

SOLAPUR UNIVERSITY, SOLAPUR**Semester Pattern Syllabus****B.Sc. II (CGPA Pattern)****(w.e.f. June 2015)****Subject- Geography (Optional)**

Class	Code No.	Course No.	Name of the Course	CGPA Marks		Total Marks
				External	Internal	
B. Sc. II Seme. III	SG. 2	SOG-201- S- III	(Section I) Biogeography	35	15	100
			(Section II) Soil Science	35	15	
B. Sc. II Seme. IV	SG. 2	SOG-201- S- IV	(Section-I)Biogeography	35	15	100
			(Section II) Agriculture Geography	35	15	
	Practical SG. 2	SOG-201- S- IV	Practical-II Remote Sensing & Aerial Photographs, Weather Reports, Statistical Methods and Computer	35	15	50
	Practical SG. 2	SOG-201- S- IV	Practical-III Map Work, Surveying & Study tour or Project Report	35	15	50

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Semester Pattern Syllabus

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(w.e.f. June 2015)

Semester-III

Paper – III Optional Geography

Paper Title: BIOGEOGRAPHY AND SOIL GEOGRAPHY

Code No: - SG. 2

Total Marks: - 100

Course No: -SOG -201-S-3

Lecture per week: -6

No. of Credit - 04

Objectives –

1. To introduce the students to the basic concepts in Biogeography, So as to enable them in understand the Biogeographical principles through an interdisciplinary approach.
2. To acquaint the students to the spatial relationship which exists between man and nature.
3. To make the students aware of need of conservation of nature.
- 4.. To acquaint the students with the study of soil, soil elements and soil types.
5. To make students aware of soil degradation and soil conservation and its management.

Section - I

Unit No	Name of the Topic	Sub Topics	Total Lectures
1	Introduction to Biogeography	1. Definition and meaning 2. Nature and Scope of Biogeography 3. Environment and ecosystem	10
2	Factors Influencing the Biogeography	1. Geographical- Physiography, Soil, Climate, vegetation and Water 2. Anthropogenic	10
3	Laws and Cycle of energy	1. Laws of energy exchange 2. Food chain and food web – Ecological Succession 3. Biogeochemical cycles - N ₂ , H ₂ O, C. and P.	10

4	Ecosystem Ecosystem	1. Concept of Ecosystem 2. ecological pyramid – Population, Biomass and Biotic Energy 3. Major Ecosystem of the World- i)Tropical ii)Subtropical (Temperate) iii)Polar iv) Aquatic	05
5	Biodiversity	1. Concept of Biodiversity – Importance 2. Concept of Conservation 3. Hot-Spot of Biodiversity and India's as mega diversity region 4. Threats to biodiversity- Natural and Manmade	10

Section II

Unit No.	Name of The Topic	Sub Topics	Total Lectures
1	Introduction and Soil characters	i) Definition of soil ii) Soil as a resource iii) Water holding capacity iv) Field capacity v) Wilting point	10
2	Factors of soil formation	i) Topography ii) Climate iii) Biotic iv) Parent material v) Time	10
3	Classification of Soils	A) Classification of Soil i) Podzol ii) Pedocal B) Study of following Soils:- i) Mountain Soil ii) Alluvial soil iii) Regur soil iv) Red soil	10

		v) Laterite soil	
4	Soil Degradation	i) Causes and consequences of Degradation ii) Estimation of soil erosion iii) Universal soil loss equation	10
5	Soil Conservation	Soil Conservation and Management- Nala bund, Counter Bund, Check Dams and leveling of soil	05

List of Reference Books

Sr. No.	Name of the Book	Name of the Author
1	Introduction to Plant Geography Longman, Green and Co. Ltd. London	Polunin Nicholas (1960)
2	Ecology and Environment –Published by Kumar Rastogi, Meerut, Rajesh Printers New Delhi	Sharma P.D. (1994-95)
3	Basic Biogeography Longman Group Ltd. London	Nigel Pears (1977)
4	Biogeography, Lotus Publication, Solapur	Y S Khan
5	Environmental Geography, Rawat Publication Jaipur	H M Saxena
6	Patterns of Life:- Biogeography of the changing world –Unwin Hyman Inc. Ltd. London (1989)	Meike Howard K
7	Biogeography English Language Book Society, London (1982)	H. Robinson
8	Geography of Soils Hutchinson London 1965	Bunting B.T
9	Fundamentals of Soil Sciences Johan wiely new yark 1978	Foth H.D
10	Soil	Butter Worth London, Briggs Danil
11	Weathering Pedology and Geomorphologic Research Brikland Publication	Olliar
12	Soil Condition and plant growth longman 1961	Russel E.J
13	Climate Soil and vegetation University Tuteri press 1969	Money D.C

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Semester-IV

Paper – IV Optional Geography

Paper Title: BIOGEOGRAPHY AND AGRICULTURE GEOGRAPHY

Code No: - SG. 2

Total Marks: - 100

Course No: - SOG -201-S- 4

Lecture per week: - 6

No. of Credit - 04

Objectives –

1. To introduce the students to the basic concepts in Biogeography, So as to enable them in understand the Biogeographical principles through an interdisciplinary approach.
2. To acquaint the students to the spatial relationship this exists between man and nature.
3. To make the students aware of need of conservation of nature.
4. To acquaint the students with the study of relationship between agriculture activity and geographical environment.
5. To course further aims to familiarize the students with the modern techniques used in Agriculture Geography.

Section I

Unit No.	Name of The Topic	Sub Topics	Total Lectures
1	Evolution of life	1) Geological time scale and life evolution 2) Darwin's and Lamark's Theory 3) Plant and Animal Evolution	10
2	Migration	1) Meaning and Causes of dispersal and Migration 2) Barriers of Dispersal and Migration 3) Dispersal of Plants and Migration of Animals	10
3	Organic resources	1) Classification of Resources 2) Availability and Exploitation of Organic Resources 3) Different uses of Forest Products in Industry	10

		4) Use of animal and marine resources	
4	Man and Ecosystem	1) Effects of human activities on plants and animals 2) Environmental pollution	10
5	Environmental Management and Protection	1) Environmental Hazards- Natural and Manmade 2) Environmental protection laws and management	05

Section II

Unit No.	Name of The Topic	Sub Topics	Total Lectures
1	Introduction	i) Meaning ii) Nature and Scope iii) Approaches and Significance	10
2	Determinants of Agriculture	i) Physical- Relief, Climate, Water Bodies, and Soil ii) Economic - Capital, Transportation and Irrigation iii) Social – Land holding, Traditional methods, Govt. Policies	10
3	Types of Agriculture –	A) Types of Agriculture – i) Subsistence Agriculture ii) Intensive Agriculture iii) Extensive Agriculture iv) Plantation Agriculture v) Mixed Agriculture B) Problems of Agriculture in India	10
4	Agriculture Development	A) Modern Techniques used:- i) Green Revolution ii) Biotechnology iii) Organic Farming iv) Concept of Sustainable Agriculture	10

5	Allied areas in Agriculture	A) Allied areas:- i) Dairy Farming ii) Poultry iii) Sheep & Goal Rearing iv) Biofertilizers B) Post Harvesting:- i) Fruit processing ii) Vegetable processing	05
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1	Introduction to Plant Geography Longman, Green and Co. Ltd. London	Polunin Nicholas (1960)
2	Basic Biogeography, Longman group Ltd. London (1977)	Nigel Pearse
3	Patterns of Life:- Biogeography of the changingworld – Unwin Hyman Inc. Ltd. London (1989)	Meike Howard K
4	Biogeography English Language Book Society, London (1982)	H. Robinson
5	Ecology oxford & IBH Pubication Co. Ltd. Pvt. Ltd. Mumbai (1975)	Odum E.P.
6	Biogeography, Lotus Publication, Solapur	Y S Khan
7	Environmental Geography, Rawat Publication Jaipur	H M Saxena
8	Agriculture Geography, Rawat publication, New Delhi	Majid Hussain
9	Agriculture Geography, Wiley Publication, New York	Terrant J.R.
10	Agriculture Geography	C.B. Mamoria
11	Agriculture Geography, Tata McGrew hill publication, New Delhi	Jasbir Sing and S.S. Dhillan
12	Geography of Agriculture, Prentic Hall, New York	Geogrosy H.P.
13	The Ecology of Agriculture Systems, Cambridge University, London	Baylis smith T.P.
14	Economic Geography, Prentic Hall, New York	Hailshowrn T.N. and Alexander Jwc
15	Systematic Agricultural Geography Rawat Publication Jaipur 1986	M. Hussain

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Semester Pattern Syllabus

B.Sc. II (CGPA PATTERN)

(w.e.f. June 2015)

Sub: - Geography (Practical-II)

PAPER TITLE: -PRACTICAL GEOGRAPHY (Practical-II)

**Remote Sensing, Aerial Photographs, Weather Reports, Statistical Methods and
Computer**

Code No: - SG. 2

Total Marks: - 50

Course No: - SOG -201-S- 4

Lecture per week Per Batch: 4

No. of Credit - 04

Objectives –

1. To introduce the important basic principal of Remote Sensing.
2. To enable the students to use various cartographic techniques and interpretation.
3. To introduce the use of Statistical techniques in Geographical analysis.

Unit No.	Name of The Topic	Sub Topics	Total Lectures
1	Remote Sensing	Application of Remote Sensing in Geography, Types of Stereoscope, Setting of Aerial Photo for Stereovision and Identification of Landforms of Aerial Photographs.	07
2	Weather Reports	Isobaric Patterns (Cyclone, Anticyclone, Trough, Ridge, Col), Signs and Symbols used in IMD weather reports. Interpretation of at least Three Weather Reports- Pre monsoon, Monsoon, and Post monsoon.	15
3	Statistical Methods	i) Measures of Central Tendency- Mean, median, mode. ii) Measures of Dispersion – Quartile and Standard deviations.	15
4	Computer	Construction of Line Graph, Bar Graph and Pie diagram with the help of computer	08

List of Reference Books

Sr. No.	Name of the Book	Name of the Author
1	Principles of Remote Sensing, Longman London (1985)	Curran P.J.
2	Textbook of Remote Sensing and Geographical Introduction Systems,Hydrabad-2007	S. B. Putti
3	Statistical Analysis of Geographical Data, Diamond publication, Pune	Karlekar & Kale M.
4	Remote Sensing , Diamond publication, Pune	Karlekar
5	Remote Sensing and Image Interpretation, Wiley, New York	Lillesand T.M. & Kieter R.W.
6.	Stiatistical Geography Rawat Publication 2005	Zamir Alvi

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PAPER TITLE: -PRACTICAL GEOGRAPHY (Practical-III)

(Map work, Surveying and Study tour)

Code No: - SG. 2

Total Marks: - 50

Course No: - SOG -201-S- 4

Lecture per week Per Batch: 4

No. of Credit - 04

Objectives –

1. To introduce basic principal of Surveying.
2. To enable the students to use various cartographic techniques and interpretation.
3. To familiarize the students with the geographical environment.

Unit No.	Name of The Topic	Sub Topics	Total Lectures
1	SOI Toposheet	1) Indexing of Toposheets, Signs & Symbols used in SOI Toposheet, Colour Convention. 2) Cross Section – Simple Profile and Intervisibility. 3) Interpretation of three Toposheets of Different Relief Features- (Mountains, Plateau, Plain Regions.)	15
2	Surveying	1) Definition and Meaning of Surveying 2) Preparation of plan with the help of following instruments i) Plane Table-Radial, Intersection and Open Traverse ii) Prismatic Compass- Radial, Intersection and Open Traverse iii) Abney level Survey	15

3	Study Tour Report	Study Tour for minimum one day and maximum 3 days. Preparation of Study Tour Report (Visit to places of geographical interest in any where in India) or Project Report	15
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Sr. No.	Name of the Book	Name of the Author
1	Surveying and leveling, Pune Vidyapeeth, Pune	Kanetkar T.P., Kulkarni S.V.
2	Maps & Diagrams - Methods & co. Ltd. London (1971)	Monkhouse F.J. &Wilkinson H.R.
3	Mapwork & Practical Geography, Vikas Publishing house Pvt. Ltd. New Delhi (1996)	Singh G.
4	Elements of Practical Geography, Kalyani Publishing, New Delhi (1971)	Singh R.L.