

Course Syllabus/Fall 2016

Ecological History of North America, 11:573:302, 21:120:365,

Instructors: Clause Hozapfel holzapfe@andromeda.rutgers.edu
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Meeting Time / Location: Monday period 1&2 / Blake 128

Web Site Sakai

Office/ Office Hours: Meteorology Building, Mon 12-2
80 Nichol Ave.

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 incredible biodiversity. This class will explore why North America has a unique ecology. By exploring the ecological 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 will use range from topics from 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, and computer experiments.

Required Text:

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

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 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 course are (a) to give students a better understanding on how current ecosystem 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 humans 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 protocol review 10%

Midterm and Final exam 45%

Project (Group Presentations and Write up) 45%

Departmental Grading Guidelines:

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 university's policy on Academic Integrity is available at <http://academicintegrity.rutgers.edu/academic-integrity-policy>. The principles of academic integrity require that a student:

1. properly acknowledge and cite all use of the ideas, results, or words of others.
2. properly acknowledge all contributors to a given piece of work.
3. make sure that all work submitted as his or her own in a course or other academic activity is produced without the aid of impermissible materials or impermissible collaboration.
4. obtain all data or results by ethical means and report them accurately without suppressing any results inconsistent with his or her interpretation or conclusions.
5. treat all other students in an ethical manner, respecting their integrity and right to pursue their educational goals without interference. This requires that a student neither facilitate academic dishonesty by others nor obstruct their academic progress.
6. uphold the canons of the ethical or professional code of the profession for which he or she is preparing.

Adherence to these principles is necessary in order to ensure that

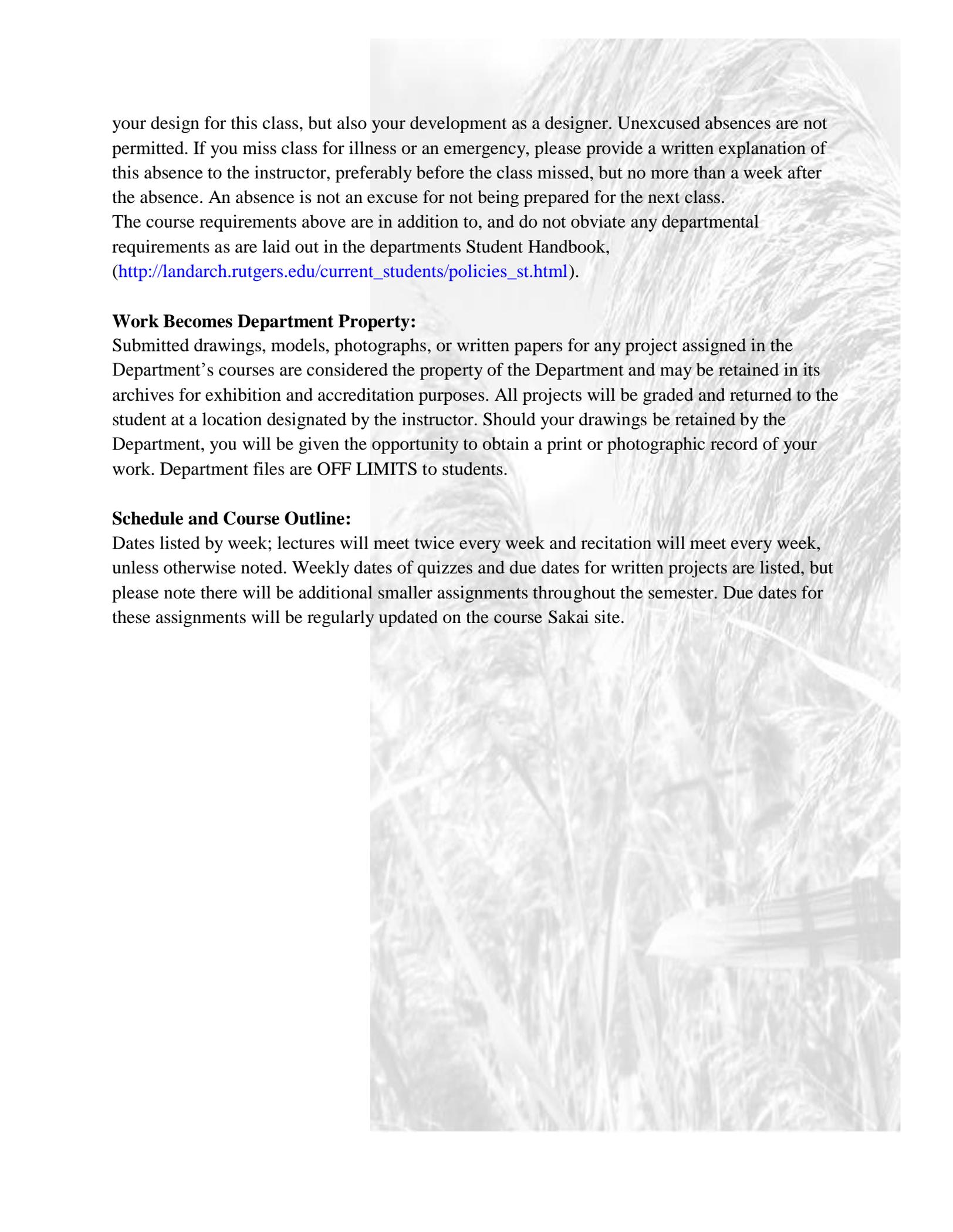
1. everyone is given proper credit for his or her ideas, words, results, and other scholarly accomplishments.
2. all student work is fairly evaluated and no student has an inappropriate advantage over others.
3. the academic and ethical development of all students is fostered.
4. the reputation of the University for integrity in its teaching, research, and scholarship is maintained and enhanced.

Failure to uphold these principles of academic integrity threatens both the reputation of the University and the value of the degrees awarded to its students. Every member of the University community therefore bears a responsibility for ensuring that the highest standards of academic integrity are upheld.

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 takes 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.

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).

Work Becomes Department Property:

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 twice every week and recitation will meet every week, unless otherwise noted. Weekly dates of quizzes and 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 Sakai site.

Week	Meeting Topic	NOTES/Activity Assignments/Exams
Week 1 – Sep 12	Intro: The rule of human in nature, the role of nature for humans: Course Overview	Course Overview, Meet and greet: Where are you from - Your Home Range
Week 2-Sep 19	Urban Ecology: fieldtrip	Fieldtrip to Johnson Park (man-made natural ; native non-native)
Week 3- Sep 26	Urban Ecology: where we are now: human dominated landscape and biota	Fieldtrip to Liberty State Park (urban nature and urban "non-nature")
Week 4- Oct 3	Urban Ecology fieldtrip	
Week 5- Oct 10	Methods: Ecological Forensics. also preparation for field project day	Written summaries of field trips due
Week 7- Oct 17	Urban Ecology: Stewardship for a natural future: Restoration and conservation in human landscapes	
Week 8- Oct 24	Pre -History: fast backwards North America takes shape: Cretaceous and onwards + The peaceful Eocene and the time of (non-human) immigrations: towards the ice ages	Midterm
Week 9- Oct 31	History: Humans move in (end of the ice age) & Ecological Forensics	
Week 10- Nov 7	Full Day Field Trip on weekend: date, Sun Nov 5 or Nov 6 History of Today and Tomorrow	Field project: Jockey Hollow and/or Watchung Ridge
Week 10- Nov 14	Second discovery: from 1491 on	Draft of Term Paper due
Week 12- Nov 21	No Class	
Week 13- Nov 28	Second discovery: from 1491 on	Student Presentations
Week 14-Dec 5	Urban Ecology: Urban Future: Urban Ecology	
Week 15 Dec 12	Conclusion: Why is North America's ecology different? A Global comparison. A revision of our role on Earth /Final	