



Cape Coral, Florida, 2012. Photograph: Edward Burtynsky, courtesy Nicholas Metivier, Toronto / Flowers, London

ARC 4323 – Advanced Architectural Design 8
LAA 6656c – Advanced Landscape Architectural Design Studio
URP 6341 – Urban Planning
Location – Arc 415 and 417
Periods 7-9 (1:55-4:55) M, W, F
Spring 2023

The National Academies of
SCIENCES
ENGINEERING
MEDICINE
GULF RESEARCH PROGRAM

Canvas website: <https://ufl.instructure.com/courses/470923>

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National Academies of Science (NAS) GulfSouth Studio Overview

Starting where the Caribbean tides lap at Key West’s mangrove shore and stretching to the white sand beaches of the Florida Panhandle, the Florida Gulf Coast is 707 miles of richly diverse, abundantly productive, and persistently threatened landscape. Historian Jack Davis aptly called the Gulf of Mexico “the American Sea,” and it embodies many American contradictions: it is an ecological treasure threatened by urbanization and industry, a landscape of transient occupation that has been continuously inhabited for millennia, a tranquil environment with the propensity for unimaginable fury.

This interdisciplinary design studio is sponsored by the National Academies of Science (NAS) Gulf Research Program (GRP).¹ The **GulfSouth Studio** explores the critical challenges facing the Gulf of Mexico’s coastline and communities in the context of a changing climate including energy transition, changing Gulf Coastline, and community health and resilience. It approaches these challenges through intensive design thinking, community engagement, and digital visualization. The studio explores the development of a “digital twin for design” to synthesize diverse research outputs and teaching methods from across a range of disciplines.

Slow Destruction – Rapid Disaster

In October 2022, Hurricane Ian made landfall in Southwest Florida near Fort Myers. While devastating Florida’s southwest coast, Hurricane Ian impacted thousands across Florida with insured losses reaching \$12.5 billion.² The storm laid waste to Fort Myers Beach and Sanibel Island before sending massive storm surge up the Caloosahatchee River and into the low lying back yards of thousands of residents in Cape Coral and the city of Ft. Meyers. **However, the region’s vulnerability was building long before the storm.** Lee County is the second-fastest growing county in Florida, as well as the ninth fastest growing county in the U.S (2021). For decades the region’s unabated pattern of sprawling development has provided low-density housing at tremendous cost to coastal ecosystems, civic institutions,

¹ National Academies of Science Gulf Research Program, <https://www.nationalacademies.org/news/2022/09/the-gulf-research-program-announces-support-for-regionally-focused-architectural-studio-design-courses-at-five-universities>

² Florida Office of Insurance Regulation, 12/21/22, <https://floir.com/home/ian>

and public infrastructure. Hurricane Ian exposed the fragility of this built environment but the foundations for catastrophe were constructed over generations.



“Cape Coral, Florida.” Angelo Cario. (<https://www.facebook.com/photo/?fbid=2957298514549102&set=pcb.3979279848823041>)

Studio Purpose: Transforming Suburban Florida through Resiliency + Recovery

This design studio investigates the multi-scalar relationship between land-use patterns, architectural form, housing, infrastructure, water, and ecological conditions of the greater Ft. Meyers metropolitan area in the context of its vulnerability to disasters. Multi-disciplinary teams will focus on the city of Cape Coral, a poster child for Florida’s rampant post World War II suburban development, to further understand these systems at the scale of city and neighborhood. The studio will propose a series of “suburban retrofits” to envision radical urban transformation to achieve greater resilience, equity, and sustainability across a range of possible future conditions. Through a series of architectural designs, landscape infrastructures, planning and policy interventions, as well as multimedia tools to reimagine a transformed “civic core,” each team will visualize and communicate, at a range of scales, different possible futures for the study area, which will culminate in the creating of an interactive “digital twin” on the Unreal Engine (UE) platform.

Studio Methodology

The studio is unique for its emphasis on iterative ideation, drawing, making, testing, critiquing designs in collaborative teams. We will engage deeply and meaningfully with a challenging set of social and environmental conditions. We will bridge across the fields of architecture, landscape architecture, urban and regional planning, as well as journalism and sustainability to explore complex challenges from many perspectives. Projects will require site visits, site documentation, research, data collection, interviews, drawing, modeling, writing, and other explorations to guide you to take a position on a problem and develop a proposition for a more resilient city.

The course will take a deep dive into the Unreal Engine (UE) to form the basis of a “digital twin” and virtual platform for exploring and understanding the site, testing design ideas, and visualizing possible future conditions. Each discipline will contribute in different ways using tools that are familiar (such as Adobe Creative Suite, Rhino, AutoCad, ArcGIS, or others) but all students will use the UE in the process of building the digital twin.

Course Objectives

- To engage in complex, current issues shaping societal response to increasing development pressure, changing coastal environments, and rising flood risks
- To develop a design-research question, conduct novel research, and test through design, planning, and policy scenarios
- To distill and synthesize relevant, research-based information in the making of well-informed alternatives
- To envision possible futures at the scale of a building, parcel, neighborhood, landscape and/or city, and gauge the effects on community resilience and climate adaptation
- To incorporate new technologies (Unreal Engine) into design and planning processes

Attendance Policy, Class Expectations, and Make-Up Policy

The studio meets 3 days per week M, W, F from 1:55-4:55pm. *It is expected that you are in studio for the duration of class and working.* Studio culture will be intense, interactive, and engaged. Perhaps it will be more office-like than you are used-to! We are going to ask for your full attention for the duration of studio so that we can maximize the time that we have as a group. The pace of the class will be fast and iterative. Teams of students across disciplines will tackle three assignments and success in the course will be based your willingness to engage each project with great imagination, collaboration, curiosity, and ambition.

Attendance is mandatory. Three or more unexcused absences may result in an administrative drop from the course. Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies.³

Assessment + Grading

Assignments	Course Week	Estimated Dates	% of Grade
Project 1	Week 1 – 3	1/09 – 1/25	15%
Project 2	Week 3 – 5	1/27 – 2/08	15%
Project 3	Week 5 – 16	2/10 – 4/26	60%
Participation	Week 1 – 16	ongoing	10%

Grading will adhere to the University of Florida Grade Policy:

Letter Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E
Numeric Grade	100-93	92-90	89-87	86-83	82-80	79-77	76-73	72-70	69-67	66-63	62-60	59-0
Quality Points	4.0	3.67	3.33	3.0	2.67	2.33	2.0	1.67	1.33	1.0	0.67	0.0

Please see the [UF Grades and Grading Policies](#)⁴ for more information.

Course Evaluations

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via [GatorEvals](#)⁵. Guidance on how to give feedback in a professional and respectful manner is available here. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via [Bluera](#)⁶. Summaries of course evaluation results are available to students [HERE](#)⁷ as well.

³ UF Attendance Policies: <https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/>

⁴ UF Grades and Grading Policies: <https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>

⁵ GatorEvals: <https://gatorevals.gq.ufl.edu/students/>

⁶ Bluera: <https://ufl.bluera.com/ufl/>

⁷ GatorEvals results: <https://gatorevals.gq.ufl.edu/public-results/>

attachment 1: university policies + resources

Academic Misconduct

UF students are bound by The Honor Pledge which states:

"We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: 'On my honor, I have neither given nor received unauthorized aid in doing this assignment.' The [Honor Code](#)⁸ specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor."

The Honor Code specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Academic Resources

- [Career Connections Center](#)⁹- career assistance and counseling. Reitz Union, 392-160.
- [Library Support](#)¹⁰- various ways to receive assistance with respect to using the libraries or finding resources.
- [Teaching Center](#)¹¹- general study skills and tutoring. Broward Hall, 392-2010 or 392-6420.
- [Writing Studio](#)¹²- help brainstorming, formatting, and writing papers. 302 Tigert Hall, 846-1138.

Accommodations

If a student has any limitations that might prevent him or her from meeting the requirements of this course, they are asked to notify the instructor. Support services for students with disabilities are coordinated by the [Disability Resource Center](#)¹³ (352-392-8565) in the Dean of Students Office. Students requesting accommodations should first register with the Disability Resource Center by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. (There is no requirement for a student to self-identify his/her disability to the instructor.) It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

Counseling + Wellness Resources

Students experiencing crisis or personal problems that interfere with their general well-being are encouraged to utilize the University's counseling resources. The Counseling & Wellness Center (CWC) provides confidential counseling services at no cost for currently enrolled students. The CWC is located at 3190 Radio Road. For further information on services, making appointments, and emergency or after-hour assistance call the CWC at 321-392-1575 or on the [web](#)¹⁴.

Distance Learning Privacy Policy

Our class sessions may be audio visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

In-Class Recording

⁸ Honor Code: <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>

⁹ Career Connections Center: <https://career.ufl.edu/>

¹⁰ Library Support: <https://cms.uflib.ufl.edu/ask>

¹¹ Teaching Center: <https://teachingcenter.ufl.edu/>

¹² Writing Studio: <https://writing.ufl.edu/writing-studio/>

¹³ Disability Resource Center: <https://disability.ufl.edu/>

¹⁴ Counseling & Wellness Center: <https://counseling.ufl.edu/>

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code. Learn more at the In-Class Recoding [FAQS](#).¹⁵

Religious Holidays

At the University of Florida, students and faculty work together to allow students the opportunity to observe the holy days of their faith. A student should inform the faculty member of the religious observances of their faith that will conflict with class attendance, with tests or examinations, or with other class activities prior to the class or occurrence of that test or activity. Because students represent a myriad of cultures and many faiths, individual students should make their need for an excused absence known in advance of the scheduled activities. More info [here](#).¹⁶

Software Use

All faculty, staff, and students at the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

Student Complaint Process

Each online distance learning program has a process for, and will make every attempt to resolve, student complaints within its academic and administrative departments at the program level. If you are unsure about who to contact at the program level, please email distance@dce.ufl.edu and a member of the distance learning staff will forward your complaint to the appropriate UF administrative authority. You can find more information [here](#).¹⁷

Student Privacy

There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see the [Notification to Students of FERPA Rights](#).¹⁸

U Matter, We Care

Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at [352-392-1575](tel:352-392-1575). The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing Staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

¹⁵ UF In-Class Recording FAQs: <https://aa.ufl.edu/policies/in-class-recording/#:~:text=Students%20may%20audio%20or%20video,students%20about%20a%20particular%20subject>.

¹⁶ UF Religious: <https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/#religiousholidaystext>

¹⁷ Distance Learning: <https://distance.ufl.edu/student-complaint-process/>

¹⁸ Notification to Students of FERPA Rights: <https://registrar.ufl.edu/ferpa/>