

Master of Urban Design - Future Cities (MUD)

[Jefferson.edu/MUD](https://jefferson.edu/MUD)

Program Highlights

- Design research oriented post-professional program (2 years)
- Focus on Sustainability, Urban Resiliency, People's Health and Smart Technologies
- Use advanced methods and tools for urban data analytics, computational design, environmental simulation, and VR/AR
- Hold strong partnerships with the world-leading architectural and urban design firms
- Offer interdisciplinary research opportunities
- STEM designated program (CIP Code 15.1001)



Students visit the project site on the Riverfront Wilmington



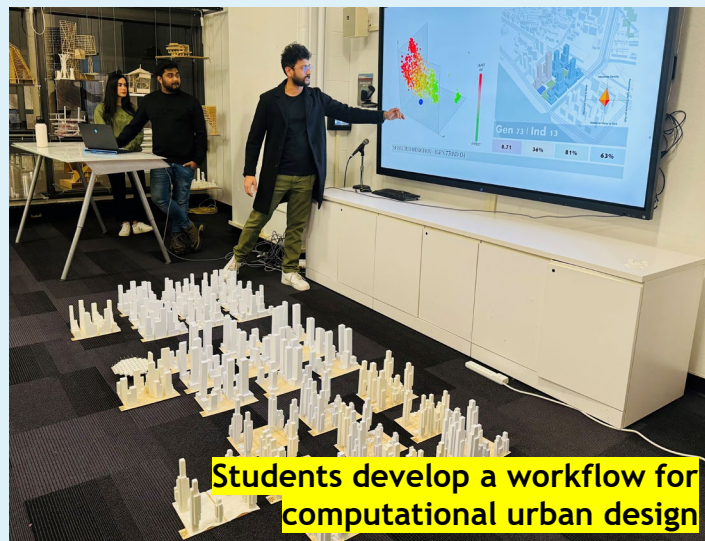
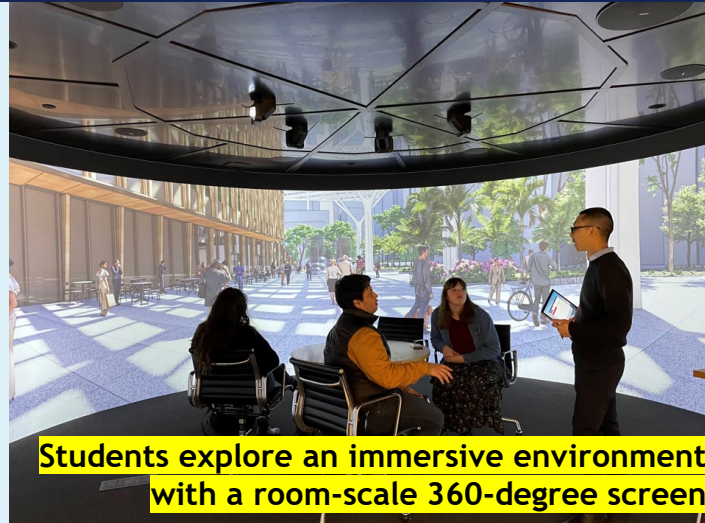
Students present their peer-reviewed papers in the international conferences



Design studio explores augmented reality (AR)

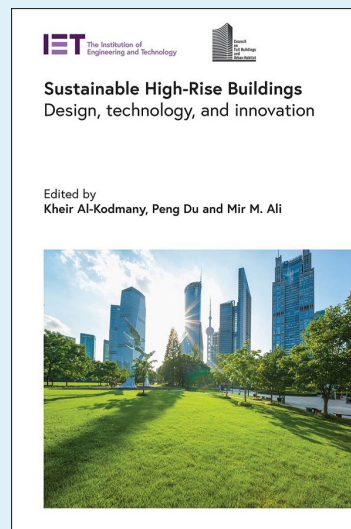
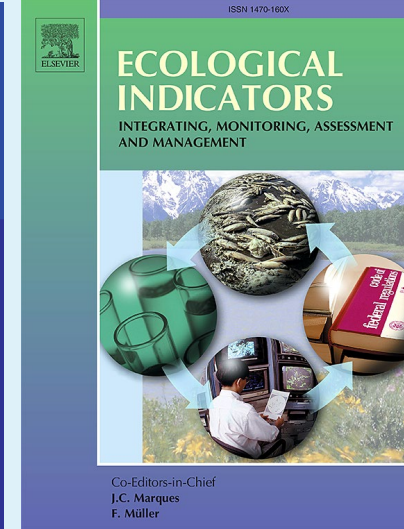
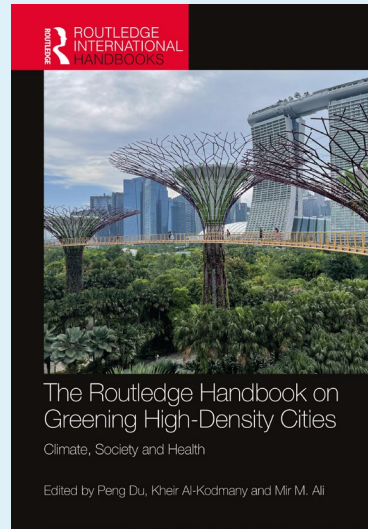
Innovative Teaching

- Conduct research-oriented design studios
- Explore data-driven, AI-powered urban design and analytics
- Study and design for the futures of major international cities through traveling studios, funded research, exchange programs and international conferences.
- Collaborate with internal and external faculty members, researchers and experts on interdisciplinary research
- Partner with world top universities, leading architectural and urban design firms, local governments and other non-profit organizations



Research & Publication

- The faculty and students in the Master of Urban Design (MUD) program collaborate with partners from government, academia and industry on a variety of funded research projects.
- The following research topics are the main research interests in the program, and have led to numerous peer-reviewed publications:
 1. Urban Data Analytics
 2. Computational Urban Design
 3. Urban Heat Resilience
 4. Environmental Simulation
 5. Zero-Carbon Cities
 6. High-Density and Tall Buildings
 7. VR, AR and Mixed reality (MR)



Industry Partnership: Teaching, Research and Internships

CALLISONRTKL™

Gensler

SOM

KPF

nbbj

GE
Nx

GP GOETTSCH
PARTNERS



BOERI
STEFANO
BOERI
ARCHITETTI

NORR

fxcollaborative

Office & Site Visit



Bjarke Ingels Group (BIG)
New York



Kohn Pedersen Fox (KPF)
New York



Gensler
Washington, D.C.



Hudson Yards
New York

Curriculum (48 credits - two years)

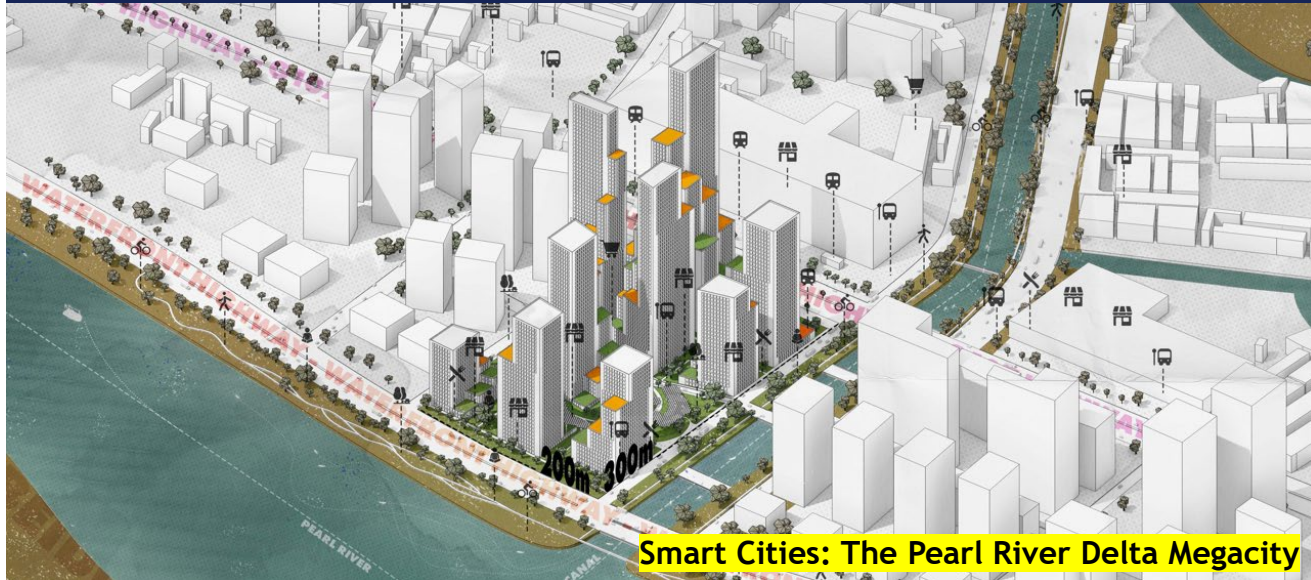
Year	Semester	Course	Credits
1	Fall	MUD 601: Master Studio - Towards Sustainable and Smart Cities	6
		MUD 607: Introduction to GIS	3
		MUD 606: Modeling Urban Environmental Performance	3
1	Spring	MUD 621: Master Studio - Resilient Cities and Communities	4
		MUD 623: Studio Companion: Ecological Systems for Resilient Communities	2
		MUD 617: Advanced GIS for Urban Planning and Design	3
		MUD 604: Emerging Design and Technology for Future Cities	3
2	Fall	MUD-603: Master Studio - Decarbonizing Cities	6
		MUD-631: Research Methods	3
		MUD 602: History and Theory of Urban Design	3
2	Spring	MUD-605: Master Thesis Studio	6
		Graduate Seminar / Focus Elective	3
		Graduate Seminar / Focus Elective	3

Admissions Information

- Fall Priority Application Deadline: **February 1**
- International Student Fall Application Deadline: **May 15**
- Required Materials:
 1. Transcripts
 2. Personal Statement
 3. Two Letters of Recommendations
 4. Resume
 5. Portfolio
 6. English Language Exam Result (if applied):
TOEFL/IELTS/Duolingo/Pearson PTE Academic
- Prerequisites:
 1. Bachelor's degree
 2. Minimum 3.0 cumulative GPA



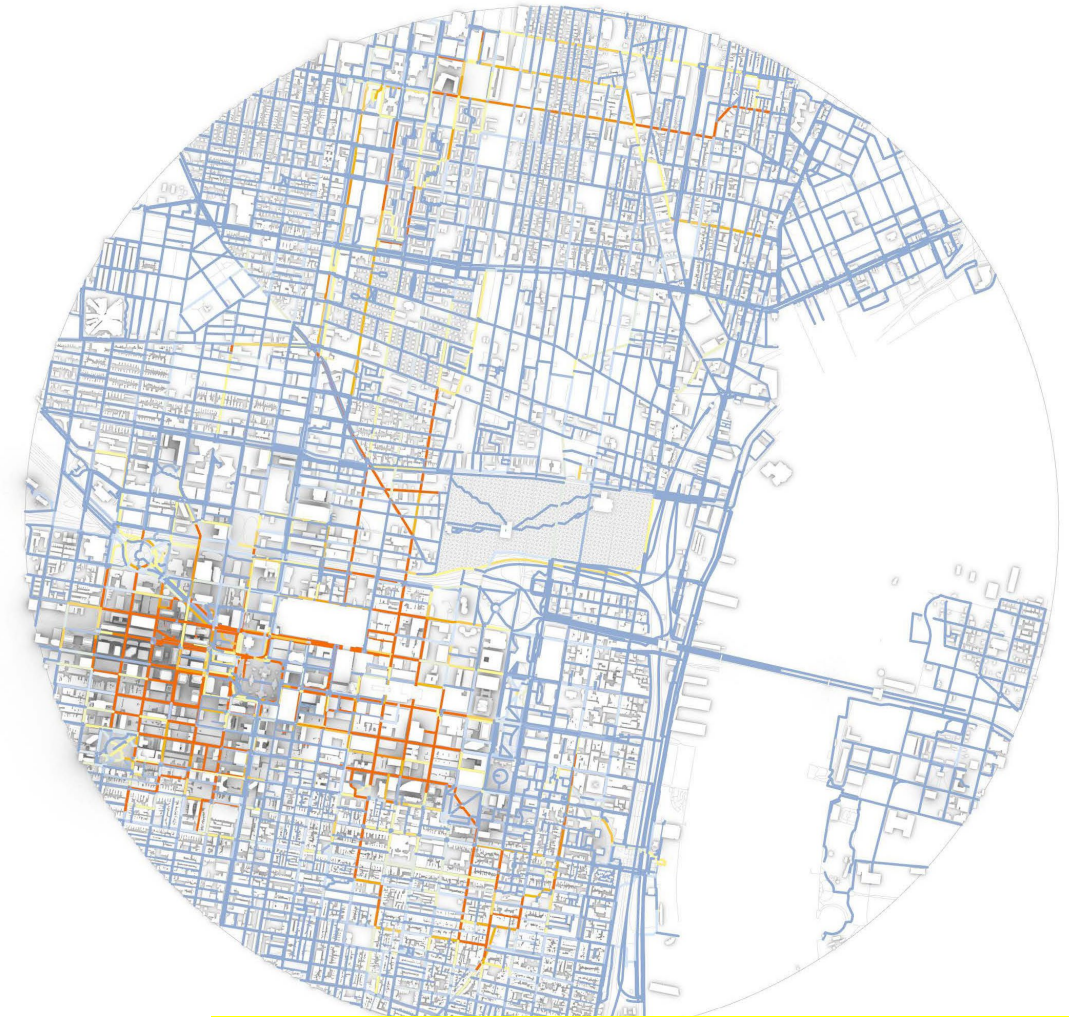
Selected Student Projects



Smart Cities: The Pearl River Delta Megacity



Resilient Cities: Long Island City Riverfront Development



Low-Carbon and Healthy Cities: Urban Mobility Simulation

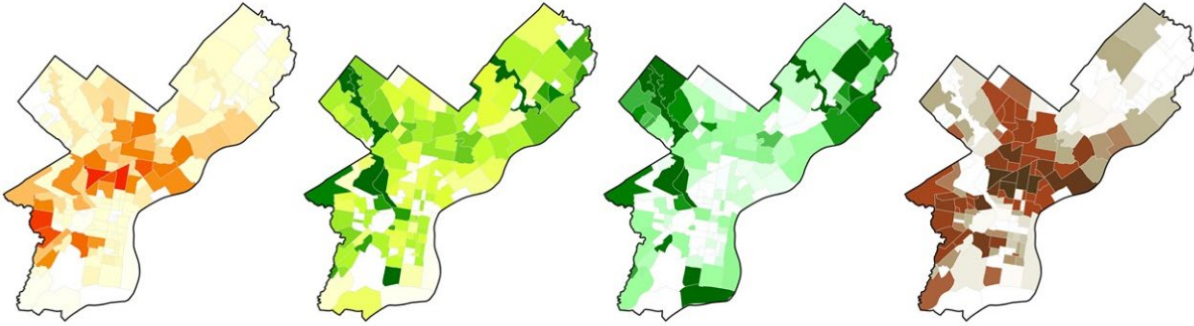
Selected Student Projects

Amenity Density

Area Ratio

Population Ratio

Vacant Land



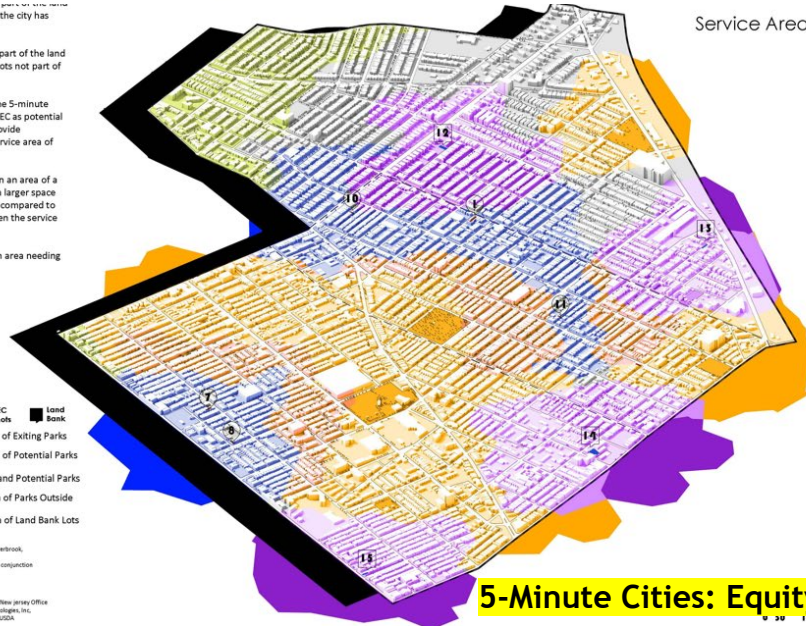
For the purposes of this study, lots on the east bank of Philadelphia, meaning the city has ownership.

All vacant lots in the study are part of the land bank, but the term is used for lots not part of OECC's selection.

Lot 12 & 13 are on the edge of the 5-minute service area of the 5 lots by OECC as potential parks. Not excluded as they provide opportunities to expand the service area of green spaces.

Lot 14 was one of several lots in an area of a 500ft proximity that provided a larger space and was appropriately located compared to others. If another lot was chosen the service area would be identical.

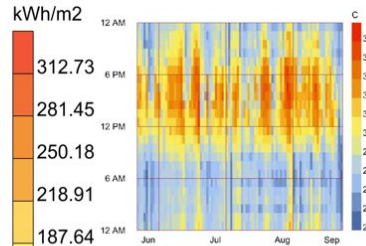
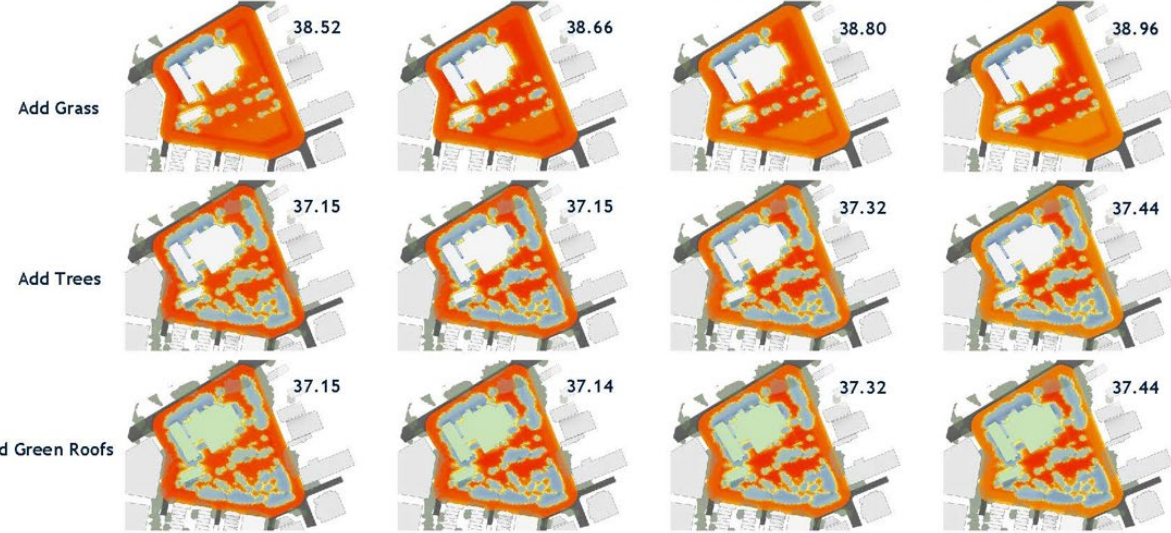
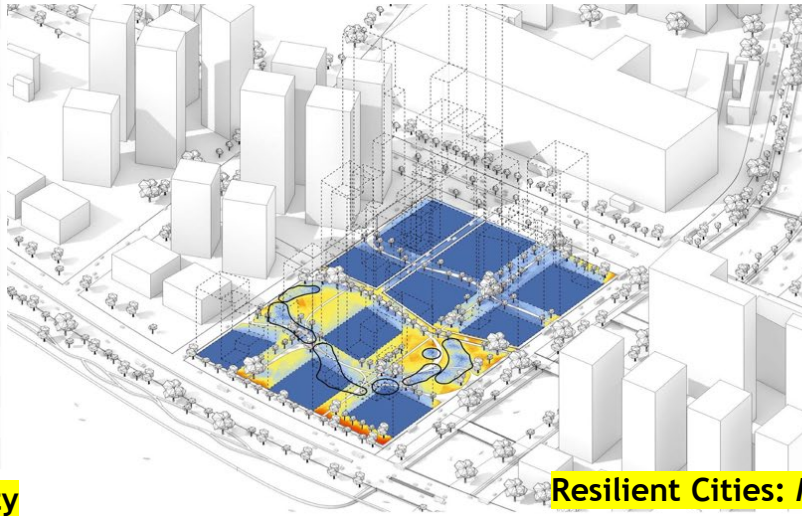
Lot 15 can provide service in an area needing of green space.



Service Area Existing and Proposed Parks

ADDRESS	AREA (SQFT)	ZIP CODE	ZONING	SMALLEST FOOTING	PARCEL TYPE
1 604 N. GREENWICH ST. AVE.	2242	19121	CMR-2	20.46	Corner
2 1400 N. 54TH ST.	1468	19131	RMK-2	18	Md
3 1200 N. 54TH ST.	1468	19131	RMK-2	20.5	Corner
4 1400 N. 54TH ST.	1468	19131	RMK-2	15.50	Corner
5 1400 N. 54TH ST.	1468	19131	RMK-2	18	Corner
6 1400 N. 54TH ST.	1468	19131	RMK-2	15.5	Md
7 2000 ARCH ST.	1274	19139	RMK-2	15.91	Corner
8 1218 N. 54TH ST.	1187	19139	RMK-2	15	Md
9 1415 N. 54TH ST.	859	19131	RMK-2	15.01	Md
10 1448 N. 54TH ST.	856	19131	RMK-2	15	Md
11 1420 N. 54TH ST.	842	19131	RMK-2	15	Md
12 1512 44N. ARCH ST.	926	19131	RMK-2	40.25	Md
13 1520 N. 54TH ST.	1493	19131	RMK-2	15	Md
14 647 N. 54TH ST.	7564	19131	RMK-2	70.91	Md
15 1507 MARKET ST.	1515	19139	CMR-2	21.24	Md

Add Green Roofs



Note:
_Proposed Site with all elements.

Legend:
 ● OECC
 ■ Land Bank
 ■ 5-Minute Service Area of Existing Parks
 ■ 5-Minute Service Area of Potential Parks
 ■ Service Area of Parks and Potential Parks
 ■ 5-Minute Service Area of Parks Outside
 ■ 5-Minute Service Area of Land Bank Lots

Data:
 Study area encompasses the neighborhood of Overbrook, Center City, and Center City East.
 All data generated throughout this project was generated in conjunction with GreenMapper for data mapping.

Sources:
 1. US Census Bureau, Census of Population, Housing, and Economic Characteristics
 2. US Census Bureau, Census of Population, Housing, and Economic Characteristics
 3. US Census Bureau, Census of Population, Housing, and Economic Characteristics
 4. US Census Bureau, Census of Population, Housing, and Economic Characteristics
 5. US Census Bureau, Census of Population, Housing, and Economic Characteristics
 6. US Census Bureau, Census of Population, Housing, and Economic Characteristics
 7. US Census Bureau, Census of Population, Housing, and Economic Characteristics
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 15. US Census Bureau, Census of Population, Housing, and Economic Characteristics

5-Minute Cities: Equity and Accessibility

Resilient Cities: Mitigating Urban Heat Island



Contact Dr. Peng Du *LEED AP, WELL AP*
Director, Master of Urban Design - Future Cities
Email: peng.du@jefferson.edu