BOARD OF GEOGRAPHY

RASHTRASANT TUKADOJI MAHARAJNAGPUR UNIVERSITY, NAGPUR

CURRICULUM FRAMEWORK FOR THREE/ FOUR YEAR GRADUATE PROGRAM IN GEOGRAPHY

(As Per NEP 2020)

(Effective from Academic Year 2024-25)

(As Approved by Board of Studies)

COMPOSITION OF CURRICULUM DRAFT COMMITTEE for B.A.

Geography Degree (Basic /Honours) Program

1	**Dr. Jagannath V. Dadave (Chairman)** Yashwantrao Chavhan College, Lakhandur, Dist - Bhandara.	Chairman
2	Dr. Avinash Talmale. Vasantrao Naik Government Institute of Arts and Social Sciences, Nagpur	Member
3	Dr. Sushama Damodare. Vasantrao Naik Government Institute of Arts and Social Sciences, Nagpur	Member
4	Dr Megha Sawarkar. Vasantrao Naik Government Institute of Arts and Social Sciences, Nagpur	Member
5	Dr. Seema Malewar. Vasantrao Naik Government Institute of Arts and Social Sciences, Nagpur	Member
6	Dr. Ramesh Motiram Bawankule Ashok Moharkar Arts & Commerce College, Adyal Dist. Bhandara	Member
7	Dr. Deepali G. Chahande LAD Colleye For Women Of Arts, Comm Science And Snt. R D Purohit College Or Home Science , Shankar Nagar, Nagpur	Member
8	Dr. Shrawan Baliram Kapgate Shyamrao Bapu Kapgate Kala Mahavidyalaya, Sakoli Bhandara.	Member
9	Dr. G.P. Obi Reddy Principal Scientist & Head ICAR-NBSS And LUP Nagpur-33	Member
10	Dr. Digambar S. Samarth Taywade College Koradi Dist. Nagpur	Member
11	Dr. Devendra K. Bisen Manorbhai Patel College Arts Commerce & Science Deori Dist. Gondia	Member
12	Dr. Kaveri Dabhadkar Govt. Bilasa Girls P.S. College Bilaspur , Chhitasgarh - 495001	Member
13	Dr. Arjun Baban Doke Prof. & Head Deptt. Geography Baburaoji Gholap College,Sangvi, Pune-27	Member
14	Ku. Aishwarya Vishnu Wanjari (Invitee Member) C/o. Director, Vasantrao Naik Govt. Institute Social Science, Reserve Bank of India Square Nagpur	Member

UG DEGREE PROGRAMME - (Major – Geography)

Sr. No.	Heading	Particulars
1	Title of the Program	B.A. (Major - Geography)
2	Eligibility for admission	As per University Rule
3	Passing Marks	40 percent in Theory course each course (Continuous assessment) 50 percent in practical course
4	Ordinances / Regulations (if any)	As per Direction No. 15 of 2023, RTMNU and G.R. No. NEP-2020 /CR No. 09 VISHI SHIKANA-3, Shikana, Dated April20, 2023. Govt. of Maharashtra.
5	No. of Years / Semesters	Three Years / Six Semesters and Four Year/ Eight semesters
6	Level	U.G. Certificate (One Yrs.). U.G. (Two Yrs.). Diploma U.G. Degree(Three Yrs.).and U.G. Honors/Honors with Research (FourYrs.)
7	Pattern	Semester Wise 80 % Weightage to Theory & Practical 20 % Internal assessment
8	Status	Revised
9	To be implemented from the Academic Year	From Academic Year 2024-25

TOTAL CREDITS & ITS DISTRIBUTION:

B.A. Program OF Six or Eight semesters

Types of Course	SEM -I	SEM-II	SEM -III	SEM -IV	SEM -V	SEM -VI	SEM -VII (Hon)	SEM -VIII (Hon)		SEM -VII (Res)	SEM -VIII (Res)	Total Credit
Major	1 Course * 4 Credits =4	1 Course * 4 Credits =4	2 Course * 4 Credits =8	2 Course * 4 Credits =8	2 Course *4 Credits =8	2 Course * 4 Credits =8	3 Course *4 Credits =12	3 Course * 4 Credits =12		2Course * 4 Credits =8	2 Course *4 Credits =8	72
	1Course *2Credits =2	1Course *2Credits =2	1Course *2Credits =2	1Course *2Credits =2								
Major Electives	-	-	-	-	1 Course *4 Credits =4	1 Course * 4 Credits =4	1 Course *4 Credits =4	1 Course * 4 Credits =4		1 Course *4 Credits =4	1 Course * 4 Credits =4	16
Minor	-	1 Course *2Credits =2	1 Course * 4 Credits =4	1 Course * 4 Credits =4	1 Course *4Credits =4	1 Course * 4 Credits =4	1 RM *4Credits =4	-		1 RM *4Credits =4	-	20+4
OE	1 Course =4 Credits	1 Course =4 Credits	1 Course =4 Credits	1 Course =4 Credits					OR			12
VSC	1 Course * 2 Credits =2	1 Course * 2 Credits =2	1 Course * 2 Credits =2	-	1 Course *2Credits =2	-	-	-		-	-	08
SEC	1 Course * 2 Credits =2	1 Course * 2 Credits =2	-	1 Course * 2 Credits =2	-	-	-	-		-	-	06
AEC, VEC, IKS	AEC:2 VEC:2	AEC:2 VEC:2										02
OJT, FP, CC, RP	CC:2	CC:2	FP:2 CC:2	CEP:2 CC:2	FP/CEP:2	OJT:4	-	OJT:4		RP:4	RP:8	08 4-6 08 12
Total Credits	22	22	20	20	20	20	20	20		20	20	160-176

Exit Option: After 1st Year- Award of UG Certificate in Major with 40-44 Credits and an additional 4 credits core NSQF course/Internship OR continue with Major or Minor.

Exit Option: After 2nd Year—Award of UG Diplomain Major and Minor with 80-88 Credits and an additional 4 credits core NSQF course/Internship OR continue with Major or Minor.

Exit Option: After 3Rd Year—Award of UG Degree in Major with 120-132 Credit OR continue with Major or Minor.

Exit Option: After 4th Year-UG Honours Degree in Major and Minor with 160-176 Credits

Exit Option: After 4th Year—UG Degree Honours with Research Degree with 160-176 Credits

STRUCTURE OF THE CREDITS, TEACHING & EXAMINATION:

Structure and Credit Distribution of UG Degree Programme (Four Years) w.e.f. 2024-25

First Year: Semester I (UG CERTIFICATE) Geography

Sr. No.	Course Type	The program(Name of the Paper)	Course Code	Teaching & Learning Scheme			Examination Evaluation & Assessment Scheme					Credit
				Teaching Hours Per Week			Theory *(CIE)Continuous Internal Evaluation Max Marks					
				Theory	Activity	Total	Theory	Activity	Internal (CIE)	Total Marks	Minimum Passing Marks	
1	Major	Introduction to Geography (T-1)	GMjT-1	4	-	4	80	-	20	100	40	4
		Basics of Cartography and Statistical Techniques (P-1)	GMjP-1	2		2	40		10	50	25	2
2	OE	Fundamentals of Physical Geography(Geomorphology) (OE-1)	GOE-1	4	-	4	80	-	20	100	40	4
3	VSC	Scale and Chain & Tape Survey	GVSC-1	-	2	2	-	50	50	100	50	2
4	SEC	Skill in Disaster Management	GSEC-1	-	2	2	-	50	50	100	50	2
5	AEC			1	2	3	50	-	50	100	50	2
6	VEC	Environmental Studies	GVEC-1	2	-	2	40	-	10	50	20	2
7	IKS	Contribution of Indians in Development of Geography	GIKS-1	2	-	2	40	-	10	50	20	2
8	CC	To be selected form common basket CC-1	GCC-1	-	4	4	-	50	50	100	50	2

Structure and Credit Distribution of UG Degree Programme (Four Years) w.e.f. 2024-25

First Year: Semester II (UG CERTIFICATE) Geography

Sr. No.	Course Type	The program (Name of the Paper)	Course Code	Teaching & Learning Scheme			Examination Evaluation & Assessment Scheme					Credit
				Teaching Hours Per Week			Theory *(CIE)Continuous Internal Evaluation Max Marks					
				Theory	Activity	Total	Theory	Activity	Internal (CIE)	Total Marks	Minimum Passing Marks	
1	Major	Fundamentals of Geomorphology (T-2)	GMjT-2	4	-	4	80	-	20	100	40	4
		Basic Practical in Geomorphology (P-2)	GMjP-2	2		2	40	-	10	50	25	2
2	Minor	Fundamentals of Environmental Geography	GMnT-1	2	-	2	40	-	10	50	20	2
3	OE	Fundamentals Of Physical Geography (Climatology) (OE-2)	GOE-2	4	-	4	80	-	20	100	40	4
4	VSC	Plane Table Survey and Prismatic Compass Survey	GVSC-2	-	4	4	-	50	50	100	50	2
5	SEC	Wild Life Tour Guide	GSEC-2	-	4	4	-	50	50	100	50	2
6	AEC			1	2	3	50	-	50	100	50	2
7	VEC	Environmental Studies	GVEC-2	2	-	2	40	-	10	50	20	2
8	CC	To be selected from common basket CC-1	GCC-1	-	4	4	-	50	50	100	50	2

Question Paper Model and Scheme of Marking

Subject : GEOGRAPHY B.A.First year (Semester –I and II) Theory
(Major Theory & Open Electives)
(w.e.f. June 2024-2025)

Time : 3.00 Hrs | Max Marks :80

Q.1 Descriptive type question (Unit-I) (20)

OR

Descriptive type question (Unit- II)

Q.2 Descriptive type question (Unit – III) (20)

OR

Descriptive type question (Unit-IV)

Q.3 Write Short Answer (Any Four) (20)

a) Short Question (Unit - I)
b) Short Question (Unit - I)
c) Short Question (Unit - II)
d) Short Question (Unit - II)
e) Short Question (Unit - III)
f) Short Question (Unit - III)
g) Short Question (Unit - IV)
h) Short Question (Unit - IV)

Q.4 MCQ question All Unit (Any Ten) (20)

a) MCQ Two questions (Unit - I)
b) MCQ Two questions (Unit - II)
c) MCQ Two questions (Unit - III)
d) MCQ Two questions (Unit - IV)

	B.A. First Year Semester-I	
	Subject : Geography	
	Type : Major Theory (T1)	Course Code : GMjT-1
	Paper Name : Introduction to Geography	
Marks: 100 (ESE 80 – Internal 20)	Credits: 04	Hrs: 60

Course Objectives:

1. Understand fundamental geographic concepts, including spatial relationships and scale.
2. Analyze the interplay between human societies and the natural environment.
3. Explore global patterns of population distribution, urbanization, and economic development.
4. Develop skills in map reading, spatial analysis, and critical thinking about geographic issue

Course Outcomes:

1. Demonstrate comprehension of key geographic concepts such as location, place, and region.
2. Apply geographic methods and tools to analyze spatial patterns and processes.
3. Evaluate the impact of human activities on the physical environment and vice versa.
4. Critically assess global issues from a geographic perspective, including sustainability, cultural diversity, and economic development.

Unit-I :	▪ Nature of Geography ▪ Meaning, Definition , nature and scope of Geography ▪ Place of Geography in classification of Sciences ▪ Branches of Geography ▪ Geography and its relation with other disciplines. ▪ Five themes of Geography- Location, Place, Interaction, Movement, region	15 Hrs 25 Marks
Unit –II :	▪ The Physical Dimension in Geography ▪ Solar System. ▪ Earth as an unique Planet ▪ The Earth Movement , Rotation and revolution. ▪ Latitudes and longitudes	15 Hrs 25 Marks
Unit –III :	▪ Geography as a study of Environment ▪ Man – Environment relationship ▪ Ecology ,Ecosystem and Environment ▪ Dualism in Geography—Physical vs Human.	15 Hrs 25 Marks
Unit –IV :	▪ Recent trend in Geography (AP, RS, GIS) ▪ Quantitative revaluation in Geography ▪ Career opportunities for Geographers ▪ Imperatives for the future	15 Hrs 25 Marks

Suggested Readings

1. Clyton. K. (1986) 'Earth Crust' Adus Brooks London.
2. Davis W.M. (1909) - 'Geographical Essay' Ginnia Co.New York
3. Garland G.D. (1966) - 'Continental Drift' Uni. of Toronto press- Canada.
4. Goh Cheng leong (2018) Certificate Physical and Human Geography, Oxford University Press, New Delhi
5. Majid Hussain (2001) -'Principals of Physical Geography' Rawat Publication. Jaipur.
6. Monkhouse (1951) - 'Principle of Physical Geography' Mc Graw Hill Pub-New York.
7. Savinder Singh (1998) - 'Physical Geography' Prayag Pub. Allahabad.
8. Steers J.A. (1958) - 'Earth Crust' Adus Brooks London
9. Strahler A.N. (1968) - 'Physical Geography' Easten P. Ltd. New Delhi
10. Tikka R. N. (1998)- 'Physical Geography' Keedar Nath Ram Nath &Co. Meerut
11. Wegner A. (1924) -'The Origin of Continents and Oceans' Mathhen & Co. Ltd. London.
12. तावडे, मोहन द. 'प्राकृतिक भूगोल', कॉन्टीनेंटल प्रकाशन , पुणे -30
13. मगर, जयकुमार , 'भूरुपशास्त्राची मुलतत्वे', अॅकेडेमिक एंटरप्राईजेस, औरंगाबाद
14. दाते, सु. प्र. आणि दाते, संजीवनी, प्राकृतिक भूगोल, विद्या प्रकाशन , नागपूर
15. शेटे, डॉ. शंकरराव , डॉ. फुले सुरेश व डॉ. शहापूरकर ओमप्रकाश ' प्राकृतिक भूगोल', अभिजात पब्लीकेशन , लातुर
16. पुराणिक, माधव, भूगोलशास्त्राची मुलतत्वे आणि भुरुपिकी, विद्या प्रकाशन नागपूर
17. दुधपचारे, योगेश, कर्नल विल्यम लॅम्बटन - भारताचे त्रिकोणमितीय सर्वेक्षण आणि पृथ्वीचा आकार , सनिधी पब्लीकेशन, पंढरपूर
18. सिंग, सविन्द्र ' भौतिक भूगोल का स्वरुप' प्रवालिका पब्लीकेशन, इलाहाबाद
19. हुसैन, माजिद 'भौतिक भूगोल' रावत पब्लीकेशन, जयपूर
20. गौतम, अल्का ' भौतिक भूगोल' रस्तोगी पब्लीकेशन, मेरठ
21. कौशिक, एस.डी, रावत, डी.एस. , भौगोलिक विचारधाराए, रस्तोगी पब्लीकेशन मेरठ

	B.A. First Year Semester-I	
	Subject : Geography	
	Type : Major Subject Practical	COURSE CODE :GMjP-1
	Paper Name : Basic Cartography and Statistical Techniques - Practical Geography (P1)	
Marks: 50 (ESE 40 + Internal 10	Credits: 02	Hrs: 30

Course Objectives

1. Develop proficiency in creating and interpreting maps using basic cartographic principles.
2. Apply statistical techniques to analyze geographic data and identify spatial patterns.
3. Understand the principles of map design and effectively communicate spatial information.
4. Gain practical experience in field data collection, spatial data visualization, and geospatial analysis techniques.

Course Outcomes

1. Demonstrate proficiency in creating and interpreting maps using cartographic principles .
2. Apply statistical techniques to analyze geographic data sets and identify spatial relationships and trends.
3. Design effective maps that communicate spatial information clearly and appropriately for different audiences.
4. Utilize field data collection methods to solve practical geographical problems and present findings effectively.
5.

Course Content :	30 Hrs
Unit – I Understanding Cartography	15
▪ Cartography : Meaning & Definition: ▪ Nature & Scope of Cartography. ▪ Globe & Maps. ▪ Essentials of Maps: ▪ Types & Uses of Maps.	
Unit – II Scale	15
▪ Scale: Definition. Types and measurement system ▪ Conversion of Scale: Statement to R. F. & R. F. to Statement: ▪ Graphical representation ▪ Simple Linear scale. ▪ Comparative scale: Time and Distance ▪ Diagonal scale	

Plan of Practical Examination

The following plan will be strictly followed to test the skill developed by students

Sr. No.	Particulars	Marks
1.	Introduction to Cartography (Any Two)	10
2.	Conversion of Scale (Any Two)	10
3.	Construction of Scale	10
4.	Viva-voce, Practical Records and Punctuality	
5.	Internal Evaluation	

Suggested Readings

1 Anson R. and Ormelling F.J., 1994: International Cartographic Association: Basic Cartographic Vol. Pregmen Press.

2 Dent B. D., 1999: Cartography: Thematic Map Design, (Vol. 1). McGraw Hill.

3 Geore p. Kellaway 1979: Map Projection B.I. Publications New Delhi

4 Gupta K. K and Tyagi V. C., 1992: Working with Maps, Survey of India, DST NewDelhi.

5 Kennedy, M., Kopp, S. 2001. Understanding Map Projections. Esri Press.

6 Kimerling, A.J., Buckley, A.R., Muehrcke, P.C., Muehrcke, J.O. 2011. Map Use: Reading, Analysis,Interpretation, 7th ed. Esri Press.

7 Mishra R. P. and Ramesh A., 1989: Fundamentals of Cartography, Concept Publishing.

8 Monkhouse, F.J., Wilkinson, H.R. 1971. Maps and Diagrams: Their Compilation and Construction, 3rded (2017 reprint), Alphaneumera-Kolkata.

9 Pearson II, F. 1990. Map Projections: Theory and Applications 2nd ed. CRC Press

10 Rhind D.W. and Taylor D.R. F., (eds.), 1989: Cartography: Past, Present and Future, Elsevier, International Cartographic Association

11 Robinson A.H., 2009: Elements of Cartography, John Wiley and Sons, New York

12 Robinson, A.H., Morrison, J.L., Phillip, C.M., Kimerling, A.J., Guptill, S.C. 1995. Elements of Cartography,6th ed. JohnWiley.

13 Sarkar, A. 2015. Practical Geography: A Systematic Approach, 3rd ed. Orient Blackswan Private Ltd.

14 Sharma J. P., 2010: Prayogik Bhugol, Rastogi Publishers, Meerut

15 Singh R L & Rana PB Singh (1991)Prayogtmak Bhugol ke Mool Tatva, Kalyani Publishers, New Delhi

16 Singh R. L., 1979: Elements of Practical Geography, Kalyani publishers, New Delhi

17 Singh R. L., 1998: Prayogik Bhoogol Rooprekha, Kalyani Publications.

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

19 Steers J. A., 1965: An Introduction to the Study of Map Projections, University of London.

20 कुंभार, डॉ. अर्जुन : 'प्रात्यक्षिक भूगोल' , सुमेरु पब्लीकेशन ,डोंबिवली, मुबई

21 नागतोडे, लांजेवार : 'नकाशाशास्त्र व प्रात्यक्षिक भूगोल ,पिंपळापुरे प्रकाशन, नागपूर

22 अहिरराव, डॉ. डी. वाय. व प्रा. करंजखेले : 'प्रात्यक्षिक भूगोल'

23 कनकुरे, डॉ. के .बी. , डॉ. मानकरी, एम.पी. : 'प्रात्यक्षिक भूगोल अरुणा पब्लीकेशन , लातूर

24 शिंदे, डॉ. एस. बी. : 'नकाशाशास्त्र' फडके प्रकाशन, कोल्हापूर

Carry Over : A candidate who fails in a lower semester examination may go to the higher semester. however. the result of the candidates who have passed the VIII semester examination but not passed the lower semester examinations shall be declared as NCL (not completed lower semester examinations). Such candidates shall be eligible for the degree only after completion of all the lower semester examinations.

CERTIFICATE

Department of Geography

Name of College .....

This is to certify that this practical record is the Original practical works of

Shri/ Kumari/ Smt.....

Class..... Semester..... During the academic year.

He/she has attended/ not attended the field work/ Study tour prescribed by the RTM Nagpur.

University Nagpur.

Signature of the teacher who taught the examinee.

1).....

2) .....

Head of the Department

	B.A. First Year Semester-I	
	Subject : Geography	
	Type : Open / Generic Elective (OE -1)	COURSE CODE – GOE-1
Paper Name : FUNDAMENTALS OF PHYSICAL GEOGRAPHY (GEOMORPHOLOGY)		
Marks: 100 (ESE 80 – Internal 20	Credits: 04	Hrs: 60

Course Objectives :

1. Understand the processes and agents responsible for shaping the Earth's landforms and landscapes.
2. Identify and classify major landforms and geomorphic features using field and remote sensing techniques.
3. Analyze the interactions between geomorphological processes, climate, and human activities.
4. Develop skills in interpreting topographic maps, aerial photographs, and satellite imagery to study landscape evolution and landform dynamics.

Course Outcomes:

1. Identify and describe key landforms and geomorphic processes, demonstrating knowledge of their formation mechanisms.
2. Apply geomorphic principles and methods to analyze and interpret landscape features and processes.
3. Evaluate the impact of natural and anthropogenic factors on landscape evolution and geomorphic change.
4. Demonstrate proficiency in using geospatial tools and techniques to investigate and present geomorphological data and findings.

Course Content :

Unit - I :	• Introduction to Physical Geography • Branches of physical Geography • Geomorphology: Nature and Scope. • Distribution of Continents and Oceans	
Unit- II :	• Earth: Interior Structure and Isostasy. • Earth Movements: Continental Drift Plate Tectonics. • Types of Folds and Faults. • Earthquakes and Volcanoes.	
Unit- III :	• Geomorphic Processes: • Weathering. • Erosion • Cycle of Erosion (Davis).	
Unit- IV :	• Evolution of Landforms (Erosional and Depositional): • Fluvial. • Aeolian. • Glacial, and • Coastal.	

Suggested Readings:

1. Davis W. M., (1909), Geographical Essay, Ginnia Co.
2. Dayal P., (1996), Text Book of Geomorphology, Shukla Book Depot, Patna.
3. Kale V.S. and Gupta A., (2001), Elements of Geomorphology, Oxford Univ. Press.
4. Monkhouse, (1951), Principle of Physical Geography, McGraw Hill Pub – New York.
5. Pitty A. F., (1974), Introduction to Geomorphology, Methuen London.
6. Singh Savindra, (2000), Physical Geography, PrayagPustakBhavan, 20-A, University Road, Allahabad
7. Steers J. A., (1964), The Unstable Earth Some Recent Views in Geography, Kalyani Publishers, New Delhi.
8. Swaroop Shanti, (2006), Physical Geography, King Books, NaiSarak, New Delhi
9. Qazi S.A. (2009) : Principles of Physical Geography, APH Publishing Corporation, New Delhi
10. Sparks B. W. (1988) : An Introduction to Geomorphology, Longman, London
11. Muller Peter O. (2003) : Physical Geography: The Global Environment Text Book & Study Guide, Oxford University Press, USA.
12. सिंग, सविन्द्र 'भौतिक भूगोल का स्वरुप' प्रवालिका पब्लीकेशन, इलाहाबाद
13. हुसैन, माजिद 'भौतिक भूगोल' रावत पब्लीकेशन, जयपूर
14. गौतम, अल्का 'भौतिक भूगोल' रस्तोगी पब्लीकेशन, मेरठ
15. दाते, सु.प्र. ,दाते स. (१९९५) प्राकृतिक भूगोल, विद्या प्रकाशन, नागपूर
16. सारंग, सुभाषचंद्र (२०००) प्राकृतिक भूगोल, विद्या प्रकाशन, नागपूर
17. देशमुख, रजनी (२००३) प्राकृतिक भूगोल, विद्या प्रकाशन, नागपूर
18. सवदी आणि कोठेकर (२००८) प्राकृतिक भूगोल, निराली प्रकाशन, पुणे
19. कोलते, पुराणिक, भोयर (२००३) भूगोलशास्त्राची मुलतत्वे, विद्या प्रकाशन, नागपूर

	B.A. First Year Semester-I	
	Subject : Geography	
	Type : Vocational Skill Course (VSC)	COURSE CODE- GVSC-1
Title of the Course: SCALE & CHAIN SURVEYING (Practical)		
Marks: 50 (ESE 40 – Internal 10	Credits: 02	Hrs: 30

Course Objective :

1. Understand the principles and techniques of scale and chain surveying, including measurement accuracy and precision.
2. Develop proficiency in using chain and tape measurements to determine distances and dimensions in field surveys.
3. Apply scale surveying methods to create accurate maps, plans, and layouts for construction and land management purposes.
4. Demonstrate competence in fieldwork practices, including setting up survey equipment, data collection, and recording techniques

Course Outcomes

1. Demonstrate proficiency in accurately measuring distances and dimensions using chain and tape surveying techniques.
2. Apply scale surveying principles to produce detailed maps, plans, and drawings with appropriate accuracy and precision.
3. Evaluate and analyse survey data to solve practical problems related to land development, construction, or resource management.
4. Develop practical skills in field surveying, including equipment setup, data collection, and documentation, adhering to industry standards and best practices.

Content of Course: CHAIN SURVEYING & SCALE	
Unit – I: Introduction to Scale	15 Hrs
▪ Definition of scale. ▪ Method of representation the scale. ▪ Conversion of Scale. Liner Scale. ▪ Comparative Scale, Time and Distance Scale, Diagonal Scale.	25 Marks
Unit – II: Surveying	15 Hrs
▪ Types of Chain, Measuring Tape, Teeth of Chain and their meaning. ▪ Principle of Triangulation Survey, area of Triangles & Fields. ▪ Open & Close Traverse, filed book.	25 Marks

Plan of Practical examinations

Sr. No.	Particulars	Marks
1.	Unit – I: Introduction to Scale (Two Questions)	15
2.	Unit – II: Surveying (Two Questions)	15

3.	Viva-voce, Practical Records and Punctuality	10
4.	Internal Marks	10

Suggested Readings:

1 Anson R. and Ormelling F.J., 1994: International Cartographic Association: Basic Cartographic Vol. Pregmen Press.

2 Dent B. D., 1999: Cartography: Thematic Map Design. (Vol. 1). McGraw Hill.

3 Geore p. Kellaway 1979: Map Projection B.I. Publications New Delhi

4 Gupta K. K and Tyagi V. C., 1992: Working with Maps. Survey of India, DST NewDelhi.

5 Kennedy, M., Kopp, S. 2001. Understanding Map Projections. Esri Press.

6 Kimerling, A.J., Buckley, A.R., Muehrcke, P.C., Muehrcke, J.O. 2011. Map Use: Reading, Analysis,Interpretation, 7th ed. Esri Press.

7 Mishra R. P. and Ramesh A., 1989: Fundamentals of Cartography, Concept Publishing.

8 Monkhouse, F.J., Wilkinson, H.R. 1971. Maps and Diagrams: Their Compilation and Construction, 3rded (2017 reprint). Alphaneumera-Kolkata.

9 Pearson II. F. 1990. Map Projections: Theory and Applications 2nd ed. CRC Press

10 Rhind D.W. and Taylor D.R. F., (eds.), 1989: Cartography: Past, Present and Future. Elsevier, International Cartographic Association

11 Robinson A.H., 2009: Elements of Cartography, John Wiley and Sons, New York

12 Robinson, A.H., Morrison, J.L., Phillip, C.M., Kimerling, A.J., Guptill, S.C. 1995. Elements of Cartography,6th ed. JohnWiley.

13 Sarkar, A. 2015. Practical Geography: A Systematic Approach, 3rd ed. Orient Blackswan Private Ltd.

14 Sharma J. P., 2010: Prayogic Bhugol, Rastogi Publishers, Meerut

15 Singh R L & Rana PB Singh (1991)Prayogtmak Bhugol ke Mool Tatva, Kalyani Publishers, New Delhi

16 Singh R. L., 1979: Elements of Practical Geography, Kalyani publishers, New Delhi

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

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

19 Steers J. A., 1965: An Introduction to the Study of Map Projections, University of London.

20 कुंभार, डॉ. अर्जुन : 'प्रात्यक्षिक भूगोल' , सुमेरु पब्लिकेशन, डोंबिवली, मुंबई

21 नागतोडे, लांजेवार :'नकाशाशास्त्र व प्रात्यक्षिक भूगोल ,पिंपळापूरे प्रकाशन, नागपूर

22 अडिरराव, डॉ. डी. वाय. व प्रा. करंजखेले :'प्रात्यक्षिक भूगोल'

23 कनकुरे, डॉ. के .बी. , डॉ. मानकरी, एम.पी. :'प्रात्यक्षिक भूगोल, अरुणा पब्लिकेशन, लातूर

24 शिंदे, डॉ. एस. बी. :'नकाशाशास्त्र'" फडके प्रकाशन, कोल्हापूर

	B.A. First Year Semester-I	
	Subject : Geography	
	Type : Skill Enhancement Course(SEC)	COURSE CODE- GSEC--1
Title of the Course: SKILL IN DISASTER MANAGEMENT		
Marks: 50 (ESE 40 + Internal 10	Credits: 02	Hrs: 30

Course Objectives :

1. Understand principles and theories of disaster management.
2. Develop practical preparedness techniques for various disasters.
3. Evaluate and analyse effective disaster response strategies.
4. Collaborate in multidisciplinary teams for disaster mitigation and recovery.

Course Outcomes :

1. Demonstrate proficiency in applying disaster management principles to real-world scenarios.
2. Implement effective disaster preparedness plans tailored to specific hazards and vulnerabilities.
3. Evaluate and recommend improvements to disaster response strategies based on critical analysis of past incidents.
4. Collaborate efficiently with diverse stakeholders in disaster response and recovery efforts to achieve resilient outcomes.

Content of Skill Enhancement Course	30 Hrs.
Unit- I : Meaning and definition of Disaster	7.5
Meaning, Definition, concept, risk, vulnerability, and classification of disaster. Manmade and Natural Disasters: - Causes, impact, distribution.	
Unit- II : Methods of Disaster management.	7.5
Methods and approaches of Disaster Management. Long term policy to avoid the disasters. Disaster and Hazards.	
Unit - III: Types of Disaster	7.5
Management of flood, Drought, Landslide, Hailstorm, Earthquake, Tsunami, and cyclone. Disaster with reference to India.	
Unit -IV: Disaster Management.	7.5
Mitigation, response and preparedness of disaster. Disaster Management in India Laws, NDMA and NIDM: Indigenous knowledge and community-based disaster management.	

Suggested Readings :

1. Arulsamy, Dr S. and J. Jeyadevi (2016): Disaster Management. Neelkamal.
2. Government of India (201): Disaster Management in India. Ministry of Home Affairs. NewDelhi.
3. Kumar, P. (2021): Disaster Management. Oak Bridge Publications. New Delhi.
4. Pandey, Dr. Mrinalini (2014): Disaster Management. Wiley India. New Delhi.
5. Pandey, Rajendra Kumar (2020): Disaster Management in India. Saye Publications India Pvt6.Seth, Pran Nath. Successful Tourism Practices. Vol 1. New Delhi 1997.
6. Srivastava, A.K. (2021): Text Book of Disaster Management. Scientific Publishers. New Delhi.
7. Singh, Savindra and Singh, Jeetendra (2013): Disaster Management. Pravalika PublicationsAllahabad.
8. Subramanian, R. (2018): Disaster Management. Vikas Publishing House. New Delhi.
9. Sylphey, M.M. and Safeer, M.M. (2017): Introduction to Disaster Management. Prentice Hall ofIndia .New Delhi
10. Vaidyanathan, S. (2020): Introduction to Disaster Management - Natural Disaster and Man MadeHazards. CBS Publishers. New Delhi.
11. Vashistha, Venod Kumar and Das, Dipak Kumar (2018): Disaster Management. Nath RamPublications. Varanasi

	B.A. First Year Semester-I	
	Subject : Geography	
	Type : Value Education Course (VEC)	COURSE CODE- GVEC-1
	Title of the Course: ENVIRONMENTAL STUDIES	
Marks: 50 (ESE 40 + Internal 10	Credits: 02	Hrs: 30

Course Objectives

1. Promote awareness and understanding of environmental ethics and values.
2. Encourage critical thinking on the ethical implications of human interactions with the environment.
3. Facilitate the development of skills for responsible and sustainable environmental decision-making.
4. Instill a sense of personal and social responsibility towards environmental conservation and protection.

Course Outcomes

1. Develop a deepened sense of environmental stewardship and responsibility.
2. Cultivate ethical decision-making skills in relation to environmental issues.
3. Demonstrate a commitment to sustainable practices and resource conservation.
4. Foster empathy and respect towards diverse ecosystems and their inhabitant

Content of Theory Course : ENVIRONMENTAL STUDIES	30 Hrs
Unit – I: Introduction To Environmental Studies	7.5
Environment : Meaning and Type Definition, Scope, Need and Importance of environmental studies. Celebration of various days in relation with environment.	
Unit – II: Ecosystem	7.5
Concept of an Ecosystem- Ecosystem Degradation. Structure and function of an ecosystem - Producers, consumers and decomposers. Energy flow in the ecosystem – water, carbon, oxygen, nitrogen and energy cycles.	
Unit – III: Environmental Pollution	7.5
Definition, effects and control measures of: Air Pollution, Water Pollution, Soil Pollution, Noise Pollution, Thermal Pollution Management of environment and Govt. policies. Role of pollution control board	
Unit – IV: Human Population and Environment	7.5
Global population growth, variation among nations. Population explosion - Family Welfare Programmes. Environment and human health.	

Suggested Readings

1. Agarwal KC. 2001. Environmental Biology. Nidi Publishers Ltd. Bikaner.
2. Bharucha Erach. 2003. The Biodiversity of India. Mapin Publishing Pvt. Ltd. Ahmedabad – 380013. India. Email: mapin@icenet.net
3. Cunningham WP. Cooper TH. Gorhani E & Hepworth MT. 2001. Environmental Encyclopaedia. Jaico Publishing House, Mumbai. 1196pgs.
4. Down to Earth. Center for Science and Environment (R)
5. Hawkins RE. Encyclopedia of Indian Natural History. Bombay Natural History Society. Bombay (R)
6. Jadhav H and Bhosale VM. 1995. Environmental Protection and Laws. Himalaya Publishing House. Delhi 284pgs.
7. Mhaskar AK. Matter Hazardous. Techno-Science Publications (TB)
8. Miller TG. Jr. Environmental Science. Wadsworth Publishing CO. (TB)
9. Odum EP. 1971. Fundamentals of Ecology. WB Saunders Co. USA. 574pgs.

	B.A. First Year Semester-I	
	Subject : Geography	
	Type : Indian Knowledge System (IKS)	COURSE CODE- GIKS-1
Title of the Course: CONTRIBUTION OF INDIANS IN DEVELOPMENT OF GEOGRAPHY (IKS)		
Marks: 50 (ESE 40 + Internal 10	Credits: 02	Hrs: 30

Course Objectives

1. Explore the historical contributions of Indian scholars to geographical knowledge and understanding.
2. Examine indigenous geographical concepts and methodologies developed in ancient India.
3. Evaluate the impact of Indian geographical contributions on global understanding of geography.
4. Critically analyze the relevance of traditional Indian knowledge systems in contemporary geographical studies and practices.

Course Outcomes

1. Demonstrate a comprehensive understanding of the significant contributions made by Indian scholars to the field of geography.
2. Appreciate the richness of indigenous geographical knowledge systems and their relevance in diverse geographic contexts.
3. Critically assess the influence of Indian perspectives on global geographical theories and practices.
4. Apply insights from Indian geographical traditions to address contemporary environmental and societal challenges.

Course: Contribution of Indians in Development of Geography (IKS)	30 Hrs
Unit- I : Theories of the Origin of the universe and the Earth	7.5 Hrs
■ Origin of Nature ■ Supreme Spirit ■ Origin by Vishwakarma ■ Origin by Prajapati	
Unit- II : Indian Astronomical Geography	7.5 Hrs
■ Bramhagupta ■ Bhaskara ■ Ancient Indian Instruments of Observation	
Unit - III: Earth's Planetary Relations	7.5 Hrs
■ Equinoctial Day ■ Astronomy ■ Nakshatra	
Unit -IV: Knowledge of planet Earth	7.5 Hrs
■ Aryabhat ■ Varahmihir ■ Indian Measure of Time	

Suggested Readings:

1	Adhikari Sudeepta, Fundamentals of Geographical Thought', Orient Blackswan, Hyderabad
2	Aryabhat- Jyotish Siddanta (Sanskrit)
3	Bhaskar Acharya Jyotish Siddhanta (Sanskrit)
4	Dikshit, R.D.,Geographical Thought- A Contextual History of Ideas, New Delhi
5	Kautilya: Arthashatra (Hindi Translation) Varanasi
6	Pandey R'Prachin Bharat Varanasi
7	कौशिक, एस.डी. एव रावत डी.एस. 'भौगोलिक विचारधाराए एंव विधीतंत्र, रस्तोगी पब्लीकेशन, मेरठ
8	मौर्य, एस. डी. 'भौगोलिक चिंतन का इतिहास' , प्रवालिका प्रकाशन, इलाहाबाद
9	विभुते, वेळापुरकर, कनकुरे , राठोड, भौगोलिक विचारांचा इतिहास , अभिजीत प्रकाशन, लातूर

B.A. First Year Semester-II
Geography

	B.A. First Year Semester-II	
	Subject : Geography	COURSE CODE- GMjT-2
	Type : Major Subject Theory	
Paper Name : FUNDAMENTALS OF GEOMORPHOLOGY (T-2)		
Marks :100 (ESE 80+Internal 20)	Credits : 04	Hrs.:60

Course Objectives :

1. Understand the fundamental processes shaping Earth's landforms and landscapes.
2. Analyze the interaction between tectonic, climatic, and erosional forces in landform evolution.
3. Apply geomorphological theories and methods to interpret landscapes and their environmental significance.
4. Evaluate the impacts of human activities on geomorphological processes and landform change.

Course Outcomes :

1. Describe and classify major landforms and geological structures.
2. Analyze geomorphological processes and their roles in shaping Earth's surface.
3. Demonstrate proficiency in interpreting topographic maps and satellite imagery.
4. Evaluate human impacts on geomorphological processes and landscapes

Course contents :

Unit-I :	**Introduction**	15 Hrs
	Definition, Nature and Scope of Geomorphology Origin of Earth. (Laplace, Jeans and Jeffery) Geomorphology and its Influence on – Settlement and Land use	25 Marks
Unit-II :	**Interior of the Earth, Rocks and Weathering**	15 Hrs
	Interior of the Earth A) Classification of Rocks According to Origin i. Igneous ii. Sedimentary iii. Metamorphic B) Weathering and its types i. Mechanical ii. Chemical iii. Biological	25 Marks
Unit-III :	**Endogenic Forces**	15 Hrs
	Endogenic Forces Types of Folds and Faults Earthquake - Meaning, Causes and Effects	25 Marks

Unit-IV : Exogenic Forces 15 Hrs

25 Marks

Cycle of Erosion (W.M. Davis)
Landforms Associated With
i) River
ii) Glacier
iii) Wind

Suggested Readings

1) Clyton. K. (1986) - 'Earth Crust' Adus Brooks London.
2) Davis W.M. (1909) - 'Geographical Essay' Ginnia Co.
3) Dayal P (1946) - 'A text book of Gemorphology' Shukla Book Depot Patana
4) Garland G.D. (1966) - 'Continental Drift' Uni. of Toronto press- Canada.
5) Hodgson J.H. (1964) - 'Earthquakes and Structure' Prentice Hall inc.
5) Kale V.A & Gupta (2001) - 'Elements of Geomorphology' Oxford Uni. Press
6) Majid Hussain (2001) -'Principals of physical Geography' 'Rawat Publication, Jaipur
7) Monkhouse (1951) - 'Principle of Physical Geography' Mc Graw Hill Pub-New York
8) Pitty A.F. (1971) - 'Introduction of Geomorphology' Adus Brooks London.
9) singh, Savinder (1998) - 'Physical Geography' Prayag Pub. Allahabad.
10) Strahler A.N. (1968) - 'Physical Geography' Easten P. Ltd. New Delhi.
11) Steers J.A. (1958) - 'Earth Crust' Adus Brooks London
12) Wegner A. (1924) -'The Origin of Continents and Oceans' Mathhen & Co. Ltd. London.
13) Wooldridge & Morgan (1966) - 'An Outline of Geomorphology' Longman London.
14) तावडे, मोहन द. 'भूरुपशास्त्र' , कॉन्टीनेंटल प्रकाशन , पुणे -30
15) नगर, जयकुमार , 'भूरुपशास्त्र', विद्या प्रकाशन, नागपूर
16) फुले, सुरेश, 'भूरुपशास्त्र', विद्याभारती प्रकाशन , लातूर
17) दाते, सु. प्र. आणि दाते, संजीवनी , प्राकृतिक भूगोल, विद्या प्रकाशन, नागपूर
18) डॉ. शेटे, शकरराव , डॉ. फुले, सुरेश व डॉ. शहापूरकर ओमप्रकाश 'प्राकृतिक भूगोल, अभीजीत पब्लीकेशन, लातुर
19) नागतोडे, डॉ. पी.न., डॉ. शेख आणि दुधपचारे, डॉ. योगेश 'भूरुपशास्त्र व सागरशास्त्र ', विद्याभारती प्रकाशन, नागपूर
20) सिंग, सविन्द्र 'भौतिक भूगोल का स्वरूप' प्रवालिका पब्लीकेशन, इलाहाबाद
21) हुसैन, मास्जीद 'भौतिक भूगोल' रावत पब्लीकेशन, जयपूर
22) गौतम, अल्का "भौतिक भूगोल' रस्तोगी पब्लीकेशन, मेरठ

	B.A. First Year Semester-II	
	Subject : Geography	COURSE CODE- GMJP-2
	Type : Major Subject Practical	
Paper Name : BASIC PRACTICAL IN GEOMORPHOLOGY Practical Geography (P-2)		
Marks: 50 (ESE 40 + Internal 10	Credits: 02	Hrs: 30

Course Objectives :

1. Develop skills in field methods for observing, measuring, and recording geomorphological features.
2. Apply laboratory techniques to analyze sediment samples and understand their geomorphological significance.
3. Interpret topographic maps and satellite imagery to identify and characterize landforms.
4. Collaborate effectively in groups to conduct field investigations and present findings.

Course Outcomes :

1. Demonstrate proficiency in conducting field surveys and collecting data on geomorphological features.
2. Analyze sediment samples in the laboratory and interpret their implications for landscape evolution.
3. Interpret and create accurate topographic maps and geomorphological profiles.
4. Present findings from field investigations in a clear and organized manner, both orally and in written reports.

Unit- I :	**Methods of Showing Relief and Landforms**	15 Hrs
	Hachures, Layer Tint, Spot Height, Bench Mark, Trigonometric Point and Contours (form lines) Representation of different landforms by Contours Conical Hill, Plateau, Ridge, 'V' and 'U' Shaped Valley and Cliff , Col, Pass, Saddle	25 Marks
Unit- II :	**Drawing of Profile**	15 Hrs
	Identification of Slopes Using Contour Lines Serial profile Superimposed profile Composite profile	25 Marks

Plan of Examination :

1	Hachures, Layer Tint, Spot Height, Bench Mark, Trigonometric Point and Contours	5 Marks
2	Representation of different landforms by Contours - Conical Hill, Plateau, Ridge, 'V' and 'U' Shaped Valley and Cliff (Any Two)	10 Marks

3	Identification of Slopes Using Contour Lines	5 Marks
4	Serial profile Superimpose Profile Composite profile (Any one)	10 Marks
5	Viva-voce, Practical Records and Punctuality	10 Marks
6	Internal Assessment	10 Marks

Suggested Readings

1. Khan, S.A. : Text Book of Practical Geography.
2. Mishra, R.P. & Ramesh, A. : Fundamentals of Cartography.
3. Monkhouse, F.J. & Wilkinson, H.R. : Maps and Diagrams.
4. Singh R.L. : Elements of Practical Geography
5. शर्मा, जे.पी. : 'प्रयोगात्मक भूगोल' रस्तोगी प्रकाशन, मेरठ
6. कुंभार, डॉ. अर्जुन : 'प्रात्यक्षिक भूगोल'
7. अहिरराव, डॉ. डी. वाय. व प्रा. करंजखेले : 'प्रात्यक्षिक भूगोल'
8. नागतोडे, लांजेवार : 'नकाशाशास्त्र व प्रात्यक्षिक भूगोल ,पिंपळापुरे प्रकाशन, नागपूर
9. शिंदे, डॉ. एस. बी. : 'नकाशाशास्त्र' फडके प्रकाशन, कोल्हापूर
10. कनकुरे, डॉ. के .बी. , डॉ. मानकरी, एम.पी. : 'प्रात्यक्षिक भूगोल

Carry Over : A candidate who fails in a lower semester examination may go to the higher semester, however, the result of the candidates who have passed the VIII semester examination but not passed the lower semester examinations shall be declared as NCL (not completed lower semester examinations). Such candidates shall be eligible for the degree only after completion of all the lower semester examinations.

CERTIFICATE

Department of Geography

Name of College.....

This is to certify that this practical record is the Original practical works of Shri/ Kumari/ Smt.....

Class.....:..... Semester... .....During the academic year.

He/she has attended / not attended the Field Work / Study Tour preseribed by the RTM Nagpur. University Nagpur.

Signature of the teacher who taught the examinee.

1).....

2) .....

Head of the Department

	B.A. First Year Semester-II	
	Subject : Geography	COURSE CODE-GMnT-1
	Type : Minor Subject Theory	
Title of the Course: Fundamentals of Environmental Geography (T-5)		
Marks: 50 (ESE 40 – Internal 10	Credits: 02	Hrs: 30

Course Objectives:

1. To make aware to the students about environment.
2. To aware the students about the processes and patterns in the natural environment.
3. To acquaint the students with potentials of Environmental Geography.
4. To aware the students about use of resources with prudence.

Course Outcomes :

1. Understand the issues of Environment.
2. Learn to correlate man and environmental conditions.
3. Understand the responsibility as a citizen to conserve the environment.
4. Understand the path of sustainable development.

Course Contents :

Unit – I : Fundamentals Of Environmental Geography 7.5 hrs

1. Environment : Definition and Meaning
2. Environmental Geography: Concepts, Nature and Scope
3. Man's interaction with Environment

Unit – II : Ecosystem Structure And Functions 7.5 hrs

1. Ecosystem - meaning and definition and its Structure
2. Functions - Energy flow in ecosystem, food chains, food webs, food pyramid
3. Study of Desert, Rainforest and fresh water lake ecosystem

Unit - III: Contemporary Environmental Issues 7.5 hrs

1. Pollution – Air, Water, Land and Noise Pollution - causes, effects
2. Major environmental issues - Global Warming, Ozone Depletion and Acid Rain

Unit - IV: Natural Resources And Biodiversity 7.5 hrs

1. Natural resources - meaning, definitions and importance
2. Natural Resources - Types, Causes of depletion, conservation methods of natural resources.
3. Bio-diversity in India and its conservation

Suggested Readings :

1. Asolekar S. Gopichandran R. 2005. 'Preventive Environmental Management -an Indian perspective'. CEE. Ahmedabad. Foundation Books Pvt Ltd. Daryaganj
2. Chambers N., Simons C., Wackernagel M., 2006. 'Sharing Nature's Interest –Ecologicalfootprints as an indicator of sustainability'.
3. Cunningham W., Cunningham M., 2003. 'Principles of Environmental Science –Inquiry and Applications'. Tata McGraw Hill Publication Company Ltd. New Delhi.
4. Doniwal H. K., 'Urban Geography'. GNOSIS. Delhi. 2009.
5. Dresner S., 2005. 'The principles of sustainability'. Earth scan publication Ltd. London.
6. Gandotra V., Patel S., 2008. 'Environmental problems and strategies'. Serials Publication. New Delhi
7. Global Environment Outlook 3 -2002. 'Past. present and future perspectives'. UNEP. Earthscan publications Ltd. London. Sterling VA.
8. Hulse J. H., 2007. 'Sustainable Development at risk -Ignoring the past'. Cambridge University Press India Pvt Ltd., New Delhi.
9. Mohanta R., Sen A., Singh M.P., 2009. 'Environmental Education -Vol. I'. APH publishing Corporation New Delhi.
10. Nellison N., Straaten J. Van D. & Klinkers L., 2001. 'Classics in Environmental Studies anoverview of texts in Environmental Studies'. Kusum Publishing. Delhi
11. Perumal M., Veerasekaran R., Suresh M., Asaithambi M., 2008. 'Environmental and Ecological issues in India'. Abhijeet Publication. Delhi
12. मगर, जयकुमार(१९९६) पर्यावरण परिचय, विद्या प्रकाशन नागपूर
13. उनाठे रमेश आणि रेखा ठाकरे (2006) पर्यावरण शास्त्र, विसा बुक्स, नागपूर
14. भरुचा, एरिका (२०१३) पर्यावरण शास्त्र ब्लकस्वान प्रायवेट लिमिटेड, मुंबई

	B.A. First Year Semester-II	
	Subject : Geography	
	Type : Open / Generic Elective OE 2	COURSE CODE – GOE-2
Paper Name : FUNDAMENTALS OF PHYSICAL GEOGRAPHY (CLIMATOLOGY)		
Marks: 100 (ESE 80 + Internal 20	Credits: 04	Hrs: 60

Course Objectives:

1. Understand the basic principles and components of the Earth's climate system.
2. Analyze the factors influencing global and regional climate patterns.
3. Apply climatological concepts to interpret past climate changes and predict future trends.
4. Evaluate the impacts of climate variability and change on ecosystems, societies, and economies.

Course Outcomes:

1. Demonstrate a comprehensive understanding of the key principles and components of the Earth's climate system.
2. Apply climatological theories and methods to analyze and interpret global and regional climate patterns.
3. Critically evaluate the implications of climate variability and change on natural environments and human societies.
4. Communicate effectively about climatological concepts, both orally and in written form, using appropriate terminology and data

Content

Unit I	▪ Meaning of Climatology ▪ Nature & Scope of Climatology ▪ Atmospheric Composition and Structure	15 Hrs 25 Marks
Unit- II	▪ Insolation and Temperature – ▪ Factors and Distribution. ▪ Heat Budget. ▪ Temperature Inversion.	15 Hrs 25 Marks
Unit- III	▪ Atmospheric Pressure and Winds – ▪ Planetary, periodic and local Winds ▪ Forces affecting Winds. ▪ Jet Streams.	15 Hrs 25 Marks
Unit- IV	▪ Atmospheric Moisture – ▪ Evaporation. ▪ Humidity. ▪ Condensation. ▪ Fog and Clouds. ▪ Precipitation Types.	15 Hrs 25 Marks

Suggested Readings :

1. Barry R. G. and Carleton A. M., 2001: Synoptic and Dynamic Climatology, Routledge, UK.
2. Barry R. G. and Corley R. J., 1998: Atmosphere, Weather and Climate, Routledge, New York.
3. Critchfield H. J., 1987: General Climatology, Prentice-Hall of India, New Delhi
4. Lutgens F. K., Tarbuck E. J. and Tasa D., 2009: The Atmosphere: An Introduction to Meteorology, Prentice-Hall, Englewood Cliffs, New Jersey.
5. Oliver J. E. and Hidore J. J., 2002: Climatology: An Atmospheric Science, Pearson Education, New Delhi.
6. Trewartha G. T. and Horne L. H., 1980: An Introduction to Climate, McGraw-Hill.
7. Gupta L S(2000): Jalvayu Vigyan, Hindi Madhyam Karyanvay Nidishalya, Delhi Vishwa Vidhyalaya, Delhi
8. Lal, D S (2006): Jalvayu Vigyan, Prayag Pustak Bhavan, Allahabad
9. Vatal, M (1986): Bhautik Bhugol, Central Book Depot, Allahabad
10. Singh, S (2009): Jalvayu Vigyan, Prayag Pustak Bhawan, Allahabad
11 सिंग सविंद्र ' भौतिक भूगोल का स्वरुप' प्रवालिका पब्लीकेशन, इलाहाबाद
12 हुसैन माजिद 'भौतिक भूगोल' रावत पब्लीकेशन, जयपूर
13 गौतम अल्का ' भौतिक भूगोल' रस्तोगी पब्लीकेशन, मेरठ
14 दाते सु.प्र. ,दाते स. (१९९५) प्राकृतिक भूगोल, विद्या प्रकाशन, नागपूर
15 सारंग सुभाषचंद्र (२०००) प्राकृतिक भूगोल, विद्या प्रकाशन, नागपूर
16 देशमुख रजनी (२००३) प्राकृतिक भूगोल, विद्या प्रकाशन, नागपूर
17 सवदी आणि कोठेकर (२००८) प्राकृतिक भूगोल, निराली प्रकाशन, पुणे
18 कोलते, पुराणिक, भोयर (२००३) भूगोल शास्त्राची मुलतत्वे, विद्या प्रकाशन, नागपूर

	B.A. First Year Semester-II	
	Subject : Geography	COURSE CODE- GVSC-2
	Type : Vocational Skill Course (VSC)	
Paper Name : Plane Table & Prismatic Compass Survey (Practical)		
Marks :50 (ESE 40+Internal 10)	Credits : 02	Hrs.:30

Course Objectives

1. Master the operation and calibration of a plane table for precise field mapping.
2. Develop proficiency in using a prismatic compass to determine azimuths and angles accurately.
3. Learn techniques for conducting traverses and recording field measurements systematically.
4. Apply theoretical knowledge to solve practical surveying problems encountered in diverse terrain.

Course Outcomes

1. Perform accurate measurements and sketches using a plane table to create detailed topographic maps.
2. Utilize a prismatic compass proficiently to determine magnetic bearings and angles in field surveys.
3. Demonstrate competency in conducting traverses and plotting survey data effectively.
4. Apply knowledge of surveying techniques to solve real-world spatial measurement challenges.

	Content of Theory Course :	30 Hrs.
Unit- I :	**Fundamentals of Plain Table Survey**	7 Hrs
	Meaning of plain table survey. preparation ot survey. Surveying Material in Plain Table survey.	
Unit- II :	**Methods of plain table survey**	8 Hrs
	Intersection Method. Radiation Method. Preparation of Map. Measurement of area.	
Unit - III:	**Fundamentals of Prismatic Compass Survey**	7 Hrs
	Basic Principles of Prismatic Compass Survey. types of compasses. Deflection of Magnetic Needle. Surveying instruments in Prismatic Compass Survey.	
Unit -IV:	**Methods of Prismatic compass survey**	8 Hrs
	Correction of bearing. open and close traverse. Closing the errors by Graphical and Browditch method.	

Plan of Practical Examination

The following plan will be strictly followed to test the skill developed by students

Sr. No.	Particulars	Marks
1	Unit –I : Fundamentals of Plain Table Survey	8
2	Unit – II : Methods of Plain Table Survey	8
3	Unit – III : Fundamentals of Prismatic Compass Survey	8
4	Unit –IV : Methods of Prismatic Compass Survey	8
5	Viva-voce. Practical Records and Punctuality	8
	Internal Assessment	10

Suggested Readings :

1. Khan, S.A. : Text Book of Practical Geography.
2. Mishra, R.P. & Ramesh, A. : Fundamentals of Cartography.
3. Monkhouse, F.J. & Wilkinson, H.R. : Maps and Diagrams.
4. Singh R.L. : Elements of Practical Geography
5. शर्मा, जे.पी. : 'प्रयोगात्मक भूगोल' रस्तोगी प्रकाशन, मेरठ
6. कुंभार, डॉ. अर्जुन : 'प्रात्यक्षिक भूगोल'
7. अहिरराव, डॉ. डी. वाय. व प्रा. करंजखेले : 'प्रात्यक्षिक भूगोल'
8. नागतोडे, लांजेवार : 'नकाशाशास्त्र व प्रात्यक्षिक भूगोल ,पिंपळापुरे प्रकाशन, नागपूर
9. शिंदे, डॉ. एस. बी. : 'नकाशाशास्त्र' फडके प्रकाशन, कोल्हापूर
10. कानकुरे, डॉ. के .बी. , डॉ. नानकरी, एन.पी. : 'प्रात्यक्षिक भूगोल

B.A. First Year Semester-II

Subject : Geography

Type : Skill Enhancement Course (SEC) COURSE CODE- GSEC-2

Paper Name : WILD LIFE TOUR GUIDE

Marks :50 (ESE 40+Internal 10) | Credits : 02 | Hrs.:30

Course Objectives

1. Acquire comprehensive knowledge of local flora and fauna species, habitats, and ecological relationships.
2. Develop interpretative skills to communicate effectively about wildlife behavior and conservation to tourists.
3. Learn techniques for wildlife tracking, identification, and observation in natural settings.
4. Enhance customer service skills to provide enriching and responsible wildlife tour experiences.

Course Outcomes

1. Demonstrate proficiency in identifying local wildlife species and interpreting their behaviors and habitats to tour participants.
2. Apply ethical principles of wildlife conservation and sustainable tourism practices during wildlife tours.
3. Communicate effectively with tourists, providing engaging and informative wildlife experiences.
4. Evaluate and mitigate potential risks associated with wildlife encounters to ensure tour participant safety.

Unit – I :	**Tour Guiding** ▪ Introduction to tour guiding and tour escorting. ▪ Difference between tour guiding and tour escorting. ▪ Role of a tour guide:	7.5Hrs 12.5 Marks
Unit-II :	▪ Tour guiding in India: Characteristics of a tour guide. ▪ Steps to becoming a tour guide: ▪ Presenting yourself: making sense of cultural differences.	7.5Hrs 12.5 Marks
Unit-II :	**Field guiding:** ▪ Guiding at a forest site. ▪ Guiding at Wild Life ▪ Guiding on Flora & Fauna of region .	7.5Hrs 12.5 Marks
Unit-IV :	▪ Guiding on a nature walk. ▪ Guiding on a National Parks	7.5Hrs 12.5 Marks
Suggested Readings :		

1. Barkal and Melik, Tourism - Past , Present and Future. London,1995.
2. Chowdhary Nimit (2013) Hand Book for Tour Guide, Matrix publishers, New Delhi
3. Kaul R.M. Dynamics of Tourism – A Triology, Vol. I. New Delhi, 1997.
4. MitchellG.E. (2005) How to start Tour Guide Business, Charleston The GEM group Ltd.
5. Pound K.L. (1993) Professional Guide, Van Nostrand Reinhold, New York
6. Seth, Pran Nath, Successful Tourism Practices, Vol 1, New Delhi 1997.
7. Sharma Shailaja, Chowdhary Nimit (2018), Tour Leadership and Management , Sage Publications

B.A. First Year Semester-II

Subject : Geography

Type : Value Education Course (VEC) COURSE CODE- GVEC-2

Paper Name : ENVIRONMENTAL STUDIES

Marks :50 Credits : 02 Hrs.:30

(ESE 40+Internal 10)

Learning Outcomes :

1. To educate students Environmental Factors.
2. To Understand the meaning, importance kinds and conservation of Bio diversity.
3. To get knowledge about Environmental Hazards.
4. To get knowledge about Government & Non government environment organizations.

Learning Objective :

1. To provide in depth Knowledge about Environment.
2. To introduce studies Environment from competitive examinations point of view.
3. To get knowledge about Biodiversity.

Contens : 30 marks

Unit - I	■ Environment : Meaning, Biotic & Abiotic factors. ■ Kinds of Environment ■ Fundamental four factors of Environment	7.5
Unit-II	■ Concept of Biodiversity ■ Importance of Biodiversity ■ Kinds of Biodiversity ■ Causes of Biodiversity ■ Conservation in Biodiversity	7.5
Unit- III	■ Environmental Hazards- concept and kinds ■ Ozone Depletion ■ Green House effect ■ Acid Rain ■ Flood, Soil Erosion	7.5
Unit- IV	■ Brief study of Government and Non Government Environmental Organization ■ Maharashtra forest Development Board ■ Central Water Pollution Control Board ■ Role of Environmental NGO's ■ Bombay Natural History Society ■ India Board of Wild Life	7.5

Suggested Readings :

1. Agarwal KC 2001 Environmental Biology Nidi Publishers Ltd Bikaner
2. Bharucha Erach. 2003. The Biodiversity of India. Mapin Publishing Pvt. Ltd. Ahmedabad
3. Cunningham WP. Cooper TH. Gorhani E & Hepworth MT. 2001. EnvironmentalEncyclopaedia. Jaico Publishing House. Mumbai.
4. Down to Earth. Center for Science and Environment (R)
5. Hawkins RE. Encyclopedia of Indian Natural History. Bombay Natural History Society.Bombay (R)
6. Jadhav H and Bhosale VM. 1995. Environmental Protection and Laws. Himalaya PublishingHouse. Delhi 284
7. Mhaskar AK. Matter Hazardous. Techno-Science Publications (TB)
8. Miller TG. Jr. Environmental Science. Wadsworth Publishing CO. (TB)
9. Odum EP. 1971. Fundamentals of Ecology. WB Saunders Co. USA. 574p