

# CE 333: Environmental Pollution and its Control

LECTURE 1

# Instructor Biography

|                          |   |
|--------------------------|---|
| 2003                     | <b>BSc. Engg.</b> (Civil Engineering), BUET<br>(Major in Environmental Engineering)   |
| 2003-' 05                | Research Officer, ITN-BUET  |
| 2005                     | <b>MSc. Engg.</b> (Environmental Engineering), BUET   |
| 2011                     | <b>PhD.</b> (Environmental Engineering),<br>Department of Civil & Environmental Engineering, Northeastern<br>University, Massachusetts, USA |
| 2012-2013                | Assistant Professor, Department of Environmental Science and<br>Management, North South University  |
| Spring 2014<br>- present | Assistant Professor, Department of Civil Engineering, University of<br>Asia Pacific   |
| Research<br>Interests    | Water Quality Assessment and Control, Wastewater treatment and<br>Management, Environment and Ecology, Environmental<br>Contaminants        |

# Overview of the Course

- Water Pollution-Sources and Types of Pollutants
- Waste Assimilation Capacity of Streams
- Dissolved Oxygen Modeling
- Ecological Balance of Streams
- Industrial Pollution, Heavy Metal Contamination
- Detergent Pollution and Eutrophication
- Groundwater Pollution; Marine Pollution; Pollution Control Measures, Water Quality Monitoring and Management
- Air Pollution - Sources and Types of Pollutants; Effects of Various Pollutants on Human Health, Materials and Plants; Air Pollution Meteorology
- Global Warming and Green House Effects; Air Pollution Monitoring and Control Measures

# Course References

- **Environmental Sanitation, Wastewater Treatment and Disposal**, By Tanvir Saeed, Abdullah Al Mueyed and Tanvir Ahmed, First Edition, Publisher: University Grants Commission, Bangladesh
- **Environmental Engineering**-Howard S. Peavy, Donald R. Rowe and George Tchobanoglous

# Course Specifics

- Quiz
- Class work
- Home work
- Project
- Exams

# What is Environmental Engineering?

- BY THE ENGINEER - MAY, 22ND 2014

Environmental engineering is the sister field of civil engineering and involves integrating engineering principles and science to improve natural environment and to protect it while providing potable water, clean air and sustainable life for humans and other organisms. Another crucial task tackled by environmental engineering is that of cleaning up polluted areas/sites. It also deals with tackling issues that are being faced by public.

<http://wonderfulengineering.com/what-is-environmental-engineering/>

# Environmental Engineer



<http://wonderfuleengineering.com/what-is-environmental-engineering/>

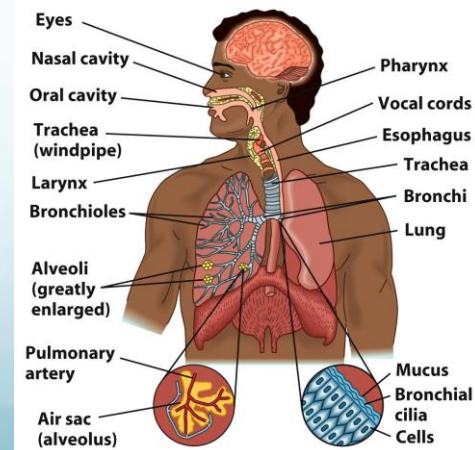
# Environmental Engineering....the link

Environmental Reservoirs

Water, Air and Soil

Pollution control  
Waste treatment and disposal  
Hazard Management

Impact on Humans





# There is Always a Need for an Environmental Engineer

- We always need clean water to drink
- We always have wastes to treat and dispose
- We always need clean air to breathe

We always ...want cheaper and better ways to improve all of the above....

.....Ensures Job Security !!!!!!!!

# What is Environmental Pollution ?

- Contaminants
- Natural Environment
- Harmful substances
- Chemical substances
- Air
- Water
- Soil
- Noise, heat, energy

**Thermal**



**Air**



**Water**



**POLLUTION**



**Light**



**Visual**

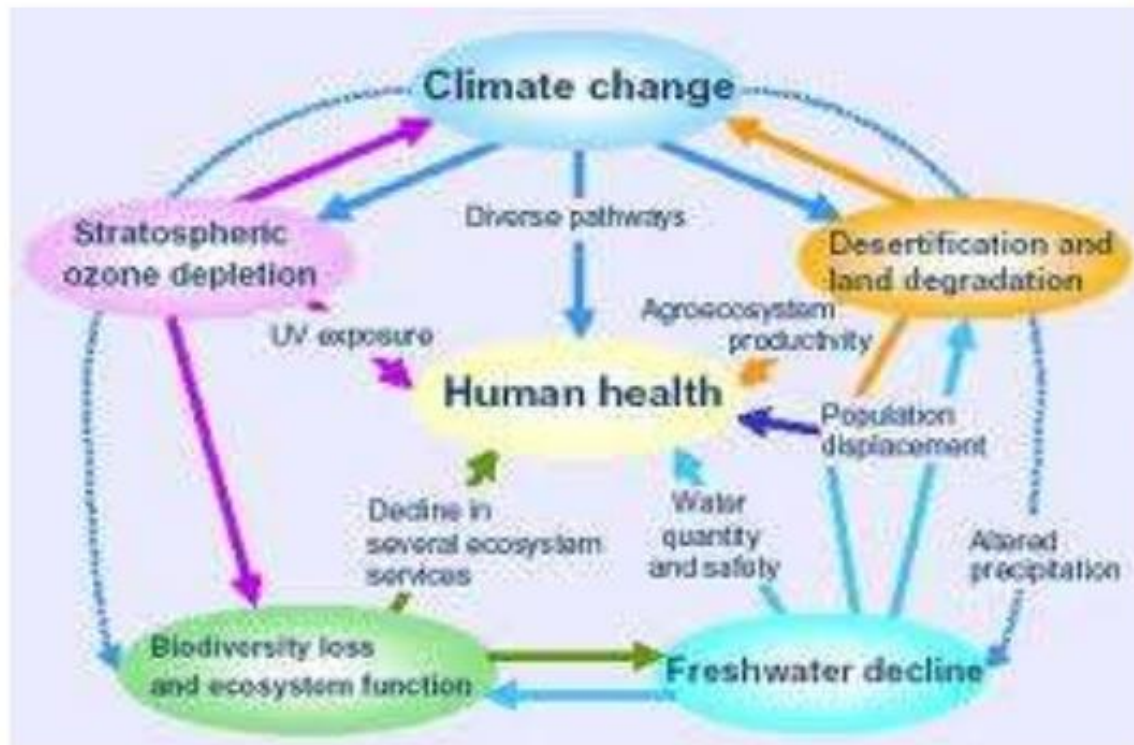


**Noise**



**Land**





- Video on Environmental Pollution

<https://www.youtube.com/watch?v=sW7fxGG9cEM>