

GEODZ 852

Geodesign Studio II: Urban/District-scale Challenges

Course URL: <https://psu.instructure.com/courses/1910493>

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Course Description

This course continues the student experience of learning in a problems-based, collaborative studio environment. The course builds upon the first studio experience. In GEODZ 852 students will be asked to apply the geodesign framework approach to real-world land design and planning challenges at a smaller, more detailed scale. The course focuses on the complexity of urban and district-scale landscape change issues. The studio format provides the closest approximation to a professional setting where multiple consultants and stakeholders collaborate on the process.

Major Topics

GEODZ 852 is a 14-week session. There will be approximately 6.5 contact hours/ week. The studio learning process is iterative, so major topics are not tied to a specific point in the class, but rather are reinforced and revisited throughout the course. The major topics to be addressed are:

- **Studio method:** Build capacity for creativity through the iterative, collaborative nature of a design- and problems-based learning approach.
- **Evidence-based problems:** Formulate the details of the specific challenge through science and values-based investigation. In this course, the topics will focus on issues of urbanization as opportunity.
- **Decision-drive method:** Address paradox of the overabundance of knowledge by distinguishing what data and information are relevant to a challenge.
- **Spatialization of knowledge:** Recognize how spatial understanding of the future of a place is possible by envisioning feasible alternatives grounded in appropriate data.
- **Systems thinking:** Focus on networked human and natural ecosystems and comprehension of the series of interconnections and profound implications if changes occur.
- **Design Alternatives:** Develop sustainable, long-term design solutions that balance the creative and scientific processes in conjunction with relevant data and community desires.

This course will advance your skills in the collaborative geodesign process to address complex, problems-based urban design systems. Every urban area is part of a larger context, its region. This studio builds upon the knowledge about critical regionalism covered in the first studio, GEODZ 842. In GEODZ 852 the approach to understanding and addressing challenges in a place will take the student from the regional scale down to the complexity of landscape change issues embedded in urban and urbanizing areas. The process is comprehensive and considers the myriad factors that influence place, such as the environmental, economic, and cultural systems. Students will utilize and build upon a substantial amount of previous coursework and resources. The main assignment, the studio project, will be rooted in current topics and real-world challenges, and often the course will have a stakeholder entity or public audience interested in the outcomes.

The issues that may be addressed in this course reflect the diverse applications of design in urban settings. Cities face a variety of future challenges, such as outward migration and population decline in some places, while others face population growth due to rural-to-urban or climate induced migration. Other pressing issues include resource scarcity, access to clean air, water and open spaces, siting urban infrastructure, climate change impacts, weighing economic growth with cultural preservation, and the like. These require creative planning or design solutions to balance the complexity of factors and competing interests.

This is the second studio course and continues exposure to an approach that closely approximates a professional setting where multiple consultants and stakeholders collaborate on the geodesign process. In the studio, all students are responsible for exploring concepts and probing the ideas from a holistic, collaborative approach. Everyone contributes his or her own ideas and knowledge, but it is the role of a studio to explore and resolve these ideas as a group, to test and retest all ideas. A studio goes beyond a class discussion-- it is a special environment for unique intellectual and creative activity. The exchange of ideas is focused on a topic and aimed primarily at gaining a deeper understanding of the issues and opportunities, with the goal being to design sustainable alternative solutions to the problem.

Instructional, educational, and course objectives:

Students who successfully complete this course will be prepared to:

1. Identify and synthesize the dynamic components of planning and design in cities, including the interrelationships of natural, cultural and economic factors on past, present and future designs.
2. Demonstrate the importance of balancing creative and scientific processes and their influence on geodesign solutions.
3. Approach a problem from a position of improved procedural knowledge (e.g., critical thinking, problem solving, spatial reasoning)
4. Consider urbanization as opportunity; judging the prospects for how effective urbanization can enhance community stability while addressing key environmental and economic factors.

5. Develop a collective understanding of other disciplines, the multidisciplinary geodesign process, and how different specialists engage and intersect with one another.
6. Demonstrate effective leadership in collaborative, transdisciplinary teams.
7. Apply a working knowledge of geospatial modeling tools that assess, visualize, and compare social, economic, and environmental consequences of design configurations over time.

Course Organization

From the sprawling beaches to the historic ruins, Jekyll Island is a beautiful blend of serenity and discovery. Situated within the chain of the Golden Isles, Jekyll Island is just a few miles from St. Simons Island, Sea Island and Brunswick. As a state park, Jekyll Island is a coastal haven where nature and humans peacefully co-exist.

From the moment you see the turtle crossing signs, you'll know you've arrived somewhere special. A canopy of live oaks will draw you in. Stories of lavish lawn parties will pique your curiosity. Driftwood skeletons will forever be etched in your memory. Whether it's through an ancient maritime forest or along our newly updated oceanfront promenade, every path leads to a unique experience you'll only find here.

From the early Native Americans to guests from around the world, the story of the island has been captivating the imaginations of explorers for generations. In 1733, General James Oglethorpe named Jekyll Island in honor of Sir Joseph Jekyll, his friend and financier from England. In the late 1800s, Jekyll Island became an exclusive hunting club for families with names like Rockefeller, Morgan, Vanderbilt, Pulitzer, and Baker. The once private retreat is now part of The Jekyll Island Club National Historic Landmark District, one of the largest preservation projects in the southeast.

In 1947, the Governor and the Georgia General Assembly established Jekyll Island as a state park. Today, the island is a special sanctuary for each of us – and the Jekyll Island Authority (JIA or Authority) is proud to protect, preserve, and share this island.

The JIA oversees the conservation, development and management of Jekyll Island and relies on operating revenues from leases, fees, and island amenity operations. Jekyll Island does not receive any tax revenues for its operation. Georgia law controls the allowable development of Jekyll Island and mandates that Jekyll Island operate in a financially self-sufficient manner.

JIA mission: As stewards of Jekyll Island's past, present and future, they are dedicated to maintaining the delicate balance between nature and humankind. Their pursuit of balance is guided by the Jekyll Island Authority Master Plan, which was approved by the Georgia General Assembly as well as the JIA Board in 2014, and the Jekyll Island Authority Conservation Plan, approved by the JIA Board in 2011.

Tasks

The class will complete the following tasks:

1. Review materials
2. Jekyll Island.
3. Inventory and analyze existing data for Jekyll Island.
4. Research other barrier islands.
5. Analyze opportunities and constraints for Jekyll Island.
6. Develop strategies for conservation planning, resource management, open space, transportation alternatives, development, climate change, etc.
7. Develop suitability maps using ArcMap and GeoDesign Hub.
8. Develop site design strategies based on defined goals and objectives using GeoPlanner.
9. Use City Engine to develop site designs.