



# **TuljaramChaturchand College, Baramati**

**Autonomous College**

Three years degree programme in Geography  
(Faculty of Science and Technology)

Revised Syllabus for

**S.Y.B.A. Geography Sem. IV**

For Tuljaram Chaturchand College, Baramati

**Choice Based Credit System Syllabus**

**To be implemented from Academic Year 2019-2020**

### Choice Based Credit System Syllabus

**To be implemented from Academic Year 2020-2021**

#### S. Y. B. A. GEOGRAPHY

<b>Semester</b>	<b>Paper Code</b>	<b>Paper</b>	<b>Subject</b>
III	GEO:2301	G2	Environmental Geography I
	GEO:2302	S1	Geography of Maharashtra - I
	GEO:2303	S2	Practical Geography – I (Scale and Map Projections)
IV	GEO:2401	G2	Environmental Geography II
	GEO:2402	S1	Geography of Maharashtra – II
	GEO:2403	S2	Practical Geography – II (Cartographic Techniques, Surveying and Excursion / Village / Project Report)

## S.Y.B.A. Geography (G2) Syllabus for Semester IV

**Paper: GEO 2401: Environment Geography- II****No. of Credits: 03****No. of Periods: 48****Course Objectives:**

1. To create awareness about dynamic environment among the students.
2. To acquaint students with the fundamental concepts of Environment Geography.
3. To acquaint students about the past, presents and future utility and potentials of natural resources.
4. To make aware students about the problems of environment, its utilization and conservation in the view of sustainable development.
5. To comprehend the meaning and implications of environmental disasters.
6. To analyzing the impacts of excessive chemical fertilizer, pesticide, and insecticide usage.
7. To exploring the environmental policies implemented in India.

**Course Outcome:**

By the end of this course, students should be able to:

1. Aware about environment issues.
2. Aware about the problems of environment, their utilization and conservation in the view of sustainable development.
3. Ability to identify and differentiate between various types of environmental disasters.
4. Understanding the significance of ozone and the effects of its depletion.
5. Identify and differentiate between various types of environmental disasters.
6. Awareness of sustainable agricultural practices and reduced chemical usage for a healthier environment.
7. Advocate for improved environmental policies based on learned insights.

## Topics and Learning point

### Unit 1: Environmental Disaster

#### Periods

- 1.1 Meaning and concepts of environmental disaster **12**
- 1.2 Classification of Disaster
- 1.3 Natural Disaster- Earthquake, Flood, Drought
- 1.4 Biological Disaster – Swine flu, Novel Corona (COVID-19)

### Unit 2: Environmental Problems **12**

- 2.1 Global Warming and climate change
- 2.2 Ozone Depletion
- 2.3 Acid rain
- 2.4 Over use of chemical fertilizers, pesticides and insecticides

### Unit 3: Environmental Planning and Management **12**

- 3.1 Need of planning and Management
- 3.2 Micro, macro and meso level Planning and Management with reference to India
- 3.3 Environmental impact assessment

### Unit 4: Environmental Policies **12**

- 4.1 Introduction of environmental policies
- 4.2 Environmental education in India
- 4.3 Kyoto Protocol

**Reference Book:**

1. Miller G.T., 2004, Environmental Science Working with the Earth, Thomson Books Cole, Singapore
2. Saxena H.M., 2017, Environmental Geography,( III ED) RawatPublicastions,Jaipur
3. Odum E.P. et al.2005, Fundamentals of Ecology, Ceneage Learning,India
4. Sharma P.D.2015, Ecology and Environment, RastogiPublications,Meerut
5. Kormondy, Edward J, 2012, Concept of Ecology, PHI Learning Pvt. Ltd, NewDelhi
6. Singh R.B.(Eds) 2009, Biogeography and Biodiversity, Rawat Publications,Jaipur
7. Singh S,Prayag, 1997, Environment Geography, PustakBhawan,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, Atharv 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 Hazads, Diamond Publishing, Pune.(Marathi)

### Mapping of Program Outcomes with Course Outcomes

**Class:** SYBA (Sem. IV)**Subject:** Geography**Course:** Environmental Geography-II**Course Code:** GEO: 2401**Weightage:** 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	3	.		2			2	
CO 2							3	2
CO 3		2					2	
CO 4				3		2	2	
CO 5					2		3	
CO 6	2					2	3	
CO 7		3					2	

#### Justification for the Mapping

##### **PO 1: Research Related Skill:**

CO 1, CO 6- Engaging in research related to sustainable agriculture often involves fieldwork or experimental studies. Students gain hands-on experience, learning experimental design, data collection methods, and field analysis techniques.

##### **PO 2: Effective Citizenship and Ethics:**

Partial alignment with effective citizenship and ethics is observed in CO 3, and CO 7. Student being able to identify various environmental disasters equips students with knowledge to make informed decisions. This awareness helps them understand the urgency and severity of different crises, fostering responsible decision-making.

##### **PO 4: Disciplinary Knowledge:**

Course outcomes 1 and 4 make straight with the acquisition of disciplinary knowledge. The concept of ozone depletion isn't isolated; it involves various scientific disciplines. Students develop a broader understanding of interconnected scientific concepts, bridging fields like chemistry, atmospheric physics, biology, and environmental studies. This interdisciplinary approach nurtures holistic thinking, essential for addressing complex environmental challenges.

**PO 5: Personal and professional competence:**

Course outcome 5 makes a meaningful contribution to enhancing students' understanding various disaster types helps in assessing and managing risks associated with different environmental scenarios. This skill is essential for professionals in fields such as urban planning, emergency response, and environmental policy-making.

**PO 6: Self-directed and Life-long learning:**

CO 4 and CO6- Encouraging students to explore and understand these topics not only enhances their academic knowledge but also equips them with the skills and motivation needed for self-directed learning throughout their lives, fostering a commitment to environmental stewardship and continual personal and professional growth.

**PO 7: Environment and Sustainability:**

All outcomes of this course contribute their caring role in the environment and suitability. Understanding environmental geography enhances career prospects, especially in fields related to environmental science, policy-making, conservation, urban planning, and sustainable development. It prepares students to contribute meaningfully to addressing global environmental concerns. Education in environment and sustainability promotes a culture of life-long learning. It encourages students to remain engaged with environmental issues and developments, fostering a commitment to continuous education and action for a sustainable future.

**PO 8: Critical Thinking and Problem solving:**

CO 2- Addressing environmental challenges necessitate innovative solutions. Critical thinking skills enable students to explore new technologies, policies, and practices that promote sustainability. They learn to devise creative approaches to mitigate environmental problems.

## S.Y.B.A. Geography (S1) Syllabus for Semester IV

**Paper: GEO 2402: Geography of Maharashtra- II****No. of Credits: 03****No of Periods: 48****Course Objective:**

1. To make students aware about the Agriculture problems and prospects of Maharashtra.
2. To understand the population distribution and settlement pattern in Maharashtra.
3. To understand the concept of rural development
4. To understand the prospectus in Tourism activity in Maharashtra and the role of MTDC and role of MIDC in industrial development in rural area of Maharashtra.
5. To understand the significance of agriculture in Maharashtra's economy.
6. To assess the potential and characteristics of major cities in Maharashtra.
7. To identify the tourism potential and explore agro-tourism in the state.

**Course Outcome:**

By the ends of the course, students should be able to

1. Understanding the economic importance of agriculture in Maharashtra's livelihood and economy.
2. Awareness of the role and potential of key cities like Mumbai, Pune, and Nagpur in Maharashtra's development.
3. Knowledge of diverse tourism opportunities and the concept of agro-tourism.
4. Understanding the demographic structure and its implications for social and economic development.
5. Analysis of successful models like Hivare Bazar, Ralegan Siddhi, and Katewadi for replicable strategies in rural development.
6. Knowledge of various schemes and policies aimed at rural upliftment.
7. Awareness of issues like water scarcity, pest control, market fluctuations affecting agriculture.



## Topics and Learning points

### **Unit 1: Agriculture**

#### **Lecture**

- 1.1 Importance of Agriculture in Economy of Maharashtra 12
- 1.2 Major Crops - Wheat, Rice, Jawar, Bajra.
- 1.3 Cash Crops and Horticulture - Cotton, Sugarcane, Pomegranate, Grapes.
- 1.4 Problems of agriculture in Maharashtra

### **Unit 2: Population and Settlement** 12

- 2.1 Population distribution of Maharashtra
- 2.2 Population composition - Sex Ratio, Age structure, Literacy, Occupational structure, Migration
- 2.3 Rural and Urban Settlements (types and Patterns)
- 2.4 Potential of Major Cities in Maharashtra – Mumbai, Pune, Nagpur

### **Unit 3: Rural Development of Maharashtra** 12

- 3.1 Concept of Rural Development
- 3.2 Parameters of Rural Development
- 3.3 Schemes for Rural Development
- 3.4 Case Studies – Hivare Bazar and Ralegan Siddhi (Ahmednagar),  
Katewadi (Pune)

### **Unit 1: Tourism** 12

- 4.1 Growth and development of tourism in Maharashtra
- 4.2 Tourism Potential of Maharashtra
- 4.3 Agro-Tourism
- 4.4 Case study of Agro- tourism – KVK, Malegaon and Palshiwadi (Baramati)  
Role of MTDC

**Reference Book:**

1. Dikshit K.R ., Maharashtra inMaps,
2. Deshpande C. D. ,Maharashtra
3. Sadhu Arun, Maharashtra, National Book Trust
4. Savadi A. B., Geography of Maharashtra: NiraliPrakashan, Pune.
5. Dastane S., Maharashtra, Ramchandra and company,Pune
6. Sawadi A. B., The Mega State Series :Nirali Publication,Pune.
7. Maharashtra state AgriculturalAtlas
8. Karve I., Maharashtra its Land and people,
9. More J. C., 2014, Geography & Agriculture For MPSC Examination, Atharv Publication, Pune(Marathi)S.Y.B.A. Geography (S2), Syllabus for Semester IV

### Mapping of Program Outcomes with Course Outcomes

**Class:** SYBA (Sem. IV)**Subject:** Geography**Course:** Geography of Maharashtra-II**Course Code:** GEO: 2402**Weightage:** 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	2		
CO 2		3						
CO 3				2			3	
CO 4			3			3		
CO 5		2	2					
CO 6		2	2					
CO 7	3							3

#### Justification for the Mapping

##### **PO 1: Research Related Skill:**

CO 7- Research-related skills help students identify key problems within agriculture, such as water scarcity's impact on crop production or the economic implications of market fluctuations. They learn to define research questions and hypotheses to address these issues effectively.

##### **PO 2: Effective Citizenship and Ethics:**

Partial alignment with effective citizenship and ethics is observed in CO 2, CO 5, and CO 6. These outcomes related to understanding urban and rural development in Maharashtra contribute to effective citizenship and ethics among students by fostering an understanding of civic responsibilities, ethical considerations in development, knowledge of governance structures, encouragement for active citizenship, promotion of critical thinking, and fostering a sense of social responsibility for inclusive and sustainable development.

##### **PO 3: Social Competence:**

Course outcomes 4, 5, and 6 with a focus on how they contribute to social competence;

understanding demographics, analyzing successful rural models, and acquiring knowledge of rural development policies contribute to social competence by fostering awareness of societal diversity, promoting inclusivity and equity, encouraging community engagement, inspiring innovation, understanding policy implications, enhancing communication skills, nurturing cultural sensitivity, encouraging ethical decision-making, and fostering a sense of social responsibility among students.

**PO 4: Disciplinary Knowledge:**

Course outcome 3 make straight with the acquisition of disciplinary knowledge. This outcome facilitates students in gaining a comprehensive understanding of population distribution, population characteristics, rural development, and the potential tourism areas in Maharashtra.

**PO 5: Personal and professional competence:**

Course outcome 1 makes a meaningful contribution to enhancing students' understanding of the economic importance of agriculture in Maharashtra's livelihood and economy.

**PO 6: Self-directed and Life-long learning:**

CO 1 and CO 4- The topics are multifaceted and continuously evolving. Self-directed learning empowers students to explore diverse resources, update their knowledge, and understand the intricate interplay between agriculture, demographics, and socio-economic dynamics in Maharashtra.

**PO 7: Environment and Sustainability:**

CO 3- Encouraging students to consider environmental and sustainability aspects in their study of tourism and agro-tourism cultivates a mindset of responsible stewardship. It empowers them to make informed decisions, advocate for sustainable practices, and contribute positively to the conservation of natural resources while promoting the economic benefits of tourism in a balanced and eco-friendly manner.

**PO 8: Critical Thinking and Problem solving:**

CO 7- Encouraging critical thinking and problem-solving in the context of agricultural issues not only prepares students to tackle specific challenges but also nurtures skills applicable across various domains. It equips them with the capacity to approach problems methodically, evaluate information critically, and devise innovative, sustainable solutions a valuable asset in any field.

## S.Y.B.A. Geography (S2) Syllabus for Semester IV

**Paper: GEO 2403: Cartographic Techniques, Surveying and  
Excursion/ Village / Project Report****No. of Credits: 04****No of Periods: 20**

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**Workload: Six Periods per week per batch consisting of 12 Students; however the last batch needs to have more than six students.**

**(Examination for the course will be conducted at the end of the semester)**

**Course Objectives:**

1. To introduce the students to the basic and contemporary concepts in Cartography.
2. To acquaint the students with the utility and applications of various Cartographic Techniques.
3. To introduce the latest concepts regarding the modern cartography in the field of Geography.
4. To explain the elementary and essential principles of practical work in Geography.
5. To understand the applications and significance of cartography in various fields.
6. To explore various surveying techniques including plane table, GPS, dumpy level, and total station.
7. To collect relevant data and information during the field visit or survey.

**Course Outcomes:**

After the successful completion of the course, the students will be able to:

1. Develop practical knowledge and application of cartographical techniques.
2. To make students aware of the new techniques, accuracy and skills of Map Making.
3. To familiarize with various data representation techniques in cartography.
4. Proficiency in report writing, summarizing findings, and presenting observations effectively.
5. Understanding of different directional references used in surveying.
6. Hands-on experience in creating visual representations manually and through computer software.
7. Measure land accurately and convert between different units of area measurement.

**Note:**

1. Use of Map stencils, Log tables, Calculators, Statistical Tables is allowed at the time of Examination.
2. Journal completion by the students and the certified by practical in-charge and Head of the Department is compulsory.
3. Students without a certified journal should not be allowed for the practical examination.
4. Each of the practical batches needs a separate question paper.

<b>Topics and Learning points</b>	
<b>Unit 1: Introduction to Cartography</b>	<b>Periods</b>
1.1 Definition of Cartography	2
1.2 Development of cartography	
a. Traditional	
b. Modern	
1.3 Use of Cartography	
<b>Unit 2: Cartographic Techniques</b>	<b>6</b>
2.1 Techniques of representation of data (Use and limitations)	
a. Simple line graph	
b. Polygraph	
c. Simple bar graph	
d. Compound bar graph	
e. Divided bar graph	
f. Piediagram	
g. Choropleth Map	
h. Isopleth Method (Isoheight or Isothermal)	
i. Flow diagram	
(At least 01 example of each manually and using computer)	

**Unit 3: Surveying**

**8**

3.1 Definition of Surveying

3.2 Types of North Direction (True, Magnetic and Grid North)

3.3 Types of Survey (Any three)

a. Plane Table Survey : (Radiation Method and Intersection Method)

b. GPS Survey and plotting

c. Dumpy level / Auto level survey

i) Rise and Fall Method

ii) Collimation Method

d. Demonstration of Total Station

3.4 Measurement of land:

a. Measurement of survey field

b. Example on measurement of area (Circle, Square, Rectangle, Triangle, Uneven shape)

c. Conversion of area (hector into Acer, Square km into square meter, Square meter to Square feet)

**Unit 4: Excursion / village/city survey and report writing**

**4**

Study tour to places of geographical interest anywhere in the country

Or

Socio- economic survey of village/city

**Reference Books:**

1. Sharma J. P., 2010, Prayogic Bhugol, Rastogi Publishers, Meerut.
2. Singh R. L. and Singh R. P. B., 1999, Elements of Practical Geography, Kalyani Publishers.
3. Slocum T. A., McMaster R. B. and Kessler F. C., 2008, Thematic Cartography and Geovisualization (3rd Edition), Prentice Hall.
4. Tyner J. A., 2010, Principles of Map Design, the Guilford Press.
5. Sarkar A., 2015, Practical Geography: A Systematic Approach, Orient Black Swan Private Ltd., NewDelhi
6. Singh R. L. and Dutta P. K., 2012, PrayogatamaBhugol, Central Book Depot, Allahabad
7. Ahirrao Y., Karanjkehele E. K., 2002, Practical Geography, Sudarshan Publication, Nashik
8. Saptarshi P. G., Jog S. R., Statistical Methods,
9. Karlekar S. N., 2008, Statistical Methods, Diamond Publication, Pune
10. Kanetkar T. P., Kulkarni S. V., 1986, Surveying and Leveling, Pune VidyrthiGriha Publication, Pune
11. Kumbhare A., Practical Geography,
12. Saha P., Basu P., 2007, Advanced Practical Geography, Books and Allied (P) Ltd, Kolkata
13. Advanced Practical Geography: 2007, Saha P., Basu P., Books and Allied (P) Ltd, Kolkata



### Mapping of Program Outcomes with Course Outcomes

**Class:** SYBA (Sem. IV)

**Subject:** Geography

**Course:** Cartographic Techniques, Surveying and Excursion/ Village / Project Report

**Course Code:** GEO: 2403

**Weightage:** 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		.		3				2
CO 2					2	2		
CO 3						2		
CO 4				2				3
CO 5			3					
CO 6					3	3		
CO 7			2					3

#### Justification for the Mapping

##### **PO 3: Social Competence:**

Course outcome 5 and 7 with a focus on how they contribute to social competence:

5. Surveying frequently requires collaboration with various stakeholders, including landowners, engineers, architects, and local communities. Proficiency in directional references allows students to engage confidently in discussions and collaborations, fostering better relationships with diverse groups involved in land surveying projects.

7. By equipping students with the ability to measure land accurately and convert between different units of area measurement, educators foster social competence by promoting effective communication, negotiation skills, respect for property rights, community engagement, cultural sensitivity, and ethical decision making skills that are essential for positive social interactions and responsible citizenship.

##### **PO 4: Disciplinary Knowledge:**

Course outcomes 2, 3, 5, and 6 make straight with the acquisition of disciplinary knowledge.

These outcomes by emphasizing the practical application of cartographical techniques alongside proficiency in reporting and presenting findings effectively, students gain a robust disciplinary knowledge base. They not only become proficient in technical aspects but also develop critical thinking, research, communication, and interdisciplinary skills essential for success within the discipline and its related professional domains.

**PO 5: Personal and professional competence:**

Course outcome 2 and 6 make a meaningful contribution to providing students with exposure to new techniques, accuracy, and skills in map-making, alongside hands-on experience with both manual and computer-based methods, educators facilitate the development of personal and professional competence. Students gain technical expertise, problem-solving abilities, critical thinking skills, and communication prowess, positioning them as competent and well-rounded professionals in the field of cartography and related disciplines.

**PO 6: Self-directed and Life-long learning:**

Course outcome 2, 3 and 6- By emphasizing self-directed and lifelong learning in map-making, data representation techniques, and hands-on experiences, educators empower students to take ownership of their learning journey. This approach equips them not only with technical expertise but also with the adaptability, problem-solving abilities, and passion for continuous learning necessary for long-term success in the field of cartography and beyond.

**PO 8: Critical Thinking and Problem solving:**

Course outcome 1, 4 and 7- By engaging in cartographical techniques, report writing, accurate land measurement, and unit conversions, students are immersed in scenarios that necessitate critical thinking and problem-solving skills. These activities not only deepen their understanding of geographical concepts but also equip them with valuable cognitive skills applicable across various academic disciplines and professional contexts.