ARCH 499 Climate Change and the Built Environment: Past, Present & Future
3 units (Fall 2017)
Fridays, 9:00-12:00, Harris 115a
Kelly Shannon
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Cappadocia, Turkey; Vo Trong Nghia Architects, Vietnam; Vincent Callebaut Architects, Belgium
COURSE DESCRIPTION
The course will focus on the specific relation of climate change and the built environment. There are a number of courses, at USC and elsewhere, that delve into the science of climate change, but few that discuss climate change policies and way in which architects, urbanists, landscape architects and others are developing innovative responses to the challenges and opportunities that climate change brings. Students will read canonical texts and be presented with both indigenous ways in which man has adapted to the environment in order to respond to the forces of nature and create resilient settlements. As there has been an acceleration during the late 20th and 21st century of the paradox between ecological balance and economic growth. This has become particularly magnified by present day American politics: The Trump administration, in its refusal to recognize climate change as an eminent threat to the planet, is forging a full-fledged assault on the environment. Ecological policies, decades-in-the-making and their respective regulating agencies, are at risk of vanishing. Now more than ever, architects, landscape architects and urbanists must develop projects that address social and environmental justice, despite – or because of – the stripping away of protections to the planet and its valuable resources. The course will begin by looking at the rich legacy of our collective past to understand what lessons can be learned, before turning to the present day and both reading and exploring projects from around the world which are exploring alternatives to a post-carbon future.

PART 1: PAST
Class 1  Friday
August 25

Climate / Productive Landscapes & Settlements
9:00-10:30: Introduction of climate change as an on-going phenomenon + humankind adaptation
break
10:45-12:00: worldwide case studies

Class 2  Friday
September 1

Indigenous Water & Forest Urbanism
9:00-10:30: worldwide case studies
break
10:45-12:00: discussion of readings

Class 3  Friday
September 8

Indigenous architectural scale responses
9:00-10:30: worldwide case studies
break
10:45-12:00: discussion of readings
**Class 4  Friday  September 15**

**Canonical figures and movements**

9:00-10:30: presentation

break

10:45-12:00: discussion of readings


3. Selection from Aldo Leopold (1949) ‘Land Ethic’ in *A Sand County Almanac*

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**PART 2: PRESENT**

**Class 5  Friday  September 22**

**Contemporary Wake Up Call**

9:00-10:30: Film *This Changes Everything*, Avi Lewis, 2015 (film based on book by same name by Naomi Klein, poses climate change vs. capitalism)

break

10:45-12:00: discussion of film & readings


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**Class 6  Friday  September 29**

**Accelerated Climate Change**

9:00-10:30: Climate Change, Politics, Economics and Ethics

10:45-12:00: discussion of readings


2. selection from Klein, Naomi (2014) *This Changes Everything: Capitalism vs. the Climate*, New York: Simon and Schuster.


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**Class 7  Friday  October 6**

**Policies**

9:00-10:30: International Policies & US Policies & California Policies

break

10:45-12:00: discussion of readings

1. selection from IPCC Sixth Assessment Report (due in Summer 2017)


3. Excerpts from California Assembly Bill 32
Class 8  Friday  
October 13  
**Sea Level Rise / Coastal Flooding**  
9:00-10:30: worldwide case studies  
break  
10:45-12:00: discussion of readings  

Class 9  Friday  
October 20  
**Inland Flooding**  
9:00-10:30: worldwide case studies  
break  
10:45-12:30: work on timeline

Class 10  Friday  
October 27  
**Drought**  
9:00-10:30: worldwide case studies  
break  
10:45-12:00: discussion of readings  

Class 11  Friday  
November 3  
**Heat Island**  
9:00-10:30: worldwide case studies  
break  
10:45-12:30: work on timeline

Class 12  Friday  
November 10  
**Mobility Infrastructure**  
9:00-10:30: worldwide case studies  
break  
10:45-12:00: discussion of readings  

Class 13  Friday  
November 17  
**Energy**  
9:00-10:30: worldwide case studies  
break  
10:45-12:30: work on timeline

**PART 3: FUTURE**

Class 14  Friday  
**Necessity for Design**
Learning Objectives
Students will study the challenges facing cities and territories in an age of accelerated climate change and will learn about strategies that can be used to make them more resilient and robust. They will have to understand systems thinking and how cities function as regional ecosystems and collections of individual buildings and places. They will explore the role of flows, green networks and urban infrastructure, as well as the impact of specific building practices on the constructed environment.

Students should learn to critically read texts and form insights that are relevant to the contemporary context.

Students should develop and novel, sharp and refined ways to perceive and represent their environment.

Students should develop skills of working as a group and creating a collective project (timeline).

Prerequisites
none

Technological Proficiency and Hardware/Software Required
Basic computer skills plus proficiency with ADOBE Suite.

Description of Assignments
There will be three types of assignments in the course:
1) weekly readings that will be discussed. They will be assigned beforehand and made available via Blackboard. The entire class will read one text and half the class will read another text. For all of these texts, each student will individually produce a one-page summary (11 font Cambria, with interesting quotes sourced). These will be presented discussed with an image that the students take from fieldwork in Los Angeles. All will be uploaded onto Blackboard and become a database for the course.

2) the class will collectively develop a timeline of climate change and the built environment: past, present & future. The exact format of the graphic timeline will be developed as a group and partially developed in class. It will be completed by the end of the course.

3) the final exam (due in December, posted to Blackboard) for the course will be an illustrated document of two contemporary projects. One projects must be in California and must include fieldwork photos, not those from the Internet. Another can be from another place anywhere in the world (with sources from the Internet and elsewhere). Choices of the projects can be discussed individually with the instructor before the assignment is due. Each project is to be no more and no less than 4-8.5x11 pages (vertical format). Images should have extended captions and the proper referencing must be made for the captions and the images alike. Citations from non-scientific web-based sources will NOT be accepted (Wikipedia, for example). An example of the assignment will be included for reference (to be eventually uploaded on Blackboard).
GRADING & GRADING BREAKDOWN
Grading will be done on an A, B, C, D, F basis.

Weekly reading summaries: 15%
Group timeline input: 15%
Final exam: 55%
Class participation: 15%

Assignment Submission Policy
Assignments will be submitted by email and Blackboard. Assignments handed in 1-3 days late will have their grades reduced by half a grade; those handed in 4-7 days late will be reduced by a full grade. Each week late will reduce the assessment by another full grade.

Additional Policies
Students are expected to attend each class and must notify the instructor before class if they are unable to attend on a particular day.

Academic Conduct
Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in Scampus in Section 11, Behavior Violating University Standards https://scampus.usc.edu/1100-behavior-violating-university-standards-and-appropriate-sanctions. Other forms of academic dishonesty are equally unacceptable. See additional information in Scampus and university policies on scientific misconduct, http://policy.usc.edu/scientific-misconduct.

Discrimination, sexual assault, and harassment are not tolerated by the university. You are encouraged to report any incidents to the Office of Equity and Diversity http://equity.usc.edu or to the Department of Public Safety http://adminopsnet.usc.edu/department/department-public-safety. This is important for the safety of the whole USC community. Another member of the university community – such as a friend, classmate, advisor, or faculty member – can help initiate the report, or can initiate the report on behalf of another person. The Center for Women and Men http://www.usc.edu/student-affairs/cwm/ provides 24/7 confidential support, and the sexual assault resource center webpage http://sarc.usc.edu describes reporting options and other resources.

Support Systems
A number of USC's schools provide support for students who need help with scholarly writing. Check with your advisor or program staff to find out more. Students whose primary language is not English should check with the American Language Institute http://dornsife.usc.edu/ali, which sponsors courses and workshops specifically for international graduate students. The Office of Disability Services and Programs http://sait.usc.edu/academicsupport/centerprograms/dsp/home_index.html provides certification for students with disabilities and helps arrange the relevant accommodations. If an officially declared emergency makes travel to campus infeasible, USC Emergency Information http://emergency.usc.edu will provide safety and other updates, including ways in which instruction will be continued by means of blackboard, teleconferencing, and other technology.