Course Type	Course Code	Name of Course	L	T	P	Credit
DC	ESC357	**Solid Waste Management Practical**	0	0	2	2

Course Objective
• To provide comprehensive insights about the solid waste characteristics, transportation, safe disposal and management
Learning Outcomes
➢ Able to address the issues like transportation optimization, sanitary landfill design, hazardous waste disposal etc.

Unit No.	Topics to be Covered	Practical Hours	Learning Outcome
1.	Solid waste collection techniques	2	Students will know how to collect representative sample of solid waste dump
2.	Solid waste segregation techniques	2	To differentiate and quantify various SW components
3.	Proximate Analysis of solid waste	2	To determine moisture content, volatile combustible matter, Fixed Carbon and ash content
4.	Ultimate Analysis of solid waste	2	To determine CHNS & O content of SW
5.	Determination of Calorific Value	2	To determine energy content of SW by Bomb Calorimeter
6.	Determination of coarse fraction	2	Segregation of solid waste
7.	Determination of EC & CEC of solid waste	2	To determine the cation exchange capacity
8.	Determination of exchangeable Na & K; non-exchangeable K & HNO_3-soluble-K.	2	To determine the nutrient exchange capacity for SW
9.	Determination of organic matter and organic carbon C:N ratio	2	To determine the feasibility of SW for composting
10.	DTPA -extractable micronutrients and trace elements in OB samples	2	To determine the feasibility of plantation in waste like OB dumps
11.	Toxicity Characteristics Leaching Procedure	2	To understand the leaching behaviour of SW
12.	CHNS analysis and calculation of energy and gas generation	2	To calculate amount of energy and gas generated from SW

Text Books:

4. Peavy, H. S., Rowe, D. R., & Tchobanoglous, G. (2010). Environmental Engineering. New York: McGraw-Hill.