2019

Architecture Now: A History of Sustainable Architecture

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Syllabus for Architecture Now: A History of Sustainable Architecture

ART-HIST 345/645
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MoWeFr 11:15-12:05
South College, E 245
Three Credits

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"In this great chain of causes and effects no single fact can be considered in isolation."

"The restless activity of large communities of men gradually despoil the face of the earth."
Alexander von Humboldt, c. 1800

PLEASE NOTE: FRIDAY DISCUSSIONS WILL BE HELD IN DICKINSON 109

Course Content

As we move further into the 21st century, architects, planners, landscape architects and the general public are increasingly concerned with climate change, environmental degradation, energy and water consumption and the role the built environment plays in contributing to or addressing these issues. Buildings consume almost 40% of the energy used in this country. The way we access buildings, the materials used to construct them, the demands of users within the building all require the earth's increasingly precious resources. So how did we get here? How did our built environment evolve to require so much energy, water and so many resources?

It is easy to think that our environmental concerns regarding architecture's role in the environment are new to society. However, environmental worries are not new. This course explores the history of sustainable architecture with a look back to vernacular building styles and passive design strategies that addressed climatic factors. We will investigate the Industrial Revolution as it transformed buildings and transportation and study the varied responses to the degradation of the natural world through the Arts and Crafts Movement and writers and thinkers of the 19th century. We will contrast our study of early environmentalists and their ideas for the built environment with more mainstream efforts of architects and designers of the 19th and 20th centuries, including Frank Lloyd Wright and le Corbusier, to better understand the formation of architecture's historical cannon and the environmental outliers who critiqued the dangers of the 'Machine Age.' We will then explore more accelerated trends of the 1960s and '70s that paralleled the birth of modern environmentalism in the wake of exposés such as Rachel Carson's *Silent Spring*. Finally, the course will conclude with an examination of recent ideas surrounding 'green' buildings such as LEED certification and the Living Building Challenge. Understanding the history of the built environment offers a powerful lens for understanding our environmental future. Such history shows us our mistakes and successes and will help us move forward thinking critically about how we can live in the future.

> "History is not everything, but it is a starting point. History is a clock that people use to tell their political and cultural time of day. It is a compass they use to find themselves on the map of human geography. It tells them where they are but, more importantly, what they must be." John Henrik Clarke

The course will include guest speakers, lectures on Mondays and Wednesdays, and discussions about readings on Fridays (in Dickinson 109). There will be a mid-term and final, and two written assignments: one a short, written response and the second, a longer research paper.

Learning Outcomes:

Visual Literacy Students will master visual analysis of works of architecture in all of its components – formal elements, style, materials and techniques, cultural and historical context. They will be able to accurately and clearly describe, in both writing and speaking, how the formal or visual characteristics of architecture addresses issues surrounding the environment.

Historical comprehension Students will be able to recognize how specific works or representations relate to identifiable movements, styles, cultures, historical periods, and patterns of linguistic, visual, or gestural rhetoric. They will also understand how architecture expresses ideas and values specific to diverse cultures and time periods.

Critical Analysis. Students will consider the built environment critically, integrating complex historical trends and philosophical concepts into the analysis of architectural production, and evaluating the historical continuity between past and present in architecture and environmental culture.

Evaluation. Majors will recognize the fundamental relevance of the visual arts as significant expressions of complex and often conflicting social and political values in contemporary as well as historical cultures. They will be able to identify and comprehensively defend the significance of the built environment in documenting and expressing diversity of human values and beliefs, societies and cultures, economic status and social class, and technological change in past and present.

Course Requirements and Policies

Participants in the class are expected to:

- attend class sessions (attendance will be taken in class)
- complete readings before coming to class and be prepared to discuss them in class
- participate consistently in class discussion and complete in-class quizzes on Friday readings
- contribute to Moodle discussion: Problem/Solution
- take midterm and final
- complete all paper assignments

Attendance:

Taking notes and participating in class is extremely important as lectures and discussions do not duplicate the reading. Viewing illustrations in the readings cannot replace the experience of seeing the projected image that is accompanied by the lecture. Therefore, attendance will be taken and will contribute to your final grade.

Classroom Atmosphere:

All students are expected to regard other students and the professor with respect and to restrict any disruption of class to absolute emergencies. Please arrive and depart on time, turn cell phones and other

electronic devices off before entering the classroom, and refrain from taking breaks during our brief time together. Observance of these policies will be considered in determining your participation grade.

Laptops, ipads/tablets, phones, and other electronic note-taking devices may be used in class only with my permission. If at any time you find another student's use of such a device disrupts your concentration, please tell me immediately so that I can resolve the problem.

Academic Honesty

All work completed for this class must be your own. Plagiarism (uncredited use of a source) on a paper, cheating on a quiz or a test, or falsifying medical excuses will result in the grade of F for the course. If you have any questions at all about what constitutes plagiarism or other forms of academic dishonesty, please do not hesitate to ask me.

Assigned Readings

There are no required textbooks for this class. All required readings are available on Moodle.

Moodle

I have created a Moodle page for this class. There you will find a copy of the syllabus, posted announcements, assignments, assigned readings, and study guides. I will post the powerpoints from each lecture on Moodle following each class. If there are readings, newspaper or on-line articles you'd like to share with the class, send them to me and I will post them on Moodle. Students will be expected to participate in the weekly, online forum: Problem/Solution.

Quizzes and Exams

There will be a midterm and a final exam. Every Friday there will be some form of quiz on the readings. This may be a team-based quiz or an independent quiz. The primary goal is to ensure that you do the readings before class and come prepared to discuss the given topic.

Exams will generally consist of image identification and essay components. **The Final is scheduled for Dec. 13 at 10:30 am. Do not make travel or work plans to leave before the exam.** Specific quiz/exam formats will be discussed in class; we will have a review before the final exam.

Consider exam dates as absolutes. Make-up quizzes and exams will be given at my discretion and only in case of serious illness or, other emergency. Missed exams will be made up only if you email me immediately to explain your absence, and then present a written note from a family member, dean, or health care professional. The grade for an unexcused quiz or exam absence will be 0 (zero).

Papers

Undergraduate students: You will complete two papers. In a short paper (3-4 pages), you will write a a response to short films and readings about Levittown NY and Buckminster Fuller's Dymaxion House. The second paper (8-10 pages) will investigate the sustainable and historical context of the Kern Center at Hampshire College.

Graduate and honors credit students: I will go over extra readings and assignments with these students as needed.

Late Paper Policy: Students seeking a paper due date extension should speak to me well in advance of the paper's due date. A late paper will be graded down one increment (for example, B+ to B) for each day (not class session) it is late. The grade for any paper not handed in will be a 0 (zero).

Special Accommodations: Please let me know as soon as possible if you need any special accommodations in this class for exams, assignments, or other activities so that we can make the proper arrangements.

Names and Pronouns: Everyone has the right to be addressed by the name and pronouns that they use for themselves. Students can indicate their preferred/chosen first name and pronouns on SPIRE, which appear on class rosters. Please let me know what name and pronouns I should use for you if they are not on the roster. A student's chosen name and pronouns are to be respected at all times in the classroom.

Grading

Undergraduate students:

Quizzes/reading responses	10%
2 Exams (20% each)	40%
Short paper	15%
Long paper	25%
Class participation and Problem/Solution:*	10%

*Includes class attendance, class discussion participation, and class conduct and:

Problem/Solution on Moodle: Each week two or three students will post their **Problem/Solution** to the Moodle site by Monday morning 9 am. Students are asked to think of one environmental issue we face today and find a recent or contemporary building that addresses that issue. The goal of this exercise is to keep you thinking about contemporary problems and promising solutions. Students will give brief comments on what struck them about their choices and the rest of the class is required, by the end of that week, to comment on the posts. I will review these posts and expect to see thoughtful responses that tie in with ideas discussed in class.

If your final grade is on the border between two grades, strong participation in class discussions will raise it to the next higher level.

All students: No late work will be accepted after 11:00 pm, Friday December 13, 2019

Class Meeting Schedule and Reading Assignments:

Please note: this schedule is open to change -- YOU are responsible for listening to the announcements of these changes in class and/or checking Moodle for announcements.

All readings (and color images) are posted on Moodle. Readings are posted by class meeting day(s). Readings listed under each class date should be read before class meets.

Week One:

Wed. Sept 4: Introduction. What is sustainable architecture?

Friday Sept. 6: **IN DICKINSON 109!!!** Reading discussion: Pliny the Elder, Rudofsky, "Preface" Christine Macy, "the Value of Beauty in Architecture"

Week Two:

Mon. Sept. 9: Vernacular Architecture and "Primitive Architecture': Green Antecedents

Wed, Sept 11: Traditional African Architecture

Fri, Sept. 13: **MEET IN DICKINSON 109:** Reading discussion/quiz: James Marsden Fitch, "Primitive Architecture" (on Moodle) and Apotsos, Michelle. "Holy Ground: Mud, Materiality, and Meaning in the Djenne Mosque." *Rutgers Art Review*, Vol. 27 (Spring, 2012), pp. 2 – 12.

Week Three:

Mon. Sept 16: European Landscape Painting: Nature in the Western Tradition

Reading: Chapter One: *Landscape and Infrastructure*, Vickery chapt 1

Wed. Sept: 18: Nature and Man in the 18th Century: The English Landscape Garden, The Picturesque and Industrial Sublime and Laugier's Primitive Hut

Reading: Chapter 2, *Landscape and Infrastructure*

Fri. Sept 20: **MEET IN DICKINSON 109:** Reading/quiz: on Williamson and Laugier,

Week 4:

Reading: Chapters 3 and 4, *Landscape and Infrastructure*

Mon. Sept. 23: The Industrial Revolution in England

Wed. Sept. 25: Gothic Revival and the environmental response to Industry.

Fri. Sept 27: **MEET IN DICKINSON 109:** Reading response/quiz on Ruskin's "Storm Clouds of the 19th Century" and William Morris, *A Factory as it Might Be*

Week 5:

Reading: Kostoff and Ingersoll, *Landscape and Infrastructure*, chapter 5

Mon. Sept. 30: America in the 19th century: Progress and Power

Wed. Oct. 2: Nature in the City

Fri. Oct. 4: **MEET IN DICKINSON 109:** Reading response/quiz Andrea Wulf "Man and Nature: George Perkins Marsh and Alexander von Humbolt," Olmsted "Public Parks and the Enlargement of Towns" (1870)

Week 6:

Reading: Curtis, chapt. 18, "nature and the machine: mies van der rohe, wright and le corbusier in the 1930s", *Landscape and Infrastructure*, chapter 6

Mon. Oct. 7: Frank Lloyd Wright and Organic Architecture

Wed. Oct. 9: le Corbusier: Nature and the Machine Age

Fri. Oct. 11: **MEET IN DICKINSON 109:** Reading response/quiz on Curtis, and Rifkind, "Reviewing Modernism Through the Lens of Sustainability" in *Lessons from Modernism: Environmental Design Strategies in Architecture 1925-1970*

First Writing Assignment handed out in class. Due Oct. 25

Week 7:

Mon. Oct 14: **NO CLASS**

Tues. Oct. 15: The 20th Century Machine Age Continued: other modern masters: Kahn, Aalto, Mies, Koenigsberger and Colonialism

Wed. Oct. 16: Modern Outliers: Fathy, Raymond, and Fuller

Fri. Oct. 18: **MEET IN DICKINSON 109:** Reading response quiz: Daniel Barber "The World Solar Energy Project" Curtis Chapt 31, in *Modern Architecture since 1900* on Regionalism, excerpt from *Eleanor Raymond,* Architect by Doris Cole

Week 8:

Reading: *Sorry Out of Gas: Architecture's Response to the 1973 Oil Crisis*, pgs. 77-170

Mon. Oct. 21: The 1960s and 70s: architectural responses to environmental threats

Wed. Oct 23: The 1960s and 70s: continued

Fri. Oct 25: **MEET IN DICKINSON 109:** Guest speaker: Tulio Inglese of Nacul Architects

First Writing Assignment Due via TurnitIn

Week 9:

Reading: Kenneth Frampton *Modern Architecture*, Chapter 4

Mon. Oct. 28: Post Modernism: Venturi, Moore and Graves

Wed. Oct 30: Green Currents: Murcutt, New Urbanism, Cutler Anderson Architects

Fri. Nov. 1: **MEET IN DICKINSON 109:** reading response/quiz:"From the Beginning:Thirteen Questions" Glenn Murcutt in discussion with Juhani Pallasmaa and Frampton

Week 10:

Mon. Nov. 4: MIDTERM

Wed. Nov. 6: Green Leaders: Ken Yeang and William McDonough

Friday Nov. 8: **Discussion of the film: *The Biggest Little Farm***

Week 11:

Mon. Nov. 11: **NO CLASS**

Wed. Nov. 13: Codifying Green: the Brundtland Report, LEED certification, Cradle to Cradle. Living building challenge, biomimicry Michael Pawlyn's essay

Final paper assignment handed out. Due Dec. 11, 2019

Fri. Nov. 13: **MEET IN DICKINSON 109:** Reading Response quiz: McDonough and Braungart "Eco-Effectiveness: A New Design Strategy", "Living buildings" by Jason McLennan both in *Sustainable Architecture White papers*, "Architecture and Human Nature: A Call for a Sustainable Metaphor" Juhani Pallasmaa, *Local architecture*, Michael Pawlyn, "Biomimicry" in *Green Design: From Theory to Practice* ed. Ken Yeang

Week 12:

Readings: *BIG and GREEN* essays on Moodle

Mon. Nov. 17: Giants of High Tech/eco design: Foster, Rogers, Fox and Fowle, Piano, etc.Herzog,

Wed. Nov. 19: Eco-Alternatives and Social Justice? Shiguru Ban, Rural Studio, MassDesign Group, African group

Fri. Nov. 21: **MEET IN DICKINSON 109:** Reading response quiz: comparing MassDesign with Rogers and Yeang in *Big and Green*

THANKSGIVING BREAK NOV. 24-29

Week 13:

Reading: *Landscape and Infrastructure*, chapters 8-10

Mon. Dec. 2: Radical Re-Imaginings:Infrastructure: Power, Water and Agriculture

Wed. Dec. 4: The greening of our cities

Fri. Dec. 6: Guest Lecturers: **MEET IN DICKINSON 109:** Carey Clouse and Ludmilla Pavlova-Gillian

Week 14:

Mon. Dec. 9: re-cap: So, what ***is*** sustainable Architecture? Class discussion.

Wed. Dec. 11: LAST CLASS: Final Review, **Final Paper Due**

Fri. Dec. 13: **Final Exam, 10:30 am**