Digital fabrication and construction technologies are enabling designers and makers to experiment with new design methodologies. The course will explore the relationship between technology and fabrication in the context of the public realm and seek new territories for exploration. We will analyze public realm projects that create engaging public spaces and the fabrication strategies behind them as well as propose and build new prototypes for future public spaces. The focus for this semester will be on the fabrication of a group installation hosted on the University of Miami Campus.
The **fourth industrial revolution** is characterized by the integration of technologies into everyday objects and blurring the boundaries between physical and digital realms. Information technology and automation converge in innovative ways and change our surrounding environment. We have “things” that measure and sense activities/changes and broadcast them to the rest of the world via a network. We call this the “**Internet of Things**” (IoT).

While IoT is penetrating every aspect of our lives, we, the architects, are slow in responding to this challenge! Smart cities, smart homes and smart personal devices are enveloping us, but we have yet to create many examples of “smart spatial design” or “smart architecture”.

Over the semester, students will analyze and define a pressing problem, learn **basic electronics** and **basic programming** with the goal to build a simple sequence of working IoT prototypes. No prior knowledge is needed.
THROUGH THE LENS OF CONSTRUCTION -
An in-depth analysis of the work of LOUIS KAHN and RAFAEL MONEO

PBL – Problem Based Learning

Prof. Edgar Sarli
Class hours: Tuesdays 5:05 – 7:50 PM
Number of Credits: 3

The oeuvre of these two architects has stemmed from an alternative approach to mainstream contemporary currents. They have both advocated for an architecture related to place and connected to history. We will study the evolution of their work placing emphasis on their understanding of architecture as closely related to the art of building.

Teaching Modality – Problem-Based Learning
The center of this class is the student. The selected projects by Kahn and Moneo will be a mirror in which students could examine their own design strategies and answers to critical questions we must address as architects. Through Problem Based assignments, students will understand and evaluate relevant specific and universal characteristics of selected projects that will allow students to formulate their own positions. Digital resources, games, group discussions and presentations by faculty and students will provide a foundation for collective, as well as individual learning and development.
The goal of this historic preservation course is to familiarize students with the foundational concepts, principles, and history of cultural heritage stewardship. The course provides a general introduction to the history and theory of historic preservation and includes examples of cultural heritage stewardship fundamental to the engagement of cultural resources, planning and management. Instruction is conducted in a lecture and seminar format. Learning resources include selected readings and require that students come prepared to engage in class discussions and debate the topics of each assignment.
This course examines the emergence and development of the city, with a specific emphasis on how urban forms are created and transformed over time and are invested with cultural meaning through architecture and building typology. The survey begins with the development and evolution of urban form in the ancient world, and the contraction and reconfiguration of the cities of antiquity in early medieval times and in the Muslim world and the East. We will examine the impact of American colonization and the encounter between the Renaissance dreams of order and the pre-Columbian civilizations. Lectures and readings will then consider the evolution of the city from the Baroque period, when the process of global urbanization is rekindled, until the Industrial Revolution. The course ends with new theories about the city leading up to the start of the 20th century.
The City of Coral Gables will celebrate its centennial in 2025. In anticipation of a variety of historical and cultural exhibits associated with the founding and building of the city, this course will engage in a documentation of the urban and architectural legacy of the city’s VILLAGES. In collaboration with the Coral Gables Museum, students will conduct historical research, analyze available documentation, and compose an interpretative exhibit through drawing, that aims to highlight the city’s timelessness. Subjects may include unbuilt and built villages including the original seven: Chinese Compound, Dutch South African, Florida Pioneer (Colonial), French City, French Country, French Normandy, and Italian Country Villages.

Fall 2024
ARC 518-618
Documentation of Historic Architecture
Tuesdays 5:05 pm - 7:50 pm
Ricardo Lopez
From simulating forces of physics to visualizing precise climate data, computational tools are enabling the architect to do more and to think differently. Beyond stylistic expressions, these tools allow for a highly efficient workflow that is becoming a standard in today’s practice.

This introductory course to computational design will expose students to a parametric-based approach to architectural making. The course will involve the use of visual scripting tools for iterative design explorations and building performance analysis to both generate and evaluate design outcomes.

Students will work with several media including Grasshopper for Rhino3D, animation software, and fabrication tools to design a facade and pavilion prototype. In parallel, students will be exposed to different construction/assembly methods as well as experimental representation techniques.
ARC 581/681
Zoning and the Shaping of Cities

Fall 2024
Professor Elizabeth Plater-Zyberk

This course will introduce students to the history and contemporary practice of zoning regulations.

Within the larger regulatory context for community design and construction, zoning codes (as distinct from building codes) are a powerful public policy tool that shapes the form of cities. By guiding the quantity of building and open space, zoning determines the character and quality of public space. It also plays a significant role in the valuation of land.

There is a long history of regulating the built environment, responding to location and culture. Nineteenth century urban growth spurred the development of public regulation of private building. Health concerns related to light and air for building interiors, evolved to include height limits, separation of uses and density (potentially an exclusionary tactic), the addition of parking requirements, and so on. Today, zoning’s role in land value and segregation is widely recognized, and its ability to encourage affordable and inclusionary housing, and sustainability practices such as a pedestrian friendly urbanism, makes it a topic of public interest and activism that is often in the news.

The course will consist of a variety of presentations, readings, assignments, and discussions, encouraging students to explore their own specific interests in the subject.
The focus of this course is to teach students skills to successfully develop and communicate thought processes. We will start exploring “the line” as a mode of expression and carrier of meaning. Through "the line", students will be guided through didactic and challenging exercises exploring eye-hand coordination, gesture, space and composition. A wide range of drawing methods will be covered, allowing students to experiment and incorporate traditional and non-traditional approaches. Subject matter will alternate between figurative and still life, we will draw outside and inside the classroom, shift from dry to wet medium, as well as vary the size and scale of drawings. The course will focus on each student’s personal development, with the sole purpose of enriching their own creative explorations.
CONCEPTUAL STORYTELLING:
ITERATING VISUAL FORMS THROUGH COMPUTER-AIDED MEDIA

ARC 585/685 | CONCEPTUAL STORYTELLING
TIME: MONDAY’S | 6:35 - 9:20 PM

PROF. DONNIE GARCIA-NAVARRO + FLAVIA MACCHIAVELLO

COURSE INFO:
OPEN TO UPPER-LEVEL AND GRADUATE STUDENTS.
PRE-REQUISITES:
FAMILIAR WITH ADOBE ILLUSTRATOR, PHOTOSHOP & RHINO

* IN THE COURSE WE WILL LEARN: RHINO, ILLUSTRATOR, AFTER EFFECTS, PREMIER PRO, ENSCAPE, 3DS MAX

This course will explore the chronicles of a design conceptualization utilizing graphic techniques and amalgamated softwares. Visual representation in our field is vital to communicate an idea; showing vision, ideation and iteration are pivotal to express our designs as prototypes. Our designs, merging conceptualization and illustration will allow us to remain competitive both in school and in the profession.

AN ARCHITECT IS THE NARRATOR OF THE STORIES HAPPENING EVERYDAY. THESE STORIES ARE SHAPED BY THE SPACES WE IMAGINE, DRAMATIZED BY THE SOLUTIONS WE CREATE AND RESOLVED BY THE VISUALIZATION OF AN IDEA.
This course introduces the student to Geographic Information Systems (GIS) and how to apply GIS technologies in sustainable and resilient urban planning and architectural design contexts. Three principal activities will be emphasized: how to find, access, and use pre-existing GIS datasets; how to use industry standard tools such as ArcGIS and QGIS to perform basic analysis of geospatial data; and how to use ArcGIS and QGIS to transform and export geospatial data for use with applications such as Illustrator and AutoCAD to tell data driven stories with maps. A series of hands on lab based exercises will build student GIS skill sets and encourage students to produce materials applicable to real-world projects for their respective research projects or design studios. The one credit option is designed to provide a basic introduction to geographic information systems, to foster spatial literacy, and to generate skills that will enable students to engage in geospatial storytelling and advanced cartographic projects. The three credit option introduces tools to enable students in more advanced geospatial data analysis and visualization with a focus on sustainable and resilient urban design and planning.
ARC 581 | 681 HOUSES AND HOUSING
Theory and Practice: an unusual history

JAIME CORREA
Director Undergraduate Program in Architecture
Oct. 8 - Dec. 3 (2 credits)
Tuesday 2:00 - 4:45 pm
This elective course is designed to give students the opportunity to support the creation of entries for the many, interesting competition opportunities provided by organizations such as the American Institute of Architects (AIA), Society of American Registered Architects (SARA), the Association of Collegiate Schools of Architecture (ACSA), eVolo (Skycraper competition), International Design Award (IDA), etc. The students must comply with the rules, regulations, requirements and submission deadlines for the competition. Through different assignments students will learn how to create board layouts, diagrams, graphics, etc...for winning a competition and also for their final reviews. The format of the course includes: lectures, student presentations and desk crits. The class will conclude with a real submission of one or more competition entries.
**SACRED SPACE**

**ARC 589/689 & REL 244/JUS 301**

a 3 Credit Elective in Architecture and Religious Studies

Fall 2024 - Thurs, 5:05 – 7:50 pm, Sect QET1-HRK

Faculty: Prof. Denis Hector, School of Architecture
Dr. William Green, College of Arts & Sciences

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**SACRED SPACE** is distinct: it is non-ordinary, possessing the capacity to evoke wonder and awe. It connects us to dimensions beyond its physical boundaries.

**Content:** A cross-disciplinary seminar in Architecture and Religious Studies, **SACRED SPACE** explores the intersections of spirituality and architecture through case-studies of historic and contemporary structures rooted in diverse cultures, eras, and locations. Students and faculty from across the University question the experiential nature of sacred spaces to identify their character, relationships, and fundamentals. And ultimately, what do Sacred Spaces teach us about the role of architecture?

**Format:** This course is offered in the Harkness format which emphasizes discussion-based learning. Topics are explored through readings, discussion, and case studies. Over the course of the semester, students prepare case studies for group discussion.

**Questions:** Please contact Denis Hector, dhector@miami.edu
Dr. William Green, wgreen@miami.edu

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Clarity and Confusion are opposite but complementary terms that are architecturally undefined. While Clarity seeks to discern in patient research the core quality of things, as a counter position, Confusion challenges any sense of order and relates to a feeling of being lost. Altogether, Clarity is not merely an aesthetic aim but a way of thinking and doing. Based on rigorous discipline and concentration, it seeks liberation from states of disorientation and irritation; figuratively, for instance, when wandering through a thicket, where the only relief may be found in the clearing. Hence, Clarity and Confusion are mutually related terms, sometimes in a highly ambiguous way, since acts of clarification may lead to increased disorder, and vice versa, catabolic erosion in its most extreme form of entropic dissolution to a state of absolute emptiness and homogeneity, a white noise more akin to repose than to disturbance.

Growth and Decay are inextricably connected with architecture: while Growth refers to the upward-striving energy to erect an artifact of human order, Decay contrarily denotes the downward-dragging, deteriorating force and fundamental truth that structures will not last, that nature with crumbling power and indifference will gradually erode them into ‘dead’ matter. More broadly, both terms deal with time as they imply issues of re-use, preservation, and metabolic transformation, the geological age and patina of materials, the archeological but also emotional value of ruins, or the plain sense of duration when traversing a building. These aspects of temporality rattle the foundations of the discipline, one that, by definition, is about stasis and not mobility, and raise essential questions: for instance, why not think of buildings as ‘ruins-in-reverse,’ thus, not as ends but as fragmentary beginnings?

In sum, the course intends to sharpen the students’ critical sense, work with their memories and personal interests, besides expanding their general architectural awareness of what are important issues being discussed today. In its format, it is highly interactive and discussion-based. Presentations on selected texts and practices are to be made throughout the semester, while a short paper on a chosen topic has to be handed in at the end.
This unique course develops the basic compositional and technical skills necessary to photograph architecture, landscape, and interiors. The emphasis is on composition and the taking of photographs in the field. Classes meet once a week for three hours. The course explores in depth: (1) History of the Depiction of Architecture. (2) Principles and Systems of Composition. Examples are drawn from artists such as: Caravaggio, Cezanne, Corot, de Chirico, Canaletto, de Hooch, Hopper, Piranesi, Poussin, Saenredam, Turner, Vermeer, Hugh Ferriss, and others. (3) Photographic Techniques. (4) Software Techniques. The subject matter includes: individual buildings, streetscapes, building complexes, high-rises, landscape, commercial and residential interiors, evening photography, room vignettes, still life, black-and white photography, and architectural models. Students may use either a 35mm digital camera (preferred) or a smart phone. Steven Brooke has been photographing architecture and design for over 40 years. He is a Fellow of the American Academy in Rome and winner of the National AIA Institute Honor Award for Photography. He has photographed over 40 books on architecture and design, ten of which he has also authored. His work may be seen at www.stevenbrooke.com. Questions may be addressed to steven@stevenbrooke.com.
"Globalization is a disputed term, packed with a rich and intricate array of interpretive possibilities that, once released, raise important questions about architecture, its institutions and its outcomes. Conventionally, the word "globalization" has been associated with flows of capital, labor, products and ideas that have crossed, challenged and blurred established national boundaries. It often evokes images of a shrinking world, in which accelerating flows of information and travel technology compress time and space in the relationships between world cultures, political economies and the built environment. Today the idea of the global city, once characterized by nodes of high-rise towers associated with nexuses of capital flows vying for command and control of the world economy, is being reconsidered. With advances in electronic media and telecommunications, people can live simultaneously in both bounded urban public environments as well as highly constructed personal virtual environments. Such virtual connections permit national formations to be maintained across international boundaries, as individuals construct virtual neighborhoods that sustain a life of what theorist Benedict Anderson refers to as "long-distance nationalism." (Architectures of Globalization, Kirsten Walker, PLACES, 14:2, p.70)

World Architecture and Reflective Practice, is a three credit architectural history and theory course that seeks to examine the ways in which architecture and the built environment are shaped by, and shape, globalization. The course is organized around two major topics: Places and Practices. The course will consist of two weekly lectures and two research papers. Topics will include: Critical Regionalism, Architecture in the Age of Globalization, Colonialism and Globalization, Mega-Cities, Archi-Tourism, China, Africa and the Middle East.
CONSTRUCTION MANAGEMENT

ARC 549 / ARC 649
3 CREDITS
FALL 2024
TUESDAY EVENINGS 6:35 – 9:20

INSTRUCTOR: VICTOR SANTANA RA, LEED AP

Real estate development is a collaborative, multi-disciplinary effort in which a group of professionals contribute their expertise to a project in a time-sensitive environment. Focusing on the five major development types: Land, Multi-Family, Office, Industrial and Retail; students will be introduced to the stages of development and the life cycle of a project.
A Critical History of Contemporary Architecture: From High Tech and Decon to Classicism and the Neo-Vernacular

Dr. Richard John

ARC 585/685, 3 Credits, Wednesdays 6.35-9.20 pm, Fall 2024

Though the professional architectural press hardly acknowledges it, there are two broad movements in contemporary architecture which are currently vying for the mantle of the avant garde. Both have their roots in historical traditions: one has developed from the Modern Movements of the Twentieth Century, while the other draws inspiration from the longer tradition of Western Classicism. This course will adopt a radically revisionist approach to the recent history of architecture by focusing on the all the major architectural idioms which have flourished in Europe and America following Post-Modernism, including High Tech, Deconstructivism, the Classical revival, and regional vernaculars. The approach will be primarily monographic and will involve examining a series of key architects. Students will have the opportunity to research in depth the work of a recent architect from any of these movements. This course counts as a History elective.