

Name of the course: Environmental Health, Water and Sanitation.

Course Coordinator: Dr. Pipas Kumar, Ms. Kanchita Toppo

Duration: 30 Hours

Mode: Blended (Classroom + Field visit+ Report)

Target Audience: Undergraduate students, volunteers, NGO workers, Nature enthusiasts

Course Objective:

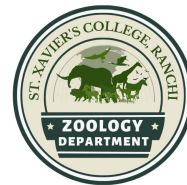
The course explains the impact of various aspects of environmental health, sanitation, water quality parameters. It equips students with the knowledge and skills to understand, manage, and improve water and sanitation systems. It typically focuses on the impact of water quality on human health, sanitation practices, and the development of sustainable water management solutions

Learning Objective/Outcome of the course: After completing the course, students will be able to:

- Assess environmental health risks and their impact on community health
- Design and implement water quality monitoring programs
- Develop sanitation strategies for diverse settings
- Apply regulatory frameworks and international standards
- Create community-based environmental health interventions
- Status of government programs related to health water and sanitation

Course Structure and Modules:

Module No.	Module Title	Hours	Mode
1	Introduction to health and water quality	4	Classroom
2	Introduction to Water and Waste-Water treatment	6	Classroom
3	Introduction to sanitation Systems and Solid Waste Management	8	Classroom
4	Regulatory Frameworks, Standards and Government programs	6	Classroom
5	Field activities, Project and Report Writing	6	Field + Evaluation



Course Curriculum:

The course is structured around five basic modules.

1. Module 1: Introduction to health and water quality

- a. Water quality parameters and their environmental and health significance
- b. Urban and rural water supply
- c. Introduction to drinking water treatment and flow sheet
- d. Point and non-point source pollution
- e. Chemical, biological, and physical contaminants

2. Module 2: Introduction to Water and Waste-Water treatment

- a. Evaluate water treatment processes
- b. Waste water treatment technologies (elementary)

3. Module 3: Introduction to sanitation Systems and Solid Waste Management

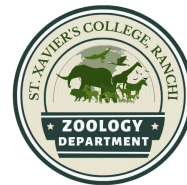
- a. Waste generation and characterization
- b. Collection, transport, and disposal systems
- c. Recycling and composting programs
- d. Hazardous waste management (Hospital waste)
- e. Understand the sanitation chain concept
- f. Circular economy principles
- c. Gender and social considerations in sanitation
- d. Implement waste reduction strategies
- e. Access health impacts of waste management (Jhiri case study)

4. Module 3: Regulatory Frameworks, Standards and Government programs

- a. Swatch Bharat mission
- b. Jal Jeevan Mission
- c. WHO and National guidelines for drinking water quality

5. Module 5: Field activities, Project and Report Writing

- a. Case study analysis: Environmental health disasters
- b. Group discussion: Local environmental health challenges
- c. Risk assessment exercise
- d. Contamination pathway analysis
- e. Field trip to water treatment facility
- f. Field trip to hospital waste treatment facility



Evaluation Methodology for Internal Assignment

S.no	Evaluation Methodology	Marks
1	Summative Assessment	10
2	Class quizzes and Tests	20
3	Field Report	10
4	Group presentation	10
5	End-Term Examination	50
Total		100

End-Term Examination of 50 marks: 2hr duration

There will be two groups of questions.

1. Group A is compulsory and will ten (10) questions/MCQ's of 1 mark each
2. Group B will contain descriptive type 2 questions of 05 marks each, out of which any three are to answer.
3. Group C will contain descriptive type 2 questions of 15 marks each, out of 6, any three are to answer.

Course Fee- Rs 2000/- (Two Thousand only)

Certification:

- 75% attendance is compulsory. Certificate awarded upon successful completion of the course

Course coordinators:

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