



Anekant Education Society's

**Tuljaram Chaturchand College of Arts, Science & Commerce,
Baramati**

(Autonomous)

Three/Four Year Honours/Honours with Research B.A. Degree

Program in Geography

(Faculty of Arts/Science/Commerce/Vocational)

CBCS Syllabus

FYBA (Geography)

For Department of Geography

NEP-2.0

Choice Based Credit System Syllabus

(2024 Pattern)

(As Per NEP-2020)

To be implemented from Academic Year 2024-2025

Title of the Programme: FYBA (Geography)**Preamble**

AES's Tuljaram Chaturchand College has decided to change the syllabus of various faculties from June, 2023 by taking into consideration the guidelines and provisions given in the National Education Policy (NEP), 2020. The NEP envisions making education more holistic and effective and to lay emphasis on the integration of general (academic) education, vocational education and experiential learning. The NEP introduces holistic and multidisciplinary education that would help to develop intellectual, scientific, social, physical, emotional, ethical and moral capacities of the students. The NEP 2020 envisages flexible curricular structures and learning based outcomes for the development of the students. The credit structure and the courses framework provided in the NEP are nationally accepted and internationally comparable.

The rapid changes in science and technology and new approaches in different areas of Geography and related subjects, Board of Studies in Geography of Tuljaram Chaturchand College, Baramati - Pune has prepared the syllabus of FYBA Geography Semester - I under the Choice Based Credit System (CBCS) by following the guidelines of NEP 2020, NCER, NHEQF, Prof. R.D. Kulkarni's Report, GR of Gov. of Maharashtra dated 20th April, 16th May 2023 and 13th March, 2024 and Circular of SPPU, Pune dated 31st May 2023 and 2nd May, 2024.

A Geography degree equips students with the knowledge and skills necessary for a diverse range of fulfilling career paths. Graduates in Geography find opportunities in various fields, including urban planning, GIS analysis, disaster preparedness, teaching, environmental science, remote sensing analysis, transportation planning, demography, hydrology, and many other domains. Throughout their three-year degree program, students explore the spatial organization of both natural and human phenomena across different scales, from local to global. They learn to identify and analyze features on the Earth's surface, understand their spatial patterns, and compare similarities and differences between different places. The curriculum also delves into the intricate relationship between humans and the environment, examining how physical and cultural landscapes evolve over time. Students specializing in physical geography gain an understanding of the processes that shape Earth's climate, create landforms, and influence the distribution of plant and animal life. By acquiring these comprehensive skills and knowledge, graduates are well-prepared to embark on rewarding

careers that contribute to a better understanding of our world and address the challenges of our ever-changing planet.

Overall, revising the Geography syllabus in accordance with the NEP 2020 ensures that students receive an education that is relevant, comprehensive, and prepares them to navigate the dynamic and interconnected world of today. It equips them with the knowledge, skills, and competencies needed to contribute meaningfully to society and pursue their academic and professional goals in a rapidly changing global landscape.

Programme Specific Outcomes (PSOs)

- PSO1. Problem Analysis:** Demonstrate the ability to analyze physical and cultural problems in both rural and urban environments and propose effective solutions.
- PSO2. Socio-economic Survey Project:** Possess the skills necessary to conduct socio-economic survey projects, enabling them to assess the development status of specific social groups or sections of society.
- PSO3. Individual and Teamwork:** Effectively collaborate as individuals and as members or leaders in diverse teams and multidisciplinary settings.
- PSO4. Application of Modern Instruments:** Apply various modern instruments for data collection and field surveys.
- PSO5. GIS and Geographical Map Making:** Learn to utilize GIS and modern techniques for creating geographically-based maps.
- PSO6. Critical Thinking:** Demonstrate the ability to understand and address critical issues in physical and cultural environments.
- PSO7. Development of Observation Skills:** Through field experiences, students will develop strong observational skills and the ability to identify socio-environmental problems in localities.
- PSO8. Human perception and behaviour:** Learning human perception and behaviour to acquire the geographical knowledge over time, is essential to improve decision making process.
- PSO9. Effective Citizenship:** Exhibit empathetic social concern, an equity-centered approach to national development, and actively engage in civic life through volunteering.
- PSO10. Management Skills:** Understand and apply management principles to their work, functioning effectively as individuals and as members or leaders in diverse, multidisciplinary teams.
- PSO.11 Ethics:** Recognize different value systems, including their own, understand the moral dimensions of their decisions, and take responsibility for their actions.
- PSO12. Environmental Ethics and Sustainability:** Comprehend the societal and environmental impact of their knowledge and exhibit an understanding of the need for sustainable development.
- PSO13. Identification of critical problems and issues:** Detection and identification of the critical problems and spatial issues are essential for sustainable development.

Anekant Education Society's
Tuljaram Chaturchand College, Baramati
(Autonomous)

Board of Studies (BOS) 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.	Dr. Santosh Lagad	Vice-Chancellor Nominee
6.	Dr. Pravin Kokane	Expert from other University
7.	Dr. T. P. Shinde	Expert from other University
8.	Dr. Babaji Maskare	Industry Expert
9.	Mr. Ganesh Ghanawat	Meritorious Alumni
10.	Ms. Jagtap Samruddhi	Student Representative
11.	Ms. Gawade Anushka	Student Representative
12.	Ms. Kadam Radhika	Student Representative
13.	Ms. Harshada Saste	Student Representative

**Credit Distribution Structure for Three/Four Year Honours/Honours with Research Degree Programme
With Multiple Entry and Exit options as per National Education Policy (2024 Pattern as per NEP-2020)**

Level/ Difficulty	Sem	Subject DSC-1	Subject DSC-2	Subject DSC-3	GE/OE	SEC	IKS	AEC	VEC	CC	Total			
4.5/100	I	2(T)+2(P)	2(T)+2(P)	2(T)+ 2(P)	2(T)	2 (T/P)	2(T) (Generic)	2(T)	2(T)	--	22			
	II	2(T)+2(P)	2(T)+2(P)	2(T)+2(P)	2(P)	2 (T/P)	--	2(T)	2(T)	2(T)	22			
Exit option: Award of UG Certificate in Major with 44 credits and an additional 4 credits core NSQF course/Internship OR Continue with Major and Minor Continue option: Student will select one subject among the (subject 1, subject 2 and subject 3) as major and other as minor and third subject will be dropped.														
Level/ Difficulty	Sem	Credits Related to Major				Minor	--	GE/OE	SEC	IKS	AEC	VEC	CC	Total
		Major Core	Major Elective	VSC	FP/OJT/CE P/RP									
5.0/200	III	4(T)+2(P)	--	2 (T/P)	2(FP)	2(T)+2(P)	--	2(T)	--	2(T)	--	2(T)	22	
	IV	4(T)+2(P)	--	2 (T/P)	2(CEP)	2(T)+2(P)	--	2(P)	2 (T/P)	--	2(T)	--	2(T)	22
Exit option: Award of UG Diploma in Major and Minor with 88 credits and an additional 4credits core NSQF course/Internship OR Continue with Major and Minor														
5.5/300	V	8(T)+4(P)	2(T)+2(P)	2 (T/P)	2(FP/CEP)	2(T)	--	--	--	--	--	--	22	
	VI	8(T)+4(P)	2(T)+2(P)	2 (T/P)	4 (OJT)	--	--	--	--	--	--	--	22	
Total 3Years		44	8	8	10	18	8	8	6	4	8	4	6	132
Exit option: Award of UG Degree in Major with 132 credits OR Continue with Major and Minor														
6.0/400	VII	6(T)+4(P)	2(T)+2 (T/P)	--	4(RP)	4(RM)(T)	--	--	--	--	--	--	22	
	VIII	6(T)+4(P)	2(T)+2 (T/P)	--	6(RP)	--	--	--	--	--	--	--	22	
Total 4Years		64	16	8	22	22	8	8	6	4	8	4	6	176
Four Year UG Honours with Research Degree in Major and Minor with 176 credits														
6.0/400	VII	10(T)+4(P)	2(T)+2 (T/P)	--	--	4(RM) (T)	--	--	--	--	--	--	22	
	VIII	10(T)+4(P)	2(T)+2 (T/P)	--	4 (OJT)	--	--	--	--	--	--	--	22	
Total 4Years		72	16	8	14	22	8	8	6	4	8	4	6	176
Four Year UG Honours Degree in Major and Minor with 176 credits														

T = Theory **P** = Practical **DSC** = Discipline Specific Course **OE** = Open Elective **SEC** = Skill Enhancement Course
IKS = Indian Knowledge System **AEC** = Ability Enhancement Course **VEC** = Value Education Course **CC** = Co-curricular Course
VSC = Vocational Skill Course **OJT** = On Job Training **CEP** = Community Engagement Project **FP** = Field Project **RP** = Research Project

F.Y.B.A. Geography

NEP-2.0

Course Structure for F.Y.B.A. Geography (2024 Pattern)

Sem	Course Type	Course Code	Course Title	Theory / Practical	Credits
I	DSC-I (General)	-101-GEN	-----	Theory	04
	DSC-II (General)	-101-GEN	-----	Theory	04
	DSC-III (General)	GEO-101-GEN	Physical Geography	Theory	02
		GEO-102-GEN	Practical in Physical Geography	Practical	02
	Open Elective (OE)	GEO-103-OE	Tourism Geography	Theory	02
	Skill Enhancement Course (SEC)	GEO-104-SEC	Fundamentals of Google Map	Theory	02
	Ability Enhancement Course (AEC)	ENG-104-AEC	-----	Theory	02
	Value Education Course (VEC)	GEO-105-VEC/ SOC-104-VEC	Environmental Education	Theory	02
	Generic Indian Knowledge System (GIKS)	GEN-106-IKS	-----	Theory	02
Total Credits					22
I	DSC-I (General)	-151-GEN	-----	Theory	04
	DSC-II (General)	-151-GEN	-----	Theory	04
	DSC-III (General)	GEO-151-GEN	Human Geography	Theory	02
		GEO-152-GEN	Practical in Human Geography	Practical	02
	Open Elective (OE)	GEO-153-OE	Practical in Tourism Geography	Practical	02
	Skill Enhancement Course (SEC)	GEO-154-SEC	Practical in Google Earth	Practical	02
	Ability Enhancement Course (AEC)	ENG-154-AEC	-----	Theory	02
	Value Education Course (VEC)	GEO-155-VEC SOC-154-VEC	Environmental Awareness	Theory	02
	CC	YOG/PES/CUL/N SS/NCC-156-CC	To be selected from the CC Basket	Theory	02
Total Credits					22
Grand Total Sem I + Sem II					44

**CBCS Syllabus as per NEP 2020 for F.Y.B.A Geography
(2024 Pattern)**

Name of the Programme	: B.A. Geography
Programme Code	: UAGG
Class	: F.Y.B.A.
Semester	: I
Course Type	: DSC-I (General) (Theory)
Course Code	: GEO-101-GEN
Course Title	: Physical Geography
No. of Credits	: 02
No. of Teaching Hours	: 30

Course Objectives:

1. To describe the components of the Earth System.
2. To understand the Plate Tectonic Theory and associated features.
3. To study distribution of major landforms of the Earth.
4. To know the process of weathering and soil formation process.
5. To understand the role of hydrological cycle in the earth system.
6. To explain the factors influencing the formation of ocean currents.
7. To identify and study local landforms and weather features.

Course Outcomes:

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

- CO1.** Identify and describe the characteristics and functions of each component within the Earth System.
- CO2.** Explain the processes and features associated with plate tectonics, such as divergent boundaries, convergent boundaries, transform boundaries, and associated geological phenomena
- CO3.** Identify and classify major landforms on Earth, including mountains, plains, plateaus, valleys, and deserts.
- CO4.** Explain the stages and factors involved in soil formation, including parent material, climate, organisms, topography, and time.
- CO5.** Understand the role of the hydrological cycle in redistributing water on Earth and

maintaining global water balance.

CO6. Analyze the role of ocean currents in global climate patterns, marine ecosystems, and the transport of heat around the Earth.

CO7. Observe and analyze local weather features, including cloud formations, wind patterns, and precipitation, and understand their causes and implications.

Topics and Learning Points

UNIT 1: Introduction to Physical Geography	Teaching Hours
1.1 Definition, nature and scope	10
1.2 Components of Earth System	
1.3 Branches of Physical geography	
1.4 Importance of Physical Geography	
UNIT 2: Lithosphere and Atmosphere	10
2.1 Internal structure of the Earth	
2.2 Plate Tectonic Theory	
2.3 Structure and composition of atmosphere	
2.4 Global wind circulation pattern	
UNIT 3: Hydrosphere	10
3.1 Hydrological cycle	
3.2 Ocean bottom relief features	
3.3 Tropical cyclones	
3.4 Major oceans and seas	

References:

1. Clyton K., (1986), Earth Crust, Adus Book, London.
2. Davis W. M., (1909), Geographical Essay, Ginnia Co.
3. Dayal P., (1996), Text Book of Geomorphology, Shukla Book Depot, Patna.
4. Kale V.S. and Gupta A., (2015), Introduction of Geomorphology, University Press, PVT Kolkata.
5. Lal, D. S. (1998): 'Climatology', Chaitanya Publishing House, Allahabad
6. Kale V.S. and Gupta A., (2001), Elements of Geomorphology, Oxford Univ. Press.

7. Monkhouse, (1951), Principle of Physical Geography, McGraw Hill Pub – New York.
8. Pitty A. F., (1974), Introduction to Geomorphology, Methuen London.
9. Singh Savindra, (2000), Physical Geography, Prayag Pustak Bhavan, 20-A, University Road, Allahabad – 211002.
10. Steers J. A., (1964), The Unstable Earth Some Recent Views in Geography, Kalyani Publishers, New Delhi.
11. Swaroop Shanti, (2006), Physical Geography, King Books, Nai Sarak, Delhi –110006.
12. Wooldridge S. W. and Morgan R. S., (1959), The Physical Basis of Geography and Outline of Geomorphology, Longman Green and Co. London.
13. Chaudhari J. L (2013) Physical Geography

Mapping of Program Outcomes with Course Outcomes

Class: FYBA

Subject: Geography

Course: Physical Geography

Course Code: GEO-101-GEN

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	1	0	0	0	0	0	0	0	0	0
CO2	1	3	0	0	0	0	0	0	0	0
CO3	1	0	3	0	0	0	0	0	0	0
CO4	1	1	1	3	0	0	0	0	0	0
CO5	1	1	1	1	3	0	0	0	0	0
CO6	1	1	1	1	1	3	0	0	0	0
CO7	1	1	1	1	1	1	3	0	0	0

Justification:

- **PO1 Critical and Creative Thinking:** CO1 to CO7 involve analytical thinking about Earth systems, processes, and phenomena, aligning well with critical and creative

thinking skills required to understand complex geological and environmental concepts.

- **PO2 Communication Skill:** CO2 involves explaining geological processes, requiring effective communication of scientific concepts. Other COs involve minimal communication skills directly.
- **PO3 Multicultural Competence:** No direct relationship identified with multicultural competence.
- **PO4 Research Skills:** CO4 to CO7 involve inquiry, analysis, and synthesis of geological data and processes, indicating a strong relation with research skills.
- **PO5 Environmental Awareness:** CO4 to CO6 involve understanding environmental processes such as soil formation, hydrological cycles, and ocean currents, demonstrating a strong relation with environmental awareness.
- **PO6 Problem-solving Abilities:** CO4 to CO7 involve analyzing and solving problems related to Earth systems and processes, demonstrating a strong relation with problem-solving abilities.
- **PO7 Collaboration and Teamwork:** No direct relationship identified with collaboration and teamwork.
- **PO8 Value Inculcation:** No direct relationship identified with value inculcation.
- **PO9 Digital and Technological Skills:** No direct relationship identified with digital and technological skills.
- **PO10 Community Engagement and Service:** No direct relationship identified with community engagement and service.

**CBCS Syllabus as per NEP 2020 for F.Y.B.A Geography
(2024 Pattern)**

Name of the Programme	: B.A. Geography
Programme Code	: UAGG
Class	: F.Y.B.A.
Semester	: I
Course Type	: DSC-I (General) (Practical)
Course Code	: GEO-102-GEN
Course Title	: Practical in Physical Geography
No. of Credits	: 02
No. of Teaching Hours	: 60

Course Objectives:

1. To Demonstrate an understanding of different types of topographical maps and their classifications.
2. To Identify and correctly interpret conventional signs and symbols used in topographical maps.
3. To Accurately read and analyze topographical maps to extract relevant geographical information.
4. To Explain and apply various methods for representing relief on maps, including hachures, contour lines, and other techniques.
5. To Create detailed and accurate relief representations using appropriate methods.
6. To Analyze the advantages and limitations of different relief representation techniques.
7. To Identify key relief features such as hills, valleys, ridges, and plateaus on toposheets using contour lines.

Course Outcomes:

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

CO1. Classify and differentiate various types of topographical maps, explaining their specific uses and characteristics.

CO2. Identify and interpret the conventional signs and symbols depicted on topographical maps.

CO3. Proficiently read and analyze topographical maps, extracting and summarizing relevant geographical information effectively.

CO4. Explain and demonstrate the application of various relief representation methods, including hachures and contour lines.

CO5. Produce detailed and precise relief representations using suitable methods for different geographical contexts.

CO6. Critically evaluate the strengths and weaknesses of different techniques used for representing relief on maps.

CO7. Accurately identify and interpret key relief features such as hills, valleys, ridges, and plateaus on toposheets using contour lines.

Topics and Learning Points

UNIT 1: Map reading and Interpretation	Teaching Hours
1.1 Introduction to Topographical Maps	20
1.2 Classification of Topographical Map	
1.3 Conventional Sign and Symbol used in topographical Maps	
UNIT 2: Methods of Representation of Relief	20
2.1 Qualitative Methods (Hachures, Hill Shading and Colour Shading)	
2.2 Quantitative Methods (Spot Height, Bench Mark, Contours, From Lines)	
2.3 Recording and interpretation of weather data	
UNIT 3: Representation of slope and landforms by contours	20
3.1 Representation of slope by contours	
i. Gentle and steep slope	
ii. Even and uneven slope	
iii. Concave and convex slope	
3.2 Representation of landforms by contours (Conical hill, Plateau, Cliff, V shaped valley)	
3.3 Field visit to observe and study landforms	

References:

1. Clyton K., (1986), Earth Crust, AdusBook , London.
2. Davis W. M., (1909), Geographical Essay, Ginnia Co.
3. Dayal P., (1996), Text Book of Geomorphology, Shukla Book Depot, Patna.
4. Kale V.S. and Gupta A., (2015), Introduction of Geomorphology, University Press, PVT Kolkata.
5. Lal, D. S.(1998): 'Climatology', Chaitanya Publishing House,Allahabad
6. Kale V.S. and Gupta A., (2001), Elements of Geomorphology, Oxford Univ. Press.
7. Monkhouse, (1951), Principle of Physical Geography, McGraw Hill Pub – New York.
8. Pitty A. F., (1974), Introduction to Geomorphology, Methuen London.
9. Singh Savindra, (2000), Physical Geography,PrayagPustakBhavan, 20-A, University Road, Allahabad – 211002.
10. Steers J. A., (1964), The Unstable Earth Some Recent Views in Geography, Kalyani Publishers, New Delhi.
11. Swaroop Shanti, (2006), Physical Geography, King Books, NaiSarak, Delhi –110006.
12. Wooldridge S. W. and Morgan R. S., (1959), The Physical Basis of Geography and Outline of Geomorphology, Longman Green and Co. London.
13. Chaudhari J. L (2013) Physical Geography

Mapping of Program Outcomes with Course Outcomes

Class: FYBA

Subject: Geography

Course: Physical Geography

Course Code: GEO-101-GEN

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	2	2	2	1	1	1	1	0	2	0
CO2	1	3	2	1	1	1	1	0	2	0
CO3	2	2	3	1	1	1	1	0	2	0
CO4	1	1	1	2	2	2	2	0	2	0
CO5	1	1	1	2	3	2	2	0	2	0
CO6	1	1	1	2	2	3	2	0	2	0
CO7	1	1	1	2	2	2	3	0	2	0

Justification:

- **PO1 Critical and Creative Thinking:** CO1, CO2, and CO3 involve classifying, interpreting, and analyzing topographical maps, demonstrating a moderate relation to critical and creative thinking. These tasks require students to apply analytic thought in understanding map characteristics and features.
- **PO2 Communication Skill:** CO2 and CO3 require effective interpretation and summarization of geographical information from maps, showing a strong relation with communication skills. Other COs involve basic communication in explaining relief representation methods and map features.
- **PO3 Multicultural Competence:** No direct relationship identified with multicultural competence.
- **PO4 Research Skills:** CO6 involves evaluating different relief representation techniques, indicating a moderate relation with research skills. Other COs involve minimal research skills in understanding and applying topographical mapping techniques.
- **PO5 Environmental Awareness:** No direct relationship identified with environmental awareness.

- **PO6 Problem-solving Abilities:** CO6 involves critical evaluation of relief representation techniques, demonstrating a moderate relation with problem-solving abilities. Other COs involve basic problem-solving in interpreting and representing relief features on maps.
- **PO7 Collaboration and Teamwork:** No direct relationship identified with collaboration and teamwork.
- **PO8 Value Inculcation:** No direct relationship identified with value inculcation.
- **PO9 Digital and Technological Skills:** CO1 and CO2 involve using digital tools to classify and interpret topographical maps, indicating a moderate relation with digital skills. Other COs involve basic digital skills in producing relief representations and using appropriate mapping techniques.
- **PO10 Community Engagement and Service:** No direct relationship identified with community engagement and service.

**CBCS Syllabus as per NEP 2020 for F.Y.B.A Geography
(2024 Pattern)**

Name of the Programme	: B.A. Geography
Programme Code	: UAGG
Class	: F.Y.B.A.
Semester	: I
Course Type	: Open Elective (Theory)
Course Code	: GEO-103-OE
Course Title	: Tourism Geography
No. of Credits	: 02
No. of Teaching Hours	: 30

Course Objectives:

- 1 To understand the diverse nature and broad scope of Tourism Geography.
- 2 To provide understanding of recent and emerging types of Tourism.
- 3 To gain insights into specialized forms of tourism.
- 4 To understand the characteristics and sustainability of tourism.
- 5 To explore the socio-cultural determinants of tourism.
- 6 To classify and analyse diverse tourism trends,
- 7 To enabling the students with the dynamic nature of the tourism industry.

Course Outcomes:

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

CO1. Understand of the definition, nature, and scope of tourism.

CO2. Recognize and articulate the economic, social, and cultural importance of tourism.

CO3. Categorize tourism based on nationality, understanding the distinctions between domestic and international tourism.

CO4. Analyse the impact of physical determinants such as relief, climate, forests, and water bodies on tourism development and experiences.

CO5. Identify and evaluate the influence of religious, historical, and cultural factors on tourist attractions and destination choices.

CO6. classify and analyse diverse tourism trends.

CO7. Understand the dynamic nature of the tourism industry.

Topics and Learning Points

UNIT 1: Introduction to Tourism Geography	Teaching Hours
1.1 Definition, meaning and concept of tourism	10
1.2 Nature and Scope of Tourism Geography	
1.3 Concept of Tourist and Tourism	
1.4 Importance of Tourism in Geography	
UNIT 2: Determinants of Tourism Development	10
2.1 Physical (Relief, Climate, Forest, Water)	
2.2 Socio-Cultural (Religious, Historical)	
2.3 Political (Policies)	
2.4 Other (Accessibility, Safety of Tourist)	
UNIT 3: Classification and recent types of Tourism	10
3.1 Classification of Tourism based on	
1. Nationality	
2. Travel Period	
3. Purpose of Tourism	
3.2 Recent types of Tourism	
1. Agro Tourism	
2. Ecotourism	
3. Wildlife Tourism	
4. Health Tourism	
5. Sports Tourism	

References:

1. Cooper, C. and Hall, M., (2008). Tourism and Leisure: Issues and Challenges. Channel View Publications, Bristol.
2. Goeldner, C. R. and Ritchie, J. R. B., (2017). Tourism: Principles, Practices, Philosophies. John Wiley & Sons, Hoboken.
3. Singh, V. and Joshi, S., (2012). Tourism Planning and Development: Concepts and Issues. Sterling Publishers, New Delhi.
4. Page, S. and Connell, J., (2009). Tourism: A Modern Synthesis. Cengage Learning, Hampshire.
5. Seth P.N., (1985), Successful Tourism Management, Sterling Publisher Ltd., New Delhi.
6. Mhatre, S., (2015), Tourism Geography: An Integrated Approach. Himalaya Publishing House, Mumbai.

Mapping of Program Outcomes with Course Outcomes**Class:** FYBA**Subject:** Geography**Course:** Tourism Geography**Course Code:** GEO-103-OE

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	2	2	1	0	0	0	0	0	0	2
CO2	2	2	1	1	1	0	0	0	0	1
CO3	1	1	3	0	0	0	0	0	0	2
CO4	1	1	2	3	2	0	0	0	1	0
CO5	1	1	1	2	3	0	0	0	0	0
CO6	1	1	1	1	1	3	1	0	0	0
CO7	1	1	1	1	1	1	3	0	0	0

Justification:

- **PO1 Critical and Creative Thinking:**CO1 and CO2 require critical thinking about tourism definitions and economic impacts. CO3 involves understanding cultural differences in tourism, requiring diverse thinking approaches.CO4 to CO7 involve factual knowledge and industry dynamics more than critical or creative thinking.
- **PO2 Communication Skill:**CO1 and CO2 require effective communication about tourism concepts and economic impacts.CO3 involves communicating effectively across cultural differences. CO4 to CO7 focus more on factual knowledge and industry-specific terminology.
- **PO3 Multicultural Competence:**CO3 is directly related to understanding cultural differences in tourism. CO1 and CO2 relate to multicultural aspects through understanding tourism definitions and economic impacts. CO4 to CO7 have less direct relation to multicultural competence.
- **PO4 Research Skills:** CO4 requires research skills to analyze physical determinants of tourism. CO5 involves research in cultural influences on tourism. CO1 to CO3 and CO6 to CO7 involve less research and more practical or observational skills.
- **PO5 Environmental Awareness:** CO4 and CO5 require understanding environmental impacts and conservation in tourism. CO1 and CO2 touch on environmental sustainability in tourism. CO3 and CO6 to CO7 have less emphasis on environmental issues.
- **PO6 Problem-solving Abilities:** CO6 requires problem-solving in analyzing tourism trends and challenges. CO1 and CO2 involve problem-solving related to economic impacts and policy analysis. CO3 to CO5 and CO7 involve less direct problem-solving.
- **PO7 Collaboration and Teamwork:**CO7 involves teamwork in understanding the dynamic nature of the tourism industry. CO1 and CO2 touch on collaboration in economic and policy contexts. CO3 to CO6 involve less direct collaboration skills.
- **PO9 Digital and Technological Skills:** CO4 involves using technology to analyze physical determinants of tourism.
- **PO10 Community Engagement and Service:** CO1 and CO3 relate to community engagement in understanding tourism impacts and cultural interactions. CO2 involves community engagement in economic and cultural benefits of tourism. CO4 to CO7 involve less direct community engagement and service activities

**CBCS Syllabus as per NEP 2020 for F.Y.B.A Geography
(2024 Pattern)**

Name of the Programme	: FYBA Geography
Programme Code	: UAGG
Class	: FYBA
Semester	: I
Course Type	: Skill Enhancement Course (SEC) (Theory)
Course Code	: GEO-104-SEC
Course Title	: Fundamentals of Google Map
No. of Credits	: 02
No. of Teaching Hours	: 30

Course Objectives:

1. To understand the concept of Google Maps and its utility
2. To identify nearby places, landmarks, and points of interest.
3. To share locations with others and explain the sharing process
4. To interpret real-time traffic updates and make informed navigation decisions.
5. To discover alternative routes and route options to reach destinations.
6. To explore streets virtually using Google Maps' Street View feature.
7. To measure distances and areas accurately using Google Maps tools

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

- CO 1.** Understand Google Maps and its significance in modern navigation.
- CO 2.** Identify and explore nearby places, landmarks, and attractions.
- CO 3.** Know how to share locations with others using Google Maps.
- CO 4.** Make informed navigation decisions based on real-time traffic updates.
- CO 5.** Analyse alternative routes and select the most suitable options.
- CO 6.** Virtually explore streets and locations using Google Maps' Street View.
- CO 7.** Accurately measure distances and areas, demonstrating a practical knowledge of Google Maps' measurement tools.

Topics and Learning Points

UNIT 1: Introduction to Google Maps	Teaching Hours
1.1 Understanding the concept of Google Maps	8
1.2 History and evolution of Google Maps	
1.3 Exploring the Google Maps interface	
1.4 Basic navigation and zooming	
UNIT 2: Searching and Finding Places	7
2.1 Searching for specific locations	
2.2 Finding nearby places and landmarks	
2.3 Sharing locations	
2.4 Saving and managing favorite locations	
UNIT 3: Directions and Navigations	8
3.1 Getting driving, walking and public transit directions	
3.2 Understanding real-time traffic updates	
3.3 Alternative routes and route options	
3.4 Offline navigation with Google maps	
UNIT 4: Exploring Additional Features	7
4.1 Street view: exploring streets virtually	
4.2 Indoor maps and floor maps	
4.3 Using Google Earth in conjunction with Google maps	
4.4 Measuring distances and areas	

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.
- Martin, A. P. (2019). "Google Maps: A Nuts and Bolts Approach to User-Friendly Web Mapping." Chapman and Hall/CRC.
 - [Google Maps Platform Documentation](#) - Official documentation for developers using Google Maps API. <https://developers.google.com/maps/documentation>
 - [Google Maps JavaScript API Tutorial](#) - Official guide to getting started with the Google Maps JavaScript API. <https://developers.google.com/maps/get-started>
 - [OpenStreetMap](#) - A collaborative mapping project that provides open and free geographic data. <https://www.openstreetmap.org/#map=4/21.84/82.79>

Mapping of Program Outcomes with Course Outcomes

Class: FYBA

Subject: Geography

Course: Fundamentals of Google Map

Course Code: GEO-141-GEN

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	2	1	0	1	0	2	1	0	1	0
CO2	1	3	0	0	0	0	0	0	2	0
CO3	2	2	1	2	0	2	1	0	1	0
CO4	2	1	0	2	0	2	1	0	1	0
CO5	1	1	2	1	3	1	0	2	1	0
CO6	2	2	1	2	1	3	2	0	1	0
CO7	2	1	1	1	0	2	3	0	1	0

Justification:

- PO1 Critical and Creative Thinking:** CO1 (Understanding Google Maps) requires analytic thought to comprehend its functionalities and significance in modern navigation. CO6 (Virtually explore streets using Street View) involves creative thinking to use innovative approaches in exploring locations.

- **PO2 Communication Skill:** CO2 (Identify and explore nearby places) and CO3 (Share locations with others) necessitate effective communication to convey information about places and share locations accurately.
- **PO3 Multicultural Competence:** CO3 (Share locations with others) relates to multicultural competence by facilitating interaction and communication across diverse groups.
- **PO4 Research Skills:** CO4 (Make informed navigation decisions based on traffic updates) involves research skills to analyze real-time data for navigation decisions.
- **PO5 Environmental Awareness:** No direct relationship identified with environmental awareness.
- **PO6 Problem-solving Abilities:** CO5 (Analyze alternative routes) and CO6 (Virtually explore locations) require problem-solving abilities to address navigation challenges and utilize Street View effectively.
- **PO7 Collaboration and Teamwork:** CO7 (Measure distances and areas) involves collaboration in team projects using measurement tools effectively.
- **PO8 Value Inculcation:** No direct relationship identified with value inculcation.
- **PO9 Digital and Technological Skills:** CO1 (Understand Google Maps) and CO9 (Use ICT in learning and work situations) directly relate to digital and technological skills in utilizing mapping tools effectively.
- **PO10 Community Engagement and Service:** No direct relationship identified with community engagement and service.

**CBCS Syllabus as per NEP 2020 for F.Y.B.A Geography
(2024 Pattern)**

Name of the Programme	: FYBA Geography
Programme Code	: UAGG
Class	: FYBA
Semester	: I
Course Type	: Vocational Enhancement Course
Course Code	: GEO-105-VEC
Course Title	: Environmental Education
No. of Credits	: 02
No. of Teaching Hours	: 30

Course Objectives:

1. To create the awareness about dynamic environment among the student.
2. To acquaint the students with fundamental concepts of environment for development in different areas.
3. The students should be able to integrate various factors of Environment and dynamic aspect of Environment.
4. To make aware the students about the problems of environment, their utilization and conservation in the view of sustainable development.
5. To make conscious about environment pollution.
6. To utilize different ideas to reduce environment pollution.
7. To accept value education about environment.

Course Outcomes:

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

- CO1. Understand concept of environment and its development.
- CO2. Identify biodiversity, ecosystem of environment.
- CO3. Well, recognize types and importance of environment.
- CO4. Identify solution to control or reduce environmental pollution.
- CO5. Understand of value of environment.
- CO6. Awareness among society to improve knowledge about environment.
- CO7. Analyse and prepare a plan to reduce environment pollution.

Topics and Learning Points

Unit – 1: Humans and the Environment	Teaching Hours
1.1 Human interaction with the environment	06
1.2 Environmental ethics	
1.3 Emergence of environmentalism	
Unit – 2: Natural resources and sustainable development	08
2.1 Concept and meaning of natural resources	
2.2 Classification of natural resources: Biotic and Abiotic	
2.3 Water resources	
2.4 Soil resources	
2.5 Mineral resources	
2.6 Energy resources	
Unit – 3: Environmental issues: Local, regional and Global	08
3.1 Environmental issue and scale	
3.2 Pollution	
3.3 Land use and land cover change	
3.4 Global Changes-Ozone depletion, climate change, disaster	
Unit – 4: Conservation of Bio-diversity and Ecosystem	08
4.1 Biodiversity and its distribution	
4.2 Ecosystem and ecosystem services	
4.3 Threats to biodiversity and ecosystem	
4.4 Major conservation policies	

References:

1. Miller G.T., 2004, Environmental Science Working with the Earth, Thomson Books Cole, Singapore
2. Saxena H.M., 2017, Environmental Geography(Ed III), Rawat Publications, Jaipur
3. Odum E.P. et al.2005, Fundamentals of Ecology, Ceneage Learning, India

4. Sharma P.D.2015, Ecology and Environment, Rastogi Publications, Meerut
5. Kormondy, Edward J, 2012, Concept of Ecology, PHI Learning Pvt.Ltd, New Delhi
6. Singh R.B.(Eds) 2009, Biogeography and Biodiversity, Rawat Publications, Jaipur
7. Singh S, Prayag, 1997, Environment Geography, Pustak Bhawan, Allahabad
8. Chandana R.C.2002, Environmental Geography, Kalyani Publication, Ludhiana
9. Goudie A, 2001, The Nature of The Environment, Blackwell, Oxford
10. Gholap T. N., 2000, Environment Science, Nishikant Publications, Pune. (Marathi)
11. Choudhar A.H., & et. al., 2014, Disaster Management, Atharva Publication, Pune. (Marathi)
12. Musmade A. H., More J. C. 2014, Geography of Disaster Management, Diamond Publication, Pune. (Marathi)
13. Saptarshi P. G., More J. C., Ugale V. R., 2009, Geography and Natural Hazards, Diamond Publishing, Pune. (Marathi)
14. Chiras, D. D and Reganold, J. P. (2010). Natural Resource Conservation: Management
15. Sustainable Future. 10th edition, Upper Saddle River, N. J. Benjamin/Cummins/Pearson.
16. John W. Twidell and Anthony D. (2015). Renewable Energy Sources, 3rd Edition, Weir Publisher
17. William P. Cunningham and Mary A. (2015) Cunningham Environmental Science: A Global Concern, Publisher (Mc-Graw Hill, USA)
18. Gilbert M. Masters and W. P. (2008). An Introduction to Environmental Engineering and Science, Ela Publisher (Pearson)
19. Singh, J.S., Singh, S.P. & Gupta, S.R. 2006. Ecology, Environment and Resource Conservation. Anamaya Publications <https://sdgs.un.org/goals>
20. Natural Resource Conservation: Management for a Sustainable Future. 10th edition

Mapping of Program Outcomes with Course Outcomes

Class: FYBA

Subject: Geography

Course: Environmental Education

Course Code: GEO-105-VEC

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	1	1	2	3	2	1	2	1	1
CO2	2	1	2	2	3	2	1	2	1	1
CO3	3	1	2	2	3	2	1	2	1	1
CO4	3	1	1	3	3	3	1	2	1	2
CO5	2	1	1	2	3	2	1	3	1	1
CO6	2	3	2	2	3	2	3	3	1	3
CO7	3	2	1	3	3	3	2	3	2	3

Justifications:

PO1: Critical and Creative Thinking

- **CO1 (3):** Understanding the concept of environment and its development involves analyzing environmental changes and creatively thinking about sustainable solutions.
- **CO2 (3):** Identifying biodiversity and ecosystems requires analytical thinking to understand complex interrelations within the environment.
- **CO3 (3):** Recognizing types and importance of environment involves evaluating different environmental aspects and their impacts.
- **CO4 (3):** Identifying solutions to control or reduce environmental pollution demands critical analysis and creative approaches to problem-solving.
- **CO5 (3):** Understanding the value of environment involves critical evaluation of environmental policies and practices.
- **CO6 (3):** Raising awareness among society requires creative thinking to effectively communicate and engage people.
- **CO7 (3):** Analyzing and preparing plans to reduce environmental pollution involves critical thinking and strategic planning.

PO2: Communication Skill

- **CO1 (1):** Basic communication skills are needed to discuss and share knowledge about the environment.
- **CO2 (1):** Communicating biodiversity and ecosystem information requires clarity and effectiveness.
- **CO3 (1):** Explaining the types and importance of environment involves effectively conveying information.
- **CO4 (1):** Communicating solutions to environmental pollution requires clear presentation of ideas.
- **CO5 (1):** Discussing the value of environment involves expressing thoughts and ideas effectively.
- **CO6 (2):** Raising awareness involves using communication skills to inform and educate society.
- **CO7 (1):** Communicating plans to reduce pollution involves clear articulation of strategies.

PO3: Multicultural Competence

- **CO1 (1):** Understanding the environment from different cultural perspectives enhances multicultural competence.
- **CO2 (1):** Identifying biodiversity and ecosystems includes recognizing cultural influences on environmental conservation.
- **CO3 (1):** Understanding the types and importance of environment involves acknowledging diverse cultural views.
- **CO4 (1):** Identifying solutions to pollution considers cultural practices and their impact on the environment.
- **CO5 (1):** Understanding the value of environment involves appreciating different cultural values towards nature.
- **CO6 (2):** Raising awareness requires engaging with diverse groups and respecting cultural differences.
- **CO7 (1):** Preparing plans to reduce pollution involves considering multicultural perspectives.

PO4: Research Skills

- **CO1 (2):** Understanding environmental concepts involves researching historical and scientific data.
- **CO2 (2):** Identifying biodiversity and ecosystems requires research to gather and analyze ecological data.
- **CO3 (2):** Recognizing types and importance of environment involves researching various environmental aspects.
- **CO4 (2):** Identifying solutions to pollution requires conducting research to find effective methods.
- **CO5 (2):** Understanding the value of environment involves research to support the importance of conservation.
- **CO6 (2):** Raising awareness involves researching effective communication strategies.
- **CO7 (3):** Analyzing and preparing plans to reduce pollution requires comprehensive research and data analysis.

PO5: Environmental Awareness

- **CO1 (3):** Understanding the concept of environment directly relates to developing environmental awareness.
- **CO2 (3):** Identifying biodiversity and ecosystems is essential for environmental awareness.
- **CO3 (3):** Recognizing types and importance of environment fosters a deeper understanding and awareness.
- **CO4 (3):** Identifying solutions to pollution enhances awareness of environmental issues and actions.
- **CO5 (3):** Understanding the value of environment is crucial for promoting environmental awareness.
- **CO6 (3):** Raising awareness involves educating society about environmental issues.
- **CO7 (3):** Analyzing and preparing plans to reduce pollution promotes environmental awareness and action.

PO6: Problem-Solving Abilities

- **CO1 (2):** Understanding environmental concepts involves solving complex problems related to environmental development.

- **CO2 (2):** Identifying biodiversity and ecosystems involves problem-solving to understand ecological interactions.
- **CO3 (2):** Recognizing types and importance of environment involves addressing environmental challenges.
- **CO4 (3):** Identifying solutions to pollution requires strong problem-solving abilities.
- **CO5 (2):** Understanding the value of environment involves solving issues related to conservation and sustainability.
- **CO6 (2):** Raising awareness involves solving communication challenges to effectively educate society.
- **CO7 (3):** Analyzing and preparing plans to reduce pollution requires advanced problem-solving skills.

PO7: Collaboration and Teamwork

- **CO1 (1):** Understanding environmental concepts involves some degree of collaboration to share knowledge and ideas.
- **CO2 (1):** Identifying biodiversity and ecosystems may involve teamwork for data collection and analysis.
- **CO3 (1):** Recognizing types and importance of environment can benefit from collaborative efforts.
- **CO4 (2):** Identifying solutions to pollution often requires teamwork to implement effective strategies.
- **CO5 (1):** Understanding the value of environment can be enhanced through collaborative learning.
- **CO6 (2):** Raising awareness involves collaborating with various groups to spread information.
- **CO7 (2):** Preparing plans to reduce pollution often requires teamwork for successful implementation.

PO8: Value Inculcation

- **CO1 (2):** Understanding the environment involves inculcating values related to environmental stewardship.
- **CO2 (2):** Identifying biodiversity and ecosystems includes understanding the value of conservation.

- **CO3 (2):** Recognizing the importance of environment involves promoting values of sustainability.
- **CO4 (2):** Identifying solutions to pollution includes values related to protecting the environment.
- **CO5 (3):** Understanding the value of environment directly involves inculcating ethical and moral values.
- **CO6 (3):** Raising awareness among society involves promoting values of environmental responsibility.
- **CO7 (3):** Preparing plans to reduce pollution includes fostering values of sustainability and conservation.

PO9: Digital and Technological Skills

- **CO1 (1):** Understanding the environment can involve basic use of digital tools for research and learning.
- **CO2 (1):** Identifying biodiversity and ecosystems may include using technology for data collection and analysis.
- **CO3 (1):** Recognizing types and importance of environment can involve digital resources for information.
- **CO4 (2):** Identifying solutions to pollution may require technological tools for research and implementation.
- **CO5 (1):** Understanding the value of environment can involve digital platforms for learning and communication.
- **CO6 (2):** Raising awareness involves using digital media to reach a wider audience.
- **CO7 (2):** Preparing plans to reduce pollution can involve using technology for data analysis and presentation.

PO10: Community Engagement and Service

- **CO1 (1):** Understanding the environment includes engaging with the community to share knowledge.
- **CO2 (1):** Identifying biodiversity and ecosystems involves community engagement to gather data and promote conservation.
- **CO3 (1):** Recognizing the importance of environment can include community service to raise awareness.

- **CO4 (2):** Identifying solutions to pollution often involves engaging with the community to implement strategies.
- **CO5 (1):** Understanding the value of environment includes participating in community activities to promote sustainability.
- **CO6 (2):** Raising awareness involves community engagement to educate and inform the public.
- **CO7 (2):** Preparing plans to reduce pollution requires community involvement for effective implementation.

**CBCS Syllabus as per NEP 2020 for FYBA
(2024 Pattern)**

Name of the Programme	: FYBA Geography
Programme Code	: UAGEO
Class	: FYBA
Semester	: II
Course Type	: General Theory
Course Code	: GEO-151- Gen
Course Title	: Human Geography
No. of Credits	: 02
No. of Teaching Hours	: 30

Course Objectives:

1. To make students well aware of the basic concepts of human geography.
2. To understand basic concepts related to the population with special reference to India.
3. To acquaint the knowledge of types and patterns of rural settlement.
4. To recognize the concept of urbanization with special reference to Maharashtra and India.
5. To understand economic sector available in India.
6. To recognize factors affecting location of agriculture.
7. To understand the types of agriculture and recognize the problems of Indian agriculture.

Course Outcomes:

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

- CO1.** Well aware of the basic concepts of human geography.
- CO2.** Basic concepts related to the population with special reference to India.
- CO3.** Acquaint with the knowledge of types and patterns of rural settlement.
- CO4.** Recognize the concept of urbanization with special reference to Maharashtra and India.
- CO5.** Understand economic sector available in India.
- CO6.** Recognize factors affecting location of agriculture.
- CO7.** Understand the types of agriculture and recognize the problems of Indian agriculture.

Topics and Learning points

Unit 1: Introduction to Human Geography	Teaching Hours
1.1 Definitions	10
1.2 Nature and Scope	
1.3 Branches	
Unit 2: Population and Settlement	10
2.1 Factors affecting on distribution and density of the population	
2.2 Types and Patterns of Rural Settlements	
2.3 Urbanization- Causes and Effects in India	
Unit 3: Agriculture	10
3.1 Type of Agriculture	
3.2 Factors Affecting on Agriculture	
3.3 Problems of Indian Agriculture	

Reference:

1. Bhende & Kanitkar (2011): Principles of Population studies, Himalaya Publishing House.
2. Chandana R.C. (1988): Geography of Population, Kalyani Pub. Ludhiana.
3. Chandna, R.C. (2010): Population Geography, Kalyani Publisher.
4. Daniel, P.A. and Hopkinson, M.F. (1989): The Geography of Settlement, Oliver & Boyd, London.
5. Ghosh B.N. (1985): Fundamentals of Population Geography, Sterling Publishers.
6. Hassan Mohammad, (2005): Population Geography, Rawat Publication.
7. Hassan, M.I. (2005): Population Geography, Rawat Publications, Jaipur.
8. Hussain M. (2018): Human Geography, Rawat Publication
9. K. Sidhartha, (2006): Economic Geography, Kishalaya Publication Delhi.

Mapping of Program Outcomes with Course Outcomes

Class: FYBA

Subject: Geography

Course: Human Geography

Course Code: GEO-151-GEN

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	2	1	1	1	1	1	1	0
CO2	2	3	1	1	1	1	1	1	1	0
CO3	2	1	3	2	1	2	1	1	1	0
CO4	1	1	2	3	2	2	1	1	1	0
CO5	1	1	1	2	3	2	1	1	1	0
CO6	1	1	2	2	2	3	1	1	1	0
CO7	1	1	1	1	1	1	3	1	1	0

Justification:

- **PO1 Critical and Creative Thinking:** CO1 (Basic concepts of human geography) requires analytic thought to understand foundational concepts in geography. CO4 (Concept of urbanization) and CO6 (Factors affecting location of agriculture) involve creative thinking in analyzing complex societal and economic patterns.
- **PO2 Communication Skill:** CO2 (Basic concepts related to population) and CO5 (Understanding economic sectors) necessitate clear communication of demographic and economic concepts to diverse audiences.
- **PO3 Multicultural Competence:** No direct relationship identified with multicultural competence.
- **PO4 Research Skills:** CO3 (Types and patterns of rural settlement) and CO7 (Types of agriculture and problems in Indian agriculture) require research skills to analyze and articulate geographical patterns and agricultural issues.
- **PO5 Environmental Awareness:** No direct relationship identified with environmental awareness.

- **PO6 Problem-solving Abilities:** CO6 (Factors affecting location of agriculture) and CO7 (Types of agriculture and problems in Indian agriculture) involve problem-solving skills in addressing agricultural challenges and geographical factors.
- **PO7 Collaboration and Teamwork:** CO7 (Types of agriculture and problems in Indian agriculture) involves teamwork in understanding and addressing agricultural issues collaboratively.
- **PO8 Value Inculcation:** No direct relationship identified with value inculcation.
- **PO9 Digital and Technological Skills:** CO1 (Basic concepts of human geography) and CO3 (Types and patterns of rural settlement) require digital skills in accessing and evaluating geographical data.
- **PO10 Community Engagement and Service:** No direct relationship identified with community engagement and service.

**CBCS Syllabus as per NEP 2020 for FYBA
(2024 Pattern)**

Name of the Programme	: FYBA
Programme Code	: UAGEO
Class	: FYBA
Semester	: II
Course Type	: General Practical
Course Name	: Practical in Human Geography
Course Code	: GEO-152- GEN
No. of Credits	: 02
No. of Teaching Hours	: 60

Course Objectives:

1. To enable the students to use various techniques of calculating rates.
2. To acquaint the students with crop combination methods.
3. To familiar the students' different theories related to human geography.
4. To make awareness about dependency ratio and growth of population.
5. To intimate gender scenario of different countries.
6. To make knowledge about future population and age structure of different countries.
7. To make knowledge about nucleation and dispersion of settlement.

Course Outcomes:

After the completion of the course,

- CO1.** Students can understand calculation techniques of growth rates.
- CO2.** Student can able to calculate rates and apply to various state of India.
- CO3.** Study in crop combination to give knowledge of society.
- CO4.** Students can able to apply various theories in human geography to their society.
- CO5.** Students understood the dynamics of population and its role in population policies
- CO6.** Student can understand about population structure and characteristics of different countries, they can also predict future population scenario of the country.
- CO7.** Student can understand population growth of different countries, they can also predict future population setting of the country.

Topics / Contents:

Unit 1: Population Indices	Teaching Hours
1.1 Decadal growth rate	20
1.2 Dependency ratio	
1.3 Fertility	
1.4 Mortality	
Unit 2: Measures of Nucleation and Dispersion of Settlement	20
2.1 Rank size rule	
2.2 Nearest neighbor analysis	
2.3 Gravity Model	
Unit 3: Crop Combination, Diversification and field visit	20
3.1 Weaver's method of crop combination	
3.2 Jasbir Singh method of crop diversification	
3.3 study tour of geographical interest places anywhere in the country and excursion report	

Reference Books & Websites:

1. **Carter, H. (1977):** The study of Urban Geography, Edward Arnold, London.
2. **Hans, R. (1978):** Fundamentals of Demography, Surjeet, Delhi.
3. **Hudson F.S. (1976):** Geography of Settlements, Estover, Macdonald& Evans, England.
4. **Liendsor, J.M. (1997):** Techniques in Human Geography, Routledge.
5. **Lloyd, P. and Dicken, B. (1972):** Location in Space - A theoretical approach to economic geography, Harper and Row, New York.
6. **Michael, E. and Hurse, E.(1974):** Transportation Geography, McGraw-Hill, New York.
7. **Pollard, A.H. and FarhatYusu, (1974):** Demographic Techniques, Rushcutters Bay, N.S.W., Pergamon Press, Australia.
8. **Singh, J. and Dhillon, (1984):** Agricultural Geography, Tata McGraw-Hill Publishing Company Limited, New Delhi.
9. **Yeats, M.H. (1974):** An Introduction to Quantitative Analysis in Human Geography, McGraw-Hill, New York.

Mapping of Program Outcomes with Course Outcomes

Class: FYBA

Subject: Geography

Course: Practical in Human Geography

Course Code: GEO-152-GEN

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	2	2	1	1	0	0	0	0	2	0
CO2	2	2	1	1	0	0	0	0	2	0
CO3	1	1	3	2	0	0	0	0	1	0
CO4	1	1	2	3	0	0	0	0	1	0
CO5	0	0	0	0	3	2	1	1	0	0
CO6	0	0	0	0	2	3	1	1	0	0
CO7	0	0	0	0	1	1	3	1	0	0

Justification:

- **PO1 Critical and Creative Thinking:** CO1 and CO2 involve analytic thought in understanding growth rates and applying them across different states in India, demonstrating moderate relations. CO3 and CO4 involve applying theories and understanding crop combinations in society, which require critical and creative thinking skills.
- **PO2 Communication Skill:** CO1 and CO2 require clear communication of growth rate calculations and their application, indicating a weak relation with communication skills.
- **PO3 Multicultural Competence:** No direct relationship identified with multicultural competence.
- **PO4 Research Skills:** CO3 and CO4 involve inquiry into theories and methodologies in human geography, indicating a moderate relation with research skills.
- **PO5 Environmental Awareness:** No direct relationship identified with environmental awareness.

- **PO6 Problem-solving Abilities:** CO5 and CO6 require problem-solving abilities in understanding population dynamics and predicting future scenarios, showing a moderate relation with problem-solving.
- **PO7 Collaboration and Teamwork:** CO7 involves understanding population growth trends and predicting future settings, indicating a weak relation with collaboration and teamwork.
- **PO8 Value Inculcation:** No direct relationship identified with value inculcation.
- **PO9 Digital and Technological Skills:** CO1 and CO2 involve using ICT for data analysis and calculation techniques, demonstrating a moderate relation with digital and technological skills.
- **PO10 Community Engagement and Service:** No direct relationship identified with community engagement and service.

CBCS Syllabus as per NEP 2020 for FYBA (2024 Pattern)

Name of the Programme	: FYBA
Programme Code	: UAGEO
Class	: FYBA
Semester	: II
Course Type	: Open Elective (Practical)
Course Name	: Practical in Tour Planning
Course Code	: GEO-153- OE
No. of Teaching Hours	: 60
No. of Credits	: 02

Course Objectives:

1. To provide students with practical knowledge and skills related to tour planning and management.
2. To familiarize students with the information about the necessary documentation for tour planning.
3. To train the students with the essential online booking process.
4. To recognize the importance of tour planning in the tourism industry.
5. To comprehend the fundamental concepts and principles of tour planning.
6. To identify the roles and responsibilities of tour planners.
7. To utilize digital platforms for marketing, booking, and customer management.

Course Outcomes:

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

- CO1.** Apply practical knowledge and skills to effectively plan and manage tours.
- CO2.** Identify and prepare the required documentation for different types of tours.
- CO3.** Efficiently perform online booking procedures using various digital platforms.
- CO4.** Articulate the importance of thorough tour planning in ensuring successful tourism experiences.
- CO5.** Understand and apply key concepts and principles of tour planning in practical scenarios.

CO6. Clearly define the various roles and responsibilities associated with tour planning.

CO7. Leverage digital tools and platforms for effective marketing, booking, and managing customer relationships.

Topics and Learning Points

Unit 1: Introduction of Tour planning	Teaching Hours
1.1 Meaning of Tour planning	20
1.2 Elements of Tour planning	
1.3 Classification of Tour planning: individual, family, group and mass level	
1.4 Importance of tour planning	
Unit 2: Techniques of Tour Planning	20
2.1 Preparation of Tour Planning: Leaflet of tour planning, Passenger documentation, Insurance calculation, Currency exchange, Time exchange and calculation, Distance measurement.	
2.2 Tourist Guide	
2.3 Computer application for tour planning.	
2.4 Procedure of passport & visa application.	
2.5 Booking and cancellation system: Transportation (Air, Rail, Road) and hospitality (accommodation)	
Unit 3: Planning and visit to tourist place	20
1.1 Preparation of one short or long international/ national/ local tour plan.	
1.2 Writing of tour report.	

References:

1. Bhatt, H (2007) Tourism Planning and Development, Commonwealth Publishers, New Delhi
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3. Chand, M (2002) Travel Agency Management, Anmol Publication
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5. Seth, P.N. (1998). An Introduction to Travel and Tourism, Sterling Publishers Pvt. Ltd., New Delhi.
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Mapping of Program Outcomes with Course Outcomes

Class: FYBA

Subject: Geography

Course: Practical in Tour Planning

Course Code: GEO-153-OE

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	2	2	2	1	2	1	1	0	2	2
CO2	2	3	3	1	2	1	1	0	2	2
CO3	2	3	3	1	2	1	1	0	2	2
CO4	1	1	2	2	2	2	2	0	1	1
CO5	2	2	2	2	3	2	2	0	2	2
CO6	1	1	1	2	2	3	2	0	1	1
CO7	1	1	1	2	2	2	3	0	1	1

Justification:

- **PO1 Critical and Creative Thinking:** CO1, CO2, and CO3 require analytic thought and diverse thinking in planning and managing tours effectively, demonstrating a strong relation with critical and creative thinking.
- **PO2 Communication Skill:** CO1, CO2, and CO3 involve clear communication in preparing documentation, booking procedures, and customer interactions, indicating a strong relation with communication skills.
- **PO3 Multicultural Competence:** No direct relationship identified with multicultural competence.
- **PO4 Research Skills:** CO4 and CO5 involve synthesis and application of tour planning concepts, showing a moderate relation with research skills.
- **PO5 Environmental Awareness:** No direct relationship identified with environmental awareness.
- **PO6 Problem-solving Abilities:** CO4, CO5, CO6, and CO7 require problem-solving in addressing tour planning challenges and leveraging digital tools, indicating a moderate to strong relation with problem-solving abilities.
- **PO7 Collaboration and Teamwork:** CO6 and CO7 involve teamwork in roles associated with tour planning and customer management, demonstrating a moderate relation with collaboration and teamwork.
- **PO8 Value Inculcation:** No direct relationship identified with value inculcation.
- **PO9 Digital and Technological Skills:** CO1, CO2, CO3, CO4, CO5, CO6, and CO7 involve extensive use of ICT and digital platforms for tour planning and management, indicating a strong relation with digital and technological skills.
- **PO10 Community Engagement and Service:** CO1, CO2, and CO3 involve community engagement in planning and managing tours that promote societal well-being, showing a strong relation with community engagement and service.

**CBCS Syllabus as per NEP 2020 for FYBA
(2024 Pattern)**

Name of the Programme	: FYBA
Programme Code	: UAGEO
Class	: FYBA
Semester	: II
Course Type	: Skill Enhancement Course (Practical)
Course Name	: Practical in Google Earth
Course Code	: GEO-154- SEC
No. of Credits	: 02
No. of Teaching Hours	: 60

Course Objectives:

1. To provide an introduction to the Google Earth Pro software.
2. To study capabilities for spatial data visualization, analysis, and communication.
3. To learn how to navigate and customize Google Earth Pro.
4. To study import and manage geographic data.
5. To learn to create and edit placemarks, polygons, paths, and images.
6. To measure distances and areas, perform spatial queries and analysis.
7. To share and export data.

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

- CO1. Navigate and customize the Google Earth Pro interface and preferences.
- CO2. Import and manage geographic data in different formats.
- CO3. Create and edit placemarks, polygons, paths, and images.
- CO4. Add attributes and labels to geographic features.
- CO5. Use measurement and annotation tools to perform spatial analysis and querying.
- CO6. Share and export maps and data in different formats.
- CO7. Apply this knowledge in any field and applications.

Topics and Learning Points

Unit 1: Introduction to Google Earth	Teaching Hours
1.1 Overview of Google Earth Pro interface and tools	20
1.2 Customizing the Google Earth Pro preferences	
1.3 Navigation and view controls in Google Earth Pro	
Unit 2: Data Import and Management	20
2.1 Importing and exporting data in different formats	
2.2 Creating and managing folders, layers, and projects	
2.3 Managing and editing data attributes and metadata	
Unit 3: Creating and Editing Geographic Features	20
3.1 Creating and editing placemarks, polygons, paths, and images	
3.2 Adding and editing attributes and labels to geographic features	
3.3 Using measurement and annotation tools in Google Earth Pro	

References:

1. Battersby, S. E., and Finn, M. P. (2018). Mapping and Visualization with Super Collider. Springer.
2. Brown, M. (2014). Google Maps: Power Tools for Maximizing the API. McGraw Hill Professional.
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4. Kohler, A., and Gow, J. (2018). Using Google Earth in Geography Classrooms: A Collection of Lessons and Ideas. Springer.
5. Roth, R. E., and Krum, K. (2013). Google Maps API. Apress.
6. Google Earth Help Center: <https://support.google.com/earth/?hl=en#topic=4386911>
7. Google Earth User Guide: <https://support.google.com/earth/answer/21955>
8. Google Earth Outreach: <https://www.google.com/earth/outreach/>
9. Google Earth Blog: <https://www.gearthblog.com/>

10. Google Earth Community: <https://support.google.com/earth/community?hl=en>
11. Google Earth Education: <https://www.google.com/earth/education/>
12. GIS Geography: <https://gisgeography.com/google-earth-pro-tutorial/>
13. KML Tutorial: https://developers.google.com/kml/documentation/kml_tut
14. Earth Point: <https://www.earthpoint.us/>
15. Google Earth Studio: <https://www.google.com/earth/studio/>

Mapping of Program Outcomes with Course Outcomes

Class: FYBA

Subject: Geography

Course: Practical in Google Earth

Course Code: GEO-154-SEC

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	2	2	1	1	1	1	1	0	3	1
CO2	1	2	1	1	1	2	1	0	3	1
CO3	1	2	1	1	1	2	1	0	3	1
CO4	1	2	1	1	1	2	1	0	3	1
CO5	1	2	1	1	1	2	1	0	3	1
CO6	1	1	1	1	1	2	1	0	3	1
CO7	1	1	1	1	1	2	1	0	3	1

Justification:

- **PO1 Critical and Creative Thinking:** CO1 requires critical thinking to customize and navigate Google Earth Pro, demonstrating a moderate relation. Other COs involve minimal critical thinking skills related to basic operations and data management.
- **PO2 Communication Skill:** CO2, CO3, CO4, CO5, and CO6 involve communicating spatial data and analysis effectively, showing a moderate relation with communication skills.
- **PO3 Multicultural Competence:** No direct relationship identified with multicultural competence.

- **PO4 Research Skills:** CO2, CO3, CO4, and CO5 involve data synthesis and spatial analysis, indicating a moderate relation with research skills.
- **PO5 Environmental Awareness:** No direct relationship identified with environmental awareness.
- **PO6 Problem-solving Abilities:** CO2, CO3, CO4, CO5, CO6, and CO7 require problem-solving in spatial analysis and data management using Google Earth Pro, showing a moderate relation with problem-solving abilities.
- **PO7 Collaboration and Teamwork:** CO2, CO3, CO4, CO5, CO6, and CO7 involve collaboration in data sharing and project applications, indicating a moderate relation with collaboration and teamwork.
- **PO8 Value Inculcation:** No direct relationship identified with value inculcation.
- **PO9 Digital and Technological Skills:** CO1, CO2, CO3, CO4, CO5, CO6, and CO7 involve extensive use of ICT skills in managing geographic data and performing spatial analysis, demonstrating a strong relation with digital and technological skills.
- **PO10 Community Engagement and Service:** No direct relationship identified with community engagement and service.

**CBCS Syllabus as per NEP 2020 for F.Y.B.A. Geography
(2024 Pattern)**

Name of the Programme	: F.Y.B.A. Geography
Programme Code	: UAGEO
Class	: F.Y.B.A
Semester	: II
Course Type	: Value Education Course
Course Code	: GEO-155-VEC
Course Title	: Environmental Awareness
No. of Credits	: 02
No. of Teaching Hours	: 30

Course Objectives:

1. To understand the theories of the evolution of the Earth.
2. To understand protocol related to environment.
3. To understand the global warming and climate change
4. To identify global environmental challenges to protect earth from them.
5. To understand the various techniques of conservation of the soil and water.
6. To understand the green house gas effect and its impact on climate change.
7. To understand governmental policies regarding global warming and climate change.

Course Outcomes:

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

- CO1.** Understand theories of evolution of the earth and how does earth has evolved.
- CO2.** Aware about protocol related to environment.
- CO3.** Able to understand causes of global warming and climate change.
- CO4.** Identify global environmental challenges to protect earth from them.
- CO5.** Aware about various techniques of conservation of natural resources
- CO6.** Understand green house gas effect and its impact on climate change.
- CO7.** Aware about government policies regarding global warming and climate change

Topics and Learning Points

Unit – 1: Environmental pollution and health	Teaching Hours
1.1 Concept and meaning of pollution	06
1.2 Air Pollution	
1.3 Water pollution	
1.4 Soil pollution and solid waste	
1.5 Thermal and radioactive pollution	
Unit – 2: Climate change: Impacts , Adaptation and Mitigation	08
2.1 Concept and meaning of climate change	
2.2 impacts, vulnerability and adaptation to climate change	
2.3 Mitigation of climate change	
Unit – 3: Environmental management	08
3.1 Introduction to environmental laws and regulation	
3.2 Environmental management system	
3.3 Environmental audit and impact assessment	
3.4 Waste management	
Unit – 4: Environmental treaties and legislation	08
4.1 Meaning of instruments of international cooperation	
4.2 Major international environmental agencies	
4.3 2 Major Indian environmental legislation	
4.4 Major international organisation and initiative	

Reference:

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2. Harris, Frances (2012) Global Environmental Issues, 2nd Edition. Wiley- Blackwell.
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Mapping of Program Outcomes with Course Outcomes

Class: FYBA

Subject: Geography

Course: Environmental Awareness

Course Code: GEO-155-VEC

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

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

Justifications

PO1: Critical and Creative Thinking

- **CO1 (3):** Understanding theories of evolution of the earth requires critical analysis and creative thinking to comprehend the complex processes involved.
- **CO2 (2):** Being aware of environmental protocols involves analyzing various regulations and their implications.
- **CO3 (3):** Understanding the causes of global warming and climate change requires critical analysis of scientific data and theories.
- **CO4 (3):** Identifying global environmental challenges necessitates critical thinking to assess and address complex issues.
- **CO5 (2):** Awareness of conservation techniques involves analyzing different methods and their effectiveness.
- **CO6 (3):** Understanding the greenhouse gas effect and its impact on climate change requires critical analysis of environmental data.
- **CO7 (2):** Awareness of government policies involves understanding and evaluating policy impacts on global warming and climate change.

PO2: Communication Skill

- **CO1 (1):** Basic communication skills are needed to discuss theories of earth's evolution.
- **CO2 (1):** Communicating knowledge about environmental protocols requires clarity and effectiveness.
- **CO3 (1):** Explaining causes of global warming involves effective communication.
- **CO4 (1):** Communicating global environmental challenges involves clear presentation of issues.
- **CO5 (1):** Discussing conservation techniques involves expressing ideas effectively.
- **CO6 (1):** Understanding and communicating the greenhouse gas effect requires clear articulation.
- **CO7 (1):** Discussing government policies involves effectively communicating policy details and implications.

PO3: Multicultural Competence

- **CO1 (1):** Understanding the evolution of the earth can involve different cultural perspectives on geological history.
- **CO2 (1):** Awareness of environmental protocols can vary by region and culture.
- **CO3 (1):** Understanding global warming involves recognizing diverse cultural impacts and responses.
- **CO4 (1):** Identifying global challenges requires understanding multicultural perspectives on environmental issues.
- **CO5 (1):** Conservation techniques can be influenced by cultural practices and beliefs.
- **CO6 (1):** Greenhouse gas effects can have different impacts across cultures.
- **CO7 (1):** Government policies on climate change may vary by culture and region.

PO4: Research Skills

- **CO1 (2):** Understanding earth's evolution involves researching geological and historical data.
- **CO2 (2):** Being aware of environmental protocols requires researching legal and scientific documents.
- **CO3 (2):** Understanding causes of global warming involves extensive research and data analysis.
- **CO4 (3):** Identifying global environmental challenges necessitates comprehensive research.
- **CO5 (2):** Awareness of conservation techniques involves researching various methods and their efficacy.
- **CO6 (2):** Understanding the greenhouse gas effect requires research into environmental science.
- **CO7 (2):** Awareness of government policies involves researching policy documents and their impacts.

PO5: Environmental Awareness

- **CO1 (3):** Understanding the earth's evolution contributes directly to environmental awareness.
- **CO2 (3):** Awareness of environmental protocols is crucial for environmental protection.
- **CO3 (3):** Understanding global warming is fundamental to environmental awareness.

- **CO4 (3):** Identifying global challenges is essential for protecting the environment.
- **CO5 (3):** Awareness of conservation techniques is vital for sustainable living.
- **CO6 (3):** Understanding the greenhouse gas effect is key to addressing climate change.
- **CO7 (3):** Awareness of government policies is crucial for implementing environmental protection measures.

PO6: Problem-Solving Abilities

- **CO1 (2):** Understanding the earth's evolution involves solving complex geological problems.
- **CO2 (2):** Awareness of environmental protocols helps in addressing regulatory challenges.
- **CO3 (3):** Understanding global warming involves solving environmental problems.
- **CO4 (3):** Identifying global challenges requires problem-solving to find effective solutions.
- **CO5 (3):** Awareness of conservation techniques involves problem-solving to implement sustainable practices.
- **CO6 (3):** Understanding the greenhouse gas effect involves solving problems related to climate change.
- **CO7 (3):** Awareness of government policies involves problem-solving to address policy impacts.

PO7: Collaboration and Teamwork

- **CO1 (1):** Understanding earth's evolution can benefit from collaborative research.
- **CO2 (2):** Awareness of environmental protocols may involve teamwork to ensure compliance.
- **CO3 (1):** Understanding global warming can involve collaborative efforts in research.
- **CO4 (2):** Identifying global challenges often requires teamwork for effective solutions.
- **CO5 (2):** Awareness of conservation techniques can involve collaborative implementation.
- **CO6 (1):** Understanding the greenhouse gas effect may involve team research efforts.

- **CO7 (2):** Awareness of government policies often involves collaboration to ensure effective advocacy and implementation.

PO8: Value Inculcation

- **CO1 (2):** Understanding earth's evolution involves inculcating values of environmental stewardship.
- **CO2 (2):** Awareness of environmental protocols involves values of compliance and protection.
- **CO3 (3):** Understanding global warming requires inculcating values of environmental responsibility.
- **CO4 (2):** Identifying global challenges involves values of proactive environmental protection.
- **CO5 (3):** Awareness of conservation techniques involves values of sustainability.
- **CO6 (2):** Understanding the greenhouse gas effect involves values of climate responsibility.
- **CO7 (2):** Awareness of government policies involves values of civic responsibility and advocacy.

PO9: Digital and Technological Skills

- **CO1 (1):** Understanding earth's evolution can involve using digital tools for research.
- **CO2 (1):** Awareness of environmental protocols can involve using digital resources for information.
- **CO3 (2):** Understanding global warming involves using technology for data analysis and research.
- **CO4 (2):** Identifying global challenges can involve using digital tools for research and communication.
- **CO5 (2):** Awareness of conservation techniques can involve digital resources for learning and implementation.
- **CO6 (2):** Understanding the greenhouse gas effect involves using technology for research and monitoring.
- **CO7 (1):** Awareness of government policies can involve using digital platforms for information and advocacy.

PO10: Community Engagement and Service

- **CO1 (1):** Understanding earth's evolution involves engaging with communities to share knowledge.
- **CO2 (2):** Awareness of environmental protocols can involve community engagement for compliance and advocacy.
- **CO3 (2):** Understanding global warming involves engaging with communities to promote environmental awareness.
- **CO4 (2):** Identifying global challenges involves community engagement to address environmental issues.
- **CO5 (2):** Awareness of conservation techniques can involve community service to implement sustainable practices.
- **CO6 (2):** Understanding the greenhouse gas effect involves community engagement to promote climate action.
- **CO7 (3):** Awareness of government policies involves engaging with communities to advocate for and implement policy measures.