Ecological Transport, Infrastructure and Building Design

IDSEM-UG1633
SPRING 2012

Mitchell Joachim, Ph.D.
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Phone: 617-285-0901
Time: Mondays, 3:30 pm – 6:10 pm
Location: 1 Wash. Pl, RM 527

SYLLABUS

Course Description
The current environmental decline is a multifaceted predicament for our civilization. Previously, utopian projects have failed to reverse this ecological decay. This crisis demands robust solutions on a massive scale to deal with an immanent mega-urbanity. We will attempt to re-envision vehicles, infrastructure, and buildings to meet the ecological needs of the future. Students will consider questions such as: what is wrong with city systems today and what are the key environmental forces that shape them? Each student will individually critique and evaluate multiple engineered urban entities and subsequently prescribe new innovations. The objective will be to establish the most scientifically plausible designs for a new socio-ecological world. Readings, historical figures, and works for the course will include Janine M. Benyus, Ian McHarg, Richard T.T. Forman, John Todd, Anne Spirn, Geoffrey Jellicoe, Jane Jacobs, Annie Leonard, Buckminster Fuller, William J. Mitchell, Paul Rudolph, Ken Yeang, and others.

Objective
The function of this course is for the student to build their skills and perception of environmentally driven urban design. A weighty prominence on the juncture of science, invention and architecture will be investigated. Students will amplify their understanding of environmental planning, engineering, mobility systems, and city design. We will jointly search for global sized ecosystem problems and energetically present original solution areas. We will highlight improving presentation skills with an assortment of graphical techniques.

Instructor Information
Mitchell Joachim is Co-Founder at Planetary ONE + Terreform ONE. He earned; Ph.D. at Massachusetts Institute of Technology, MAUD Harvard University, M.Arch. Columbia University, and BPS SUNY at Buffalo with Honors. He is an Associate Professor at NYU and previously was the Frank Gehry Chair at University of Toronto. Earlier, he was faculty at Columbia, Syracuse, Washington, and Parsons. He was formerly an architect at Gehry Partners, and Pei Cobb Freed. He has been awarded fellowships at TED2010, Moshe Safdie Assoc., and Martin Society for Sustainability. He won the History Channel and Infiniti Award for City of the Future, and Time Magazine Best Invention of 2007 w/ MIT. He was chosen by Wired magazine for "The 2008 Smart List: 15 People the Next President Should Listen To". Rolling Stone magazine honored him in "The 100 People Who Are Changing America". Popular Science magazine has featured his work as a visionary for “The Future of the Environment” in 2010.
Suggested Resources and Readings


Department and Class Policies

Attendance is mandatory. There is no substitute for working and participating in class. If a student fails a class due to attendance, he/she is no longer permitted to attend the class. Absence will impact final grade. Undo tardiness following a given break will result in an absence. Leaving before the class is over is considered an absence. Three absences are grounds for failure.

Tardiness: Two tardies will be counted as one absence. Ten minutes late considered tardy. Over 20 minutes late is considered absence.

Academic Warning: Students who do not complete and submit assignments on time and to a satisfactory standard will fail the class. It is the student responsibility to obtain missed assignments from other classmates and make up work in time for the next class.

Evaluation and Grading: Based on projects, participation and attendance. In order to receive a grade, students must complete all assignments, participate in class and maintain a daybook.

Grade Description

- **A** 4.0 Outstanding quality
- **A-** 3.7 Excellent work
- **B+** 3.3 Work of high quality
- **B** 3.0 Very good work
- **B-** 2.7 Good work
- **C+** 2.3 Average
- **C** 2.0 Adequate
- **C-** 1.7 Passing work
- **D** 1.0 Below avg.
- **F** 0.0 Failure

Course Requirements

**Assignments**- all assigned work is due at the beginning of the following session unless otherwise indicated, after that is considered late and will be marked down accordingly. **Preparedness**- students are expected to bring required materials to all classes. In addition, each student is expected to maintain a visual and written journal, which will be a collection of
observations, inspirations, class notes, vocabulary, questions, clippings, drawings, ideas, and preparation sketches for assignments.

**Evaluation and Grading**
**Attendance 20%, Assignments 20%, Mid-term Presentation 30%, Final Presentation 30%.**

**Incomplete Grades**
Gallatin has a strong policy on students' taking incompletes, based on two essential premises: (a) students should take incompletes only for good reasons ("I haven't finished yet" is not a good reason), and (b) students should meet class deadlines for completing the required work. The student must request the incomplete in writing (Request for a Grade of Incomplete Form) before final grades are due; if the student does not request the incomplete, the final grade is based on whatever work is received up to that point. If an incomplete is granted, the form will indicate; (a) what work remains to be done and (b) the deadline by which the work must be submitted (the default is the last day of classes in the next full term). It is the student's responsibility to submit the finished work.

**Statement on Academic Integrity**
As a Gallatin student you belong to an interdisciplinary community of artists and scholars who value honest and open intellectual inquiry. This relationship depends on mutual respect, responsibility, and integrity. Failure to uphold these values will be subject to severe sanction, which may include dismissal from the University. Examples of behaviors that compromise the academic integrity of the Gallatin School include plagiarism, illicit collaboration, doubling or recycling coursework, and cheating. Please consult the Gallatin Bulletin or Gallatin website www.gallatin.nyu.edu/academics/policies/policy/integrity.html for a full description of the academic integrity policy.

Academic integrity demands that all work you submit is your own. You are required to credit any sources that have contributed to the development of your ideas. Presenting ideas, words and images as your own without acknowledging their source is plagiarism, a type of academic fraud.

Plagiarism includes, but is not limited to:
- Using a phrase, sentence, passage, image, or any other type of creative or intellectual material from another work without proper citation.
- Paraphrasing words or ideas from another work without attribution.
- Reporting as your own research or knowledge any data or idea gathered, reported, or developed by another person.
- Submitting as your own work anything produced by another.
- Purchasing or downloading work and submitting it as your own.
COURSE SCHEDULE_SP12

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<thead>
<tr>
<th>Week</th>
<th>Day</th>
<th>Date</th>
<th>Assignment</th>
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<tbody>
<tr>
<td>Week 1</td>
<td>Monday</td>
<td>01/23</td>
<td>HW 1</td>
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<tr>
<td>Week 2</td>
<td>Monday</td>
<td>01/30</td>
<td>HW 2</td>
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<td>Week 3</td>
<td>Monday</td>
<td>02/06</td>
<td>HW 3</td>
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<td>Week 4</td>
<td>Monday</td>
<td>02/13</td>
<td>HW5</td>
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<td>Week 5</td>
<td>Monday</td>
<td>02/20</td>
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<td>Week 6</td>
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<td>02/27</td>
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<td>03/05</td>
<td>HW6</td>
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<td>Week 8</td>
<td>Monday</td>
<td>03/12</td>
<td>Spring Break</td>
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<td>Monday</td>
<td>03/19</td>
<td>HW7</td>
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<td>Monday</td>
<td>03/26</td>
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<td>04/02</td>
<td>Review</td>
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<td>04/09</td>
<td>Mid-Term Project</td>
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<td>04/16</td>
<td>Review</td>
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<td>04/30</td>
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<td>Week 16</td>
<td>Monday</td>
<td>05/07</td>
<td>Final Presentations</td>
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All dates are subject to change based on information / opportunities that might arise during the semester.