Pennsylvania State University
World Campus

GeoDz 511: Geodesign History, Theory, and Principles

Spring 2017

Course URL: https://courses.aanda.psu.edu/geodz511/
CANVAS URL: http://canvas.psu.edu/

Course Instructor: Caitlin Smith [ccs195@psu.edu]
Instructor Office Hours: By appointment. Please just ask!

Prerequisites
None

Course Description

GeoDZ 511 introduces the fundamental theory, concepts, and frameworks of geodesign. Dr. Carl Steinitiz's framework for geodesign and Ian McHarg's design work provide the foundation for students to explore historic and contemporary methods of designing in geographic space. Throughout the course students will become familiar with the geodesign process by reviewing case studies, engaging in dialogues with colleagues, and by completing weekly assignments. Each week the course material will be communicated through five (5) different methods:

- Core reading materials
- Lesson narratives
- Weekly assignments
- Independent research
- Instructor led peer-to-peer discussion

Students will demonstrate an understanding of the material by using the geodesign process to develop a Preliminary Model Scope for a place and problem chosen by the student.

Required Texts

- Steinitz, Carl. *A Framework for Geodesign: Changing Geography by Design*. ESRI Press. 2012.
- McHarg, Ian L. *Design with Nature.* John Wiley & Sons Inc. New York. 1992.

Other texts, articles, etc. will be provided through the PennState CAT (cat.libraries.psu.edu)

Course Objectives

By the end of this course, you should be able to:

- Define "geodesign" and its goals.
- Identify a geographic problem and propose a method for solving the problem.
- Describe the basic historic and contemporary foundations of geodesign theory.
- Demonstrate a working knowledge of the geodesign process.
- Explain the role of collaboration in the geodesign process.
- Develop a portfolio of geodesign literature.

Course Evaluation

Geographic design is an inherently visual and communicative process. As such, all assignments will be submitted as pdfs in CANVAS. Each assignment is expected to include a series of pages that use a combination of text, images (maps, photos, sketches, etc.), and/or other media to best communicate the objectives of the assignment. It is important that you continue to develop your own way of clearly communicating key concepts using ***both*** written and visual techniques.

** Late Assignment Policy

This course moves at a very fast pace. Assignments that are submitted late affect both your ability to receive timely feedback and your preparedness for the following assignment. As such, late submissions have significantly more penalty than can be conveyed through a grade deduction. However, ***late submissions will be assigned a 10% deduction. The course instructor will not review assignments submitted more than one week after the original submission date.***

2% Orientation Quiz

Becoming familiar with the course format and websites is essential to your success. Prior to the beginning of the semester an orientation quiz will be available via the CANVAS website. The quiz tests your familiarity with the software and course structure.

23% Lesson Assignments

Assignments will generally consist of 2-3 questions related to the lesson. Each assignment is a critical building block of the Preliminary Model Scope. Evaluation is based on:

30%	Comprehension	Is it clear that the student understands the material?
30%	Application	Is the student able to apply the concept(s) to a problem?
30%	Articulation	Does the student clearly communicate concepts? *Note: this includes spelling, grammar, formatting, etc.*

The remaining 10% of your grade will be awarded for assignments that are submitted complete and on time.

10% Issue Proposal

The Issue Proposal is a significant checkpoint in the course. It is an opportunity for the student to justify that the area of interest they have selected is appropriate for the geodesign process.

Students will submit a short proposal that 1) briefly describes their area of interest (AOI) and clearly defines the problem; 2) explains why they have chosen this place and problem; and 3) generally describes the science or theory of the problem. Literature, case studies, or other media supporting the proposal and will be cited with a bibliography. (Student may use any standard citation method).

45%	Background	Is the place and problem adequately described (see above)?
15%	Literature Review	Is the proposal supported using relevant research?
15%	Articulation	Does the student clearly communicate the proposal? *Note: this includes spelling, grammar, formatting, etc.*
10%	Motivation	Is the motivation for choosing the place clear?
5%	Citation	Is the paper cited using a standard format with a bibliography?

The remaining 10% of your grade will be awarded for assignments that are submitted complete and on time.

45% Preliminary Model Scope

The Preliminary Model Scope outlines 1) the problem that you have identified in the Issue Proposal paper and 2) how you propose to study it. Development of the Model Scope is a continual process that starts the first week of the course. It is expected that much of the Model Scope content will be developed through individual lesson assignments, but also that a significant contribution will come from independent research conducted throughout the course.

The Model Scope focuses on the first iteration of the geodesign framework (i.e.: your ability to plan a strategy for addressing a geographic problem). Each of the six model types in all three iterations of the framework must be considered, but you do not need to include a detailed description of each model. Images, diagrams, and maps are encouraged if they help to describe the plan, but technical modeling and processing are not required. The Model Scope will be supported by citations and a bibliography. (Student may use any standard citation methods). At a minimum, the plan will:

- Identify a clear design problem;
- Identify a strategy for solving the problem (offensive or defensive, exploratory or anticipatory);
- List the geodesign team members and why they were selected;
- List of project stakeholders (decision-makers) and why they were included.
- Describe a how each step of Stenitiz's framework *sequentially* works together to study your specific problem;

Many of these elements will be addressed in lesson assignments. However, it is expected that the Model Scope will greatly exceed what has been presented in previous assignments in both depth and quality of understanding.

5%	Background	Are the place and problem adequately described?
5%	Problem	Are the problem and the issues clearly described?
15%	Strategy	Does the design strategy address the problem?
35%	Method	Is it clear how the individual models work together?
15%	Team-building	Is there a rationale and explanation for selected team members?
10%	Stakeholders	Is there a list and explanation of stakeholders provided?
10%	Articulation	Does the student clearly communicate key concepts? *Note: this includes spelling, grammar, formatting, etc.*
5%	Citation	Is the paper cited using a standard format with a bibliography?

20% Collaboration

Collaboration is a key part of the geodesign process. Collaboration is an opportunity for students to share ideas and dialogue with their peers. You will be expected to contribute regularly (several times a week) to the groups and maintain an on-going conversation with your peers.

Twice during the semester, once ***after submitting the Issue Proposal Assignment***, and once the week ***before submitting the Preliminary Model Scope***, you will be expected to peer review your classmate's work. The instructor will set-up discussion and peer review threads in CANVAS.

Students will be evaluated on the quality, insight, and productivity of their contributions.

40%	Consistency	Does the student consistently contribute to the conversation?
30%	Quality	Is the discussion grounded in a theoretical foundation?
30%	Response	Does the student acknowledge and respond to other students?

Course Grades

A	90% - 100%
B	80% - 89%
C	70% - 79%
D	60% - 69%
F	< 60%

Course Schedule

All assignments should be complete and submitted to CANVAS by 11:59pm on Sunday night. The instructor will generally provide feedback on each assignment within 48hrs of the submission date. A full course calendar of assignment and peer review due dates is attached to the syllabus. A typical week is outlined below, with the course calendar following:

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
New lesson narrative		Mid-week instructor check-in of discussion Peer Review Due (weeks 5 & 8 only)			Work on lesson assignment / independent research for Model Scope Assignment Due Sunday @ 11:59pm	

January 2017

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
9 Course Orientation Module 1	10	11	12	13	14 Independent AOI Research	15 Orientation Quiz Due Introduction post + Assignment 1
16 Module 2	17	18	19	20	21 Independent AOI Research	22 Assignment 2
23 Module 3	24	25	26	27	28 Independent AOI Research	29 Assignment 3
30 Module 4	31	1	2	3	4 Independent AOI Research	5 **Assignment 4: Issue Proposal**

February/March 2017

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
6 Module 5	7	8 Peer Review of Issue Proposal	9	10	11 Independent AOI Research	12 Assignment 5
13 Module 6	14	15	16	17	18 Independent AOI Research	19 Assignment 6
20 Module 7	21	22	23	24	25 Independent AOI Research	26 **DRAFT Model Scope**
27 Module 8	28	1 Peer Review of Draft Scope	2	3	4	5 **FINAL Model Scope**

Course Delivery Format

This course will be delivered entirely online. There are no face-to-face class sessions. Be sure to go through the Getting Started module thoroughly to prepare yourself for how this course will operate and what is expected of you. In short, the course is Web-based. It makes extensive use of Penn State's Learning Management System called CANVAS for discussion activities, assignment submissions, and grade reporting. The course Web pages reside outside CANVAS and supply you with most of the course content, directions, media, and activities you will need. The Getting Started module will explain the delivery format in more detail.

Technical Requirements

Operating System

Windows 2000/XP or Vista, Mac OS X 10.2 or higher (10.3 or higher recommended)

Web browser

Mac OS X: Firefox, Safari (current version) Windows: Firefox, Safari, Internet Explorer (current version) Firefox and Safari are preferred as they will provide the fastest experience possible for e-Learning Institute courses. Due to nonstandard handling of CSS, JavaScript and caching, we do not support using Internet Explorer 6 as your browser.

Other Requirements

- Adobe Flash Player 9 or later
- A minimum of 256 MB of RAM
- GHz or higher processor
- 500 MB of available (a.k.a "free") hard disk storage is recommended
- Broadband (cable or DSL) connection required

Note

Cookies, Java, and JavaScript must be enabled. Pop-up blockers should be configured to permit new windows from Penn State web sites.

Academic Policies

Academic Integrity

According to the Penn State Principles and University Code of Conduct: Academic integrity is a basic guiding principle for all academic activity at Penn State University, allowing the pursuit of scholarly activity in an open, honest, and responsible manner. In according with the University's Code of Conduct, you must not engage in or tolerate academic dishonesty. This includes, but is not limited to cheating, plagiarism, fabrication of information or citations, facilitating acts of academic dishonesty by others, unauthorized possession of examinations, submitting work of another person, or work previously used without informing the instructor, or tampering with the academic work of other students. Any violation of academic integrity will be investigated, and where warranted, punitive action will be taken. For every incident when a penalty of any kind is assessed, a report must be filed.

Affirmative Action & Sexual Harassment

The Pennsylvania State University is committed to a policy that all persons shall have equal access to programs, facilities, admission, and employment without regard to personal characteristics not related to ability, performance, or qualifications as determined by University policy or by Commonwealth or Federal authorities. Penn State does not discriminate against any person because of age, ancestry, color, disability or handicap, national origin, race, religious creed, sex, sexual orientation, or veteran status. Direct all inquiries to the Affirmative Action Office, 211 Willard Building.

An Invitation to Students with Learning Disabilities

Penn State welcomes students with disabilities into the University's educational programs. If you have a disability-related need for modifications or reasonable accommodations in this course, contact the Office for Disability Services, ODS (located in 116 Boucke Building, 1-814-863-1807 (V/TTY). For further information regarding ODS please visit their web site at: www.equity.psu.edu/ods.

Instructors should be notified as early in the semester as possible regarding the need for modification or reasonable accommodations. Since many students have disabilities not readily noticeable this announcement or statement encourages students to identify their needs early in the semester so timely adaptations can be made. You may refer to the Nondiscrimination Policy in the Student Guide to University Policies and Rules.