

RAJAGIRI COLLEGE OF SOCIAL SCIENCES(AUTONOMOUS)

VALUE ADDED COURSE

Environmental Hygiene, Sanitation and Waste Management under Swatch Bharat Mission (SBM)

Total no. of hours: 130 (including internship)

Theory sessions: 30 hours

Internship: 100 hours

Duration: April 1-30, 2019

No. of students: 19

Course Learning Outcome:

By doing this course, the students would be:

- Sensitized about the need for environment protection and hygiene
- Able to demonstrate pro environmental behavior
- Able to conduct waste and waste water audit

Course Outline (30 hours)

Sl. No.	Content	Module content	Teaching/Learning methodology	No. of hours
1	Environmental hygiene, solid waste and waste water: perspectives	Prevailing scenario in environmental hygiene, waste and waste water. Urban and rural –risk factors, challenges and work opportunities in the district, city and State in India	Checklists, classroom, reports, group exercise	4
2	Environmental hygiene and Sociology of environmental hygiene management, solid waste and waste water and impacts	Community consciousness and engagement on sanitation aspects, roles and responsibilities, job charts, frequency, schedules and timelines in Swachta Management, culture of cleanliness (Swachh Bharat Abhiyan), Behaviour change Communication, role of habits and attitudes in environmental hygiene management, waste and waste water disposal; change management	Checklists, case studies, lecture, field visit, participatory learning and action, preparation of aids and coaching for awareness programme, Swachh Bharat portal	6
3	Waste and water management as participatory learning	Waste and waste water disposal Waste: Social mapping, resource mapping of waste infrastructure Wastewater: Audit and feasibility study for management practices	Checklists, field visits, mapping, demonstration, participation, interaction with Adjunct faculty	6

4	Waste and waste water audit	<p>Waste Audit: Environmental impact assessment, waste characterization, quantity determination, primary collection methods, secondary transportation</p> <p>Wastewater Audit: Water budget, types of wastewater, survey of distribution network and feasibility of various wastewater treatment methods</p>	Checklists, neighbourhood field visit, classroom interaction and group exercise	8
5	Recovery of resources from waste and management and administration of environmental hygiene	Solid waste management methods and techniques – source segregation, composting and recycling (3R), zero waste institution; Management of collectives, local involvement, political will, community mobilization, resolving bottlenecks, addressing environmental hygiene and safety	Checklists, classroom teaching, case study, interview, field visits, Adjunct Faculty	6

Requirements of Internship

Sl. No.	Activity
1	<p>Waste Audit</p> <p>Conduct a waste audit in your locality to assess the current waste management practices in different parts of your locality.</p> <p>Step 1: Mapping: Find out demography and composition of the area. On a map, mark locations of waste collection points, garbage transit points, waste recycling units, composting units, official garbage dumps and unofficial dumping places, and biomedical waste management plants (if any)</p> <p>Step 2: Waste characterization: Find out the types of garbage collected from each category of establishment – commercial, industrial, residential, medical and institutional. Through interviews with relevant authorities or from published data of the local self government.</p> <p>Step 3: Quantity determination: Visit the important dumpyard and interview the supervisor to understand the quantity of waste generated, types of waste and the methods used for processing and landfill; areas of pollution due to dumpsite.</p> <p>Step 4: Collection methods: From the group in charge of waste collection as well as waste collectors, find out the no. of persons involved in waste collection, the mechanisms and frequency of waste collection, segregation and disposal (primary collection methods, secondary transportation, health and safety measures, problems faced by the workers) practiced in the area.</p> <p>Step 5: Environmental Impact Assessment: Prepare a report based on your findings. Analyse your findings with the best practices in solid waste management and give suggestions for improvement.</p>
2.	<p>Waste water Audit</p> <p>Conduct a waste water audit in your locality to assess the current waste water management practices in different parts of your locality.</p> <p>Step 1: Mapping: Find out demography and composition of the area. On a map, mark locations of waste outlets, sewage treatment plants, septic tank opening, drainage lines, nallahs with garbage</p>

	<p>thrown in and water bodies which are used to dump waste in liquid or solid form. Mark the inlet and outlet of the drainage system of your area on the map. Conduct interviews with people to understand issues of smell or change in taste of water as well as any other issue like mosquito menace, water hyacinth, fish kills etc.</p> <p>Step 2: Waste water characterization: Find out the types of water leaving the following establishments – commercial, industrial, residential, medical and institutional. Find out, if any of it is treated or recycled for alternate purposes.</p> <p>Step 3: Quantity determination: Note the volume of water used by each establishment. Assume that 80% of the water consumed is turned into waste water. Note the method of waste water disposal.</p> <p>Step 4: Disposal methods and testing of water quality: Find out the quality of water being let out after treatment. Where is the waste water let out? Collect secondary data from relevant municipal water and sewerage dept. Check the map for the inlet and outlet of the drainage system of your area on the map. Check and see the water quality at the inlet and outlet points.</p> <p>Step 5: Social and work conditions of the waste water maintenance staff: Interview the people in charge of drain cleaning. Find out the maintenance routine and conditions of work, no. of workers engaged in cleaning and maintenance, facilities provided, problems, where do they dispose waste etc.</p> <p>Step 6: Environmental Impact Assessment: Prepare a report on the methods of waste water generation, processing and disposal in your area based on your findings. Add your map on the sources of point pollution and the direction of the water stream. Analyse your findings with the best practices in solid waste management and give suggestions for improvement.</p>
3.	<p>Conduct a clean drive in any one illegal dumping area, with the active support of locals and local self government. Beautify the area with art, slogans and plants to prevent recurrence.</p>
4.	<p>Conduct a survey of public toilets and map the same. Find out whether the toilets are in good condition, cleanliness, have dustbins, disabled friendly, sufficient lighting and availability of soap, issues of mosquito, graffiti on walls, no. of people employed for managing it and their problems, are they paid or free, timings, are they linked to proper waste water & waste management, whether they are appealing (green plant, lighting, visible board etc). Interview 5 users each and take down their comments. Also map where toilets are required. Suggest methods to improve the current public toilet system and report to the local self government.</p>