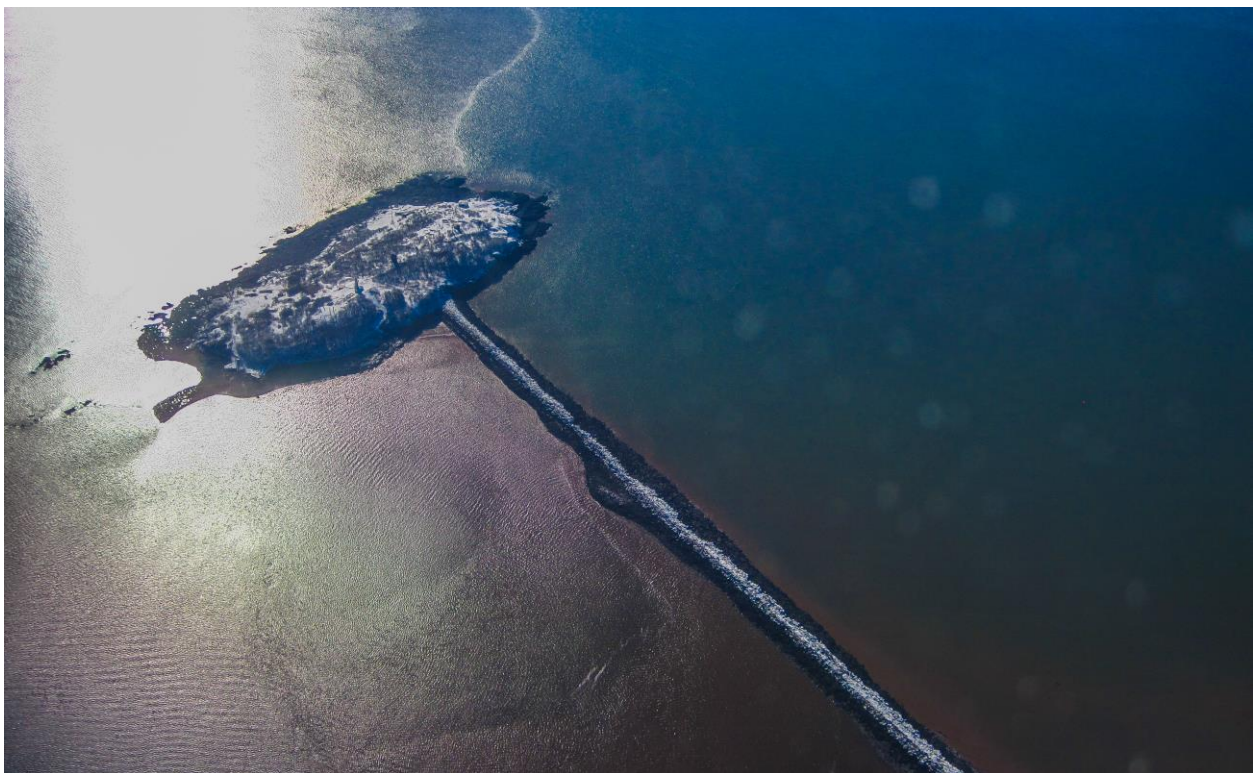


Graduate Option Studio Descriptions

Architecture

ARC3015Y, Lec0101 Monica Adair, Stephen Kopp
Cultural tourism. Architecture and the sublime.
(or Quak'm'Kagan'ik: A Piece Cut Out)



Partridge Island and breakwater, Saint John, New Brunswick

The sublime favours the adventurer.

As Romantic poet William Wordsworth describes it, in encountering the sublime, the "*mind tries to grasp at something towards which it can make approaches but which it is incapable of attaining.*" In *Lines Composed a Few Miles above Tintern Abbey*, Wordsworth writes:



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*Of aspect more sublime; that blessed mood,
In which the burden of the mystery
In which the heavy and weary weight
Of all this unintelligible world,
Is lightened*

This studio explores how sublimity relates to creating a contemporary structure amongst the history, memory, tragedy and neglected ruins of Partridge Island. Predating New York's Ellis Island by more than a century, this National Historic Site of Canada may be one of the country's most underappreciated places for its significance to immigration. Relatively unknown to Canadians and locals alike, this island at the mouth of Saint John's inner harbor, on the Bay of Fundy, home to the world's highest tides, has been clouded in fog and mystery for centuries.

The island's human story began some 9,000 years ago, when Indigenous people landed canoes there. They called it "Quak'm'Kagan'ik" meaning "a piece cut out." They believed the island was created when the great hero-god Glooscap smashed the dam Big Beaver had built at nearby Reversing Falls; a piece of the dam was swept in the rush of water to the mouth of the harbor where it came to rest, forming the island.

Partridge Island has a haunting, tragic past as a quarantine station and pest house for thousands of immigrants. In the 1840s alone, some 30,000 Irish escaping the Great Potato Famine landed there. By the 1890s, nearly 80,000 people a year disembarked on its rocky shores. Some 1,200 immigrants are buried on its 24 acres.

Partridge Island has long been an important nautical navigation point, housing many lighthouses over the years. Here the world's first steam-powered foghorn was invented. Later, Partridge Island became a military post that was decommissioned in the 1950s.

Long abandoned, its architecture in ruins as nature reclaims the rugged landscape, it is here that the student becomes explorer, archeologist, anthropologist, historian, editor and architect in designing a building that will be first deliberate mark on the island since military operations ceased half a century ago.

As Canada celebrates 150 years since confederation we look to a National Historic Site in the country's first incorporated city and its relation to the sublime to help create a new cultural identity; a new cultural tourism. As architects, we share collective responsibility for our built environment and we have the opportunity to enhance our heritage as we define our future. Partridge Island holds fascinating human stories that pre-date our confederation with indigenous, and natural geologies dating over 300 million years. The preservation and enhancement of Partridge Island seeks a champion to sustainably lead the charge on the future of this heritage asset. The preservation of the Island's physical resources are both a cultural and environmental concern meriting exploration.

The studio will start with collective research and site-analysis, followed by an optional site visit to Saint John in late September to observe, record and document, as well as meet with stakeholders from the city to put forth innovative ideas around the future of the island. The subsequent analysis and transformation will lead to the development of a building, investigating tourism and the sublime.



ARC3015Y, Lec0102 Brady Peters, Ultan Byrne

Self-Driving Architecture

Where are we heading?

New advances in digital technology promise new ways of interacting with each other, new ways of sensing the world, and new ways of extending our abilities. We work remotely, our houses are controlled through our phones, and soon our cars will be able to drive themselves. Advances are being made every day in automated technologies such as self-driving cars, facial recognition, and robotics. At the same time, there is a steady stream of speculations on the legal and ethical questions at stake, and we are regularly warned that labour as we know it is coming to an end. Many of these developments are an outcome of the most recent wave of research in the field of Artificial Intelligence (AI). Due in no small part to the work of Professor Geoffrey Hinton and others at the University of Toronto, AI promises a seemingly endless set of transformations to everything from medicine to the cities that we inhabit.

Why are we going?

While the application of these new algorithms in architecture has been limited, we can imagine a series of possible future trajectories. For example: will 'reinforcement learning' algorithms enable building systems to become self-managing, leading to new kinds of dynamic and responsive architectures? Should new methods of search and 'pattern recognition' encourage us to rethink the role of the computer in the design process, allowing us access to relevant precedents and facilitating navigation through design spaces? Can new agent-based simulations enable more robust forms of testing and analysis during the design process?

Have we been here before?

Given the boom and bust cycle of funding and development in AI, we might do well to retain some scepticism towards the latest claims. With each thawing of what critics call an 'AI winter', architects such as Cedric Price and Nicholas Negroponte, have taken an interest in the role these technologies could play in design. Throughout these cycles, popular culture has continued to explore the theme of artificial intelligence – characters such as HAL9000 force us to question the reality of AI and its relation to sentience. Indeed, we can trace this literary fascination with automata back as far as Homer's description of Hephaestus' tripods in 'The Iliad'. Between these architectural and literary references, can we situate ourselves in order to move forwards?

Through a series of cumulative exercises during the semester, students will develop architectural proposals for a specialized research facility at University of Toronto – *the Vector Institute*. In March of 2017, the University of Toronto collaborated with private industry, the Government of Canada, and the Government of Ontario to launch the Vector Institute – an independent, non-profit research institution dedicated to the transformative field of artificial intelligence (vectorinstitute.ai). Building on the University of Toronto's historical strength in artificial intelligence research, the Institute aims at to build: physical infrastructure for cutting edge computing and data analysis, teaching spaces and student facilities, and spaces supporting promotion and knowledge transfer. In this studio, we will explore recent advances in digital design technology, in performance simulation, and in artificial intelligence. We will work to situate these into a broader discussion around the state of computational design methods while designing an architectural housing for the Vector Institute.

ARC3015Y, Lec0103 Adrian Phiffer
New Generics

Carl Andre
Uncarved Blocks
1975

While we are freely running through the fields of history picking up precedents in a truly hedonistic manner, one needs to wonder: what ever happened to *generic architecture*? I am not referring here to that *generic* sarcastically described by Rem Koolhaas in the SMLXL text "The Generic City", but to that *generic* implied by Rem Koolhaas in "Our New Sobriety", a text accompanying OMA's contribution to the 1980 Venice Biennale "Strada Novissima". The latter seems to be a succinct extension of Ludwig Hilberseimer's "Großstadtarchitektur". Published in 1927, "Großstadtarchitektur" or "Metropolisarchitecture", is a sharp proposal for an architectural form rooted within the reality of the city. It is a proposal which argues that "*the contemporary city requires a radical sobriety of form; a form defined by objectivity and economy, material and construction, economic and social factors; a form with its own laws; a form which corresponds to contemporary human life; a form which is subjected to a new awareness of life that is not subjective-individual but rather objective-collective*". Metropolisarchitecture is nothing else but a healthy form of generic architecture; a generic that is not ordinary or vernacular. It is a form established in the present. It is a non-referential form. It is the one that interests us.

This studio will work on the theme of generic.
This studio will ask the students to design a building.
This studio will be in Chicago.



Project

The task of this studio is to design a 1,000-room hotel on the East end of Navy Pier, Chicago.

Chicago Navy Pier

Navy Pier is the attraction every city wants to have. In the end, it is an attraction that every city with access to water could have. This particular site lures an average 9 million people every year. By all standards, this is the definition of a successful public space.

Nowadays, Chicago Navy Pier is a domain packed with *almost* all the must-have elements of a good touristic destination. It even has a ferris wheel. But it is still missing one ingredient, the hotel.

After a first phase of renovations and new additions geared towards the 2016 centennial anniversary, the Navy Pier Organization is looking into its second phase of development to the East end of the Pier. A new hotel is planned here. This is where our project starts.

Hotel

The hotel is a fascinating place. Situated halfway between live and work, leisure and business, public and private, generic and specific, it is the moment when everyone is ready to experiment. Nowadays, it needs to be more than what it has been in the past. It needs to overcome AirBnB.

Project (continued)

Our project will not be limited just by the requirements of a hotel building. We will reconsider the entire East end of the pier which now includes the Beer Garden, the Ballroom, and large open spaces. The existing structures will be carefully assessed as part of the design process. The Ballroom, with its two towers, is an iconic presence that has defined the image of the Navy Pier throughout the years. Should it be kept or replaced?

Moreover, we will have to remember that the proposed hotel building will sit on top of one of the most public and most visited areas in Chicago. Its ground floor will be complex. Its ground floor will be a landscape project on its own. Thinking about the ground floor is thinking about the entire East end of the Navy Pier.

Studio Approach

We will focus on the simultaneous development of form, structure, and image. Construction and materiality will be the driving forces in our design studio. Therefore, this studio will privilege working with physical models. The design project will be explored at multiple scales and constantly verify through models. The aim is to have a basic approach to architecture, one defined by the making of physical artefacts.

We will aim to overcome conventions, but only by understanding them first. Research will be carefully integrated in our studio, but rather than being a component that precedes the design work, it will be folded into the design process.

Ultimately, the aim of our studio is to design architectural artefacts that are intellectually profound and emotionally charged.

Note: This studio will travel to Chicago September 29th to October 1st. The trip is optional. Students will be responsible for handling their own travel arrangements and expenses. All students will be able to apply for travel grants through funding provided by the school.



ARC3015Y, Lec0104 Peter Sampson, Liz Wreford
PLAIN VERTICAL
a studio in the urban prairie



The studio invites you to design a multi-storey-integrated-hybrid-public-open-space-building that houses a living tall grass prairie museum, a bioregional seed bank and research centre that will be located at the Market Lands site in the Exchange District of downtown Winnipeg. The studio will explore the tectonic implications of socio-ecological design and its corollary of critical opportunities for an urban prairie context. In particular, students are asked to explore design as a means of studying the act of city building and its relationship to endangered ecosystems.

This studio is taught by Liz Wreford MALA, OALA, CSLA and Peter Sampson MAA, OAA, FRAIC, principals of Public City Architecture a trans-disciplinary practice based in Manitoba. As part of the studio's research, students are invited to visit Winnipeg in mid-September.

ARC3015Y, Lec0105 Amale Andraos, Dan Wood NEWtown



This studio is about creating new designs for experimental, ecological housing along Newtown Creek in Queens, New York.

Climate Change is the single most important issue facing architects and urbanists today. We believe that this represents a unique moment to reconceptualize living, to rethink – literally from the ground up – how we plan and create human settlements in the ever-increasing urban condition.

We will begin with research. First into the history of experimental housing through the study of a series of precedents and then into the history of Queens and Newtown Creek. We will then, hopefully, take a trip together to New York City and tour historic and new housing projects, Newtown Creek and have a workshop together with invited critics including architects, urbanists and experts in Queens and Newtown Creek. After the workshop we will create a quick masterplan in New York and from then, each student will work individually on new housing designs for the site.

Dan Wood will be in Toronto generally once a week on Tuesdays, and will be available by Skype other times.

Amale Andraos will participate in the workshop in New York and will be in Toronto during the semester and for the final review.

Sam Dufaux, a former long-time Associate of Dan and Amale at WORKac is teaching at Daniels this semester will be assisting. Sam will make time available on Fridays.

ARC3015Y, Lec0106 Stephanie Davidson & Georg Rafailidis

PULP

(This studio will take place Fridays 9-6)



Image: torn cotton linters

The lifespan of contemporary uses is much shorter than the life span of buildings. In this studio we will look at the potential of a short-lived architecture that could simply disappear after its short-time use. This ambition poses challenging questions regarding construction materials, the life cycle of construction systems, disassembly/decay and structural typologies.

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To address this agenda we will explore the architectural and structural potential of paper casting. We will use a range of humble materials, from cotton to recycled paper and expand upon traditional methods of paper making and paper casting using strategic, experimental tactics. We will fabricate material swatches, scale models, and ultimately make a full-scale or large partial cast paper enclosure with an emphasis on investigating thin shell / monocoque structures and the weathering/decaying process of paper. The aim of the studio is to encourage students to develop habits of working that are resourceful, inventive, produce little waste, and that lead to a form of architecture that is temporary, with a positive and productive ecological impact.

The studio fosters material research in architecture as an integrated endeavor between scientific, tectonic and cultural readings. We will exercise to express theoretical and spatial concepts through physical artifacts. Insights will be triggered by working within the material specificity and fabrication techniques of paper casting / fibers / pulp.

The studio is organized in collaboration with the Material Culture Research Group at the University at Buffalo where graduate architecture students will be working on aligned projects. Respective field trips between Buffalo/Toronto will allow for critical crosspollination of studio cultures, research methods and pedagogical models offered by the distinct institutions of the University of Toronto and the Buffalo School of Architecture and Planning.

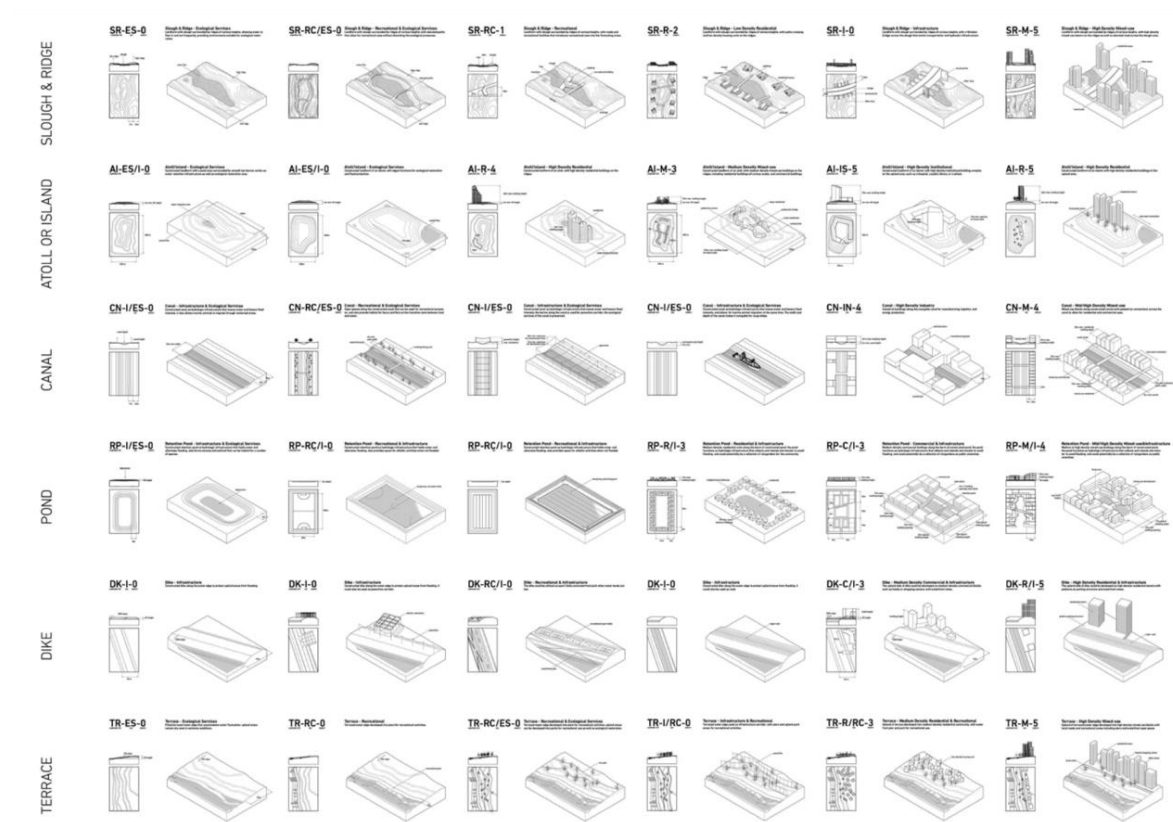
The course will be held on Fridays from 9am-6pm with additional support available via Skype/Google Hangouts.



Landscape Architecture

LAN3016Y, Lec0101 Fadi Masoud

Coding Flux: In pursuit of resilient urbanism in South Florida





With nearly 20 million residents, Florida is one of North America's fastest growing regions. Its extensive suburban landscape is enabled by the continued manipulation of a dynamic estuarine environment and a pervasive real-estate-driven housing pattern. Thirty-five miles of levees and 2,000 hydraulic pumping stations drain a metropolitan area of 15,890 km² everyday; resulting in the 'world's largest wet subdivision' with an anticipated \$101 billion worth of property projected to be below sea level by 2030.

The overall structure that defines Florida's metropolitan areas results from the combination of hard infrastructural lines, developer-driven master plans, reductive normative zoning, and prescriptive form-based codes. These conventional tools have proven marginally effective in dealing with the increased flooding vulnerability on its urban fabric; thus, further rendering traditional static "object-based codification," which has defined much of contemporary urban design, inadequate and in urgent need of innovation.

To that end, this studio implores urbanism and design's standards and codes in enabling the ubiquity of the status quo. **The studio asks why does land use zoning code continue to remain static when we know that landscapes are dynamic?**

We will question why powerful legislative spatial planning tools, such as land use zoning plans, remain inherently planometric, fixed, and reductive? Instead of diminishing the complexity of our cities and their landscapes into a universal set of primary colours predetermined by the American Planning



Association's Land Based Classification Standards, can we imagine these powerful land use zoning categories to be more heterogeneous, dynamic, and contextual?

By recognizing that it is exactly in the process of design and physical planning that we may be the most operative and strategic agents, this studio puts front and center the agency and efficacy of urban codes as they deal with issues of 21st century urbanism. It starts by rendering the exclusivity of building cities on dry ground insufficient, and accepts a state of constant hydrological flux - that is neither wet nor dry but always shifting - as the starting point of a novel "process-based" language for the future of Floridian urbanism.

Studio Structure

The studio is broken into three main phases, first a mapping exercise (Animated Analytics), followed by code research and dynamic multi-scalar adaptation design strategies (Codification Workshop), concluding with an urban catalyst affected by the shifting terrain (Responsive Propositions). Students in the studio will have exclusive access to an interactive mapping web-platform (Flux.Land) currently under development by Daniels and MIT. The platform will be used to better understand the potential adaptability of the urban fabric's ability to manage the dynamic hydrological condition of Broward County, especially in the face of increased vulnerability due to climate change. An optional studio trip to South Florida to visit studio sites and meet with officials in Broward County and Miami is planned for November 3rd-7th.

LAN3016Y, Lec0102 Darlene Montgomery

Urban landscapes are places of multiple, successive, and intersecting changes, while historically, landscapes have been considered within a static framing device. These ideal representations, both material, and those that exist in our minds, shape the way that we understand landscape. What if we subvert the framing device and create our own frame to define the project?

How do we speculate with images? How do we frame urban space? How do we reposition and morph the framing device to influence designed space and influence its narrative? How do we design for proximate opposites? How do we understand and express time and change at the urban, the landscape, and the garden scale?

Allan Gardens and Moss Park both reside within Toronto's Garden District yet despite their proximity, and despite their common history as parts of the Allan family estate bequeathed to the city as public space, they are in many ways opposites: north and south; garden and park; contained botanic specimens and open-air community garden; cared-for and neglected; passive recreation and active recreation; wedding photos and needle exchange. This binary relationship will be the jumping off point for the student's individual project: to explore the project as two ends of a seesaw of urban space.

Meet the Site

As a local project, students will be asked to engage locally, to generate design strategies and points of view from first-hand experience: to frame projects within a complex, multi-layered urban context that is in swift transition. Guest lecturers with specific involvement with both sites will be scheduled to talk about complex and overlapping issues of history, present development plans and pressures, social context and public engagement, the role of art in marginalized communities, and the role of gardens in marginalized communities. Students will be challenged to develop a new perspective, in theoretical as well as practical terms to reconsider not only the challenging task of designing for these



spaces, but to reconsider strategies of representation that work towards and form their 21st century narratives.

Make a Moving Image

Students will present their site analysis as films that expand the frame from an idealized or singular view, to multiple frames per second that reveal the margins of the framing device and the margins of the site as subjects that will form and inform their designs. Here the margins should include the physical adjacencies of homeless shelters as well as the distant ecological regions that are represented in the botanic garden. Students will be challenged to go beyond beautiful mapping analysis and demonstrate that mapping the margins affects real space.

Meet the Site Again

Students will be expected to visit the site regularly to understand and narrate its change over time. The studio is about encountering the site, and liberating ideas by frequent visits that will allow the student to go beyond the familiar, the safe, the known, and into the broader world, to roam geographically and imaginatively.

Drive to America

Students will have a chance to visit the Buffalo Botanic Garden as a way to study how the utopian ideals of this botanic garden have changed with its context in terms of complexity, history, and structure. The Buffalo Botanic Garden is housed in a replica of Paxton's Crystal Palace that is set within an Olmsted Park system that is itself set within a fairly depressed economic context. Aside from theoretical questions of these spaces, students will also be exposed to the daily burden of curation, maintenance hours, and public resources that compete for validity.

Tell a Good Story

Design is about editing and narrative. The film and its approach will set the student's strategy for his or her project. The narrative will address the two sites, but will set the parameters of the student's work: the question he or she wants to answer, and how the story continues. The question and the story will undoubtedly change over time, change with each re-telling.

Cultivate a Garden, Cultivate a Park

Great design can be seen as an extension of what you find: a conversation that continues the conversation. Students should approach the site, not to seek authority, but seek to travel with it and its ideas, invite it to blossom and invite others into a conversation that might have previously seemed impenetrable, to draw relationships that might be unseen. Mostly, this studio is about figuring out your story and how it responds to the essential mystery of a site, which is both its beauty and its pleasure and which is completely subjective.

Urban Design

URD2013Y, Lec0101 Alfredo Landaeta DENSITY

Density drives our lives. From the decisions of planning officials to the viability of corner stores, the implications, pre-conceptions and enabling potential that derives from density shapes decisions that affects our present and our future.

Urban environments have the potential, like ecosystems, of getting more diverse and complex as density increases, generating interdependencies, feedback loops and specializations that make the overall system more dynamic and resilient, but this is not always the case. Unlike natural systems, urban environments are the result of decisions that, in many cases, stem from preconceptions and biases, lacking a deeper analysis and understanding of the implications, opportunities and challenges of density.

The 21st century has been heralded as the first of the “Urban Age”. While the methodologies and theoretical frameworks used to define it as such have raised criticism and spurred significant academic debate, the fact that patterns of urbanization are changing is beyond dispute. Since most of that change comes as the result of net changes in density, understanding the implications of this phenomenon becomes an important first step to design better urban environments.

Density has different implications at different scales, from a lofty objective defined in large scale, long term planning instruments to the challenges of dealing with hyperlocal conditions and design and implementation challenges. Equally important, density becomes an enabler of experiences, services and amenities.

As pervasive as the concept is, planning instruments traditionally reduce density to a quantitative description, usually using only 2 numbers to quantify it (population per land area unit and/or building area per land area unit), to the extent that these 2 numbers become, almost exclusively, the foundation of policy planning frameworks, with little regard for the qualitative aspects that density entails. Translating high level visions into rich urban environments is far from straight forward and the shared responsibility of community members, practitioners, developers, and designers.

Density also has different faces depending or where in the world we look. Developing countries differ substantially in the way they accommodate denser urban environments from developed countries. In addition to the need to understand different contexts and be able to develop critical positions that lead to design solutions, the analysis of case studies in developing countries provides an expanded palette of options and a magnified perspective on the benefits and challenges derived from unregulated densification processes.

The studio will explore the topic of density in 3 segments:

1. **Understanding:** working in teams and through targeted research and mapping exercises of selected case studies from Toronto and around the globe, students will critically address the concept of density. Through a series of presentations by biologists, designers, practitioners and public officials,

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students will be exposed to different ways to understand density and its environmental, cultural and economic implications, and how is expressed both in developed and developing countries.

2. **Measuring:** continuing the team work from the previous segment, students are expected to develop a quantitative understanding of the implications of density by further analysing the different case studies introduced in the previous segment, by understanding both development metrics, environmental impacts, social and political dynamics, urban form and building typologies prevalent to each case study. Results will be presented in a series of 2D, 3D and 4D diagrams.
3. **Designing:** the longest segment in the studio, by transposing and hybridizing the case study models into the designated study area(s) and understanding the spatial, environmental and cultural implications of significant changes in density, students will be expected to develop an urban design proposal that provides a vision for a denser, more humane and sustainable future, that includes the understanding of development proformas, built form and typological responses and the implications in services, amenities and sustainable strategies.