

NEW YORK UNDERGROUND (ENVST/BIOL-UA-327)
PROFESSOR KATIE SCHNEIDER PAOLANTONIO
FRI 9:30 – 12:00 (RUBIN HALL, 35 5TH AVE, RM 102 AND VARIOUS FIELD SITES)
***NOTE: SEVERAL TRIPS WILL REQUIRE THE ENTIRE DAY!**
SYLLABUS SPRING 2020

MY CONTACT INFORMATION:

Email: ks146@nyu.edu

Phone: 212-992-9669 (x29669 from a campus phone)

Office hours: Tuesday 11-12 (please let me know in advance if you plan to attend) & by appt

REQUIRED TEXTS:

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 for free download through the library.

Additional readings will be posted on NYU Classes.

PREREQUISITES: ENVST UA 100 or Principles of Biology II

COURSE DESCRIPTION: Every day, millions of people walk the streets of New York City. But what is happening below those city streets? This course will investigate the life and resources underneath NYC and 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.

GRADING:

There are no exams in this class. Attendance to the seminars, field trips, and lectures is mandatory. This course requires continuous student participation and engagement. Your grade will be based on the following:

Module Papers (3) and Idea Sketch (1)	300 pts
Paper Responses and Data Collection Plans (10)	150 pts
Discussion Questions (4)	40 pts
Participation	10 pts
<u>Total</u>	500 pts

Unexcused, late papers will not be accepted. Points will be deducted for excused, late work at a rate of 5% per day. Course letter grades will be determined as follows. If you earn the following points, your grade will be at least as indicated; instructor reserves the right to "curve" the lowest grade upwards as appropriate:

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Above 470 = A, 450 – 470 = A-, 435 - 450=B+, 420 - 435 = B, 400 - 420 = B-, 385 - 400 = C+, 370 - 385 = C, 350 – 370 = C-, 335 – 350 = D+, 295 – 335 = D, Below 295 = F, INC = Incomplete, W = Withdrawal. This scale is subject to change based on overall course performance. If you receive an INC, you must resolve the INC before the end of the next semester or it will become an F. It is your responsibility to request an INC in writing before the end of the course.

ATTENDANCE: Attendance in this course is mandatory. If you miss a class, you must meet with me ASAP the following week (either in person or via chat) to discuss what you missed and go over what is needed for the next class. As each class relates to the next, no extension can be granted for any material due the next class and it is in your best interest to get the makeup material quickly. If you miss a class in the field, you will be required to complete an out of class activity, which will be designed to mirror the missed field experience (in content and duration). Your participation grade will be impacted by any lateness and/or unexcused absences.

ASSIGNMENTS, READINGS AND PARTICIPATION:

Main Module Assignments

After the energy, transportation and water modules, you will be required to submit a written assignment (3 – 4 pages). For the biology module, you will submit and present a short idea sketch (to be described in class). These assignments will allow you to synthesize the information presented within that module while integrating each component into a larger framework. Each paper will target a different audience, enhancing your skills in scientific communication while encouraging critical and independent thinking and analysis. You will also incorporate peer-reviewed, scientific literature in each assignment. Late assignments will be subject to a late penalty of 5% per 24 hours.

Paper Responses and Data Plans

There will be ten paper responses due throughout the semester. These responses are based on peer-reviewed papers, reports, and additional information. You will be responsible to read the material prior to class, hand in your printed answers to the questions, and participate in the discussion. You will also have to draft three data collection plans for each of the main modules. You will receive more information about these plans during class. All writing assignments will be discussed at the beginning of the lecture on the day that they are due. As such, late writing assignments will NOT be accepted. If you must miss class due to a personal emergency or medical issue, you can email your assignment prior to the start of class in order to get credit.

Writing Tutors

We are fortunate to collaborate with the Undergraduate Writing Tutors Program in this course. For two of the writing assignments (the energy module group report and the independent biology sketch), well-trained peer writing tutors will provide feedback on your drafts. Their role is to encourage and challenge you to strengthen your writing and clarify your ideas (not to grade your work). You are required to participate in the program for each of the two designated paper assignments, which means submitting a complete draft of your paper on time for written feedback and attending two scheduled, 30-minute long, conferences outside of our scheduled class time. Late submission of drafts to tutors and missed conferences are reported to me and will impact your final grade.

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Discussion Questions

During weeks where we will have field trips and guest lectures, you will read background information, primarily in the form of books or reports. This will be roughly 60 – 100 pages of material per week. Prior to these classes, you will submit two discussion questions that you may have for the speaker/guide based on your readings or independent research.

Participation

Participation includes your attendance and participation in our weekly discussions. Attendance in this course is mandatory. You must come to each class prepared and plan to stay the entire time. During weeks that we will be meeting at an off-campus site, you are responsible for your own transportation (public transportation is available). You must arrive to the site on time, prepared (notebook/pencils, etc.) and dressed accordingly (more on this below). Field trips are mandatory and can not be made up. Missing classroom time is strongly discouraged as most classes can not be made-up independently. If you must miss classroom time, you are responsible to email me any work prior to the missed class and will have to meet with me that week to determine what you missed and how to catch up. See attendance policy above.

FIELD TRIPS:

There are several field trips scheduled for this course. For most, you are required to provide your own transportation (subway or train). We will discuss each field trip in more detail, but some will require specialized attire (CLOSED TOED SHOES, boots, etc.). You will also be required to sign waivers at several of the sites. Field trips are mandatory (and going to be fun!).

POLICIES:

1. All students must adhere to the academic integrity policies of NYU (more below).
2. Attendance to this course is mandatory. Come to lecture prepared and plan to stay the entire time. This means you must read the assigned readings prior to class. Expect to spend a substantial amount of time with assigned readings and assignments if you hope to do well and to get a lot out of this course.
3. Do not disrupt the course. Do not use your cell phone. Please keep eating during lecture to a minimum and clean up all trash when you leave. Respect me and your classmates. Disruptive conduct during lecture or while on field trips can result in disciplinary action as per NYU academic policy.

DISABILITY DISCLOSURE STATEMENT:

Academic accommodations are available to any student with a chronic, psychological, visual, mobility, learning disability, or who is deaf or hard of hearing. Students should please register with the Moses Center for Students with Disabilities at 212-998-4980.

NYU's Henry and Lucy Moses Center for Students with Disabilities
726 Broadway, 2nd Floor
New York, NY 10003-6675
Telephone: 212-998- 4980
Voice/TTY Fax: 212-995- 4114
Web site: <http://www.nyu.edu/csd>.

ACADEMIC INTEGRITY STATEMENT:

CAS Academic Policies (From <http://cas.nyu.edu/page/academicintegrity>):

I. A COMMUNITY OF THE MIND

The College is a "community of the mind." Its students, faculty, and staff all share the goal of pursuing truth through free and open inquiry, and we support one another's endeavors in this regard. As in any community, membership comes with certain rights and responsibilities. Foremost among these is academic integrity. Cheating on an exam, falsifying data, or having someone else write a paper undermines others who are "doing it on their own"; it makes it difficult or impossible to assess fairly a student's interest, aptitude, and achievement; and it diminishes the cheater, depriving him/her of an education. Most importantly, academic dishonesty is a violation of the very principles upon which the academy is founded. Thus, when students enter the College, one of the first things that they are asked to do is to sign a community compact, recognizing these principles of academic integrity. For this reason also, violations of these principles are treated with the utmost seriousness.

II. SOME GUIDELINES

Academic honesty means that the work you submit - in whatever form - is original. Students are expected - often required - to build their work on that of other people, just as professional researchers and writers do. Giving credit to someone whose work has helped you is expected; in fact, not to give such credit is a crime. Plagiarism is the severest form of academic fraud. Plagiarism is theft. Obviously, bringing answers into an examination or copying all or part of a paper straight from a book, the Internet, or a fellow student is a violation of this principle. But there are other forms of cheating or plagiarizing which are just as serious, for example:

- presenting an oral report drawn without attribution from other sources (oral or written);
- writing a paragraph which, despite being in different words, expresses someone else's idea without a reference to the source of the idea;
- submitting essentially the same paper in two different courses (unless both instructors have given their permission in advance);
- giving or receiving help on a take-home examination or quiz unless expressly permitted by the instructor (as in collaborative projects)
- presenting as your own a phrase, sentence, or passage from another writer's work without using quotation marks;
- presenting as your own facts, ideas, or written text gathered or downloaded from the Internet;
- submitting another student's work with your name on it;
- purchasing a paper or "research" from a term paper mill;
- "collaborating" between two or more students who then submit the same paper under their individual names.

Term paper mills (web sites and businesses set up to sell papers to students) often claim they are merely offering "information" or "research" to students and that this service is acceptable and allowed throughout the university. THIS IS ABSOLUTELY UNTRUE. If you buy and submit "research," drafts, summaries, abstracts, or final versions of a paper, you are committing plagiarism and are subject to stringent disciplinary action. Since plagiarism is a matter of fact and not intention, it is crucial that you acknowledge every source accurately and completely. If you quote anything

from a source, use quotation marks and take down the page number of the quotation to use in your footnote.

When in doubt about whether your acknowledgment is proper and adequate, consult your instructor. Show the instructor your sources and a draft of the paper in which you are using them. The obligation to demonstrate that work is your own rests with you, the student. You are responsible for providing sources, copies of your work, or verification of the date work was completed. While all this looks like a lot to remember, all you need to do is to give credit where it is due, take credit only for your original ideas, and ask your instructor or adviser when in doubt.

Consult the APA, MLA, or Chicago style guides for accepted forms of documentation. You can access these resources, as well as additional information on proper citations on the [NYU Libraries Citation Style Guide](#).

III. PROCEDURES AND SANCTIONS

The penalty for academic dishonesty is severe. The following are the procedures as approved by the Faculty of Arts and Science. See also the *College Bulletin*.

1. If a student cheats on an examination or in laboratory work or engages in plagiarism, appropriate disciplinary action should be taken. The Department can take the following actions:
 - a) The faculty member, with the approval of the Director of Undergraduate Studies (Director), may reduce the student's grade or give the student an F in the course.
 - b) If after lowering the grade or assigning an F the department believes a more severe penalty (i.e., probation, suspension, expulsion) is warranted, it can refer the case to the Dean or his/her representative (Associate Dean for Students) for further action.
2. In all cases of either (a) or (b), the Director shall inform the Department Chair of any action in writing and send copies of this letter to the Dean and to the student. The letter shall include the nature of the offense, the penalty, and the right of the student to appeal such penalty. A copy of the letter shall be kept in a confidential chairman's file and not in the student's departmental file. The Dean's office copy shall also be kept in a confidential file. (The Professor and/or the Director is encouraged to meet with the student and discuss the nature of the offense and the action taken.)
3. For cases involving a first offense at New York University, the Dean shall send the student by registered mail a notice that a second offense will result in a one-semester suspension, or a more severe penalty. (The student is also called in to discuss the offense, and review the consequences of the disciplinary action.)
4. For cases involving a second offense, the Dean shall proceed as follows:
 - a) Upon receiving a second Director's letter concerning a given student, the Dean shall convene a three-member *ad hoc* committee, with no member being from the department involved, to examine the evidence. This *ad hoc* committee shall consider if there are reasonable grounds to believe that cheating/plagiarism has occurred and if so, shall affirm the suspension penalty. It shall report its conclusion to the Dean within three business days.

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- b) If the committee affirms the suspension, the Dean shall send the student by registered mail the suspension letter within two business days of receiving the report. The letter shall advise the student of his or her right to appeal. The student shall have two business days from the letter's delivery to request an appeal of the suspension as provided in Section 5 (below). The suspension shall ordinarily be stayed during the pendency of appeal.
 - c) If the committee does not affirm the suspension, the report shall be kept on file for a one-year period.
5. The student in all cases has the right to appeal to the Dean. In the event of an appeal, the Dean shall elicit a written complaint from the faculty member and proceed as described above.

<u>Date</u>	<u>Lecture Topic</u>	<u>Site</u>	<u>Readings (recommended)</u>	<u>Assignments DUE</u>
Week 1 Jan 31	Introduction to the course Introduction to Energy Module	NYU Rubin	Goldemberg 2011 Parts 1 & 2 <i>Christiansen 2013 Chpts 15 & 16</i>	
Week 2 Feb 7	Introduction to Tutors Trip to NYU Cogen Plant 9:15 Followed by Book/Paper Discussion	Cogen Rubin	Goldemberg 2011 Parts 3 – 5 Obama 2017, www.whitehouse.gov	Paper response 1 Discussion questions
Week 3 Feb 12 WEDS				Data Collection Plan due on google docs by noon
Week 3 Feb 14	Field data collection (assigned times)	Field	IR Background Papers	Paper response 2 Sign up to meet with tutors
Week 4 Feb 19 WEDS				Energy Module Draft (Group Component) Due to Tutors
Week 4 Feb 21	Guest Lecture: National Grid <i>Renewable Gas, Environmental Management</i>	NYU Rubin	Natural Gas Report National Grid Report	Paper response 3 Discussion questions
Week 5 Feb 24 - 26 M/T/W	30 Minute group meeting with tutor Scheduled to meet sometime M, T or W			
Week 5 Feb 28	Introduction to transportation module	NYU Rubin	<i>Christiansen 2013 Chpts 5 & 17</i> FTA 2010, Abdallah Chapters 1 - 4	Entire Energy Module Due Paper response 4
Week 6 March 6	Guest Lecture: NYCT downtown at 9:30 <i>Sustainability/ Climate Initiatives at NYCT</i>	NYCT At 9:30	MTA Report 2011, Abdallah Chapters 5, 7, case study Kaufman et al. 2012	Paper response 5 Discussion Questions
Week 7 March 11 WEDS				Data Collection Plan due on google docs by noon
Week 7 March 13	Field data collection	Field	Abdallah Chapter 8, King 2011	Paper response 6
Week 8 March 20	SPRING BREAK			Brainstorm Biology Sketch, Think about Transportation While on Beach Somewhere

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*Week 9 March 27	Field Trip to Transit Museum 12:30 – 2			Transportation Module due
Week 10 April 03	Lecture: Introduction to Water Module and Book Discussion	NYU Rubin	Koeppel Pages 102 -184	Paper Response 7 Thoughts (in head, not paper) on biology ideas
Week 11 April 10	Construction Site Visit Book discussion 1:1 chat about Biology ideas		Koeppel Pages 1-102	Paper Response 8 Biosketch outlines shared with me, sign up for tutor meeting
*Week 12 April 17	Field Trip to Newtown Creek Wastewater Treatment Plant Brooklyn @ 9:30 am	Field	Wastewater Papers	Paper Response 9 Discussion Questions Biosketch drafts shared with Writing tutors
Week 13 April 20- 22	30 Minute independent meeting with tutor Scheduled to meet sometime this week			
*Week 13 April 24	ALL DAY Croton Trip 7 AM – 6 PM	Field	Koeppel Pages 184 – 292 Croton Management Plan	Paper Response 10 Data Collection Plan
*Week 14 May 1	Croton Rain Date Discuss Sketch Figure	Field	Papers for water module	Water Module Due Sketch Figure Due
Week 15 May 8	<i>TBD</i>	NYU	Grant et al. 2007, Culver 1970 Schick & Lindley 2007 <i>Christiansen 2013 Chpts 6, 9, & 11</i>	Biology Idea Sketch

Tentative Schedule – dates are subject to change!