

## **SSCI 350: International GeoDesign**

**Units:** 4

**Term — Day — Time:** Summer 2019; May 28 – June 28, 2019

**Location:** USC (AHF 145D) and the Netherlands

**Instructor:** Laura C Loyola, Ph.D.

**Office:** AHF B56G

**Regular Office Hours:** Mon 10:00-11:00 a.m. and Tues 1:00-2:00 p.m. PT. Also available by appointment.

**Contact Info:** [loyola@usc.edu](mailto:loyola@usc.edu), 213-740-5612

**Bluejeans:** <https://bluejeans.com/loyola>

**IT Help:** Richard Tsung

**Office:** AHF B57B

**Hours of Service:** Mondays to Fridays, 9:00 a.m.-5:00 p.m.

**Contact Info:** [ctsung@usc.edu](mailto:ctsung@usc.edu), 213-821-4415(offices)

**Library Help:** Andy Rutkowski

**Office:** VKC B36B

**Hours of Service:** Tuesdays, 10:00 a.m.-12:00 noon;

Thursdays 4:30-5:30 p.m., or other times by appointment

**Contact Info:** [arutkows@usc.edu](mailto:arutkows@usc.edu), 213-740-6390 (office)

## **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. Additionally, this course will enable students to apply these skills 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 combines 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 University of Southern California (USC) campus, the use of Geodesign principles is becoming 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 a 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 maximize 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 think about how these strategies may be applied in Los Angeles.

## **Learning Objectives**

On completion of this course, students should 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 the relationship between human and natural systems in theoretical and practical terms and identify how and why people transform natural environments

into residential, commercial, and/or industrial uses, including the impacts these decisions have on environmental vitality, economic sustainability, and human health and well-being.

- Formulate a specific geodesign plan for Los Angeles County, based on research and geodesign principles.

**Prerequisite(s):** None

**Co-Requisite (s):** None

**Concurrent Enrollment:** None

**Recommended Preparation:** None

### **Course Organization**

This course is a five-week intensive living and 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 and completed with colleagues from the Geodesign Lab at Vrije University Amsterdam, and the focus of these efforts will be to develop a sustainable revitalization plan for the commercial and residential neighborhoods in the borough of Amsterdam-Zuidoost (Amsterdam Southeast).

### **Technological Proficiency and Hardware/Software Required**

Students do not need to have prior experience with GIS software. The modeling software and geospatial data required for course assignments will be accessed using computing resources provided by the Spatial Sciences Institute and Vrije University. Instead, every student must have the following technology requirements:

- A computer with a fast Internet connection.
- An up-to-date web browser to access the GIST Server

If you have difficulty meeting either of these requirements, please speak with the instructor at the start of the course.

### **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 points): 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 geodesign project.

Reading Assignments (16 points): 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 (15 points): You will be required to participate in all activities for the course, each weekday (Mon – Fri) of the field experience.

Field Geodesign Case Study (14 points): You will complete a case study in small groups in collaboration with colleagues from Vrije University Amsterdam. This will incorporate the field activities and analysis. The case study will culminate in a short presentation.

Field Experience Story Map (15 points): You will create and present an online Story Map that illustrates activities, observations, reflections, and key locations of the field experience.

Capstone Geodesign Project (30 points): You will produce a research paper (3,000 – 4,000 words) and final oral presentation on the research that integrates course concepts and case studies on Geodesign, while proposing a specific Geodesign strategy in Los Angeles County.

### Grading Breakdown

Assignment	# of Assignments	Total Points
Oral presentation – topic proposal	1	10
Reading Assignments	4	16
Field Activities	10	15
Field Geodesign Case Study	1	14
Field Experience Story Map	1	15
Capstone Geodesign Project	1	30
<b>TOTAL</b>	<b>18</b>	<b>100</b>

### Assignment Submission Policy

Assignments will be submitted for grading via Blackboard using the due dates specified in the Course Schedule below. 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. No work will be accepted for grading after 5 pm PT on the last day of the PWP session.

### Additional Policies

Students are expected to attend and participate in a mandatory orientation session, every class session, and to complete and upload all assignments before the deadlines detailed in the Course Schedule.

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

	Topic	Readings and Assignments	Deliverables/Due Dates
<b>Week 1</b> 5/28* Monday is a university holiday	<b>Module 1: Core Concepts of Geodesign:</b> The first week of the course will be held on the USC campus in the Allan Hancock Foundation (AHF), room 145D Tues – Fri, 10am-12pm. Students will be introduced to core concepts of geodesign through a combination of lectures, readings, discussions, and hands-on activities.	Miller (2012); Dangermond (2009); Steinitz (2012)	Complete by Friday 5/31: Reading Assignment 1; Reading Assignment 2; Oral Presentation
<b>Week 2</b> 6/3	<b>Module 2: Self-directed Research</b> The second week of class 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 component of the course. Work tasks for Module 2 will be completed independently and can be accomplished from home or while traveling abroad.	Shorto (2013)	Complete by Friday 6/7: Reading Assignment 3; Reading Assignment 4

	Topic	Readings and Assignments	Deliverables/Due Dates
<b>Weeks 3 &amp; 4 6/8 – 6/22</b>	<b>Module 3: Field Experience – The Netherlands</b> 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 with the Vrije Univeristy Geodesign Lab. The case study will focus on sustainable revitalization for the residential and commercial sectors in the borough of Amsterdam-Zuidoost.	Time spent during the field experience will involve: 1) Lectures, field trips, and field work (est. 4 hrs/day); 2) Independent study time (est. 2 hrs/day); and 3) Personal/ recreation time.	
	<p><u>The following represents the tentative schedule of the field experience:</u></p> <p><i>June 8:</i> Arrive in Amsterdam, NL – check-in to The Student Hotel</p> <p><i>June 9:</i> Tour of Amsterdam – guided bicycle tour; historical and cultural appreciation (11am – 3pm)</p> <p><i>June 10:</i> Visit to Vrije University (VU) – meet with Prof. Niels van Manen, introductions, tour of Geodesign Lab, and context building (10am – 4pm)</p> <p><i>June 11:</i> Excursion to Amsterdam-Zuidoost- stakeholder meeting and examination of geodesign case study site (10am – 5:30pm)</p> <p><i>June 12:</i> Visit to Geodan – presentations by geodesign experts – spatial questionnaire (9:30am – 1pm)</p> <p><i>June 13:</i> Field work (10am – 5pm)</p> <p><i>June 14:</i> Field trip to Rotterdam: tour of living lab and talk (1pm – 7:30pm)</p> <p><i>June 15:</i> Field trip to Rijksmuseum (museum of Amsterdam)</p> <p><i>June 16:</i> Free day</p> <p><i>June 17:</i> Field trip to TU Delft – learn about geodesign theory and practice in the Netherlands. After enjoy a traditional canal tour (10am – 2pm)</p> <p><i>June 18:</i> Sustainable economic development and revitalization (9am – 5pm)</p> <p><i>June 19:</i> Geodesign case study – first design iteration at the VU Geodesign Lab (10am – 4pm)</p> <p><i>June 20:</i> Geodesign case study – second design iteration at the VU Geodesign Lab (10am – 4pm)</p> <p><i>June 21:</i> Geodesign case study – final design iteration and course reflection at the VU Geodesign Lab (10am – 4pm); closing dinner (6pm – 8pm)</p> <p><i>June 22:</i> Check out of The Student Hotel</p>		

	Topic	Readings and Assignments	Deliverables/Due Dates
<b>Week 5</b> 6/24	<b>Module 4: Capstone Project and Reflections on Geodesign</b> The course resumes on the USC campus (AHF 145D) to provide critical reflections on course concepts, the field experience, and the final presentations for the course capstone research project. Class meetings will be held Mon – Fri, 10am-12pm.		Complete by Friday 6/28: Field Experience Story Map; Geodesign capstone 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 Part B, Section 11, “Behavior Violating University Standards” [policy.usc.edu/scampus-part-b](http://policy.usc.edu/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>.

### **Support Systems**

*Student Counseling Services (SCS)* – (213) 740-7711 – 24/7 on call  
[engemannshc.usc.edu/counseling](http://engemannshc.usc.edu/counseling)

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

*National Suicide Prevention Lifeline* – 1 (800) 273-8255 – 24/7 on call  
[www.suicidepreventionlifeline.org](http://www.suicidepreventionlifeline.org)

Provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.

*Relationship and Sexual Violence Prevention Services (RSVP)* – (213) 740-4900 – 24/7 on call  
[engemannshc.usc.edu/rsvp](http://engemannshc.usc.edu/rsvp)

Free and confidential therapy services, workshops, and training for situations related to gender-based harm.

*Office of Equity and Diversity (OED)/Title IX Compliance* – (213) 740-5086  
[equity.usc.edu](http://equity.usc.edu), [titleix.usc.edu](http://titleix.usc.edu)

Information about how to get help or help a survivor of harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants. The university prohibits discrimination or harassment based on the following protected characteristics: race, color, national origin, ancestry, religion, sex, gender, gender identity, gender expression, sexual orientation, age, physical disability, medical condition, mental disability, marital status, pregnancy, veteran status, genetic information, and any other characteristic which may be specified in applicable laws and governmental regulations.

*Bias Assessment Response and Support – (213) 740-2421*

<https://titleix.usc.edu/reporting-options/>

Avenue to report incidents of bias, hate crimes, and microaggressions for appropriate investigation and response.

*The Office of Disability Services and Programs – (213) 740-0776*

[dsp.usc.edu](http://dsp.usc.edu)

Support and accommodations for students with disabilities. Services include assistance in providing readers/notetakers/interpreters, special accommodations for test taking needs, assistance with architectural barriers, assistive technology, and support for individual needs.

*Student Support and Advocacy – (213) 821-4710*

[studentaffairs.usc.edu/ssa](http://studentaffairs.usc.edu/ssa)

Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

*Diversity at USC – (213) 740-2101*

[diversity.usc.edu](http://diversity.usc.edu)

Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

*USC Emergency - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call*

[dps.usc.edu](http://dps.usc.edu), [emergency.usc.edu](http://emergency.usc.edu)

Provides safety and other updates, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

*USC Department of Public Safety – - UPC: (213) 740-6000, HSC: (323) 442-120 – 24/7 on call*

[dps.usc.edu](http://dps.usc.edu)

Non-emergency assistance or information.