

**Department of Civil and Environmental Engineering,
The University of the West Indies
CVNG 3016—Design of Environmental Systems
Semester I, Year 2011/2012**

The course considers typical environmental engineering systems and provides students with the knowledge for performing process and structural designs of such systems.

Learning Outcomes

On successful completion of the course, students should be able, at threshold level, to:

1. Explain the factors that contribute to loadings on environmental systems;
2. Understand the principles for designing specific environmental systems;
3. Estimate the loadings on environmental systems for process and structural designs;
4. Perform process and structural designs for specific environmental systems.

Course Assessment

Evaluation is by coursework consisting of:

1. One assignment on process design, either water systems, wastewater systems or stormwater systems;
2. One assignment on the structural design of a unit used in water or wastewater treatment.

The projects are evenly weighted. A project brief will be given for each assignment, including the due date for the submission. Adequate consultation with the lecturers will be available.

Delivery of Lectures

Lectures are scheduled as follows:

Component**	No. of Lectures	Lecturer	Date
Design of stormwater systems I	5	VC	06-20 Sep
Process design for Wastewater Systems	5	VC	23 Sep – 07 Oct
Process design for Water Systems	5	VC	11-25 Oct
FEM Modelling/Tank Foundations	2	RC	28 Oct, 01 Nov
Design for Vibrations	2	RC	04, 08 Nov
Liquid Retaining Structures	4	WW	11-22 Nov
Design of stormwater systems II	2	VC	25, 29 Nov
Presentations	1	VC	02 Dec

RC—Richard Clarke; WW—William Wilson; VC—Vincent Cooper

** . A field trip will be conducted on a date to be announced, to the Caroni Water Treatment Plant and the Beetham Wastewater Treatment Plant.