

**Semester I**  
**B.A. /B.Sc. (Honours) Geography Honours Core Course**  
**Paper Code: GEG-HC1016**  
**Paper Name: Geomorphology (Theory)**

<b>No. of Hours per Week</b>	<b>Credits</b>	<b>Total No. of Hours</b>	<b>Marks</b>
<b>5-6</b>	6	45	60+40

**Course objectives:**

1. To introduce the students about the geomorphologic processes of landform
2. To assist them in understanding the origin of the earth systems
3. To acquaint the students with the knowledge of concept and theories relating to geomorphology.

**Course Outcomes:**

**Upon completion of this course the students will be able to:**

1. Understand the various components of the earth system and the process which shapes the earth.
2. Identify various types of landforms and their formation processes

Unit	Section	Topic	Lecture hours	Learning outcome	Pedagogy	Assessment/ Evaluation
I	1	Definition and scope	2	The students will understand the concepts relating to geomorphology	Lecture/ Discussion/ / Practical	Quiz/Class test / Seminar/ Group Discussion /Assignment
	2	Components of the earth system	3	The students will have a thorough understanding of the various components of the earth systems	Lecture/ Discussion/ Practical	
2	1	Interior Structure	3	The students will have a thorough understanding on the interior structure of the earth	Lecture/ Discussion/ Practical	
	2	Isostasy	3	The students will have a thorough understanding on the scientific explanation of isostasy	Lecture/ Discussion/ Practical	
3	1	Plate Tectonics	3	The students will have a thorough understanding on the geological discovery of plate tectonics and its significance	Lecture/ Discussion/	
	2	Faults and folds	4	The students will have a thorough understanding on the processes and types of faults and folds	Lecture/ Discussion/	
	3	Earthquake and Volcanoes	3	The students will understand the processes of the formation of earthquakes and volcanoes and its significance in landform formation	Lecture/ Discussion/	
4	1	Processes	4	The students will understand the processes generated by Endogenetic and exogenetic force	Lecture/ Discussion	
		Cycle of erosion	4	The students will have a thorough understanding of the fluvial cycle of	Lecture/ Discussion/ Practical	
5	1	Erosional landforms	4	The students will have a thorough understanding on the origin and types of erosional landforms erosion	Lecture/ Discussion/ Practical	
	2		4	The students will have a thorough understanding on depositional landforms	Lecture/ Discussion/ Practical	

### **Reading List**

1. Bloom , A. L., 2003. *Geomorphology: A Systematic Analysis of Late Cenozoic Landforms*. New Delhi.: Prentice-Hall of India.
2. Bridges, E. M., 1990. *World Geomorphology*. Cambridge: Cambridge University Press.
3. Christopherson & Robert , W., 2011. *Geosystems: An Introduction to Physical Geography*. 8th ed. s.l.:Macmillan Publishing Company.
4. Kale , V. S. & Gupta , A., 2001. *Introduction to Geomorphology*.. Hyderabad: Orient Longman.
5. Knighton , A. D., 1984. *Fluvial Forms and Processes*. London: Edward Arnold Publishers.

**Course Teacher** -Dr. Robindro Singh

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**Semester I**  
**B.A. /B.Sc. (Honours) Geography Honours Core Course**  
**Paper Code: GEG-HC1016**  
**Paper Name: Cartographic Techniques (Practical)**

No. of Hours per Week	Credits	Total No. of Hours	Marks
5-6	6	45	60+40

**Course objectives:**

1. To introduce the students about the components of cartographic techniques and the application of empirical data through graphical construction.
2. To assist them in understanding the various types of methods of map construction.
3. To acquaint the students with the knowledge of field analysis.

**Course Outcomes:**

**Upon completion of this course the students will be able to:**

1. Understand the various methods and components of cartography
2. will provide the application of cartographic techniques in field survey

Unit	Section	Topic	Lecture hours	Learning outcome	Pedagogy	Assessment/ Evaluation	
I	1	Nature and scope	2	The students will understand the concepts of cartography	Lecture/ Discussion/ / Practical	Quiz/Class test / Seminar/ Group Discussion /Assignment	
	2	1	Scale	6			The students will have a thorough understanding on the construction of various types of scales
	3	1	Map constructions	3			The students will have a thorough understanding on properties and uses of map projections
		2	Polar Zenithal Stereographic method	4			The students will have a thorough understanding on the construction of Polar Zenithal Stereographic method
		3	Bonne's and Mercator's projection	5			The students will understand the construction of Bonne's and Mercator's projection
	4	1	Interpreting topographical map				The students will have a thorough understanding on the interpretation of topographical map
			Cross and Longitudinal profile	4			The students will be able to understand cross and longitudinal profile in mapping analysis
	5	1	Wentworth method in slope analysis	4			The students will have a thorough understanding on Wentworth method in slope analysis
		2	Smith Relative Relief method	4			The students will have a thorough understanding on Smith Relative Relief method

### Reading List

1. Anson , R. & Ormelling , F. J., 1994. *International Cartographic Association*. s.l.:Pregmen Press.
2. Gupta , K. K. & Tyagi, V. C., 1992. *Working with Map*. New Delhi: Survey of India,DST.
3. Mishra, R. P. & Ramesh, A., 1989. *Fundamentals of Cartography*. New Delhi: Concept.
4. Monkhouse , F. J. & Wilkinson , H. R., 1973. *Maps and Diagrams*. London: Methuen.
5. Rhind , D. W. & Taylor , D. R. F., 1989. *Cartography: Past. Present and Future*. s.l.:Elsevier, International Cartographic Association.

**Semester I**  
**B.A. /B.Sc. Generic Elective Paper**  
**Paper Code: GEG-HG1016**  
**Paper Name: Physical Geography (Theory)**

No. of Hours per Week	Credits	Total No. of Hours	Marks
5-6	6	45	60+40

**Course objectives:**

4. To introduce to the students about the physical component in geographical studies
5. To assist them in understanding the origin of the earth systems
6. To acquaint the students with the knowledge of concept and theories relating to geomorphology, climatology and oceanography.

**Course Outcomes:**

**Upon completion of this course the students will be able to:**

1. Understand the various components of the earth system and the process which shapes the earth.
2. Distinguished various types of wind, and the spheres of the earth.
3. Identify various types of landforms and their formation processes

Unit	Section	Topic	Lecture hours	Learning outcome	Pedagogy	Assessment/ Evaluation
I	1	Definition and scope	2	The students will understand the concepts relating to physical geography	Lecture/ Discussion/ / Practical	Quiz/Class test / Seminar/ Group Discussion/ Assignment
	2	Components of the earth system	3	The students will have a thorough understanding of the various components of the earth systems	Lecture/ Discussion/ Practical	
	3	Major landforms	3	The students will get exposed to the various types of landforms and climatic system	Lecture/ Discussion/ Practical	
2	1	Composition of Atmosphere	2	The students will have a thorough understanding of the Composition of Atmosphere	Lecture/ Discussion/ Practical	
	2	Pressure belts and winds	4	The students will have a thorough understanding of the fluvial cycle of erosion	Lecture/ Discussion/ Practical	
	3	Types of winds	3	The students will understand the processes and Types of winds	Lecture/ Discussion/ Practical	
3	1	Lithosphere	3	The students will learned the internal structure of the earth system	Lecture/ Discussion/	
	2	Major landforms	3	The students will get exposed to the various types of landforms and climatic system	Lecture/ Discussion/	
	3	Drainage pattern	3	The students will have a thorough understanding of the various drainage	Lecture/ Discussion/	
4	1	Cycle of erosion	3	The students will have a thorough understanding of the fluvial cycle of	Lecture/ Discussion	
	3	Processes	3	The students will understand the processes generated by Endogenetic and exogenetic force	Lecture/ Discussion	
5	1	Hydrological Cycle	2	The students will understand the processes of hydrological cycle	Lecture/ Discussion	
	2	Ocean bottom and reliefs	3	The students will have a thorough understanding of the oceanic relief features	Lecture/ Discussion	
	3	Tide and currents	3	The students will have a thorough understanding of the oceanic tide and currents	Lecture/ Discussion	

Reference Books:

1. Conserva, H., 2004. *Illustrated Dictionary of Physical Geography*. s.l.:Author House.
2. Husain, M., 2002. *Fundamentals of Physical Geography*. Jaipur: Rawat Publications.
3. Monkhouse, F., 2009. *Principles of Physical Geography*. Kolkata: Platinum Publishers
4. Goudie, A., 1984. *The Nature of the Environment : An Advanced Physical Geography*.  
Oxford: Basil Blackwell Publishers.
5. Hamblin, W., 1995. *Earth's Dynamic System*. N.J.: Prentice-Hall.
6. Strahler, A. & Strahler, A., 2008. *Mordern Physical Geography*. New York: John Wiley & Sons.
7. Gabler, R., Petersen, J. & Trapasso, L., 2007. *Essentials of Physical Geography*. 8th ed. Brooks/Cole: Thompson.
8. Garrett, N., 2000. *Advanced Geography*. s.l.:Oxford University Press

Course Teacher **-Dr. Irabot Singh**

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**Semester II**  
**B.A. /B.Sc. (Honours) Geography Honours Core Course**  
**Paper Code: GEG-HC2016**  
**Paper Name: Human Geography (Theory)**

No. of Hours per Week	Credits	Total No. of Hours	Marks
5-6	6	40	60+40

**Course objectives:**

1. To introduce to the students about the importance of Human geography
2. To acquaint them with the ideals of space, society and population
3. To acquaint them with the different kinds of settlement

**Course Outcomes:**

Upon completion of this course the students will be able to:

1. Define the nature and scope of human geography and its relevance.
2. Study population and settlement patterns and their determinants.

Unit	Section	Topic	Lecture hours	Learning outcome	Pedagogy	Assessment/ Evaluation
1	1	Definition and scope	3	The students will understand the nature and scope of human geography	Lecture/ Discussion/	Quiz/Class test / Seminar/ Group Discussion /Assignment
2	1	Space and society	2	The students will have a thorough understanding of the cultural regions	Lecture/ Discussion/	
	3	Religion and language	5	The students will have a thorough understanding of religion and language	Lecture/ Discussion/	
3	1	Population growth and distribution	5	The students will have a thorough understanding of population growth and distribution especially in india	Lecture/ Discussion/	
	2	Population change and composition	4	The students will have a thorough understanding of population migration and composition	Lecture/ Discussion/	
4	1	Patterns of rural settlements	3	The students will have a thorough understanding of the patterns of rural typology	Lecture/ Discussion	
	2	Urban settlement	4	The students will have a thorough understanding of functional classification, growth and structure	Lecture/ Discussion	
	3	World urbanization and processes	4	The students will have a thorough understanding of the processes, trends and patterns of urbanization of the world	Lecture/ Discussion	
5	1	Man versus environment	3	The students will be acquainted with the various concepts and theories of the relationship of man and environment	Lecture/ Discussion practical	

### Reading List

1. Hassan, M. I., 2005. *Population Geography*. Jaipur: Rawat Publications.
2. Chandna, R., 2010. *Population Geography*. s.l.:Kalyani Publisher.
3. Daniel, P. A. & Hopkinson, M. F., 1989. *The Geography of Settlement*. London: Oliver & Boyd.
4. Johnston, R., Gregory, D. P. G., et al., 2008. *The Dictionary of Human Geography*. s.l.:Blackwell Publication.
5. Jordan, B., et al., 2006. *The Human Mosaic: A Thematic Introduction to Cultural Geography*. New York: W. H. Freeman and Company.

Course Teacher -Dr. R.K. Jeermison

HOD.....

**Semester II**  
**B.A. /B.Sc. (Honours) Geography Honours Core Course**  
**Paper Code: GEG-HC2026**  
**Paper Name: Thematic Cartography (Practical)**

No. of Hours per Week	Credits	Total No. of Hours	Marks
8	6	60	60+40

**Course objectives:**

1. To introduce to the students about the importance of Cartography
2. To assist them in conducting field survey and map projections
3. To acquaint the students with the use of various graphical construction

**Course Outcomes:**

Upon completion of this course the students will be able to:

1. Differentiate between various type scales and map projections.
2. Apply various cartography overlays for plotting empirical data.
3. Read and prepare map

Unit	Section	Topic	Lecture hours	Learning outcome	Pedagogy	Assessment/ Evaluation
I	1	Maps	3	The students will understand the classification and types of map.	Lecture/ Discussion/ / Practical	Quiz/Class test / Seminar/ Group Discussion
2	1	Diagrammatic data presentation	3	The students will be able to construct line, Circle, square diagram	Lecture/ Discussion/ Practical	
	2	Diagrammatic data presentation	3	The students will be able to construct Cuboid and Sphere diagram	Lecture/ Discussion/ Practical	
3	1	Classification and properties of thematic mapping	4	The students will have a thorough understanding of the of the classification and properties of map projections	Lecture/ Discussion/ practical	
	2	Choropleth	4	The students will be able to choropleth the various data on maps	Lecture/ Discussion/ practical	
	3	Isopleths	2	The students will be able to construct point data isopleths	Lecture/ Discussion/ practical	
4	1	Cartographic overlays	4	The students will be able to construct point and line data	Lecture/ Discussion practical	
	2	Cartographic overlays	4	The students will be able to construct areal data and ergo graph.	Lecture/ Discussion practical	
5	1	Thematic map interpretation	2	The students will be able to prepare and interpret thematic maps	Lecture/ Discussion practical	
	2	Age-sex pyramid	5	The students will be able to construct Age-sex pyramid of any given data	Lecture/ Discussion practical	

#### Reading lists.

1. Gupta , K. K. & Tyagi , V. C., 1992. *Working with Maps*. New Delhi: Survey of India, DST.
2. Kraak , M. J. & Ormeling , F., 2003. *Cartography: Visualization of Geo-Spatial Data*. s.l.:Prentice-Hall.
3. Mishra , R. P. & Ramesh , A., 1989. *Fundamentals of Cartography*. New Delhi: Concept.
4. Sarkar, A., 2015. *Practical geography: A Systematic Approach*. New Delhi: Orient Black Swan Private Ltd..

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HOD.....

**Semester II**  
**B.A. /B.Sc. (Honours) Geography**  
**Generic Elective Paper**  
**Paper Code: GEG-HG2016**  
**Paper Name: Human Geography (Theory)**

<b>No. of Hours per Week</b>	<b>Credits</b>	<b>Total No. of Hours</b>	<b>Marks</b>
5-6	6	40	60+40

**Course objectives:**

1. To introduce to the students about the importance of Human geography
2. To acquaint them with the ideals of space, society and population
3. To acquaint them with the development of human geography

**Course Outcomes:**

Upon completion of this course the students will be able to:

1. Define the nature and scope of human geography and its relevance.
2. Understand the various typologies of the relationship of man and the environment. .
3. Classify the various racial group of the world

Unit	Section	Topic	Lecture hours	Learning outcome	Pedagogy	Assessment/Evaluation
1	1	Definition and scope	3	The students will understand the nature and scope of human geography	Lecture/ Discussion/	Quiz/Class test / Seminar/ Group
2	1	Human Geography	2	The students will understand the writings of philosophy by the Greeks	Lecture/ Discussion/ Lecture/ Discussion/	
	2	Human Geography	3	The students will understand the European school of thoughts in the development of human geography		
	3	American school of thought	3	The students will understand the American school of thoughts in the development of human geography		
3	1	Man-Environment	4	Man and environment relationship; its constraints and benefits	Lecture/ Discussion/	
4	1	Eskimos and the Bushman	3	The students will have a thorough understanding on the population of cold and hot regions	Lecture/ Discussion Lecture/ Discussion	
	2	Nagas and Kukis of Manipur	4	The students will have a thorough understanding on the tribes of tropical rainforest region		
5	1	Races	3	The students will be acquainted with the various types of race	Lecture/ Discussion practical	
	2	Linguistic and religious regions	3	The students will be acquainted with the various Linguistic and religious settings		

#### Reading List

1. Chhokas, K. B., n.d. *Understanding Environment*. s.l.:Sage Publications.
2. Huntington, E., 1951. *Principles of Human Geography*. New York : John Wiley and Sons Inc..
3. Hussain, M., 1994. *Human Geography*. New Delhi: Rawat Publication.
4. Peter, D., Michael, B., Denis, S. & James, S., 2003. *Human Geography*. Delhi: Pearson Education.
5. Saxena, H. M., n.d. *Environmental Geography*. s.l.:Rawat Publications.

Course Teacher -Dr. R K Jeermison

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**Semester III**  
**B.A. /B.Sc. (Honours) Geography**  
**Paper Code: GEG-HC3016**  
**Paper Name: Climatology (Theory)**

No. of Hours per Week	Credits	Total No. of Hours	Marks
5-6	6	40	60+40

**Course objectives:**

1. To introduce to the students about the atmospheric structure
2. To acquaint them with the processes and forces of climatology

**Course Outcomes:**

Upon completion of this course the students will be able to:

1. Define the atmospheric composition and structure
2. Understand the various atmospheric data and its analysis

Unit	Section	Topic	Lecture hours	Learning outcome	Pedagogy	Assessment/Evaluation
1	1	Atmospheric structure	3	The students will understand the composition and structure of the atmosphere	Lecture/ Discussion/	Quiz/Class test / Seminar/ Group Discussion
2	1	Insolation/Temperature	2	The students will understand the factors and distribution of temperature	Lecture/ Discussion/	
	2	Temperature inversion	3	The students will understand the concept and relevance of temperature inversion	Lecture/ Discussion/	
3	1	Man-Environment	4	Man and environment relationship; its constraints and benefits	Lecture/ Discussion/	
4	1	Eskimos and the Bushman	3	The students will have a thorough understanding on the population of cold and hot regions	Lecture/ Discussion	
	2	Nagas and Kukis of Manipur	4	The students will have a thorough understanding on the tribes of tropical rainforest region	Lecture/ Discussion	
5	1	Races	3	The students will be acquainted with the various types of race	Lecture/ Discussion	
	2	Linguistic and religious regions	3	The students will be acquainted with the various Linguistic and religious settings	practical	

#### Reading lists

1. Barry , R. & Corley , R. J., 1998. *Atmosphere, Weather and Climate*. New York: Routledge.
2. Barry , R. G. & Carleton , A. M., 2001. *Synoptic and Dynamic Climatology*. New York: Routledge.
3. Critchfield, H. J., 1987. *General Climatology*. New Delhi: Prentice-Hall of India.
4. Lutgens, F. K., 2009. *The Atmosphere: An Introduction to Meteorology*. New Jersey: Prentice-Hall.
5. Oliver, J. E. & Hidore, J. J., 2002. *Climatology: An Atmospheric Science*. New Delhi: Pearson Education .
6. Trewartha, G. T. & Horne, L. H., 1980. *An Introduction to Climate*. NY: McGraw-Hill



**Semester III**  
**B.A. /B.Sc. (Honours) Geography Honours Core Course**  
**Paper Code: GEG-HC3026**  
**Paper Name: Geography of India (Theory)**

No. of Hours per Week	Credits	Total No. of Hours	Marks
5-6	6	40	60+40

**Course objectives:**

1. To introduce to the students about the geography of India.
2. To acquaint them with the processes and the cause of a particular commodity relevant to geography of India.

**Course Outcomes:**

Upon completion of this course the students will be able to:

1. Locate the different geographic variables defining the country
2. Understand the various data that define the country

Unit	Section	Topic	Lecture hours	Learning outcome	Pedagogy	Assessment/Evaluation
1	1	Physiography of India	3	The students will understand the physiographic settings of India.	Lecture/ Discussion/	Quiz/Class test / Seminar/ Group Discussion
2	1	Population	2	The students will understand the characteristic, composition and Change of population	Lecture/ Discussion/ Lecture/ Discussion/	
3	1	Economy	4	Understand the mineral and power resources distribution in India	Lecture/ Discussion/	
	2	Economy	3	The students will understand agricultural distribution of India.	Lecture/ Discussion	
	3	Economy	4	The students will have a thorough understanding on the development of automobile and information technology.	Lecture/ Discussion	
4	1	Races	3	The students will be acquainted with the various types of race, caste, and tribes	Lecture/ Discussion practical	
	2	Linguistic and religious regions	3	The students will be acquainted with the various Linguistic and religious settings		
5	1	Regionalization of India.	3	The students will have a thorough understanding on regionalization method based on India.		
	2	Regionalization of Manipur.	3	The students will have a thorough understanding on regionalization method based on Manipur		

#### Reading List

1. Deshpande , C. D., 1992. *India: A Regional Interpretation*. New Delhi: ICSSR.
2. Johnson, B. L. C., 2001. *Geographical Dictionary of India*. New Delhi: Vision Books.
3. Mandal , R. B., 1990. *Patterns of Regional Geography - An International Perspective*. Vol. 3 - Indian Perspective ed. s.l.:s.n.
4. Pathak, C. R., 2003. *Spatial Structure and Processes of Development in India*. Kolkata: Regional Science Association.
5. Sdyasuk , G. & P , Sengupta, 1967. *Economic Regionatisation of India*. Delhi: Census of India.
6. Sharma, T. C., 2003. *India - Economic and Commercial Geography*. New Delhi: Vikas Publ

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**HOD**

**Semester III**  
**B.A. /B.Sc. (Honours) Geography**  
**Paper Code: GEG-HC3036**  
**Paper Name: Statistical Methods in Geography (Practical)**

No. of Hours per Week	Credits	Total No. of Hours	Marks
5-6	6	40	60+40

**Course objectives:**

1. To introduce students about the statistical relevance in explaining geographic variables.
2. To acquaint them with the descriptive statistics such as central tendency, dispersion and correlation and regression.

**Course Outcomes:**

Upon completion of this course the students will be able to:

1. Apply statistical calculation in understanding the various economic and geographic data.

Unit	Section	Topic	Lecture hours	Learning outcome	Pedagogy	Assessment/ Evaluation
I	1	Nature and scope	2	The students will understand the concepts and methods in statistical geography	Lecture/ Discussion/ / Practical	Quiz/Class test / Seminar/ Group Discussion /Assignment/ / Q & A Session/ Assignment
	2	Tabulation and descriptive statistics	6	The students will have a thorough understanding on the calculation of central tendency and dispersion methods	Lecture/ Discussion/ Practical	
	3	Sampling	3	The students will have a thorough understanding on the various types of sampling methods.	Lecture/ Discussion/	
	4	Interpreting topographical map		The students will have a thorough understanding on the interpretation of topographical map	Lecture/ Discussion	
	4	Cross and Longitudinal profile	4	The students will be able to understand cross and longitudinal profile in mapping analysis	Lecture/ Discussion/ Practical	
5	1	Wentworth method in slope analysis	4	The students will have a thorough understanding on Wentworth method in slope analysis	Lecture/ Discussion/ Practical	
	2	Smith Relative Relief method	4	The students will have a thorough understanding on Smith Relative Relief method	Lecture/ Discussion/ Practical	

### Reading List

1. Berry , B. J. L. & Marble , D. F., n.d. *Spatial Analysis - A Reader in Geography*. s.l.:s.n.
2. Ebdon , D., 1977. *Statistics in Geography: A Practical Approach*. s.l.:s.n.
3. Hammond , P. & McCullagh , P. S., 1978. *Quantitative Techniques in Geography: An Introduction*. s.l.:Oxford University Press..
4. Mahmood , A., 1977. *Statistical Methods in Geographical Studies*. s.l.:Concept.
5. Pal , S. K., 1998. *Statistics for Geoscientists*. New Delhi: Tata McGraw Hill.
6. King, . L. S., 1969. *Statistical Analysis in Geography*. s.l.:Prentice-Hall

**Semester IV**  
**B.A. /B.Sc. (Honours) Geography Honours Core Course**  
**Paper Code: GEG-HC4016**  
**Paper Name: Economic Geography (Theory)**

No. of Hours per Week	Credits	Total No. of Hours	Marks
5-6	6	40	60+40

**Course objectives:**

1. To introduce students about the economic relevance in geographical studies.
2. To acquaint them with the distribution of economic activity in the world

**Course Outcomes:**

Upon completion of this course the students will be able to:

1. Understand regionalization of economic activities
2. Understand the basic component of economic force in geography.

Unit	Section	Topic	Lecture hours	Learning outcome	Pedagogy	Assessment/ Evaluation
I	1	Concept and classification of economic activity	2	The students will understand the economic concepts and classification in geography	Lecture/ Discussion/ / Practical	Quiz/Class test / Seminar/ Group Discussion /Assignment/ / Q & A Session/
2	1	locational analysis	6	The students will have a thorough understanding on the location of agricultural and industry based on Von Thunen and Weber.	Lecture/ Discussion/ Practical	
3	1	Primary activities	4	The students will have a thorough understanding on concept and classification of primary activities.	Lecture/ Discussion/	
4	1	Secondary activities	4	The students will have a thorough understanding on the concept and classification of economic activities.	Lecture/ Discussion	
		Concept of manufacturing regions	4	The students will be able to understand manufacturing region, SEZ and Technology parks	Lecture/ Discussion/ Practical	
5	1	Tertiary activities	4	The students will have a thorough understanding on the concept and classification of secondary activities	Lecture/ Discussion/ Practical	

### Reading List

- Alexander , J. W., 1963. *Economic Geography*. Englewood Cliffs, New Jersey: Prentice-Hall Inc..
- Bagchi-Sen , S. & Smith, H. L., 2006. *Economic Geography: Past, Present and Future*. s.l.:Taylor and Francis.
- Coe , N. M., Kelly , P. F. & Yeung, H. W., 2007. *Economic Geography: A Contemporary Introduction*. s.l.:Wiley-Blackwell.
- Combes , P., Mayer , T. & Thisse , J. F., 2008. *Economic Geography: The Integration of Regions and Nations*. s.l.:Princeton University Press.
- Durand , L., 1961. *Economic Geography*. s.l.:Crowell.
- Hodder , B. W. & Lee , R., 1974. *Economic Geography*. s.l.:Taylor and Francis.
- Wheeler , J. O., 1998. *Economic Geography*. s.l.:Wiley.

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**Semester IV**  
**B.A. /B.Sc. (Honours) Geography Honours Core Course**  
**Paper Code: GEG-HC4026**  
**Paper Name: Environmental Geography (Theory)**

No. of Hours per Week	Credits	Total No. of Hours	Marks
5-6	6	40	60+40

**Course objectives:**

1. To introduce students about the economic relevance in geographical studies.
2. To acquaint them with the distribution of economic activity in the world

**Course Outcomes:**

Upon completion of this course the students will be able to:

1. Understand regionalization of economic activities
2. Understand the basic component of economic force in geography.

Unit	Section	Topic	Lecture hours	Learning outcome	Pedagogy	Assessment/ Evaluation
1	1	Concept and scope	3	The students will understand the concept and scope of environmental geography	Lecture/ Discussion/	Quiz/Class test / Seminar/ Group Discussion
2	1	Relationship	3	The students will understand the relationship of man and the environment through historical progression	Lecture/ Discussion/ Lecture/ Discussion/	
	2	Adaptation	3	The students will understand the adaptation of human in different biome.	Lecture/ Discussion/	
3	1	Ecosystem	4	The students will understand the concept, structure and functions of the environment.	Lecture/ Discussion/	
4	1	Environmental issues	3	The students will have a thorough understanding on the environmental problems in the tropics	Lecture/ Discussion Lecture/ Discussion	
	2	Environmental issues	4	The students will have a thorough understanding on the environmental problems in temperate and polar ecosystem.	Lecture/ Discussion	
5	1	Programmes and policies	3	The students will be acquainted with the environmental programmes in developed and developing countries	Lecture/ Discussion	
	2	Programmes and policies	3	The students will be acquainted with the environmental programmes of India	practical	

### Reading List

1. Chandna , R. C., 2002. *Environmental Geography*. Ludhiana: Kalyani.
2. Cunningham , W. P. & Cunningham , M. A., 2004. *Principals of Environmental Science: Inquiry and Applications*. New Delhi: Tata McGraw Hill.
3. Odum , E. P., 2005. *Fundamentals of Ecology*. India: Ceneage Learning.
4. Singh, R. B., 1998. *Ecological Techniques and Approaches to Vulnerable Environment*. New Delhi: Oxford & IBH Pub..
5. Singh, S., 1991. *Environmental Geography*. Allahabad: Pustak Bhawan.



**Semester XXV**  
**B.A. /B.Sc. (Honours)**  
**Paper code: GEG-HC5016**  
**Paper Name: Regional Planning and Development (Theory)**

No. of Hours per Week	Credits	Total No. of Hours	Marks
5-6	6	40	60+40

**Course objectives:**

1. To introduce students about the regionalization processes in planning
2. To acquaint them with the various model developed for regional planning

**Course Outcomes:**

Upon completion of this course the students will be able to:

1. Understand regionalization process
2. Understand the various models and theories formulated for regional planning.

Unit	Section	Topic	Lecture hours	Learning outcome	Pedagogy	Assessment/ Evaluation
1	1	Definition	2	The students will understand the concept of region and development	Lecture/ Discussion/	
	2	Evolution/types of regional planning	3	The students will understand the evolution and the various types of regional planning	Lecture/ Discussion/ practical / Discussion Lecture/ Discussion Lecture/ Discussion	Quiz/Class test / Seminar/ Group Discussion
2	1	Characteristics and delineation	3	The students will understand the characteristic and delineation of planning region		
	2	Agro-ecological zones	3	The students will understand the regionalization of India for planning		
3	1	Theories/models	4	The students will understand the various theories and model formulated for regional planning		
4	1	Development.	3	The students will have a thorough understanding on the concept of development and under-development		
	2	Efficiency vs equity	4	The students will have a thorough understanding on the debate of efficiency and equity for development		
5	1	Indicators	3	The students will be acquainted with the various indicators of regional planning		
	2	Human development	3	The students will be acquainted with the basic idea of calculating human development		

### Reading List

1. World Bank , 2001-05. *World Development Report*. New York: Oxford University Press .
2. Claval , P. I., 1998. *An Introduction to Regional Geography*. Oxford and Massachusetts: Blackwell Publishers.
3. Blij H. J. De , 1971. *Geography: Regions and Concepts*. s.l.:John Wiley and Sons.
4. Friedmann , J. & Alonso , W., 1975. *Regional Policy - Readings in Theory and Applications*. Massachusetts: MIT Press.
5. Gore , C. G., 1984. *Regions in Question: Space, Development Theory and Regional Policy*. London: Methuen.

**Semester VI**  
**B.A. /B.Sc. (Honours) Geography Discipline Specific Elective /**  
**Paper Code: GEG-HE6036**  
**Paper Name: Hydrology and Oceanography (Theory)**

No. of Hours per Week	Credits	Total No. of Hours	Marks
5-6	6	45	60+40

**Course objectives:**

1. To introduce students about hydrological sciences
2. To acquaint them with the various characteristics of hydrology and Oceanography

**Course Outcomes:**

Upon completion of this course the students will be able to:

1. Understand the elements pertaining to hydrological sciences
2. Understand the science of hydrology and oceanography

Unit	Section	Topic	Lecture hours	Learning outcome	Pedagogy	Assessment/ Evaluation
I	1	Hydrological cycle	2	The students will understand the hydrological cycle and its impact by human	Lecture/ Discussion/ / Practical	Quiz/Class test / Seminar/ Group Discussion /Assignment/ / Q & A Session/
	2	Ground water: input and output	3	The students will have a thorough understanding on the ground water, run-off and overland/surface flow		
2	1	Rivers- problems and measurements	6	The students will have a Thorough understanding on the river basin, regional hydrology, measurement of river discharge: flood and drought		
3	1	Oceanic topography	4	The students will have a thorough understanding on oceanic characteristics.		
	1	Oceanic Salinity and temperature	4	The students will have a thorough understanding on the temperature and salinity of ocean		
5	1	Oceanic deposits	4	The students will have a thorough understanding on coral reefs and marine deposits		
	2	Theories	4	The students will be acquainted with the basic theory of origins of various oceanic components		

### Reading List

- Andrew , D. W. & Stanley , T., 2004. *Environmental Hydrology*. 2nd ed. s.l.:Lewis PublishersCRC Press.
- Anikouchine , W. A. & Sternberg , R. W., 1973. *The World Oceans: An Introduction to Oceanography*. s.l.:Prentice-Hall.
- Garrison , T., 1998. *Oceanography*. Belmont: Wordsworth Company.
- Karanth , K., 1988. *Ground Water: Exploration, Assessment and Development*. New Delhi: Tata- McGrawHill.
- Kershaw , S., 2000. *Oceanography: An Earth Science Perspective*. UK: Stanley Thornes.