

1.	Title of the course	Solid Waste Management
2.	Course number	CE316L
3.	Structure of credits (L-T-P-C)	2-0-0-2
4.	New course/modification to	New
5.	To be offered by	Civil and Environmental Engineering
6.	Proposed by	Nippatlapalli Narasamma
7.	Prerequisite	None
8.	<b>Course Objective(s):</b> To discuss the fundamentals of waste prevention, management, recycling, waste transportation, treatment and disposal. To explain solid waste management system rules, policies and practical challenges.	
9.	<b>Course Content:</b> Sources and types of solid waste: residential, commercial and industrial wastes; Waste generation: sampling and analysis; Factors determining the quantity and composition of solid wastes; Collection and transport: waste logistics, collection services, analysis of collection system, separate collection, transportation systems; Processing and material separation techniques: conveyors, shredders, manual separation, screening, air classification, magnetic and eddy current separation techniques; Biological treatment techniques: composting and modifications; Anaerobic biomethanization and modifications; Thermal treatment techniques: incineration, pyrolysis, auto-claving; Disposal methods: landfills and leachate treatment; 6R concept: recycle, rethink, reduce, reuse, repair and restore; Innovations in solid waste management.	
10.	<b>Textbook(s):</b> 1. Tchobanoglous G, Theisen H and Vigil S A, Integrated Solid Waste Management, 2nd Edition, McGraw Hill Companies (1993). 2. Vesilin P A, Worrell W A and Reinhart D R, Solid Waste Engineering, Nelson Engineering Publishers, US (2001).	
11.	<b>Reference(s):</b> 1. CPHEEO Manual of Solid Waste Management, Government of India Publication (2016). 2. John Pichtel, Waste Management Principles, 2nd Edition, CRC Press Inc. (2014).	