

Department of Architectural Technology

ARCH 3551

SUSTAINABILITY: HISTORY AND PRACTICE

3 classroom hours, 3 credits

Thursday 2:30 – 5:00

Course Coordinator

Prof. Azaroff

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Course Description: Sustainability describes an approach to the design, construction and stewardship of products and environments that align human need and ecological resourcefulness. This course focuses on built work of the last 200 years, which grew from a new consciousness of ecological limits, living system dynamics and understanding of human well-being. The practice of sustainability has understandably developed numerous and sometimes competing logics. We will explore how sustainable criteria are influenced by outlook (and self-interest) and how the prioritization of health, social agendas, economics, aesthetics, environmental protection or resource efficiency have shaped selected buildings, landscapes and city plans.

Course Context: This course is written as an elective and is designed to help students develop a critical understanding of sustainability and resilience.

Prerequisites: ENG 1101, completion of 45 credits

Required Text: McDonough, William and Michael Braungart, *Cradle to Cradle: Remaking the Way We Make Things*. North Point Press; April 22, 2002

Attendance Policy: No more than two absences will be permitted during the semester. For the purpose of record, being late for class twice will be considered as one absence. Being more than 10 minutes late for class will be considered lateness. Exceeding this limit will expose the student to failing at the discretion of the instructor.

Course Structure: The course will include both lecture and seminar formats. There will be extensive readings, written assignments, oral presentations, discussions and a final paper plus exam. Students will be required to contribute to discussion materials, form critical positions and develop those positions in both verbal and written forms.

Grading:

- Class Participation 20%, (in class discussions, attendance)
- Class Presentations 20%, (topic lecture PPT)
- Written Assignments 30%, (daily written assignments and pop terminology quizzes)
- Final Research Paper (20%) and Exam (10%)

Academic Integrity: Students and all others who work with information, ideas, texts, images, music, inventions and other intellectual property owe their audience and sources accuracy and honesty in using, crediting and citation of sources. As a community of intellectual and professional workers, the college recognizes its responsibility for providing instruction in information literacy and academic integrity, offering models of good practice, and responding vigilantly and appropriately to infractions of academic integrity. Accordingly, academic dishonesty is prohibited in The City University of New York and is punishable by penalties, including failing grades, suspension and expulsion.

Learning Objectives: Upon successful completion of this course the student should be able to:

1. Describe the evolution of sustainability over the last 200 years and develop familiarity with the key landmark projects that define this evolution.
2. Trace how sustainability criteria have changed and identify the influences behind these changes.
3. Demonstrate how changes to these sustainability criteria have impacted sustainability practices and the marketplace.
4. Develop an understanding of how ethical positions place different values on the environment, human and nonhuman life and how this informs the logics of sustainability.

Assessment: To evaluate the students' achievement of the learning objectives, the professor will do the following: Written assignments, oral presentations, classroom discussions and the final paper will be evaluated for clarity, content, analysis of topic and the capability to articulate and distinguish between competing ideas and positions. Students will also be asked to articulate their own positions, building on the material presented, assigned and discussed. Students will also have an opportunity to evaluate their classmates during oral presentations.

Each week two or more students will present research on the topics listed below. The presentations will incorporate visual information through projection or other AV equipment along with verbal presentations. Fellow students will grade the presentations, ask questions and carry on the topic through group conversation and participation.

Writing assignments are listed below and are subject to alteration as the semester moves along. Each written assignment will be a **minimum** of two pages long, 12pt text with one inch margins right, left and top with a half inch bottom margin. The papers can be double spaced.

Course Outline: Please note that this outline is subject to change.

Week 1: Lecture: Introduction and overview: what is sustainable?

The 19th Century development of the Green ideal (Pastoralism, The Industrial Revolution and Cities, Nature as Commodity and the Ecological Picturesque, the American Suburb and Natural Urban Park)

Homework assignment: Describe a recently designed city that has been shaped by these ideas.
Conclude with what NYC must do to become a sustainable city.

Reading assignment: Reading from Fein or Howard, or Doepel

Week 2: Lecture: The early and mid 20th Century development of an ecological consciousness

(landscape architecture, planning, Silent Spring, Earth day, resource limits, etc) Green cities

Homework assignment: Describe a recently designed landscape that has been shaped by these ideas

Reading assignment: Reading from McDonough Chapters 1 and article (Reading from Wright or McHarg, or Post Sandy Initiative)

Week 3: Lecture: The formalization of sustainability (Earth Day, Bruntland, Rio, USGBC, Kyoto)

2 student presentations, Ecological landscapes

Homework assignment: Describe a recently designed product that has been shaped by these ideas

Reading assignment: Reading from McDonough Chapters 2 and article (News article on Corporate social responsibility or WeACT Climate action plan)

Week 4: Lecture: The commoditization of sustainability (Corporate Social Responsibility, branding)

2 student presentations, Sustainable manifestos

Homework assignment: Describe a recently designed product that has been shaped by these ideas

Reading assignment: Reading from McDonough Chapters 3 and article

Week 5: Lecture: The codification of sustainability (Energy Star, BREEM, LEED, Federal and Municipal initiatives)

2 student presentations, Sustainable products

Homework assignment: prepare for discussion

Reading assignment: Reading from McDonough Chapters 4 and article

Week 6: Full class discussion

2 student presentations, Sustainable products

Reading assignment: Reading from McDonough Chapters 5 and article

Week 7: Lecture: The logics of sustainability (ecological, technological, economic)

2 student presentations

Homework assignment: Describe how one of the above logics has been applied to a product or building
Reading assignment: Reading from McDonough Chapters 6 and article (Reading from Fox or Jacobs or Set of Articles)

Week 8: Lecture: The logics of sustainability (human health, cultural, social)

2 student presentations, How logics manifest themselves in a product or building

Homework assignment: Describe how one of the above logics has been applied to a product or building

Reading assignment: Reading from Capra or Set of Articles

Week 9: Lecture: Sustainability whole system logics and models (Gaia, integral theory, stew-map

USFS initiative to map green spaces and social service networks, transition towns, etc)

2 student presentations, How logics manifest themselves in a product or building

Homework assignment: Set of Articles, prepare for discussion

Week 10: Full class discussion: the logics of sustainability

2 student presentations if needed.

Reading assignment: reading from Leopold or Set of Articles

Week 11: Lecture: The beginning of an environmental ethic and responsibility for resilience

Homework assignment: Develop an argument for or against an ethic

2 student presentations if needed.

Reading assignment: reading from Nash or Set of Articles

Week 12: Lecture: Environmental ethics and the rights of nature

2 student presentations, Ethical argument

Homework assignment: Develop an argument for or against an ethic

Reading assignment: reading from Shiva or Set of Articles

Week 13: Lecture: Environmental ethics and social justice

2 student presentations, Ethical argument

Homework assignment: Identify 10 issues of social equity and 10 problems facing the world, subjects for final papers.

Week 14: Full class discussion: the ethics of sustainability and resilience

Week 15: Individual meetings with students on final papers, Final exam

Bibliography

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