

COURSE CODE: ENS-445
COURSE NAME: Solid Waste Management
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:

The students will learn the types, handling, and management systems of solid waste.

Course Outline:

Week#	Topics
1	Introduction to solid waste management
2	Solid waste characterization
3	Sources, quantities and quality
4	Waste collection and transport
5	Treatment technologies
6	Bioremediation strategies
7	Composting: Types and methods, environmental requirements
8	Incineration, reuse and recycling
9	Midterm Exam – MSE
10	Landfills
11	Site design and management
12	Site design and management
13-14	Pollution and risk assessment of landfills
15	Biogas generation

16-17	Recent technologies used for solid waste management
18	End Semester Exam

Text and Material:

1. Principles and Applications of Soil Microbiology. Salivia, D.M., J.J. Fuhrman, G.P. Hartel and A.D. Zuberer, 3rd Ed. Prentice Hall, Upper Saddle River, NJ, USA. 2021.
2. Compost Science and Technology. Diaz, L.F., M. de Bertold and W. Bidlingmaier. Elsevier, London, UK.
3. Compost: The natural way to make food for your garden Kenneth, T. and E. Annelise. Dorling Kindersly, London, UK.
4. Organic Waste Recycling: Technology, Management and Sustainability. 4th edition, Chongrak Polprasert &Thammarat Koottatep, IWA, London, UK. 2017

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%