SSCI 350: International GeoDesign

Units: 4

Term — Day — Time: Summer 2017; May 30 – June 30, 2017

Location: USC (AHF 145D) and the Netherlands

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Course Description

The goal of this course is to introduce students to the critical and spatial thinking skills of GeoDesign while engaged in both classroom and field settings in Los Angeles, California, and in the Netherlands, and to enable students to apply them in a capstone research project that proposes GeoDesign strategies to address a societal challenge in Los Angeles County.

GeoDesign is a forward-thinking, interdisciplinary framework that pairs planning, design, and environmental systems management with geospatial technologies to explore ways to build a better world. As interest and demand for sustainable development gains traction nationally, internationally, and across the USC campus, the use of GeoDesign principles will be increasingly valuable to address global challenges that foster human and environmental well-being. Europe is a region of the world that is particularly advanced in the integration of land management, transportation systems, ecological conservation, and high quality of life. The practice of GeoDesign in the Netherlands is centuries old, and the Dutch, in particular, have long been leaders in designing land uses to maximum efficiency while minimizing adverse environmental impacts. Land reclamation, alternative energy sources, and advanced transportation systems are hallmarks of Dutch ingenuity. Accordingly, Dutch leadership in sustainability and GeoDesign are worthy of student inquiry and investigation by means of an intensive field experience.

The field experience in SSCI 350 will examine GeoDesign applications in three unique locations, with Vrije University Amsterdam serving as home base. The first location is Amsterdam, the capital city of the Netherlands, which represents a large city with a rich diversity of people, commerce, and land uses. The second location is the historical town of Utrecht, located in central Netherlands, which boasts the Netherlands' largest university and a long tradition of integrating medium and high density housing, greenbelts, and bicycle paths. The third field location is the Port of Rotterdam, Europe's largest port, and the fifth largest port in the world. Students will utilize these experiences to interrogate applications of GeoDesign, and how these strategies may be applied in Los Angeles.

Learning Objectives

When you have completed this course, you will be able to:
- Articulate representative challenges of population growth, increasing urbanization and globalization, resource and land management, the widening gap between rich and poor, and the likely impacts of climate change across a variety of urban settings throughout the Netherlands;
- Describe the ways in which these challenges have been addressed in exemplar Dutch settings;
- Compare successes and challenges in addressing these issues across the Netherlands and Los Angeles, CA;

- Describe a broad understanding (theoretical and practical) of the relationship between human and natural systems, how and why people transform natural environments into residential, commercial, and/or industrial uses, and the impacts these decisions have on environmental vitality, economic sustainability, and human health and well-being.

Prerequisite(s): None
Co-Requisite (s): None
Concurrent Enrollment: None
Recommended Preparation: None

Course Organization

This course is a five-week intensive living-learning experience comprised of lecture sessions on the USC campus paired with a field experience in the Netherlands. The lecture sessions will utilize readings, discussions, presentations, and videos to introduce core concepts of GeoDesign, which include urban planning, redevelopment, land management, human-environment interactions, transportation systems, geospatial technologies, among other topics. The field experience will consist of a 14-day study abroad to the Netherlands where the class will engage applications and the theory of GeoDesign through guest lectures, field excursions, exploratory analysis, and an applied case study in GeoDesign. The GeoDesign case study will be organized with colleagues from Vrije University Amsterdam, and the focus of these efforts will be to develop a green lifecycle plan for Amsterdam Noord.

Technological Proficiency and Hardware/Software Required

The modeling software and geospatial data required for course assignments will be accessed using computing resources provided by the Spatial Sciences Institute and the Vrije University.

Required Readings

Dangermond J. 2009. GIS: Designing Our Future. *ArcNews* 31:6-7.*

Miller W. 2012. *Introducing GeoDesign: The Concept.* Redlands, CA, Esri Press.*

Shorto R. 2013. *Amsterdam: A History of the World's Most Liberal City.* New York, Vintage Books.

Steinitz C. 2012. *A Framework for GeoDesign.* Redlands, CA, Esri Press.

* Denotes text will be posted on Blackboard

Description and Assessment of Assignments

Your grade in this course will be determined on the basis of several different assessments:

Oral Presentation – topic proposal (10%): You will prepare and deliver a 10-15 minute oral presentation accompanied by PowerPoint slides proposing a topic of interest to investigate for your capstone research project.

Reading Assignments (20%): You will complete four assignments on readings that inform GeoDesign by providing 1-2 page reflections on the concepts, principles, and/or case studies covered in the readings.

Field Activities (20%): You will be required to participate in all field experience activities for the course and you will receive a pass/fail grade for each weekday (M-F) field experience activity.

Field Experience Story Map (20%): You will create and present an online Story Map that illustrates activities, observations, reflections, and key locations of the field experience.

GeoDesign Project (30%): You will produce a research paper (3,000 – 4,000 words) that integrates course concepts and case studies on GeoDesign while proposing a specific GeoDesign strategy in Los Angeles County.

Grading Breakdown

Assignment	# of Assignments	% of Grade
Oral presentation – topic proposal	1	10
Reading Assignments	4	20
Field Activities	10	20
Field Experience Story Map	1	20
GeoDesign Project	1	30
TOTAL	**17**	**100**

Assignment Submission Policy

Assignments will be submitted for grading via Blackboard using the due dates specified in the Course Schedule below.

Additional Policies

Students are expected to attend and participate in a mandatory orientation session and every class session and to complete and upload all assignments before the deadlines detailed in the Course Schedule. Late work will be assessed a penalty of 10% per day and zero grades will be assigned for work that is more than one week late.

The anticipated number of contact hours between instructor and student for this course, which includes course meetings on the USC campus in addition to the two-week field experience, is 70 hours. Course meetings at USC comprise 18 hours (9 two-hour sessions); the field experience counts for 52 hours (i.e., 13 days with an approximate average of four hours per day).

Course Schedule: A Weekly Breakdown

	Topics/Daily Activities	Readings and Deliverables/Due Dates
Week 1 5/30/17 – 6/2/17	**Module 1: Core Concepts of GeoDesign** The first week of the course will be held on the USC campus in the Allan Hancock Foundation building (AHF), room 145D Tuesday through Friday from 10am-12pm. Students will be introduced to core concepts of GeoDesign through a combination of lectures, readings, discussions, and hands-on activities.	*Read* Miller "Introducing GeoDesign: The Concept"; Dangermond "GIS: Designing Our Future"; and Steinitz "A Framework for GeoDesign" *Complete by 6/2/17*: Reading assignment 1 Reading assignment 2 Oral Presentation
Week 2 6/5/17 – 6/9/17	**Module 2: Self-directed Research** The second week of class (June 5-9) is for students to complete and reflect upon course readings, and then articulate a societal challenge in Los Angeles County that will serve as the topic of investigation for the capstone research component of the course. Work tasks for Module 2 will be completed independently. This can be accomplished from home or while traveling abroad.	*Read* Shorto "Amsterdam: A History of the World's Most Liberal City" *Complete by 6/9/17*: Reading assignment 3 Reading assignment 4
Weeks 3 & 4 6/10/17- 6/24/17	**Module 3: Field Experience: The Netherlands** Headquarters for the field experience will be The Student Hotel in Amsterdam. The field experience will include research talks, site visits, and an applied GeoDesign case study. The case study will be coordinated with colleagues at Vrije University (VU)	

Amsterdam and will focus on developing a green lifecycle plan for Amsterdam Noord.

Time spent during the field experience will involve: 1) lectures, field trips, and field work (estimated at 4 hours per day); 2) independent study time (two hours per day); and 3) personal/recreation time.

The following represents the tentative schedule of the field experience:

June 10: Arrive in Amsterdam, NL – check in to The Student Hotel
June 11: Tour of Amsterdam – guided bicycle tour; historical and cultural appreciation – 11am-3pm
June 12: Visit to Vrije University (VU) meet with Prof. Niels van Manen, introductions and context building – 10am-4pm
June 13: Excursion to Amsterdam Noord for stakeholder meeting and examination of geodesign case study site – 10am-5:30pm
June 14: Visit to Geodan – presentations by Henk Scholten and Eduardo Dias – spatial questionnaire – 9:30am-1pm
June 15: Field work – 10am-5pm
June 16: Field trip to Rotterdam: tour of living lab and Next Talk – 1-7:30pm
June 17: Field trip to Van Gogh Museum
June 18: Free day
June 19: Field trip to TU Delft – learn about geodesign theory and practice in the Netherlands – 10am-2pm
June 20: Creating system interventions – 9am-5pm
June 21: GeoDesign Case Study – first design iteration at the VU – 10am-4pm
June 22: GeoDesign Case Study – second design iteration at the VU – 10am-4pm
June 23: GeoDesign Case Study – final design iteration and course reflection at the VU; evening banquet – 10am-3pm
June 24: Check out of The Student Hotel

| Week 5 6/26/17-6/30/17 | **Module 4: Summary and Reflections on GeoDesign** The course resumes on the USC campus (AHF 145D) to provide critical reflections on course concepts, the field experience, and final presentations for the course capstone research project. Class meetings will be held Monday through Friday from 10am-12pm. | *Complete by 6/27/17*: Field Experience Story Map *Complete by 6/30/17*: GeoDesign Project |

Statement on Academic Conduct and Support Systems

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://policy.usc.edu/student/scampus/part-b/. 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 Relationship and Sexual Violence Prevention Services* http://engemannshc.usc.edu/rsvp/ 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.

Academic Accommodations

Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP and it should be delivered to me early in the semester. DSP is located in STU 301 and is open from 8:30am to 5:00pm, Monday through Friday (213-740-0776; study@usc.edu).