

# Bachelor of Architecture Program

College of Architecture  
& The Built Environment






# Welcome!

This is an introduction to the Bachelor of Architecture Program at Thomas Jefferson University in Philadelphia.

In this presentation we will review:

- A Program Description
  - The Plan of Study
  - Minors & Graduate Programs
  - Outcomes
  - Facilities & Career Services
  - Sample Student Work
  - Student, Faculty & Alumni Profiles
- 





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Please email me with any questions or requests as these are exciting times

# College of Architecture & The Built Environment (CABE)

- Balance between theory and practice, design excellence and making
- Unique combination of disciplines = interdisciplinary collaboration
- Preparing to be future leaders in their fields
- Core Values

**Sustainability**

**Social Equity**

**Design Excellence**



# College of Architecture & The Built Environment

## Nexus Learning: A Core Teaching Value

Active, Collaborative

Real-World Learning

Infused with the Liberal Arts / Hallmarks

Emphasis on Developing

Curiosity and Confidence

Empathy and Collaboration

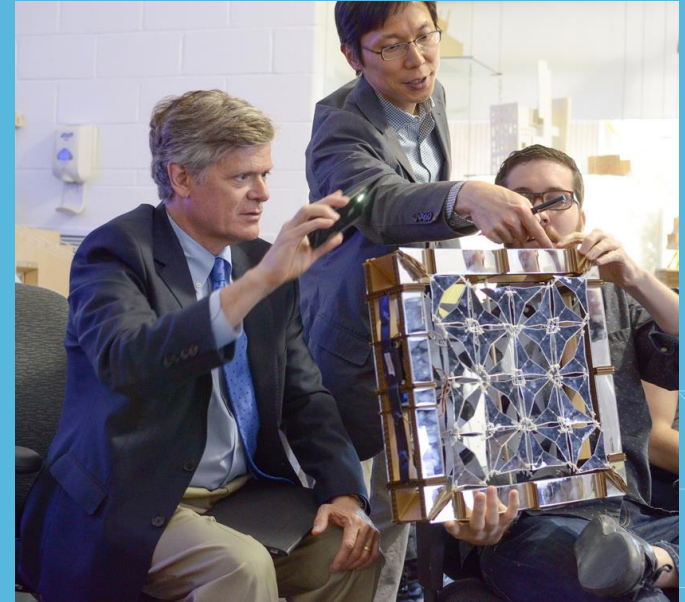
Initiative and Ethical Reflection

Contextual Understanding/Global View



# Bachelor of Architecture Program

- Is a 5-year professional degree program
- Is for students interested in becoming professionally licensed Architects
- Is a NAAB-accredited degree program (National Architectural Accrediting Board)
  - degree is required to be eligible for licensure



What is the difference between a 5-year BArch and 4+2 program?

BArch: 5 Years + 2 AXP = 7 Years to Licensure

MArch: 4+2 Years + 2 AXP = 8 Years to Licensure

Getting the **most** from your education



## The Bachelor of Architecture Studio Sequence

The core of our program are the Design & Visualization Studios

- The Design Studios Conclude with Research Studios such as Future Cities & Global Health
- The Vis Studios start with hand drawing and end with 3-D modeling/digital fabrication

CURRICULAR SEQUENCE	YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5	
DESIGN STUDIOS + REPRESENTATION	ARFD-101 DESIGN 1 Interdisc Explorations ADFND 4CR	ARCH-102 DESIGN 2 Architectural Graphics 4CR	ARCH-213 DESIGN 3 Urban Site & Context 4CR	ARCH-214 DESIGN 4 Natural Site & Context 4CR	ARCH-311 DESIGN 5 Urban Operations Social Issues 6CR	ARCH-312 DESIGN 6 Tectonics 6CR	ARCH-401 DESIGN 7 Nexus Experience Options 6CR	ARCH-412 DESIGN 8 Comprehensive Project 6CR	ARCH-507 DESIGN 9 Research Studio I 6CR	ARCH-508 DESIGN 10 Research Studio II 6CR
	ARFD-103 VIS 1 Drawing + Orthogonal Projection ADFND 3CR	ARFD-108 VIS 2 Tech & Graphic Rep Adobe/CAD ADFND 3CR	ARDS-208 VIS 3 Digital Modeling Rhinoceros ARCHDSN 3CR			ARCH-308 VIS 4 Advanced Modeling & Digital Fabric 3CR				



# The Bachelor of Architecture Studio Sequence

## Design Studio 7 - Study Abroad

### Semester-long Programs

UARC Rome

DIS Copenhagen

IE Univ. Segovia

Bauhaus Germany

### Nexus Abroad Summer Programs

Central Europe, Southern Europe, India

### Faculty-led Short Courses

South Africa

Czech Republic



# The Bachelor of Architecture History Theory Sequence

The History Theory sequence sets up a strong cultural foundation

- These courses set a context for understanding architecture & our study abroad programs
- Students are required to take on a highly focused theory seminar

CURRICULAR SEQUENCE	YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5	
HISTORY + THEORY			AHST-205 HISTORY 1 Ancient to Medieval  AHIST 3CR	AHST-206 HISTORY 2 Renaissance Baroque  AHIST 3CR	AHST-305 HISTORY 3 Early Modern  AHIST 3CR	ASHST-306 HISTORY 4 Contemp  AHIST 3CR		ARCH-371 THEORY SEMINAR  3CR		

## The Bachelor of Architecture Technology Sequence

A seven-course sequence moving from basic materials to building performance

- Technology is considered “a means for making” though hand and computer work
- Advanced computer software is used to study building energy & material performance

CURRICULAR SEQUENCE	YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5	
TECHNOLOGY	MATH 1 INTRO TO CALCULUS  3CR	MATH 2 OR ELECTIVE  3CR		ARCH-303 STRUCTURES 1 - Linear Forces  3CR	ARCH-304 STRUCTURES 2 - Columns & Beams  3CR					
	ENVIRO- MENTAL SCIENCE  3CR	PHYS-101 GENERAL PHYSICS  3CR	ARDS-210 TECH 1 Materials & Methods  ARCHDSN 3CR	ARCH-212 TECH 2 Passive Systems + Envelope  3CR	ARCH-313 TECH 3 Dynamic Systems  3CR	ARCH-314 TECH 4 Applied Systems + Performance  3CR		ARCH-416 TECH 5 REVIT + Documents  3CR		



## The Bachelor of Architecture Elective/ Minor Sequence

The elective sequence sets up focused Minors, Certificates & Combined UG+G Degrees

- In the fourth & fifth years, students can declare minors in areas of interest
- These choices can lead to Accelerated Combined UG and G Degrees

CURRICULAR SEQUENCE	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
ELECTIVES	<b>ELECTIVE 12 CR MINORS, CERTIFICATES &amp; A NUMBER OF DUAL DEGREES</b>  SND - Sustainable Design RED - Real Estate Development GEO - GeoDesign CM - Construction Management HP - Historic Preservation				ELECTIVE  3CR
				ELECTIVE  3CR	ELECTIVE  3CR

# College of Architecture & Built Environment

Minors - minimum 12 credits

Historic Preservation

Photography

Interior Design

Landscape Design or Planning

Sustainable Design

Construction Management

GIS

GeoDesign

Business

Real Estate Development



# College of Architecture & Built Environment

## Graduate Programs

Master of Architecture  
MS in Architecture  
MS in Construction Management  
MS in GeoDesign  
MS in Historic Preservation  
MS in Interior Architecture  
MS in Real Estate Development  
MS in Sustainable Design



# College of Architecture & Built Environment

## Accelerated Dual Degrees

Through coordination of your minors, you can continue into a graduate degree adding to your professional competitiveness

### Undergraduate Degree + Graduate Degree

B. Architecture + M.S. Real Estate Development (5+1)

B. Architecture + M.S. Historic Preservation (5+1)

B. Architecture + M.S. Interior Architecture (5+2)





## OUTCOMES

### RETENTION RATE

# 85%

Retention Rate for CABE in 2018

### PLACEMENT RATE

# 100%

First Destination Report Class of 2019:  
Employment and Graduate School  
Success Rate for CABE

### DISTINCTIONS

**1 Fulbright Teaching Scholar:**  
Professor Chris Harnish

**FIVE TIME WINNER** of John  
Stewardson Fellowship  
Competition

### AWARDS

- 1<sup>st</sup> Prize in 2020, 2018, 2017, 2016, 2014 of John Stewardson Fellowship Competition (all PA Architecture Programs)
- *Architect Magazine* Studio Prize, 2019 (Malawi Studio)
- 1<sup>st</sup> Prize: 2014 ACSA International Student Steel Design Competition
- 1st Prize for Office Building: 2019 DOE Race to Zero Solar Decathlon Design Challenge Competition

### EMPLOYERS OF JEFFERSON GRADUATES

- |                     |                    |
|---------------------|--------------------|
| • Gensler           | • Ballinger        |
| • HOK               | • WRT              |
| • Jacobs            | • Nelson Worldwide |
| • WRT               | • Michael Graves   |
| • Stantec           | • EwingCole        |
| • Kieran Timberlake | • SmithGroup       |



JOB TITLE

# Architect

## OUTLOOK

“Architects plan and design structures, such as private residences, office buildings, theaters, factories, and other structural property.”

“Employment of architects is projected to grow 8 percent from 2018 to 2028, faster than the average for all occupations.”

## SALARIES

MAX

\$138,120



MEDIAN

\$79,380



START

\$48,020

Sources: U.S. Bureau of Labor Statistics  
<https://www.bls.gov/oes/2018/may/oes171011.htm>



# College Facilities

CABE has state of the art studio spaces with individual computer screens, distanced learning labs, computer labs, and active learning classrooms

Mirrors professional work environments



# College Facilities

FabLabs: Analog and digital fabrication spaces

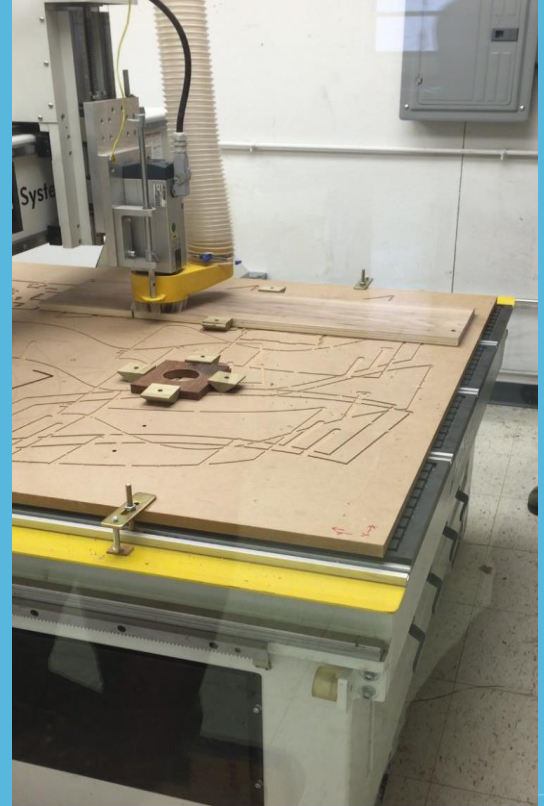
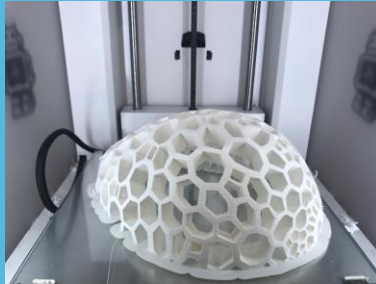
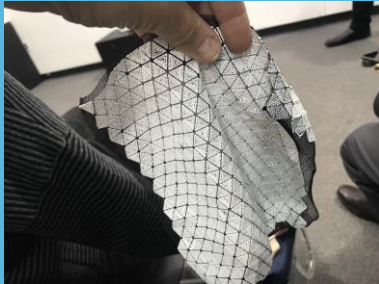
Comprehensive wood-shop

Laser cutters

CNC Router

Over 30 3-D printers in studios

SEE Gallery



- American Institute of Architects (AIA)
  - National, State and Local Chapters
- Society of American Registered Architects (SARA)
  - National, State and Local Chapters
- National Council of Architectural Registration Boards (NCARB)
  - Association which allows architects to transfer licenses to other states
- U.S. Green Building Council (GBC)
  - LEED Rating Systems



## Career Services

- Design Expo
- Portfolio Preparation
- *On-Line* portfolios
- Interview Days
- Professional Internships for Credit





# Student Work

## Comprehensive Projects

In completion of designs, students are required to consider a full balance of Site, Program, Form, Technology and Sustainability.

*In this example Hutton Moyer designed a health facility proposal fully considering the site, construction materials and program spaces.*



Jefferson CREATE WHAT'S NEXT



# Student Work

## Trans-disciplinary Projects

In our studios, students work collaboratively with students and faculty in other disciplines as they will in the real world.

*In this example Richard Jansen and his studio colleagues worked with the Jefferson Health Science program to design a collaboration center exploring natural organic systems.*



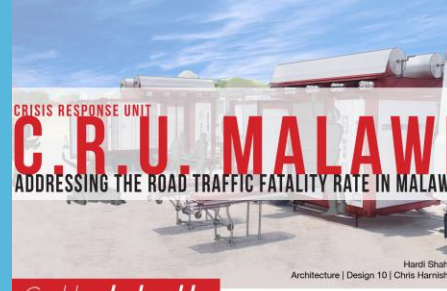


# Student Work

## Socially Responsible Projects

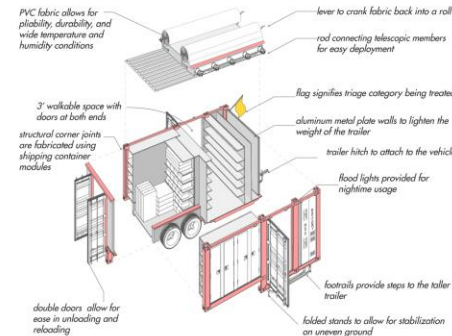
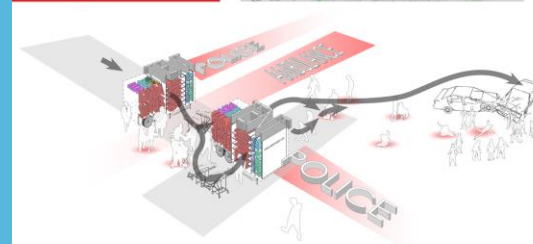
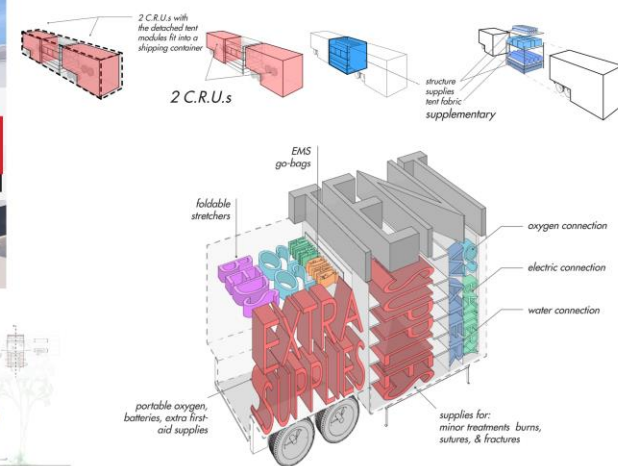
In completion of designs, issues of community, social equity and cultural sustainability are extremely important factors to study and incorporate.

*In this example Hardi Shah explored ideas to lower traffic fatality rates in Malawi, Africa.*



Could a **deployable, pre-fabricated mobile emergency response unit** help reduce the on-site road traffic accident mortality rate?

SECTION A





# Student Work

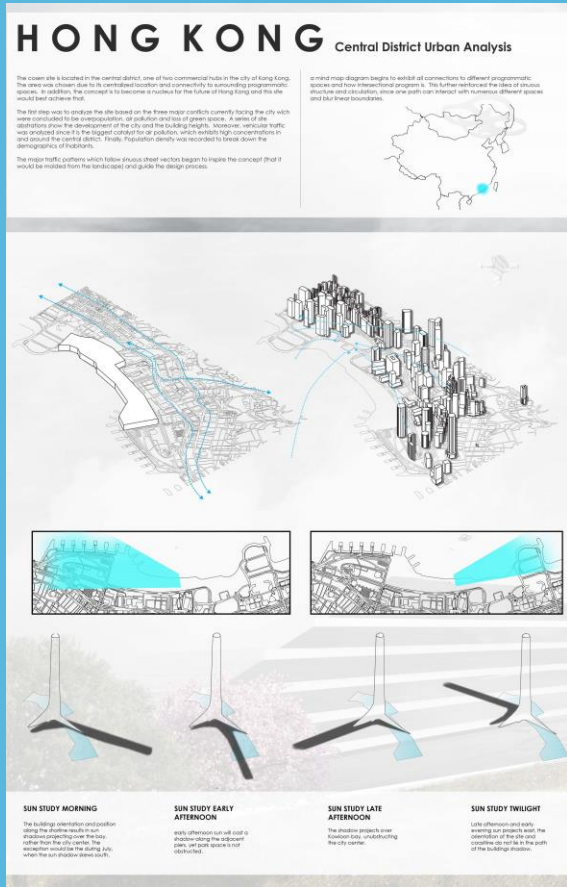
## 5<sup>th</sup> Year Research Studios

The fifth year experience is capped with research studios focused on such topics as Global Informal Settlements, Smart Future Cities, Responsive Technologies & Environmental Sustainability

*In this example, students designed high performance buildings for smart city development around the world.*



Jefferson CREATE WHAT'S NEXT



# Student Work

## Environmental High Performance Projects

How well a building operates in concert with our environment is critical

*In this example, Kihong Ku studied responsive facades treatments with his students at Xi'an Jiaotong Liverpool University in Suzhou, China while visiting for the 2018-19 academic year.*



### Adaptive Facades: Retrofitting the Foundation Building



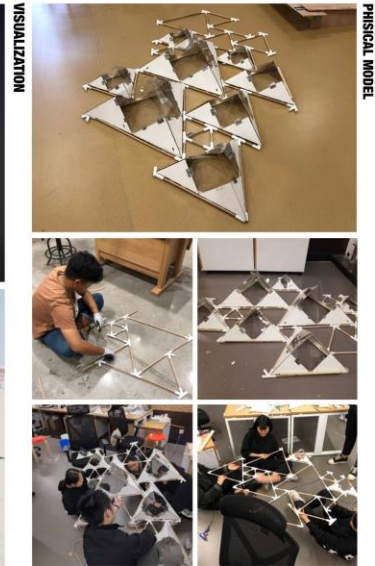
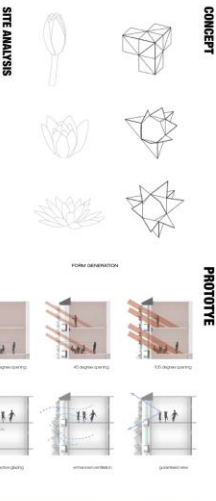
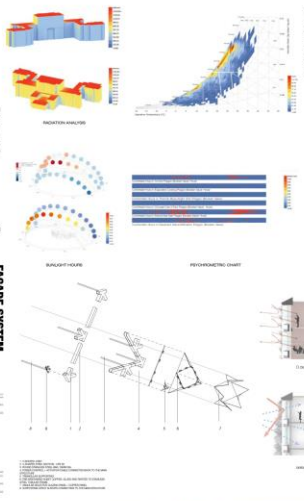
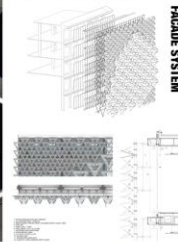
#### CONCEPT

**NENUPHAR**  
Mengxin Liu  
Zhiling Wang  
Shuoyu Tong  
Wenqi Wang  
Anwen Zhao  
Linyu Wang

This facade retrofit design aims to enhance the solar performance of the original facade of the Foundation building. The main idea of the prototype comes from our regular lecture tips. It was applied in order to not only generate a highly diverse pattern and provide a new appearance for the building, but also to give it a new identity, an academic center with purity and freedom. The facade system is applied mainly to control the daylighting conditions based on different technical needs, providing sufficient views as well as avoiding glare.

**Installation:**  
Xi'an Jiaotong-Liverpool University, Suzhou, China  
Department of Architecture and Design  
ARCH501 Architectural Technology (Undergraduate Year 4)

**Teaching Team:**  
Kihong Ku (Coordinator), Tong Lu, Peiyu Qi

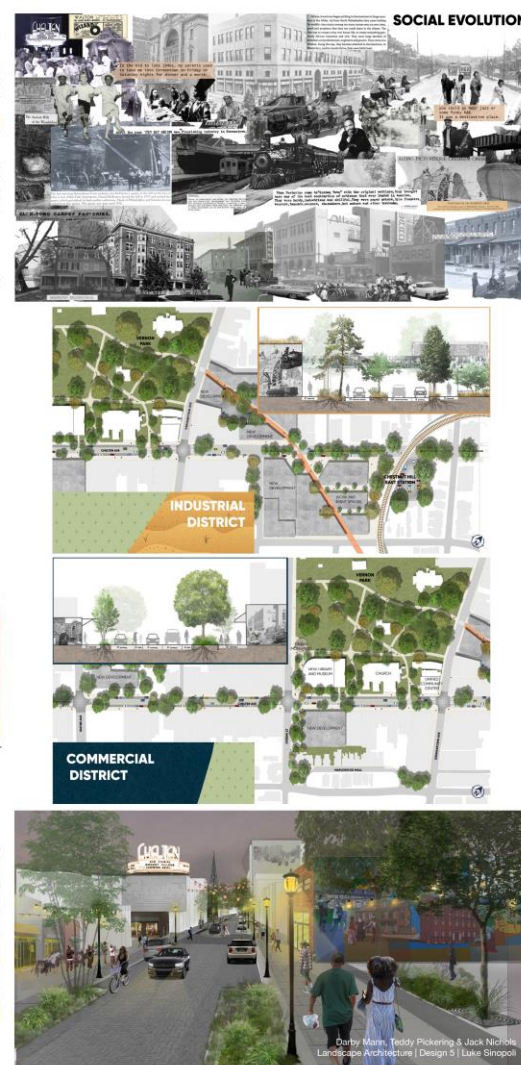
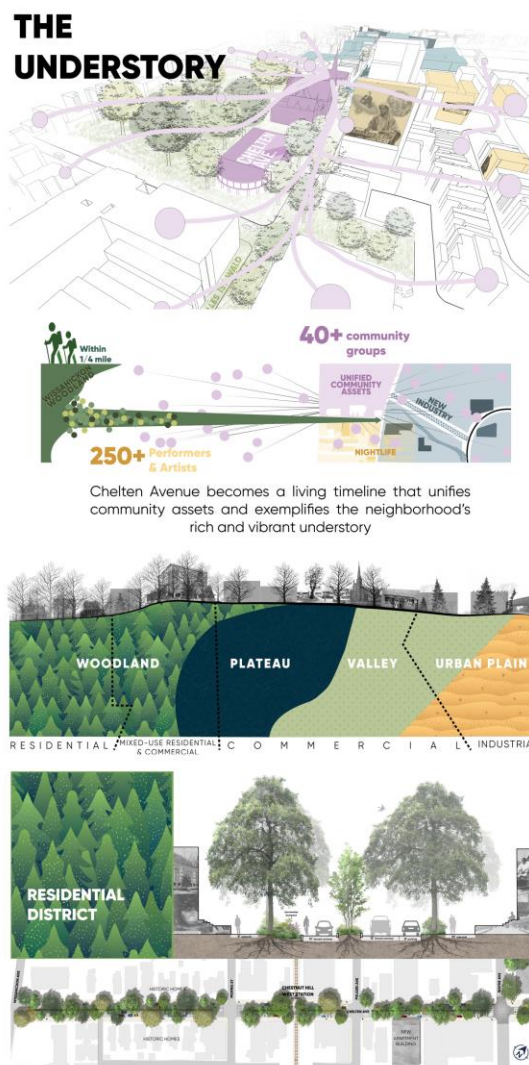




# Student Work Research Projects

It is extremely important for future architects to utilize research as a fundamental design tool to better our built environment.

*In this example, architecture and landscape architecture students joined forces to research the natural and built components of a site. Such research includes literal inventory as well as historiographical development*



# Hand Drawing Versus Computer Drawing?

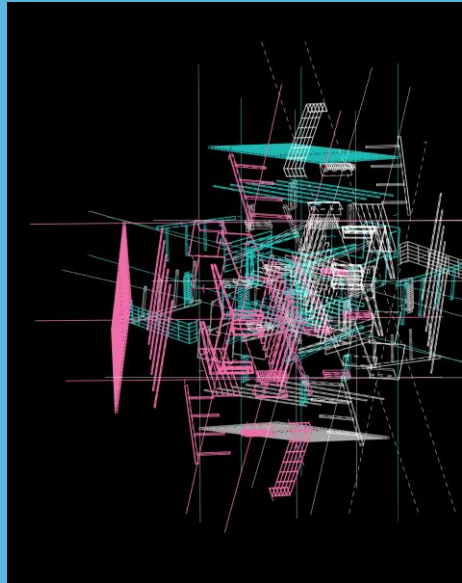
A common question we receive is which type of drawing does our program emphasize? The answer is both. We believe the ability to sketch, hand draw, diagram and build models are fundamental architectural skills just as much as being proficient in digital rendering. Programs we use:

Microsoft Office

Adobe Creative Suite

AutoDesk (AutoCad & Revit)

Rhinoceros

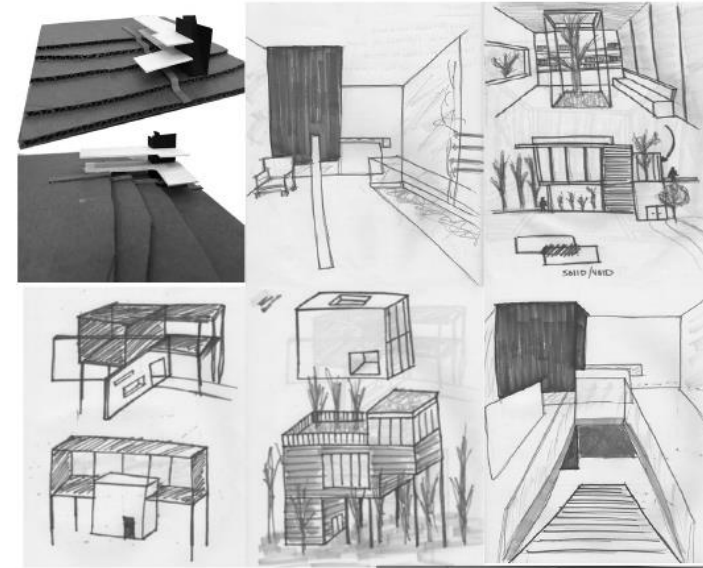
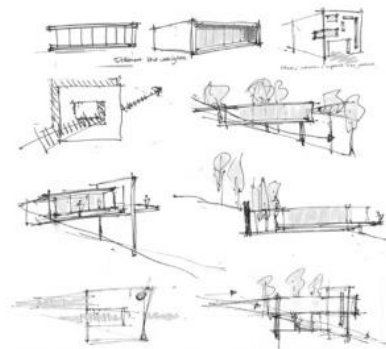


M.ARCH & INTD | Melanie Perkins, Samantha Oriente, Tianyi Xie

“The only other sound’s the sweep of easy wind”  
“To watch his woods fill up with snow”

## PROJECT PROPOSITION

- Different varieties of line weights
- Warm lighting from within
- Look down on nature floor
- Bring nature in
- Rectilinear
- Hike to location
- Journey; Exploration
- Raised off ground
- Secluded vs Open
- Balanced





# Theresa Chiarenza

CLASS OF 2020

Theresa will graduate with a BArch and minor in Historic Presentation. She is President of Jefferson's AIAS chapter and received the 2019 Jefferson Student Leader of Innovation Award.

*The Student Leader of Innovation Scholarship went to architecture student Theresa Chiarenza '20 for her contributions to meet current and emerging social needs through innovation. Chiarenza played a leadership role with a team of 13 students, who collected oral histories and developed a cohesive exhibition about Jefferson's Hassrick House, designed by Richard Neutra, that was presented to the public at the recent opening of the Center for the Preservation of Modernism.*



## Chris Harnish

ASSOCIATE PROFESSOR

BA in Environmental Studies and English Literature from  
Denison University  
MArch from University of Oregon

Professor Harnish specializes in humanitarian architecture in Malawi and South Africa, examining the process of design and construction with the goal of positive culture and environmental impact in local communities. In 2016, Professor Harnish was awarded a Fulbright Teaching Scholar Fellowship for his proposal, “Equity, Sustainability and Resilience: Architecture as a Social Force in Humanitarian Development”.



# TJ Burghart

MASS DESIGN GROUP  
KIGALI, RWANDA

BArch with minor in Arch. History/Theory  
CLASS OF 2014

AIAS Director Freedom by Design  
Formerly AmeriCorps Construction Crew Leader at  
Habitat for Humanity Philadelphia Inc.

*“I view architecture as a tool that has implications beyond its walls through the process. Spaces are where people come together to live. Details and moments of these spaces influence our daily experience and shape who we are. As a recent graduate, I continually seek to understand how we can improve our quality of life”.*



# Skylar Tibbits

ASSISTANT PROFESSOR  
MASSACHUSETTS INSTITUTE OF TECHNOLOGY  
CAMBRIDGE, MA

BArch with minor in Experimental Computation  
CLASS OF 2008

M.S. Design Computation, MIT

M.S. Computer Science, MIT

Skylar Tibbits is a co-director and founder of the Self-Assembly Lab housed at MIT's International Design Center. The Self-Assembly Lab focuses on self-assembly and programmable material technologies for novel manufacturing, products and construction processes.







**Jefferson**  
Thomas Jefferson University