Anekant Education Society's

Tuljaram Chaturchand College, Baramati

Autonomous College

Three years degree programme in Geography

(Faculty of Science and Technology)

Revised Syllabus for

T.Y.B.A. Geography (Semester VI)

For Tuljaram Chaturchand College, Baramati

Choice Based Credit System Syllabus (2022 Pattern)

To be implemented from Academic Year 2024-2025

Anekant Education Society's

Tuljaram Chaturchand College, Baramati

Autonomous College

Board of Studies in Geography

From 2022-23 To 2024-25

Sr. No.	Name	Designation
1.	**Dr. Arun S. Magar**	Chairman
2.	**Dr. Asaram S. Jadhav**	Member
3.	**Mr. Vinayak D. Chavan**	Member
4.	**Ms. Sayali B. Pawar**	Member
5.	**Ms. Aysha A. Mulani**	Member
6.	**Ms. Aisha S. Tamboli**	Member
7.	**Dr. Santosh Lagad**	Vice-Chancellor Nominee
8.	**Dr. Pravin Kokane**	Expert from other University
9.	**Dr. T. P. Shinde**	Expert from other University
10.	**Dr. Babaji Maskare**	Industry Expert
11.	**Mr. Ganesh Ghanawat**	Meritorious Alumni
12.	**Tilekar Rucha**	Student
13.	**Shaikh Muskan**	Student

Prologue/ Introduction of the programme:

Students enrolled in the program complete a curriculum that exposes and trains students in a full range of essential skills and abilities. They will have the opportunity to master the following objectives. Geography mainly concerns changes in spatial attributes in a temporal perspective, this programme in geography is tailored to meet the students' specific educational and professional goals in mind. It focuses on spatial studies, qualitative as well as quantitative, and emphasizes on human-environment relationship. During the first year of the programme, the students are trained on advanced concepts of physical and human geography. From second year students are allows them to concentrate on specific areas of the subject, on which they complete their field and survey reports. After completing the course, the students will be amply prepared for professional careers in geography and allied disciplines like GIS and Remote Sensing.

The syllabus tries to give equal importance to the two main branches of Geography: Physical and Human. The principal goal of the syllabus is to enable the students to secure a job as well as acquire adequate geographical knowledge at the end of the undergraduate programme. Keeping this in mind and in tune with the changing nature of Geography, adequate emphasis is concentrated on applied aspects of the subject such as emerging techniques of mapping and field-based data generation. The syllabus emphasizes on development of basic skills of the subject.

Programme outcomes (Pos) (B.A. Geography)

1. Student will learn a basic narrative of geographical features in a various region of the world.
2. Students are enhancing the ability to use Geographical instruments for the advanced study of geography.
3. Student will understand & evaluate different geographical theories, principles, various arguments and point of view.
4. Development of observation and survey skills through study tours, field visits and village survey among students.
5. Students enhance the basic skill about advanced Geo-spatial techniques regarding GIS, RS, GPS, DGPS, Total Station and Drone Survey.

6. Student will gain the knowledge of physical geography. Student will have a general understanding about the geomorphological processes and formation of landforms.
7. Student will be able to correlate the knowledge of physical geography with the human geography. They will be able to acquire the knowledge of Human Geography and will correlate it with their practical life.
8. Student will be able to analyze the problems of physical as well as cultural environments of both rural and urban areas. Along with they will try to find out the possible measures to solve those problems.
9. They will be able for conducting social survey project which is needed for measuring the status of development of a particular area or section of the society.
10. Students will be able to handling and application of various modern instruments so that they can be collect data.
11. They will learn preparation of map based on Geo-spatial technology by using the modern geographical map making techniques, such as Satellite images of different bands, Google Maps, Google Earth etc.
12. As a student of Geography, they will be able to develop their observation power through field experience and in future they will be able to identify the socioenvironmental and socioeconomic problems of society.
13. Some of the students are being able to understand and write effective reports and design credentials, make effective demonstrations.
14. Students are able to use their knowledge according to need for sustainable development.
15. After the completion of the project, they will be efficient in their communication skill as well as skill to interact with society.
16. This syllabus design according to competitive exam like MPSC and UPSC. Students can learn effectively concepts of Geography.

Choice Based Credit System Syllabus

To be implemented from Academic Year 2022-2023

GEOGRAPHY

Class	Sem	Paper Code	Subject
FYBA	I	UAGG111	Physical Geography
	II	UAGG121	Human Geography
SYBA	III	UAGG231	Geography of Disaster Management-I
		UAGG232	Physical Geography of Maharashtra
		UAGG233	Practical in Elements of Map and Surveying
		UAGGSEC-1	Fundamentals of Google Earth
	IV	UAGG241	Geography of Disaster Management-II
		UAGG242	Human Geography of Maharashtra
		UAGG243	Statistical Techniques in Geography
		UAGGSEC-2	Applications of Google Earth
TYBA	V	UAGG351	Tourism Geography-I
		UAGG352	Physical Geography of India
		UAGG353	Practical in Remote Sensing
		UAGGSEC-3	Fundamentals of Google map
	VI	UAGG361	Tourism Geography-II
		UAGG362	Human Geography of India
		UAGG363	Practical In GIS
		UAGGSEC-4	Application of Google Map
		UAGGFP-1	Field Project

B.A. PROGRAMME CREDIT DISTRIBUTION PATTERN (128 Credit)

Class	Semester	Core Course	Elective Course			Ability Enhancement Compulsory Courses (AECC)		Total Credit
			Discipline Specific Elective	Dissertation Project	Generic Elective Course	Ability Enhancement Compulsory Courses	Skill Enhancement Courses	
FYBA	I	4 papers 4 x 3 = 12 Credits	-	-		Comp.English 3 Credits Mar/Hin/Sanskrit = 3 Credits		18
	II	4 papers 4 x 3 = 12 Credits	-	-	Democracy 2 Credit Phy.Edu. 2 Credit	Comp.English 3 Credits Mar/Hin/Sanskrit = 3 Credits		22
SYBA	III	3 papers 3 x 3= 9 Credits	2 Special papers 2 x 3= 6 Credits	-	Env.Sci. 2 Credit	Comp.English 3 Credits	Special papers 1 x 2= 2 Credits	22
	IV	3 papers 3 x 3= 9 Credits	2 Special papers 2 x 3= 6 Credits	-		Certificate Course Not Related to subject 2 Credit	Special papers 1 x 2= 2 Credits	22
TYBA	V	3 papers 3 x 3= 9 Credits	2 Special papers 2 x 3= 6 Credits Certificate Course Related to subject 2 Credit	-	-	Comp.English 3 Credits	Special papers 1 x 2= 2 Credits	22
	VI	3 papers 3 x 3= 9 Credits	2 Special papers 2 x 3= 6 Credits	1 Project related to subject 2 Credit	-	Comp.English 3 Credits	Special papers 1 x 2= 2 Credits	22
		60	**26**	**2**	**6**	**26**	**8**	**128**

Mandatory 8 additional / add on credits for Undergraduate Programmes

Note: **1. 6 credits from Group-1 are compulsory**

2. Choose minimum 2 credits from Group-2 to Group-7

Group-1	(a)	Physical Education (at F.Y.B.A. Sem. II)	02 credits
	(b)	Democracy Course (FYBA Sem. II)	02 credit
	(c)	Environmental Awareness (S.Y.B.A. Sem. III)	02 Credit
Group-2	(a)	Certificate Course Not Related to Subject (S.Y. B.A. Sem. IV)	02 Credit
Group-3	(a)	Representation in Sports at University Level	02 credits
	(b)	Representation in Sports at State Level / National level	02 credits
	(c)	Representation in Sports at International (overseas) Level	04 credits
Group-4	(a)	National Social Service Scheme (participation in college camp)	02 credits
	(b)	National Social Service Scheme (participation in university camp)	02 credits
	(c)	NCC (participation in annual camp)	02 credits
	(d)	NCC (with B certificate/ C certificate award)	02 credits
	(e)	NSS / NCC participation in Republic day parade	04 credits
	(f)	Selection in AVISHKAR at University Level	02 credits
Group-5	(a)	Research paper publication at National level	02 credits
	(b)	Research paper publication at International (overseas) level	02 credits
Group-6	(a)	Participation in Summer School/ Internship programme / Short term course (not less than 2 weeks duration)	02 credits
	(b)	Participation in cultural and co-curricular activities/ extracurricular activities/competitions at University level / State Level	02 credit
Group-7	(a)	Participation in cultural and co-curricular activities/ extracurricular activities/competitions at University level / State Level	02 credit
	(b)	Participation in cultural and cocurricular activities / extracurricular activities/ competitions at International (overseas) level	02 credits

Note: 1) One Credit = 15/16 Lectures.

2) The Project should be initiated at on the onset of V Semester and submitted during VI Semester.

3) FY/SY/TY --> 4 Lectures per week.

4) Theory paper be covered with 70% actual teaching (3 actual lectures per week) and 30% component (1 lecture per week) of self-study should be further evaluated through Group discussion / Seminar / Open Book Test / MCQ / Essay writing / Assignment etc.

T.Y.B.A. Geography(S3), Syllabus for Semester VI

Subject: Tourism Geography-II

Subject Code: UAGG 361 **No. of Credits:** 03

Course Objectives:

1. To understand the impacts of tourism on various environments and communities.
2. To raise awareness of the utility and application of tourism in different contexts.
3. To develop knowledge in tour planning and enhance related skill sets.
4. To explore the influence of physical and human environments on tourism activities.
5. To identify and assess tourism potentials across various continents.
6. To cultivate skills in geographical analysis, including mapping and data presentation in the context of tourism.
7. To investigate the principles of tourism planning and policy formulation.

Course Outcomes:

By the Completion of the course, students will be able to:

CO 1: Analyze the impacts of tourism on various environments and communities.

CO 2: Recognize the utility and application of tourism in diverse contexts.

CO 3: Apply knowledge in tour planning and enhance related skill sets.

CO 4: Evaluate the influence of physical and human environments on tourism activities.

CO 5: Identify and assess tourism potentials across various continents.

CO 6: Develop skills in geographical analysis, including mapping and data presentation in tourism.

CO 7: Examine the principles of tourism planning and policy formulation.

Topics and Learning points	Teaching Hours
Unit 1: Impact of Tourism	**12**
1.1 Environmental impact of tourism	
1.2 Economical impact of tourism	
1.3 Social and Cultural impact of tourism	
1.4 Infrastructural impact of tourism	
Unit 2: Tourism potentials and Attraction	**12**
2.1 Continent wise tourism Potential and attractions	
2.2 Tourism Potential and Attractions in India	
2.3 Impact of Natural Disaster on Tourism	
2.4 Impact of Biological Disaster on Tourism	
Unit 3: Local Tourism	**10**
3.1 Concept and meaning of local tourism	
3.2 Role of Local Tourism in Regional Development	
3.3 Potential of local tourism and available infrastructure	
3.4 A case study of local tourism (Pune and Baramati)	
Unit 4: Tour planning and Skill development	**11**
4.1 Basic skills in Tour Planning	
4.2 Promotion of tour planning	
4.3 International Tour Planning	
4.4 Travel agencies in India	

References:

1. Robinson, H., 1996. A Geography of Tourism. Sterling Publishers Pvt. Ltd., New Delhi.
2. Bhatia, A.K., 2006. Tourism Development: Principles and Practices. Sterling Publishers Pvt. Ltd., New Delhi.
3. Singh, S.N., 1985. Geography of Tourism and Recreation. Vikas Publishing House, New Delhi.
4. Pearce, D., 1987. Tourism Today: A Geographical Analysis. Longman, U.K.
5. Mathieson, A. and Wall, G., 1982. Tourism: Economic, Physical and Social Impact. Longman,

U.K.

6. Das, M., 2007. India: A Tourist Paradise. Shubhi Publications, New Delhi.
7. Kumar, M., 2012. Tourism Today: An Indian Perspective. Abhijeet Publications, New Delhi.
8. Hudman, L.E., 1985. Geography of Travel and Tourism. McGraw-Hill Education, U.S.A.
9. Seth, P.N., 1985. Successful Tourism Management. Sterling Publishers Pvt. Ltd., New Delhi.
10. Smith, S.L.J., 1994. Tourism Analysis. Pearson Education, U.K.
11. Gupta, V.K., 2005. Tourism of India. Anmol Publications, New Delhi.
12. Kaul, R.N., 2000. Dynamics of Tourism. Sterling Publishers Pvt. Ltd., New Delhi.
13. Shinde, S.B., 2009. Geography of Tourism. Phadke Prakashana, Kolhapur.

TYBA **Department of Geography**

Mapping of Program Outcomes with Course Outcomes

Weightage: 0= No Relation 1= Weak or low relation

2= Moderate or partial relation, 3= Strong or direct relation

	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**
CO1	3	2	1	3	2	2	2	2	2	2
CO2	2	3	2	2	2	1	2	1	2	2
CO3	2	2	3	2	1	2	2	1	2	1
CO4	3	2	2	3	2	2	2	2	2	2
CO5	2	2	1	2	3	2	2	1	2	1
CO6	2	2	2	2	2	3	2	1	3	1
CO7	3	2	2	3	2	2	3	2	2	2

Justification

PO1: Critical and Creative Thinking: CO1 requires critical analysis of tourism impacts, CO2 demands creative problem-solving for applying tourism concepts, and CO3 needs innovative thinking for effective tour planning. CO4 to CO7 also involve critical and creative approaches for evaluating and applying tourism principles.

PO2: Communication Skills: CO1 and CO2 need clear communication about tourism impacts and utility. CO3 involves precise communication of tour plans, while CO4 through CO7 require clear presentation of tourism assessments, potentials, and policies.

PO3: Multicultural Competence: CO1 and CO2 involve understanding and respecting cultural diversity. CO3 requires incorporating cultural perspectives in tour planning, and CO4 through CO7 emphasize integrating multicultural viewpoints in tourism assessment and policy-making.

PO4: Research Skills: CO1 requires researching tourism impacts, CO2 involves studying tourism applications, CO3 needs research for effective tour planning, and CO4 through CO7 involve comprehensive research for evaluating tourism influences and developing policies.

PO5: Environmental Awareness: CO1's analysis includes mitigating environmental effects, CO2 involves responsible tourism, CO3's planning includes sustainability, and CO4 through CO7 address environmental impacts and promote stewardship.

PO6: Problem-Solving Abilities: CO1 involves solving issues related to tourism impacts, CO2 requires effective solutions for tourism applications, and CO3's tour planning addresses logistical problems. CO4 through CO7 involve solving challenges in tourism assessment and policy formulation.

PO7: Collaboration and Teamwork: CO1 benefits from team-based research, CO2 involves working with diverse groups, CO3 requires coordination in tour planning, and CO4 through CO7 involve teamwork for analysis, data presentation, and policy development.

PO8: Value Inculcation: CO1 promotes ethical tourism practices, CO2 emphasizes sustainability, CO3 includes ethical tour planning, and CO4 through CO7 focus on ethical considerations and community engagement in tourism.

PO9: Digital and Technological Skills: CO1 uses digital tools for analysis, CO2 involves technology for assessing tourism utility, CO3 benefits from digital tools in planning, and CO4 through CO7 utilize technology for data analysis, mapping, and policy formulation.

PO10: Community Engagement and Service: CO1 engages with communities to address tourism impacts, CO2 involves community initiatives, CO3 considers community needs in planning, and CO4 through CO7 involve engaging communities for effective tourism development.

T.Y.B.A. Geography(S3), Syllabus for Semester VI

Subject: Human Geography of India

Subject Code: GG 362 **No. of Credits:** 03

Course Objectives:

1. To introduce basic concepts in population studies
2. To understand population in terms of their spatial distribution pattern
3. To understand economic development, demographic and social change.
4. To introduce demographic, social and cultural attributes.
5. To introduce the cultural diversity of India.
6. To learn the patterns of population distribution, growth, and migration in India.
7. To learn the geographical patterns of economic activities, industries, and employment in India,

Course Outcomes:

After the completion of the course, Students will be able to:

1. Understand the Population distribution of India.
2. Demonstrate critical thinking in evaluating historical background for migration, Population and their distribution.
3. Understand impact of agriculture, Industries, Minerals on the Indian economy.
4. Analyze the human (migration, Population, Industries, Agriculture, Minerals)contexts of India in order to recommend policies aimed at social change.
5. Understand the agricultural practices, land use patterns, and livelihoods of rural communities in different regions of India.
6. Analyze social movements and changes in India.
7. Examine gender roles, relationships, and issues in Indian society, exploring theirinfluence on human geography.

Topics / Contents:

Topics / Contents **Teaching Hours**

Unit – 1: Population

1.1 Sources of population data

1.2 Population Growth and Distribution

1.3 Population Dynamics

1.4 Population Composition and Characteristics

Unit – 2: Settlement

2.1 Types and Patterns of Rural Settlement

2.2 Urban Development

2.3 Functional Classification of Indian Cities

2.4 Settlement hierarchy

2.5 Problems of Urbanization and Remedies

Unit – 3: Agriculture

3.1 Significance of Agriculture in Indian Economy

3.2 Major Crops: Rice, Wheat, Sugarcane and Cotton

3.3 Green Revolution

3.4 White Revolution

3.5 Blue Revolution

3.6 Tissue Culture & Horticulture

Unit – 4: Industries

4.1 Importance of Industries in Indian Economy

4.2 Agro-based Industries: Location, Factors, Distribution, Production

i) Cotton Industries ii. Sugar Industries iii. Jute Industries

4.3 Mineral Based Industries: Location, Factors, Distribution, Production- Iron and Steel Industries

4.4 Fertilizers Industries

4.5 Automobile Industries

Reference Books & Websites:

1. Bhende A. and Kanitkar T., 2000: Principles of Population Studies, Himalaya Publishing
2. Jones, H. R., 2000: Population Geography, 3rd ed. Paul Chapman, London.
3. Maurya S D (2009) Jansankya Bhugol, Sharda Putak Bhawan, Allahabad
4. Singh, R.L.(ed.): India: A Regional Geography. National Geogphical Society. India,Varanasi, 1971.
5. Patil S. G., Suryawanshi R. S., Pacharne S., Choudhar A. H. : Economic Geography,Atharav Prakashan, Pune. (2014) (Marathi).
6. Aher A. B. ,Arekar R.: Commercial Geography, AtharavPrakashan, Pune. (2013)(Marathi).
7. Datt & Sunderm: Indian Economy (2014)
8. Dubey R. N. : Economic Geography Of India
9. Tirtha, Ranjit. : Geography of India, Rawat, Jaipur, 1996.
10. Pijushkanti Saha &Partha Basu (2007):Advanced Practical Geography, Books and Allied (P) Ltd., Kolkata.
11. Heywood,I.,Cornelius,S.andCarver,S.(2011)AnIntroductiontoGeographicalInformationSystems.PrenticeHall,FourthEdition.
12. Majid H., (2013): Geography of India, Tata Mcgraw Hill Education (India) PrivateLimited, New Delhi.
13. https://epgp.inflibnet.ac.in/
14. https://ndl.iitkgp.ac.in/

Mapping of Program Outcomes with Course Outcomes

Weightage: 0= No relation 1= Weak or low relation
2= Moderate or partial relation 3= Strong or direct relation

Program Outcomes (POs)								
Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8
CO 1				2				
CO 2								3
CO 3				3				
CO 4			2					
CO 5			2	2				
CO 6			2					
CO 7				2		2		

PO3: Social Competence and Communication Skills: CO4, CO5, and CO6 foster social competence and communication skills by immersing students in the analysis of human contexts, agricultural practices, and social movements. These experiences equip students with critical thinking, empathy, and advocacy skills, preparing them to contribute effectively to social change in diverse settings.

PO4: Disciplinary Knowledge: CO1, CO4, and CO5 enhance disciplinary knowledge by integrating interdisciplinary concepts from geography, economics, sociology, and environmental sciences. This comprehensive approach helps students develop a holistic understanding of complex societal and rural issues, promoting collaborative and innovative solutions.

PO6: Self-directed and Lifelong Learning: CO3 and CO6 promote a mindset of continuous learning and adaptability by engaging students in the analysis of economic impacts and social movements. These experiences foster critical thinking, historical awareness.

T.Y.B.A. Geography Syllabus for Semester VI

Course Title: Practical in GIS

Course Code: UAGG 363 **No. of Credits:** 03

Learning Objectives:

1. Equip students with the ability to georeference different types of maps and data in QGIS for accurate spatial analysis.
2. Develop skills in creating base maps for spatial analysis, enabling users to visualize and interpret data within a geographic context.
3. Enable students to create, edit, and manipulate shapefiles consisting of points, lines, and polygons for diverse spatial data representation.
4. Teach students how to generate effective map layouts that clearly communicate spatial data and include essential elements such as legends, scale bars, and titles.
5. Provide knowledge on adding, managing, and classifying attribute data to enhance spatial datasets in QGIS.
6. Instruct students on using Digital Elevation Models (DEMs) to produce slope maps and analyze terrain features such as aspect, contour, and hill shade.
7. Build competencies in saving, editing, and managing spatial data, including the application of buffer analysis and topology creation for clean data processing.

Learning Outcomes:

After the completion of the course, Students will be able to-

CO 1: Georeference maps accurately, ensuring that spatial data is aligned and ready for further analysis.

CO 2: Design and utilize base maps that provide a solid foundation for spatial visualization and analysis.

CO 3: Create and manage shape files with point, line, and polygon features for various

applications in geographic information systems (GIS).

CO 4: Produce map layouts that effectively communicate spatial information, integrating elements like legends and scales.

CO 5: Proficient in adding and managing attribute data, as well as classifying and categorizing spatial datasets for improved analysis.

CO 6: Generating slope, aspect, contour, and hill shade maps, and interpreting terrain features from DEMs.

CO 7: Proficient in spatial data management tasks, including saving, editing, buffer analysis, and creating topologies for accurate spatial data.

Topics and Learning Points	Teaching Hours
Unit – 1: Introduction to Digitizing in QGIS	**12**
1.1 Georeferencing	
1.2 Making a Base Map	
1.3 Creating Shape file with Point, Line and Polygon Feature	
1.4 Map Layout	
Unit – 2: Spatial Data Management	**12**
2.1 Adding Attribute Data	
2.2 Making Classes for Different Attribute Data	
2.3 Generating Layout with Legend	
2.4 Saving and Editing Shape files	
Unit – 3: Digital Elevation Model	**12**
3.1 Generating Maps of Slope	
3.2 Aspect, Contour, Relief, Hill shade	
3.3 Buffer Analysis	
3.4 Building Topology, Data Query	
Unit – 4: Using different tools in QGIS	**12**

4.1 Raster Calculator

4.2 Spatial Analyst

4.3 Raster Data Manipulation

Reference Books & Websites:

1. QGIS Development Team (2023). *QGIS Georeferencing*. Retrieved from https://docs.qgis.org
2. Lillesand, T., Kiefer, R. W., & Chipman, J. (2015). Remote Sensing and Image Interpretation. Wiley.
3. Sutton, T., Dassau, O., & Sutton, M. (2009). A Gentle Introduction to GIS. Spatial Information Management, UNIGIS.
4. Longley, P. A., Goodchild, M. F., Maguire, D. J., & Rhind, D. W. (2015). Geographic Information Systems and Science. Wiley.
5. Burrough, P. A., & McDonnell, R. A. (1998). Principles of Geographical Information Systems. Oxford University Press.
6. QGIS Development Team (2023). Creating Vector Layers (Shapefiles). Retrieved from https://docs.qgis.org
7. Peterson, G. (2020). GIS Cartography: A Guide to Effective Map Design. CRC Press.
8. Slocum, T. A., McMaster, R. B., Kessler, F. C., & Howard, H. H. (2009). Thematic Cartography and Geovisualization. Pearson.
9. Zeiler, M. (1999). Modeling Our World: The ESRI Guide to Geodatabase Design. ESRI Press.Heywood, I.,

   Press.

Mapping of Program Outcomes with Course Outcomes

Weightage: 0= No relation 1= Weak relation
2= Moderate relation 3= Strong relation

CO\PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	2	1	3	2	3	2	1	3	2
CO2	3	2	1	2	2	3	2	1	3	2
CO3	3	2	1	2	2	3	2	1	3	2
CO4	3	3	1	2	2	2	2	1	3	2
CO5	3	2	1	3	3	3	2	1	3	2
CO6	3	2	1	3	3	3	2	1	3	2
CO7	3	2	1	3	3	3	2	1	3	2

Justification

PO1: Critical and Creative Thinking: CO1, CO3, CO5, CO6, and CO7 have a strong connection to critical and creative thinking, as they require deep analytical skills in spatial data processing, creation of shapefiles, and topographical data interpretation. CO2 and CO4 also engage critical thinking, though less intensely, due to their focus on design and visualization, earning them a moderate relation.

PO2: Communication Skill: CO4 has a direct link to communication skills as it involves producing map layouts that communicate spatial information effectively. Other COs (CO1, CO2, CO3, CO5, CO6, CO7) moderately connect to communication because presenting data and analysis requires clear expression, but it’s secondary to the technical work.

PO3: Multicultural Competence: All COs have a weak connection to multicultural competence, as their focus on GIS and spatial analysis doesn't directly engage with cultural diversity, although these skills may be applied in multicultural contexts or projects.

PO4: Research Skills: CO1, CO3, CO5, and CO6 are strongly linked to research skills, as they involve rigorous data management, analysis, and the use of GIS tools critical for conducting research. CO2, CO4, and CO7 moderately contribute to research through visualization and data management but are not primarily research-focused.

PO5: Environmental Awareness: CO6 has a strong relation to environmental awareness due to its focus on terrain analysis, which is essential for understanding environmental impacts. Other COs (CO1, CO2, CO4, CO5, CO7) moderately contribute by managing spatial data that can support environmental assessments.

PO6: Problem-solving Abilities: CO6 and CO7 are strongly aligned with problem-solving abilities as they involve tackling complex spatial and environmental challenges through GIS tools. The other COs moderately contribute by solving practical, but less interdisciplinary, problems in GIS applications.

PO7: Collaboration and Teamwork: CO3 and CO7 are closely tied to collaboration and teamwork since creating and managing GIS data often requires working in teams. The other COs moderately relate, as collaboration is helpful but not central to their tasks.

PO8: Value Inculcation: All COs have a weak connection to value inculcation, as the focus is on technical skills rather than humanistic or ethical values. These COs may indirectly support value-based outcomes in specific contexts but are not designed with this purpose in mind.

PO9: Digital and Technological Skills: All COs have a strong link to digital and technological skills, as they heavily involve the use of GIS software, spatial analysis techniques, and data management, which are key components of digital proficiency.

PO10: Community Engagement and Service: CO4 moderately aligns with community engagement, particularly in projects where map layouts help convey geographic data to the public or stakeholders. Other COs have a weaker connection as they focus more on technical skills rather than direct community service, though they could support community projects indirectly.

T.Y.B.A. Geography Syllabus for Semester VI

Course Title: Applications of Google Map

Course Code: UAGG SEC- 4 **No. of Credits:** 02

Course Objectives:

1. To teach students how to use Google Maps as an educational tool in geography.
2. To provide knowledge about geographic coordinates and geocoding.
3. To instruct students on the integration of Google Maps with Geographic Information System (GIS) software for advanced spatial analysis and mapping.
4. To demonstrate the use of Google Maps in urban planning, environmental monitoring, land use pattern identification, and land use analysis.
5. To introduce students to various data visualization techniques using Google Maps.
6. To teach students how to effectively embed maps in presentations and reports, utilize for academic research, fieldwork, and data collection.
7. To develop practical skills in planning tours and sharing maps using Google Maps, enhancing their ability to apply geographic knowledge in real-world scenarios.

Course Outcomes:

By the completion of the course, students will be able to:

CO1. Use Google Maps as an educational tool to enhance their understanding of geographic concepts and spatial analysis.

CO2. Understand geographic coordinates and geocoding and be able to apply this knowledge for precise location mapping in Google Maps.

CO3. Integrate Google Maps with GIS software, enhancing their ability to perform advanced spatial analysis and mapping.

CO4. Use Google Maps for urban planning, environmental monitoring, identifying land use patterns, and conducting land use analysis.

CO5. Create data layers, heat maps, and visualize demographic and economic data using Google Maps.

CO6. Adept at embedding maps in presentations and reports, utilizing Google Maps for academic research, and employing Google Earth for fieldwork and data collection.

CO7. To plan tours using Google Maps and effectively share maps, demonstrating practical application skills in various geographic contexts.

Topics and Learning Points

UNIT 1: Google Maps in Geographic Studies **Teaching Hours**

1.1 Using Google Maps as an educational tool in geography **06**

1.2 Understanding geographic coordinates and geocoding

1.3 Understanding the integration of Google Maps with GIS software

1.4 Planning of tours through Google map.

UNIT 2: Urban Planning and Environmental Applications **08**

2.1 Using Google Maps for urban planning and mapping

2.2 Environmental monitoring

2.3 Identifying land use patterns and environmental changes

2.4 Land use analysis by Google Map

UNIT 3: Data Visualization and Analysis **08**

3.1 Introduction to data layers and heat maps

3.2 Visualizing demographic data

3.3 Visualizing economic data

3.4 Creating data visualizations using Google Maps

UNIT 4: Integrating Google Maps into Research and Presentations 08

4.1 Embedding maps in presentations and reports

4.2 Utilizing Google Maps for academic research

4.3 Using Google Map for fieldwork and data collection

4.4 Embedding and sharing maps

References:

1. Anji Reddy, M. (2004): Geoinformatics for environmental management. B. S. Publications
2. Li, J., & Chen, Y. (2018). "Google Maps: Power Tools for Maximizing the API." O'Reilly Media.
3. Kassner, M., &Winter, J. (2017). "The Google Maps API and PHP, MySQL, and Apache." A press.
4. Martin, A. P. (2019). "Google Maps: A Nuts and Bolts Approach to User-Friendly Web Mapping." Chapman and Hall/CRC.
5. Google Maps Platform Documentation - Official documentation for developers using Google Maps API. https://developers.google.com/maps/documentation
6. Google Maps JavaScript API Tutorial - Official guide to getting started with the Google Maps JavaScript API. https://developers.google.com/maps/get-started
7. OpenStreetMap - A collaborative mapping project that provides open and free geographic data. https://www.openstreetmap.org/#map=4/21.84/82.79
8. Rich Gibson and Schuyler Erle (2006): Google Maps Hacks: Tips & Tools for Geographic Searching and Remixing" O'Reilly Media.

Mapping of Program Outcomes with Course Outcomes

Weightage: 0= No relation, 1= Weak relation , 2= Moderate relation, 3= Strong relation

COs/POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	1	1	2	1	2	1	0	2	1
CO2	2	1	0	2	0	1	0	0	2	0
CO3	3	1	0	3	1	2	1	0	3	0
CO4	3	1	1	2	3	3	1	1	2	2
CO5	3	1	0	2	2	2	0	0	3	0
CO6	2	3	1	2	1	1	2	1	2	1
CO7	2	2	1	1	0	1	3	0	1	3

Brief Justification for Ratings

PO1 (Critical and Creative Thinking): CO1, CO3, CO4, and CO5 are rated 3 as they involve in-depth analysis and creative use of Google Maps for spatial tasks. CO2, CO6, and CO7 are rated 2 for requiring moderate critical thinking in geocoding, map embedding, and tour planning.

PO2 (Communication Skill): CO6 is rated 3 for needing strong communication in presenting maps. CO7 is rated 2 for effectively sharing tour plans. CO1, CO2, CO3, CO4, and CO5 are rated 1 as they involve basic communication skills.

PO3 (Multicultural Competence): CO1, CO4, CO6, and CO7 are rated 1 for requiring some awareness of diverse contexts. CO2, CO3, and CO5 are rated 0 as they do not engage with multicultural aspects.

PO4 (Research Skills): CO3 is rated 3 for advanced research in GIS integration. CO1, CO2, CO4, CO5, and CO6 are rated 2 for moderate research skills. CO7 is rated 1 for basic research in tour planning.

PO5 (Environmental Awareness): CO4 is rated 3 for its focus on urban planning and environmental monitoring. CO5 is rated 2 for visualizing environmental data. CO1, CO3, and

CO6 are rated 1 for indirectly promoting environmental awareness. CO2 and CO7 are rated 0 as they do not focus on this area.

PO6 (Problem-solving Abilities): CO4 is rated 3 for addressing urban and environmental issues. CO1, CO3, and CO5 are rated 2 for moderate problem-solving in spatial analysis. CO2, CO6, and CO7 are rated 1 for basic problem-solving tasks.

PO7 (Collaboration and Teamwork): CO7 is rated 3 for requiring strong teamwork in map planning. CO6 is rated 2 for collaborative presentations. CO1, CO3, and CO4 are rated 1 for potential collaboration. CO2 and CO5 are rated 0 as they are individual tasks.

PO8 (Value Inculcation): CO4 and CO6 are rated 1 for promoting values indirectly. CO1, CO2, CO3, CO5, and CO7 are rated 0 as they do not focus on value inculcation.

PO9 (Digital and Technological Skills): CO3 and CO5 are rated 3 for extensive digital skills. CO1, CO2, CO4, and CO6 are rated 2 for moderate use of digital tools. CO7 is rated 1 for basic digital skills.

PO10 (Community Engagement and Service): CO7 is rated 3 for active community involvement. CO4 is rated 2 for community-related applications. CO1 and CO6 are rated 1 for minor community aspects. CO2, CO3, and CO5 are rated 0 as they do not engage with community service.

T.Y.B.A. Geography Syllabus for Semester VI

Course Title: Field Project

Course Code: UAGGFP- 1 **No. of Credits:** 02

Course Objectives:

1. To develop students' ability to design and implement effective research questionnaires for community-based studies.
2. To enhance students' skills in collecting and analyzing socio-economic and environmental data.
3. To foster critical thinking and problem-solving through real-world geographical research.
4. To deepen understanding of the relationship between human activities and geographical factors.
5. To promote active engagement with local communities to address geographical issues.
6. To build students' competence in synthesizing and presenting research findings.
7. To prepare students for advanced academic research or professional roles in geography-related fields.

Course Outcomes:

By the end of the course, students will be able to:

CO1: Demonstrate the ability to design and implement effective research questionnaires for community-based studies.

CO2: Exhibit enhanced skills in collecting and analyzing socio-economic and environmental data.

CO3: Apply critical thinking and problem-solving skills in conducting real-world geographical research.

CO4: Display a deeper understanding of the relationship between human activities and geographical factors.

CO5: Actively engage with local communities to address and resolve geographical issues.

CO6: Demonstrate competence in synthesizing and presenting research findings clearly and effectively.

CO7: Prepare for advanced academic research or professional roles in geography-related fields.

SOP for the Filed Project

As per the NEP-2020 credit and course structure, students in UG programs are required to complete a two-credit Field Project in SYBA Semester III to be eligible for the award of a B.A. degree. To meet this requirement, our Board of Studies has prepared a Standard Operating Procedure (SOP) and format for conducting the Field Project. The detailed SOPs are provided below.

1) **Preparation of SOP and Course Material:** The Board of Studies (BOS) will prepare the SOP, project format, and curriculum for the Field Project coursework.
2) **Notification to Students:** The department will issue a notice instructing students to attend the coursework for the Field Project.
3) **Conducting Coursework:** The department will conduct the necessary coursework to prepare students for undertaking the Field Project.
4) **Application for Guide Allocation:** Groups of three students will submit an application in the prescribed format to the HOD for the allocation of a Field Project guide.
5) **Guide Allocation:** A departmental committee will allocate guides to students in accordance with the department's rules and policies.
6) **Publication of list of students and guide:** The list of student groups and their allotted guides will be published.
7) **Topic Finalization:** Students will meet with their assigned guide to finalize the topic

of their Field Project.

8) **Questionnaire Development:** Students will prepare a questionnaire under the guidance of their Field Project guide.
9) **Fieldwork and Data Collection:** Students will conduct fieldwork/field surveys to collect relevant data and information.
10) **Data Analysis and Presentation:** Students will analyze and present the collected data.
11) **Project Preparation:** Students will prepare the Field Project report in the prescribed format provided by the department, under the guidance of their assigned guide.
12) **Assessment and Evaluation:** The Field Project will be assessed and evaluated according to the guidelines provided by the exam department.
13) **Inclusion of Geo-tagged Photographs:** The Field Project must include geo-tagged photographs of the fieldwork/survey.
14) **Inclusion of Study Area Map:** The Field Project should contain a map of the study area.
15) **Project Length:** The Field Project report should be between 20 to 25 pages

Topics and Learning Points

Unit 1: Planning and Preparation for Field Work	**Teaching Hours**
1.1 Defining the Fieldwork Topic	**15**
1.2 Scope of the Study Area	
1.3 Identifying Key Research Questions for Field Study	
1.4 Understanding the Fieldwork Objectives	
1.5 Ethical Considerations in Field Work	
1.6 Creating a Fieldwork Plan	
Unit 2: Fieldwork Data Collection	**25**
2.1 Selecting the Fieldwork Methods (Surveys, Interviews, Observations)	
2.2 Collecting Primary Data from the Field	
2.3 Recording and Organizing Field Data (Photographs, Maps, Notes)	
2.4 Handling Challenges in Data Collection	
2.5 Post-Fieldwork Data Compilation and Preliminary Analysis	
Unit 3: Fieldwork Report Preparation and Presentation	**20**
3.1 Analyzing Field Data (Quantitative and Qualitative Methods)	
3.2 Structuring the Fieldwork Report	
3.3 Writing the Introduction and Study Area Description	
3.4 Formulating Objectives and Hypothesis	
3.5 Writing the Methodology and Data Analysis Sections	
3.6 Discussing Results and Significance of Findings	
3.7 Conclusion and Recommendations	
3.8 Bibliography and References	
3.9 Preparing for Oral Presentation of the Report	
3.10 Submission of the Final Fieldwork Report	

References:

1. Mukherjee, Neela (2002). Participatory Learning and Action with 100 Field Methods. Concept Publishing, New Delhi.
2. Rao, P. S. (2006). Research Methodology for Social Sciences. Anmol Publications, New Delhi.
3. Kothari, C. R. (2004). Research Methodology: Methods and Techniques. New Age International Publishers, New Delhi.
4. Sundaram, K. V. (2007). Geography Fieldwork and Techniques. Concept Publishing, New Delhi.
5. Singh, R. L. (1994). Elements of Practical Geography. Kalyani Publishers, New Delhi.

Mapping of Program Outcomes with Course Outcomes

Weightage: 0= No relation, 1= Weak relation, 2= Moderate relation, 3= Strong relation

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3	3	2	3	2	2	3	2	3	2
CO2	3	2	2	3	3	3	2	2	3	2
CO3	3	2	2	3	2	3	2	2	3	2
CO4	3	2	2	2	3	3	2	2	2	3
CO5	2	3	3	2	3	2	3	2	2	3
CO6	3	3	2	3	2	3	2	2	3	2
CO7	3	2	2	3	2	3	2	2	3	2

Justification

PO1: Critical and Creative Thinking

All COs demonstrate a strong alignment with critical thinking (CO1, CO2, CO3, CO4). The design of questionnaires (CO1), analysis of socio-economic data (CO2), and application of problem-solving skills in research (CO3) require analytical and creative thought processes to assess real-world problems.

PO2: Communication Skills

Communication is integral to most COs, especially CO1 (designing questionnaires) and CO6 (presentation of research findings), where clear expression of complex data and ideas is essential. Engaging with communities (CO5) also requires strong verbal and written communication.

PO3: Multicultural Competence

CO5 (community engagement) and CO3 (understanding diverse socio-cultural impacts) directly engage with the values of multicultural competence, allowing students to work with and understand diverse groups and geographical contexts.

PO4: Research Skills

All COs, especially CO1, CO2, and CO6, focus on research skills. Designing questionnaires, collecting and analyzing data, and synthesizing findings require rigorous research methodologies, in line with PO4's focus on hypothesis testing, data interpretation, and project design.

PO5: Environmental Awareness

Environmental awareness is strongly linked to CO2 (collecting and analyzing environmental data) and CO4 (understanding human-geography relationships), where students study the impact of human activities on the environment and work towards sustainability.

PO6: Problem-solving Abilities

CO3 (critical thinking) and CO5 (engaging with communities to resolve issues) contribute to problem-solving abilities, as students identify geographical issues and propose solutions through innovative methods.

PO7: Collaboration and Teamwork

CO5 emphasizes teamwork through community engagement, where students collaborate with local populations to address geographical issues. CO1 (questionnaire design) and CO2 (data collection) also involve working in teams for effective outcomes.

PO8: Value Inculcation

Many COs, particularly CO5 (community engagement), focus on ethical engagement with communities and understanding the broader implications of geographical research on human well-being and environmental sustainability.

PO9: Digital and Technological Skills

CO1 (questionnaire design), CO6 (data presentation), and CO2 (data analysis) align with digital skills, as students utilize tools like GIS, data processing software, and digital platforms to conduct and present their research effectively.

PO10: Community Engagement and Service

CO5 directly engages with this PO by focusing on community-based studies and working with local populations to address geographical and environmental issues, fostering a sense of responsibility and service.