

## **BIOL-UA 327/ENVST-UA 327 New York Underground**

### **Instructor:**

Katie Schneider-Paolantonio

### **Course Description:**

Every day, millions of people walk the streets of New York City. But what is happening below those city streets? This is an environmental science course that will investigate the life and resources underneath NYC. The course is divided into three principle modules: energy, transportation, and water (potable and wastewater). For each module, we will discuss the mechanics, history and significance of the infrastructure from the perspective of environmental scientists. At the end of the course we relate the biotic components of New York's fascinating dendritic underground environment. This seminar course will integrate classroom learning with practical experience and hands-on application through data collection and field trips. You will be required to pay for your own transport to some field trips throughout the semester.

### **Pre-requisite:**

Principles of Biology II (BIOL-UA 12) or  
Environmental System Science (ENVST-UA 100)

### **Textbook and Required Materials:**

Goldemberg, Jose. Energy: What Everyone Needs to Know. New York: Oxford University Press. 2012.

Koeppel, G.T. Water for Gotham: A History. Princeton: Princeton University Press. 2001.

Abdallah, T. Sustainable Mass Transit. Available through the library. Additional readings will be posted on NYU Classes.

### **Grading:**

Module papers and idea sketch	60%
Paper Responses and Data Collection Plans	30%
Discussion questions and participation	10%

### **Topics:**

Introduction to the course Introduction to Energy Module

Trip to NYU Cogen Plant 9:30

Book/Paper Discussion

Field data collection

Guest Lecture: National Grid

Renewable Gas, Environmental Management

Field Trip to Newtown Creek Wastewater Treatment Plant

Lecture: Introduction to Water Module and Book Discussion

In class lecture (Croton Postponed)

Field Trip to Croton

Introduction to transportation module

Guest Lecturer: NYC

Sustainability/Climate Initiatives at NYCT

Field Data Collection Part I  
Field Trip to Transit Museum  
Field Data collection Part II  
Construction Site Visit  
Discuss Biology Sketches  
Student Presentations: Ideas Sketches