VALUE-ADDED COURSE

On

Soil and Agriculture Management

(GEOVAC 002)

(With effect from 2022-2023)

COURSE OFFERED BY

Department of Geography

PASKURA BANAMALI COLLEGE (AUTONOMOUS)

Panskura RS, Purba Medinipur

PIN 721152

COURSE DETAILS

1. Name of the course: **Soil and Agriculture Management**
2. Course structure: **Theory and Practical**
3. Intake capacity: **Minimum 20**
4. Course fees: **Rs 300.00** (three hundred/candidate)
5. Course time: **30 hours**
6. Medium of instruction**: English**
7. Mode of teaching: **Blended**
8. Course coordinator: **Dr**. **Gour Dolui**
9. Coordinator's contact information: gourdolui@gmail.com

Soil and Agriculture Management

(Number of lectures to be delivered for theory & practical 30 hours)

Group A

Theory

1. Physical and Chemical properties of soil; Texture, structure, moisture, organic matter, soil pH, soil nutrients (*2 hours*)
2. Concept of Agriculture geography: Determinants of Crop productions, Cropping pattern, Crop rotation, relationship between agriculture and soil properties. Uses of fertilizers – organic and inorganic (*4 hours*)
3. Soil erosion and threats to agriculture, soil erosion management (*4 hours*)

Group B

Practical

1. Analysis of Physical properties: Soil texture, moisture (*6 hours*)
2. Analysis of Chemical properties: Soil pH, NPK (*8 hours*)
3. Spatial Mapping: Soil properties, and cropping pattern (*6 hours*)

Reference list

1. Grigg, D. (2003). An introduction to agricultural geography. Routledge.
2. Hakeem, K. R., Akhtar, J., & Sabir, M. (Eds.). (2016). Soil science: agricultural and environmental prospectives. Springer.
3. Gerrard, J. (2014). Fundamentals of soils. Routledge
4. Pennock, D. (2019). Soil erosion: The greatest challenge for sustainable soil management.
5. Blanco, H., & Lal, R. (2008). Principles of soil conservation and management (Vol.
6. 167169). New York: Springer.
7. Meena, R. S., Kumar, S., Bohra, J. S., & Jat, M. L. (Eds.). (2019). Sustainable management of soil and environment. Springer Singapore.
8. Greenland, D. J., & Lal, R. (1978). Soil conservation and management in the humid tropics. Soil Science, 126(1), 61.
9. Ratta, R., & Lal, R. (Eds.). (1998). *Soil quality and soil erosion*. CRC press.

10. Das, D. K., & Das, D. K. (2004). Introductory soil science. Kalyani publishers.
11. U. D, Patil, J. V. Chavan (2020) Key Notes on Agriculture Chemistry and Soil Science
12. S. Mohandas (2021) Introduction to Soil Science
13. Mukesh Mishra (2022) Agricultural Geography, Sankalp Publication
14. Majid Husain (2022) Agricultural Geography, Rawat PublicationSullivan, P. (1999). Sustainable soil management. Appropriate Technology Transfer for Rural Areas.
15. Velde, P., & Barré, P. (2009). Soils, plants and clay minerals: mineral and biologic interactions. Springer Science & Business Media.
16. Wright, C. H. (1934). Soil analysis. A handbook of physical and chemical methods.