

## 2. EXECUTIVE SUMMARY OF THE TWO MOST RECENT NAAB VISITS: 2016 and 2010

### CONDITIONS NOT MET

2016 VTR	2010 VTR
None	6. Human Resources
	8. Physical Resources
	10. Financial Resources

### STUDENT PERFORMANCE CRITERIA NOT MET

2016 VTR	2010 VTR
B.3 Codes and Regulations	None

3.

**Interim Progress Report Year 5**  
**University of Kansas**  
**School of Architecture, Design, and Planning**  
**Master of Architecture**  
**Track I (180 credits)**  
**Track II (preprofessional degree + 66 credits)**  
**Track III (non-preprofessional degree + 117 credits)**

*Year of the previous visit: 2016*

*Please update contact information as necessary since the last APR was submitted.*

**Chief administrator for the academic unit in which the program is located:**

**Name: Hui Cai**

**Title: Associate Professor, Chair of Department of Architecture, University of Kansas**

**Email Address: Huicai@ku.edu**

**Physical Address: Marvin Hall, 1465 Jayhawk Blvd, Lawrence, KS 66045**

**Any questions pertaining to this submission will be directed to the chief administrator for the academic unit in which the program is located.**

**Chief academic officer for the Institution:**

**Name: Barbara Bichelmeyer**

**Title: Provost and Executive Vice Chancellor, University of Kansas**

**Email Address: provost @ku.edu**

**Physical Address: Strong Hall, room 250, 1450 Jayhawk Blvd. Lawrence, KS 66045**

Text from the previous VTR and IPR Year 2 Review is in the gray text boxes. Type your response in the designated text boxes.

**I. Progress in Addressing Not-Met Conditions and Student Performance Criteria**

**a. Progress in Addressing Not-Met Conditions**

**University of Kansas, 2021 Response:** N/A

**b. Progress in Addressing Not-Met Student Performance Criteria**

**University of Kansas, 2021 Response:** Narrative Satisfied by 2-Year IPR.

**II. Changes or Planned Changes in the Program**

*Please report such changes as the following: faculty retirement/succession planning; administration changes (dean, department chair, provost); changes in enrollment (increases, decreases, new external pressures); new opportunities for collaboration; changes in financial resources (increases, decreases, external pressures); significant changes in educational approach or philosophy; changes in physical resources (e.g., deferred maintenance, new building planned, cancellation of plans for new building).*

**University of Kansas, 2021 Response: Please Note: Response must provide an update on the funding of open faculty positions, the result of faculty searches, and an update on the search for additional studio space:** [Click here to enter text.](#)

Faculty retirement/succession planning: Between FY 2016 and FY 2021, four tenured faculty members (two at the rank of full professor and two at the rank of associate professor) and one permanent lecture have retired from the Department of Architecture.

During the same period, we have hired five tenure-line faculty members (three at the rank of associate professor and two at the rank of assistant professor) and one permanent lecturer in the department. In 2018, our department added an Interior Architecture program, which added two additional TTR faculty to our department. Currently, we have 15 tenured professors and five tenure-track professors in the Department. Among them, 18 TTR faculty are in the Professional Architecture programs (Table 1).

In the fall of 2015 when our last APR for 2016 NAAB Accreditation Visit was submitted, we had 19 tenured and tenure-track (TTR) faculty members in the Department. With 18 TTR faculty members, we have one less TTR faculty members now than what we had in 2015. The total number of faculty teaching Professional Architecture Programs in the Department of Architecture was 40 (TTR + Non-TT) in 2015. In FY 2020-21, that number is 35, and in Fall 2021, the total number of faculty is back at 40.

During FY 2021-22, the Department of Architecture is in the process of hiring four new TTR faculty members (two in Professional Architecture program and two in Interior Architecture program). If we are successful, the number of our TTR faculty members in the Professional Architecture program will increase to 20, which is one more than what we had in 2015. In addition, we are also in the process of hiring three teaching professors at the rank of assistant professor for Architecture by Fall 2022 to balance the teaching and service load of our TTR faculty members.

**Table 1: Full-time and permanent faculty members in the Department of Architecture, FY 2020-21**

<b>Professional Architecture Program</b>				
First name	Last name	Rank	Tenure status	Allocation
Hui	Cai	Associate Professor	Tenured	1.0 FTE
Jae	Chang	Professor	Tenured	1.0 FTE

<b>Professional Architecture Program</b>				
First name	Last name	Rank	Tenure status	Allocation
Joe	Colistra	Professor	Tenured	1.0 FTE
Gregory	Crichlow	Assistant Professor	Tenure-track	1.0 FTE
Shannon	Criss	Professor	Tenured	1.0 FTE
Nils	Gore	Professor	Tenured	1.0 FTE
Farhan	Karim	Associate Professor	Tenured	1.0 FTE
Chad	Kraus	Associate Professor	Tenured	1.0 FTE
Marie-Alice	L'Heureux	Professor	Tenured	1.0 FTE
Andrew	Moddrell	Associate Professor	Tenure-track	1.0 FTE
Steve	Padget	Professor	Tenured	1.0 FTE
Mahbub	Rashid	Professor	Tenured	1.0 FTE
Danny	Rockhill	Distinguished Prof	Tenured	1.0 FTE
Hugo	Sheward	Assistant Professor	Tenure-track	1.0 FTE
Kapila	Silva	Professor	Tenured	1.0 FTE
Kent	Spreckelmeyer	Professor	Tenured	1.0 FTE
Niloufar	Vakilbahrami	Associate Professor	Tenure-track	1.0 FTE
Keith	Van De Riet	Associate Professor	Tenured	1.0 FTE
Anne	Patterson	Lecturer	Non Tenure-track	1.0 FTE
Jason	Pittman	Lecturer	Non Tenure-track	0.8 FTE
<b>Interior Architecture Program</b>				
Nisha	Fernando	Associate Professor	Tenured	1.0 FTE
Casey	Franklin	Assistant Professor	Tenure-track	1.0 FTE

Source: Human Resource Management, University of Kansas

Administration changes (dean, department chair, provost): Since our last 2015 APR for 2016 NAAB Accreditation Visit was submitted, significant administrative changes have occurred at the university, school, and the department level. Provost Barbara Bichelmeyer, appointed in February 2020, is our third provost since July 2016. The other two included; Neeli Bendapaudi who was appointed Provost on July 1, 2016 and Carl Lejuez who served as Interim Provost after Neeli Bendapaudi's acceptance of the presidency at the University of Louisville.

Between FY 2016 and FY 2021, the School of Architecture & Design had two Deans. Mahesh Daas served as our Dean from June 2015 until July 2019, succeeding John Gaunt who retired as dean after a 20-year career. Since July 2019, Mahbub Rashid is serving as the Interim Dean of the School. A national search is underway for a permanent dean with a target start date of no later than June 2022.

Between FY 2016 and FY 2021, we had several changes in the position of the Chair of the Department of Architecture. Our current Chair Hui Cai has been holding this position since July 2021. Before that, Joe Colistra (July 2019- June 2021), Mike Swann (July 2018-June 2019), Jae Chang (July 2016-June 2018), served as the Interim Chair of the Department and Paolo Sanguinetti (July 2013-June 2016) served as the Chair of the Department.

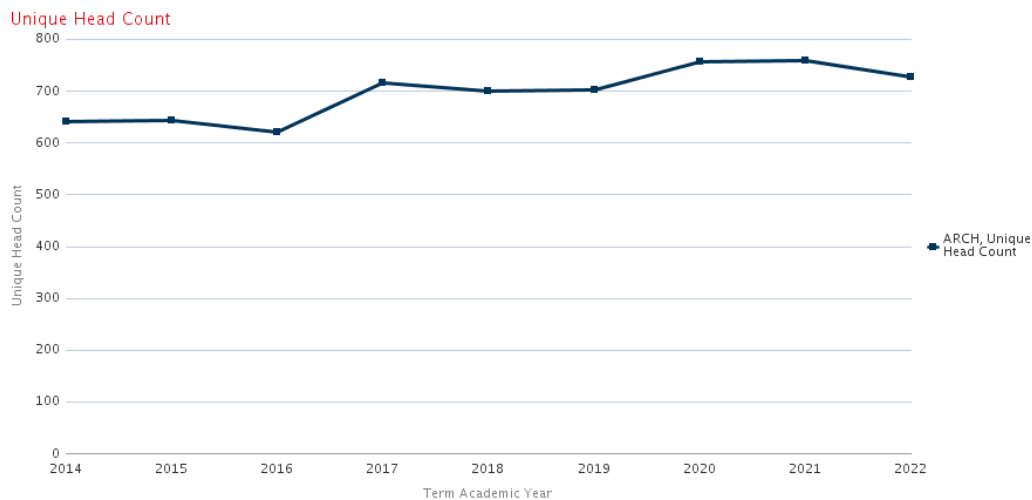
Changes in enrollment (increases, decreases, new external pressures):

Between FY 2016 and FY 2021, the enrollment in the Department of Architecture at the University of Kansas continued to increase (Figure 1). The total number of students taking departmental courses has increased from 620 in AY 2016 to 758 in AY 2021. Despite the challenge of the COVID-19 pandemic and decrease of enrollment in other units across KU, the Department of Architecture had a steady enrollment of 757 students in AY 2020 and 758 in AY 2021. The total credit hours also have increased from 11,446 in AY 2016 to 15,187 in AY 2021.

Some external pressures for enrollment come from the decline of high school graduates who immediately enroll in college. According to Forbes (2021), “The percentage of 2020 high school graduates who immediately enrolled in college dropped by almost 7% last fall, during the height of the Covid-19 pandemic, a decrease that was four times greater than the pre-pandemic rate (-1.5%) for graduates in fall 2019.”

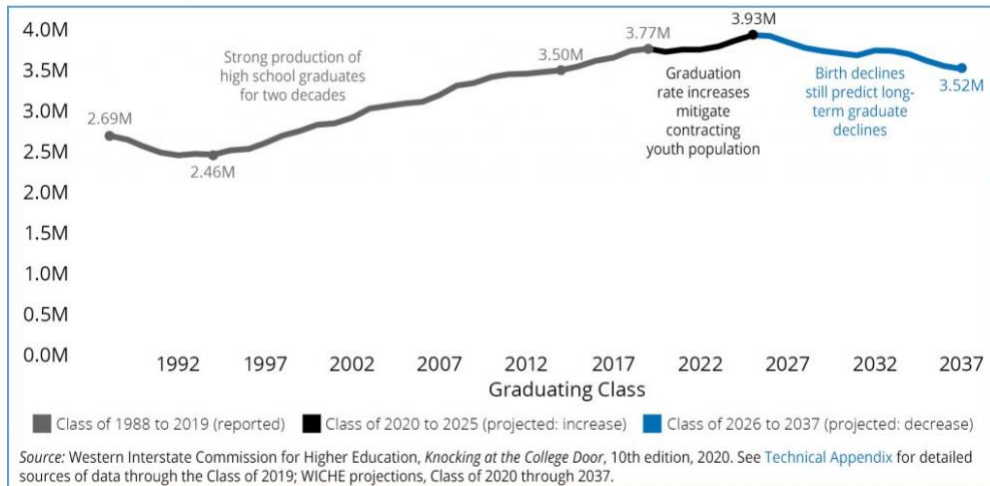
Looking forward, future enrollments in colleges and universities are projected to drop significantly due to the projected significant decrease of the number of high school graduates after 2025, based on research conducted by the Western Interstate Commission for Higher Education (2020), as shown in Figure 2. In addition, changes in community college education can potentially impact enrollment in universities. For example, the newly approved Kansas Promise Scholarship allows eligible students to receive a two-year community or technical college education in select high-demand fields almost for free (Kansas Board of Regents, 2021). Moreover, a recent change in the state-level policy of transfer credits allows students to transfer in a larger percentage of courses taken at a community college to apply to an undergraduate degree. The demographic shift and changes in higher education are new external pressures that we have to consider in future recruitment. More focus needs to be put on creating a better pipeline from high schools and community colleges.

Figure 1. Number of students enrolled in KU Department of Architecture (2014-2022)



Source: Analytics, Institutional Research, & Effectiveness (AIRE), University of Kansas

Figure 2. Trend of high school graduates (1992-2037)



Source: Western Interstate Commission for Higher Education (2020).

New opportunities for collaboration:

In the past five years, the Department has developed several new opportunities for collaboration with community colleges, industry partners, local community stakeholders, and global peer institutes.

**Collaboration with community colleges and high schools in underserved areas**

We have worked on developing new opportunities to collaborate with community colleges and high schools in underserved areas to develop better pipelines and improve diversity and equity of our student body. Beginning in 2021, the Department increased recruiting activities in high schools and community colleges throughout the smaller communities in central and western Kansas. The Department also established a relationship with the Kansas City Public Schools (KCPS) in Missouri to develop an educational pipeline for middle and high school students in ten schools to explore a career in architecture. Specific recruiting efforts and scholarship programs were created to support the recruitment of students from the BIPOC community.

**Industry Partnership for innovative teaching and research:** The Department has developed strong relationship with industry partners including architecture firms, engineering firms, and healthcare systems. The collaboration was established through multiple approach. One is through strengthening the School of Architecture and Design’s Advisory Board. The Advisory Board has created four standing committees in addition to the Executive committee, including Advancement Committee; Diversity, Equity, Inclusion, and Belonging Committee; Excellence and Innovation Committee; and Outreach and Engagement Committee.

The other approach is through the establishment of Institutes and Centers of Excellence within the School to create platforms for inter-disciplinary collaboration in research and design education.

*Institute of Health and Wellness Design:* For example, in 2016, our faculty, Kent Spreckelmeyer, Frank Zilm, and Hui Cai, launched the Institute of Health and Wellness Design (IHWD). Faculty in the IHWD have established and maintained on-going associations with approximately forty-five architectural firms across the country. Currently, ten of these firms are Affiliate Members of the Institute of Health & Wellness Design, each contributing \$5000 membership fee per year to support the students’ education and faculty research. Since 2016, the Institute has attracted almost \$250,000 funding through Affiliate membership support, Design Service Center, and sponsored research activities. In summer 2020, the Institute pledged \$90,000 of their funds to support for the construction of the fourth-floor studio space in Marvin Hall. In addition to this direct support from the Institute, the program recruited \$40,000 in pledged

donations for the project. It resulted in a state-of-the-art virtual reality (VR) and physical mock-up research lab and two design studio spaces.

In terms of educational outcomes, the health and wellness design program have placed more than 200 students in internship around the nation. The industry-based collaborative education model allows students to gain real-life design experience and be immersed in design practice. The innovative education model has proven to be successful. Students from the Health and Wellness program have been recognized as the Honorable Mention for the Union of Architecture Public Health Group Design Competition in 2017, and awarded with the Healthcare Environment Design Award Student Category winners in 2018, 2020 and Honorable Mention in 2021.

This collaborative model also provides opportunities for both faculty and students to engage in industry-based research projects. Since 2016, the IHWD faculty and industry partners engaged students in several large-scale post-occupancy evaluation (POE) research and evidence-based design research. During the COVID-19 pandemic, our faculty and students are able to contribute with their expertise in health and wellness design to engage with hospitals and the AIA Knowledge Communities to establish best practices in emergency response. Some examples include emergency room reconfiguration to accept surges in patients and reconfiguration of ventilation systems to ensure positive air flow in COVID isolation units; supporting AIA develop “ArchMap,” which was an online database and dashboard that documented the design and construction efforts on alternative care sites during COVID-19; capstone studio collaborating with the KU Medical Center’s School of Nursing and local design firms to design innovative prototype of future nursing homes and continuing care retirement communities post-COVID. Prof. Hui Cai was also part of the subcommittee on “Small and Rural hospitals” that contributed to the whitepaper for the FGI on the development of “Guidance for Designing Health and Residential Care Facilities that Respond and Adapt to Emergency Conditions”.

*Sports and Entertainment Design Initiatives:* Leveraging the strength of Kansas City’s sports architecture; we established relationships with the leading sports and entertainment firms to place our students in 6-7 months long internships focused on sports and entertainment architecture. While most firms are in the Kansas City region, we also place students in firms across the nation and overseas in Singapore and Korea. Our recent faculty hire Andrew Moddrell, co-founder of PORT Urbanism, is directing this program.

*Smart cities and downtown design center.* Joe Colistra founded the Institute for Smart Cities and partnered with several corporations and the KU Medical Center to assemble research grants and engage students in collaborative research. Most recently, he obtained funding from KU’s Center for Service Learning and initiated a partnership with a local developer to establish the Downtown Lawrence Design Center. This embeds our students in our community and allows us to exhibit our commitment to our downtown community stakeholders.

Recently, our faculty Chad Kraus has partnered with faculty in the School of Engineering to enter the 2023 Solar Decathlon Build Challenge. It is a high-profile design-build competition to explore innovative sustainable design solutions. They have successfully engaged BNIM, the world-renowned sustainable design firm, as the strategic partner in this project.

**Engaging Local Communities collaborators:** Our robust design build and public interest design programs continue to develop meaningful collaborations in our surrounding communities. Our faculty and students have worked with non-profits, cultural institutions, municipalities, and schools to design, fund, and execute significant projects in our community. Each semester seems to bring a new partner to our efforts.. For example, Dotte Agency has established strong partnership with local communities at Kansas City, Kanas, and Lawrence, Kansas. During the last five years, our faculty members who founded Dotte Agency worked with several community partners in Wyandotte County within the metropolitan Kansas City area. These partners include Community Housing of Wyandotte County, Community Health Council of Wyandotte County, Central Avenue Betterment Association, Health Forward Foundation, Menorah Heritage Foundation, Wyandotte Health Foundation, Healthy Communities Wyandotte, Unified Government of Wyandotte County, Local Initiatives Support Corporation, and Latino Health for All Coalition. Based on these partnerships, our faculty have published at least four book chapters, three journal articles, five peer-reviewed papers in conference proceedings, have made at 65 public

presentations, and received the Public Scholarship Award in 2019. More recently, during the pandemic, they converted a vehicle into a mobile grocery store. Between October 2020 to May 2021, the Dotte Mobile Grocer was able to distribute 16,500 USDA food boxes to Kansas City, KS food insecure-residents. This is an estimated value of \$685K of food (each USDA food box is valued at \$40 of food). They have developed participatory engagement tools and working directly with neighborhoods residents in the West Height Neighborhood/KCK to assess public sidewalks, streets and street lighting.

Another example is our Studio 804 led by Prof. Dan Rockhill. Through the partnership with Lawrence Community Shelter (LCS), working through the heart of the COVID-19, Studio 804 donated and built 12 safe, easy to staff dwellings that offer much needed privacy for families while allowing guests access to important services at the shelter. The project is to meet the needs of families experiencing homelessness in a rapidly changing world while supporting their transition to permanent housing.

Every semester, our design-build studios (Arch 509) partner with local communities and collaborate on projects that can directly benefit the communities, such as Chad Kraus' Dirt Work studio's work on Passerine Pavilion, Keith Van de Riet's studio's work on Reptilian Pavilion at Kansas Children's Discovery Center, and Nils Gore's work on Book Mobile in collaboration with the Lawrence Public Library. These are just examples from our 2020 Arch 509 projects.

**Global connections and collaborations:** KU Department of Architecture has signed several MOUs for collaboration with international universities and professional architecture schools, including Nanjing Tech University in China and Incheon National University, Hanyang University, Chung Ang University, Soongsil University, and Yonsei University in Korea. We also have a long-standing Paris program, which recently has expanded into a full-year program that allows students to gain both work and educational experience in Paris.

Changes in financial resources (increases, decreases, external pressures): Between FY 2016 and FY 2021, the University of Kansas imposed general use fund (state appropriations and general tuition) budget cuts every year. In 2015, 2018, and 2020, it had permanent base budget cuts. In 2016 and 2019, it had cash budget cuts. In 2017, it had a permanent base cut along with state-imposed spending limits. During the five-year period, the School's course fees, endowment, and grant funding were not affected by the budget reductions.

Despite university budget cuts, the overall budget of the School of Architecture & Design has increased significantly from FY 2015 to FY 2020. In 2015, the amount of our total instructional costs for the Department of Architecture was \$4,149,323. In 2017, our faculty received merit awards and the amount of our total instructional costs for the Department of Architecture has increased to \$ 4,324,056. In 2019, that amount was \$5,192,204, which is a 125.13% increase over the FY 2015 amount ([Table 2](#)). The amount of our instructional costs for FY 2020 is not yet available, but that number is likely to increase again.

The increase in our instructional costs can be explained by increases in the number of students in our programs, the number of student credit hour (SCH) production, course fees, and changes in the university budget model.

[Table 2: Instructional expenditures of the Department of Architecture for FY 2015 to FY 2020.](#)

FY	Salaries	Fringe	Other Operating Expenses	Total Instructional Costs
2015	\$2,837,698	\$711,498	\$600,127	\$4,149,323
2016	\$2,813,863	\$671,206	\$898,175	\$4,383,244
2017	\$3,102,157	\$716,104	\$505,794	\$4,324,056
2018	\$3,341,544	\$791,066	\$927,902	\$5,060,512
2019	\$3,368,377	\$873,170	\$950,657	\$5,192,204

Source: Analytics, Institutional Research, & Effectiveness (AIRE), University of Kansas



### Significant changes in educational approach or philosophy:

Some significant changes in educational approach or philosophy already happened prior to the 2016 visit. For example, our department has made Study abroad programs and design build studios as required components in our curriculum. The department also continued to strengthen the final year options for the 5<sup>th</sup> year studios to provide students a wide range of options for specialized architectural education that mimic the real-world practice, including design-build, health and wellness design, Paris program, social entrepreneurship, and Sports and Entertainment design.

Additional significant changes after 2016 happen in these five areas: flexibility in course delivery, student success/career readiness, diversity, equity, inclusion and belong (DEIB), Interdisciplinary collaborative education, and Integration of research and design education.

#### **Flexibility in course delivery**

The last year and a half have forced us to make significant changes in our approach. First, our entire community of educators, staff, and students worked hard to find new and exciting ways to deliver engaging educational experiences remotely. We continue to rigorously debate whether remote learning is comparable to the in-person experience, however, most will agree there are things we learned from this pivot that are valuable and worthy of retaining. One such aspect is the ability to bring flexibility to the engagement. We were able to invite design professionals from around the world to participate in studio reviews, class discussions, and lectures in ways that we had never thought possible. Also, the ability to “meet students where they are” was critical in allowing those unable to return to campus for a variety of reasons to continue their education. As a response to that, we have offered a variety of course delivery models, including flip class, online, and hybrid class to supplement traditional in-person classes, to ensure our students have equal access to information.

Second, the pandemic brought to the forefront the extent to which our students are vulnerable to mental stress, financial hardship, and instability with regard to housing. Faculty worked extremely hard to provide alternative means for students to demonstrate learning outcomes. They recognized that every student has unique challenges that require understanding and flexibility.

Third, the challenges of the last 18 months made it extremely clear that issues of diversity and social justice must be woven throughout our entire educational experience. From recruitment to curricular content, to funding of DEI issues, we must recognize the different challenges all our students face and allow our educational system to respond more compassionately to these challenges.

#### **Diversity, equity, inclusion, and belonging (DEIB)**

We have taken a series of efforts on improving diversity, equity, inclusion, and belonging (DEIB) among our students, staff, and faculty. We established the DEIB committee at both department and school levels. Our professional advisory board has also created a sub-committee on DEIB to support efforts and initiatives that help advocate diversity and equity. With the help of the university’s Endowment, we have developed strategies to raise funds to support DEIB initiatives. In addition, in July 2021, we appointed the first Associate Dean for DEIB, Prof. Kapila D. Silva, to lead various DEIB initiatives. Various efforts are underway:

1. Offering scholarships to BIPOC students;
2. Using Multicultural Architecture Scholars Program to provide structured mentorship to students from underrepresented populations;
3. Developing summer camps to recruit students from underrepresented groups;

4. Partnering with NOMA-Kansas City, AIA-Wichita, and public school systems in Kansas City area and Wichita to run summer design camps targeting high school students of minority backgrounds and offering them full/partial scholarships to participate in those camps;
5. Developing 'diversity goals' for the department in faculty/staff hiring so that we can build a socially diverse faculty and staff;
6. Inclusion of a DEI statement in course syllabi to inform students of the department's commitment to DEIB;
7. Developing more accessible pathways to mental health counselling for the students;
8. Establishing scholarships for African American students to participate in study abroad programs;
9. Developing funding support for student organizations such as AIAS and NOMAS to support their activities. In addition, we reactivated NOMAS KU Chapter in 2016;
10. Creating pipelines with community colleges and high schools to provide better connections to students with diverse backgrounds, as we have described before in the opportunities for collaboration.

### **Student Success/Career readiness**

Our faculty, students, and alumni have been working hard to foster a supportive learning community to ensure student success and career readiness. This was done through enhancing the state-of-the art technology education, structured support and feedback for portfolios, career readiness workshops, and peer mentorship program.

### ***Technology education***

To ensure our students have the technical competency in the job market, our department has made ARCH 110 Introduction to Computing as a required class for all students. This course introduces our students to the latest digital design tools and knowledge about Building Information Modeling. In addition, we have provided electives on Virtual Reality/Augmented Reality, digital fabrication, and visual scripting and data management to supplement our students with advanced technology education.

### ***Portfolio requirement***

Our department has always organized portfolio reviews to invite architects and design practitioners to visit our students and provide feedback to their portfolio. But we have decided to formalize the process and create a structure and iterative process that can support assessment of students' work, provide feedback, and review the progress of their work. Since September 2020, the Architecture Department has led a portfolio review process for our 3rd Year IA and M. Arch students and our 4th Year M.Arch students. All 3<sup>rd</sup> year and 4<sup>th</sup> year students are required to submit portfolios on their first day of class. Faculty are involved in the first round of review of all portfolios and provide individual feedback. Alumni and industry partners are engaged in the second round of review of portfolios and help determine merit awards for best portfolios. Our goal for this initiative is to 1) build a culture of support for our students as they develop their folios, 2) to increase faculty conversations around what we are collectively teaching and 3) get our best students' folios out to leading firms to share what our students are doing. Through this collective effort, last year we recognized 17 folios at the Advisory Board Meeting. This year we have over 200 students participating (95% submitted).

### ***Career Readiness Workshops***

In 2019, our department partnered with a local design firm and developed a series of lectures and workshops on career readiness to help students develop soft skills, establish professional connections,

build resumes, and provide mock interviews. In 2021, this effort has been formalized as a collaboration between our department and NOMA KC to provide comprehensive career readiness support to all students group, and particularly support students with disadvantage background.

**Peer Mentorship program**

The other initiative to support student success and building a positive learning community is through the mentorship collaborative program that was established in 2020. It was designed as a student-run and faculty-supported initiative for the Architecture and Interior Architecture Programs. The Mentorship Collaborative connecting 4th year students with 2nd years, and 3rd years students with 1st years. The mentors work in collaboration with the 1st and 2nd Year Instructors to aid in providing student experience perspectives on courses inside our school, throughout the university, internships, study abroad, certificate and minor degree programs and assist with skill-building workshops. We have about 50 architecture students serving as mentors which help build a positive student culture and assist our instructors.

**Interdisciplinary collaborative education:** Our department has expanded our collaboration with the Civil, Environmental & Architectural Engineering (CEAE) Department at the School of Engineering to provide interdisciplinary education and diverse career path to our students. We established the Dual Master of Construction Management (MCM) and M.Arch. Degree Program. The Master of Construction Management (MCM) and Master of Architecture dual degree program is designed for students intending to pursue a career in architecture, development, construction, and/or project management. Students completing the dual degree program earn an MCM from the KU School of Engineering and an M.Arch. from the KU School of Architecture and Design. Diplomas are awarded concurrently by each school at the conclusion of the dual degree program requirements. As M.Arch. students, our students received 6 credit hours reduction and only need 24 additional credit hours in the School of Engineering to receive both M.Arch. and MCM degrees.

**Integrate research with design education:**

Another significant change of educational philosophy is to integrate research with design education. Our 5<sup>th</sup> year options provide opportunities for students to conduct research-based design activities. For example, students in the Health and Wellness program are engaged in various evidence-based design and industry-based research.

Changes in physical resources (e.g., deferred maintenance, new building planned, and cancellation of plans for new building): The School of Architecture & Design occupies a part or the whole of the following university-owned buildings: Marvin Hall, Marvin Mud Hut, Chalmers Hall, Snow Hall, East Hill Facility, and the Center for Design Research. Altogether, the School occupies 154,153 square foot built spaces. Out of these, the Department of Architecture occupies 117,541 square feet ([Table 3](#)).

[Table 3: The current space inventory of the Department of Architecture, FY 2020.](#)

	Space usage	Square footage
Marvin Hall	faulty office	4429
	exhibit space	2354
	classroom	772
	studio space	15895
	administration	4704
	laboratory	2217
	meeting room	1875
	reading room	1906
	lecture hall	1723

	Space usage	Square footage
	open commons	751
	Total	36626
Marvin Studios	faculty office	518
	studio space	2777
	laboratory	1353
	Total	4648
Snow Hall	faculty office	100
	exhibit space	525
	PhD office	620
	laboratory	716
	studio space	4815
	Total	6776
East Hills	faculty office	231
	studio space	4839
	meeting room	340
	classroom/workshop	60884
	administration	70
	Total	66364
Chalmers	classroom	1046
	laboratory	2081
	Total	3127
Summary	faculty office	5278
	exhibit space	2879
	classroom	62702
	studio space	28326
	administration	4774
	laboratory	6367
	meeting room	2215
	reading room	1906
	lecture hall	1723
	open commons	751
	PhD office	620
	Total	117541

Source: Space Planning and Management, University of Kansas

A description of the changes made to some of our buildings and spaces between FY 2016 and FY 2021 are provided below:

*Marvin Hall:* The building includes most of the learning and office spaces of the Department of Architecture. The following changes were made to the building:

- The front steps of the Marvin Hall, which were over 100 years old, became structurally unsafe; hence, were replaced.

- The two studios, one faculty office and an exhibition area on the west end of the 3<sup>rd</sup> floor of Marvin Hall were converted into three studio spaces with state-of-the-art technology and furniture.
- The two studios, one faculty office and an exhibition area on the west end of the 4<sup>th</sup> floor Marvin Hall were converted to provide two studio spaces and one high-end simulation lab for our Institute of Health and Wellness Design (IHWD). The IHWD Simulation Lab will provide a great platform for inter-disciplinary collaborations on research and education. The new 2100 ft<sup>2</sup> healthcare design innovation laboratory is equipped with physical mock-ups and Virtual Reality simulation. This new space brings many possibilities to our teaching, research, and industry collaboration. The simulation lab can be converted to a studio space as needed.
- A lecture room of Marvin Hall (Marvin 308) was converted to a studio space. This lost classroom space was recovered by adding a newly renovated multipurpose classroom in Chalmers Hall (Chalmers 315).
- The old Urban Planning Office Suite was repurposed for our new Interior Architecture program of the Department. The office now includes the office of the director of the program, four faculty offices and one reception plus material library.
- The Dean's Office Suite was moved from a suite in Marvin 206 to Marvin 200. The newly reconfigured office suite includes a reception area, a kitchenette, the offices of the associate deans, student advisors, recruiter, and admissions coordinator, and a conference room.
- The old Dean's Office Suite has been reconfigured to include a reception area, a conference area/seminar room, and the offices of the Chair of Architecture and the Chair of Design, their administrative assistant, and a graphic designer.
- Finally, the old mailroom was moved to a new space, which served as a conference room. The old conference room has now been replaced with a conference room in the new Dean's Office Suite as noted above.

*East Hills Facility:* This 66,364 square feet warehouse houses our design-build studio spaces and individual faculty workshops/labs. This building has undergone a major reorganization during the last five years. New technology has been added and old technology has been reorganized and upgraded for efficiency, convenience, and safety in individual faculty workshops. With more shelving space, storage areas are better and cleaner in these workshops/labs.

*Snow Hall:* The building includes some learning spaces of the Department of Architecture. A minimally used woodshop and storage area were converted into two studio spaces in Snow Hall 115 and 117. We also renovated Snow 106/108 into a useable double studio.

*Chalmers Hall:* The Department of Design of the School occupies a part of this building. We renovated an outdated lighting lab in Chalmers 232 to be used as an operator booth for the CNC Lab in Chalmers 231 of the Department of Architecture. We have also added one additional CNC machine. We have also installed new HVAC system in Chalmers Hall.

*Additional spaces not managed by the School:* The faculty of architecture also teach courses in several spaces managed through their academic and industry partners. They use one studio space located in the School of Engineering of the University. Other spaces are located within our industry partners' office space or within the community, one located in the office space in Downtown Kansas City, MO, one in Downtown Lawrence, and the fourth one is located in Kansas City, KS.

*Electronic ID card swipe:* To enhance the safety and security of our buildings, we added electronic ID card swipe locks to Marvin Hall, Marvin Studios, Chalmers, Snow Halls, and East Hills. Buildings are now locked from 10:00pm to 7:00am during the week and 10:00pm Friday to 7:00am Monday. When locked, users can access these buildings by swiping their ID cards only at those times.

Future facility development plans: In addition to the changes we have made to our facilities during the last five years, the School will need several new studio spaces, computer labs, multipurpose classrooms, faculty office spaces, traditional shops, and a high-end digital fabrication lab with large robotic arms and 3D printers to serve its growing needs and to remain in the forefront of design

education. Currently, the Interim Dean of the School is working on a facility development plan for the School with the upper administration of the University and the Advisory Board of the School.

### III. Summary of Preparations for Adapting to [2020 NAAB Conditions](#)

*Please provide a brief description of actions taken or plans for adapting your curriculum/ classes to engage the 2020 Conditions.*

**University of Kansas, 2021 Response:** The KU Department of Architecture has developed several steps to adapt our curriculum to engage the 2020 conditions. However, the ongoing COVID-19 pandemic has posed some challenges to implement these adaptations. In March 2020, as KU shut down the campus, our department quickly shifted to remote learning, and developed various strategies to focus on delivering highly engaging hybrid student learning experiences. 1. Technology preparation and training. Our department invested in 29 iPad tablets and various software packages (Morpholio Tract, Miro, Trello, etc.) that allowed professors to use a stylus to draw building details and design revisions more accurately in real time through Zoom and Microsoft Teams. The department also held weekly training sessions throughout the summer to bring instructors up to speed on the new equipment and software. The department also held weekly training sessions throughout the summer to bring instructors up to speed on the new equipment and software. A series of software (e.g., SketchUp, Revit, Adobe Suite, ArcGIS, and other drawing software) tutorial videos were also made available to our students to ensure all students have equitable software skills and knowledge. Wi-Fi hotspots were provided for students to loan for free. Essential software (e.g., SketchUp, Revit, Adobe Suite, ArcGIS, Enscape, Lumion, and other drawing software) were also provided via Virtual Desktop to all of our students. 2. Learning model adaptation. In particular, our department questioned how the design studio would need to be reinvented in order to simulate what is widely considered to be the most engaging component to design education: the one-on-one tutoring that occurs over student drawings, models, and other artifacts. We were most interested in learning how students would respond and engage to remote delivery courses. We observed increased feeling of isolation among our students due to remote learning. It was also noted that it is challenging for students to engage in side conversations about the work that would typically occur organically in the in-person studio. As a response to that, we have encouraged team projects to foster peer interaction and collaboration. In addition to one-to-one virtual desk-crits, coordinated study groups and organized breakout rooms increased this interaction.

Since Fall 2021, our campus has resumed normal operations with COVID-19 precautions in place and all students returned to campus for in-person learning. With things slowly shifting to the “New Normal”, we have resumed the mapping of our curriculum to the 2020 NAAB conditions. The Chair worked closely with the Curriculum Management Committee (composed of the year-level coordinators of each year level) to adapt our curriculum and identify opportunities for innovation and continuous improvement. Please see below for a brief list of planned actions:

- 1) Organized retreats for strategic planning of the school and our department.** During the Dec. 2020-Jan. 2021 winter break, three online workshops were organized to reflect on the uncertainties we are facing and develop vision for our future strategic plans. The workshops focus on our uncertain future, exploring innovative educational and business models, and learning by doing. Each workshop had an average of 40-45 participants. The workshops were structured to engage in open discussions about our future strategic planning. The initial environmental assessment helped us identify challenges at the global, local, and institutional levels. Our discussions reflected our deep concern for social justice and how it relates to global warming and technology, and the impact on our communities’ health, wellness, and resiliency. As a group, we expressed that it was imperative that we embrace the values of diversity, equity, inclusion, belonging (DEIB). We also expressed great concern for the impact of technology on the future of design professions, the way we teach, and the access that our students may have, based on their socio-economic status.

The reflections aligned well with the 2020 NAAB Accreditation Conditions and highlighted the importance of architecture design education in supporting equity, diversity, and inclusion in the profession and the broader society, and its role in supporting the health, safety, and welfare needs of the public. Some strategies were proposed as innovative ways to promote excellence and DEIB in architecture education: 1. increase our educational presence and broaden our reach through low-cost tech; 2. expand our educational experiences to meet the needs of life-long learners; 3. focus on mentoring and regional engagement; 4. implement a co-op educational model and connect to design and STEM professions. 5. Promote public interest, community engagement, and design-build and research activities that can improve community health and wellbeing and sustainability;

- 2) **Reduced overall credit hours required to graduate.** Our current 180 credit hour degree is 12 hours over the accreditation required minimum of 168 credit hours. To help reduce the overall credit hours required to graduate and potentially reduce tuition and student debt load, we evaluated whether there was redundancy in our curriculum that could allow us to reduce the number of credits. A new degree plan and curricula guideline were developed as a result of these efforts. The new degree plan has 172 credit hours, which include 30 credits for graduate credits as required by the 2020 NAAB Conditions (see Appendix). It has been approved by the Curriculum Management Committee and will be voted on our December Faculty meeting.
- 3) **Mapped our curricula and each course to the 2020 NAAB Program and Student Criteria Matrix.** The Curriculum Management Committee compared the 2014 and 2020 NAAB Program and Student Criteria Matrix. Each year-level coordinator then mapped the courses at their year levels to the new 2020 NAAB Program and Student Criteria Matrix. The mapping allowed us not only to identify which NAAB PC-SC criteria a course addresses, but also identify other NAAB PC-SC criteria that a course can potentially address through course redevelopment and curricula revision.
- 4) **Developed our curriculum guidelines.** The Curriculum Guidelines provide the information on degree plans, 2020 NAAB Program and Student Criteria Matrix, course description, the Program Criteria and Student Criteria each course should meet, course objectives and deliverables, required textbooks/tools/resources, and suggested project types and scope. The purpose of the guidelines is to provide detailed guidance to all instructors and ensure all sections have consistency in course delivery and meet the 2020 NAAB Conditions.
- 5) **Revise class syllabi.** We plan to use the 2020 NAAB Program and Student Criteria Matrix and the Curriculum Guidelines to guide the revision of class syllabi. In Spring 2022, our faculty will revise their class syllabus and the instructional materials (required readings, lecture materials, fields trips and other materials) to adapt to the 2020 NAAB Program.
- 6) **Align the Institution's regional accreditation expectations and our program's professional accreditation.** By February 1, 2022, we will work with KU Center for Teaching Excellence (CTE) to refine our learning outcomes to ensure it meets expectations of the Higher Learning Commission (HLC) and is aligned with the 2020 NAAB Conditions.
- 7) **Assessment tool development and implementation.** We have developed assessment rubrics for SC.5 and SC. 6 as a pilot test to evaluate student learning performance. We plan to work with KU Center for Teaching Excellence to refine assessment tools for all courses to

evaluate baseline performance in relation to the NAAB 2020 Conditions. The implementation is planned to be in multiple phases:

Spring 2022 (Implement new curriculum, baseline data collection and identify gaps, propose additional changes to curriculum and syllabi);

Fall 2022- Spring 2023 (Implement revised curriculum strategies and syllabi, Year 1 Assessment and develop strategies for improvement),

Fall 2023- Spring 2024 (Implement revised curriculum strategies and syllabi, Year 2 Assessment and refine strategies for improvement),

Fall 2024- Summer 2024 (Implement revised curriculum strategies and syllabi, Year 3 Assessment and refine strategies for improvement, prepare Architecture Program Report),

Spring 2025 (Prepared for 2025 NAAB Team Visit)

- IV. Appendix** *(include revised curricula, syllabi, and one-page CVs or bios of new administrators and faculty members; syllabi should reference which NAAB SPC a course addresses. Provide three examples of low-pass student work for SPCs in the following cases--if there are any SPCs that have not been met for two consecutive visits, or if there are three not-met SPCs in the same realm in the last visit--as required in the Instructions.)*

**University of Kansas, 2021 Update:** [Click here to enter text and graphics.](#)







**Master of Architecture, Track I (Total 172 Credits)- Proposed to be voted on Dec. 15, 2021**

<b>Fall-First Year</b>	<b>15</b>	<b>Spring-First Year</b>	<b>19</b>
Arch 108 Architectural Foundations I	6	Arch 109 Architecture Foundations II	6
Arch 103 Introduction to Architecture	3	Arch 110 Introduction to Design Computing	3
English 101	3	English 102	3
Math 105 or 115	3	Physics 114	4
		<i>Gen Ed Elective (KU CORE 1.1, Hum 204 or 205)</i>	3
<b>Fall-Second Year</b>	<b>18</b>	<b>Spring-Second Year</b>	<b>18</b>
Arch 208 Form and Function	6	Arch 209 Sustainability and Context	6
Arch 605 Natural Forces	3	Arch 620 Theory of Urbanism	3
Arch 524 Structures I	3	Arch 624 Structures II	3
Arch 540 Global History I (KU CORE 3 AH)	3	Arch 541 Global. History II (KU CORE 4.2)	3
<i>Gen Ed Elective (KU CORE 2.2)</i>	3	<i>Gen Ed Elective (KU CORE 3 Social Science)</i>	3
<b>Fall-Third Year</b>	<b>18</b>	<b>Spring-Third Year</b>	<b>18</b>
Arch 508 Materials and Tectonics or Arch 509 Designbuild	6	Arch 508 Materials and Tectonics or Arch 509 Designbuild	6
Arch 530 Environmental Systems I	3	Arch 531 Environmental Systems II	3
Arch 626 Bldg Tech I: Construction Assemblies	3	Arch 627 Bldg Tech II: Materials and Tectonics	3
Arch 510 Technical Drawing I or Arch 630 Theory of Architecture	3	Arch 510 Technical Drawing I or Arch 630 Theory of Architecture	3
<i>Gen Ed Elective (KU CORE 4.1)</i>	3	<i>Arch Elective</i>	3
<b>Summer-Third/Fourth</b>	<b>6</b>		
Arch 690 Study Abroad	6		
<b>Fall-Fourth Year</b>	<b>15</b>	<b>Spring-Fourth Year</b>	<b>15</b>
Arch 608 Urban Dwelling	6	Arch 609 Integrated Design (KU CORE 6.1)	6
Arch 552 Prof. Practice (KU CORE 5.1)	3	Arch 610 Technical Drawing II	3
Arch 658 Programming & Pre-Design	3	Arch Elective	3
Arch Elective	3	<i>Free Professional Elective (DESIGN, ARCE, UBPL)</i>	3
<b>Graduate Status student enrollment Final Year</b>		<b>Graduate Status student enrollment Final Year</b>	
<b>Fall-Fifth Year</b>	<b>15</b>	<b>Spring-Fifth Year</b>	<b>15</b>
Arch 8XX Professional Option I	6	Arch 8XX Professional Option II	6
Arch Elective	3	Arch Elective	3
Arch Elective	3	Arch Elective	3
Arch Elective	3	Arch Elective	3

**Master of Architecture, Track III (123 Credits)  
Proposed to be voted on Dec. 15, 2021**

<b>Summer-Accelerated First Year</b>	<b>15</b>
Arch 501 Accelerated Architectural Foundations	6
Arch 502 Accelerated Architectural Foundations	6
Arch 110 Introduction to Design Computing	3

<b>Fall-First Year</b>	<b>18</b>
Arch 503 Form and Function	6
Arch 605 Visualizing Site & Nat Env Systems	3
Arch 524 Structures I	3
Arch 530 Environmental Systems I	3
Arch 626 Bldg Tech I: Construction Assemblies	3

<b>Spring-First Year</b>	<b>18</b>
Arch 504 Sustainability and Context	6
Arch 630 Theory of Architecture	3
Arch 624 Structures II	3
Arch 531 Environmental Systems II	3
Arch 627 Bldg Tech II: Materials and Tectonics	3

<b>Summer-Accelerated Second Year</b>	<b>6</b>
Arch 602 Accelerated Studio	6
Arch 510 Architectural Detailing	3

**Master of Architecture, Track II (63 Credits)**

<b>Fall</b>	<b>15</b>
Arch 608 Urban Dwelling	6
Arch 552 Prof. Practice	3
Arch 658 Programming & Pre-Design	3
Arch 540 Global History I	3

<b>Spring</b>	<b>15</b>
Arch 609 Integrated Design	6
Arch 610 Technical Drawing II	3
Arch 541 Global History II	3
Arch 620 Theory of Urban Design	3

<b>Summer or Winter</b>	<b>6</b>
Arch 690 Study Abroad	6

<b>Fall</b>	<b>15</b>
Arch 8xx Urban Dwelling	6
Arch Elective	3
Arch Elective	3
Arch Elective	3

<b>Spring</b>	<b>12</b>
Arch 8xx Integrated Design	6
Arch Elective	3
Arch Elective	3

## ARCH 108 Architecture Foundations I: Architectural Thinking

An introductory design studio directed towards the development of spatial thinking and the skills necessary for the analysis and design of architectural space and form. This course is based on a series of exercises that include direct observation: drawing, analysis and representation of the surrounding world, and full-scale studies in the making of objects and the representation of object and space. Students are introduced to different descriptive and analytical media and techniques of representation to aid in the development of critical thought. These include but are not limited to freehand drawing, orthographic projection, para-line drawing, basic computer skills, and basic materials investigation. Students must bring a laptop computer to this class.

*Prerequisite: Approval of the Dean of the School of Architecture and Design*

*Recommended Concurrent Courses: ARCH 103 Introduction to Architecture*

### 2020 NAAB Criteria

#### Shared Values

Design

#### Program Criteria

##### PC.2 Design

*How the program instills in students the role of the design process in shaping the built environment and conveys the methods by which design processes integrate multiple factors in different settings and scales of development, from buildings to cities.*

PC. 2.1 Design thinking skills

PC. 2.4 Ordering Systems

##### SC.2 Professional Practice

SC 2.6 Professional Communication Skills

### Course Objectives and Deliverables (by project)

#### 1. DRAWING (freehand) - Individual

Demonstrating acute observational skills and developing interdependence between eyes, mind, and hands.

Mastering a range freehand drawing media from line to tone.

Understanding how to depict space and spatial depth using perspective,

Demonstrating the ability to describe and discuss what and how we see using appropriate vocabulary.

#### 2. LINE (layer model) - Individual

Exploring form-making through mapping & extruding.

Exploring the use of Photoshop to edit an image

Exploring model-making: materials and ways of making.

Understanding line hierarchy conventions.

Understanding an object through orthographic conventions, paraline drawing, and exploded views.

Understanding the importance of iteration and demonstrate the ability to make a presentation on process

#### 3. OBJECT (wall system) - Individual

Exploring form-making through folding and force: how to capture space with folded planes

Understanding how to diagram transformation.

Understanding pattern, repetition, & rhythm.

Understanding structure and the interdependency of components in a system.

#### 4. SPACE (lightbox) - Group

Exploring the relationship between section and space.

Understanding how to use light as a design tool to reveal space.

Understanding how to use drawings to instruct assembly.

Understanding how to use photography to capture light.

Other deliverables:

MOLESKINE -Used daily, containing sketches, diagrams, and notes that make visible the thinking process.

STUDIO REPORT -Final portfolio demonstrating competence in InDesign.

### Required Textbooks/Tools

- *Design Drawing* by Francis D.K. Ching
- *Drawing and Perceiving* by Douglas Cooper
- *Architectural Graphics* by Francis D.K. Ching
- *Drawing: a creative Process* by Francis D.K. Ching

## ARCH 109 Architecture Foundations II: Scale, Space, and Human Experience

A continuation of the Architectural Studio Sequence with major emphasis on the design relationships among people, architectural space, and the environment. The course is based on a series of exercises leading to the understanding of architectural enclosure as mediating between people and the outside world. Issues of scale, light, proportion, rhythm, sequence, threshold, and enclosure are introduced in relation to the human body, as well as in relation to architectural form. Students will engage in drawing, perspective projection, model building, and basic computer graphics. Students must bring a laptop computer to this class.

*Prerequisite: ARCH 108 Architectural Foundations I*

*Recommended Concurrent Courses: ARCH 110 Introduction to Design Computing*

### 2020 NAAB Criteria

#### Shared Values

Design

#### Program Criteria

##### PC.2 Design

*How the program instills in students the role of the design process in shaping the built environment and conveys the methods by which design processes integrate multiple factors in different settings and scales of development, from buildings to cities.*

PC. 2.1 Design thinking skills

PC. 2.3 Architecture Design Skills

PC. 2.4 Ordering Systems

PC. 2.5 Use of Precedents

PC. 2.6 Integrate multiple factors at different scales of development, from buildings to cities

##### SC.2 Professional Practice

SC 2.6 Professional Communication Skills

#### Course Objectives and Deliverables (by project)

1. PLACE (analyzing how we see a place) - Individual

Demonstrating the ability to research an architectural source

Understanding how analyze and existing space by interpolating between architectural drawings and photographs

Understanding how architectural elements frame views.

Understanding perspective concepts

2. SCALE/MOTION (documenting and analyzing human motion) - Individual

Understanding the use of architectural scale

Demonstrating the ability to measure, critically analyze, and document human dimensions and the space of the body.

Demonstrating how to diagram motion in both drawings and physical models.

Exploring how to depict experience through collage

3. SEQUENCE (designing a spatial journey) - Individual

Understanding sequence, threshold, and path-space relationships.

Demonstrating how to orchestrate movement and views with a kit of parts

Understanding how to make a set of orthographic drawings.

Demonstrating competence in measured perspective drawing

4. ENCLOSURE (working with reality); 1,800 SF maximum, on a sloped site - Group

Understanding how to design an enclosure that mediates between a human and his/her world

Understanding how to use precedent

Demonstrating competence building a site model.

Understanding how to do a site analysis

Understanding seasonal and diurnal change using sunpath diagrams

Understanding parti diagramming, both 2D & 3D

Understanding the use of organizational principles to inform design.

Understanding the iterative process, and the implications of working at various architectural scales

Understanding synthesis of a project

Other deliverables:

MOLESKINE -Used daily, containing sketches, diagrams, and notes that make visible the thinking process.

STUDIO REPORT -Final portfolio demonstrating competence in InDesign

#### Required Textbooks/Tools

- *Architecture: Form, Space, and Order* by Francis D.K. Ching
- *Elements of Architecture: from Form to Place* by Pierre Von Meiss
- *The Eyes of the Skin* by Juhani Pallasmaa

- *Body, Memory, and Architecture* by Kent C. Bloomer % Charles W. Moore
- *The Language of Architecture* by Andrea Simitch and Val Warke

## ARCH 208 Form and Function

A continuation of the Architectural Studio sequence with major emphasis on introducing students to the basic form determinants of architecture-from limited scope exercises to complete building designs. Using diagrams and sketches, plans, sections, elevations and models, students explore the spatial ordering of human activity, site and landscape analysis, light and air modulation, simple environmental controls and energy conservation, basic framing systems, volumetric organization and the materials of building skins and envelopes. Students must bring a laptop computer to this class.

*Prerequisite: ARCH 109 Architectural Foundations II*

*Recommended Concurrent Courses: ARCH 605 Visualizing Site & Natural Environmental Systems; ARCH 524 Structures I; ARCH 540 Global History I*

### 2020 NAAB Criteria

#### Shared Values

#### Design (Introduction)

#### Program Criteria

##### PC.2 Design

- PC.2.1 Design thinking skills (Introduction)
- PC.2.2 Investigative Skills (Introduction)
- PC.2.3 Architectural Design Skills (Introduction)
- PC.2.4 Ordering Systems (Introduction)
- PC.2.5 Use of Precedents (Introduction)
- PC.2.6 Integrate multiple factors at different scales of development, from buildings to cities (Introduction)

#### Student Criteria

##### Understanding Level

##### SC.1 HSW in the Built Environment

- SC.1.1 Human health, safety, and welfare at building's scale (Introduction)

##### SC.2 Professional Practice

- SC.2.6: Professional Communication Skills (introduction)

##### SC.3 Regulatory Context

- SC.3.4 Site Design (Introduction)

##### SC.4 Technical Knowledge

- SC.4.2 Structural Systems (Introduction)
- SC.4.3 Environmental Systems (Introduction)
- SC.4.4 Building Envelope Systems and Assemblies (Introduction)
- SC.4.5 Building Materials and Assemblies (Introduction)

##### Pre-Ability Level (not for NAAB student work evidence demonstration)

*This is for preparing our students for the ability in SC. 5 and SC.6 in upper year levels.*

##### SC.5 Design Synthesis

- SC.5.1 Design Decisions that Synthesize Multiple Factors (Introduction)
- SC.5.2 User Requirements (Introduction)
- SC.5.3 Regulatory Requirements (Introduction)
- SC.5.4 Site Conditions (Introduction)
- SC.5.5 Ecological Concerns and Consider Measurable Environmental Impacts (Introduction)
- SC.5.6 Accessible Design (Introduction)

##### SC.6 Building Integration

- SC. 6.2 Integrate Building Envelop Systems (Introduction)
- SC.6.3 Integrate Structural Systems (Introduction)

#### Course Objectives and Deliverables

At the completion of the studio, students will be able to demonstrate the following skills:

- Developing a programmatic strategy that efficiently and meaningfully organizes a set of building functions within an urban context, exhibited via floor plans, axonometric drawings, program/adjacency diagrams, floor area calculations, and/or physical models.
- Generating a formal strategy that is expressive of contextual, functional, social, and symbolic dimensions, exhibited through schematic sectional and elevational drawings, exterior/interior renderings, physical models, conceptual/design process diagrams, and/or analytical drawings.

- Developing an understanding of structural types/construction materials (wood, masonry, concrete, steel) and interior/exterior finishes/materiality, in relation to form-function nexus, demonstrated via above-mentioned drawings/models.
- Creating an effective representational strategy, and developing related oral and visual communication skills, exhibited via vivid and clear display panels that include above-mentioned drawings and physical models.
- Students will continue developing their working knowledge of design-related software that include Adobe Suite (Illustrator, InDesign, Photoshop), AutoCAD, Revit, Rhino, SketchUp, and rendering software (Lumion, 3DS Max, V-Ray and the like).

#### **Required Textbooks/Tools**

- *Precedents in Architecture: Analytic Diagrams, Formative Idea, and Parts* by Roger H. Clark and Michael Pause\
- *The Structural Basis of Architecture* by Bjørn N. Sandaker, Arne P. Eggen, Mark R. Cruvellier

#### **Project Types and Quantities**

Number of Projects/ Semester: 3  
 Work Type: Individual  
 Project Typology: Small-scale: Cultural | Residential | Commercial  
 Context: Rural | Suburban | Urban  
 Project Scale: 1,000-10,000 SF

### **ARCH 209 Sustainability, Site, and Context**

A continuation of the Architectural Studio sequence with major emphasis on the synthesis of basic form determinants of medium-sized, multi-story public building in the urban environment. Students will demonstrate competence in basic architectural design, and preparedness for the third-year focus on materials and methods of building construction. Students are required to bring a laptop computer to this class.

*Prerequisite: ARCH 208 Form and Function*

*Recommended Concurrent Courses: ARCH 5XX Theory of Urbanism; ARCH Structures II; ARCH 541 Global History II*

#### **2020 NAAB Student Criteria**

##### **Shared Values**

##### **Design**

**Environmental Stewardship & Professional Responsibility  
 Leadership, Collaboration & Community Engagement**

##### **Program Criteria**

###### **PC.2 Design**

- PC.2.1 Design thinking skills
- PC.2.2 Investigative Skills
- PC.2.3 Architectural Design Skills
- PC.2.4 Ordering Systems
- PC.2.5 Use of Precedents
- PC.2.6 Integrate multiple factors at different scales of development, from buildings to cities

###### **PC.3 Ecological Knowledge & Responsibility**

- PC.3.1. Holistic understanding of the dynamic between built and natural environments
- PC.3.2. Design to mitigate climate change responsibly
- PC.3.3. Design for adaptation and resilience

###### **PC.7 Learning & Teaching Culture**

- PC.7.1 Fosters and ensures a positive and respectful environment

##### **Student Criteria**

###### **Understanding level**

###### **SC.1 HSW in the Built Environment**

- SC.1.1 Human health, safety, and welfare at buildings' scale
- SC.1.2 Human health, safety, and welfare at cities' scale

###### **SC.2 Professional Practice**

- SC.2.6: Professional Communication Skills

###### **SC.3 Regulatory Context**

- SC.3.1 Life Safety
- SC.3.2 Land Use
- SC.3.3 Codes and Regulations
- SC.3.4 Site Design

###### **SC.4 Technical Knowledge**

- SC.4.2 Structural Systems



SC.4.3 Environmental Systems  
SC.4.4 Building Envelope Systems and Assemblies  
SC.4.5 Building Materials and Assemblies

**PRE-Ability level (no student work evidence for demonstration)**

*This is for preparing our students for the ability in SC. 5 and SC.6 in upper year levels.*

**SC.5 Design Synthesis**

SC.5.1 Design Decisions that Synthesize Multiple Factors (Understanding)  
SC.5.2 User Requirements (Understanding)  
SC.5.3 Regulatory Requirements (Understanding)  
SC.5.4 Site Conditions (Understanding)  
SC.5.5 Ecological Concerns and Consider Measurable Environmental Impacts (Understanding)  
SC.5.6 Accessible Design (Understanding)

**SC.6 Building Integration**

SC.6.1 Integrated Decision-Making Design Process (Understanding)  
SC.6.2 Integrate Building Envelop Systems (Understanding)  
SC.6.3 Integrate Building Assemblies (Understanding)  
SC.6.4 Integrate Structural Systems (Understanding)

**Course Objectives and Deliverables**

At the completion of the studio, students will be able to demonstrate the following skills:

- Articulate the ways of using architectural precedents to develop ideas for formal, programmatic, tectonic, sustainable, and rhetorical aspects of the design; this is demonstrated via analytical diagrams of at the least of 04 precedents (appropriate to the studio project in question), supplemented with narratives and images of plans, sections, elevations, and photos of those precedents.
- Develop a programmatic strategy to meaningfully and efficiently organize a set of building functionst; exhibited via plan drawings, axonometric drawings, adjacency diagrams, floor area calculations, and/or physical models.
- Integrate site and context in the overall project design and demonstrate the understanding in (a) contextual relationship with surrounding buildings and landscape features, (b) site formations (grading, cut & fill, retaining walls, etc.), and (c) site landscaping (parking areas, driveways, and soft and hard landscape design and materiality); exhibited via plan drawings, axonometric drawings, site/context analysis diagrams, site sections, exterior renderings, and/or physical models.
- Generate a formal strategy that is expressive of the contextual, functional, social, and symbolic dimensions of the program; exhibited through schematic sectional and elevational drawings, exterior/interior renderings, physical models, conceptual/design process diagrams, and/or analytical drawings.
- Understanding the use of sustainable design principles, technology, materiality, and construction ideas in architectural design, illustrated through appropriate diagrams and/or analytical drawings.
- Create an effective representational strategy and develop related oral and visual communication skills, exhibited via vivid and clear display panels that include above-mentioned drawings and physical models.
- Students will continue developing their working knowledge of design-related software that include Adobe Suite (Illustrator, InDesign, Photoshop), AutoCAD, Revit, Rhino, SketchUp, and rendering software (Lumion, 3DS Max, V-Ray and the like).
- 

**Required Textbooks/Tools**

- *Sun, Wind, and Light: Architectural Design Strategies*, by G.Z. Brown and Mark DeKay
- *Thermal Delight in Architecture*, by Lisa Heschong

**Project Types and Quantities**

Number of Projects/ Semester: 2  
Work Type: Individual  
Project Typology: Small-scale; Commercial, Cultural, Civic, Educational  
Context: Rural/ Suburban/ Urban  
Project Scale: 10,000-20,000 SF

**ARCH 508 Material and Tectonics**

A continuation of the Architectural Studio sequence with major emphasis on studies in urban spaces and design development of building envelopes as related to urban public-life, structural and mechanical systems, and principles of sustainability. Students shall work individually on an advanced building design. Work will focus on medium scale, multi-story, urban-infill, buildings developed to an appropriate level of technical resolution as evidenced in clear schematic wall sections and structural proposals. Students shall demonstrate an understanding of formal ordering and building-concept development as related to the tectonic form determinants. Students are required to bring a laptop computer to this studio class.

Prerequisite: ARCH 209 Sustainability, Site, and Context

Recommended Concurrent Courses: ARCH 530 or ARCH 531 Environmental Systems I or II; ARCH 626 or ARCH 627 Building Technology I or II; ARCH 630 Theory of Architecture

## **Shared Value**

### **Design**

#### **Environmental Stewardship & Professional Responsibility Equity, Diversity, & Inclusion**

### **Program Criteria**

#### **PC. 2 Design**

- PC. 2.1 Design thinking skills
- PC. 2.2 Investigative skills
- PC. 2.3 Architecture Design Skills
- PC. 2.4 Ordering Systems
- PC. 2.5 Use of Precedents
- PC. 2.6 Integrate multiple factors at different scales of development, from buildings to cities

#### **PC. 3 Ecological Knowledge & Responsibility**

- PC.3.1 Holistic understanding of the dynamic between built and natural environments
- PC.3.2 Design to mitigate climate change responsibly

#### **PC.5 Research & Innovation**

- PC. 5.1 Research

#### **PC. 8 Social Equity & Inclusion**

- PC. 8.2 Translate understanding of diverse cultural and social background into built environment

### **Student Criteria**

#### **Understanding**

##### **SC.1 HSW in the Built Environment**

- SC.1.1 Human health, safety, and welfare at buildings' scale
- SC.1.2 Human health, safety, and welfare at cities' scale

##### **SC.2 Professional Practice**

- SC.2.6 Professional Communication Skills

##### **SC.3 Regulatory Context**

- SC.3.1 Life Safety
- SC.3.2 Land Use
- SC.3.3 Codes and Regulations
- SC.3.4 Site Design

##### **SC.4 Technical Knowledge**

- SC.4.1 Technical Documentation
- SC.4.2 Structural Systems
- SC.4.3 Environmental Systems (B.6)
- SC.4.4 Building Envelope Systems and Assemblies
- SC.4.5 Building Materials and Assemblies

##### **Pre-Ability Level**

##### **SC.5 Design Synthesis**

- SC.5.1 Design Decisions that Demonstrating Synthesis of Multiple Factors (Introduction)
- SC.5.2 User Requirements (Understanding)

##### **SC.6 Building Integration**

- SC.6.1 Integrated Decision-Making Design Process (Introduction)
- SC.6.2 Integrating Building Envelop Systems (Understanding)

### **Course Objectives and Deliverables**

At the completion of the studio, students will be able to demonstrate the following skills:

- Developing a programmatic strategy that efficiently and meaningfully organizes a set of building functions within an urban context, exhibited via floor plans, axonometric drawings, program/ adjacency diagrams, floor area calculations, and/or physical models.
- Generating a formal strategy that is expressive of contextual, functional, social, and symbolic dimensions, exhibited through schematic sectional and elevational drawings, exterior/interior renderings, physical models, conceptual/design process diagrams, and/or analytical drawings.
- Devising a tectonic strategy that matches the formal and programmatic strategies, utilizing sustainable design principles, and demonstrated by schematic proposals for structure, building services, and construction (wall assembly and materiality). The schematic proposals may be represented via drawings and/or models of a Wall Section and specific construction details (to appropriate scales with annotations) and structural framing (columns & beams) system.

- Understanding the related building codes on accessibility and fire safety, illustrated through an 'Egress Diagram' and Plan drawings.
- Creating an effective representational strategy, and developing related oral and visual communication skills, exhibited via vivid and clear display panels that include above-mentioned drawings and/or physical models.
- Students will continue developing their working knowledge of design-related software that include Adobe Suite (Illustrator, InDesign, Photoshop), AutoCAD, Revit, Rhino, and SketchUp, and rendering software (Lumion, 3DS Max, V-Ray and the like).

#### **Required Textbooks/Tools**

- *The Architect's Studio Companion: Rules of Thumb for Preliminary Design*, 6th Edition, by Edward Allen and Joseph Iano
- *Building Construction Illustrated*, 5th Edition, by Francis D.K. Ching
- *The Perfect Wall*, by Joseph W. Lstiburek

#### **Project Types and Quantities**

Number of Projects/ Semester: 1  
 Work Type: Individual  
 Project Typology: Medium-scale; Commercial, Cultural, Civic, Educational  
 Context: Urban  
 Project Scale: 20,000-40,000 SF

### **ARCH 509 Designbuild**

A continuation of the Architectural Studio sequence with major emphasis on materiality and construction of built assemblies through hands-on activities. Development of craft, process, collaboration and technical documentation skills will be primary objective of the course. Students are required to bring a laptop computer to this studio class.

*Prerequisite: ARCH 209 Sustainability and Context*

*Recommended Concurrent Courses: ARCH 530 or ARCH 531 Environmental Systems I or II; ARCH 626 or ARCH 627 Building Technology I or II; ARCH 510 Technical Drawing I (Course is actually called "Architectural Detailing") (co-requisite) I think 509/510 go well together, but delivery needs to change, so that all students get a consistent experience that conforms to the catalog description.*

#### **2020 NAAB Criteria**

##### **Shared Values**

Design  
 Leadership, Collaboration, & Community Engagement

##### **Program Criteria**

###### **PC.2 Design**

How the program instills in students the role of the design process in shaping the built environment and conveys the methods by which design processes integrate multiple factors in different settings and scales of development, from buildings to cities.

- PC.2.1 Design thinking skills
- PC.2.2 Investigative Skills
- PC.2.3 Architectural Design Skills
- PC.2.4 Ordering Systems
- PC.2.5 Use of Precedents
- PC.2.6 Integrate multiple factors at different scales of development, from buildings to cities

###### **PC.3 Ecological Know. & Respon.**

- PC.3.2. Design to mitigate climate change responsibly

###### **PC.5 Research & Innovation**

- PC.5.1 Research

###### **PC.6 Leadership & Collaboration**

- PC. 6.1 Understanding approaches to leadership in multidisciplinary teams
- PC. 6.2 Understanding approaches to leadership in diverse stakeholder constituents
- PC 6.3 Understanding approaches to leadership in dynamic physical and social contexts
- PC. 6.4 Apply effective collaboration skills to solve complex problems

##### **Student Criteria**

###### **Understanding Level**

###### **SC.1 HSW in the Built Environ.**

- SC.1.1 Human health, safety, and welfare at buildings' scale
- SC.1.2 Human health, safety, and welfare at cities' scale

###### **SC.2 Professional Practice**

SC. 2.6: Professional Communication Skills

**SC.3 Regulatory Context**

- SC.3.1 Life Safety
- SC.3.2 Land Use
- SC.3.3 Codes and Regulations
- SC.3.4 Site Design

**SC.4 Technical Knowledge**

- SC.4.1 Technical Documentation
- SC.4.2 Structural Systems
- SC.4.3 Environmental Systems
- SC.4.5 Building Materials and Assemblies
- SC.4.7 Economics

**Ability Level**

**SC.5 Design Synthesis**

- SC.5.1 Design Decisions that Synthesize Multiple Factors
- SC.5.2 User Requirements
- SC.5.3 Regulatory Requirements
- SC.5.4 Site Conditions
- SC.5.5 Ecological Concerns and Consider Measurable Environmental Impacts

**Pre-Ability Level**

**SC.6 Building Integration**

- SC. 6.4: Structural Systems (understanding)
- SC. 6.5: Environmental Control Systems (understanding)

**Course Objectives and Deliverables**

At the completion of the studio, students will be able to demonstrate the following skills:

- Developing a tectonic strategy and detailing as an integral part of the design process that efficiently and meaningfully addresses the complex conditions of the project, clearly communicated via technical drawings, including: axonometric drawings, detail drawings, construction documentation, and shop drawings
- Developing an understanding and sensitivity for craft, process, testing, and iteration, as a fundamental part of the design process, utilizing digital and physical prototyping and mockups
- Developing a material/assembly strategy that is expressive of the contextual, functional, economic, social, and symbolic dimensions of the project, demonstrated through design documentation and full-scale construction and fabrication
- Developing an understanding of value and resourcefulness through 1) cost-benefit analysis of material/assembly selection utilizing material/product research, cost estimations, and material takeoffs and 2) detailed project scheduling
- Developing a collaborative work ethic, personal responsibility, and leadership within a design team and with external collaborators and project stakeholders
- Understanding design as an iterative, adaptive process of ideation, development, material experiment

**Required Textbooks/Tools**

- *Building Construction Illustrated*, 5<sup>th</sup> Edition, by Francis D.K. Ching
- Tools: Work Boots; Work Gloves; Safety Glasses; Hard Hat; 25'/30' Tape Measure; Cordless Power Drill + Driver (+ bits); Framing Square; Hammer; Wrench Set
- **Software: Sketchup Pro. (This is an ongoing conversation that has yet to achieve complete resolution. It needs to be part of a larger curriculum discussion.)**

**Project Types and Quantities**

Number of Projects/ Semester: 1-3  
Work Type: Collective / Group  
Project Typology: Small-scale (furniture, exhibitions, installations, prototyping, pavilions, sheds, interior renovations, etc.)  
Project Scale: variable  
Context: variable

## **ARCH 608 Urban Dwelling**

A continuation of the Architectural Studio sequence with major emphasis on program analysis and design of urban building(s) and urban spaces with culture, context and precedent as major form determinants. Students are required to bring a laptop computer to this studio class.

*Prerequisite: ARCH 508 Material and Tectonics and ARCH 509 Designbuild*

*Recommended Concurrent Courses: ARCH 552 Ethics and Leadership in Professional Practice; ARCH 658 Programming and Pre-Design*

### **2020 NAAB Criteria**

#### **Shared Values**

##### **Design**

##### **Equity, Diversity & Inclusion**

#### **Program Criteria**

##### **PC.1 Career Paths**

##### **PC.2 Design**

How the program instills in students the role of the design process in shaping the built environment and conveys the methods by which design processes integrate multiple factors, in different settings and scales of development, from buildings to cities.

PC.2.1 Design thinking skills

PC.2.2 Investigative Skills

PC.2.3 Architectural Design Skills

PC.2.4 Ordering Systems

PC.2.5 Use of Precedents

PC.2.6 Integrate multiple factors at different scales of development, from buildings to cities

##### **PC.5 Research & Innovation**

How the program prepares students to engage and participate in architectural research to test and evaluate innovations in the field

PC 5.1 Research

#### **Student Criteria**

##### **Understanding Level**

##### **SC.1: Health, Safety, and Welfare in the Built Environment**

How the program ensures that students understand the impact of the built environment on human health, safety, and welfare at multiple scales, from buildings to cities.

SC.1.1 Human health, safety, and welfare at buildings' scale

SC.1.2 Human health, safety, and welfare at cities' scale

##### **SC.3: Regulatory Context**

How the program ensures that students understand the fundamental principles of life safety, land use, and current laws and regulations that apply to buildings and sites in the United States, and the evaluative process architects use to comply with those laws and regulations as part of a project.

SC.3.1 Life Safety

SC.3.2 Land Use

SC.3.3 Codes and Regulations

SC.3.4 Site Design

##### **SC.4: Technical Knowledge**

SC.4.2 Structural Systems

SC.4.3 Environmental Systems

SC.4.4 Building Envelope Systems and Assemblies

SC.4.5 Building Materials and Assemblies

##### **Pre-Ability Level**

SC.6: Building Integration

SC.6.1 Integrated Decision-Making Design Process (Understanding)

##### **Ability-Level**

##### **SC.5: Design Synthesis (ability)**

SC.5.1 Design Decisions that Synthesize Multiple Factors

SC.5.2 User Requirements

SC.5.3 Regulatory Requirements

SC.5.4 Site Conditions

SC.5.5 Ecological Concerns and Consider Measurable Environmental Impacts

SC.5.6 Accessible Design

#### **Course Objectives and Deliverables**

At the completion of the studio, students will be able to demonstrate the following skills:

- Developing a programmatic strategy that efficiently and meaningfully organizes a set of building functions within an urban context, exhibited via floor plans, axonometric drawings, program/adjacency diagrams, floor area calculations, and/or physical models.
- Generating a formal strategy that is expressive of contextual, functional, social, and symbolic dimensions, exhibited through schematic sectional and elevational drawings, exterior/interior renderings, physical models, conceptual/design process diagrams, and/or analytical drawings.
- Integrate site and context in the overall project design and demonstrate the ability in (a) contextual relationship with surrounding buildings and landscape features, (b) site formations (grading, cut & fill, retaining walls, etc.), and (c) site landscaping (parking areas, driveways, and soft and hard landscape design and materiality); exhibited via plan drawings, axonometric drawings, site/context analysis diagrams, site sections, exterior renderings, and/or physical models.
- Devising a tectonic strategy that matches the formal and programmatic strategies, utilizing sustainable design principles, and demonstrated by schematic proposals for structure. The schematic proposals may be represented via drawings and/or models and structural framing (columns & beams) system.
- Demonstrating the knowledge of related building codes of the urban/site location, accessibility and fire safety, illustrated through an 'Egress Diagram', Plan drawings, and other appropriate means of representation.
- Creating an effective representational strategy, and developing related oral and visual communication skills, exhibited via vivid and clear display panels that include above-mentioned drawings and/or physical models.
- Students are required to continue developing their working knowledge of design-related software.

#### **Required Textbooks/Tools**

- *Responsive Environments: A Manual for Designers*, by Ian Bentley, Alan Alcock, Paul Murrain, Sue McGlynn, and Graham Smith
- *Sustainable Urbanism: Urban Design with Nature*, by Douglas Farr
- *Building Codes Illustrated*, 4<sup>th</sup> Edition, by Francis D.K. Ching and Steven R. Winkel

#### **Project Types and Quantities**

Number of Projects/ Semester: 1  
Work Type: Individual  
Project Typology: Large-scale; Mixed-use (Housing+)  
Context: Urban  
Project Scale: 40,000-100,000 SF

## **ARCH 609 Integrated Design**

A continuation of the Architectural Studio sequence with major emphasis on the demonstration of integration of all previously learned design skills. These include program analysis, site design, structure, formal composition, materials and methods of construction, technical development of building fabric, environmental systems, code and zoning compliance, and principles of sustainability. Students should also demonstrate an appropriate awareness of history, theory, and culture. The level of project development should be demonstrated by technically precise drawings and well-researched written documentation in addition to other means of representation.

*Prerequisite: ARCH 608 Urban Dwelling*

*Recommended Concurrent Courses: ARCH 610 Technical Drawing II*

#### **2020 NAAB Criteria**

##### **Shared values**

##### **Design**

##### **Program Criteria**

##### **PC.2 Design**

How the program instills in students the role of the design process in shaping the built environment and conveys the methods by which design processes integrate multiple factors, in different settings and scales of development, from buildings to cities.

PC.2.1 Design thinking skills

PC.2.2 Investigative Skills

PC.2.3 Architectural Design Skills

PC.2.4 Ordering Systems

PC.2.5 Use of Precedents

PC.2.6 Integrate multiple factors at different scales of development, from buildings to cities

## **Student Criteria Understanding Level**

### **SC.1: Health, Safety, and Welfare in the Built Environment**

- SC.1.1 Human health, safety, and welfare at buildings' scale
- SC.1.2 Human health, safety, and welfare at cities' scale

### **SC.3: Regulatory Context**

- SC.3.1 Life Safety
- SC.3.2 Land Use
- SC.3.3 Codes and Regulations
- SC.3.4 Site Design

## **Ability Level**

### **SC.5: Design Synthesis**

How the program ensures that students develop the ability to make design decisions within architectural projects while demonstrating synthesis of user requirements, regulatory requirements, site conditions, and accessible design, and consideration of the measurable environmental impacts of their design decisions.

- SC.5.1 Design Decisions that Synthesize Multiple Factors
- SC.5.2 User Requirements
- SC.5.3 Regulatory Requirements
- SC.5.4 Site Conditions
- SC.5.5 Ecological Concerns and Consider Measurable Environmental Impacts
- SC.5.6 Accessible Design

### **SC. 6: Building Integration**

How the program ensures that students develop the ability to make design decisions within architectural projects while demonstrating integration of building envelope systems and assemblies, structural systems, environmental control systems, life safety systems, and the measurable outcomes of building performance.

- SC.6.1 Integrated Decision-Making Design Process
- SC.6.2 Integrate Building Envelop Systems
- SC.6.3 Integrate Building Assemblies
- SC.6.4 Integrate Structural Systems
- SC.6.5 Integrate Environ. Control Systems
- SC.6.6 Integrate Life Safety Systems
- SC.6.7 Measurable Outcomes of Building Performance

## **Course Objectives and Deliverables**

At the completion of the studio, students will be able to demonstrate the following skills:

- Following a theoretically and methodologically rigorous design process that includes problem identification, gathering relevant information, setting evaluative criteria, analyzing solutions, and predicting the effectiveness of implementation of design decisions.
- Demonstrating broad integration and consideration of environmental stewardship, technical documentation, accessibility, site conditions, life safety, environmental systems, structural systems, and building envelope systems and assemblies.
- These abilities are exhibited via schematic plans, sectional and elevational drawings; exterior/interior renderings; physical models; conceptual/design process diagrams; analytical drawings; axonometric drawings; drawings and/or models of a Wall Section and specific construction details (to appropriate scales with annotations) and structural framing (columns & beams) system; and diagrams showing applicable building codes of accessibility and fire safety (Egress Diagram).
- Creating an effective representational strategy and developing related oral and visual communication skills, exhibited via vivid and clear display panels that include above-mentioned drawings and/or physical models. Students are also required to submit a Studio Portfolio that documents their design process and final design product.
- Students are required to continue developing their working knowledge of design-related software.

## **Required Textbooks/Tools**

- *The Architect's Studio Companion: Rules of Thumb for Preliminary Design*, 6th Edition, by Edward Allen and Joseph Iano
- *Building Construction Illustrated*, 5th Edition, by Francis D.K. Ching
- *Building Codes Illustrated*, 4th Edition, by Francis D.K. Ching and Steven R. Winkel

## **Project Types and Quantities**

Number of Projects/ Semester: 1

Work Type: Individual  
Project Typology: Small/Medium-scale; Commercial, Cultural, Civic, Educational  
Context: Urban  
Project Scale: 15,000-30,000 SF

### **Arch 610 Integrated Design Documentation**

Integrated design documentation, including drawings and specifications, is fundamental to the development a professional architectural project. This course is designed to complement and support ARCH 609 Integrated Design Studio in the technical documentation of the studio project and to shed light on professional expectations for design documentation. Prerequisite: ARCH 510. Corequisite: ARCH 609 Integrated Design Studio. LEC.

#### **2020 NAAB Criteria**

##### **SC.4: Technical Knowledge**

SC. 4.1 Technical Documentation  
SC.4.2 Structural Systems  
SC.4.3 Environmental Systems  
SC.4.4 Building Envelope Systems and Assemblies  
SC.4.5 Building Materials and Assemblies  
SC 4.6. Building Service Systems  
SC.4.8 Building performance evaluation and Post-occupancy Evaluation

### **ARCH 800 Professional Options**

Each of the year-long Arch 800 Professional Options Studios have their own course descriptions and include:

#### **Arch 801 Urban and Community Issues I:**

**Arch 802 Urban and Community Issues II:** Continuation of the critical and rigorous investigations into issues of urban and community design with an increasing focus on synthesis and evaluation

**Arch 803 Design-Build and Materiality I:** An advanced studio with an emphasis on issues of design-build and/or materiality with a focus on problem-setting, discovery, and analysis. Students are required to bring a laptop computer to this studio class.

**Arch 804 Design-Build and Materiality II:** Continuation of the critical and rigorous investigations into issues of design-build and/or materiality with an increasing focus on synthesis and evaluation

**Arch 805 Architectural Cooperatives:** An advanced studio with an emphasis on professional collaboration and scholarship. Faculty-directed investigations within the context of an internship experience will focus on the development of a research topic in areas such as health and wellness, global issues, public interest, and entrepreneurship. Graded on a satisfactory/unsatisfactory basis. Students are required to bring a laptop computer to this studio class

**Arch 806 Architectural Technology II:** Continuation of the critical and rigorous investigations into issues of building technology with an increasing focus on synthesis and evaluation

**Arch 807 Healthy and Sustainable Environments I:** A workshop-based course involving approved self and group directed investigations into healthy and sustainable environments with a focus on problem-setting, discovery and analysis.

**Arch 808 Healthy and Sustainable Environments II:** An advanced studio with an emphasis on investigations into healthy and sustainable environments with a focus on problem-setting, discovery, and analysis.

**Arch 809 Global Practice I:** An advanced studio involving directed investigations with a focus on problem- setting, discovery, and analysis. Graded on satisfactory/unsatisfactory basis.

**Arch 810 Global Practice II:**

**Arch 811 Architectural Investigation I:** A workshop-based course involving approved self and group directed investigations in a particular area of architectural investigation with a focus on problem-setting, discovery and analysis. Students are required to bring a laptop computer to this studio class.

**Arch 812 Architectural Investigation I:** Continuation of the critical and rigorous investigations in a particular area of architectural investigation with an increasing focus on synthesis and evaluation

*Prerequisite: ARCH 609 Integrated Design*

*Recommended Concurrent Courses: --*

#### **2020 NAAB Criteria**

##### **Shared Values**

##### **Design**

**Env. Stewardship & Professional Responsibility**

**Knowledge & Innovation**

**Leadership, Collaboration & Community Engagement**

##### **Program Criteria**



**PC. 1 Career Paths**

PC.1.2 The range of available career opportunities

**PC.2 Design**

PC.2.1 Design thinking skills

PC.2.2 Investigative Skills

PC.2.3 Architectural Design Skills

PC.2.4 Ordering Systems

PC.2.5 Use of Precedents

P.C.2.6 Integrate multiple factors at different scales of development, from buildings to cities

**PC.5 Research & Innovation**

PC. 5.1 Research

**Student Criteria**

**SC.2 Professional Practice**

SC.2.6 Professional Communication Skills

**SC.3 Regulatory Context**

SC.3.1 Life Safety

SC.3.2 Land Use

SC.3.3 Codes and Regulations

SC.3.4 Site Design

**Course Objectives and Deliverables**

These vary from one professional option to another.

**Project Types and Quantities**

Number of Projects/ Semester: varies

Work Type: Team

Project Typology: varies

Context: varies

Project Scale: varies

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**BIOGRAPHICAL SKETCH**

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<b>NAME</b> Rashid, Mahbub		<b>POSITION TITLE</b> Professor, University of Kansas	
eRA COMMONS USER NAME: mrashid			
<b>EDUCATION/TRAINING</b>			
<b>INSTITUTION AND LOCATION</b>	<b>DEGREE</b>	<b>YEAR(s)</b>	<b>FIELD OF STUDY</b>
Bangladesh University of Engineering & Technology, Dhaka	B. Arch.	1990	Architecture
Massachusetts Institute of Technology, Cambridge, MA	S. M. Arch. S	1993	Architecture
Georgia Institute of Technology, Atlanta, GA	Ph.D.	1998	Architecture
Georgia Institute of Technology, Atlanta, GA	Postdoctoral fellow	1999	Architecture

**A. Positions, Honors, and Professional Memberships****Administrative Positions**

July 2019-Present: Interim Dean, School of Architecture & Design

July 2014-Present: Associate Dean for Research and Graduate Studies, School of Architecture & Design

July 2018-July 2019: Interim Chair, Department of Design, School of Architecture & Design

August 2008-Present: Director, MA/PhD Programs, Department of Architecture, School of Architecture & Design

**Academic Positions**

1991-1993: Graduate Research Assistant, School of Architecture and Planning, MIT, Cambridge, MA

1993-1997: Graduate Research Assistant/Associate, College of Architecture, Georgia Tech, Atlanta, GA

1998-1999: Post-doctoral Fellow, Doctoral Program, College of Architecture, Georgia Tech, Atlanta, GA

1999-2002: Staff Architect, Cooper Carry, Inc., Atlanta, Georgia, USA

2002-2005: Research Scientist, Doctoral Program, College of Architecture, Georgia Tech, Atlanta, GA

2005-2008: Associate Professor of Design, School of Fine Arts, University of Kansas, Lawrence, KS

2006-2008: Courtesy Associate Professor, School of Architecture, Design, and Planning, University of Kansas, Lawrence, KS

2008-2011: Associate Professor, School of Architecture, Design, and Planning, University of Kansas, Lawrence, KS

2011-Present: Professor, School of Architecture, Design, and Planning, University of Kansas, Lawrence, KS

**Honors and Awards**

1991-1993: The Aga Khan Program Scholarship at MIT & Harvard, Cambridge, MA

1997-98: Best Ph.D. Student and Thesis Award, College of Architecture, Georgia Tech, Atlanta, GA

1998: Presidential Honoree as an Outstanding Graduate, College of Architecture, Georgia Tech, Atlanta, GA

2005: Faculty Research Integration Award, College of Architecture, Georgia Tech, Atlanta, GA

**Licensures, Certifications, and Professional Training**

Senior Administrative Fellow, University of Kansas, 2018-2019

Registered Architect, Georgia, USA (RA010970), 2003

Certified by the International Center for Facilities (ICF), Ottawa, Ontario, Canada, to rate building serviceability using Serviceability Tools and Methods (ST&M), 2003

Registered Architect, Bangladesh Institute of Architects (R052), 1993

**B. Selected Peer-Reviewed Publications****Books**

1. Rashid, M. (2021). *Physical Space and Spatiality in Muslim Societies: Notes on the Social Production of Cities*. The University of Michigan Press. ISBN 978-0-472-13250-8 (hardcover); ISBN 978-0-472-12881-5 (e-book). Subject Area: Political Science
2. Rashid, M. (2017). *The Geometry of Urban Layouts: A Global Comparative Study*. Springer International Publishing. doi:10.1007/978-3-319-30750-3 ISBN: 978-3-319-30748-0; 978-3-319-30750-3 (eBook). Subject Area: Geography

**Books Chapters (Most Recent)**

3. Rashid, M. (2020). Urban Morphology and Historic Urban Landscape Management: The Case of Kolkata, India. In *Routledge Handbook on Historic Urban Landscapes of the Asia-Pacific*, Kapila D. Silva (Editor), Chapter 8, Taylor & Francis/Routledge.
4. Rashid, M. (2019). Space Syntax: A Network-based Configurational Approach for Urban Morphological Studies. In *Mathematics of Urban Morphology*, D'Acci, L. (Editor), Bellomo, N. and Tezduyar, T. (Series Editors), Springer Nature series: Birkhäuser Mathematics (<http://www.springer.com/series/4960>)

**Journal Articles (Most Recent)**

5. Alalyani, A., & Rashid, M. (2021). Exploring the Availability and Distribution of Public Green Spaces among Riyadh Residential Neighborhoods. *International Journal of Urban and Civil Engineering*, 15(5), 262-267.
6. Rashid, M., & Obeidat Bushra (2020). Students' Static Activities in relation to Campus Quad Design and Layout: Exploring Gender-based Differences. *The Journal of Urban Space*. 5(1): 75-94, DOI 10.32891/jps.v5i1.1252
7. Romdhoni, M. F., & Rashid, M. (2020). Urban Geometry: City Shape and Spatial Layout of Six Indonesian Government Centers. *DIMENSI: Journal of Architecture and Built Environment*, 47(2), 71-86.
8. Rashid, M. (2018). The Evolving Metropolis after Three Decades: A Study of Community, Neighborhood, and Street Form at the Urban Edge. *Journal of Urban Design*. 23(5): 621-623. <https://doi.org/10.1080/13574809.2018.1429216>

## ANDREA HERSTOWSKI

### INTERIM ASSOCAITE DEAN ADMINISTRATION, ASSOCIATE PROFESSOR DESIGN

School of Architecture and Design, The University of Kansas

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## EDUCATION

- 2019 Summer **TYPE@COOPER**, Cooper Union, New York  
Postgraduate Certificate in Typeface Design
- 1993 – 1995 **SCHULE FÜR GESTALTUNG**, Basel, Switzerland  
Graduate with a certificate equivalent to a MFA
- 1985 – 1990 **UNIVERSITY OF KANSAS**, Lawrence, Kansas  
BFA Design, Visual Communication
- 1989 Summer **YALE UNIVERSITY SUMMER PROGRAM**, Brissago, Switzerland  
INSTRUCTORS: Paul Rand, Richard Sapper, Armin Hofmann, Pierre Mendel and Philip Burton.  
GUEST LECTURE: Wolfgang Weingart.

## APPOINTMENT

- 2008 – present **ASSOCIATE PROFESSOR**, Department of Design, School of Architecture and Design.  
The University of Kansas
- 2002 – 2008 **ASSISTANT PROFESSOR**, Department of Design, School of Fine Arts,  
The University of Kansas
- 1997 – 2002 **INSTRUCTOR**, Undergraduate and Graduate, Academy of Art University,  
San Francisco, California
- 2011 **VISITING PROFESSOR**. Centro University, Mexico City International Mexico. Lecture and workshop.

## ADMINISTRATIVE ASSIGNMENT

- 2021 – present **INTERIM ASSOCAITE DEAN ADMINISTRATION**, Department of Design, School of Architecture and Design. The University of Kansas
- 2014 – 2018 **DEPARTMENT CHAIR**, Department of Design School of Architecture and Design  
**INTERIM DEPARTMENT CHAIR** (2012 – 2014)  
Department of Design includes BFA degrees in Illustration & Animation, Industrial Design, Photo Media, and Visual Communication Design and an undergraduate certificate in Book Arts. MA degrees in Interaction Design and Design Management and a graduate certificate in Book Arts.

## PROFESSIONAL TRAINING

- 2021 **PYTHON FOR DESIGNERS**. Six week course developing scripts for Type Design
- 2020 **SOCIETY OF SCRIBES**. Five week course A Journey Into Blackletter with Luca Barcellona
- 2020 **TYPE@COOPER**. Ten week course on Generative Typography using p5.js coding.
- 2020 **TYPE@COOPER**. Course on Typgography for the Web.
- 2020 **BRIEFING FOR NASAD EVALUATORS**, National Association of Schools of Art and Design (NASAD).

## **Bio**

**Kapila D. Silva** is a Professor of Architecture and the Associate Dean for Diversity, Equity, Inclusion, and Belonging in the School of Architecture and Design at the University of Kansas, USA. He also coordinates academic programs in historic preservation, co-directs the Multicultural Architecture Scholars Program, co-leads study abroad programs in Asia, and teaches design studios. He has previously taught at the University of Wisconsin-Milwaukee from where he received his doctorate in architecture and at the University of Moratuwa in Sri Lanka from where he received professional architectural education. His research focuses on the social, cultural, and psychological aspects of architecture, urbanism, and historic preservation. His research has thus far been on global heritage conservation, addressing theoretical and pragmatic issues related to UNESCO's World Heritage Program, which attempts to conserve and manage historic monuments and sites with outstanding universal value around the world. The underlined interest in his research has been in the construction and stewardship of meaning in the built environment in the forms of sites, monuments, and memorials and in the ways of balancing conservation concerns with development needs within historic urban areas. In geo-cultural scope, his work focuses specifically on non-Western traditions within the Asian context. In addition, he studies vernacular environments in the region, developing a theoretical framework to study those environments and deriving lessons for contemporary architectural situations, such as community design and post-disaster resettlement housing. In addition to these scholarly activities, he continues to be engaged in architectural design, practicing exclusively in Sri Lanka where he is a licensed architect. Dr. Silva is the lead editor of *Asian Heritage Management: Contexts, Concerns and Prospects* (with Neel Kamal Chapagain; Routledge, 2013); *Cultural Landscapes of South Asia: Studies in Heritage Conservation and Management* (with Amita Sinha; Routledge, 2017); *The Routledge Handbook on Historic Urban Landscapes in the Asia-Pacific* (Routledge, 2020); and *The Routledge Handbook of Cultural Landscape Heritage in the Asia-Pacific* (with Ken Taylor and David Jones; Routledge, expected in 2022). He is co-author of *The Tāmpīṭāvihāras of Sri Lanka: Elevated Image-houses in Buddhist Architecture* (with Dhammika Chandrasekara; Anthem Press, 2021). His on-going research includes a co-edited volume titled *Imagining Presidential Legacies: Critical Perspectives on Presidential Libraries and Museums* (with Marie Alice L'Heureux; University Press of Kansas; expected in 2023). For his teaching, he has received *2006 Building Block Award (Faculty of the Year)* from the University of Wisconsin-Milwaukee Chapter of the American Institute of Architecture Students; and *2010 Jack and Nancy Bradley Student Recognition Award for Teaching Excellence*, *2018 K. Barbara Schowen Undergraduate Research Mentor Award*, *2020 The Honor for Outstanding Progressive Educator (HOPE) Award*; and *2021 George and Eleanor Woodyard International Educator Award* from the University of Kansas. He is also the recipient of *2013 New Researcher Award* from the Architectural Research Centers Consortium (ARCC) and *2018 Achievement Award* from the Environmental Design Research Association (EDRA).

## HUI CAI, Ph.D.

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<b>EDUCATION</b>	<b>Ph.D.</b> , College of Architecture, Georgia Institute of Technology, United States, 2012 <b>M.A. (Arch)</b> , School of Design and Environment, Center for Advanced Studies in Architecture. National University of Singapore, Singapore, 2005 <b>B. Arch</b> , with highest honor, School of Architecture and Urban Planning, Southeast University, China, 2002
<b>ACADEMIC EMPLOYMENT</b>	<b>University of Kansas</b> Associate Professor, Chair, Department of Architecture, Associate Director of the Institute of Health+ Wellness Design, 2019-present Assistant Professor, School of Architecture and Design, Director of Research, the Institute of Health and Wellness Design, August 2014 – 2019 <b>University of Missouri</b> Assistant Teaching Professor, Department of Architectural Studies, 2013 - 2014 <b>Georgia Institute of Technology</b> Research Assistant & Teaching Assistant, 2006 - 2011 First Year Studio Instructor, 2008 – 2010 <b>National University of Singapore</b> Full-time Research Scientist and Project Coordinator, 02/2005-07/2006
<b>PROFESSIONAL EMPLOYMENT</b>	<b>RTKL Associates Inc.</b> , Dallas, Texas, 2012 – 2013 Health + Science Research Leader and Designer <b>Hong Kong Ho &amp; Partner's Design LTD</b> , Shanghai, China, 2001 – 2002 Design Architect
<b>HONORS AND AWARDS</b>	<b>The HCD 10, Educator of the Year 2020,</b> <b>The 2018-19 American Institute of Architecture-Academy of Healthcare Architecture (AIA-AHA) J. Armand Burgun Fellowship in FGI interest areas of Health Facility Planning &amp; Design</b> <b>The 2011 Best International Research Project</b> awarded by the Design & Health International Academy. <b>Best Practices Institute Fellow</b> from Center for Teaching Excellence, Center for Teaching Excellence, the University of Kansas, 2016 <b>Mentor, Healthcare Environment Award 2020-21, Honorable Mention, 2017-2018, 2018-2019, Best Graduate Students Project, co-sponsored by the Center for Health Design and the Contract Magazine</b> <b>Mentor, Honorable mention, Union of International Architects-Public Health Group (UIA-PHG) Young Architects and Students Design International Competition 2017,</b>
<b>SELECTED PUBLICATIONS</b>	
<b>Recent Articles</b>	Cai, H., Tyne, I., Spreckelmeyer, K., & Williams, J. (2021). Impact of Visibility and Accessibility on Healthcare Workers' Hand-Hygiene Behavior: A Comparative Case Study of Two Nursing Units in an Academic Medical Center. <i>HERD: Health Environments Research &amp; Design Journal</i> . doi:10.1177/1937586720962506  Cai, H., Zilm, F., Sheward, H., Graham, K. (2021). Responding to COVID-19 – Healthcare Surge Capacity Design for High-Consequence Infectious Disease, <i>Technology  Architecture + Design (TAD)</i> . Cai, H. Lu, Y., & Sheward, H. (2019). A Historical Study of Chinese Nursing Unit Design. <i>Health Environments Research &amp; Design Journal</i> .

Dr. Hui Cai is the Associate Professor and Chair at the Department of Architecture, and Associate Director of the Institute of Health and Wellness Design at the University of Kansas. Cai received her Ph.D. degree from the Georgia Institute of Technology. Dr. Cai's research focuses on using evidence-based design approach to analyze the relationship between culture, human behavior, and the physical environment in healthcare settings and healthy communities. Cai disseminates her work extensively through numerous publications on academic journals. She has received more than \$175,000 from grants and funded projects.

## **Niloufar (Nilou) Vakil, AIA, LEED AP BC+D**

### **Brief Bio**

Nilou Vakil is a licensed architect and a LEED Accredited Professional who has practiced and taught in both the United States and in the Gulf region for the past two decades. Originally from Iran, she has earned a Bachelor of Fine Arts in Visual Communications and Design from the University of the Arts in Tehran where she received the University's Highest Honor (Summa Cum Laude). Following her undergraduate studies and after working in design and architectural agencies for several years, she began her Tehran/Los Angeles-based design firm, Graphic IV, where she served as Design Director. She moved to the United States permanently in 1999 and received a Master of Architecture from the University of Colorado's College of Architecture and Planning in 2005. She has worked at several architecture firms including six years at the award-winning Tryba Architects in Denver. She is currently the President and Principal Architect of in situ Design. Since her leadership at in situ Design, the firm has won multiple national and international awards.

She has taught architectural design and/or digital technology courses at the University of the Arts in Tehran, Arapahoe Community College in Colorado, and NAAB Accredited institutions including the University of Colorado, Denver. She has served as a guest lecturer in the Department of Architecture at the American University of Sharjah in the United Arab Emirates (NAAB Accredited Program.)

She has taught all levels of design studio and have supplemented these core studio courses with seminars in digital communication skills, ethics and leadership in the profession, and technical documentations. She joined the University of Kansas in 2013 as a lecturer and was named one of the 25 Most Admired Architecture Educators by DesignIntelligence in 2017-2018. In 2018 she was hired as tenure track associate professor at the University of Kansas.

## **ANDREW MODDRELL, AIA**

Associate Professor, The University of Kansas School of Architecture and Design  
1465 Jayhawk Boulevard | Marvin Hall, Room 312 | Lawrence, Kansas 66045  
Email: andrew.moddrell@ku.edu | Mobile: (312) 519-1103

### **EDUCATION**

**Yale University School of Architecture** | New Haven, CT  
Master of Architecture, 2004

**The University of Kansas School of Architecture and Design** | Lawrence, KS  
Bachelor of Architecture, 2002

### **REGISTRATIONS + MEMBERSHIPS**

**Licensed Architect** | Illinois, Ohio and Arkansas  
**American Institute of Architects** | Member

### **PROFESSIONAL EXPERIENCE**

**PORT** | Chicago, IL + Philadelphia, PA  
Founding Partner, June 2009 - Present

**Garofalo Architects** | Chicago, IL  
Project Designer + Project Manager, November 2006 - June 2009

**UrbanLab** | Chicago, IL  
Project Designer + Project Manager, June 2004 - November 2006

### **UNIVERSITY TEACHING APPOINTMENTS**

**The University of Kansas School of Architecture and Design** | Lawrence, KS  
Associate Professor, Fall 2021 - Present

**University of Michigan Taubman College of Architecture and Urban Planning** | Ann Arbor, MI  
Visiting Assistant Professor, Spring 2017; Spring 2018; Fall 2018 - Spring 2019; Fall 2019  
Eliel Saarinen Visiting Assistant Professor, Fall 2015 - Spring 2016

**University of Illinois Chicago School of Architecture** | Chicago, IL  
Clinical Assistant Professor, Fall 2011 - Fall 2018  
Visiting Assistant Professor, Fall 2010 - Spring 2011  
Adjunct Assistant Professor, Spring 2008 - Spring 2010

**Illinois Institute of Technology College of Architecture** | Chicago, IL  
Adjunct Assistant Professor, Spring 2006 - Fall 2007  
Research Associate, Fall 2004 - Fall 2006

### **SELECTED PORT FIRM AWARDS + HONORS**

**The Architectural League of New York Emerging Voices Award 2020** –  
*The Architectural League of New York, PORT* (March 2020)

**Next Progressives 2021** –  
*The Architect's Newspaper, PORT* (March 2021)

**Artist-in-Residence, Chicago Ideas Week** –  
*Chicago Ideas Week, PORT* (October 2015)

**Participant, Chicago Architecture Biennial** –  
*City of Chicago and The Graham Foundation, PORT* (2015, 2019, 2021)

**Permanent Collection, “The Big Shift” Model from Chicago-isms Exhibition** –  
*The Art Institute of Chicago, PORT* (April 2015)

**Emerging Visions Award 2014, Chicago Architecture Club / The Graham Foundation / AIA Chicago** –  
*Christopher Marcinkoski + Andrew Moddrell, PORT* (March 2014)

# GREGORY J. CRICHLLOW

Registered Architect, Colorado

E + gregory.crichlow@ku.edu

Education: University of Illinois - Chicago : MArch: May 2004  
AIA Henry Adams Certificate of Merit

University of Colorado - Boulder: B.A. Environmental Design: December 1995

## Professional Experience:

March 2010 - Present **Chocolate Spokes Bike Studio**  
Principal  
<https://www.outsideonline.com/2249326/chocolate-spokes-film-about-bicycles>

Oct 2006 - Oct 2009 **in situ DESIGN**  
Project Architect

May 2004 - Oct. 2006 **BURKETTDESIGN**  
Nov. 1995 - Feb. 1999 Senior Associate

June 2003-Aug. 2003 **Wheeler Kearns Architects** (Chicago, Illinois)  
Intern

Feb. 1999 - June 2000 **AndersonMasonDaleArchitects**  
Intern

## Teaching Experience:

Aug. 2019 - Present University of Kansas; Assistant Professor

Dec. 2019 - May 2019 University of Kansas; Visiting Assistant Professor

Aug. 2018 - Dec. 2018 University of Kansas; Langston Hughes Visiting Professor

Oct. 2014 - June 2018 University of Colorado\_Denver; Honorarium Instructor

Summer 2017 University of Colorado\_Denver; Honorarium Instructor

Aug. 2005 - May 2007 University of Colorado - Boulder; Honorarium Instructor

## Bibliographic References to Creative Work:

Sept./Oct. 2018 Bicycling: "He Opened a Bike Shop to Save a Neighborhood" <https://www.bicycling.com/culture/a22748043/opened-bike-shop-save-neighborhood-chocolate-spokes/>

June 29th 2018 5280: Top of the Town Services: 2018 Chocolate Spokes "Best Bike Shop" <https://www.5280.com/2018/06/top-of-the-town-2018-services/> Spencer Campbell

Oct. 11th 2017 Outside Magazine: "A film about bicycles" <https://www.outsideonline.com/2249326/chocolate-spokes-film-about-bicycles> Brendan Leonard

March 10th 2017 Bicycle Times: "Building Frames Building Community" <http://bicycletimesmag.com/building-frames-building-a-community/>

April 12th 2016 Elevation Outdoors: Chocolate Spokes <http://www.elevationoutdoors.com/chocolate-spokes/> Brendan Leonard

Aug. 20th 2013 New York Times: "In Denver, Beat starts to pick up in a ounce thriving hub for Jazz" <https://www.nytimes.com/2013/08/21/realestate/commercial/ready-to-pick-up-the-beat-on-welton-street.html>

Feb. 18th 2013 The Denver Post: "Bow-tie wearing bike mechanic sets up shop in Five Points" <http://www.denverpost.com/2013/02/18/bow-tie-wearing-bike-mechanic-sets-up-shop-in-five-points>. Joe Vaccarelli