

NYU – Environmental Studies Department Senior Capstone - Fall 2016

Title: **Visionmaker.nyc**

Instructor: Dr. Eric W. Sanderson, Senior Conservation Ecologist, Wildlife Conservation Society/Bronx Zoo

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Office Hours: by appointment – please email

Course Meetings: Mondays (starting September 12, 2016) from 5-7:30pm at 194 Mercer Street in Room 303.

Course Abstract:

The Mannahatta Project changed how New Yorkers see their city, literally and figuratively, juxtaposing the urban, culturally diverse landscape of Manhattan to the forested, ecologically diverse island of Mannahatta, as it existed just prior to European discovery 400 years ago. In this capstone seminar, advanced Environmental Studies students will work with Dr. Eric Sanderson of the Wildlife Conservation Society, to examine how we recover the ecology of the city and make it sustainable over the long term, building on the Mannahatta Project, its sequel, the Welikia Project (welikia.org), and the development of a new tool for vision-making called Visionmaker.

Visionmaker.nyc is an ecological democracy tool to allow all New Yorkers to develop, evaluate, and share ideas for sustainability in their neighborhoods. Users create visions that are composed of ecosystems (including built ecosystem types, like buildings and streets, as well as natural ecosystems, like wetlands, forests, etc.), lifestyles, and climate scenarios. The interface calculates estimates of carbon flows, water flows, biodiversity and habitat, population density, and costs to create the vision. Calculations are compared to two baselines: the city as it is today and the pre-European landscape (from the Welikia Project)

Specifically this capstone will focus creating visions that describe existing projects, or projects planned for or suggested, to be built in the city. Building on the work of past NYU capstones, students will work with the instructor to (1) locate proposals to change the urban landscape in some way; (2) create visions of those proposals in Visionmaker; (3) analyze the intended and unintended effects of each proposal by examining Visionmaker metrics; (4) develop a group report looking across diverse projects to understand how the city is proposed to change; and (5) create their own synthetic concepts for the future of the city. From these activities, students should expect to gain an introduction to issues in urban planning and conservation; learn how to construct, catalog, analyze and synthesize quantitative information across multiple domains; and contribute to efforts to improve the environment of our home in New York.

For more information, check out Visionmaker.nyc, welikia.org, [Mannahatta: A Natural History of New York City](#) and [Terra Nova: The New World After Oil, Cars, and Suburbs](#).

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](tel: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](tel:212-998-4980) Voice/TTY Fax: [212-995- 4114](tel:212-995-4114) Web site: <http://www.nyu.edu/csd>

Course Materials

Computer: Students will need access to a computer, whether a personal computer or one of the university provided ones, with an update-to-date Internet browser, word processing and presentation software. You will need to be able to access the Internet, print documents, and prepare presentations, presenting them during class time. (A NYU id and a Google Slides presentation via Google Drive work well.) Computer laboratories at NYU are available at the Washington Place Academic Technology Center, the Third Avenue NYUHotSpot and the Kimmel Center NYUHotSpot

Grading and Evaluation: Although working in groups, students will be graded individually according to NYU policies. Each assignment is worth a point value (Table 1). Grades will be assigned based on completeness, timeliness, and demonstrated mastery of the material; innovation, flair and enthusiasm will be rewarded. During presentations, all students must speak for their team in approximately equal proportions. Active inquiry and participation with your team and in class discussions is required for credit. Mid-term evaluations will be made for all students. No exams or quizzes will be given per se; rather your work will be evaluated as it is given, typically through in-class presentations and the final capstone presentation at the end of the semester. Note that because products build on each other over the course of the term, failure to complete one activity can lead to subsequent failures to complete activities in a cascading fashion with dire consequences in terms of final scoring.

- No extra credit— there is nothing you can do to “improve your grade” beyond doing the assignments on time, completely and with attention to quality.
- Although this is not a writing course per se, we will be writing and presenting on the works of other persons. Please be aware that plagiarism results in automatic failure of the class. Plagiarism includes: copying sentences or fragments from any source without quotes or references; not citing every source used in your papers; citing internet information without proper citation; presenting someone else’s work as your own; or “inadvertently” copying verbatim from any source. For example:
 - Original: There is considerable debate in the scientific community as to the sources of climate change.
 - Plagiarism: There exists substantial disagreement in the scientific field about the causes of climate change.
 - Not Plagiarism: Scientists are engaged in ongoing disagreement and discussion on the sources of climate change.
- Lateness is unacceptable. Repeated lateness will result in a lowering of your participation grade.
- Be considerate. No chatting, texting, or web-surfing during class. Please come to class with an open mind, ready to learn and participate.
- All work produced as part of this project accords with the Visionmaker.nyc terms of use, which includes the student’s ability to retain copies of their own work for their own use.

Student contributions will be acknowledged collectively or individually in any and all publications that result from their work.

Table 1. Class assignments in Visionmaker.nyc capstone

Date	Topic of this session	Assignment for next session	Point value
9/12	Introductions; A tutorial to using Visionmaker	Read Sanderson et al. (2002) and Venter et al. (2016) ***** Create Visionmaker.nyc login; Watch the tutorials and create a vision for the NYU neighborhood (Washington Square Park and the adjacent blocks). Each individual will prepare & present describing how your vision is different from the neighborhood today, including ecosystem, lifestyle, climate and metrics, using graphs of the data, on 9/19 (~10 min.)	50 (ind.)
9/19	Motivations for Visionmaker: the changing human footprint on Earth	Read Grimm et al. (1998) ***** Study the explanations about the Visionmaker models under Resources > For Researchers. We will select 5 two person groups. Each group will prepare & present an explanation with a flow chart explaining how one of the five methods (carbon, water, biodiversity, economics, population) works on 9/26. (~20 min.)	50 (group)
9/26	How does Visionmaker work? Historical and contemporary ecology	Skim OneNYC report and read draft Nature Goals report ***** Write 1000 word essay on what you think goals for New York City's environment should be for 2050 and illustrate with a vision created in Visionmaker. Justify your reasoning including accounting for other needs for the city, including economy, justice, etc. Each individual will prepare and present your goal statement and idealized vision on 10/3. (~10 min.; email your essay to Eric before class begins)	50 (ind.)
10/3	Setting goals for the NYC environment	No reading ***** We will select 5 two person groups	100 (group)

		(same as before or different), one per borough. Each group will research find projects, planned or underway, in their borough (see http://gis.nyc.gov/doitt/nycitymap) that can be represented in Visionmaker. Provide a general summary of projects and create visions representing three using Visionmaker. Present your findings on 10/17. (~20 min.)	
10/10	No class – Fall recess	Continue assignment	
10/17	How is New York City changing (Part I)?	No reading ***** We will select 5 two person groups (same as before or different), one per borough. Each group will research zoning changes in their borough (see http://www1.nyc.gov/site/planning/plans/proposals-studies.page) that can be represented in Visionmaker. Provide a general summary of zoning and create visions representing one of the zoning study recommendations using Visionmaker. Discuss how the environmental performance of the neighborhoods will change, preparing graphs from the Visionmaker metrics. Present your findings on 10/31. (~20 min.)	100 (group)
10/24	Field trip to Lower Manhattan	Continue assignment	
10/31	How is New York City changing (Part II)? Summary of results from Visionmaker studies.	Read Part I of <u>Terra Nova</u> ***** Revise your essay on nature goals from earlier in the semester. Using Visionmaker as a guide, argue for quantitative goals for the carbon, water, biodiversity, and population of New York City in 2050. Bring your goals to class to compare to your classmates on 11/7. (Email your essay to Eric before class begins on 11/7)	150 (ind.)
11/7	Consensus goals developed by capstone.	Read Parts II and III of <u>Terra Nova</u> ***** Based on class discussion, each individual will research and draft a policy recommendations (~1000 words) to move city toward an consensus environmental goals. Prepare and present your draft	100 (ind.)

		recommendations in class on 11/14 (Email your recommendations to Eric and the class before class on 11/14. Note: midterm evaluation deadline)	
11/14	Discussion and drafting of final presentation	Prepare 5 arguments each for pro and con to the statement: Cities are good for nature. Use these points for an in-class debate on 11/28. Meanwhile begin drafting final presentation based on discussion on 11/14.	No points
11/21	No class	Continue assignment	
11/28	Are cities good for conservation? An in-class debate.	Based on debate and notes you're your classmates, revise final presentation	50 (ind.)
12/5	Practice final presentation	Practice final presentation	50 (ind.)
12/12	No class	Give final presentation	150 (group) ; 150 (ind.)

In addition up to 250 points will be awarded for semester long in class participation.