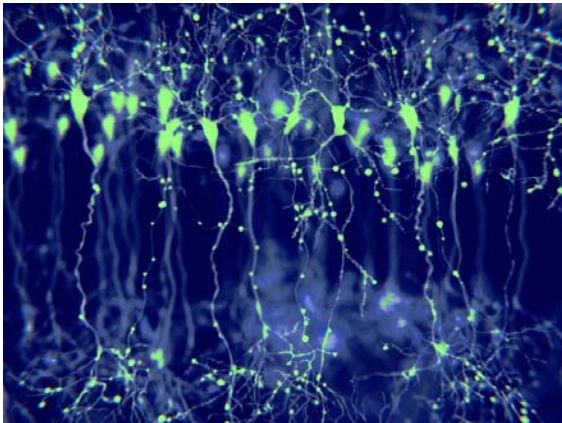
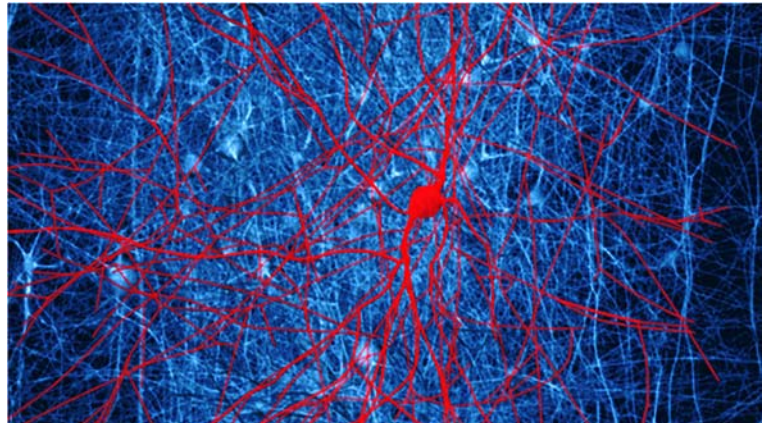


Type of Course: Advanced Studio ARCH 51000
Class Meetings: M/TH 2:00-5:50 pm
Instructor: Professor Suzan Wines
Office Hours: TH 6-7:50 pm, via Zoom
Location: Online via Zoom
Semester/Year: Fall 2020

SCHOOL OF THE FUTURE



Neurons in Cerebral-Cortex of Mouse Brain, MIT



Fragment of Rat Brain Simulation, EPFL Blue Brain Project

'Form no longer follows function because significant function is invisible'- Buckminster Fuller

The two greatest mysteries in all of nature are the mind and the universe... They are the most mysterious and fascinating frontiers known to science."- Michio Kaku, The Future of The Mind

STUDIO OVERVIEW

School is the space between curiosity and knowledge: the most exciting place to be in life.

How we learn and what we learn is at the center of current discourse on equal opportunity, equity, in-person and remote learning versus online courses. Everyone is pre-occupied by what these changes in education mean for themselves personally and for future generations. The 'School of The Future' studio provides a place to speculate on the implications of our relationship to culture, society, information and technology in the coming decades.

During this unprecedented moment of disillusionment, mistrust, global pandemic and one of the most pronounced cultural reckoning periods in American history, making 'schools' that embrace diversity, in person, and on-line learning tools constructively, could have a huge long-term impact on society at large. The imminent need to design for potential periods of physical distance, while consistently embracing social and intellectual engagement, presents a serious challenge to architects and educators alike.

CUNY's emphasis on remote learning for fall 2020, and Spitzer's own curricular evolution to the 'Unit System,' are front and center in the minds of both faculty and students at SSA. The 'School of The Future' Studio provides a venue to engage students' questions and concerns through speculation, research, exploration, innovation, and verification about what we think of school, and how we are prepared to embrace new systems of learning and innovation as we create a 'School of The Future'.

The site and program for the 'School of The Future' is an expansion of the Mott Hall Middle School located at 71-111 Convent Avenue at the southwest edge of The City College campus.

Students will attempt to answer questions that explore architecture's role in the 'school of the future' with the goal of generating research in specific areas of brain function related to learning and educational theory.

Students will document their research in thesis proposals and diagrams that articulate the spatial and neurological relationships between information and comprehension. These maps will inform new theories of learning, related programs and spatial organization diagrams for SSA students' own 'school' design proposals.

RESEARCH

The 'School of The Future' Studio begins by asking students to answer the following critical questions:

1. What does the school of the future need to do and why?
2. Does the school of the future need architecture, if so, why?
3. What is the purpose of school architecture?
4. How can school architecture improve the learning experience?
5. What kind of civic space is school, and how does society at large benefit from it?

The purpose of the 'school' syllabus is to foster research and experimentation.

Students will:

- Research and map systems of learning including organizational structures, neurological activity, perceptual processes, cognitive relationships, and theoretical and cultural precedents.
- Translate maps of cognitive systems into new types of learning systems based on research and personal experience.
- Diagram a theoretical framework for a particular area of knowledge that interests them.
- Combine their learning and theoretical framework research to create a network of cognitive and spatial connections that will develop into a new theory of learning, related program and spatial organization diagram for their own 'school' projects.

PROGRAM

Our general program is a 'School of the Future'. We are designing a proposed expansion of the Mott Hall Middle School on the City College campus. Mott Hall is a Department of Education charter school with a strong stem-based curriculum. The site and program are familiar to SSA students and students are expected to respond to and innovate with both the program and site based on their own research, ideas about education and personal experience.

While the mandate to design a new type of school architecture that addresses issues of equity, diversity, public health and the impact of technology on learning provides the impetus to think outside the box; proposed designs may be constructed of bricks & mortar, apps, networks or other media as appropriate to the program, needs of Mott Hall School and SSA students' concepts of the learning experience.

http://www.themotthall.org/mission_vision

Space Requirements

35,000sq. ft. of additional interior space including, classrooms, labs, research center and library of the future
25,000 sf exterior space

TOTAL AREA OF NEW CONSTRUCTION: 60,000 total sq. ft.

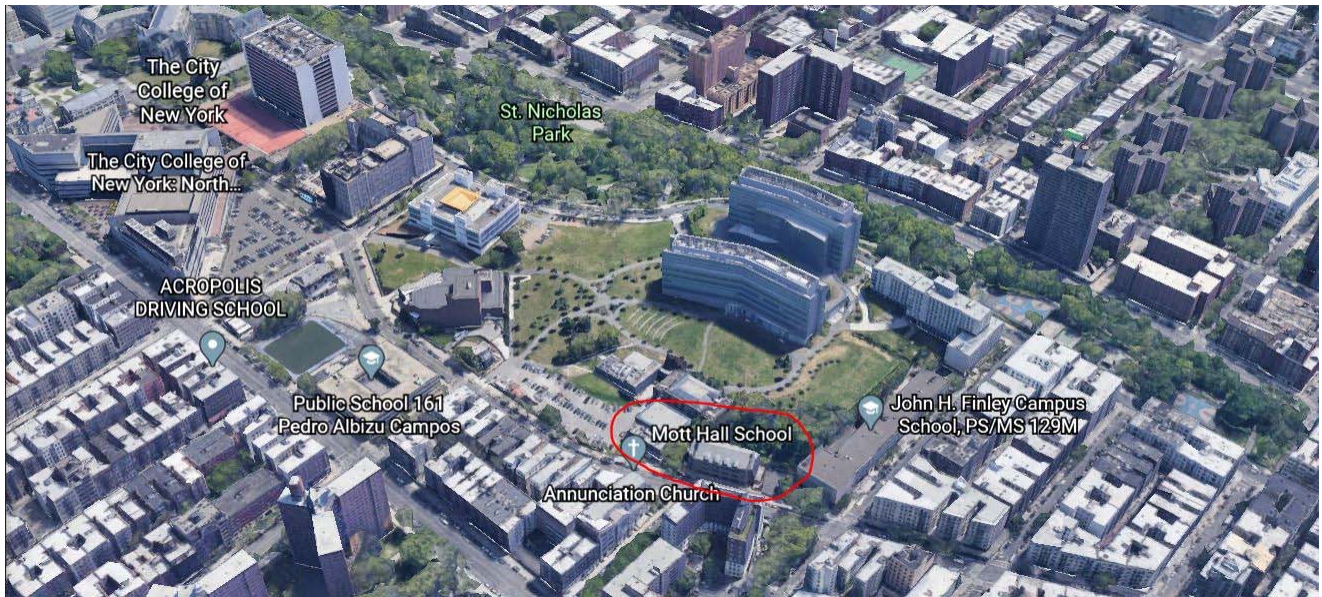
SITE

We are designing a proposed expansion of the Mott Hall Middle School on the City College campus. Mott Hall Middle School is located at the southwest end of the City College campus, facing the surrounding community, adjacent to the Biology, Discovery & Innovation and Advanced Technology Centers.

Mott Hall School

School Number: M223

71-111 Convent Ave Manhattan, NY 10027



READINGS

Erickson, Ansley T., Ernest Morrell, eds. *Educating Harlem: A Century of Schooling and Resistance in a Black Community*. New York: Columbia University Press, 2019. Select readings. [PDF]
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Joshua, Davis, “A Radical Way of Unleashing a Generation of Geniuses,” *Wired*, October, 15, 2013. [PDF]
<https://www.wired.com/2013/10/free-thinkers/>

Seymour Papert, *Mindstorms: Children, Computers, and Powerful Ideas*. New York: Basic Books Inc.1980. Select readings. [PDF]
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James, H Wansersee, “Concept Mapping and The Cartography of Cognition,” *Journal of Research in Science Teaching* 7, no.10 (Dec. 1990), Issue Online (Feb, 03, 2011)pp923-936 [PDF]
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<https://web-a-ebSCOhost-com.cny-proxy1.lib.cny.cuny.edu/ehost/detail/detail?vid=0&sid=86f72157-e0b3-45e7-90ca-b34acbe3e83f%40sdc-v-sessmgr03&bdata=JnNpdGU9ZWVhc3QtbGl2ZQ%3d%3d#AN=800416&db=e000xna>
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 Karen Willcox, Luwen, Huang, “**Mapping Unbundled Open Education Resources: Pathways through the Chaos**”, *Future of Open Education Resources*, November 2, 2016 2016 [PDF]
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<https://developingchild.harvard.edu/science/key-concepts/brain-architecture/>

Human Brain Project

<https://www.humanbrainproject.eu/en/follow-hbp/news/easier-to-use-v-2-brain-simulation-platform-now-online/>

<https://www.humanbrainproject.eu/en/understanding-cognition/>

EPFL Blue Brain Project <https://www.epfl.ch/research/domains/bluebrain/>

https://www.youtube.com/watch?v=ySgmZOTkQA8&feature=emb_rel_end [Video]

Future Computing: Brain- Based Chips, Henry Markram at World Economic Forum 3/8/2015

<https://www.youtube.com/watch?v=PCqI2DgW5sE> [Video]

Mott Hall Middle School

http://www.themotthall.org/mission_vision

<https://tools.nycenet.edu/snapshot/2019/06M223/EMS/>

BRIEF SCHEDULE OF DELIVERABLES

PART 1: (3 weeks): RESEARCH & DIAGRAMS

Concept maps and diagrams of cognitive systems and neural pathways in the brains of students 10-13 years old.

PART 2: (3 weeks): SITE ANALYSIS, PRECEDENT STUDIES & PROGRAM DEVELOPMENT

Written Program and curriculum outline.

Translation of neurological and learning diagrams into site plans and web based learning structures.

PART 3: (4 weeks): PROJECT DEVELOPMENT- SCHEMATIC DESIGN

Spatial organization and siting of school project on physical/virtual site.

PART 4: (6 weeks): PROJECT DEVELOPMENT- DESIGN DEVELOPMENT

Final architectural, visual and functional expression of the concept, student interface and project design.

WEEKLY SCHEDULE, M/TH 2:00-5:50 pm

Note: schedule below is subject to revision through the duration of the semester.

W1

Th 08.27 **LOTTERY via ZOOM @ 2:00pm, followed by first studio meeting
Convocation @ 5:30pm**

W2

Mon 08.31 Studio
Th 09.03 **Sciame Global Spotlight Lecture: Gerardo Caballero; Argentina @ 5:30pm**
Studio

W3

Mon 09.07 College Closed (Labor Day), no class
Th 09.10 Studio

W4

Mon 09.14 Studio
Th 09.17 **Sciame Global Spotlight Lecture: Teresa Moller; Chile @ 5:30pm**
Studio

W5

Mon 09.21 Studio
Th 09.24 **Sciame Global Spotlight Lecture: Gloria Cabral; Paraguay @ 5:30pm**
Studio

W6

Tu 09.29 *MONDAY SCHEDULE*; Studio
Th 10.01 Studio

W7

Mon 10.05 Studio
Th 10.08 **Sciame Global Spotlight Lecture: Luis Callejas; Colombia @ 5:30pm**
Studio

W8

Mon 10.12 College Closed (Columbus/Indigenous Peoples' Day); no class
Wed 10.14 *MONDAY SCHEDULE*; Studio
Th 10.15 Studio

W8

Mon 10.19 Studio
Th 10.22 **Sciame Global Spotlight Lecture: Alexia Leon; Peru @ 5:30pm**
Studio; mid-semester assessments

W9

Mon 10.26 Studio
Th 10.29 Studio

W10

Mon 11.02 Studio
Th 11.05 Studio
Fri 11.06 *Withdrawal period ends*

W11

Mon 11.09 Studio
Th 11.12 **Sciame Global Spotlight Lecture: Paulo Tavares; Brazil @ 5:30pm**
ADVANCED STUDIO SHARING via Zoom, @ 2:00-3:30pm; Studio

W12

Mon	11.16	Studio Sciame Global Spotlight Lecture: Jeannette Plaut; Chile @ 5:30pm
Th	11.19	Studio

W13

Mon	11.23	Studio Sciame Global Spotlight Lecture: Patricia Llosa Bueno; Peru @ 5:30pm
Th	11.26	College Closed (Thanksgiving); no class

W14-15

Mon	11.30	Studio Sciame Global Spotlight Lecture: Diego Arralgada; Argentina @ 5:30pm
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REVIEWS

Mon	12.07	Advanced Studio reviews, session 1
Wed	12.09	Advanced Studio reviews, session 2
Th	12.10	End of Semester Assessment (faculty only)

FINALS WEEK

Mon	12.14	Final Meeting, Exit interviews
Th	12.17	Student Portfolios due for: SSA/CCNY Archive, etc. as directed by instructor

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 in order to be considered valid.

Methods of Assessment:

- Attendance and participation in class discussions: 20%
- Project development in response to semester schedule: 50%
- Project presentation, completion and resolution: 30%

Note: The Research component of the studio will be weighed more heavily in assessment of graduate student work and class performance.

Key areas of Grading Assessment:

- **Studio performance & work habits:** Ability to respond to studio criticism & discourse in a consistent & clear manner throughout the course of the semester as demonstrated in the evolution and development of design work.
- **Clarity of representation & mastery of media:** Ability to utilize both digital and manual drawing and model-making techniques to precisely and creatively represent architectural ideas.
- **Pre-design:** Ability to prepare a comprehensive program for an architectural project that includes such tasks as: an assessment of client and user needs; an inventory of spaces and their requirements; an analysis of site conditions (including existing buildings); a review of the relevant building codes and standards, including relevant sustainability requirements, and an assessment of their implications for the project; and a definition of site selection and design assessment criteria.
- **Research:** Understanding of the theoretical and applied research methodologies and practices used during the design process.
- **Integrated evaluations and decision-making design process:** Ability to demonstrate the skills associated with making integrated decisions across multiple systems and variables in the completion of a design project. This demonstration includes problem identification, setting evaluative criteria, analyzing

- solutions, and predicting the effectiveness of implementation.
- **Attendance:** Consistent level of preparation and on-time presence for each studio class and scheduled evening lectures.
- **Portfolio:** Completion of portfolio as directed by coordinator 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 struggle 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. While presentations may be complete, student has struggled to develop an individual design process and/or is lacking in craft or design resolution.
- D** Work is below minimum requirements. Presentations are incomplete, student has struggled to develop an individual design process and/or is lacking in craft or design resolution.
- F** Work is well below minimum requirements. Student does not develop adequate design process, and/or does not finish work on time.
- 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 / 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. D is the lowest passing grade for B.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 student.

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

Office Hours:

Regular office hours are scheduled (2 hours per week). If a student needs to speak in private with a studio critic it is advised that they email in advance to request an office hours appointment. 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 advisors:

B Arch: Michael Miller mmiller@ccny.cuny.edu
 Amy Daniel adaniel@ccny.cuny.edu

Studio Culture (Teaching and Learning Culture):

Working collaboratively and respectfully on studio assignments, often with others, is mandatory. Studio culture is an important part of an architectural education. Please see the Spitzer School of Architecture Studio Culture Policy, which can be accessed on the SSA website here: <https://ssa.ccnycuny.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 discussion.

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 a serious instance of academic dishonesty in the 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.ccnycuny.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). <https://www.ccnycuny.edu/accessability>

Fabrication and Digital Media Support:

Consult the SSA Website's "Creative Spaces/Resources" for the latest guidance on access Fabrication and Digital Media/IT support during this period of remote learning:

Fabrication: <https://ssa.ccnycuny.edu/resources/creative-spaces/fabrication-shop/>

Digital Media: <https://ssa.ccnycuny.edu/resources/creative-spaces/digital-media-labs-and-printing/>

Library:

Not sure where to start your research? Explore the Library's Architecture Research

Guide: <https://library.ccnycuny.edu/architecture>

Still need help finding, choosing, or using resources? The Architecture Librarian is available to help. No question or task is too big or too small, and there are many ways to get assistance:

[Architecture Library Chat Service](#): Connect with library staff M – F (10 am – 6 pm)

[Drop-in Architecture Library Zoom](#): M W (12 pm – 2 pm) | T Th (2 pm – 4 pm)

[Book a Research Appointment](#)

Email: Nilda Sanchez-Rodriguez, Architecture Librarian: nsanchez@ccny.cuny.edu

Taida Sanchez, Library Coordinator: tsainvil@ccny.cuny.edu

Call: (212) 650-8766 or (212) 650-8767
Web: <https://ssa.cuny.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.

The following student performance criteria from the 2014 NAAB Conditions are addressed in this course:

Realm B: Building Practices, Technical Skills, And Knowledge. Graduates from NAAB-accredited programs must be able to comprehend the technical aspects of design, systems, and materials and be able to apply that comprehension to architectural solutions. In addition, the impact of such decisions on the environment must be well considered.

B.1 Pre-Design: ability to prepare a comprehensive program for an architectural project that includes an assessment of client and user needs; an inventory of spaces and their requirements; an analysis of site conditions (including existing buildings); a review of the relevant building codes and standards, including relevant sustainability requirements, and an assessment of their implications for the project; and a definition of site selection and design assessment criteria.

Realm C: Integrated Architectural Solutions. Graduates from NAAB-accredited programs must be able to demonstrate that they have the ability to synthesize a wide range of variables into an integrated design solution.

C.1 Research: understanding of the theoretical and applied research methodologies and practices used during the design process.

C.2 Integrated Evaluations and Decision-Making Design Process: ability to demonstrate the skills associated with making integrated decisions across multiple systems and variables in the completion of a design project. This demonstration includes problem identification, setting evaluative criteria, analyzing solutions, and predicting the effectiveness of implementation.

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

CONTACT INFORMATION:

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