

Course title: Solid and Hazardous Waste Management			
Course code: NRE 189	No. of credits: 3	L-T-P: 35-10-0	Learning hours: 45
Pre-requisite course code and title (if any): NRE 131 Environmental Chemistry and Microbiology, NRE 137 Environmental Monitoring laboratory			
Department: Natural and Applied Sciences			
Course coordinator: Dr Saumya Arya		Course instructor: Dr Saumya Arya	
Contact details: saumya.arya@terisas.ac.in			
Course type: Core		Course offered in: Semester 1	
Course Description The course would cover-general introduction including definition of solid wastes–municipal waste, biomedical waste, hazardous waste, e-waste; legal issues and requirements for solid waste management; sampling and characterization of solid waste; analysis of hazardous waste constituents including QA/QC issues; health and environmental issues related to solid waste management; steps in solid waste management-waste reduction at source, collection techniques, materials and resource recovery/recycling, transport, optimization of solid waste transport, treatment and disposal techniques (composting, vermi-composting, incineration, non-incineration thermal techniques, refuse derived fuels, land-filling); economics of the onsite vs. offsite waste management options (individual vs. common treatment/disposal practices, integrated waste management; and waste minimization and concepts of industrial symbiosis and industrial ecology.			
Course objectives <ol style="list-style-type: none"> 1. Understanding of problems of municipal waste, biomedical waste, hazardous waste, e-waste, industrial waste etc. 2. Knowledge of legal, institutional and financial aspects of management of solid wastes. 3. Become aware of Environment and health impacts solid waste mismanagement 4. Understand engineering, financial and technical options for waste management 			