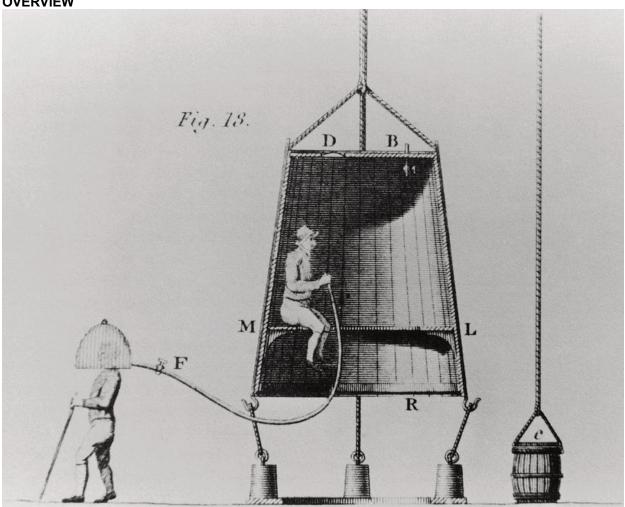|	
Type of Course:	**GPS Unit #23**
Class Meetings:	**M 9:30-12:20; M/TH 2:00-5:50pm**
Office Hours:	**EDMISTON: M, Th 1:00-1:45 BY APPOINTMENT**
	FAHERTY: F 1:00 – 2:00 BY APPOINTMENT
Instructor:	**Professor JEREMY EDMISTON & KAITLIN FAHERTY**
Location:	**Rm 219**
Semester/Year	**Fall 2022**

FORM WORK

OVERVIEW

Image: Edmond Halley's *Diving Bell* of 1716. Source: Science Photo Library.

'Form can hold the things in us that feel formless, and we can find space within form that, if we were to say we just exist in space, for instance, we would never find that space.'
–Padraig O Tuama
Podcast: *On Being with Krista Tippett, Padraig O Tuama and Marilyn Nelson, A New Imagination of Prayer*, January 30, 2020.

Like a diving bell, form protects us as our explorations propel us into places and spaces we've never been or imagined. Traditional representational practices of form, such as plans, sections and models, provide us with a container to hold our scraps of thought; the faintest of pencil profiles; capturing the most ephemeral qualities of light, while we search for coherence in our imagination. Perhaps the only use we have for these traditional representations is as guides to plot tactics for future spaces.

The reading of poetry (often alone and aloud) completes the creative act of the writer, bringing a unique context to that moment where reading participates with the writing of an idea. By means of the engagement, it becomes a public idea. In the same way, 'reading' our drawings transforms them into maps, stories of ecologies — overlapping and interconnected systems, struggling for balance – where program and site become active forces in architectural investigation, instruments in the development of a tactics of architectural reading, where the artificial boundaries between analysis and production are collapsed, allowing us to arrive at a point where even our most pragmatic propositions have no other choice but to take the form of speculations, the staging of uncertainty, the discovery of un-nameable hybrids.

The Template
Equal parts drawing and tool, the template is a device that extends drawing into physical three-dimensional space. The template implies repetition, a mechanism that focuses on process, and increases our ability to produce and reproduce unique outcomes within a system of thought. Once engaged, the template holds the power to reproduce form, which in itself produces new forms of public and private participation. Through a series of case studies, ranging from Utzorn's Sydney Opera House to Buckminster Fuller's Plydome, Unit 23 will obsessively study past templates in order to understand (and perhaps subvert) this primal relationship between the architect and form.

RESEARCH
Design research is conducted through a series of repetitive sets of drawings and models produced by each student over the course of the semester and year, leading to a design proposition that includes large scale mock-ups of parts of the physical proposition. As the themes and techniques vary, the guiding questions remain: How does pursuing the tension between traditional forms of drawing and form develop new methods of making, and drawing?
What is the contemporary (or future) proposition when you combine plan and poetry? What is a speculative section? What could it be and how might it be sited? What are the implications to drawing and making, when analysis and production are integrated?

The following sets of drawings and models, make up the preamble and design research for the unit's design proposition:

Precedent

Through modernist and contemporary precedent, we will think about architecture and the making of architecture through a comparative, critical analysis process, while also moving beyond two-dimensional spatial understandings into tectonic and formal comprehension of these case studies. The seminar sessions will focus on enabling participants to situate themselves in specific formal-tectonic worlds from which to launch their design studio work, developing in-depth expertise in the constructability, material ecology, and formal potential of an architectural system.

As we dive into bodies of work that extract, abstract, and articulate form, we will look at both the form and the modes of making them constructible. Mario Carpo's writings reveal the instrumental role architects like Brunelleschi held in making his own work constructible, and Carpo's speculation on the potential for contemporary, model-oriented modes of designing and building makes space for us to investigate architectural production beyond that of the design-intent drawing set. We will test hybrid modes of drawing and making to arrive at these form works. To inform and position the studio and seminar work, we will read across disciplinary perspectives - architecture, landscape, urbanism, ecology, history.

#1 The Site—4 weeks
        When you look, what do you see? Everyone sees differently, and the ability to respond creatively to what you are able to observe is one of the most powerful tools we possess.

What is invisible? What hidden forces, social, economic, cultural are at play shaping the way a place performs? The actions of weather, environment and ecology are measurable and observable to those who spend the time. How does human occupation of the site contribute to these existing systems operating on and within the site?

Document these systemic forces in a measured way. Build a model from this documentation.

#2 Program—2 weeks
What are the uses that your project brings to the site—single person, single family dwelling, multi-family dwelling, community living, apartment dwelling? What activities are generated by this use? How do these activities connect with existing activities and uses in the neighborhood?

Document these activities in a measured way. Build a model from this documentation.

#3 Services—2 weeks
What infrastructure is required for the planned activities on the site? Are these an extension and/or manipulation of existing systems? Are there possibilities unique to the site for generating new services? Are there opportunities for enhancing or creating networks that support economic development?

Document the infrastructural networks in a measured way. Build a model from this documentation.

#4 Circulation—3 weeks
What movement is necessary for the site to exist and to transform to support the activities planned for the site? What movement is generated by the activities planned for the site? What is the movement of others on and through the site? What is the movement for recreation, service, and pleasure? What things move and how? What movement is implied? What moves and can't be seen?

Document movement in a measured way. Build a model from this documentation.

#5 Co-ordination—1 week
Once we consider the drawings and models already created for the site, and that they exist in one place, what collides, what is adjacent, what overlaps, what misaligns? Do we care? Should we? What motivates our response? Do the relationships implied between our models enhance or detract from the experience and operation of the site? Can we know? Are these relationships at best benign?

Document the primary issue of co-ordination in a measured way. Build a model from this documentation.

#6 Qualities—2 weeks
What are the dynamic qualities of the space and the site? What are the questions for the architecture of the proposal? What questions do the formal structures of the proposition present?

Document the qualities of the space in a measured way. Build a model from this documentation.

PROGRAM
Dwelling, Housing, Shelter

In 1924, Walter Gropius wrote a modernist manifest on housing titled simply, *Housing Industry:*

"By adjusting to changed world conditions, attempts are finally being made to realize the old ideal of building typical dwellings more cheaply, better and in larger numbers than heretofore so as to provide every family with the basis for a healthy life. Generally applicable solutions genuinely suited to modern conditions have not yet been found, simply because the problem of dwelling design as such has never been dealt with in its entirety of sociological, economic, technical and formal ramifications…..Housing the people is a problem of mass requirements…….Reduction of cost of dwelling construction is of decisive importance for the national budget."

After almost 100 years of mass housing production, two months ago in NYC, the median rental price for an apartment hit an all-time high of $5000/month. The National Low Income Housing Coalition estimates a shortfall of 7 million rental homes affordable and available nationwide. The House of Representatives Ways and Means Committee convened a session in mid-July titled "Nowhere to Live".

Might dwelling be a question of poetry and form? What might be the future of dwelling?

SITES
Uncontested grounds?
The city is continually built upon itself. As development drives demand and speculation over each square inch of land in New York and elsewhere – where are the opportunities or need for architecture to speculate on future sites for dwelling? Consider New York's railyards, waterfronts, and supertalls – what other sites await the unabashed reach of development, and can architecture get there first? We will investigate a series of these 'difficult sites' and their potential to hold our speculations on form and dwelling.

A. Small Lots – urban infill sites narrower than a standard buildable lot – how do we live within inches?
B. Office Block – the deep floorplate no one wants to work in – how do buildings become dwellings?
C. Public Industrial – roofscapes of logistical space that is critical to urban life – how is this new landscape articulated?
D. Networked Infrastructure – as vehicles electrify, how do we coexist with the relics of open space?

Specific sites will be outlined in an addendum.

READINGS
To Be Assigned in Class.

Spuybroek, Lars. *Grace and Gravity: Architectures of the Figure* (London: Bloomsbury, 2020)
Project: https://www.frac-centre.fr/_en/art-and-architecture-collection/nox/fresh-o-pavillon-l-eau-douce-waterland-neeltje-jans-zeeland-317.html?authID=133&ensembleID=344

Site/Measure:
- Corner, James. "Aerial Representation: Irony and Contradiction in an Age of Precision" in The Landscape Imagination: Collected Essays of James Corner 1990-2010. Princeton Architectural Press.
- Waldheim, Charles. Landscape As Urbanism.
- Allen, Stan. Field Conditions.
- Miralles, Enric.

Architectural Production:
- Spiro, Annette and David Ganzoni. Working Drawing: The Architects Tool. 2013.
- Carpo, Mario. *The Second Digital Turn* (The MIT Press, 2017)
- Carpo, Mario. "Digital Darwinism: Mass Collaboration, Form-Finding, and The Dissolution of Authorship." Log, no. 26 (2012): 97–105. http://www.jstor.org/stable/41765764.
- Kolatan, Ferda. The Chunk Model. Log 50: Model Behavior.

Publics:
- Sennett, Richard. The Open City. https://www.gsd.harvard.edu/event/richard-sennett/
- Warner, Michael. 2002. Publics and counterpublics. New York: Zone Books.
- Certeau, Michel de. 2011. The Practice of Everyday Life. Translated by Steven F. Rendall. 3rd ed. Berkeley: University of California Press.
- Laguerre, Michel S. 1999. Minoritized space: an inquiry into the spatial order of things. Berkeley [Calif.]: Institute of Governmental Studies Press.

Ecologies:
- Cohen, Jeffrey Jerome, and Lawrence Buell. 2013. Prismatic ecology: ecotheory beyond green.
- Young, Michael. Nature is Not in It. 2014.

Futurism:
- Schwartz, Peter. The Art of the Long View: Planning for the Future in an Uncertain World.
- Olalekan Jeyifous

Housing:
- Ways and Means Committee Hearing. Nowhere to Live. https://waysandmeans.house.gov/legislation/hearings/nowhere-live-profits-disinvestment-and-american-housing-crisis
- The Housing Shortage isn't Just a Coastal Crisis Anymore. https://www.nytimes.com/2022/07/14/upshot/housing-shortage-us.html?smid=tw-share
- The Smithsons of Housing https://www.youtube.com/watch?v=UH5thwHTYNk

BIBLIOGRAPHY
Class Handout

REFERENCES
Bernd and Hilla Becher
Buckminster Fuller – Plydome
Escuelas Nacionales de Arte. Ricardo Porro, Roberto Gottardi, and Vittorio Garatti
Steinberg Herrmann & Co. Hat Factory – Erich Mendelsohn – 1923
La Maison Suspendue – Paul Nelson - 1936
Casa Il Girasole – Luigi Moretti – 1950
Endless House – Friedrick Kiesler – 1950
Ronchamp – Le Corbusier – 1955
TWA Terminal – Eero Saarinen – 1956-62
House of the Future – Alison & Peter Smithson – 1956
Demountable Houses, Maison Tropicale – Jean Prouve – 1940s-60s
Cristo Obrero Church – Eladio Dieste – 1958
Sydney Opera House – Jorn Utzon – 1957-73
Inmos Microprocessor Factory – Richard Rogers – 1982
Igualada Cemetery – Enric Miralles and Carme Pinos – 1985-91
Yokohama Port Terminal – FOA – 1995-2002
Seattle Public Library – OMA – 2004
Ningbo Historic Museum – Amateur Architecture Studio – 2008
Truffle House – Ensemble Studio – 2010
Fondation Louis Vuitton – Frank Gehry – 2008-14
Grace Farms – SANAA – 2015
FRAC Dunkerque – Lacaton & Vassal – 2015
Tate Modern – Herzog & de Meuron – 2015
KAPSARC – Zaha Hadid Architects – 2017
National Museum of Qatar – Jean Nouvel – 2019

WEEKLY SCHEDULE, M 9:30-12:20; M/TH 2:00-5:50pm
Note: schedule below is subject to revision through the duration of the semester.

W1
Th   08.25   **LOTTERY, in-person, Aaron Davis Hall, 2pm, 7 minute Unit presentations, followed by ranking and assignments**
                    First Unit meeting, including *Hour SSA* and development of Community Agreement
                    Convocation @ 5:30pm

W2
Mon 08.29   Seminar: Lecture/Discussion #1: Formless; Intro Precedents
                    Studio #1 The Site
Th   09.01   Studio

W3
Mon 09.05   College Closed (Labor Day), No Classes
Th   09.08   Studio
                          Lecture: Ana María León

W4
Mon 09.12   Seminar: Precedent Presentations (2D); Intro Analysis
                    Studio
Th   09.15   Studio
                          Lecture: Gabriel Diaz Montemayor

W5
Mon 09.19   Seminar: Lecture/Discussion #2: Formed; Precedent Workshop (2D)
                    Studio
Th   09.22   Studio, Final Presentation of #1, Intro #2 Program

W6
Mon 09.26   No Classes
Th   09.29   Seminar, *Classes follow a Monday Schedule:* Precedent Workshop (2D + 3D)
                    Studio

W7
Mon 10.03   Seminar: Lecture/Discussion #3: Working
                    Studio
Th   10.06   Studio, Final Presentation of #2, Intro #3 Services, *(CCNY Grad Open House)*
                        Lecture: C.J. Alvarez

W8
Mon 10.10   College Closed (Columbus/Indigenous Peoples' Day); No Classes
Th   10.13   Studio
                          Lecture: Sarah Lynn Lopez

W9
Mon 10.17   Seminar: Precedent Presentations (2D + 3D)
                    Studio
Th   10.20   Studio, Final Presentation of #3, Intro #4 Circulation,
                        Mid-semester assessments & *Hour SSA,*
                    Lecture: Paul Farber

W10
Mon 10.24   Seminar: Lecture/Discussion #4: Formal
                    Studio
Th   10.27   Studio
                        Lecture: William Brinkman-Clark

W11
Mon 10.31   Seminar: Future Work
                              Studio
Th   11.03   Studio
                                      Lecture: Miguel Rábago

W12
Mon 11.07   Seminar: Lecture/Discussion #5: Form-ing
                              Studio
Th   11.10   Studio, Final Presentation of #4, Intro #5 Coordination
                                      Lecture: Loreta Castro and Gabriela Carillo

W13
Mon 11.14   Seminar: Lecture/Discussion #6: Form
                              Studio
Th   11.17   Studio, Final Presentation of #5, Intro #6 Qualities
                                      Lecture: Arturo Ortiz

W14
Mon 11.21   Seminar: Revisiting Work
                              Studio
Th   11.24   College Closed (Thanksgiving); no class

W15
Mon 11.28   Seminar: Showing Work
                              Studio
Th   12.01   Studio, #6 presentation and Final Review Prep.

W16
Mon 12.05   Seminar: Producing Work
                              Studio

FINAL REVIEWS, week of Dec 7-13
Fr   12.09   FINAL REVIEW
Tu   12.13   Last Day of Classes
Wed 12.14   Grad Unit Assessment (Faculty Only)

FINALS
Th   12.15   Final Class Meeting, **Exit interviews**
Mon 12.19   Grad Sharing Session (Student Presentations, 2 Projects per Unit)
                              Clean-up Day (Units)
                              Student Portfolios due for: SSA/CCNY Archive, etc. as directed by instructor
Tu   12.27   Final Grade Submission Deadline

GRADING/ATTENDANCE POLICIES AND STUDIO CULTURE

Course Expectations:
- That students will develop a high level of independent thought and rigor and a willingness to go beyond both basic project requirements and their own perceived limits and abilities.
- That students will successfully complete all project requirements. No make-up or postponed project submissions will be accepted except in the case of medical emergencies or other extraordinary circumstances. Excused absences and project delays must be officially cleared by professor in advance to be considered valid.

Community Agreement:
- During the first full studio meeting, the professor will make time for an *Hour SSA* session for a supportive open discussion among students.

- Studio members will work *together* to create a community agreement for interacting together over the semester. Definition: "A consensus on what every person in our group needs from each other and commits to each other in order to feel safe, supported, open, productive and trusting… so that we can do our best work." https://www.nationalequityproject.org/tools/developing-community-agreements
- *Hour SSA* will be repeated at the middle of the semester.

Methods of Assessment:
- All assignments will be graded, and grades will be discussed in group sessions.
- Grades for assignments will be pass/fail only.
- Grades for the students' architectural proposition will be based on the grading criteria below.

Key areas of Grading Assessment:
- **Models**
- **Drawing Sets**
- **Participation**
- **Attendance**: Consistent level of preparation and on-time presence for each studio class and scheduled evening lectures.
- **Portfolio**: Completion of final portfolio or collection of studio work as directed by instructor and attendance at all scheduled portfolio related events.

Grading Criteria:

A (+/-) Work meets all requirements and exceeds them. Presentations are virtually flawless, complete, and finely detailed. Work exhibits professional, "museum quality" level of craft. Student has developed an individual design process that shows a high level of independent thought and rigor. Work shows evidence of intense ambition and effort to go beyond expectations, and beyond the student's own perceived limits of their abilities.

B (+/-) Work meets all requirements. Presentations are complete and finely detailed. Work exhibits professional level of craft. Student has developed an individual design process that shows a high level of independent thought and rigor.

C (+/-) Work meets minimum requirements. Deadlines are missed. While presentations may be somewhat complete, student has struggled to develop an individual design process and/or is lacking in craft or design resolution.

F Work is below minimum requirements. Student does not develop adequate design process, and/or does not finish work.

INC Grades of "incomplete" are not given under any circumstances unless there is evidence of a medical or personal emergency. In such cases, instructor and student develop a contract to complete work by a specified date, as per CCNY policy. Classes and/or work missed due to illness must be explained with a physician's note.

Notes:
C is the lowest passing grade for M. Arch I and M.S. Arch students. No C- or D grades may be given to graduate students.
Working in teams does not guarantee the same grade for each team member; grades are based on a range of criteria for each individual student.

For more information on grading guidelines and other CCNY policies and procedures, consult the current CCNY academic bulletins: https://www.ccny.cuny.edu/registrar/bulletins

Office Hours:
Each studio/unit faculty member schedules regular office hours over the semester, as posted at the top of the syllabus. If a student needs to speak in private with a studio/unit critic, they should ask or email in advance to request a specific meeting time. Students may seek office hour appointments to discuss any matters of concern

including personal, private matters and general inquiries about course related work, grading, assessment and content.

Probation & Dismissal: for program specific information related to grades, academic standing, probation and dismissal, please see your program academic advisor:
Graduate: Hannah Borgeson hborgeson@ccny.cuny.edu

Studio Culture:
Working collaboratively and respectfully on studio assignments, with and alongside others, is an expectation in studio. Studio culture is an important part of an architectural education, and it extends to expectations for Faculty and the School's Administration as well. Please see the Spitzer School of Architecture Studio Culture Policy, which can be accessed on the SSA website here: https://ssa.ccny.cuny.edu/about/policies/.

Absence & Lateness:
Arriving more than ten minutes late to class will constitute an absence. Two unexcused absences will result in a whole letter grade deduction from a final grade; more than four will result in a failing grade. It is expected that all students will participate in all scheduled working, midterm and final reviews and contribute constructively to the discussions.

Absences due to Religious Observances:
Students who will miss any class sessions, exams, presentations, trips, or the like due to a religious observance should notify the instructor at the beginning of the semester so that appropriate adjustments for observance needs can be implemented. This could include an opportunity to make up any examination, study, or work requirement that is missed because of an absence due to a religious observance on any particular day or days.

Readings & Journals:
Students are expected to keep a journal or sketchbook throughout the duration of studio to document their thought process & take notes of any texts, books, terms or references that are mentioned by either the studio critic or fellow classmates and to selectively follow up on these and any other assigned readings before the next class.

Academic Integrity:
As a student you are expected to conduct yourself in a manner that reflects the ethical ideas of the profession of architecture. Any act of academic dishonesty not only raises questions about an individual's fitness to practice architecture, but also demeans the academic environment in which it occurred. Giving or receiving aid in examinations, and plagiarism are a violation of an assumed trust between the school and the student.

Plagiarism, i.e. the presentation as one's own work of words, drawings, ideas and opinions of someone else, is as serious an instance of academic dishonesty in this context as cheating on examinations. The submission of any piece of work (written, drawn, built, or photocopied) is assumed by the school to guarantee that the thoughts and expressions in it are literally the student's own, executed by the student. All assignments must be the student's original work. Any copying, even short excerpts, from another book, article, or Internet source, published or unpublished, without proper attribution will result in automatic failure of the entire course.

The CCNY Academic Integrity Policy: https://www.ccny.cuny.edu/about/integrity

For citations, the Chicago Manual of Style is recommended:
http://www.chicagomanualofstyle.org/tools_citationguide.html

AccessAbility Center (Student Disability Services):
The AccessAbility center (AAC) facilitates equal access and coordinates reasonable accommodations, academic adjustments, and support services for City College students with disabilities while preserving the integrity of academic standards. Students who have self-identified with AAC to receive accommodations should inform the instructor at the beginning of the semester. (North Academic Center 1/218; 212-650-5913 or 212-650-6910 for TTY/TTD). For further information, go to http://www.ccny.cuny.edu/accessability/ or email disabilityservices@ccny.cuny.edu

Health And Wellness Support:
City College's Office of Health and Wellness Services offers free and confidential counseling. Contact: Health and

Wellness Services, Marshak Science Building, room J-15: counseling@ccny.cuny.edu.

Gender Based Violence Resources
City College has resources to support you if you have experienced sexual violence, intimate partner/domestic violence, gender-based discrimination, harassment or stalking. For confidential support, you can contact the Student Psychological Counselor: Confidential Advocate at (212) 650-8905 or the Gender Resources Program at (212) 650-8222. If you would like to report sexual misconduct, you can contact the Chief Diversity Officer and Title IX Coordinator, Diana Cuozzo, at 212-650- 7330 or dcuozzo@ccny.cuny.edu. If there is an emergency on campus, you can call Public Safety at 212-650-777 and off campus call 911. Https://www.ccny.cuny.edu/affirmativeaction

Library:
The school's library is a shared resource that is necessary supplement to all research and design work. Please direct questions to the library staff or the Architecture Librarian Nilda Sanchez-Rodriguez: nsanchez@ccny.cuny.edu

NAAB (National Architectural Accrediting Board)
The National Architectural Accrediting Board (NAAB) is the sole agency authorized to accredit US professional degree programs in architecture. Since most state registration boards in the United States require any applicant for licensure to have graduated from a NAAB-accredited program, obtaining such a degree is an essential aspect of preparing for the professional practice of architecture. While graduation from a NAAB-accredited program does not assure registration, the accrediting process is intended to verify that each accredited program substantially meets those standards that, as a whole, comprise an appropriate education for an architect.

More specifically, the NAAB requires an accredited program to produce graduates who: are competent in a range of intellectual, spatial, technical, and interpersonal skills; understand the historical, socio-cultural, and environmental context of architecture; are able to solve architectural design problems, including the integration of technical systems and health and safety requirements; and comprehend architects' roles and responsibilities in society.

Students should consult the NAAB website www.naab.org for additional information regarding student performance criteria and all other conditions for accreditation.

CONTACT INFORMATION:

Jeremy Edmiston   917 622 7560
Kaitlin Faherty   917 755 1121