



Savitribai Phule Pune University

(Formerly University of Pune)

**Three Year B.Sc. Degree Program in Geography
(Faculty of Science & Technology)**

T.Y.B.Sc. (Geography)

**Choice Based Credit System Syllabus
To be implemented from Academic Year 2021-2022**

T.Y.B.Sc. (Geography) Choice Based Credit System Syllabus**To be implemented from Academic Year 2021-2022****Course Structure****F. Y. B. Sc. GEOGRAPHY**

Year	Semester	Course Type	Course code	Course Name	Credit
1	1	Compulsory Course	GG 111	Introduction to Physical Geography – I (Geomorphology)	2
			GG 112	Introduction to Physical Geography - II (Geography of Atmosphere and Hydrosphere)	2
			GG 113	Practical's in Physical Geography	1.5
	2	Compulsory Course	GG 121	Introduction to Human Geography	2
			GG 122	Population and Settlement Geography	2
			GG 123	Practical in Human Geography	1.5

S. Y. B. Sc. GEOGRAPHY

Year	Semester	Course Type	Course code	Course Name	Credit
2	3	Compulsory Course	GG 231	Environmental Geography -I	2
			GG 232	Geography of Maharashtra (Physical)- I	2
			GG 233	Surveying- I (Practical)	2
	4	Compulsory Course	GG 241	Environmental Geography -II	2
			GG 242	Geography of Maharashtra (Human) -II	2
			GG 243	Surveying – II (Practical)	2

T.Y.B.Sc. Geography**Choice Based Credit System Syllabus****To be implemented from Academic Year 2021-22****Title of the Course: T.Y.B.Sc. Geography**

Year	Sem.	Course Code	Paper	Course Name	Credit
3	5	GG 351	Discipline Specific Elective Course	Regional Geography of India-I	2
		GG 352	Discipline Specific Elective Course	Geography of Economic Activities-I	2
		GG 353	Discipline Specific Elective Course	Fundamentals of Tourism	2
		GG 354	Discipline Specific Elective Course	Geography of Soil-I	2
		GG 355	Discipline Specific Elective Course	Management of Natural Disasters	2
		GG 356	Discipline Specific Elective Course	Geoinformatics-I	2
		GG 357	Discipline Specific Elective Course	Techniques in Quantitative Analysis (Practical Paper -1)	2
		GG 358	Discipline Specific Elective Course	Field Techniques in Geography (Practical Paper -2)	2
		GG 359	Discipline Specific Elective Course	Techniques in Geomorphology (Practical Paper -3)	2
		GG 3510	Skill Enhancement Course	Research Methodology – I	2
	GG 3511	Skill Enhancement Course	Elementary Surveying	2	
	6	GG 361	Discipline Specific Elective Course	Regional Geography of India-II	2
		GG 362	Discipline Specific Elective Course	Geography of Economic Activities-II	2
		GG 363	Discipline Specific Elective Course	Tourism Activities and Management	2
		GG 364	Discipline Specific Elective Course	Geography of Soil-II	2
		GG 365	Discipline Specific Elective Course	Management of Manmade Disasters	2

	GG 366	Discipline Specific Elective Course	Geoinformatics-II	2
	GG 367	Discipline Specific Elective Course	GIS Based Project Report Practical Paper -1)	2
	GG 368	Discipline Specific Elective Course	Maps and Mapping Techniques Practical Paper -2)	2
	GG 369	Discipline Specific Elective Course	Soil and Sediment Analysis Practical Paper -3)	2
	GG 3610	Skill Enhancement Course	Research Methodology – II	2
	GG 3611	Skill Enhancement Course	Total Station Surveying	2

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Geography T.Y.B.Sc.

(Credit System, 2019 Pattern)

Revised Syllabus (From June-2021)

Semester-V

GG 351: Regional Geography of India-I

No. of Credits: 02

No. of Periods: 30

Objectives:

1. To understand administration and physical divisions of India.
2. To analyze the natural resources, the importance in the regional development and its necessity of conservation and management.
3. To sensitize the students with India's natural resources and their planning in current scenario.

Sr. No.	Topic	Sub-Topic	Learning Points	Periods
1	Introduction	Geographical Information of India	1. Location and Extent 2. Historical Background 3. India's frontiers 4. India's Political Division	07
2	Physiography	Major Physical Divisions of India	1. Himalayan Mountainous Region 2. Northern Plain Region 3. Peninsular Plateau 4. Coastal Plains 5. Islands	08
3	Drainage	A. The Himalayan River System B. The Peninsular River System	1. The Indus , The Ganga , The Brahmaputra 2. East Flowing Rivers- Mahanadi, Godavari, Krishna, Kaveri. 3. West Flowing Rivers- Narmada & Tapi	07
4	Climate, Soil & Natural Vegetation	A. Climate B. Soil C. Natural Vegetation	1. Monsoon: Origin and Mechanism. 2. Various Seasons and weather associated with them 3. Types of Soils and its distribution 4. Soil degradation and conservation 5. Types of Natural Vegetation and its Distribution	08

Reference Books:

1. Alka Gautam (2009): Geography of India, Sharada Pustak bhawan, University Road, Allahabad – UP.
2. Deshpande C.D: India-A Regional Interpretation Northern Book Centre, New Delhi.1992.

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Geography T.Y.B.Sc. (Credit System)
Revised Syllabus (From June-2021)
Semester: V

GG 352: Geography of Economic Activities-I

Objectives:

1. To acquaint the students of various economic activities
2. To make students aware of the importance of natural resources and economic activities
3. To understand the applications of various theories in Economic activities

No. of Credits: 02

No. of Periods: 30

Sr. No.	Topic	Sub-Topic	Learning Points	Periods
1	Introduction to Economic Activities	Definition, Classification and Concepts.	<ol style="list-style-type: none"> 1. Types of Economic Activities: Primary, Secondary, Tertiary, Quaternary and Quinary with Examples 2. Pre and Post Industrialization development of Economic Activities 	06
2	Determinants of Economic Activities	Importance and its effect on economic activities	<ol style="list-style-type: none"> 1. Physical factors 2. Climatological factors 3. Biological factors 4. Economic Factors 5. Technological factors 	08
3	Resources	Classification & Distribution	<ol style="list-style-type: none"> 1. Resource Classification, Natural and Manmade resources. 2. Significance of Land, Labour and Capital in Economic Activities. 3. Major Resource Planning policy of Govt. of India.: Water and Forest 4. Role of Energy Resources in Economic Activities and Global Energy Crisis 	08
4	Theories and Models of Economic Activities	Theories, Models and its application in Economic Activities	<ol style="list-style-type: none"> 1 Christaller's Central Place Theory 2 Weber's Model of Industrial Location 3 Flow Theory and Network Analysis 4 Indices of Network Analysis 	08

Reference Books:

1. Alexander, J.W. (1977): Economic Geography, Prentice Hall of India Pvt. Ltd., New.

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Revised Syllabus (From June-2021)

Semester: V

GG 353: Fundamentals of Tourism

No. of Credits: 02

No. of Periods: 30

Objectives:

1. To know the fundamental concepts of Geography of Tourism.
2. To understand tourism and its various types and its importance in Indian economy.
3. To make aware about the recent trends in tourism and changing nature of tourism in pandemic period.
4. To sensitize the students with positive and negative impact of tourism.

Sr. No.	Topic	Sub-Topic	Learning Points	Periods
1	Introduction to Tourism Geography	Nature and Scope	1. Definition and Concepts of Tourism 2. Nature and Scope 3. Concepts of Recreation and leisure	07
2	Types of Tourism	Types of Tourism	1. Nature Tourism 2. Cultural Tourism 3. Medical Tourism 4. Pilgrimage Tourism	08
3	Recent trends in tourism	Recent trends in tourism	1. Changing nature of International Tourism in Pandemic Periods 2. Role of MICE (Meetings, Incentives, Conventions and Exhibitions) 3. Agro-tourism 4. Sustainable Tourism	08
4	Impact of Tourism	Positive & Negative Impact of Tourism	1. Economy 2. Environment 3. Society	07

Reference Books

1. Bhatia A.K. (1996): Tourism Development: Principles and Practices, Sterling Publishers, New Delhi
2. Bhatiya, A.K.(1991): International Tourism - Fundamentals and Practices,

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Revised Syllabus (From June-2021)

Semester-V

Gg: 354: Geography of Soil-I

No. of Credits: 02

No. of Periods: 30

Objectives:

- 1) To acquaint the students with concepts in Soil Science.
- 2) To familiarize the students with the importance of soil science in Geography.
- 3) To develop an understanding of the origin, classification, and distribution of soils and their relationship to people and food production.
- 4) To develop an understanding of the environmental impact of soil use.

No.	Topic	Sub topic	Learning Points	Periods
1	Introduction	Definition, Nature & Scope, Approaches.	A. Definition of Soil B. Definition of Soil Geography (Pedology) C. Nature & Scope of Soil geography D. Approaches to The Study of Soil Geography i. Pedagogical Approach ii. Edapological Approach E. Importance of soil studies in Geography.	07
2	Soil Formation & Soil Profile	Processes, Factors responsible and Soil Profile	A) Processes of Soil Formation i. Weathering & Pedogenesis Processes ii. Carbonation iii. Humification iv. Laterisation v. Calcification vi. Podzolisation B) Factors Responsible For Soil Formation i. Parent Rock ii. Precipitation iii. Temperature iv. Biological Factors: Plants, Animals & Micro Organisms C) Soil Profile: Meaning & Horizons.	08

3	Soil Properties	Soil Complex, Physical, Chemical, and Biological Properties	<p>A) Soil Complex meaning and Soil Complex-Components</p> <p>B) Properties of Soil:</p> <p>1) Physical Properties</p> <p>a) Texture and Structure</p> <p>b) Soil Moisture</p> <p>c) Temperature</p> <p>d) Color</p> <p>e) Porosity</p> <p>f) Density (Particle & Bulk density)</p> <p>g) Compaction</p> <p>h) Soil water relationship</p> <p>2) Chemical Properties</p> <p>a) Soil PH and NPK</p> <p>b) Soil Solution</p> <p>c) Salinity</p> <p>d) Soil clays</p> <p>e) Cation exchange</p> <p>f) Humus</p> <p>3) Biological Properties</p> <p>a) Soil organic matter</p> <p>b) Soil organism</p>	08
4	Soil Water Relationship	Terms related to Soil Water Relationship	<p>A) Soil Water Relationship</p> <p>B) Terms related to Soil Water Relationship:</p> <p>a) Field Capacity</p> <p>b) Wilting point in soil</p> <p>c) Soil water or Soil moisture</p> <p>d) Irrigation efficiency</p> <p>B) Limiting Soil moisture condition</p> <p>C) Soil-Water-Air Relationship</p> <p>D) Measurement of soil moisture content</p>	07

Reference Books:

- 1) Ecology and Environment, P.D.Sharma, Rastogi Publications, Meerut.
- 2) Watershed management, Madan Mohan Das, PHI Private LTD. New Delhi.
- 3) Soil Science Simplified, Khonke and Franzmeier, Waveland Press, Pune.
- 4) Weathering Pedology and Geo-morphological Research, Birkland P., Oxford University Press, New York.
- 5) Hydrology, Madan Mohan Das, PHI Private LTD. New Delhi.
- 6) Fundamentals of Soil Science, Foth, Henry.D., Wiley Books.
- 7) A text book of Soil Science: Biswas T.D.&Mukharji ; Tata Mc Grow Hill Mumbai
- 8) A Text Book of Soil Science: Daji J.A. ; Tata Mc Grow Hill, Mumbai

SAVITRIBAI PHULE PUNE UNIVERSITY
Geography T.Y.B.Sc. (Credit System)
Revised Syllabus (From June-2021)
Semester-v

GG 355: Management of Natural Disaster

Objectives:

1. To make students understand concept of disaster management.
2. To acquaint students with principles of disaster management.
3. To understand causes and effects of disasters.

No. of Credits: 02

No. of Periods: 30

Sr. No.	Topic	Sub-Topic	Learning Points	Periods
1	Introduction to Disaster Management	Definition and Concepts.	1 Disaster, Hazards, Risk, Vulnerability, Capacity 2 Classification of Disasters 3 Disaster Management cycle	6
2	Geo-physical disaster in India	Geo-physical disaster	1 Causes, Impact, Distribution 2 Landslide, Earthquake, Tsunami 3 Disaster Mapping in India	8
3	Atmospheric Disaster in India	Atmospheric Disaster	1 Causes, Impact, Distribution 2 Flood, Drought and Cyclone 3 Disaster Mapping in India	8
4	Disaster Risk Reduction	Response and Mitigation to Disasters:	1 Mitigation and Preparedness: Survival Kit, Medicinal Kit, Warning and Alarm System 2 Community Based Disaster Management 3 Do's and Don'ts during and Post Disaster 4 Role and Responsibilities of GO's and NGO's 5 Application of RS and GIS in disaster planning and management	8

Reference Books:

1. Government of India. (1997) Vulnerability Atlas of India. New Delhi, Building Materials & Technology Promotion Council, Ministry of Urban Development, Government of India.

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Semester: VI

GG 361: Regional Geography of India-II

No. of Credits: 02

No. of Periods: 30

Objectives:

1. To understand India's population resource and its demographic characteristics.
2. To analyze the mineral and energy distribution and its role in economic development.
3. To assess the status of agricultural, industrial and infrastructure status in India.

Sr. No.	Topic	Sub-Topic	Learning Points	Periods
1	Population and Settlement	Population and Settlement	1. Population- Growth and distribution 2. Rural Settlement Types and Patterns	06
2	Minerals and Energy Resources	A. Minerals B. Energy Resources	1. Distribution and Production of Major Mineral : iron ore and bauxite 2. Distribution and Production of Major Power Resources :Coal and hydroelectricity	08
3	Agriculture & Industries	A. Importance of Agriculture B. Types of Agriculture C. Major Industries in India	1. Importance of Indian Agriculture 2. Major Types of Agriculture 3. Distribution and Production of major crops: Rice, Wheat, Sugarcane and Cotton 4. Major Industries in India: Cotton Textile, Iron-Steel, Automobile & I.T.Industry	08
4	Transportation and Communication	A. Types of Transportation B. Types of Communication	1. Types of Transportation in India 2. Means of Communication 3. Importance of Transportation and Communication in India	08

Reference Books:

1. Alka Gautam (2009): Geography of India, Sharada Pustak bhawan, University Road,

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Revised Syllabus (From June-2021)
Semester: VI

GG 362: Geography of Economic Activities-II

Objectives:

1. To acquaint students with modern trends in Economic activities
2. To understand the problems of various sectors of economy
3. To understand the characteristics and distribution of major economic activities

No. of Credits: 02

No. of Periods: 30

Sr. No.	Topic	Sub-Topic	Learning Points	Periods
1	Agricultural & Allied Economic Activities	Global Distribution & Characteristics	1. Commercial Grain Farming 2. Plantation Agriculture 3. Dairy Industry 4. Industrial Fishing	06
2	Manufacturing based Economic Activities	Global distribution & Characteristics	1. Commercial Mining of Iron ore 2. Copper mining 3. Mineral Oil production 4. Chemical Industries and Fertilizer Manufacturing	08
3	Technology Based Economic Activities	Major Industrial hubs and their factors of development	1. Silicon Valley of USA 2. Auto Clusters in India 3. Electronic goods production in China 4. Major IT Parks in India	08
4	Web-based Economic Activities	Need of Development and Characteristics	1. E-Commerce platforms 2. Use of web-based platforms in Tourism 3. Transportation and Service industry 4. Use of GIS in Economic Activities	08

Reference Books:

1. Alexander, J.W. (1977): Economic Geography, Prentice Hall of India Pvt. Ltd., New Delhi
2. Chorley, R.J. and Haggett, P. (1970): Socio Economic Models in Geography, Concept publishing Company Pvt. Ltd., New Delhi
3. Garnier, B.J. and Delobez, A. (1979): Geography of Marketing, Longman.
- Hartshorne, T.A. and Alexander, J.W. (2010): Economic Geography, PHI Learning, New Delhi
4. Kanan Chatterjee (2015): Basics of Economic Geography

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Semester-VI

Gg: 364: Geography of Soil-II**No. of Credits: 02****No. of Periods: 3****Objectives:**

1. To acquaint the students with concepts in **Soil Science**.
2. To familiarize the students with the importance of **soil science in Geography**.
3. To develop an understanding of the management and conservation of soils.

Sr. No.	Topic	Sub topic	Learning Points	Periods
1	Soil Classification and Soil Types	Classification and Types	A) Classification of Tropical soils B) Basis of classification, Zonal, Intrazonal and Azonal Soils C) Types of Soil	07
2	Soil organic matter and Soil Dynamics	Organic Composition of Soil, Soil Dynamics	A) Meaning and Determination of Organic carbon and matter. B) Fractionation of organic matter C) Carbon cycle C:N ratio Organic Colloids– Soil Organic Matter D) Factors Affecting Soil Organic Matter E) Decomposition of Soil Organic Matter F) Soil Dynamics	08
3	Soil Degradation	Soil Degradation Types, Causes and Effects	A) Meaning of Soil degradation. B) Types of Soil degradation C) Causes of Soil degradation D) Effects of Soil degradation E) Soil degradation control measures	08
4	Soil conservation And	Soil Conservation & Soil	A) Meaning and Definition of Soil Conservation. B) Methods of soil conservation	07

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Semester VI

Course No: GG 369: Soil and Sediment Analysis
(Practical Paper-3)

No. of Credits: 02

No. of hours: 30

Objectives:

1. To introduce students with soil and sediment analysis in geography.
2. To apply soil and sediment analysis techniques to understand geographical phenomena.
3. To make use of soil and sediment analysis to arrive at conclusions.
4. To acquaint students with the importance of soil and sediment analysis in geography as the scientific method.

Each Practical batch will be comprised of 12 students

Unit No.	Unit	Sub-Unit	No. of Hrs.
1	Concept of soil sampling	Various methods of soil sampling and at least one field sampling by using soil augur or core tubes	05
2	Study of physical properties of soils	Laboratory determination of i) Soil texture ii) Soil Moisture iii) Bulk density and Specific gravity iv) Percentage porosity	10
3	Study of chemical properties of soils	Laboratory determination of i) Soil pH ii) Soluble salts by gravimetric method iii) Soil EC iv) CaCO ₃ v) Organic carbon vi) Organic matter vii) N,P,K viii) Fe ₂ O ₃ ix) Al ₂ O ₃ x) SiO ₂	15

Note:

1. Use of map stencils, log tables, statistical tables and calculators are allowed at the time of examination.
2. Completion of journal and certification by Practical-in-charge and Head of the Department is must.
3. Candidate without certified journal should not be allowed for the practical examination.

Reference Books: