



## Course Syllabus/Fall 2021

### Ecological History of North America 21:120:381, 11:573:302

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<b>OFFICE/OFFICE HOURS:</b>	RUN, Boyden 408/ TBA 80 Nelson Ave, 108 (NB)	<b>COURSE WEBSITE:</b>	CANVAS
<b>COURSE LOCATION(S):</b>	Engelhardt 215	<b>MEETING TIME(S)</b>	TH, 8:30-11:20AM

#### COURSE DESCRIPTION:

Almost all of North America today is shaped by human activity. Despite this, the continent still has a wealth of natural resources and harbors a large biodiversity. This class will explore why North America has special ecologies. By exploring the biological history of the continent from pre-human times to today (and even beyond), this class is investigating how the biota (flora and fauna) of the continent developed over the millennia and arrived at its current status. The class ranges from topics from such as paleontology, archaeology, historical and bio-geography to urban ecology and conservation biology. The topic will be approached using lectures, field trips, student facilitated discussion and paper presentation.

#### REQUIRED TEXT:

*Flannery, T. (2001): The eternal frontier. An ecological history of North America and its people. Atlantic Monthly Press, New York (or any other edition)*

In addition to the text, research or review papers (including selected chapters from “edited-volume” books) will be assigned for each topic.

#### LEARNING GOALS:

Ecological history attempts to explain current ecological conditions by retracing the changes that occurred through time. By searching for traces of this change, the historical ecologist can gain a better understanding how

current ecosystem function and what can be done to improve them (if needed). Therefore, the main objectives of the new course are (a) to give students a better understanding on how current ecosystems were shaped, (b) why they are as they are, and (c) how environmental problems can be addressed in more holistic way. During class we will be increasingly focuses on urban systems. In this process our urban students will understand and appreciate "urban ecologies" better and will learn how to experience and to see their environment more actively. The "story" will start where we are now, in an urban landscape. In lectures, field trips and field exercises we will foster an enhanced understanding of our habitat better and we will review the methods used in urban ecology research. Only after that, can we backtrack in time and review how the urban landscape formed during deep history - before human appeared - and throughout human history. All this will be facilitated by engaging students in active student group projects related to urban ecology and on field trips that cover urban-extra urban gradients so typical for cosmopolitan New Jersey.

### Learning Objectives

- a. As much as human history teaches us about what we are (or could be), this account of the ecological history of our continent will foster an understanding of why we arrived at the current ecological condition.
- b. Students will understand that natural processes are active in human dominated landscapes as well and how urban environments are part of the natural history as well.
- c. Students will gain an awareness of how to read the current landscape and look for signs of the past that explain the present (and maybe the future).
- d. Students will appreciate how natural and human histories are connected.
- e. Students will understand how to address problematic human impacts and find ways of allowing natural processes to continue less impeded. As such they will see that science must play a central role in addressing problems of societal concern.

### Assessment and Grade Calculation:

Field Trip protocols (3 trips)	10%
Reading Questions	10%
Midterm and Final exam	40% (20% each)
Project (Presentations and Write up)	40%

### Grading system

90-100 %	A
85-89	B+
77-84	B
75-76 %	C+
67-74	C
60-66	D

etc. (fractions are rounded e.g., 89.5=90, 89.4=89)

### Assignments:

1. "My home range" presentation
2. Questions for weekly readings
3. Field trip protocols (including Bioblitz report)
4. For 21:120:381 (Rutgers Newark Q1) Paper summarizing a specific topic related to class (e.g., history and potential future of specific ecosystems). This monograph is to be delivered in written form by undergraduate students, with 2 stages of review: 1st and 2nd draft and final paper. The paper will be

presented (10 minutes) in oral form by all students (with PowerPoint slides) to the class, 40 % of grade (undergraduates), 20% for graded (graduate students).

+ Graduate students taking the class per permission and for credits, will prepare an additional 30 minute lecture about a topic of their particular research interest in relation to the class topic. The lecture will be discussed with the instructor before inception and delivery (20% of grade).

### **Departmental Grading Guidelines (for Landscape Architecture program New Brunswick Students 11:573:302):**

While the assignment of grades is ultimately the purview of the instructor, the department uses the following guideline for understanding appropriate grading in its courses:

A- Outstanding -This not only means fulfilling the requirements, but impressing and going beyond the initial expectations of the project. The student has demonstrated a superior grasp of the subject matter coupled with a high degree of creative or logical expression, and strong ability to present these ideas in an organized and analytical manner,

B- Very Good - The student has demonstrated a solid grasp of the material with an ability to organize and examine the material in an organized, critical, and constructive manner. The projects and in-class performance reveal a solid understanding of the issues and related theories or literature.

C- Acceptable -The student has shown a moderate ability to grasp concepts and theories for the class, producing work that, while basically adequate, is not in any way exceptional. This performance in class display a basic familiarity with the relevant literature and techniques.

D- Unacceptable - The work demonstrates a minimal understanding of the fundamental nature of the material or the assignment with a performance that does not adequately examine the course material critically or constructively. Students cannot graduate from the Landscape Architecture program with 2 D's in required SSO classes,

F- Failure - The student has demonstrated a lack of understanding or familiarity with course concepts and materials. Their performance has been inadequate. Failure is often the result of limited effort and poor attendance which may indicate that the student is not in the proper field of study.

### **Academic Integrity:**

The course has a zero tolerance policy for academic dishonesty, including plagiarism and cheating. Instances of dishonesty will be reported to Academic Integrity Officers to determine if further action is required. If you have any questions about what constitutes plagiarism or cheating, please ask your instructors or refer to the academic integrity websites for Rutgers and NJIT:

- ✓ <http://academicintegrity.rutgers.edu/academic-integrity-at-rutgers>
- ✓ <http://studentconduct.rutgers.edu/>
- ✓ <http://www.njit.edu/academics/integrity.php>

### **Attendance:**

Class attendance is Mandatory. A minimum level of participation is defined as being in attendance for the entire duration of a class session. It is the student's responsibility to be in attendance at all required classes and trips. All personal plans should be made in accordance with the class schedule.

Attendance and active participation in class is a fundamental part of learning. The interaction, discussion, and activities that take place during class will be critical to both the development of your design for this class, but also your development as a designer. Unexcused absences are not permitted. If you miss class for illness or an emergency, please provide a written explanation of this absence to the instructor, preferably before the class missed, but no more than a week after the absence. An absence is not an excuse for not being prepared for the next class.

[For New Brunswick students] The course requirements above are in addition to, and do not obviate any departmental requirements as are laid out in the departments Student Handbook, ([http://landarch.rutgers.edu/current\\_students/policies\\_st.html](http://landarch.rutgers.edu/current_students/policies_st.html)).

**Work Becomes Department Property (for Landscape Architecture program):**

Submitted drawings, models, photographs, or written papers for any project assigned in the Department's courses are considered the property of the Department and may be retained in its archives for exhibition and accreditation purposes. All projects will be graded and returned to the student at a location designated by the instructor. Should your drawings be retained by the Department, you will be given the opportunity to obtain a print or photographic record of your work. Department files are OFF LIMITS to students.

**SCHEDULE AND COURSE OUTLINE:** Dates listed by week; lectures will meet once every week. Weekly dates of due dates for written projects are listed, but please note there will be additional smaller assignments throughout the semester. Due dates for these assignments will be regularly updated on the course [Blackboard](#) site.

## 120: 381 Ecological History of North America

WEEK	MEETING TOPIC	NOTES/ACTIVITY ASSIGNMENTS/EXAMS
Week 1 – Sep2	<b>Intro:</b> The rule of human in nature, the role of nature for humans: Course Overview, “sense of place”	Meet and greet: Where are you from? Urban fieldtrip
Week 2 – Sep9	<b>Urban Ecology:</b> where we are now: human dominated landscape and biota	<b>Student presentation: “My home range”</b>
Week 3 - Sep16	<b>Urban Ecology:</b> fieldtrip	Fieldtrip to Branch Brook Park (man-made nature and suburban gardens)
Week 4- Sep23	<b>Methods:</b> Ecological Forensics. Campus Bioblitz	Biodiversity sampling on campus and in the city
Week 5- Sep30	<b>Urban Ecology:</b> fieldtrip	Fieldtrip to Liberty State Park (urban nature and urban "non-nature")
Week 6- Oct7	<b>Urban Ecology:</b> Stewardship for a natural future: Restoration and conservation in human landscapes	<b>Written summaries of 2 field trips due</b>
Week 7- Oct14	<b>Pre-History:</b> fast backwards North America takes shape: Cretaceous to Ice Age	
Week 8- Oct21	<b>History:</b> Humans move in (end of the ice age)	<b>Paper outline due</b>
Week 9- Oct28	Halloween special?	<b>Midterm</b>
	<b>½ Day Field Trip</b> on weekend: date TBA, Sat Nov6 or Sat Nov13	Watchung Reservation
Week 10- Nov4	<b>History:</b> Native Americans pre 1491 and Second Discovery (post 1491), Fur is gold	
Week 11- Nov11	<b>History:</b> Industrious overkill: the industrial revolution and post-industrial world today	<b>Complete draft of Term Paper due</b>
Week 12 – Nov18	<b>No Class (to make up for field weekend trip)</b>	<b>Watchung Field Trip report due</b>
Nov 25	<b>Thanksgiving – no class</b>	
Week 13- Dec2	Project Colloquium	<b>Student Presentations</b>
Week 14- Dec9	The Future, the world without us?	<b>Final Paper due</b>
<b>DATE OF FINAL EXAM: DEC 16</b>		