

Type of Course: ARCH 51000 Advanced Studio
Class Meetings: M/TH 2:00-5:50pm
Office Hours: [30 hours over the semester]
Instructor: Professor Suzan Wines
Location: 324
Semester/Year: Spring 2023

NATURESCAPE ADVENTURE PARK



Growing Up, Compiègne, R&Sie(n)



Ankor Wat, Cambodia



Ramblewild, Lansborough, MA

“If we re-enact earth as living connectedness, then we are called to see our place (being placed) in/on earth in a transformed, enlarged way. We need, then, to re-inhabit our place...To re-inhabit is to relearn dwelling.”

- Martin Heidegger

OVERVIEW

Climate change is amongst the most urgent problems facing the planet in the 21st century, and buildings are responsible for 39% of the carbon dioxide emissions in the USA. Architects have the power to dramatically reduce the American carbon footprint by leveraging environmental systems thinking, innovative building technologies, and a commitment to leading the industry towards more sustainable and resilient modes of building, living, and adapting to the ever-changing environmental conditions that we have created. How do we employ the discipline of architecture to minimize buildings' adverse impact on climate while maximizing people's appreciation for the natural environment?

As long as people populate the Earth, they will build. In order to foster a more symbiotic relationship with our planet, we need to create a culture that reduces consumption while increasing respect for nature and each other. To achieve long term impact, we must use design to inspire an appreciation for the natural environment amongst the youngest urban citizens. This design problem starts with children, because children, are by nature, curious, receptive to new ideas, and full of energy.

COURSE DESCRIPTION

This semester students will design **An Environmental Adventure Park** with 20,000 sq. ft. of indoor and outdoor play space, education and entertainment facilities located on a 2 acre site in the Bronx River Forest.

This family-friendly, environmentally-themed Adventure Park provides children from 2-15 years old with a unique opportunity to run, climb, swing, and explore the natural environment in safe and controlled conditions while parents relax, socialize, garden, and learn about the bounty and diversity of the natural environment with their kids.

NatureScape Adventure Park will introduce kids to local ecosystems through play and direct physical engagement. By preserving, protecting, and restoring existing forest, the project will not only provide unique educational and recreational opportunities for families but will also improve air quality, help to manage storm water flow, and improve water quality for local wildlife and the community.

PLAY

- Invite play and discovery.
- Honor the child's perspective.
- Create fun, engaging experiences.
- Revel in nature's miracles

LEARN

- Inspire respect for the natural environment.
- Learn about local ecosystems.
- Stimulate the imagination and curiosity.
- Interact and learn.

GROW

- Integrate architecture, landscape and playscapes.
- Create a living building that gives back more than it takes.
- Grow food for the community.
- Celebrate nature's bounty as a source of food and fun.

METHODOLOGY & DELIVERABLES

Students will ultimately design an **Adventure Park** occupying a 2 acre section of Bronx River Forest that includes both indoor and outdoor play environments, gardens and educational experiences. The objective is to instill in the next generation "a holistic understanding of the dynamic between built and natural environments, enabling future architects to mitigate climate change responsibly." - NAAB Accreditation Criteria on Climate Change.

SCHEDULE:

Warm-Up Exercise Play Space Models	2 weeks	Individual	12"x12" models at 1/4"=1'-0"
Play Equipment Precedent,	1 Week	Individual	1 Board 24"x 36" per person
Building Systems & Material Research			Students chose 1 of 3 topics
Site Research	1 Week	Team of 3	2 Boards 24"x 36" per team
Concept Design	2 weeks	Team of 3	Models and drawings
Schematic Design	3 weeks	Team of 3	Models and drawings
Design Development	4 weeks	Team of 3	Final Models and drawings

PROGRAM

The program embodies environmentally, socially and psychologically responsive goals for a zero emissions project that not only sequesters carbon, but that is a prototype for a new design culture that does more with less.

By developing a clear understanding of the interrelationship between building and site, recreation facility and nature, infrastructure and ecosystem, the goal is to make a built environment that exists in symbiotic equilibrium with its natural context.

Playscapes are the largest component of the program and present an opportunity to look closely at the way siting, orientation, building systems and construction methods can tread lightly on the earth, while stimulating a profound shift in our attitudes towards waste and energy consumption. By using technologies that optimize architectural and environmental performance, and employing innovative models for sustainable urban recreation facilities, we can create a project that practices (and teaches) what it preaches.

NATURESCAPE: Environmental Adventure Park consisting of the following:

- | | |
|---|-----------------------|
| • Visitor Center (Exhibit Spaces, Bathroom, Storage, Offices) | 2,000 Sq. Ft. |
| • Cafe (Dining, Kitchen, Loading/Trash, Access) | 1,500 Sq. Ft. |
| • Interior Playscape (Reception, Playscape, Bathrooms, Storage, Offices) | 6,500 Sq. Ft. |
| • Exterior Playscape (Reception, Playscape, Access) | 10,000 Sq. Ft. |

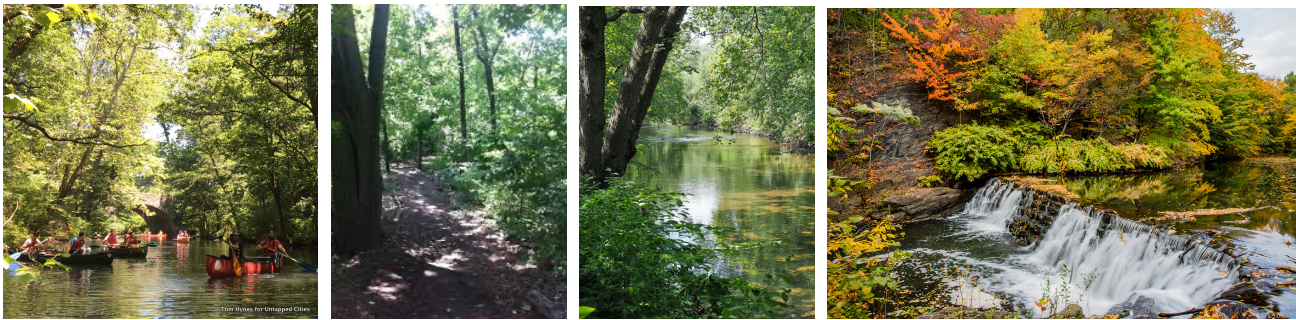
SUB TOTAL

20,000 Square Feet

PROJECT SITE

The Project site occupies 2 acres within the Bronx River Forest at Bronx Park just north of Southern Boulevard and the NY Botanical Garden. The Bronx River Forest is a 40 acre remnant of the original forests and floodplains that once blanketed the Bronx River corridor. Recent projects led by NYC Parks and the Bronx River Alliance have restored the river's floodplain and increased habitat.

Today, the Bronx River Forest is an ideal place to escape the hustle and bustle of the city and observe the many birds and other wildlife that rely on the river for habitat and sustenance. — Bronx River Alliance



The two-mile stretch of river in Bronx Park runs through a deep gorge, where a combination of red maple-hardwood swamp and floodplain forest grows on the riverbanks. ... include a broad range of landscapes, including permanently flooded forest and apparent upland forests, that rarely flood. Floodplain forests grow on mineral soils in the lowlands of river floodplains and are characterized by their flooding schedule. The forest is thought to be the

only forest in New York that was never cleared and features a mixture of eastern hemlock (*Tsuga canadensis*) and hardwoods. Many birds reside here and the flora provides a space between the forest floor and the canopy for squirrels, raccoons and opossums to forage and live. — NYC Parks and Recreation

The Bronx River is a tributary of the east river, flowing from the Kensico Dam south toward its mouth near Hunts Point where it empties into the East River. The upper part of the river is fresh water while the area near the mouth is brackish.

RESEARCH

Students will research and analyze historical changes in the ecosystems of the Bronx River watershed, its history, flora, fauna, topography, biological and infrastructural systems. There will be a site visit and opportunities to share expertise across disciplines with students and faculty from Spitzer School of Architecture's Urban Design and Landscape Programs.

Students will select from a series of research topics that include environmental education precedents, Living Building Systems and the embedded carbon footprint and lifecycle of specific materials, in order to identify programmatic, material and environmental systems for their own design proposals.

Questions Projects Will Address:

- How to design an exuberant recreation destination with maximum educational impact and minimal carbon footprint?
- How to inspire and engage children through design?
- How to design at different scales (urban, landscape, architectural) and for different age groups?
- How to restore and revitalize the natural environment through design.
- How to integrate built and natural ecosystems and infrastructure.

Educational Outcomes for Students:

- Site analysis including a basic understanding of local ecosystems, climate, orientation and sustainable infrastructural systems.
- Introduction to master planning, site, park and landscape design
- How to design buildings and park with maximum restorative impact.
- Living Building standards and goals.
- Make a built environment that exists in symbiotic equilibrium with its natural context.
- Basic principles of landscape design: **unity, scale, balance, simplicity, variety, emphasis, and sequence** .

READINGS

- Cao, Lilly. "Urgent Issue: 10 Strategies to Decarbonize Architecture." *Arch Daily*, July 27, 2020. <https://www.archdaily.com/938866/urgent-issue-10-strategies-to-decarbonize-architecture>
- Droege, Peter. *Climate Design*. San Francisco: ORO Editions, 2009.
- Hu, Winnie. "Getting New Yorkers Into the City's Wilderness: All 10,000 Acres of It." *NY Times*, August.11, 2016. <https://www.nytimes.com/2016/08/12/nyregion/new-york-city-parks-trails-forests.html>
- International Living Future Institute. *Living Building Challenge 4.0*. Seattle. June 2019 https://living-future.org/wp-content/uploads/2022/08/LBC-4_0_v14_2_compressed.pdf
- McWhorter, Ladelle, and Gail Stenstad. *Heidegger and the Earth: Essays in Environmental Philosophy*. University of Toronto Press, 2009, pp. xvii–xvii, <https://doi.org/10.3138/9781442697720> .
- NYC Planning. *New York City Comprehensive Waterfront Plan*. New York, 2021 <https://www.waterfrontplan.nyc/>
- Zumthor, Peter. *Atmospheres*. Basel: Birkhauser, 2006. SSA Library: NA1353.Z86 A35 2006g

BIBLIOGRAPHY

- Ascher, Kate. *The Works: Anatomy of a City*. New York: Penguin Books. 2007
- Bernheimer, Andrew. *Timber in the City*. San Francisco: ORO Editions, 2015
- Fernández-Galiano. *AV Monographs 195: Shigeru Ban - Social Beauty*. Madrid Arquitectura Viva, 2017.
- Heschong, Lisa. *Thermal Delight in Architecture*. Cambridge: MIT Press, 1979. SSA Library: NA2541.H47
- Jodidio, Philippe. *Wood Architecture Now! Vol. 2*. Cologne: Taschen, 2013
- Koolhaas, Rem., Stefano. Boeri, Sanford. Kwinter, Nadia. Tazi, and Hans Ulrich. *Obrist. Mutations: Rem Koolhaas, Harvard Project on the City*, Barcelona: ACTAR, Arc-en-Reve, 2000. SSA Library: HT151.M84 20000g.

- Lewis, Paul, Lewis, David, Tsurumaki, Marc. *Manual of Biogenic House Sections*. San Francisco: ORO Editions, 2022
- Mayo, Joseph, *Solid Wood: Case Studies in Mass Timber Architecture, Technology and Design*. London: Routledge, 2015.
- Pryce, Will, *Architecture in Wood: A World History*. London: Thames & Hudson, 2016.
- Whiston Spirm, Anne. *The Granite Garden: Urban Nature and Human Design*. New York. Basic Books, 1984. SSA Library: HT166.S638 1984

Landscape Design:

- Carson, Rachel, et al. *Silent Spring*. Illustrated by Lois Darling and Louis Darling, Houghton Mifflin Company, 1994. SSA Library: QH545.P4 C38 1994
- Hopper, Leonard J. *Landscape Architectural Graphic Standards*. Student ed., John Wiley & Sons, 2007 . SSA Library: SB472.H57. 2007
- Hopper, Leonard J. *Graphic Standards Field Guide to Softscape*. Wiley, 2011. SSA Library: SB472.45.H66 2011
- Wilk, Sabrina. *Drawing for Landscape Architects. 2, Perspective Views in History, Theory, and Practice*. DOM Publishers, 2021. SSA Library: SB472.47.W552 2021
- Michael Hough. *Cities and Natural Process*. Vol 2 ED. Routledge; 2004 <https://search-ebscohost-com.ccny-proxy1.lib.ccny.cuny.edu/login.aspx?direct=true&db=e000xna&AN=114942&site=ehost-live>
- McHarg, Ian L. *Design with Nature*. J. Wiley, 1992. SSA Library: HC110.E5 M33 1992

RESOURCES

Bronx Forest, NYC parks & Recreation

<https://www.nycgovparks.org/parks/bronx-park/highlights/11414>
<https://www.nycgovparks.org/park-features/hiking/bronx-river-forest>
<https://www.nycgovparks.org/greening/natural-resources-group/bronx-river-wetlands/parkland-section/reach-11/rehabilitation>
<https://www.nycgovparks.org/parks/bronx-park>

Bronx Park

<https://library.wcs.org/en-us/Archives/DigitalCollections/Bronx-Park-Postcards/About-Bronx-Park.aspx>
<https://archive.org/details/newparksbeyondha00mull/page/28/mode/2up>

Bronx River

https://www1.nyc.gov/assets/dep/downloads/pdf/water/nyc-waterways/bronx-river/ltcp_bronx_river_fact_sheet.pdf
<https://hiddenwatersblog.wordpress.com/2016/05/05/river-park-bronx/>

Bronx River Alliance

<https://bronxriver.org/>
<https://bronxriver.org/wp-content/uploads/2021/05/Get-Moving-on-the-Bronx-River-2016-Activity-Guide1.pdf>
<https://bronxriver.org/visit-the-river/the-living-laboratory/curriculum>

Bronx Historical Society

<https://bronxhistoricalsociety.org/>

DEP

<https://www.arcgis.com/home/webmap/viewer.html?webmap=a3763a30d4ae459199dd01d4521d9939&extent=-74.138,40.5264,-73.2055,40.9779>

Riverkeeper

<https://www.riverkeeper.org/nyc-watershed/basics/>

Bronx Council for Environmental Quality

<https://bceq.org/>

NYC Nature

<https://naturalareasnyc.org/map>
<https://naturalareasnyc.org/what-we-do#forests>

https://naturalareasnyc.org/media/pages/climate/ab753dd0d1-1598471724/carbon-report_handout_final_august5.pdf
<https://www.thesca.org/program/youth/commuting/new-york-city-ny/>

Adventure Park Design and Equipment

<https://www.acctinfo.org/page/PVMList>
<https://www.visionaryadventure.com/>
<http://eng.adventure.kr/#>
<https://www.americanadventurepark.com/installation>

Living Buildings

https://living-future.org/wp-content/uploads/2022/08/LBC-4_0_v14_2_compressed.pdf

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

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

W1

Th 01.26 **Advanced Studio lottery in Rm 107, followed by first studio meeting**
Spitzer School Convocation @ 5:00pm – all students and faculty expected to attend

W2

Mon 01.30 Studio
 Th 02.02 **All school event during studio time/don't include any studio activities on this day**

W3

Mon 02.06 Studio
 Th 02.09 Studio-**Eco-Environment Models Due**

W4

Mon 02.13 College Closed; no class
 Th 02.16 Studio- **Play Equipment , Systems & Material Research Due**

W5

Mon 02.20 College Closed; no class
 Tues 02.21 Studio (classes follow a Monday schedule) **Site Visit**
 Th 02.23 Studio

W6

Mon 02.27 Studio- **Site Analysis Due**
 Th 03.02 Studio

W7

Mon 03.06 Studio
 Th 03.09 Studio

W8

Mon 03.13 Studio
 Th 03.16 Studio – **Concept Design Due – MIDTERM REVIEW**

W9

Mon 03.20 Studio
 Th 03.23 Studio

W10

Mon 03.27 Studio
 Th 03.30 Studio

W11

Mon 04.03 Studio— **Schematic Design Due -**

04.05-04.13

Spring Recess, no classes

W12

Mon 04.17 Studio

Th 04.20 Studio

W13

Mon 04.24 Studio

Th 04.27 Studio

W14

Mon 05.01 Studio

Th 05.04 Studio

W15

Mon 05.08 Studio- **Design Development Due – FINAL REVIEW**

FINAL REVIEWS, May 10-16**FINAL EXAMS, May 17-23**

Wed 10 May	Th 11 May	Fri 13 May	Mon 15 May	Tu 16 May
Advanced	Core Studio 2/ Advanced	Reading Day	Core Studio 4	Core Studio 6
Horn (coord)	Aydogan (coord)	No student assignments	Llonch (coord)	Melitonov (coord)

FINALS

Th 05.18 End of Semester Assessment (faculty only)

Studio Clean Up day (students & faculty)

Tu 05.23 Final Meeting, **Exit interviews**

Student Portfolios due for: Spitzer School Archive, etc. as directed by instructor

Fri 05.26 Final Grade Submission Deadline

TAKE NOTE: ALL personal effects in studios and student lockers to be entirely cleaned out for the summer by Tuesday May 23, the last day of the term.

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:

- Attendance and participation in class discussions and other activities: 10%
- Project development in response to semester schedule: 60%
- Project presentation, level of completion and resolution: 30%

Key areas of Grading Assessment:

- **Studio performance & work habits:** Ability to respond to studio discourse & feedback in a consistent & clear manner throughout 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 final portfolio or collection of studio work as directed by instructor and/or 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 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.
- 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.
- 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:

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 faculty member schedules 30 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 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 advisors:

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

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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