (10 classes)

- Nature and scope of Environmental Geography
- Environmental problems – Global warming and climate change, natural hazards (flood, drought, landslide and earthquake), loss of biodiversity with special reference to N.E. India

Part C: Political Geography *15 marks*

Unit 5: Field of Political Geography and Associated Issues 15

(one question carrying 15 marks) (10 classes)

- Nature and scope of Political Geography
- State and nation
- Concept of frontier, boundary and buffer zone
- Boundary problems of India: International and inter-state

Books Suggested :

1. Das, H.P.: *Arthanaitik Bhugol*, G.U.
2. Das, M.M.: *Arthanaitik Bhugol*, G.U.
3. Guha, J.L. and Chattaraj, P.R.: *A New Approach to*

Economic Geography, The World Press Pvt.Ltd.
4. Alexander, J.W.: *Economic Geography*, Prentice-Hall Ltd.
5. Leong, G.C. and Morgaon, G.C.: *Human and Economic Geography*, Oxford University Press, New Delhi
6. Singh, J. and Dhillon, S.S.: *Agricultural Geography*, Tata McGraw hill, Pvt. Ltd
7. Thoman, R.S. and Corbin, P.B.: *The Geography of Economic Activity*, McGraw Hill
8. Roy, P. and Mukherjee, S.: *Economic Geography-An Appraisal of Resources*, Central Educational Enterprise, Kolkata
9. Negi, B.S.: *Geography of Resources*, Kitab Mahal
10. Sadhukhan, S.K.: *Economic Geography- An Appraisal of Resources*, S. Chand
11. and Company Ltd, New Delhi.
12. Park,C 1997 : *The Environment*, Routledge, London
13. Pickering , K.T. & L.A.,Owne,1994 : *An Introduction to Global Environmental Issus,* Routledge, London
14. Singh,S. 1991 : *Environmental Geography*, Prayag Pustak Bhawan, allahabad
15. Gudie, A.,1984 : The Nature of Environment, Basil Blackwell, London
16. Strahler,A.N. & A.H. Strahler,1976 : *Geography and Man's Environment,* John Willey,New York
17. Hussain, M : *Principles of Political Geography*
18. Dikshit, R.D : *Modern Political Geography*
19. Sukhuwal, B. L. : *Political Geography*
20. Dikshit , R.D.1982 : *Political Geography – A Contemporary* Perspective, Tata McGraw Hill Publishing Co.Ltd,NewDelhi
21. Carlson : *Geography and World Politics*
22. Taylor,P.J.,1989 : *Political Geography*,Longman,London
23. Sukhuwal,B.L.,1979 : *Modern Political Geography* of India, Sterling, New Delhi

SIXTH SEMESTER
PAPER 602: PRACTICAL ON MAP WORK AND INTERPRETATION

Total Marks : 100
(Including 10 marks for internal assessment)
Total Credit : 6
(Total number of classes: 60)
Time : 4 hours

(4 questions carrying 20 marks each taking three from Unit 1 and one from Unit 2)

Unit 1: Map work

(Three questions of 20 marks each) (45 classes) 60

- Map reading and analysis of (20 marks)
  (a) Topographical
  (b) Thematic map
  (c) Satellite imagery
- Weather map analysis (20 marks)

(a) Analysis and interpretation of pressure and wind system, temperature distribution, precipitation and sky condition
(b) Preparation of weather maps of India for different seasons of the year

· Map enlargement/reduction (20 marks)
(Mechanical and Graphical methods); Basin area/Administrative area measurement (using planimeter and graphical method)

Unit 2: Field Study Report *20*

· Evaluation of field report & Viva-voce (15+5=20)

Unit 3: Practical Note-Book and Viva-voce 10

· Practical Note-Book & Viva-voce (5+5=10)

Books Suggested :

1. Das, M.M. and Sarma, M. C.: *Ganit Bhugol*, G.U.
2. Deka, P. and Bhattacharya, N. N.: *Byavaharik Bhugol Bijnan*, G.U.
3. Singh, R.L. and Singh, Rana, P.B.: *Elements of Practical Geography*, Kalyani Publishers, Ludhiana and New Delhi
4. Misra, R.P. and Ramesh, A.: *Fundamentals of Cartography*, Concept Publishing Co., New Delhi
5. Mahmood, A.: *Statistical Methods in Geographical Studies*, Rajesh Publications, New Delhi
6. Deka, P.: *Sankhyik Bhugol*, University Publication Department, Gauhati University

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