

Course Title: Water and Wastewater Treatment			
Course code: UES 303	No. of credits: 4	L-T-P: 40-20-0	Learning hours: 60
L: Lecture; T: Tutorial; P: Practical			
Pre-requisite course code and title (if any):			
Department: Department of Natural and Applied Sciences			
Course coordinator:		Course instructor:	
Contact details:			
Course type: Major		Course offered in: Semester 5	
Course Description This course provides a comprehensive exploration of the fundamental principles and technologies related to water and wastewater treatment, focusing on source characteristics, quality standards, diverse treatment processes (conventional and advanced), and the Indian policy context alongside real-world challenges and case studies in achieving sustainable water quality and public health.			
Course objectives <ul style="list-style-type: none">• Develop an understanding of fundamental concepts of water and wastewater treatment, including water sources, quality parameters, and treatment objectives• Imbibe knowledge on key water treatment processes, from basic aeration to advanced methods such as desalination and ozonation.• Introduce wastewater treatment stages, including primary, secondary, and tertiary treatments, and emerging technologies for wastewater reuse and zero discharge.• Develop an understanding on key policies, challenges, and case studies in water quality management, with a focus on India's regulatory framework and innovative treatment solutions.			