

6. Tandon, B.C., (1979): Research Methodology in Social Sciences. Allahabad, Chaitanya Publishing House.
7. Ullman, Neil R. (1978): Elementary Statistics, New York: John Wiley & Sons, Inc.
8. Yamane, T., Statistics (1973): An Introductory Analysis, 3rd ed., New York: Harper and Row.

SAVITRIBAI PHULE PUNE UNIVERSITY
Geography MA/MSc-II (Credit System)
Revised Syllabus (From June-2020)

Course: GGUT- 252: Geography of Soil

Credit: 02

Periods: 30

Topic No.	Topic	Subtopics	Periods
1	Introduction to Geography of Soil	i. Definition ii. Nature and Scope of Soil Geography iii. Development of Geography of Soil iv. Soil as a Natural Resource	4
2	Soil Formation and Soil Profile	i. Factors of Soil formation: Parent Material, Climate, Biota, Time, Topography. ii. Soil Profile : Definition and Structure	6
3	Components and Characteristics of Soil	i. Soil component: Minerals, Organic Matter, Air and Water. ii. Physical, Chemical and Biological characteristics of soil. iii. Nutrients in Soils: Primary, Secondary and Micronutrients	6
4	Classification and types of Soil	i. Land Capability Classification ii. Land Suitability Classification iii. Types of Soil with reference to India	6
5	Problems related to soil and Soil Conservation	i. Soil Problems: Soil Pollution, Acidification, salinization and Soil health ii. Soil Conservation: Definition and various methods of Soil Conservation, iii. Soil Conservation in India iv. Role of RS and GIS in Soil Conservation	8

References Books:

1. A.S. Gustafson, (2007): "Soils and Management" Published by Agrobios (India).
2. Brady, N. C., and Weil, R. R. (2008): The Nature and Properties of Soils, Prentice Hall, New Jersey
3. Bridges, E. M. and Davidson, D. A. (1982): Principles and Applications of Soil Geography, Longman Group, London.
4. Birkeland, P. W (1999): Soils and Geomorphology, Oxford University Press, New York.
5. C. E. Miller, L.M. Turk, (2001): "Fundamental of soil Science" Biotech Books Delhi.

6. Daji, J. A. (1970): A Textbook of Soil Science, Asia Publication House, New York.
7. Lal, R. (ed.), (2002): Encyclopedia of soil science. Marcel Dekker, New York.
8. Miller, R. W. and Donahue, R. L. (1992): Soils: An Introduction to Soils and Plant Growth, Prentice-Hall of India, New Delhi.
9. Pitty, A. F. (1978): Geography and Soil Properties, Methuen and Co., London.
10. S. C. Panda, (2007): "Soil water conservation and dry farming" Published by Agrobios (India).
11. V. B. Kale (2020): Soil Geography, Himalaya Publishing House, Mumbai.

Savitribai Phule Pune University, Pune

MA/MSc - II Syllabus in Geography (Credit System)
Revised Syllabus (from June, 2020)

Course: GGDP-253 Practical in Geostatistics

No. of Credits: 02

No. of Periods: 30

Topic No.	Topic	Subtopics	Practical (3 hours)
1	Exploratory spatial data analysis	i. Univariate descriptors: Frequency tables, Histogram, Cumulative frequency table, Normal probability plots, Summary / Descriptive Statistics ii. Bivariate descriptors: Scatter plot, correlation, covariance, correlation-coefficient, linear regression <i>(Attempt at least two discrete problems plotting/obtaining the univariate and bivariate descriptors and interpreting them.)</i>	2
2	Structural analysis	Variogram: Definition and concept i. Plotting of variogram using GIS software	2
3	Spatial interpolation	Local Interpolation Thiessen polygon (Vornoi plots) (manual and software) i. Inverse Distance Weighting (IDW)* ii. Spline* iii. Kriging* (*use of software)	2
4	Cluster Analysis	Problems and interpretation of results	2
5	Markov Chain Analysis	Problems and interpretation of results	2