

SHRI GURU RAM RAI UNIVERSITY

(Estd. by Govt. of Uttarakhand, vide Shri Guru Ram Rai University Act no. 03 of 2017)



SYLLABUS OF B.A. GEOGRAPHY

Effective from Academic Session 2017-2018 & Revised in 2021

BA/B.Sc
Duration of the Programme: Three Years
STUDY & EVALUATION SCHEME
Choice Based Credit System
Bachelor of Geography

Eligibility for admission:

Any candidate who has passed the Plus Two of the Higher Secondary Board Board of Examinations in any state recognized as equivalent to the Plus Two of the Higher Secondary Board in with not less than 40 % marks in aggregate is eligible for admission, However, SC/ST, OBC and other eligible communities shall be given relaxation as per University rules.

Program Outcomes (PO's):

PO-1 Acquire knowledge of the discipline and conduct proper academic in various areas of discipline.

PO-2 Recognize the social structures in our society.

PO-3 Communicate effectively in context which one is operating and develop soft skills

PO-4 Leader in teams in multidisciplinary courses and engage in initiatives that encourage growth for all.

PO-5 Develop awareness of issues among students

PO-6 Recognize and respect different value systems by following the norms of academic integrity.

PO-7 Explain awareness of local, regional, national and global needs.

PO-8 Work on career enhancement by adapting to professional and social needs engaged in lifelong learning.

PO-9 Exhibit capability as lifelong learners adapting new technologies, modern concepts and skills for sustainable development

PO-10 Imbibe qualities of good citizenship, morality and ethics so as to work for the betterment of mankind.

PO-11 Cultivate a broad array of interdisciplinary knowledge and skills integrating concepts of humanities and social sciences.

PO-12 Able to apply critical thinking, creativity, skills, cultural sensitivity, and humanity to create awareness within society for problem – solving and interpretation.

Program Specific Outcome (PSOs)

PSO 1	To prepare the base for geography in the mind and heart of all UG students.
PSO2	To develop the understanding of nature, culture, regional variation and economic aspects.
PSO3	To impart Geographical Knowledge to the students.

PSO4	To introduce basic concept of cartography and develop the understanding about different type of maps, scales, relief features and surveying.
PSO5	To develop understanding of Environment and Sustainable development.

B.A./B.Sc. Geography

First Semester

S. No.	Course Category	Course Code	Course Name	Periods				Evaluation scheme		Subject Total
				L	T	P	C	Sessional (Internal)	External (ESE)	
Theory										
1	Core/Elective	BGGC_101	Physical Geography	4			4	30	70	100
Practical										
2	Core	BGGL_101	Practical Geography			4	2	30	70	100
		Total		4		4	6	60	140	200

Examination Scheme:

Components	I st internal	II nd Internal	Presentation/ Assignment/ Project	External (ESE)
Weightage(%)	Marks	Marks	Marks	Marks
100%	15	15	30	70

L – Lecture, T – Tutorial, P – Practical, C – Credit

Course code	: BGGC_101						
Course Name	: Physical Geography						
Semester /Year	: I						
	L	T	P	C			
	4			4			

L - Lecture T – Tutorial P – Practical C – Credit

Course Objectives: The objectives of this course are

1. To give the knowledge of three major components of physical geography.
2. To develop the skill of compare and justify in students.

3. To develop the skill in student to write and prepare a project on physical environment.

Course Outcomes

Upon successful completion of the course a:

Paper code	Paper name	Course outcome
BGGC-101	Physical Geography	<p>CO1- Students can learn and describe about basic concepts of physical geography.</p> <p>CO2- Students will be able to explain the 3 components of the earth system as lithosphere, atmosphere and hydrosphere.</p> <p>CO3- They will complete their knowledge of fluvial cycle of erosion in special reference of father of geomorphology Sir Willam Moris Davis.</p> <p>CO4-. Now they can compare different atmospheric phenomena in different region.</p> <p>CO5-.They will know oceanic resources and components with justification of importance of tides and currents for human lives.</p> <p>CO6. - They can be able to design a project on fluvial cycle, Hydrological cycle and interior of the earth etc.</p>

CO-PO Mapping

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	-	3	-	-	-	3	3	-	-	1	1
CO2	3	-	3	-	-	-	3	3	1	-	2	2
CO3	3	-	3	-	-	-	3	3	1	-	2	3
CO4	3	-	3	-	-	-	3	3	2	-	1	3
CO5	3	-	3	1	-	-	3	3	2	-	1	2
CO6	3	-	3	1	-	-	3	3	3	-	1	1

3: Highest Correlated, 2: Medium Correlated, 1: Lowest Correlated

Course Contents

Unit -1

Physical Geography – Definition and Scope, Components of Earth System.

[No. of Hours: 12]

Unit -2

Lithosphere – Internal Structure of Earth based on Seismic Evidence, Plate Tectonics.

Erosion and weathering; Fluvial Cycle of Erosion – Davis and Penck. [No. of Hours: 16

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Unit -3

Atmosphere – Heat Balance, Global Circulation Pattern, Tropical Cyclones, Monsoon, Climatic Classification (Koppen & Taylor). **[No. of Hours: 8]**

Unit -4

Hydrosphere – Ocean Bottom Relief Features, Tides and Currents, salinity and oceanic resources.

[No. of Hours: 12]

Reading List

Text Books:

1. Conserva H. T., 2004: Illustrated Dictionary of Physical Geography, Author House, USA.
2. Gabler R. E., Petersen J. F. and Trapasso, L. M., 2007: Essentials of Physical Geography (8th Edition), Thompson, Brooks/Cole, USA.
3. Garrett N., 2000: Advanced Geography, Oxford University Press.
4. Goudie, A., 1984: The Nature of the Environment: An Advanced Physical Geography, Basil Blackwell Publishers, Oxford.
5. Hamblin, W. K., 1995: Earth's Dynamic System, Prentice Hall, N.J.
6. Husain M., 2002: Fundamentals of Physical Geography, Rawat Publications, Jaipur.
7. Monkhouse, F. J. 2009: Principles of Physical Geography, Platinum Publishers, Kolkata.

Reference Book:

1. Singh, Savindra : Physical Geography, PrayagPustak Bhawan, Allahabad.
2. Singh, Savindra :Bhotik Bhoogol (in Hindi), Prayag Pustak Bhawan, Allahabad.
10. <https://open.umn.edu/opentextbooks/textbooks/926>
11. <http://www.physicalgeography.net/fundamentals/contents.html>

Websites:

e-PG Pathshala: <https://epgp.inflibnet.ac.in/>

MOOCS - NPTEL: <https://nptel.ac.in/>

MOOCS - SWAYAM: <https://swayam.gov.in/>

National Digital Library of India: <https://ndl.iitkgp.ac.in/>

Shivaji University Library (E-Resources): <http://www.unishivaji.ac.in/library/E-Resources>

Course code	: BGGL_101			
Course Name	: Practical Geography			
Semester /Year	: I			
	L	T	P	C
			4	2

Course Objectives

Theo bjectives of this course are:

1. To introduce basic concept of cartography and develop the understanding about different type of maps, scales, relief features.
2. to recognize various land form features in the topographical map.
3. Students will be able to recognize and importance of conventional signs on international platform.

Course Outcomes**Upon successful completion of the course a:**

Paper code	Paper name	Course outcome
BGGL_101	Geography Practical	CO1- Students will learn and relate relief features with actual world. CO2- Students can learn and explain basic concept of cartography. CO3- They will solve the problems related to scale. CO4-. Now they can examine the importance of topographical sheets published by Survey of India CO5-.They can prepare the plan of their area from given survey sheet. CO6-Student will be able to describe the plan prepared by them for selected micro area.

CO-PO Mapping

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	-	3	1	-	-	1	3	-	-	1	1
CO2	3	-	3	1	-	-	-	1	1	-	2	2
CO3	3	-	3	1	-	-	3	2	1	-	2	3
CO4	3	-	3	1	-	-	3	3	2	-	1	3
CO5	3	-	3	1	-	-	3	3	2	-	1	2

3: Highest Correlated, 2: Medium Correlated, 1: Lowest Correlated

Course Contents**Unit -1**

Scale- Definition and importance, construction of simple, comparative and diagonal scale. [No. of Hours: 12]

Unit -2

Topo sheets- indexing, scale and conventional signs. [No. of Hours: 12]

Unit -3

Study and interpretation of one inch/1:50000, Survey of India Toposheets with special reference to landscape features, drainage characteristics, land use, settlements, transport and other routes. [No. of Hours: 12]

Unit -4

Meaning and importance of contours; landform features based on contours and profile drawn on them.

[No. of Hours: 12]

Division of Marks

- Lab Work-one question from each section with internal choice.
- Sessional record and viva.

Reading List

Text Books:

- Dent B. D., 1999: *Cartography: Thematic Map Design*, (Vol. 1), McGraw Hill.
- Gupta K. K and Tyagi V. C., 1992: *Working with Maps*, Survey of India, DST, NewDelhi.
- Mishra R. P. and Ramesh A., 1989: *Fundamentals of Cartography*, Concept Publishing.
- Robinson A., 1953: *Elements of Cartography*, John Wiley.
- Sharma J. P., 2010: *Prayogic Bhugol*, Rastogi Publishers.
- Steers J. A., 1965: *An Introduction to the Study of Map Projections*, University of London.

Reference Book:

- Singh R. L. and Singh R. P. B., 1999: *Elements of Practical Geography*, Kalyani Publishers
- Singh R. L., 1998: *Prayogic Bhoogol Rooprekha*, Kalyani Publications.
- <https://www.amazon.in/Understanding-Practical-Geography-Surveying-Secondary-ebook/dp/B076XDG8QS>
- https://books.google.co.in/books/about/Elements_Of_Practical_Geography.html?id=bFJLYgEACA-AJ&redir_esc=y

Websites:

Indian Institute of Surveying & Mapping: <http://www.iism.nic.in/>
 Survey of India Department of Science & Technology: <http://www.surveyofindia.gov.in/>
 Indian National Cartographic Association: <https://incaindia.org/>
 Bhuvan Indian Geo Platform of ISRO: <https://bhuvan.nrsc.gov.in/>

B.A./B.Sc. Geography Second Semester

S. No.	Course Category	Course Code	Course Name	Periods				Evaluation scheme		Subject Total
				L	T	P	C	Sessional (Internal)	External (ESE)	
Theory										
1	Core/Elective	BGGC_201	Human Geography	4			4	30	70	100
Practical										

2	Core	BGGL_101	Practical Geography			4	2	30	70	100
		Total		4	4	6	60		140	200

L – Lecture, T – Tutorial, P – Practical, C – Credit

Examination Scheme:

Components	I st internal	II nd Internal	Presentation/ Assignment/ Project	External (ESE)
Weightage(%)	Marks	Marks	Marks	Marks
100%	15	15	30	70

Course code	: BGGC_201
Course Name	: Human Geography
Semester /Year	: II
	L T P C
	4 4

Course Objectives:

The objectives of this course are:

1. To introduce and make them understand about different human dimensions related to culture, society, settlement and resources with their types and distribution.
2. The expected learning outcome would be the student will able to understand, identify and describe social, cultural and economic dynamics of society.

Course Outcomes

Upon successful completion of the course a:

Paper code	Paper name	Course outcome
BGGC_201	Human Geography	CO1- Students will recall the definition and branches of Geography. CO2- Now they are capable for examines and predicts the future of man in a particular natural region. CO3- They can classify world races on the basis of different parameters prepared by different geographers. CO4-. They can also categories world races, world religion, world linguistic region by themselves. CO5-.They will be able to rate the world cultural region. CO6- Now they will be able to compose few analytical lines on world culture, races, language, urban regions, and trends of urbanization.

CO-PO Mapping

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	3	3	2	-	3	3	3	-	3	3	3
CO2	3	3	3	1	-	3	3	3	-	3	3	3
CO3	3	3	3	2	1	3	3	2	1	3	3	2
CO4	3	3	3	3	-	3	3	3	-	3	3	3
CO5	3	3	3	-	-	3	3	3	-	3	3	3
CO6	3	3	3	-	-	3	3	3	-	3	3	3

3: Highest Correlated, 2: Medium Correlated, 1: Lowest Correlated

Course Contents**Unit -1**

Definition, Nature, Major Subfields, Contemporary Relevance of Human Geography.

[No. of Hours: 12]

Unit -2

Space and Society: Cultural Regions; Race; Religion and Language [No. of Hours: 12]

Unit -3

Population: Population Growth and Demographic Transition Theory. [No. of Hours: 12]

Unit -4

World Population Distribution and Composition (Age, Gender and Literacy). Settlements: Types and Patterns of Rural Settlements; Classification of Urban Settlements; Trends and Patterns of World Urbanization.

[No. of Hours: 12]

Reading List**Text Books:**

1. Chandna, R.C. (2010) Population Geography, Kalyani Publisher.
2. Daniel, P.A. and Hopkinson, M.F. (1989) The Geography of Settlement, Oliver & Boyd, London.
3. Johnston R; Gregory D, Pratt G. et al. (2008) The Dictionary of Human Geography, Blackwell Publication.
4. Jordan-Bychkov et al. (2006) The Human Mosaic: A Thematic Introduction to Cultural Geography. W. H. Freeman and Company, New York.
5. Kaushik, S.D. (2010) Manav Bhugol, Rastogi Publication, Meerut.
6. Maurya, S.D. (2012) Manav Bhugol, Sharda Pustak Bhawan. Allahabad.
7. Ghosh, S. (2015) Introduction to settlement geography. Orient Black Swan Private Ltd., Kolkata.
- 8- <https://www.amazon.in/Introduction-Human-Geography-5th-edn-ebook/dp/B01FDYGTTS>
9. <https://www.amazon.in/INTRODUCTION-HUMAN-GEOGRAPHY-Jyotiram-Chandrakant-ebook/dp/B08B1QYG4X>

Reference Book:

1. Hussain, Majid (2012) Manav Bhugol. Rawat Publications, Jaipur.
2. Hussain, Majid (2012), Human Geography; Rawat Publications, Jaipur.

Course code	: BGGL_201			
Course Name	: Practical Geography			
Semester /Year	: I			
	L	T	P	C
			4	2

Examination Scheme:**Course Objectives:****The objectives of this course are:**

1. To introduce about basic concepts of astronomy, celestial bodies and to develop the understanding on cartographic techniques and skills of map projection.
2. At the end of the course students should be able to determine different and appropriate uses of map projection in various aspects of geographic representation.
3. To develop the skill to forecast the Indian daily weather.

Course Outcomes**Upon successful completion of the course:**

Paper code	Paper name	Course outcome
BGGC_201	Geography Practical	CO1- Student will learn and prepare the list of different types of maps. CO2- Student will be able to discuss and prepare the outline of map. CO3- They will learn and practiced to complete the map projection. CO4- They will be able to interpret the weather map. CO5-Now students will be able to forecast weather of a region after interpretation of weather map. CO6- Now he will be able to write about projection ad weather maps in detail.

CO-PO Mapping

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	-	-	-	-	3	1	3	-	1	1	3
CO2	3	-	3	-	-	2	-	1	-	2	-	1
CO3	3	-	3	-	-	2	3	2	-	2	3	2
CO4	3	-	3	-	-	2	3	3	-	2	3	3
CO5	3	-	3	-	2	1	3	3	2	1	3	3

3: Highest Correlated, 2: Medium Correlated, 1: Lowest Correlated

Course Contents**Unit -1**

Maps- Definition, basic concepts and classification, Map composition.

[No. of Hours: 10]

Unit -2

Map Projections- classification, properties, choice, and merits and demerits.

[No. of Hours: 10]

Unit -3

Construction of Conical projection with one and two standard parallel, Bonne's, cylindrical equal area, Mercator's, and Polar Zenithal Equal Area map projection.

[No. of Hours: 16]

Unit -3

Study and interpretation of Indian Daily Weather Report Maps/reports of January, June and July.

(No. of Hours: 12)

Division of Marks

- a. Lab Work-One question from each section with internal choice.
- b. Sessional record and viva.

Reading List.**Text Books:**

1. Dent B. D., 1999: *Cartography: Thematic Map Design*, (Vol. 1), McGraw Hill.
2. Gupta K. K and Tyagi V. C., 1992: *Working with Maps*, Survey of India, DST, New Delhi.
3. Mishra R. P. and Ramesh A., 1989: *Fundamentals of Cartography*, Concept Publishing.
4. Robinson A., 1953: *Elements of Cartography*, John Wiley.
5. Sharma J. P., 2010: *PrayogicBhugol*, Rastogi Publishers.
6. 8. Steers J. A., 1965: *An Introduction to the Study of Map Projections*, University of London.

Reference Book:

1. Singh R. L. and Singh R. P. B., 1999: *Elements of Practical Geography*, Kalyani Publishers
2. Singh R. L., 1998: *PrayogicBhoogolRooprekha*, Kalyani Publications.

1- <https://www.amazon.in/Understanding-Practical-Geography-Surveying-Secondary-ebook/dp/B076XDG8QS>

3. https://books.google.co.in/books/about/Elements_Of_Practical_Geography.html?id=bFJLYgEACAAJ&redir_esc=y

Websites:

Indian Institute of Surveying & Mapping: <http://www.iism.nic.in/>

Survey of India Department of Science & Technology: <http://www.surveyofindia.gov.in/>

Indian National Cartographic Association: <https://incaindia.org/>

Bhuvan Indian Geo Platform of ISRO: <https://bhuvan.nrsc.gov.in/>

III SEMESTER

Course code	: BGGL_301			
Course Name	: Geographical Thought			
Semester /Year	: III			
	L	T	P	C
	4			4

Examination Scheme:

Components	I st internal	II nd Internal	Presentation/ Assignment/ Project	External (ESE)
Weightage(%)	Marks	Marks	Marks	Marks
100%	15	15	30	70

S. No.	Course Category	Course Code	Course Name	Periods				Evaluation scheme		Subject Total
				L	T	P	C	Sessional (Internal)	External (ESE)	
Theory										
1	Core	BGGC_301	Geographical Thought	4			4	30	70	100
2	Elective	BGGS-301	(Regional Planning and developmen) Geography Skill Enhancement	6			6	30	70	100
3	Elective	BGGS-301	OR Remote Sensing and GPS based project report- Geography Skill Enhancement	6			6	30	70	100
Practical										

1	Practical	BGGL_101	Practical Geography	4		2	30	70	100
2									

Paper code	Paper name	Course outcome
BGGC_301	Geographical Thought	<p>CO1- Students will be recall the definition, scope, and branches of geography.</p> <p>CO2- Students will be able to explain the importance and scope of Geography.</p> <p>CO3- They will be able to classify world Geography into various historical time period.</p> <p>CO4-. Now they will be identifying various world famous Geographer.</p>

	Total	1 4			1 2	90	210	300
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L – Lecture, T – Tutorial, P – Practical, C – Credit

Course Objectives: The objectives of this course are:

1. To make them understand about historical development of geographical concepts, philosophies and approaches.
2. The learning outcome of this course would be comprehended, correlate and connect geographical ideas and concepts with historical as well as contemporary context.

Course Outcomes

Upon successful completion of the course a:

		CO5-They will be able to prepare an assignment on the various fields of Geography. CO6- Student can be able to write about the contribution of various geographers from different time period of history of geography.
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CO-PO Mapping

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	-	2	-	3				3	-	3	3
CO2	2	-	2	2	-	2	-	3	3	-	3	3
CO3	3	-	1	-	-	-	-	2	3	-	2	2
CO4	2	-	3	-	-	3	2	1	3	-	3	3
CO5	2	-	3	1	3	3	3	3	3	-	3	3
CO6	3	-	1	-	-	-	-	-		-	2	2

3: Highest Correlated, 2: Medium Correlated, 1: Lowest Correlated

Course Contents

Unit -1

Definition, Nature and Scope of Geography, Branches and sub branches of Geography, Basic concepts of Geography. **[No. of Hours: 12] Unit -2**

Contribution of Greek and Roman Geographers-Ptolemy and Strabo. Arab Geographers. Contribution of Geographical knowledge in ancient and medieval India, Renaissance in Geography, Discoveries and inventions, Contribution of Varenius and Immanuel Kant.

[No. of Hours: 12]

Unit -3

German and French School of Geography; Humboldt ,Ritter,Ratzel, Hattner, Hartshorne ,Blache, Brunhes and Dimanjia. **[No. of Hours: 12]**

Unit- 4

Anglo-American School of Geography- Davis, EC. Semple, Huntington, Isaiah Bowman, Mackinder, and Stamp.

Geography in India (after independence); recent trends in Geography; quantitative geography, use of statistical method and computer. **[No. of Hours: 12]**

Selected Readings:

Text Books:

1. Dickenson. R. E. – The Makers of Modern Geography, Rutledge and Kegan London
2. Freeman . T.W. – A Hundred Years of Geography, London.
3. Jones and Martin – All Possible World – A History of Geographical Ideas. Odessey, Indianapolis (USA)

4. Halt Jensen A. – Geography- Its History and Concepts , Harper and Raw London.
5. Dixit R.D. – Geographical Thought – A Contextual History of Ideas .Prentice Hall, New Delhi
6. Kaushik S.D. – BhaugolikVichardharayen (Hindi) – Sahitya Bhawan Pub. Agra.
7. Taylor. G. Geography in Twentieth Century; London.
8. *Jagdish Singh - Bhaugolik Chintan ka Kramvikas (Hindi) Gyanodaya , Gorakhpur.*

1. <https://www.kobo.com/us/en/ebook/geographical-thought>

2. Evolution of Geographical Thought – E-Book By ... - Mithila Craft

Reference Book:

1. Hussain Majid - Evolution of Geographical Thought (English And Hindi) Rawat Publication jaipur.

Practical-III

Course code : BGGL_301				
Course Name : Practical Geography				
Semester /Year : III				
	L	T	P	C
			4	2

Course Objectives:**The objectives of this course are:**

1. To enhance the potential of advance statistical techniques and its application in geographical studies.
2. Students will learn about appropriate use of statistical techniques in varying avenues of geographical studies.

Course Outcomes**Upon successful completion of the course a:**

Paper code	Paper name	Course outcome
BGGL_301	Geography Practical	<p>CO1- Students will find the use of statistical methods and techniques in the field of geography.</p> <p>CO2- Students will be able to know the importance and how they can compare between different statistical techniques.</p> <p>CO3- They will be able to examine various methods and techniques in Geography.</p> <p>CO4-. They will be able to evaluate the data by short cut and easy method.</p> <p>CO5-.They will be to express statistical data of various fields by various statistical techniques as mean, median, mode, diagrams and graphs.</p> <p>CO6- They will be to write with example from society about various statistical data.</p>

CO-PO Mapping

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	3	3	-	3	-	3	3	3	-	3	3
CO2	3	3	3	-	3	-	3	3	3	-	2	3
CO3	3	3	3	-	3	-	3	2	3	-	1	2
CO4	3	3	3	-	3	-	3	3	3	-	1	3
CO5	3	3	3	-	3	-	3	3	3	-	2	3

3: Highest Correlated, 2: Medium Correlated, 1: Lowest Correlated

Course Contents

Unit -1

Meaning, scope, types and uses of statistical method and data in Geography.

Unit -2

Primary and secondary data and their sources, methods of primary data collection, classification of statistical data and tabulation.

Unit -3

Graph and diagram; Frequency curve, histogram and polygon, Measures of Central Tendency- Mean, Median, Mode.

Unit -4

Measures of dispersion- Quartile, Standard Deviation and Coefficient of Variation. Coefficient of Correlation- Karl Pearson's methods, Scatter Diagrams.

Division of Marks

- a. Lab Work-One question from each section with internal choice.
- b. Sessional record and viva.

Reading List

Text Books:

1. Dent B. D., 1999: *Cartography: Thematic Map Design*, (Vol. 1), McGraw Hill.
2. Gupta K. K and Tyagi V. C., 1992: *Working with Maps*, Survey of India, DST, New Delhi.
3. Mishra R. P. and Ramesh A., 1989: *Fundamentals of Cartography*, Concept Publishing.
4. Robinson A., 1953: *Elements of Cartography*, John Wiley.
5. Sharma J. P., 2010: *Prayogic Bhugol*, Rastogi Publishers.

Reference Book:

Text Books:

1. Singh R. L. and Singh R. P. B., 1999: *Elements of Practical Geography*, Kalyani Publishers
2. Singh R. L., 1998: *Prayogic Bhoogol ki Rooprekha*, Kalyani Publications.
- 1- <https://www.amazon.in/Understanding-Practical-Geography-Surveying-Secondary-ebook/dp/B076XDG8QS>
2. https://books.google.co.in/books/about/Elements_Of_Practical_Geography.html?id=bFJLYgEACAAJ&redir_esc=y

Websites:

Indian Institute of Surveying & Mapping: <http://www.iism.nic.in/>

Survey of India Department of Science & Technology: <http://www.surveyofindia.gov.in/>

Indian National Cartographic Association: <https://incaindia.org/>

Bhuvan Indian Geo Platform of ISRO: <https://bhuvan.nrsc.gov.in/>

Skill Enhancement -III

Course code	: BGGGS_301			
Course Name	: Regional Planning and development (Skill Enhancement Course)			
Semester /Year	: III			
	L	T	P	C
	6			6

Course Objectives: The objectives of this course are:

1. To developed the analytical understanding of regional concepts, approaches and demarcation and to make the students aware about various plans adopted for regional developments.
2. Students will be able to critically evaluate the formal, functional and planning regions as well as they can evolve theoretical input for regional development.

Course Outcomes**Upon successful completion of the course a:**

Paper code	Paper name	Course outcome
BGGGS_301	Regional Planning and development	CO1- Students will find the concept of region CO2- Students will be able to compare between different types of region. CO3- They will be able to classify different region on the basis of different natural and cultural components. CO4-. They will justify the limitation of a particular region. CO5-.They will be able to prepare a plan of natural regions in a political boundary as well as political regions. CO6- They will be able to prepare a design for the development region.

CO-PO Mapping

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	-	3	1	1	-	3	2	-	-	3	2
CO2	3	-	3	1	1	-	3	2	-	-	3	2
CO3	3	-	3	2	-	-	3	2	-	-	3	2
CO4	3	-	3	3	-	-	3	3	-	-	2	3

CO5	3	-	3	1	1	-	3	3	-	-	1	3
CO6	2	-	3	1	1	-	3	3	-	-	1	3

3: Highest Correlated, 2: Medium Correlated, 1: Lowest Correlated

Course Contents

Unit -1

Meaning, Concept, Need and Types of Regional Planning. [No. of Hours: 12]

Unit -2

Regionalization of India for Planning (Agro climatic Zones). [No. of Hours: 12]

Unit -3

Models for Regional Planning: Growth Pole Theory; Core Periphery Model and Growth Foci Concept in Indian Context. [No. of Hours: 12]

Unit -4

Backward Regions and Regional Plans- Special Area.
Development Plans in India; DVC & Tehri Dam -The Success Story and the Failures; - NITI Aayog. [No. of Hours: 12]

Reading List

Text Books:

1. Blij H. J. De, 1971: *Geography: Regions and Concepts*, John Wiley and Sons.
2. Claval P.I, 1998: *An Introduction to Regional Geography*, Blackwell Publishers, Oxford and Massachusetts.
3. Friedmann J. and Alonso W. (1975): *Regional Policy - Readings in Theory and Applications*, MIT Press, Massachusetts.
4. Gore C. G., 1984: *Regions in Question: Space, Development Theory and Regional Policy*, Methuen, London.
5. Gore C. G., Köhler G., Reich U-P. and Ziesemer T., 1996: *Questioning Development; Essays on the Theory, Policies and Practice of Development Intervention*, Metropolis- Verlag, Marburg.
6. Haynes J., 2008: *Development Studies*, Polity Short Introduction Series.
7. Johnson E. A. J., 1970: *The Organization of Space in Developing Countries*, MIT Press, Massachusetts.
8. Peet R., 1999: *Theories of Development*, The Guilford Press, New York.
- 9- Roger M Minshull, 1967; *Regional Geography*; Hutchinson University Library.

10. Singh R.L., 1971, India: Regional Geography; National Geographical Society of India, Varanasi.

11. Douglas L Johnson, Viola Haarmann, Merrill L Johnson, World Regional Geography: A Development Approach, 11th edition, July 2015, Pearson Publication.

Reference Book:

1. Alka Gautam, Regional Geography of the world, Sharda Pustak Bhawan, Allahabad.

1. <https://www.pearson.com/store/p/world-regional-geography-a-development-approach/P100002140235/9780137612697>

2. <https://www.indianculture.gov.in/ebooks/india-regional-geography>

Or

Skill Enhancement

Course code	: BGGS_302			
Course Name	: Remote Sensing and GPS based project report (Skill Enhancement Course)			
Semester /Year	: III			
	L	T	P	C
	6			6

Course Objectives: The objectives of this course are:

1. To enrich the knowledge of students regarding meaning, sources, platform of remote sensing.
2. To aware the students about arial photography and its uses in practical world.
3. To develop the skill to prepare a project file so more explore and more knowledge will gain by them about the space science.

Course Outcomes

Upon successful completion of the course a:

Paper code	Paper name	Course outcome
BGGS_302	Skill Enhancement course - Remote Sensing and GPS based project report	CO1- Students will find the meaning, sources and platform of remote sensing. CO2- Students will be able to do compare between the use of aerial photographs and remote sensing CO3- They will examine the role of various sources of remote sensing in geography. CO4-. They can able to give the rank to the various sources of remote sensing. CO5-.They will be able to prepare a project on various Indian satellites. GPS and progress of Indian remote sensing after independence..

		CO6- Now more exploration and more knowledge will gain by them about the space science.
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CO-PO Mapping

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	-	3	-	3	-	3	3	-	-	-	3
CO2	3	-	3	-	3	-	3	3	-	-	-	3
CO3	3	-	3	-	3	-	3	2	-	-	-	2
CO4	3	-	3	-	3	-	3	3	-	-	-	3
CO5	3	-	3	-	2	2	3	3	-	2	-	3
CO6	2	-	3	-	-	-	1	1	-	-	-	3

3: Highest Correlated, 2: Medium Correlated, 1: Lowest Correlated

Course Contents**Unit -1**

Remote Sensing: Definition, Development, and Platforms.

[No. of Hours: 12]

Unit -2

Aerial Photography: Principles, Types and uses in Geography and other field.

[No. of Hours: 12]

Unit -3

Satellite Remote Sensing: Principles, EMR Interaction with Atmosphere and Earth Surface; Satellites (Landsat and IRS) and Sensors.

[No. of Hours: 12]

Unit -4

Interpretation and Application of Remote Sensing: Land use/ Land Cover. Global Positioning System (GPS) – Principles and Uses. [No. of Hours: 12]

Practical Record:

A project file consisting of five exercises will be done from aerial photos, satellite images (scale, orientation and interpretation) and GPS field survey.

Reading List**Text Books:**

1. Campbell J. B., 2007: *Introduction to Remote Sensing*, Guildford Press.
2. Jensen J. R., 2004: *Introductory Digital Image Processing: A Remote Sensing Perspective*, Prentice Hall.

3. Joseph, G. 2005: *Fundamentals of Remote Sensing*, United Press India.
4. Lillesand T. M., Kiefer R. W. and Chipman J. W., 2004: *Remote Sensing and Image Interpretation*, Wiley. (Wiley Student Edition).
6. Rees W. G., 2001: *Physical Principles of Remote Sensing*, Cambridge University Press.
7. Wolf P. R. and Dewitt B. A., 2000: *Elements of Photogrammetric: With Applications in GIS*, McGraw-Hill
8. <https://www.amazon.in/Aerial-Photography-Image-Interpretation-David-ebook/dp/B00711AUN8>
9. https://books.google.co.in/books/about/Basic_Concept_of_Remote_Sensing_GPS_and.html?id=hy-DwAAQBAJ&redir_esc=y

Reference Book:

1. Nag P. and Kudra, M., 1998: *Digital Remote Sensing*, Concept, New Delhi.
2. Singh R. B. and Murai S., 1998: *Space-informatics for Sustainable Development*, Oxford and IBH Pub.

Websites:

10. Indian Institute of Surveying & Mapping: <http://www.iism.nic.in/>
11. Survey of India Department of Science & Technology: <http://www.surveyofindia.gov.in/>
12. Indian National Cartographic Association: <https://incaindia.org/>
13. Bhuvan Indian Geo Platform of ISRO: <https://bhuvan.nrsc.gov.in/>

I V SEMESTER**Examination Scheme:**

Components	I st internal	II nd Internal	Presentation/ Assignment/ Project	External (ESE)
Weightage(%)	Marks	Marks	Marks	Marks
100%	15	15	30	70

S. No.	Course Category	Course Code	Course Name	Periods				Evaluation scheme		Subject Total
				L	T	P	C	Sessional (Internal)	External (ESE)	
Theory										
1	Core	BGGC-401	Environmental Geography	4			4	30	70	100
2	Core	BGGS-401	Regional Planning and development (Geography Skill EnhancementT)	6			6	30	70	100

3	Core	BGGS-401	OR Remote Sensing and GPS based project report- (Geography Skill Enhancement)	6			6	30	70	100
Practical										
1	Core	BGGL_401	Practical Geography	4			2	30	70	100
2										
Total				10		4	12	90	210	300

L – Lecture, T – Tutorial, P – Practical, C – Credit

Environmental Geography

Course code	: BGGC_401										
Course Name	: Environmental Geography										
Semester /Year	: IV										
								L	T	P	C
								4			4

Course Objectives:

The objectives of this course are:

1. To make the student aware about different types of environments, ecological setting and their issues and challenges.
2. To make them understand and take role in environmental conservation and management.

Course Outcomes

Upon successful completion of the course a:

Paper code	Paper name	Course outcome
BGGC-401	Environmental Geography	CO1- Students will find environmental issues. CO2- Students will be able to examine different types of environments, ecological setting and their issues and challenges. CO3- Now they will be able to explain role of environmental conservation and management. CO4-. They will be able to prepare the project on environment. CO5-. They will be able to evaluate the loss of property and life in various regions and various type of disaster.

		CO6- They will be able to write about various program and plans introduced by government.
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CO-PO Mapping

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	-	3	-	-	3	3	3	-	3	-	1
CO2	3	-	3	-	2	-	3	3	2	-	-	2
CO3	3	-	3	-	-	3	3	2	-	3	-	3
CO4	3	-	3	-	-	3	3	3	-	3	-	3
CO5	3	-	3	-	2	3	3	3	2	3	-	3

3: Highest Correlated, 2: Medium Correlated, 1: Lowest Correlated

Course Contents:**Unit -1**

Environmental Geography: Concepts and Approaches; Ecosystem – Concept and Structure; Ecosystem Functions.

[No. of Hours: 14]

Unit -2

Human-Environment Relationship in Equatorial, Desert, Mountain and Coastal Regions.

[No. of Hours: 12]

Unit -3

Environmental Problems and Management: Air Pollution; Biodiversity Loss; Solid and Liquid Waste.

[No. of Hours: 12]

Unit -4

Environmental Programmes and Policies: Developed Countries; Developing Countries. New Environmental Policy of India; Government Initiatives.

[No. of Hours: 10]

Reading List**Text Books:**

1. Casper J.K. (2010) Changing Ecosystems: Effects of Global Warming. Infobase Pub. New York.
2. Hudson, T. (2011) Living with Earth: An Introduction to Environmental Geology, PHI Learning Private Limited, New Delhi.
3. Miller, G.T. (2007) Living in the Environment: Principles, Connections, and Solutions, Brooks/ Cole Cengage Learning, Belmont.

4. Singh, R.B. (1993) Environmental Geography, Heritage Publishers, New Delhi.
5. UNEP (2007) Global Environment Outlook: GEO4: Environment For Development, United Nations Environment Programme. University Press, Cambridge.
6. Wright R. T. and Boorse, D. F. (2010) Toward a Sustainable Future, PHI Learning Pvt Ltd, New Delhi.
7. Singh, R.B. and Hietala, R. (Eds.) (2014) Livelihood security in North-western Himalaya: Case studies from changing socio-economic environments in Himachal Pradesh.
8. Teli, BL, 2005, Paryavaraniya Adhayan, College Book Depot, Jaipur

Reference Book:

1. Singh, Savindra 2001. *Paryavaran Bhugol*, Prayag Pustak Bhawan, Allahabad. (in Hindi)
2. Singh, Savindra 2001. *Paryavaran Bhugol*, Prayag Pustak Bhawan, Allahabad. (in English)

Practical-IV

Course code	: BGGL_401			
Course Name	: Practical Geography			
Semester /Year	: IV			
	L	T	P	C
			4	2

Course Objectives: The objectives of this course are:

1. To enhance the potential of advance statistical techniques and its application in geographical studies.
2. Now students will able to appropriate use of statistical techniques in varying avenues of geographical studies.
3. They will also understand the construction of Geological profile and uses of them.

Course Outcomes**Upon successful completion of the course a:**

Paper code	Paper name	Course outcome
BGGL_401	Practical Geography	CO1 Students will enhance the of potential advance statistical techniques and its application in geographical studies. CO2- Students will be able to explain the Now students will able to appropriate use of statistical techniques in varying avenues of

		<p>geographical studies.</p> <p>CO3-They will be to prepare all Geological maps.</p> <p>CO4-. They will be able to present different geographical phenomena by distribution map.</p> <p>CO5-.They will be able to prepare different types of maps as Geological map, topographical map etc.</p> <p>CO6-.Now students will be able to prepare a frame for various type of profiles in different region of Himalaya.</p>
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CO-PO Mapping

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	-	-	-	-	1	1	3	-	3	1	3
CO2	3	-	3	-	-	2		1	-	2	2	1
CO3	3	-	3	-	-	1	3	2	-	2	2	2
CO4	3	-	3	-	-	2	3	3	-	2	1	3
CO5	3	-	3	-	2	1	3	3	2	1	1	3
CO6	3	-	3	-	2	1	3	3	2	1	3	3

3: Highest Correlated, 2: Medium Correlated, 1: Lowest Correlated

Course Contents:**Unit -1**

Statistical Diagrams- Simple, Compound and Multiple Bar Diagram, Circle diagram.

[No. of Hours: 14]

Unit -2

Simple and polyline graph, Hyther graph and Climograph. [No. of Hours: 14]

Unit -3

Distribution maps meaning, importance and uses- Isopleths, Choropleth and Dot method.

[No. of Hours: 14]

Unit -4

Identification of rock outcrops, bedding planes, determinants of dip.
(Geological cross section drawing)

[No. of Hours: 14]

Division of Marks

- Lab Work-One question from each section with internal choice.
- Sessional record and viva.

Note: Lab Work-one question from each section with internal choice (duration three hours)

Reading List

Text Books:

1. Dent B. D., 1999: *Cartography: Thematic Map Design*, (Vol. 1), McGraw Hill.
2. Gupta K. K and Tyagi V. C., 1992: *Working with Maps*, Survey of India, DST, NewDelhi.
3. Mishra R. P. and Ramesh A., 1989: *Fundamentals of Cartography*, Concept Publishing.
4. Robinson A., 1953: *Elements of Cartography*, John Wiley.
5. Sharma J. P., 2010: *PrayogicBhugol*, Rastogi Publishers.
6. Steers J. A., 1965: *An Introduction to the Study of Map Projections*, University of London.
7. <https://www.amazon.in/Understanding-Practical-Geography-Surveying-Secondary-ebook/dp/B076XDG8QS>
8. https://books.google.co.in/books/about/Elements_Of_Practical_Geography.html?id=bFJLYgEACAAJ&redir_esc=y

Reference Book:

1. Singh R. L. and Singh R. P. B., 1999: *Elements of Practical Geography*, Kalyani Publishers
2. Singh R. L., 1998: *Prayogic Bhoogol ki Rooprekha*, Kalyani Publications.

Websites:

Indian Institute of Surveying & Mapping: <http://www.iism.nic.in/>
 Survey of India Department of Science & Technology: <http://www.surveyofindia.gov.in/>
 Indian National Cartographic Association: <https://incaindia.org/>
 Bhuvan Indian Geo Platform of ISRO: <https://bhuvan.nrsc.gov.in/>

Skill Enhancement Course (Compulsory Papers):**1. REGIONAL PLANNING AND DEVELOPMENT**

Course code	: BGGs_401			
Course Name	: Regional Planning and development			
Semester /Year	: IV			
	L	T	P	C
	6			6

Course Objectives :**The objectives of this course are:**

1. To developed the analytical understanding of regional concepts, approaches and demarcation and to make the students aware about various plans adopted for regional developments.

2. to develop the skill of critically evaluate the formal, functional and planning regions as well as they can evolve theoretical input for regional development.

Course Outcomes

Upon successful completion of the course a:

Paper code	Paper name	Course outcome
BGGS_401	REGIONAL PLANNING AND DEVELOPMENT	CO1- Students will be able to understand and write about region. CO2- Students will be able to explain different types of region. CO3- They will be able to illustrate, different region. CO4-. They will understand atmospheric phenomena. CO5-.They will able to classify new regions. CO6- They will able to write about backward region and NITI Ayog in detail.

CO-PO Mapping

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	-	3	1	1	-	3	2	1	-	1	2
CO2	3	-	3	1	1	-	3	2	1	-	3	2
CO3	3	-	3	2	-	-	3	2	-	-	3	2
CO4	3	-	3	3	-	-	3	3	-	-	2	3
CO5	3	-	3	1	1	-	3	3	1	-	2	3
CO6	3	1	3	1	1	-	3	3	1	-	1	2

3: Highest Correlated, 2: Medium Correlated, 1: Lowest Correlated

Course Contents

1. Definition, Concept, Need and Types of region and regional Planning.
2. Regionalization of India for Planning (Agro Ecological Zones).
3. Models for Regional Planning: Growth Pole Theory; Core Periphery Model and Growth Foci Concept in Indian Context.
4. Backward Regions and Regional Plans- Special Area Development Plans in India; Vishu Ganga & DVC-The Success Story and the Failures; NITI Aayog.

Reading List

Text Books:

1. Blij H. J. De, 1971: *Geography: Regions and Concepts*, John Wiley and Sons.

2. Claval P., 1998: *An Introduction to Regional Geography*, Blackwell Publishers, Oxford and Massachusetts.
3. Friedmann J. and Alonso W. (1975): *Regional Policy - Readings in Theory and Applications*, MIT Press, Massachusetts.
4. Gore C. G., 1984: *Regions in Question: Space, Development Theory and Regional Policy*, Methuen, London.
5. Gore C. G., Köhler G., Reich U-P. and Ziesemer T., 1996: *Questioning Development; Essays on the Theory, Policies and Practice of Development Intervention*, Metropolis- Verlag, Marburg.
6. Haynes J., 2008: *Development Studies*, Polity Short Introduction Series.
7. Johnson E. A. J., 1970: *The Organization of Space in Developing Countries*, MIT Press, Massachusetts.
8. UNDP 2001-04: *Human Development Report*, Oxford University Press.
- 9- <https://www.pearson.com/store/p/world-regional-geography-a-development-approach/P100002140235/9780137612697>
- 10- . <https://www.indianculture.gov.in/ebooks/india-regional-geography>

Reference Book:

1. Alka Gautam, Regional Geography of the world, Sharda Pustak Bhawan, Allahabad.

Websites:

- Indian Institute of Surveying & Mapping: <http://www.iism.nic.in/>
 Survey of India Department of Science & Technology: <http://www.surveyofindia.gov.in/>
 Indian National Cartographic Association: <https://incaindia.org/>
 Bhuvan Indian Geo Platform of ISRO: <https://bhuvan.nrsc.gov.in/>

Skill Enhancement Course (Compulsory Papers):

2. Remote Sensing and GPS based Project Report

Course code	: BGGs_402			
Course Name	: Remote Sensing and GPS based Project Report			
Semester /Year	: IV			
	L	T	P	C
	6			6

Course Objectives :

The objectives of this course are:

1. Students will know the meaning, sources, platform of remote sensing.

2. They will be able to know about arial photography and its uses in Geography.
3. They will prepare a project file so more explore and more knowledge will gain by them about the space science.

Course Outcomes

Upon successful completion of the course a:

Paper code	Paper name	Course outcome
BGGS_402	Geography Skill Enhancement Remote Sensing and GPS based Project Report	CO1- Students will learn about Remote Sensing CO2- Students will be able to explain the sources and platform of remote sensing. CO3- They will be able to examine the importance of remote sensing and Arial photograph CO4-. They will be able to compose the importance of remote sensing. CO5- They will be able to justify the importance of GPS system. CO6- They will be able to write and use about remote sensing imageries and Arial photographs in practical world.

CO-PO Mapping

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	-	3	-	3	-	3	3	3	-	3	3
CO2	3	-	3	-	3	-	3	3	3	-	3	3
CO3	3	-	3	-	3	-	3	2	3	-	3	2
CO4	3	-	3	-	3	-	3	3	3	-	3	3
CO5	3	-	3	-	2	2	3	3	2	2	3	3
CO6	3	-	3	-	2	2	3	3	2	2	3	3

3: Highest Correlated, 2: Medium Correlated, 1: Lowest Correlated

Course Contents:

1. Remote Sensing: Definition, Development, Platforms and Types.
2. Aerial Photography: Principles, Types and Geometry.
3. Satellite Remote Sensing: Principles, and Earth Surface; Satellites (Landsat and IRS) and Sensors.
4. Interpretation and Application of Remote Sensing: Land use/ Land Cover with the help of QGIS or ADAS
5. Global Positioning System (GPS) – Principles and Uses

Practical Record: A project file consisting of five exercises will be done from aerial photos, satellite images (scale, orientation and interpretation) and GPS field survey.

Reading List

Text Books:

1. Campbell J. B., 2007: *Introduction to Remote Sensing*, Guildford Press.
2. Jensen J. R., 2004: *Introductory Digital Image Processing: A Remote Sensing Perspective*, Prentice Hall.
3. Joseph, G. 2005: *Fundamentals of Remote Sensing*, United Press India.
4. Lillesand T. M., Kiefer R. W. and Chipman J. W., 2004: *Remote Sensing and Image Interpretation*, Wiley. (Wiley Student Edition).
6. Rees W. G., 2001: *Physical Principles of Remote Sensing*, Cambridge University Press.
7. Wolf P. R. and Dewitt B. A., 2000: *Elements of Photogrammetric: With Applications in GIS*, McGraw-Hill
8. - <https://www.amazon.in/Aerial-Photography-Image-Interpretation-David-ebook/dp/B00711AUN8>
9. https://books.google.co.in/books/about/Basic_Concept_of_Remote_Sensing_GPS_and.html?id=hy-DwAAQBAJ&redir_esc=y

Reference Book:

1. Nag P. and Kudra, M., 1998: *Digital Remote Sensing*, Concept, New Delhi.
2. Singh R. B. and Murai S., 1998: *Space-informatics for Sustainable Development*, Oxford and IBH Pub.

Websites:

Indian Institute of Surveying & Mapping: <http://www.iism.nic.in/>
Survey of India Department of Science & Technology: <http://www.surveyofindia.gov.in/>
Indian National Cartographic Association: <https://incaindia.org/>
Bhuvan Indian Geo Platform of ISRO: <https://bhuvan.nrsc.gov.in>

Discipline Specific Elective Papers**Geography of India****Semester- V**

Course code	: BGGD_501				
Course Name	: Geography of India				
Semester /Year	: V				
		L	T	P	C
		4			4

S. No.	Course Category	Course Code	Course Name	Periods				Evaluation scheme		Subject Total
				L	T	P	C	Sessional (Internal)	External (ESE)	
Theory										
1	Core	BGGD_501	Geography of India	4			4	30	70	100
2	Core	BGGD_502	Disaster Management	4			4	30	70	100
3	Elective	BGGS_501	(Geography Skill Enhancement Course) -GIS based Project Report (Practical)-2	6			6	30	70	100
4	Elective	BGGS_502	Or- (Geography Skill Enhancement Course) - Field Techniques and Survey based Project Report-2	6			6	30	70	100

5		BGGS_503	OR- India – Locational Aspects (Map)	6			6	30	70	100
6	Elective	BGGG_501	Generic Elective - Disaster Risk Reduction	6			6	30	70	100
7	Elective	BGGG_502	Or-Generic Elective - World Geography	6			6	30	70	100
Practical										
1	Core	BGGL_501	Geography Practical			4	2	30	70	100
2										
Total				16		4	18	120	280	400

Examination Scheme:

Components	Ist internal	IInd Internal	Presentation/ Assignment/ Project	External (ESE)
Weightage(%)	Marks	Marks	Marks	Marks
100%	15	15	30	70

Course Objectives :The objectives of this course are:

1. To provide detail knowledge about physiography, demography and cultural attributes of Indian landscapes, Agriculture, economy, resource distribution.
2. Now there would be conceptual clarity about physical, demographic, social, cultural, agriculture and economic spheres of Indian regions.

Course Outcomes**Upon successful completion of the course a:**

Paper code	Paper name	Course outcome
BGGD_501	Geography of India	CO1- Students will able to provide detail knowledge about physiographic divisions of India. CO2- Students will be able to explain and compare between

		<p>different regions of India.</p> <p>CO3- They will be able to clarify about physical, demographic, social, cultural, agriculture and economic spheres of Indian regions.</p> <p>CO4-. They will able to prepare maps of physical, demographic, social, cultural, agriculture and economic spheres of Indian regions.</p> <p>CO5- They will be able to prepare and explain the plan for the development of various fields of Geography in India.</p> <p>CO6- Now students will be able to analyze the demographic and other attributes of Utrakhand and India.</p>
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CO-PO Mapping

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	3	3	-	-	3	-	1	-	3	-	1
CO2	3	2	2	-	-	2		1	-	2	-	1
CO3	3	2	3	-	-	2	3	2	-	2	3	2
CO4	3	2	3	-	-	2	3	2	-	2	3	2

3: Highest Correlated, 2: Medium Correlated, 1: Lowest Correlated

Course Contents

1. Physical Setting – Location, Structure and Relief, Drainage, Climate.
2. Population – Size and Growth since 1901, Population Distribution, Literacy, Sex Ratio.
3. Settlement System - Rural Settlement Types and Patterns, Urban Pattern.
4. Resource Base – Livestock (cattle and fisheries), Power (coal, and hydroelectricity), Minerals (iron ore, petroleum and bauxite).
5. Economy – Agriculture (Rice, Wheat, Sugarcane, Tea, Cotton); Industries (Cotton Textile, Iron-Steel, Automobile), Transportation Modes (Road and Rail).
6. Economy of Uttarakhand.

Reading List

Text Books:

1. Hussain M., 1992: *Geography of India*, Tata McGraw Hill Education.
2. Mamoria C. B., 1980: *Economic and Commercial Geography of India*, Shiva Lal Agarwala.
3. Miller F. P., Vandome A. F. and McBrewster J., 2009: *Geography of India: Indo-Gangetic Plain, Thar Desert, Major Rivers of India, Climate of India, Geology of India*, Alpha script Publishing.
4. Nag P. and Sengupta S., 1992: *Geography of India*, Concept Publishing.
5. Pichamuthu C. S., 1967: *Physical Geography of India*, National Book Trust.

6. Sharma T. C. and Coutinho O., 1997: *Economic and Commercial Geography of India*, Vikas Publishing.
7. Singh Gopal, 1976: *A Geography of India*, Atma Ram.
8. Spate O. H. K. and Learmonth A. T. A., 1967: *India and Pakistan: A General and Regional Geography*, Methuen.
9. Rana, Tejbir Singh, 2015, *Diversity of India*, R.K. Books, Delhi.
10. <https://www.gale.com/ebooks/9781615302024/understanding-india-the-geography-of-india>
11. <https://www.indianculture.gov.in/ebooks/india-regional-geography>

OR

Disaster Management

Course code	: BGGD_502			
Course Name	: Disaster Management			
Semester /Year	: V			
	L	T	P	C
	6			6

Course Objectives

The objectives of this course are:

1. Students will be able to know the meaning, causes, impact of environmental hazards, vulnerability and disasters.
2. They will also be able to know different types of disasters in India.
3. Now they will be able to know the role of different government and NGA in India to control the disasters.

Course Outcomes

Upon successful completion of the course a:

Paper code	Paper name	Course outcome
BGGD_502	Disaster Management	<p>CO1- Students will be able to describe about causes and impact of disaster management.</p> <p>CO2- Students will be able to compare between disaster and hazards</p> <p>CO3- They will be able to examine the role of different government and NGA in India to control the disasters.</p> <p>CO4-. They will be able to create different types of disasters in India.</p> <p>CO5-. They will know oceanic resources, importance of tides and currents.</p>

		CO6- CO6- They will be able to write and prepare a map for the disaster affected region of their state and country also will focus on dos ad Don't.
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CO-PO Mapping

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	3	3	-	3	-	3	3	3	-	3	3
CO2	3	3	3	-	3	-	3	3	3	-	3	3
CO3	3	3	3	-	3	-	3	2	3	-	3	2
CO4	3	2	3	-	3	-	3	3	3	-	3	3
CO5	3	1	3	-	3	-	2	3	3	-	3	3
CO6	3	1	3	-	3	-	2	3	3	-	3	3

3: Highest Correlated, 2: Medium Correlated, 1: Lowest Correlated

Course Contents

1. Hazards, Risk, Vulnerability and Disasters: Definition and Concepts.
2. Disasters in India: (a) Causes, Impact, Distribution and Mapping: Flood, Landslide, Drought.
3. Disasters in India: (b) Causes, Impact, Distribution and Mapping: Earthquake, Tsunami and Cyclone.
4. Human induced disasters: Causes, Impact, Distribution and Mapping.
5. Response and Mitigation to Disasters: Mitigation and Preparedness, NDMA and NIDM; Indigenous Knowledge and Community-Based Disaster Management; Do's and Don'ts During Disasters.

Reading List**Text Books:**

1. Government of India. (1997) Vulnerability Atlas of India. New Delhi, Building Materials & Technology Promotion Council, Ministry of Urban Development, Government of India.
2. Kapur, A. (2010) Vulnerable India: A Geographical Study of Disasters, Sage Publication, New Delhi.
3. Modh, S. (2010) Managing Natural Disaster: Hydrological, Marine and Geological Disasters, Macmillan, Delhi.
4. <https://www.kobo.com/in/en/ebook/disaster-management>
5. https://www.barnesandnoble.com/b/free-ebooks/ebooks-nook/public-health-safety/emergency-disaster-management-policies/_/N-ry0Z8qaZ16uo

6. <https://www.amazon.in/Disaster-Management-S-C-Sharma-ebook/dp/B08RJRDCSY>

7. [disaster-management-handbook.pdf](#)

Reference Book:

1. Singh, R. B. Disaster Management. New Delhi: Rawat Publications., 2008.
2. Narayan, B. Disaster Management, New Delhi: A.P.H. Publishing Corporation ,2009

Practical V

Course code	: BGGL_501			
Course Name	: Practical Geography			
Semester /Year	: V			
	L	T	P	C
			4	2

Course Objectives

The objectives of this course are:

1. To develop cartographic skills such as map works, diagram construction, graphic representation of data and physical surveying.
2. Now students will be able to constructs and draw maps, based on field survey data through the Prismatic compass and Plane table.
3. They will also be able to conduct specific field survey.

Course Outcomes

Upon successful completion of the course a:

Paper code	Paper name	Course outcome
BGGL_501	Practical Geography	<p>CO1- Students will develop cartographic skills such as map works, diagram construction, graphic representation of data and physical surveying.</p> <p>CO2- Now students will be able to constructs and draw maps, based on field survey data through the Prismatic compass and Plane table.</p> <p>CO3-They will also be able to conduct specific field survey.</p> <p>CO4- They will be able to examine the method of survey in reference to fulfill the requirement of purpose.</p> <p>CO5-. They will be able to evaluate all the work done by them in ground.</p> <p>CO6- They will be able to prepare a map for ground or allotted survey area.</p>

CO-PO Mapping

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	-	3	1	1	-	3	2	1	-	3	2
CO2	3	-	3	1	1	-	3	2	1	-	3	2
CO3	3	-	3	2	-	-	3	2	-	-	3	2
CO4	3	-	3	3	-	-	3	3	-	-	3	3
CO5	3	-	3	1	1	-	3	3	1	-	3	3
CO6	3	-	3	1	2	-	3	3	-	-	3	3

3: Highest Correlated, 2: Medium Correlated, 1: Lowest Correlated

Course Contents

Unit-1 Surveying- Meaning, Types and Methods

Unit-2 Prismatic Compass Survey- open and close traverse.

Unit-3 Use and handling of GPS.

Unit-4 Field survey – Environment aspect (3 to 7 days).

Division of Marks

- Two field survey Exercises -duration Four hours
- GPS, Sessional record and viva-voce.
- Field survey report.

Reading List**Text Books:**

- Dent B. D., 1999: *Cartography: Thematic Map Design*, (Vol. 1), McGraw Hill.
- Gupta K. K and Tyagi V. C., 1992: *Working with Maps*, Survey of India, DST, New Delhi.
- Mishra R. P. and Ramesh A., 1989: *Fundamentals of Cartography*, Concept Publishing.
- Robinson A., 1953: *Elements of Cartography*, John Wiley.
- Sharma J. P., 2010: *Prayogic Bhugol*, Rastogi Publishers.
- Singh R. L. and Singh R. P. B., 1999: *Elements of Practical Geography*, Kalyani Publishers
- Singh R. L., 1998: *Prayogic Bhoogol Rooprekha*, Kalyani Publications.
- <https://www.amazon.com/dp/B07DZKT9KM?tag=uuid10-20>
- <https://www.pdfdrive.com/land-surveying-books.html>

Reference Book:

- Singh R. L. and Singh R. P. B., 1999: *Elements of Practical Geography*, Kalyani Publishers

2. Singh R. L., 1998: *Prayogic Bhoogol Rooprekha*, Kalyani Publications.

Websites:

Indian Institute of Surveying & Mapping: <http://www.iism.nic.in/>

Survey of India Department of Science & Technology: <http://www.surveyofindia.gov.in/>

Indian National Cartographic Association: <https://incaindia.org/>

Bhuvan Indian Geo Platform of ISRO: <https://bhuvan.nrsc.gov.in/>

Skill Enhancement compulsory course

GIS based Project Report-1

Course code	: BGGGS_501				
Course Name	: GIS based Project Report (Skill Enhancement)-1				
Semester /Year	: V				
		L	T	P	C
		6			6

Course Objectives

The objectives of this course are:

1. Students will be able to know about meaning and types and uses of GIS and it's data.
2. They will be able to understand the use of GIS for preparation of digital maps.

Course Outcomes

Upon successful completion of the course a:

Paper code	Paper name	Course outcome
BGGGS_501	Geography Skill Enhancement - GIS based Project Report	<p>CO1- Students will be able to find about meaning and types and uses of GIS and it's data.</p> <p>CO2- They will be examining to understand the use of GIS for preparation of digital maps.</p> <p>CO3-They will also be able to do work with GIS based field survey.</p> <p>CO4- They will be able to examine the method of survey in reference to fulfill the requirement of purpose.</p> <p>CO5-. They will be able to evaluate all the work done by them in ground.</p> <p>CO6- They will be able to prepare a map for ground or allotted survey area.</p>

CO-PO Mapping

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	3	3	-	3	-	3	3	1	-	3	2
CO2	3	3	3	-	3	-	3	3	1	-	3	2
CO3	3	-	3	2	-	-	3	2	-	-	3	2
CO4	3	-	3	3	-	-	3	3	-	-	3	3
CO5	3	-	3	1	1	-	3	3	1	-	3	3
CO6	3	-	3	1	2	-	3	3	-	-	3	3

3: Highest Correlated, 2: Medium Correlated, 1: Lowest Correlated

Course Contents

2. GIS Data Structures: Types (spatial and Non-spatial), Raster and Vector Data

Structure.

3. GIS Data Analysis: Input; Geo-Referencing; Editing and Output; Overlays.

4. Application of GIS in Land Use/Land Cover Mapping.

5. Application of GIS in Urban Sprawl and Forests Monitoring.

Practical Record: A project file consisting of 5 exercises on using any GIS Software on above mentioned themes.

Reading List**Text Books:**

1. Bhatta, B. (2010) Analysis of Urban Growth and Sprawl from Remote Sensing, Springer, Berlin Heidelberg.41

2. Burrough, P.A., and McDonnell, R.A. (2000) Principles of Geographical Information System-Spatial Information System and Geo-statistics. Oxford University Press

3. Chauniyal, D.D. (2010) SudurSamvedanevamBhogolikSuchanaPranali, Sharda Pustak Bhawan, Allahabad

4. Heywoods, I., Cornelius, S and Carver, S. (2006) An Introduction to Geographical Information system. Prentice Hall.

5. Jha, M.M. and Singh, R.B. (2008) Land Use: Reflection on Spatial Informatics Agriculture and Development, New Delhi: Concept.

6. Sarkar, A. (2015) Practical geography: A systematic approach. Orient Black Swan Private Ltd., New

Delhi

7. Singh, R.B. and Murai, S. (1998) Space Informatics for Sustainable Development, Oxford and IBH, New Delhi.

8. - <https://www.esri.com/en-us/news-publications/ebooks>

9. - <https://www.amazon.in/Image-Processing-GIS-Remote-Sensing-ebook/dp/B01BKTGKCG>

Reference Book:

1. Singh, R.B. and Murai, S. (1998) Space Informatics for Sustainable Development, Oxford and IBH, New Delhi.
2. Nag, P. (2008) Introduction to GIS, Concept India, New Delhi.

Websites:

Indian Institute of Surveying & Mapping: <http://www.iism.nic.in/>

Survey of India Department of Science & Technology: <http://www.surveyofindia.gov.in/>

Indian National Cartographic Association: <https://incaindia.org/>

Bhuvan Indian Geo Platform of ISRO: <https://bhuvan.nrsc.gov.in/>

Field Techniques and Survey based Project Report -2

Course code	: BGGS_502				
Course Name	: Field Techniques and Survey based Project Report-2				
Semester /Year	: V				
		L	T	P	C
		6			6

Course Objectives

The objectives of this course are:

1. To provide the students with the understanding of socioeconomic conditions of chosen rural/urban dwellers through means of observations, surveying and interview with the households.
2. Now they will be able to write a report/project on living environment of rural/urban dwellers from chosen village.
3. They will also know the basics of research. So it will be easy to prepare field design, questionnaires and construction of sketch.

Course Outcomes

Upon successful completion of the course a:

Paper code	Paper name	Course outcome
BGGS_502	Field Techniques and Survey based Project Report	CO1- To provide the students with the understanding of socioeconomic conditions of chosen rural/urban dwellers through means of observations, surveying and interview with the households. CO2- Now they will be able to write a report/project on living

		<p>environment of rural/urban dwellers from chosen village</p> <p>CO3- They will be able to prepare field design, questionnaires and construction of sketch.</p> <p>CO4-. They will also know the basics of research.</p> <p>CO5-. They will be able to evaluate all the work done by them in ground.</p> <p>CO6- They will be able to prepare a project report on different cultural values bases for ground or allotted survey area.</p>
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CO-PO Mapping

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	3	3	3	3	3	3	3	1	-	1	3
CO2	3	3	3	3	3	3	3	3	1	-	2	3
CO3	3	3	3	3	3	3	3	2	-	-	1	3
CO4	3	3	3	3	3	3	3	3	-	1	1	3
CO5	3	3	3	3	3	3	3	2	-	1	2	3
CO6	3	3	3	3	3	3	3	3	-	1	1	3

3: Highest Correlated, 2: Medium Correlated, 1: Lowest Correlated

Course Contents

1. Field Work in Geographical Studies – Role, Value and Ethics of Field-Work.
2. Defining the Field and Identifying the Case Study – Rural / Urban / re / Human / Environmental.
3. Field Techniques – Merits, Demerits and Selection of the Appropriate Technique; Observation (Participant / Non-Participant).
4. Questionnaires (Open/ Closed / Structured / Non-Structured); Interview with Special Focus on Focused Group Discussions; Space Survey (Transects and Quadrants, Constructing a Sketch).
5. Designing the Field Report – Aims and Objectives, Methodology, Analysis, Interpretation and Writing the Report.

Practical Record

1. Each student will prepare an individual report based on primary and secondary data collected during field work.
2. The duration of the field work should not exceed 10 days.
3. The word count of the report should be about **8000 to 12,000** excluding figures, tables, photographs, maps, references and appendices.
4. One copy of the report on A 4 size paper should be submitted in soft binding

Reading List**Text Books:**

1. Creswell J., 1994: *Research Design: Qualitative and Quantitative Approaches* Sage Publications.
2. Dikshit, R. D. 2003. *The Art and Science of Geography: Integrated Readings*. Prentice-Hall of India, New Delhi.
3. Evans M., 1988: "Participant Observation: The Researcher as Research Tool" in *Qualitative Methods in Human Geography*, eds. J. Eyles and D. Smith, Polity.
4. <https://www.amazon.com/dp/B07DZKT9KM?tag=uuid10-20>
5. <https://www.pdfdrive.com/land-surveying-books.html>
6. <https://ncert.nic.in/textbook/pdf/legy305.pdf>

Reference Book:

1. Project Reports & Appraisals 7th Edition, H. P. S. Pahwa

Websites:

Indian Institute of Surveying & Mapping: <http://www.iism.nic.in/>
 Survey of India Department of Science & Technology: <http://www.surveyofindia.gov.in/>
 Indian National Cartographic Association: <https://incaindia.org/>
 Bhuvan Indian Geo Platform of ISRO: <https://bhuvan.nrsc.gov.in/>

Course code	: BGGGS_503			
Course Name	: INDIA – LOCATIONAL ASPECTS (MAP)			
Semester	: V			
	L	T	P	C
	6			6

Course Objectives**The objectives of this course are:**

1. The paper is designed to acquaint the students with the importance of location as one of the important aspects of geographical studies.
2. The aim to promote awareness among students about Atlas.
3. They will be able to get job in the department of Survey of India, and other concern private department.

Course Outcome

Paper code	Paper name	Course outcome
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BGG5_503	India – Locational Aspects (Map)	<p>CO1- Students will able to recall the detail knowledge about physiographic divisions.</p> <p>CO2- Students will be able to explain and compare between different regions of India.</p> <p>CO3- They will be able to clarity about physical, climatic and natural vegetation demographic, social, cultural, agriculture and economic spheres of Indian regions.</p> <p>CO4-. They will able to prepare maps of physical, demographic, social, cultural, agriculture and economic spheres of Indian regions.</p> <p>CO5- They will be able to present critical description of different cultural landscape and their development.</p> <p>CO6- They will be able to prepare the map and explain them in reference to various fields of Geography in India.</p>
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CO-PO Mapping

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	-	-	-	-	3	1	3	-	3	1	3
CO2	3	-	3	2	3	2		1	-	2	-	1
CO3	3	-	3	2	3	2	3	2	-	2	-	2
CO4	3	-	3	2	3	2	3	3	-	2	-	3
CO5	3	-	3	2	3	2	3	3	-	2	-	3
CO6	3	-	3	2	3	2	3	3	-	2	-	3

Note : The paper consists of four units.4 long,5 short & 10 very short questions will be set from all unit. The candidates will be required to attempt all section.

There will be two parts of this course:

- (A) The paper consists of four units.4 long,5 short & 10 very short questions will be set from all unit. The candidates will be required to attempt all section. The paper is map oriented.
- (B) An out line map of India will be provided to the students and they will have to mark locations on it. 10 locations will be given and 02 marks for each correct location.

Course Contents :

Physical –

Mountain and ranges, rivers, forest, soil, and natural regions.

Cultural – State and Capitals, Impotent Cities, Population, Rural –Urban, tribal, Planning regions.

Economic –

Agricultural regions Cities/ belts, Industrial, regions and complexes, Power plants, Hydro Power Projects, Important ports and transport routes, important resources.

Other –

Bio diversity, National Parks.

Reading List Books:

Text Books:

1. Hussain M., 1992: *Geography of India*, Tata McGraw Hill Education.
2. Mamoria C. B., 1980: *Economic and Commercial Geography of India*, Shiva Lal Agarwala.
3. Miller F. P., Vandome A. F. and McBrewster J., 2009: *Geography of India: Indo-Gangetic Plain, Thar Desert, Major Rivers of India, Climate of India, Geology of India*, Alpha script Publishing.
4. Nag P. and Sengupta S., 1992: *Geography of India*, Concept Publishing.
5. Pichamuthu C. S., 1967: *Physical Geography of India*, National Book Trust.
6. Sharma T. C. and Coutinho O., 1997: *Economic and Commercial Geography of India*, Vikasb , Publishing.
7. Singh Gopal, 1976: *A Geography of India*, Atma Ram.
8. Spate O. H. K. and Learmonth A. T. A., 1967: *India and Pakistan: A General and Regional*.
9. Rana, Tejbir Singh, 2015, *Diversity of India* , R.K. Books, Delhi.
10. <https://www.gale.com/ebooks/9781615302024/understanding-india-the-geography-of-india>
11. <https://www.indianculture.gov.in/ebooks/india-regional-geography>
12. <https://sarkaribooklet.com/india-atlas-book-pdf-in-hindi/>
13. <https://ishwarahir.in/atlas-book-pdf/>

Reference books.

1. . Hussain M., 1992: *Geography of India*, Tata Mc Graw Hill Education.
2. INDIA A COMPREHENSIVE GEOGRAPHY, D.R. Khullar, Kalyani Publication.
Geography, Methuen.

Websites:

Indian Institute of Surveying & Mapping: <http://www.iism.nic.in/>
 Survey of India Department of Science & Technology: <http://www.surveyofindia.gov.in/>
 Indian National Cartographic Association: <https://incaindia.org/>
 Bhuvan Indian Geo Platform of ISRO: <https://bhuvan.nrsc.gov.in/>

Generic Elective (1)

World's Geography

Course code	: BGGG_501			
Course Name	: World' s Geography			
Semester /Year	: V			
	L	T	P	C
	6			6

Course Objectives

The objectives of this course are:

1. Students of non-core geography subjects will understand the basics of world geography.
2. They will also know about natural and man-made resources their world distribution.
3. They will be able to understand the world's major agricultural and mineral resources region.

Course Outcomes

Upon successful completion of the course a:

Paper code	Paper name	Course outcome
BGGG_501	World' s Geography	CO1- Students will be able to recall solar system. CO2- Students will be able to describe the movements of earth. CO3- They will be able to draw a diagram of movements of earth. CO4-. They will be able to differences between different types of resource region of the world. CO5-.They will be able to write about economic and natural region of the world. CO6- They will be able to prepare a plan and map about economic and natural region of the world.

CO-PO Mapping

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	-	3	-	3	-	3	3	3	-	1	3
CO2	3	-	3	-	3	-	3	3	3	-	2	3
CO3	3	-	3	-	3	-	3	2	3	-	-1	2

The objectives of this course are:

1. To develop the skill of understanding about natural calamities and disaster and, also realize the consequences as well as preparedness.
2. After end of this syllabus the students will understand the natural calamities to disaster impact region of the country.

Course Outcomes**Upon successful completion of the course a:**

Paper code	Paper name	Course outcome
BGGG_502	Disaster Risk Reduction	<p>CO1- Students will learn To develop the skill of understanding about natural calamities and disaster and, also realize the consequences as well as preparedness.</p> <p>CO2- Students will be able to explain the natural calamities and disaster.</p> <p>CO3- They will be able to rate the calamities region of the country.</p> <p>CO4- They will design do's and don'ts during disasters.</p> <p>CO5-. They will be able to evaluate the loss of property and life in various regions and various type of disaster.</p> <p>CO6- They will be able to write and prepare a map for the disaster affected region of their state and country.</p>

CO-PO Mapping

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	-	3	-	3	-	3	3	-	-	1	1
CO2	3	-	3	-	3	-	3	3	-	1	1	1
CO3	3	-	3	-	3	-	3	2	-	1	2	1
CO4	3	-	3	-	3	-	3	3	2	1	2	2
CO5	3	-	3	-	3	-	3	3	2	-	-	2
CO6	3	-	3	-	3	-	3	3	2	-	1	3

3: Highest Correlated, 2: Medium Correlated, 1: Lowest Correlated

Course Contents

1. Disaster; Hazards, Risk, Vulnerability and Disasters: Definition and Concepts.
2. Disasters in India: (a) Causes Impact, Distribution and Mapping: Flood and Drought.
3. Disasters in India: (b) Causes, Impact, Distribution and Mapping: Earthquake and Cyclone.
4. Human induced disasters: Causes, Impact, Distribution and Mapping.

5. Disaster Risk Reduction: Mitigation and Preparedness, NDMA and NIDM; Community-Based Disaster Management; Do's and Don'ts During Disasters

Reading List

Text Books:

1. Government of India. (1997) Vulnerability Atlas of India. New Delhi, Building Materials & Technology Promotion Council, Ministry of Urban Development, Government of India.
2. Kapur, A. (2010) Vulnerable India: A Geographical Study of Disasters, Sage Publication, New Delhi.
3. Modh, S. (2010) Managing Natural Disaster: Hydrological, Marine and Geological Disasters, Macmillan, Delhi.
4. Singh, R.B. (2005) Risk Assessment and Vulnerability Analysis, IGNOU, New Delhi. Chapter 1, 2 and 3
5. Singh, R. B. (ed.), (2006) Natural Hazards and Disaster Management: Vulnerability and Mitigation, Rawat Publications, New Delhi.
6. Sinha, A. (2001). Disaster Management: Lessons Drawn and Strategies for Future, New United Press, New Delhi.
7. Stoltman, J.P. et al. (2004) International Perspectives on Natural Disasters, Kluwer Academic Publications. Dordrecht.
8. Singh Jagbir (2007) "Disaster Management Future Challenges and Oppurtunities", 2007. Publisher- I.K. International Pvt. Ltd. S-25, Green Park Extension, Uphaar Cinema Market, New Delhi.
- 9- <https://www.kobo.com/us/en/ebook/disaster-risk-reduction>
10. https://books.google.co.in/books/about/Disaster_Management.html?id=_0h1DwAAQBAJ&redir_esc=y

Reference Book:

1. Singh, R. B. Disaster Management. New Delhi: Rawat Publications., 2008.
2. Narayan, B. Disaster Management, New Delhi: A.P.H. Publishing Corporation ,2009

Semester- VI

S.	Course	Couse Code	Course Name	Periods	Evaluation scheme	Subject
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No.	Category			L	T	P	C	Sessional (Internal)	External (ESE)	Total
Theory										
1	Core/Elective	BGGD_601	Economic Geography	4			4	30	70	100
2	Core/Elective	BGGD_602	OR Geography of Tourism	4			4	30	70	100
3		BGGS_601	Geography Skill Enhancement Course - GIS based Project Report - 2(Practical)	6			6	30	70	100
4		BGGS_602	OR Field Techniques and Survey based Project Report - 2(Practical)	6			6	30	70	100
5		BGGG_601	Generic Elective – 1- Geography of India	4			4	30	70	100
6		BGGG_602	2-- Disaster Risk Reduction	4			4	30	70	100
		BGGG_603	OR 3- Sustainability and Development	6			6	30	70	100
		BGGG_604	OR 4- Geography of the Himalaya	6			6	30	70	100
Practical										
1		BGGL_601	Geography Practical			4	2	30	70	100
Total				16		4	18	120	280	400

Examination Scheme:

Components	I st internal	II nd Internal	Presentation/ Assignment/ Project	External (ESE)
Weightage(%)	Marks	Marks	Marks	Marks
100%	15	15	30	70

Economic Geography

Course code	: BGGD_601			
Course Name	: Economic Geography			
Semester /Year	: VI			
	L	T	P	C
	4			4

Course Objectives**The objectives of this course are:**

1. To educate the students about nature and types of economic activities with relation to location, space, place and geographical resources.
2. At the end of the lesson, students should be able to conceptualize, demarcate and analyze the geographical determinates of various economic activities.
3. To develop the skill of successful economist.

Course Outcomes**Upon successful completion of the course a:**

Paper code	Paper name	Course outcome
BGGD_601	Economic Geography	<p>CO1- Students will memorize different types of economic activities.</p> <p>CO2- Students will be able to classify world economic region on the basis of different types of economic activities and availability of resources.</p> <p>CO3- They will be able to draw the world resource distribution map.</p> <p>CO4-. They will be able to know the concept of world's resource region and responsible factors for the development of economy in these regions.</p> <p>CO5-.They will be able to prepare world resources map after studying all the chapters.</p> <p>CO6- They will be able to examine and write abpot world economy after covid- 19</p>

CO-PO Mapping

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	3	3	-	-	3	-	1	-	-	1	1
CO2	3	3	2	-	-	2		1	-	1	1	1
CO3	3	3	3	-	-	2	3	2	-	1	2	1
CO4	3	3	3	-	-	2	3	2	2	1	2	2
CO5	3	3	3	-	2	2	3	2	2	-	-	2
CO6	3	3	3	-	3	2	3	2	2	-	1	3

3: Highest Correlated, 2: Medium Correlated, 1: Lowest Correlated

Course Contents

1. Definition, Approaches and Fundamental Concepts of Economic Geography; Patterns of Development.
2. Locational Theories – Agriculture (VonThunen) and Industrial (Weber).
3. Primary Activities – Intensive Subsistence Farming, Commercial Grain Farming, Plantation, Commercial Dairy Farming, Commercial Fishing, and Mining (iron ore, coal and petroleum).
4. Secondary Activities – Cotton Textile Industry, Petro-Chemical Industry, Major Manufacturing Regions.
5. Tertiary and Quaternary Activities – Modes of Transportation, Patterns of International Trade, and
6. Information and Communication Technology Industry.
7. World economy after covid- 19

Reading List**Text Books:**

1. Alexander J. W., 1963: *Economic Geography*, Prentice-Hall Inc., Englewood Cliffs, New Jersey.
2. Bagchi-Sen S. and Smith H. L., 2006: *Economic Geography: Past, Present and Future*, Taylor and Francis.
3. Coe N. M., Kelly P. F. and Yeung H. W., 2007: *Economic Geography: A Contemporary Introduction*, Wiley-Blackwell.
4. Combes P., Mayer T. and Thisse J. F., 2008: *Economic Geography: The Integration of Regions and Nations*, Princeton University Press.
5. Durand L., 1961: *Economic Geography*, Crowell.

6. Hodder B. W. and Lee R., 1974: *Economic Geography*, Taylor and Francis.

7- <https://www.pdfdrive.com/world-geography-books.html>

8- https://play.google.com/store/apps/details?id=com.sanaedutech.worldgeography&hl=en_IN&gl=US

9- <https://www.gale.com/ebooks/9781642654264/world-geography>

Reference Book:

1. Economic Geography of India, T.C. Sharma, Rawat book Publication, New Delhi.
2. Indian Economy, A.N. Agarwal, New Age International; 2019.

OR

Geography of Tourism

Course code	: BGGD_602				
Course Name	: Geography of Tourism				
Semester /Year	: VI				
		L	T	P	C
		4			4

Course Objectives

The objectives of this course are:

1. Students will understand the concept, parameters and types of tourism.
2. They will also study the impact of tourism on economy and society.
3. They will learn about the tourist places of different region of the country.

Course Outcomes

Upon successful completion of the course a:

Paper code	Paper name	Course outcome
BGGD_602	Geography of Tourism	<p>CO1- Students will learn about concept, parameters and types of tourism.</p> <p>CO2- Students will be able to explain the impact of tourism on economy and society.</p> <p>CO3- They will be able to draw and find the tourist places in the country.</p> <p>CO4-. They will be able to differences between Himalayan tourism and Desert region tourism.</p> <p>CO5-. They will be able to prepare project on Tourism.</p> <p>CO6- They will be able to write and go for the case study in various tourist region of the country.</p>

CO-PO Mapping

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	3	3	-	3	-	3	3	-	-	1	3
CO2	3	3	3	-	3	-	3	3	-	1	1	1
CO3	3	3	3	-	3	-	3	2	-	1	2	1
CO4	3	3	3	-	3	-	3	3	2	1	2	2
CO5	3	3	3	-	3	-	3	3	2	-	-	-

3: Highest Correlated, 2: Medium Correlated, 1: Lowest Correlated

Course Contents

1. Concepts, Nature and Scope; Inter-Relationships of Tourism, Recreation and Leisure; Geographical

Parameters of Tourism by Robinson.

2. Type of Tourism: Nature Tourism, Cultural Tourism, Medical Tourism, Pilgrimage

3. Recent Trends of Tourism: International and Regional; Domestic (India); Eco-

Tourism, Sustainable Tourism, Meetings, Incentives, Conventions and Exhibitions (MICE)

4. Impact of Tourism: Economy; Environment; Society

5. Tourism in India: Tourism Infrastructure; Case Studies of Himalaya, Desert and Coastal and Heritage; National Tourism Policy.

Reading List**Text Books:**

1. Dhar, P.N. (2006) International Tourism: Emerging Challenges and Future Prospects. Kanishka, NewDelhi.
2. Hall, M. and Stephen, P. (2006) Geography of Tourism and Recreation – Environment, Place and Space, Routledge, London.
3. Kamra, K. K. and Chand, M. (2007) Basics of Tourism: Theory, Operation and Practise, Kanishka Publishers, Pune.
4. Page, S. J. (2011) Tourism Management: An Introduction, Butterworth-Heinemann- USA. Chapter 2.
5. Raj, R. and Nigel, D. (2007) Morpeth Religious Tourism and Pilgrimage Festivals Management: An International perspective by, CABI, Cambridge, USA.
6. Tourism Recreation and Research Journal, Center for Tourism Research and Development, Lucknow.

10- Singh Jagbir (2014) "Eco-Tourism" Published by - I.K. International Pvt. Ltd.

- 11- [https://books.google.co.in/books/about/An Introduction to the Geography of Tour.html?id=8jRjWvpQHa8C&redir_esc=y](https://books.google.co.in/books/about/An+Introduction+to+the+Geography+of+Tour.html?id=8jRjWvpQHa8C&redir_esc=y)
 12- <https://www.ebooks.com/en-in/95756743/geography-of-tourism/peter-mason/?c=1>
 13- <https://www.kobo.com/ww/en/ebook/tourism-geography-5>
 14- <https://www.worldcat.org/title/geography-of-tourism/oclc/1130105847>

Reference Book:

1. Singh, Savindra 2001. *Paryavaran Bhugol*, Prayag Pustak Bhawan, Allahabad. (in Hindi)
2. Singh, Savindra 2001. *Paryavaran Bhugol*, Prayag Pustak Bhawan, Allahabad. (in English)

Practical-VI

Course code	: BGGL_601			
Course Name	: Practical Geography			
Semester /Year	: VI			
	L	T	P	C
			4	2

Course Objectives**The objectives of this course are:**

1. To expose the students towards the basic knowledge about Remote Sensing, GIS, aerial photographs and bases of remote sensing applications.
2. Now they will be develop in themselves the analysis, assessments and application of Plane table survey and Indian clinometers in practical world.
3. To develop the skill to work with aerial photographs and satellite based data store department for earning purpose and serve the nation.

Course Outcomes**Upon successful completion of the course:**

Paper code	Paper name	Course outcome
BGGL_601	Geography Practical	CO1- Students will be able to define survey and remote sensing. CO2- Students will be able to explain different methods of surveying. CO3- They will be able to draw the sketch and map of ground. CO4-. They will be able to select different methods of survey. CO5-.They will be able to develop ability to prepare a plan for a region. CO6- Students will be able to write the details about use of various survey instruments in geography and its applied aspect.

CO-PO Mapping

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	3	3	1	1	-	3	2	-	-	1	3
CO2	3	3	3	1	1	-	3	2	1	-	3	2
CO3	3	3	3	2	-	-	3	2	-	-	3	3
CO4	3	3	3	3	-	-	3	3	-	-	3	3
CO5	3	3	3	1	1	-	3	3	1	-	3	3
CO6	3	3	3	1	1	-	3	3	1	-	3	3

3: Highest Correlated, 2: Medium Correlated, 1: Lowest Correlated

Course Contents**Unit-1**

Survey: Introduction, History and methods of survey;
Plane Table Survey.

Unit-2

Plane Table Survey- Radiation and Intersection
Methods.

Unit-3

Use and handling of Indian Clinometers.

Unit-4

GIS and Remote Sensing Definition, Use and Application in Geography.

Division of Marks (External & Internal Examiners will be appointed by the university) One field survey exercises with clinometers) (duration four hours-a.20 and b. 10 marks) GIS and Remote Sensing exercise-20 Marks

Sessional record and viva-voce- 10+10 marks.

Reading List**Text Books:**

1. Dent B. D., 1999: *Cartography: Thematic Map Design*, (Vol. 1), McGraw Hill.
2. Gupta K. K and Tyagi V. C., 1992: *Working with Maps*, Survey of India, DST, NewDelhi.
3. Robinson A., 1953: *Elements of Cartography*, John Wiley.
4. - <https://www.amazon.com/dp/B07DZKT9KM?tag=uuid10-20>
- 5-. <https://www.pdfdrive.com/land-surveying-books.html>
- 6- <https://www.esri.com/en-us/news-publications/ebooks>

7- <https://www.amazon.in/Image-Processing-GIS-Remote-Sensing-ebook/dp/B01BKTGKCG>

Reference Book:

1. Sharma J. P., 2010: *Prayogic Bhugol*, Rastogi Publishers.

Websites:

Indian Institute of Surveying & Mapping: <http://www.iism.nic.in/>

Survey of India Department of Science & Technology: <http://www.surveyofindia.gov.in/>

Indian National Cartographic Association: <https://incaindia.org/>

Bhuvan Indian Geo Platform of ISRO: <https://bhuvan.nrsc.gov.in/>

Skill Enhancement course

GIS based Project Report -1

Course code	: BGGG_601			
Course Name	: GIS based Project Report			
Semester /Year	: VI			
	L	T	P	C
	6			6

Course Objectives

The objectives of this course are:

1. Students will be able to know about meaning and types and uses of GIS and it's data.
2. They will be able to understand the use of GIS for preparation of digital maps.
3. To develop the skill of preparation of digital map for urban sprawl and forests monitoring in Himalayan state.

Course Outcomes

Upon successful completion of the course a:

Paper code	Paper name	Course outcome
BGGS_601	GIS based Project Report	CO1- Students will recall the knowledge about GIS. CO2- Students will be able to explain the types of GIS data. CO3- They will be able to apply to use online data for the digital mapping. CO4- They will be able to ask question regarding slow progress of GIS tool in India. CO5-. They will be able to evaluate the progress and use of GIS technique in India. CO6- They will be able to prepare a map with the help of GIS tool.

CO-PO Mapping

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	3	3	2	3	3	3	2	3	3	3	2
CO2	3	-	-	-	-	-	-	-	3	2	3	2
CO3	3	-	-	2	3	2	3	2	-	-	3	2
CO4	3	-	3	3	3	2	3	3	3	2	3	3
CO5	3	3	3	1	3	2	3	3	3	2	3	3
CO6	3	-	3	1	3	3	3	3	3	3	3	3

3: Highest Correlated, 2: Medium Correlated, 1: Lowest Correlated

Course Contents**Unit-1**

Geographical Information System (GIS): Definition and Components and sources.

Unit-2

GIS Data Structures: Types (spatial and Non-spatial), Raster and Vector Data Structure.

Unit-3

GIS Data Analysis: Input; Geo-Referencing; Editing and Output; Overlays.

Unit-4

Application of GIS in Land Use Mapping; Application of GIS in Urban Sprawl and Forests Monitoring.

Practical Record: A project file consisting of 5 exercises on using any GIS Software on above mentioned themes.

Reading List**Text Books:**

1. Bhatta, B. (2010) Analysis of Urban Growth and Sprawl from Remote Sensing, Springer, Berlin Heidelberg.41
2. Burrough, P.A., and McDonnell, R.A. (2000) Principles of Geographical Information System-Spatial Information System and Geo-statistics. Oxford University Press
3. Chauniyal, D.D. (2010) SudurSamvedanevamBhogolikSuchanaPranali, Sharda Pustak Bhawan, Allahabad

4. Heywoods, I., Cornelius, S and Carver, S. (2006) An Introduction to Geographical Information system. Prentice Hall.
5. Jha, M.M. and Singh, R.B. (2008) Land Use: Reflection on Spatial Informatics Agriculture and Development, New Delhi: Concept.
6. Nag, P. (2008) Introduction to GIS, Concept India, New Delhi.
7. Sarkar, A. (2015) Practical geography: A systematic approach. Orient Black Swan Private Ltd., New Delhi
8. Singh, R.B. and Murai, S. (1998) Space Informatics for Sustainable Development, Oxford and IBH, New Delhi.
- 9- <https://www.esri.com/en-us/news-publications/ebooks>
- 10- <https://www.amazon.in/Image-Processing-GIS-Remote-Sensing-ebook/dp/B01BKTGKCG>

Websites:

Indian Institute of Surveying & Mapping: <http://www.iism.nic.in/>
 Survey of India Department of Science & Technology: <http://www.surveyofindia.gov.in/>
 Indian National Cartographic Association: <https://incaindia.org/>
 Bhuvan Indian Geo Platform of ISRO: <https://bhuvan.nrsc.gov.in/>

Or**3. Field Techniques and Survey based Project Report -2**

Course code	:	BGGS_602				
Course Name	:	Disaster Risk Reduction				
Semester /Year	:	VI				
			L	T	P	C
			6			6

Course Objectives**The objectives of this course are:**

1. To provide the students with the understanding of socioeconomic conditions of chosen rural/urban dwellers through means of observations, surveying and interview with the households.
2. Now they will be able to write a report/project on living environment of rural/urban dwellers from chosen village
3. They will be able to prepare field design, questionnaires and construction of sketch.

Course Outcomes

Upon successful completion of the course a:

Paper code	Paper name	Course outcome
BGGS_602	Field Techniques and Survey based Project Report	<p>CO1- Students will find the understanding of socio-economic conditions of chosen rural/urban dwellers through means of observations, surveying and interview with the households.</p> <p>CO2- Students will be able to explain various components of village survey.</p> <p>CO3- They will be able to prepare field design, questionnaires and construction of sketch.</p> <p>CO4-. They will be examine various parameters to study the rural and urban survey.</p> <p>CO5-. Now they will be able to write a report/project on living environment of rural/urban dwellers from chosen village.</p> <p>CO6- Now they will be able to able to develop surveying skill.</p>

CO-PO Mapping

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	3	3	2	3	3	3	2	3	3	3	2
CO2	3	-	-	-	-	-	-	-	-	-	-	1
CO3	3	3	3	2	3	2	3	2	3	2	3	2
CO4	3	3	3	3	3	2	3	3	3	2	3	3
CO5	3	3	3	1	3	2	3	3	3	2	3	3

3: Highest Correlated, 2: Medium Correlated, 1: Lowest Correlated

Course Contents

Unit-1

Field Work in Geographical Studies – Role, Value and Ethics of Field-Work.
Defining the Field and Identifying the Case Study – Rural / Urban / Human / Environmental.

Unit-2

Field Techniques – Merits, Demerits and Selection of the Appropriate Technique; Observation (Participant / Non-Participant).

Unit-3

Questionnaires (Open/ Closed / Structured / Non-Structured); Interview with Special Focus on Focused Group

Discussions; Space Survey (Transects and Quadrants, Constructing a Sketch).

Unit-4

Designing the Field Report – Aims and Objectives, Methodology, Analysis, Interpretation and Writing the Report.

Practical Record

1. Each student will prepare an individual report based on primary and secondary data collected during field work.
2. The duration of the field work should not exceed 10 days.
3. The word count of the report should be about **8000 to 12,000** excluding figures, tables, photographs, maps, references and appendices.
4. One copy of the report on A 4 size paper should be submitted in soft binding

Reading List

Text Books:

1. Creswell J., 1994: *Research Design: Qualitative and Quantitative Approaches* Sage Publications.
2. Dikshit, R. D. 2003. *The Art and Science of Geography: Integrated Readings*. Prentice-Hall of India, New Delhi.
3. Evans M., 1988: "Participant Observation: The Researcher as Research Tool" in *Qualitative 4-Methods in Human Geography*, eds. J. Eyles and D. Smith, Polity.
- 5- <https://www.esri.com/en-us/news-publications/ebooks>
- 6- <https://www.amazon.in/Image-Processing-GIS-Remote-Sensing-ebook/dp/B01BKTGKCG>

Reference Book:

3. **INDIA A COMPREHENSIVE GEOGRAPHY, D.R. Khullar, Kalyani Publication.**

Generic Elective (4 Papers)**Geography of India**

Course code	: BGGG_601				
Course Name	: Geography of India				
Semester /Year	: VI				
		L	T	P	C
		6			6

Course Objectives**The objectives of this course are:**

1. To provide detail knowledge about physiographic, demography and cultural attributes of Indian landscapes, agriculture, economy, resource distribution.
2. Now there would be conceptual clarity about physical, demographic, social, cultural, agriculture and economic spheres of Indian regions.
3. To develop the feeling of nationalism and socialism in students.

Course Outcomes**Upon successful completion of the course a:**

Paper code	Paper name	Course outcome
BGGG_601	Geography of India	<p>CO1- Students will able to recall detail knowledge about physiographic divisions and unity in diversity of India.</p> <p>CO2- Students will be able to explain and compare between Plans and policies introduced by Indian government.</p> <p>CO3- They will be able to clarity about physical, climatic and natural vegetation demographic, social, cultural, agriculture and economic spheres of Indian regions.</p> <p>CO4-. They will able to prepare maps of physical, demographic, social, cultural, agriculture and economic spheres of Indian regions.</p> <p>CO5- They will be able to prepare and explain the plan for the development of various fields of Geography in India.</p> <p>CO6- Now students will be able to analyze the demographic and other attributes of Uttrakhand and India.</p>

CO-PO Mapping

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	3	3	-	-	3	-	1	-	3	-	1
CO2	3	3	2	-	-	2		1	-	2	-	1
CO3	3	3	3	-	-	2	3	2	-	2	3	2
CO4	3	3	3	-	-	2	3	2	-	2	3	2

CO5	3	-	-	-	-	2	3	2	-	2	3	2
CO6	3	-	-	-	-	2	3	2	-	2	3	2

3: Highest Correlated, 2: Medium Correlated, 1: Lowest Correlated

Course Contents

Unit-1

Physical Setting – Location, Structure and Relief, Drainage, Climate.

Unit-2

Population – Size and Growth since 1901, Population Distribution, Literacy, Sex Ratio. Settlement System - Rural Settlement Types and Patterns, Urban Pattern.

Unit-3

Resource Base – Livestock (cattle and fisheries), Power (coal, and hydroelectricity), Minerals (iron ore, petroleum and bauxite).

Unit-4

Economy – Agriculture (Rice, Wheat, Sugarcane, Tea, Cotton); Industries (Cotton Textile, Iron-Steel, Automobile), Transportation Modes (Road and Rail).

Reading List

Text Books:

1. Mamoria C. B., 1980: *Economic and Commercial Geography of India*, Shiva Lal Agarwala.
3. Miller F. P., Vandome A. F. and McBrewster J., 2009: *Geography of India: Indo-Gangetic Plain, Thar Desert, Major Rivers of India, Climate of India, Geology of India*, Alpha script Publishing.
4. Nag P. and Sengupta S., 1992: *Geography of India*, Concept Publishing.
5. Pichamuthu C. S., 1967: *Physical Geography of India*, National Book Trust.
6. Sharma T. C. and Coutinho O., 1997: *Economic and Commercial Geography of India*, Vikas Publishing.
7. Singh Gopal, 1976: *A Geography of India*, Atma Ram.
8. Spate O. H. K. and Learmonth A. T. A., 1967: *India and Pakistan: A General and Regional Geography*, Methuen.
- 9-Rana, Tejbir Singh, 2015, Diversity of India, R.K. Books, Delhi.
10. <https://www.gale.com/ebooks/9781615302024/understanding-india-the-geography-of-india>
11. <https://www.indianculture.gov.in/ebooks/india-regional-geography>

Reference Book:

4. . Hussain M., 1992: *Geography of India*, Tata Mc Graw Hill Education.
5. INDIA A COMPREHENSIVE GEOGRAPHY, D.R. Khullar, Kalyani Publication.

OR

Disaster Risk Reduction

Course code	: BGGG_602			
Course Name	: Disaster Risk Reduction			
Semester /Year	: VI			
	L	T	P	C
	6			6

Course Objectives**The objectives of this course are:**

1. Students will be able to know the meaning, causes, impact of environmental hazards, vulnerability and disasters.
2. They will also able to know different types of disasters in India.
3. Now they will able to play a role of activists in different government and NGO in India to control the disasters.

Course outcomes (COs):**Upon successful completion of the course a:**

Paper code	Paper name	Course outcome
BGGG_602	Disaster Risk Reduction	<p>CO1- Students will recall meaning and types of disaster.</p> <p>CO2- Students will be able to explain the factors responsible for disaster.</p> <p>CO3- They will be illustrating various tools and methods to study the disaster.</p> <p>CO4- They will be able to examine the government programmes and policies to control the disaster in different region.</p> <p>CO5-. They will be able to evaluate the loss of property and life in various regions and various type of disaster.</p> <p>CO6- They will be able to write and prepare a map for the disaster affected region of their state and country.</p>

CO-PO Mapping

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	-	3	-	3	-	3	3	-	3	-	1
CO2	3	-	3	-	3	-	3	3	-	2	-	1
CO3	3	-	3	-	3	-	3	2	-	2	3	2
CO4	3	-	3	-	3	-	3	3	-	2	3	2
CO5	3	-	3	-	3	-	3	3	3	-	3	3
CO6	3	-	3	-	3	-	3	3	3	-	3	3

3: Highest Correlated, 2: Medium Correlated, 1: Lowest Correlated

Course Contents**Unit-1**

Disaster; Hazards, Risk, Vulnerability and Disasters: Definition and Concepts.

Unit-2

Disasters in India: (a) Causes Impact, Distribution and Mapping: Flood and Drought.

Unit-3

Disasters in India: (b) Causes, Impact, Distribution and Mapping: Earthquake and Cyclone.

Unit-4

Human induced disasters: Causes, Impact, Distribution and Mapping. Disaster Risk Reduction: Mitigation and Preparedness, NDMA and NIDM; Community-Based Disaster Management; Do's and Don'ts during Disasters.

Reading List**Text Books:**

1. Government of India. (1997) Vulnerability Atlas of India. New Delhi, Building Materials & Technology Promotion Council, Ministry of Urban Development, Government of India.
2. Kapur, A. (2010) Vulnerable India: A Geographical Study of Disasters, Sage Publication, New Delhi.
3. Modh, S. (2010) Managing Natural Disaster: Hydrological, Marine and Geological Disasters, Macmillan, Delhi.
4. Singh, R.B. (2005) Risk Assessment and Vulnerability Analysis, IGNOU, New Delhi. Chapter 1, 2 and 3
5. Singh, R. B. (ed.), (2006) Natural Hazards and Disaster Management: Vulnerability and Mitigation, Rawat Publications, New Delhi.
6. Sinha, A. (2001). Disaster Management: Lessons Drawn and Strategies for Future, New

United Press, New Delhi.

7. Stoltman, J.P. et al. (2004) International Perspectives on Natural Disasters, Kluwer Academic Publications. Dordrecht.

8. Singh Jagbir (2007) “Disaster Management Future Challenges and Opportunities”, 2007. Publisher- I.K. International Pvt. Ltd. S-25, Green Park Extension, Uphaar Cinema Market, New Delhi.

9- <https://www.kobo.com/us/en/ebook/disaster-risk-reduction>

10. https://books.google.co.in/books/about/Disaster_Management.html?id=_0h1DwAAQBAJ&redir_esc=y

Reference Book:

1. Singh, R. B. Disaster Management. New Delhi: Rawat Publications., 2008.
2. Narayan, B. Disaster Management, New Delhi: A.P.H. Publishing Corporation ,2009

OR

Sustainability and Development

Course code	: BGGG_603				
Course Name	: Sustainability and Development				
Semester /Year	: VI				
		L	T	P	C
		6			6

Course Objectives

The objectives of this course are:

1. Students will learn about meaning, components and importance of sustainability.
2. They will be able the concept of sustainability in the various fields of their practical life.
3. To earn the money in the field of sustainability a concept introduced by government in the field of resource utilization.

Course outcomes (COs):

Upon successful completion of the course a:

Paper code	Paper name	Course outcome
BGGG_603	Sustainability and Development	CO1- Students will find the meaning, components and importance of sustainability. CO2- Students will be able to explain the importance of sustainability for development.

		<p>CO3- They will be able to illustrate need and importance of sustainability.</p> <p>CO4-. They will be able to examine the policies, model and programs for sustainability.</p> <p>CO5-.They will be able to write an assignment of importance, policies and programs for sustainability.</p> <p>CO6- Students will be able to develop the knowledge of sustainability and its optimum in nature.</p>
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CO-PO Mapping

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	3	3	-	-	3	3	3	-	3	-	1
CO2	3	3	3	-	2	-	3	3	-	2	-	1
CO3	3	3	3	-	-	3	3	2	-	2	3	2
CO4	3	3	3	-	-	3	3	3	-	2	3	2
CO5	3	3	3	-	2	3	3	3	3	-	3	3

3: Highest Correlated, 2: Medium Correlated, 1: Lowest Correlated

Course Contents

Unit-1

Sustainability: Definition, Components and Sustainability for Development. The Millennium Development Goals: National Strategies and International Experiences

Unit-2

Sustainable Development: Need and examples from different Ecosystems.

Unit-3

Inclusive Development: Education, Health; Climate Change: The role of higher education in sustainability; The human right to health; Poverty and disease; Sustainable Livelihood Model; Policies and Global Cooperation for Climate Change.

Unit-4

Sustainable Development Policies and Programmes: Rio+20; Goal-Based Development; Financing for Sustainable Development; Principles of Good Governance; National Environmental Policy, CDM.

Reading List

Text Books:

1. Agyeman, Julian, Robert D. Bullard and Bob Evans (Eds.) (2003) Just Sustainabilities: Development in an Unequal World. London: Earthscan. (Introduction and conclusion.).

2. Ayers, Jessica and David Dodman (2010) "Climate change adaptation and development I: the state of the debate". Progress in Development Studies 10 (2): 161-168.

3. Baker, Susan (2006) Sustainable Development. Milton Park, Abingdon, Oxon; New York, N.Y.: Routledge. (Chapter 2, “The concept of sustainable development”).
4. Brosius, Peter (1997) “Endangered forest, endangered people: Environmentalist representations of indigenous knowledge”, Human Ecology 25: 47-69.
5. Lohman, Larry (2003) “Re-imagining the population debate”. Corner House Briefing 28.
6. Martínez-Alier, Joan et al (2010) “Sustainable de-growth: Mapping the context, criticisms and future prospects of an emergent paradigm” Ecological Economics 69: 1741-1747.
7. Merchant, Carolyn (Ed.) (1994) Ecology. Atlantic Highlands, N.J: Humanities Press. (Introduction, pp 1-25.)
8. Robbins, Paul (2004) Political Ecology: A Critical Introduction. Blackwell Publishing.
- 9- <https://www.eolss.net/ebooklib/bookinfo/principles-sustainable-development.aspx>
- 10- <https://www.kobo.com/in/en/ebooks/sustainable-development>

Reference Book:

1. Singh, Savindra 2001. *Paryavaran Bhugol*, Prayag Pustak Bhawan, Allahabad. (in Hindi)
2. Singh, Savindra 2001. *Paryavaran Bhugol*, Prayag Pustak Bhawan, Allahabad. (in English)

OR

**GEOGRAPHY OF THE
HIMALAYA**

Course code	:	BGGG_604				
Course Name	:	Geography of the Himalaya				
Semester /Year	:	VI				
			L	T	P	C
			6			6

Course Objectives

The objectives of this course are:

1. To provide the knowledge of Himalaya to the students.
2. To give the information regarding economy of Himalaya.
3. To give the knowledge to the students regarding demographic composition of Himalayan states.

Course outcomes (COs):

Upon successful completion of the course a:

Paper code	Paper name	Course outcome
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BGGG_604	Geography of the Himalaya	<p>CO1- Students will recall Himalayan identity.</p> <p>CO2- Students will be able to know the Himalayan location on the map of India.</p> <p>CO3- They will be able to illustrate the Himalayan identity.</p> <p>CO4-. They will be able to evaluate government programs and policies in Himalayan region.</p> <p>CO5-.They will be able to design the map of Himalayan region.</p> <p>CO6- Students will be able to write the description and give their view on mountain developing policies introduced by center and state government.</p>
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CO-PO Mapping

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	-	-	-	-	3	1	3	-	3	-	1
CO2	3	-	-	-	2	-	1	3	-	2	-	1
CO3	3	-	-	-	-	2	3	2	-	2	3	2
CO4	3	-	-	-	-	2	3	3	-	2	3	2
CO5	3	-	-	-	2	1	3	3	3	-	3	3

3: Highest Correlated, 2: Medium Correlated, 1: Lowest Correlated

Course Contents

Unit-1

Geo- physical identity; origin of Himalaya and its structure. Climate; natural vegetation; drainage.

Unit-2

Demography and Economy – Distribution, density and growth of population.

Unit-3

Economy – Agriculture, Industry, Horticulture, Tourism and power projects.

Unit-4

Geographical account of western, central and eastern Himalaya.

Mountain Developing and Policy.

Text Books:

- Lal, J.S.&Moddle, : The Himalaya- Aspect of Change A.D
- Bose, S.C. : Land and people of the Himalaya.
- Kayastha, S. : The Himalayan Beas Basin.
- Singh, T.V.(ed.) : Mountain and Development.
- Singh, O.P.(ed.) : The Himalaya – Nature, Man & Culture
- Nityanand & Kumar, K. : The Holy Himalaya – Geographical Interpretation of Garhwal Himalaya.
- Kharkwal, S.C.: Uttarakhand – Physico – Culture Complex.
- Maithani, D.D. : Central Himalaya : Ecology, Environmental Resources & Development.
- Bhatt H.P. & Bhatt Sangita : Environmental Dimensions of Rural Settlements in the Himalaya in 1993.
- <https://archive.org/details/geographyofhimal0000enay>
- https://www.researchgate.net/publication/305650430_Geography_of_Himalaya

Reference Books:

- 1.** Geography of the Himalaya, Ahmad Enayat, Kalyani Publishers; 1992
- 2.** Rawat, M.S.S. (ed.) : Central Himalaya – Environment Development Vol. I & II.

