

COURSE CODE: ENS-213
COURSE NAME: Soil and Environment
CREDIT HOURS: Theory = 3 Practical = 0 Total = 3
CONTACT HOURS: Theory = 48 Practical = 0 Total = 48
PREREQUISITE: None
MODE OF TEACHING: Three hours of lecture per week

Course Description:

This course will provide students with the knowledge of the basic properties and significance of soil and its care for a sustainable environment.

TOPICS COVERED:

Week	Topic
1	Introduction, Soil forming minerals
2	Types and properties of parent materials
3	Physical and chemical processes of weathering
4	Physical and chemical processes of weathering
5	Factors and processes of soil formation
6	Physical and chemical properties of soil
7	Physical and chemical properties of soil
8	Soil morphology and classification Cation and anion exchange
9	Mid Semester Exam
10	Soil buffering capacity and its importance
11	Soil degradation, management and green productivity
12	Environmental implications of fertilizers and agrochemicals
13	Environmental implications of fertilizers and agrochemicals
14	Environmental impact of agricultural and Industrial wastes
15	Environmental impact of agricultural and Industrial wastes
16	Soil as a natural sink for pollutants

17	Soil as a natural sink for pollutants
18	End Semester Exam

Text and Material:

1. The Nature and Properties of Soils, Brady, N.C. and Weil, R.R. Prentice- Hall, 14th Edition. Upper Saddle River, NJ, USA.
2. Environmental Soil Science 3rd Edition by Kim H. Tan 2009
3. Biological Approaches to Regenerative Soil Systems 2nd Edition By Norman Uphoff, Janice Thies 2023

ASSESSMENT SYSTEM:

Theoretical/Instruction	100%
Assignments	10%
Quizzes	15%
Mid Semester Exam	25%
End Semester Exam	50%
Practical Work	0%
Lab Attendance	0%
Lab Report	0%
Lab Quiz	0%
Lab Rubrics	0%