Interim Progress Report

University of Arizona
College of Architecture and Landscape Architecture (CALA)
Bachelor of Architecture (174 credit units)
Master of Architecture (prerequisite Bachelor's degree + 102 credit units)
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: Robert J. Miller, Professor, Director, UA School of Architecture

Provost: Dr. Jeffrey B. Goldberg, Interim Senior Vice President for Academic Affairs and Provost

President of the institution: Dr. Robert C. Robbins, President

Individual submitting the Interim Progress Report: Robert J. Miller

Name of individual(s) to whom questions should be directed: Robert J. Miller

Current term of accreditation: 2016–2023

Text from the most recent VTR or APR is in the gray text boxes. Type your response in the designated text boxes.

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

A.5 Ordering Systems (M. Arch. only)

2016 Team Assessment: The work exhibited in the team room from ARC 510d Advanced Design Studio 1 addressed ordering systems in terms of program organization, layout of vertical circulation, structural systems, and technical systems; however, there was no evidence of conceptual ordering in two or three dimensions or any exploration of parti in the exhibits for this studio or in any completed projects in the advanced studios.

University of Arizona, 2018 Response: For the first 8 weeks in a 16-week studio, students now develop conceptual ordering systems in drawings (plan, section, axonometric) and models (digital and analog), based on precedent research and each student's theoretical position. The site and program are determined by the students based on their particular position. The conceptual ordering process includes: Week 1: Investigate and identify a variety of conceptual ordering systems using theoretical and built precedent. Week 2-8: Develop conceptual ordering system(s) in drawings and models. Week 4-8: Develop detailed wall section(s) in relation to conceptual ordering system.

2. 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 Arizona, 2018 Response:

FACULTY RETIREMENT / SUCCESSION PLANNING

Since the last visit there have been no retirements. Succession planning is in place for two senior faculty members:

Professor Nader Chalfoun: estimated retirement in 2020. Chalfoun is currently the key to our MS.Arch degree and runs the Design and Energy Conservation subplan. We have begun development of additional subplans in order to strengthen that degree as Chalfoun retires. A succession plan for the Design and Energy Conservation subplan will be developed in 2019.

Professor Mary Hardin: no estimated retirement date. Hardin is a key expert in our design/build program. Assistant Professor Anna Koosmann started in AY 2017-2018 as a succession hire.

ADMINISTRATION CHANGES

UNIVERSITY

President: President Robbins assumed authority in AY 2017-2018. A new University strategic plan has been developed and was announced to the Arizona Board of Regents in November 2018. Provost: President Robbins appointed an interim Provost in AY 2017-2018. A search is underway.

COLLEGE

Dean: At the College of Architecture, Planning, and Landscape Architecture, Dean Cervelli left in 2016. Professor Mary Hardin served as Interim Dean until Nancy Pollock-Ellwand became CAPLA

Dean in AY 2017-2018. A new College strategic plan has been developed and will be unveiled in early 2019.
Director of Development: In 2018 Kay Brown was reassigned to Director of Alumni Relations and a search was opened, as yet unfilled, for a new DOD.

SCHOOL
Starting AY 2017-2018, the School hired Associate Director Laura Hollengreen, Ph.D., as an Associate Professor of Practice on a five-year term (majority paid by non-School funds). Hollengreen as a former Interim Director of the School and has contributed significantly to advancing administrative effectiveness and depth. This temporary position allows the Director to assume limited-time duties outside the School at low-cost to the School.

SCHOOL STAFF
Both primary staff positions in the School will retire between July-December 2019. A search is open for the first retirement. The Dean is conducting a workload study to determine whether the second position will be restored.

CHANGES IN ENROLLMENT
Bachelor of Architecture
Enrollments have dropped since the last visit, the B.Arch down 16% and graduate programs down 25% over two years. Please see Appendix I, Figure 1.
In the B.Arch, freshman enrollments (Foundation) have been recovering from the recession, albeit sporadically. We anticipate continued modest growth in applicants and plan to hold Foundation starts at 150. Please see Appendix I, Figure 2.
Admissions to the Professional Phase, beginning in 2nd Year, are capped at 80, due to space constraints but are limited to qualified applicants. As indicated, 2nd Year starts do not follow Foundation admissions. We plan to increase space in the next few years so the Professional Phase classes can grow to 100. B.Arch graduates have dropped due, not to performance declines or teaching degradation, but to small recession classes.

Graduate Programs
Graduate classes will grow to about 60 in the next two years. Graduate enrollments are down since the last visit, due largely to a decline in foreign applications and a hostile political environment created by the federal government for foreign students. Please see Appendix I, Figure 3.

Master of Architecture
Within this population, the M.Arch program has also shrunk. See Appendix I, Figure 4.
We have applied for STEM status to make our degrees more attractive to foreign students by improving their changes for government funding by their home countries. Meanwhile, we are shifting efforts to domestic recruiting and, with the other disciplines in our College, are working on more robust and better staffed recruiting programs.

NEW OPPORTUNITIES FOR COLLABORATION
Bachelor of Science in Architectural Engineering (BS.ARCE):
The SoA has contributed five new courses to Civil Engineering's BS.ARCE, which was launched in 2016-2017, one of which is a B.ARCH course and the others new. This program will give another professional career option for students interested in the built environment; it will give a new

option for students who are not at home in the B.Arch and may provide a recruitment path into Architecture. The five courses will add modestly to our revenue stream.

Applied Humanities:
The SoA is going to contribute some course options to a new degree in Applied Humanities, with a similar but more modest impact as BS.ARCE.

CHANGES IN FINANCIAL RESOURCES
The School budget first increased, then declined, since the last visit, dropping 7% net over two years. See Appendix I, Figure 5.
School revenue is made up of state funds, retained fees (Differential Tuition and Program Fees), and other sources, all of which are allocated by the Dean. See Appendix I, Figure 6.
Retained fees are based solely on enrollments; state funds are dependent on overall enrollments at the University and are about 50/50 subvention and Responsibility Centered Management (incentivized distribution based on enrollments and majors). We anticipate continued fluctuations, and probably declines, in our budget due to factors outside our control:
1. Even if the Arizona legislator keeps university funding constraint, President Robbins has launched an aggressive Strategic Plan that needs significant resources. We expect a reduction in subvention to the colleges; with RCM at the end of its hold-harmless period, we also expect the distribution algorithm to be revised to provide more central funds (less to the colleges).
2. Our Dean has presided over a college strategic plan that will also need funds for realization. As the largest revenue source in the College, we anticipate some reduction in revenue.

SIGNIFICANT CHANGES IN EDUCATION APPROACH
Both accredited degrees have undergone a shift in philosophy that seeks to make students work smarter, not harder, and have increased curricular choice.
Master of Architecture
In 2017 the Faculty compressed the M.Arch curriculum, reducing the average semester load and lowering the degree total from 103-CU to 97-CU. Much of this change was realized by reductions in building technology courses, which were changed from domain-specific to integrated technology offerings. Prior to this change, students felt constantly overwhelmed and overloaded, without time to reflect and absorb learning. Comparisons to other programs also suggested we were asking too much. See revised curricula in Appendix II.
Bachelor of Architecture
Based on positive change in the M.Arch, the Faculty began an effort in AY 2017-2018 to Optimize the B.Arch. This change is ongoing with an anticipated adoption later this year for implementation beginning AY 2020-2021. The likely result with be a small reduction in CU, realized by a reduction in required courses but more required electives that fall under specified concentrations in the upper levels of the degree.

CHANGES IN PHYSICAL RESOURCES
Since the last visit, we have made modest changes:
1. Expanded utility drops in the East building studios, facilitating more furniture layouts and higher densities.
2.Removal of the wind tunnel and installation of a model shop, to improve model-making culture.
3. Improvements in Foundation studio for storing equipment and facilitating hot-desks.
attached.

3. Summary of Activities in Response to Changes in the NAAB Conditions
2014 NAAB Conditions

University of Arizona, 2018 update: NAAB Conditions have not changed since our 2016 Accreditation.

4. 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)

University of Arizona, 2018 update: Please refer to the following Appendix items:
Appendix I: Supporting Figures for Question 2, Changes or Planned Changes in the Program
Appendix II: Revised Curricula
Appendix III: New Course Syllabi
Appendix IV: Curricula Vitae for New Faculty

APPENDIX I

Supporting Figures for Question 2,
Changes or Planned Changes in the Program

figure 1:

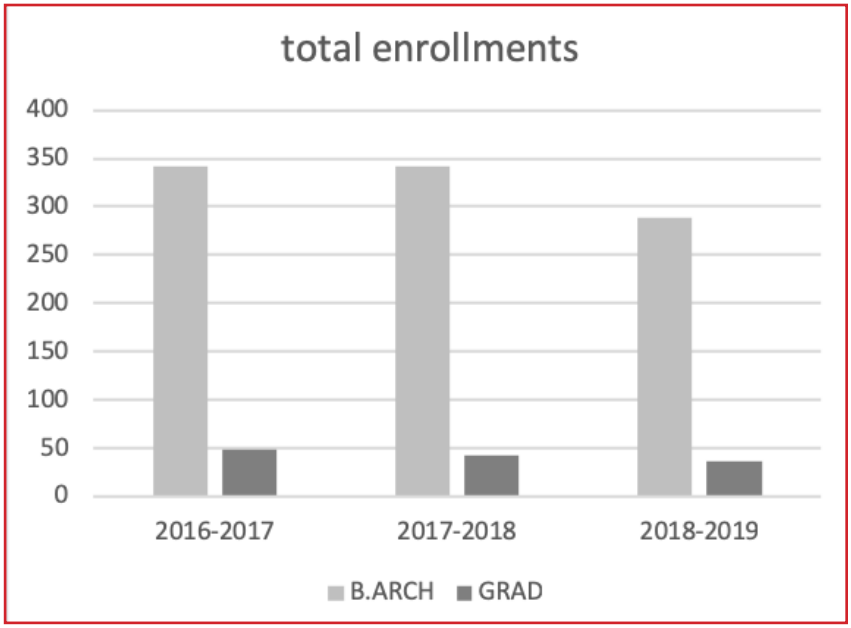


figure 2:

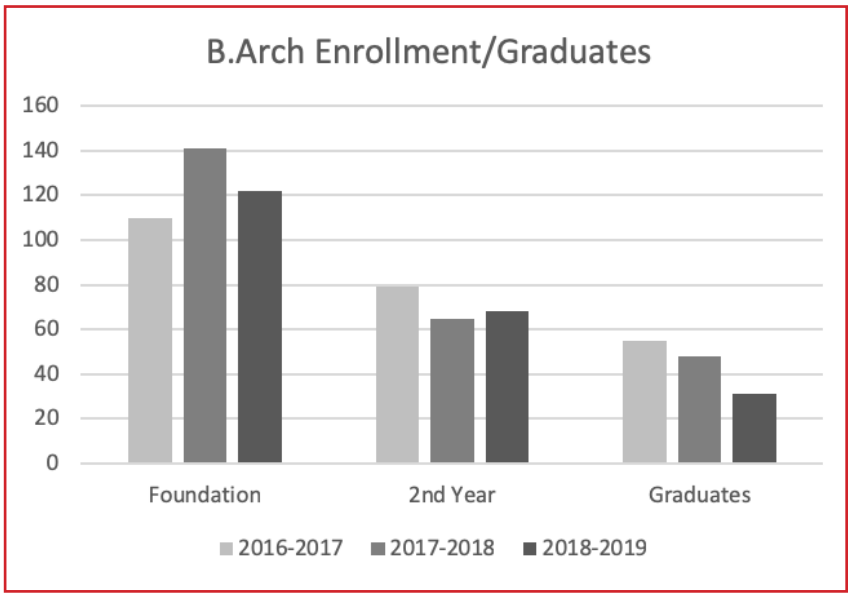


figure 3:

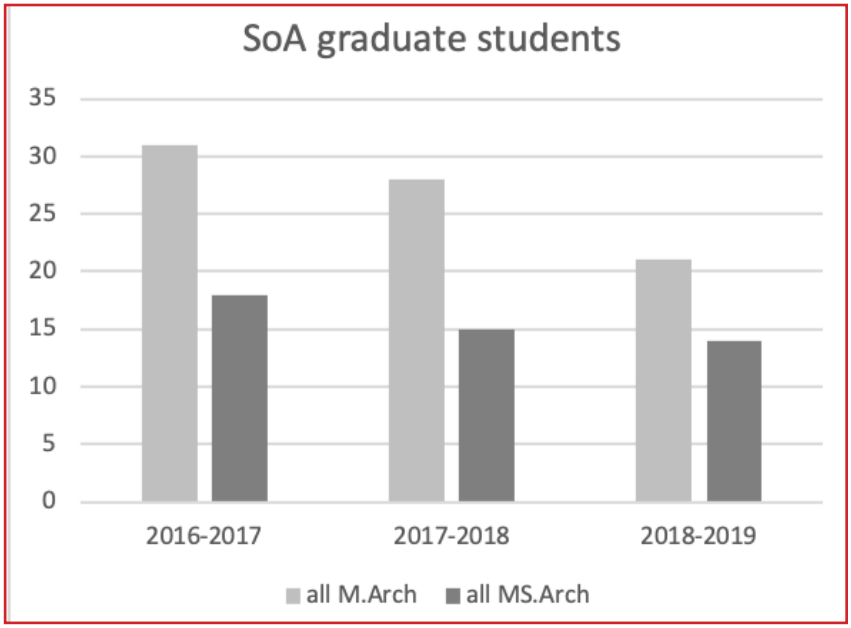


figure 4:

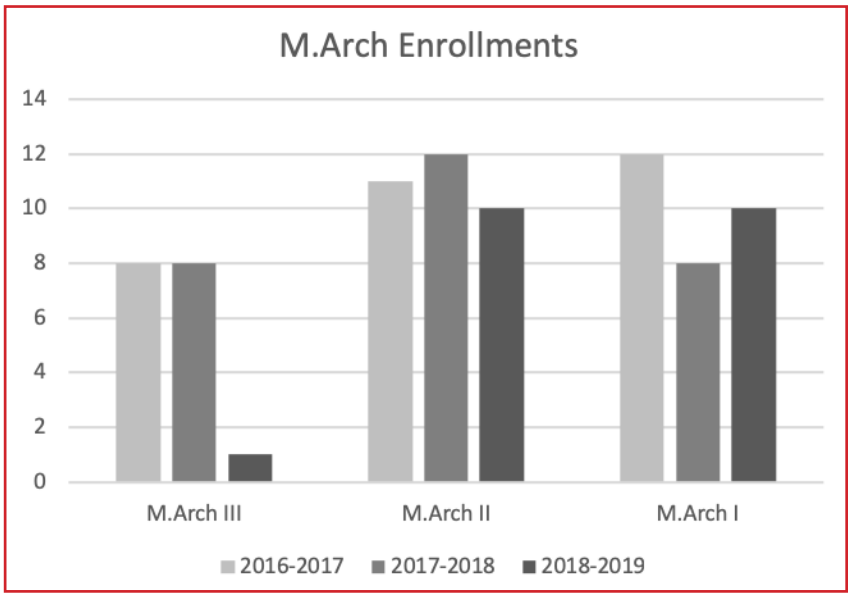


figure 5:

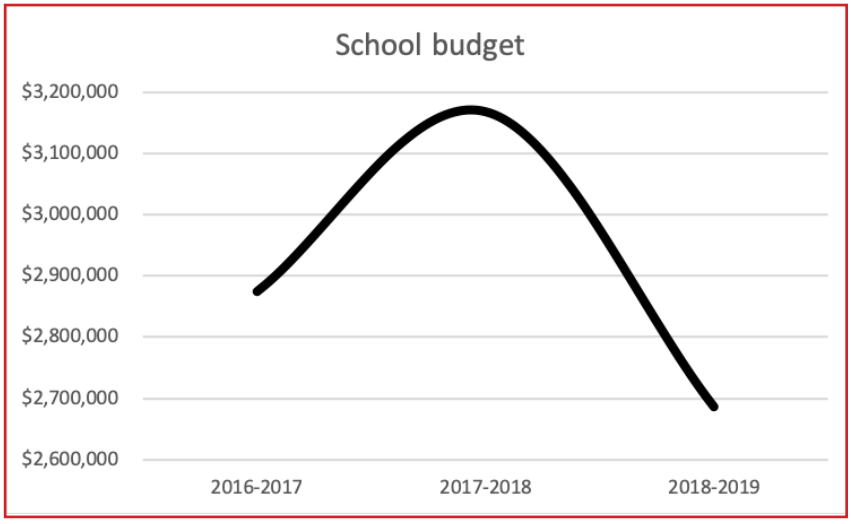
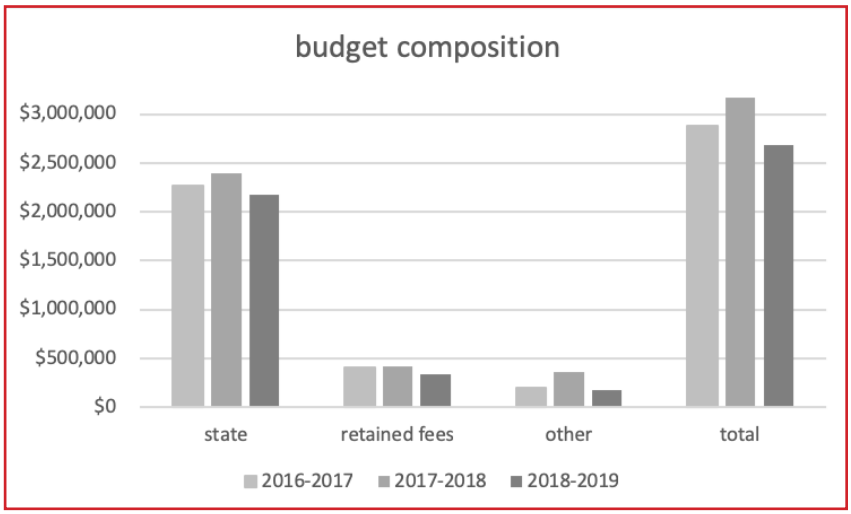


figure 6:



APPENDIX II

2014–2015 M.Arch Curricula

	M.Arch III	M.Arch II	M.Arch I	
PRE-PROFESSIONAL PHASE				
Summer 1				
ARC 510a immersion studio I: groundwork	4			
ARC 540a design communication 1	3			
	7			
Fall 1				
ARC 510b immersion studio 2	6			
ARC 520a building technology 1 – structures 1	3			
ARC 520b building technology 2 – materials + methods 1	3			
ARC 529 intro to the built environment	3			
ARC 540b design communication 2	3			
	18			
Spring 1				
ARC 510c immersion studio 3	6			
ARC 526 site analysis + planning	2			
C 520c building technology 3 – environmental control systems 1	3			
ARC 527 architectural programming	2			1-CU in 2019
ARC 530 history + theory of architecture 1	3			
	16			
year	**41**			
PROFESSIONAL PHASE				
Summer 2				
ARC 509a immersion studio	4*	4		
ARC 509b immersion seminar	3*	3		
		7		
Fall 2				
ARC 510d advanced studio 1: poetics + place	6	6		
ARC 520d building technology 4 – materials + methods 2	3	3		
ARC 531 history + theory of architecture 2	3			
ARC 540c design communications 3	3	3		
C 520f building technology 6 – environmental control systems 2	3	3	3	
ARC 529 intro to the built environment		3		
	18	18		
Spring 2				
ARC 510e advanced studio 2: urban focus	6	6		
ARC 520e building technology 5 – structures 2	3	3		
ARC 533 history + theory of architecture 3	3			
ARC 541 contract documents[Θ]	3	3		
ARC 530 history + theory of architecture 1		3		
	15	15		
year	**33**	**40**		
MILESTONE[Δ]				
Summer 3				
ARC 509a immersion studio	4*	4*	4*	
ARC 509b immersion seminar	3*	3*	3*	
Fall 3				
510f advanced studio3: technical integration + comprehensive[Θ]	6	6	6	
advanced elective	3	3	3	
advanced elective	3		3	
ARC 909 - masters project preparation	3	3	3	
ARC 529 intro to the built environment			3	
ARC 531 history + theory of architecture 2-seminar		3		
	15	15	18	
Spring 3				
ARC 909 masters project	6	6	6	
ARC 520g building technology 7 – structures 3	3	3	3	
ARC 533 history + theory of architecture 3-seminar		3		
ARC 550c ethics and practice	2	2		3-CU in 2019
advanced elective	3		3	
advanced elective			3	
	14	14	15	
year	**29**	**29**	**33**	
total required credits[Ω β]	**103**	**69**	**33**	

notes

Θ ARC 510f + ARC 541 taken concurrently

Ω NAAB 2009 Conditions: min 168 total CU; 30 grad CU

β NAAB 2009 Conditions: min 45 non-arch CU

* optional developmental course

Δ Continuation requires passage of Milestone

approved by SoA Curriculum Committee: 2014.04.14

2016.02.18 corrrected ARC 550c, from 2 to 3 CU

2016.05.09 corrected M.Arch II elective count; M.Arch III + II are deficient: NAAB 2014 conditions requires 10 Optional Studies CU (electives)

APPENDIX II

2018–2019 M.Arch Curricula

	M.Arch III	M.Arch II	M.Arch I
PRE-PROFESSIONAL PHASE			
Summer 1			
ARC 510a l immersion studio I: space+composition	4		
ARC 540a l design communication 1	3		
	7		
Fall 1			
ARC 510b l immersion studio 2: tectonic	6		
ARC 521a l integrated technologies I	3		
ARC 530 l history+theory 1	3		
ARC 540b l design communication 2	3		
	15		
Spring 1			
ARC 510c l immersion studio 3: land ethic	6		
ARC 526 l site analysis + planning	2		
ARC 521b l integrated technologies II	3		
ARC 527 l architectural programming	1		
ARC 531 l history+theory 2	3		
	15		
	year 1 **37**		
PROFESSIONAL PHASE			
Summer 2			
ARC 509a l immersion studio	4*	4	
ARC 509b l immersion seminar	3*	3	
		7	
Fall 2			
ARC 510d l comprehensive studio 1: dwelling or institutional	6	6	
ARC 521c l integrated technologies III	3	3	
ARC 533 l history+theory 3	3	3	
ARC 540c l design communications 3	3	3	
	15	15	
Spring 2			
ARC 510e l comprehensive studio 2: assembly	6	6	
history + theory technical elective$^{\beta}$	3	3	
ARC 521d l integrated technologies IV	3	3	
ARC 541 l contract documents$^{\Theta}$	3	3	
	15	15	
	year 2 **30**	year 1 37	
MILESTONE 2$^{\Delta}$			
Summer 3			
ARC 509a l immersion studio	4*	4*	4*
ARC 509b l immersion seminar	3*	3*	3*
Fall 3			
ARC 510f l advanced studio: options technical integration + comprehensive$^{\Theta}$	6	6	6
advanced elective$^{\beta}$	3	3	3
advanced elective$^{\beta}$	3	3	3
ARC 909 l masters project preparation	3	3	3
history + theory technical elective$^{\flat}$			3
	15	15	18
Spring 3			
ARC 909 masters project	6	6	6
integrated technologies: technical elective$^{\infty\beta}$	3	3	3
ARC 550c ethics and practice	3	3	
advanced elective$^{\beta}$	3	3	3
advanced elective$^{\flat}$			3
	15	15	15
	year 3 **30**	year 2 **30**	year 1 **33**
total required credits$^{\Omega\,\beta}$	**97**	**67**	
NAAB Optional Studies$^{\beta}$	15	15	

3-CU first offered SPRING 2019

notes

Θ ARC 510f + ARC 541 taken concurrently

Ω NAAB 2014 Conditions: min 168-CU total incl. pre-req; min. 30 grad CU

β NAAB 2014 Conditions: min. 10-CU Optional Studies

* optional developmental course

Δ Continuation requires passage of Milestone

∞ ARC 521e: technical elective options:

ARC 520g	Structures III
ARC 561A	Water Efficiency in Buildings
ARC 561d	Computer Energy Analysis
ARC 561e	Sustainable Design and the LEED Initiative
ARC 561i	Materials: Properties and Tests
ARC 561j	Materials Modeling
ARc 561k	Energy and the Environment
ARc 561l	Energy Use in Buildings
ARC 561p	Environmental Science Laboratory
ARc 581f	Biomimetics
ARC 596d	Daylighting
ARC 599	Independent Study

approved by SoA Curriculum Committee:

2014.04.14	
2016.02.18	corrrected ARC 550c, from 2 to 3 CU
2016.05.09	corrected M.Arch II elective count; M.Arch III + II are deficient: NAAB 2014 conditions requires 10 Optional Studies CU (electives)
2016.11.14	compressed H+T and Technology Streams, increased Optional Studies CU
2017.04.19	integrated technologies technical elective, options added
2018.01.31	removed ARC 529; added ARC 530; resequenced H+T curriculum
2018.02.14	revised ARC 521e technical elective options
2018.02.28	adopted H+T elective to replace ARC 529

APPENDIX III

New Course Syllabi

The following courses have been taught since the 2016 Accreditation Visit:

- ARC 101 Foundation Studio I, A+B
- ARC 220 History of Applied Building Technology
- ARC 303 Investigating the Exhibition
- ARC 461a/561a Water Efficiency in Buildings
- ARC 471b/571b Contemporary Urbanity and Public Space
- ARC 471b/571b Trans Journal
- ARC 496d/596d Social and Behavioral Issues in Built Environments
- ARC 496d/596d Daylighting, Health and Behavior
- ARC 497b/597b Health and Wellbeing in the Built Environment
- ARC 497b/597b Latin American Practice Traditions
- ARC 497b/597b Reading Architecture (Spring 2019 / DRAFT)
- ARC 497k/597k The Portfolio: Advanced Graphics, Presentation, Layout, and Design
- ARC 521a Integrated Technologies I
- ARC 521b Integrated Technologies II
- ARC 521c Integrated Technologies III
- ARC 521d Integrated Technologies IV

SPC for non-elective courses are listed in the upper right corner of the first page of each syllabus.

ARC 101a: FOUNDATION STUDIO IA, 3-CU, 2018 SoA, CAPLA, University of Arizona

Instructors: Carr, Ford, Guerrero, Hazelbaker, Hoffman, Matharoo, Mostert

COURSE DATA
ARC 101a, Foundation Studio IA, Fall 2018 3-credit units

FACULTY
Laura Carr, Adjunct Lecturer
lacarr@email.arizona.edu
office hours : room 310 : by appointment only

Alexander Ford, Adjunct Lecturer
forda90@email.arizona.edu
office hours : room 214 : by appointment only

Eduardo Guerrero, Assistant Lecturer
eduardoguerrero@email.arizona.edu
office hours : room 312 : by appointment only

Darci Hazelbaker, Assistant Lecturer
darcih@email.arizona.edu
office hours : room 314 : by appointment

Dan Hoffman, Professor of Practice, *(Studio Coordinator)*
studioma1@email.arizona.edu
office hours : room A203j : by appointment only

Prabhjeet Matharoo, Adjunct Lecturer
matharoo@email.arizona.edu
office hours : room 214 : by appointment only

Stefan Mostert, Adjunct Lecturer
stefanmostert@email.arizona.edu
office hours : room 214 : by appointment only

CRITERIA

FULFILLMENT

This course satisfies the first studio requirement for admission to the Professional Phase of the Bachelor of Architecture program

PREREQUISITES

Acceptance to Foundation program.

ENROLLMENT

The minimum and maximum enrollment will be determined annually by the School Director in consultation with the instructor of this course

CONTACT

Studios will meet in Architecture, Room 104 at times listed below:

Section Guerrero-Hazelbaker	MWF, 8-11
Section Ford-Hoffman	MWF, 2-5
Section Carr	MWF, 5-8
Section Matharoo-Mostert	T TH, 2-6:15

Lectures for all sections (including History-Theory) will meet in McClelland Park, Room 105 every Monday and Wednesday from 12:00 am – 12:50pm.

WEB + D2L
This course will be supported over D2L https://d2l.arizona.edu)

COST
In addition to the purchase of the required Material Kit ($350-$400), students will be expected to buy additional materials as each project requires. Students are encouraged to share materials with their colleagues to save cost. A suggested list of materials will be provided before the beginning of the course.

COURSE CONTENT

CATALOGUE DESCRIPTION

Develop a visual and haptic sensibility, rigor and awareness of architecture through freehand drawing, technical drafting and physical material manipulation.

COURSE DESCRIPTION

The course is designed to develop basic skills in architectural design and to develop an awareness of the role of architecture in the design of the built environment. It consists of two parts; ***Studio*** and ***History Theory***.

The design ***Studio*** introduces students to the essential methods of visual communication and architectural design through a series of inter-related exercises. Techniques such as orthographic projection, technical drafting, model making, freehand sketching and photography are used to explore the possibilities of architectural design at various scales. Elemental architectural considerations such as spatial ordering, composition, structure, construction, program (use) and building orientation are introduced at increasing levels of complexity over the term.

The ***History Theory*** sequence provides an overview of the factors involved in the practice of architecture and the design of the built environment. The lectures describe how human beings have responded to and shaped their environment through the making of buildings and related constructions such as landscapes and cities and also serve as an introduction to the various disciplines that are part of the College of Architecture, Planning and Landscape Architecture (CAPLA) for those interested in pursuing other design disciplines.

LEARNING OBJECTIVES

To develop an ***understanding*** of the following:

- The role of architecture and related design disciplines in the design of the built environment
- The basic, physical (material) properties and systems at work in the built environment
- The global impact of the built environment
- The role of cultural and historical factors in the design of the built environment
- The various types of spatial and formal organization used in the design of the built environment

LEARNING OUTCOMES

To develop the following ***ability***:

- Building scale models
- Drafting to scale in plan, section and elevation
- Using projective drawing techniques
- Hand sketching to study preliminary design concepts
- Utilize spatial and forma concepts
- To develop architectural designs using the above noted techniques

Understanding: The capacity to classify, compare, summarize, explain and/or interpret information. **Ability:** Proficiency in using specific information to accomplish a task, correctly selecting the appropriate information, and accurately applying it to the solution of a specific problem, while also distinguishing the effects of its implementation.

NAAB PERFORMANCE CRITERIA (National Architecture Accrediting Board)

A 7i: Understanding of the parallel and divergent histories of architecture and the cultural norms of a variety of indigenous, vernacular, local, and regional settings in terms of their political, economic, social, ecological, and technological factors.(Introductory). The material covered in this course offers students proficiency (at the indicated level of accomplishment) in the following subject areas as defined by the National Architectural Accrediting Board (NAAB) http://www.naab.org/wp-content/uploads/01_Final-Approved-2014NAAB-Conditions-for-Accreditation.pdf1

SUSTAINABILITY PROTOCOL

The Sustainability Protocol is a school-wide initiative to incorporate basic sustainability concepts into the curriculum. This course provides introductions to the following areas of focus:

ENVIRONS – This area is focused on issues of sustainability as they relate to context and human settlement.
Learning Outcomes: students should exhibit knowledge of optimized settlement density options, programmatic use diversity and adaptability (including agricultural opportunities), pedestrian oriented environment considerations, and wildlife habitat preservation.

WATER – This area is focused on issues relating to natural water cycles, scarcity, conservation, and management.
Learning Outcomes: students should exhibit knowledge of natural, local and regional water cycles and flow patterns, availability, scarcity concerns, capturing and re-use systems, and strategies for biologic systems enhancement through storm water management.

ENERGY – This area is focused on issues of sustainability as they pertain to the production and consumption of energy by and through the built environment in addition to closely related uses.
Learning Outcomes: students should exhibit knowledge of renewable sources of energy, correlation between building configuration and energy consumption / human comfort, and principles of net-zero energy design.

MATTER – This area is focused on issues of sustainability as they relate to the use of physical materials and the processes by which they are manipulated for use in the built environment.
Learning Outcomes: students should exhibit knowledge of material life-cycle processes, conservation and re-use opportunities, the concept of embodied carbon footprints, and purposeful use of locally available and/or repurposed, non-toxic, materials, that are produced through fair labor and trade practices.

WELLNESS – This area is focused on optimized healthfulness of all people through the design and maintenance of a built environment providing universal modes of mobility, and equal access to natural light, fresh air, and natural settings.
Learning Outcomes: students should exhibit knowledge of strategies for providing living and working environments that are physically and psychologically healthful for all. This should include access to daylight, fresh air, and natural settings that are accessible to all members of society regardless of economic status or physical ability.

CULTURATION (CULTURE, HISTORY, AND TRADITIONS) – This area is focused on the recognition and application of established local cultural practices as they relate to the sustainable continuity and renewal of the built environment.
Learning Outcomes: students should exhibit knowledge of local precedents and principles of the construction and maintenance of sustainable built environments that are integral and contemporary to the cultures which they serve, or have served. Additionally, students should show evidence of the application /adaptation of these principles in a contemporary cultural and physical context.

COURSE COMPONENTS + CRITERIA OF EVALUATION

This course is designed to achieve the learning objectives indicated. Because architecture is an art as well as a science, and because every student and student-group present new challenges in the teaching of design, instructors may add, alter, or modify assignments, criteria, or project weights in order to adapt to evolving circumstances that are inherent in the practice of Architecture, and also to evaluate students' abilities to make such adaptations. The Instructor will notify the students in advance of such changes; students for their part will notify the professor within one week of such notification if the proposed changes will cause undue hardship. Students acknowledge the dynamic nature of this course.

The graded components of this course are currently anticipated to be as follows, but are subject to change as set forth above:

The course is comprised of two components; ***Studio*** and ***History Theory.*** There is one grade for the course, 75% of which is Studio and 25% History Theory.

There are two ***Studio*** projects assigned for the course. Individual grades for each project are based on design, craft (drafting and model making) and sketchbook (hand drawing). Final drawings and models will be presented at a class-wide exhibition at the completion of each project. The ***Studio*** grade distribution is as follows:
23% P1

23% P2

23% P3

23% P4

6% Participation/Collegiality/Progress/Collective Spirit

In ***History Theory***, there will be two assignments for the term in the form of a brief essay and scanned (hand drawn and written) lecture notes. The grade distribution is as follows:
25% L1

25% L2

25% L3

25% L4

Project assignments will be posted to D2L (https://d2l.arizona.edu)

SEMESTER SCHEDULE A course calendar is attached to this syllabus.

POLICIES + STATEMENTS

GRADING: Evaluations will be distributed at intervals during the semester and will indicate performance according to the stated criteria of evaluation. Students are expected to use this system to monitor and adjust their performance and to seek additional support from the professor, as appropriate. Evaluations will be based primarily on student's work, rather than effort expended. Students are expected to acquire knowledge and skill, not merely *endeavor* to do so.

GRADING SCHEDULE

scale	undergraduate criteria
A (90-100)	Excellence in most areas of evaluation, high competence in others.
B (80 to <90)	High Competence in most areas of evaluation, competence in others.
C (70 to <80)	Fulfilled all course requirements with competence. (Competence: the answering of all requirements; adequate fitness, ability, capacity; sufficient for the purpose.)
D (60 to <70)	Less than competent work in one or more areas of evaluation. One or more requirements lacking and/or sub-standard quality.
E (0 to <60)	Substantially incomplete work and/or work of an unsatisfactory quality.
Incomplete	Work left incomplete at the end of the semester *due to circumstances beyond the student's control*.

CHANGE: By its very nature, the practice of architecture requires an ability to adapt to change, both by responding to unforeseen events in the delivery of services and in the revision of the work. Because an ability to adapt and embrace change is an essential skill in our profession, it may be considered in evaluations for this course.

LATE WORK: Work submitted after the deadline will be graded one or more letter grades below what would have been awarded had the work been submitted on time, appropriate to the length of delay and the importance of the assignment, at the Instructor's discretion.

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VALIDITY
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RETENTION OF WORK: The School of Architecture may retain samples of student work produced in this course as part of the accreditation process of the National Architectural Accrediting Board, Inc. (NAAB) or other University purposes. This may include models, mock-ups, prints, and other physical documents. Students will be notified of work that needs to be retained and shall submit those to the Archivist or the Instructor, as determined by the Instructor, before grades will be released. After accreditation review, the owners of the retained work will be given the opportunity to reclaim it at their own expense (at the name and email address affixed to the product by the student at the time of submittal) for up to 30 days after notification. By contributing work students aid the School in certifying its work, which is essential to the standing and reputation of the institution, for which the Faculty is grateful.

End of syllabus

ARC 101a Schedule

	m	t	w	th	f	s	s
august	**First Day of ARC 101a** P1 Assigned Lecture	Technique Lecture		HT Lecture 1			
week 1	20	21	22	23	24	25	26
august/september		HT Lecture 2		HT Lecture 3			
week 2	27	28	29	30	31	1	2
september	Labor Day No Class	HT Lecture 4		HT Lecture 5			
week 3	3	4	5	6	7	8	9
september	P1 Exhibition	HT Lecture 6	Post HT 1 to D2L	HT Lecture 7	Post P1 to D2L		
week 4	10	11	12	`13	14	15	16
september	P2 Assigned Lecture	Technique Lecture 8		HT Lecture 9			
week 5	17	18	19	20	21	22	23
september		HT Lecture 10		HT Lecture 11			
week 6	24	25	25	25	28	29	30
october		HT Lecture 12		HT Lecture 13			
week 7	1	2	3	4	5	6	7
october	P2 Exhibition	HT Lecture 14	**Last Day of ARC 101a** Post HT 2 to D2L	**First Day of ARC 101b** HT Lecture 15	Post P2 to D2L		
week 8	8	9	10	11	12	13	14

All Lectures are in Koeffler, Rm. 218

D2L Posts no later than 10:00PM ib due date

ARC 101b Schedule

	m	t	w	th	f	s	s
october	P3 Assigned Lecture	HT Lecture 16		HT Lecture 17			
week 9	15	16	17	18	19	20	21
october	MID TERM GRADE REPORTS DUE	HT Lecture 18		HT Lecture 19			
week 10	22	23	24	25	26	27	28
october/november		HT Lecture 20		HT Lecture 21			
week 11	29	30	31	1	2	3	4
november	P3 Exhibition	HT Lecture 22	Post HT 3 to D2L	P4 Assigned Lecture	Post P3 to D2L		
week 12	5	6	7	8	9	10	11
november		Techniqe Liecture		HT Lecture 23			
week 13	12	13	14	15	16	17	18
november		HT Lecture 24		Thanksgiving	Thanksgiving		
week 14	19	20	21	22	23	24	25
november/december					P4 Exhibition		
week 14	26	27	28	29	30	1	2
december	Studio Clean-Up	Studio Clean-Up	**Last Day of ARC 101b** Post HT4 to D2L		Post P4 to D2L		
week 15	3	4	5	6	7	8	9
december	FINAL GRADE REPORTS DUE						
week 16	10	4	5	6	7	8	9

All Lectures are in Koeffler, Rm. 218

D2L Posts no later than 10:00PM ib due date

ARC 101b: FOUNDATION STUDIO IB, 3-CU, 2018 SoA, CAPLA, University of Arizona

Instructors: Carr, Ford, Guerrero, Hazelbaker, Hoffman, Matharoo, Mostert

COURSE DATA
ARC 101a, Foundation Studio IB, Fall 2018 3-credit units

FACULTY
Laura Carr, Adjunct Lecturer
lacarr@email.arizona.edu
office hours : room 310 : by appointment only

Alexander Ford, Adjunct Lecturer
forda90@email.arizona.edu
office hours : room 214 : by appointment only

Eduardo Guerrero, Assistant Lecturer
eduardoguerrero@email.arizona.edu
office hours : room 312 : by appointment only

Darci Hazelbaker, Assistant Lecturer
darcih@email.arizona.edu
office hours : room 314 : by appointment

Dan Hoffman, Professor of Practice, *(Studio Coordinator)*
studioma1@email.arizona.edu
office hours : room A203j : by appointment only

Prabhjeet Matharoo, Adjunct Lecturer
matharoo@email.arizona.edu
office hours : room 214 : by appointment only

Stefan Mostert, Adjunct Lecturer
stefanmostert@email.arizona.edu
office hours : room 214 : by appointment only

CRITERIA

FULFILLMENT

This course satisfies the first studio requirement for admission to the Professional Phase of the Bachelor of Architecture program

PREREQUISITES

Acceptance to Foundation program.

ENROLLMENT

The minimum and maximum enrollment will be determined annually by the School Director in consultation with the instructor of this course

CONTACT

Studios will meet in Architecture, Room 104 at times listed below:

Section Guerrero-Hazelbaker	MWF, 8-11
Section Ford-Hoffman	MWF, 2-5
Section Carr	MWF, 5-8
Section Matharoo-Mostert	T TH, 2-6:15

Lectures for all sections (including History-Theory) will meet in McClelland Park, Room 105 every Monday and Wednesday from 12:00 am – 12:50pm.

WEB + D2L
This course will be supported over D2L https://d2l.arizona.edu)

COST
Equipment and tools purchased for ARC 101a can be used for this course. Students will be expected to buy additional materials as each project requires. Students are encouraged to share materials with their colleagues to save cost.

COURSE CONTENT

CATALOGUE DESCRIPTION

Develop a visual and haptic sensibility, rigor and awareness of architecture through freehand drawing, technical drafting and physical material manipulation. The course builds upon ARC 101a, developing higher level skills and understanding.

COURSE DESCRIPTION

The course is designed to develop basic skills in architectural design and to develop an awareness of the role of architecture in the design of the built environment. It consists of two parts; ***Studio*** and ***History Theory***. The course builds upon ARC 101a, developing higher level skills and understanding of architectural design, history and theory.

The design ***Studio*** introduces students to the essential methods of visual communication and architectural design through a series of inter-related exercises. Techniques such as orthographic projection, technical drafting, model making, freehand sketching and photography are used to explore the possibilities of architectural design at various scales. Elemental architectural considerations such as spatial ordering, composition, structure, construction, program (use) and building orientation are introduced at increasing levels of complexity over the term.

The ***History Theory*** sequence provides an overview of the factors involved in the practice of architecture and the design of the built environment. The lectures describe how human beings have responded to and shaped their environment through the making of buildings and related constructions such as landscapes and cities and also serve as an introduction to the various disciplines that are part of the College of Architecture, Planning and Landscape Architecture (CAPLA) for those interested in pursuing other design disciplines.

LEARNING OBJECTIVES

To develop a higher level of ***understanding*** of the following objectives, first introduced in ARC 101a:

- The role of architecture and related design disciplines in the design of the built environment
- The basic, physical (material) properties and systems at work in the built environment
- The global impact of the built environment
- The role of cultural and historical factors in the design of the built environment
- The various types of spatial and formal organization used in the design of the built environment

LEARNING OUTCOMES

To develop the following ***abilities*** *to a higher level**, first learned ARC 101a*:

- Building scale models
- Drafting to scale in plan, section and elevation
- Using projective drawing techniques
- Hand sketching to study preliminary design concepts
- Utilize spatial and forma concepts
- To develop architectural designs using the above noted techniques

Understanding: The capacity to classify, compare, summarize, explain and/or interpret information. **Ability:** Proficiency in using specific information to accomplish a task, correctly selecting the appropriate information, and accurately applying it to the solution of a specific problem, while also distinguishing the effects of its implementation.

NAAB PERFORMANCE CRITERIA (National Architecture Accrediting Board)
A 7i: Understanding of the parallel and divergent histories of architecture and the cultural norms of a variety of indigenous, vernacular, local, and regional settings in terms of their political, economic, social, ecological, and technological factors.(Introductory). The material covered in this course offers students proficiency (at the indicated level of accomplishment) in the following subject areas as defined by the National Architectural Accrediting Board

(NAAB) http://www.naab.org/wp-content/uploads/01_Final-Approved-2014NAAB-Conditions-for-Accreditation.pdf1

SUSTAINABILITY PROTOCOL

The Sustainability Protocol is a school-wide initiative to incorporate basic sustainability concepts into the curriculum. This course provides introductions to the following areas of focus:

ENVIRONS – This area is focused on issues of sustainability as they relate to context and human settlement.
Learning Outcomes: students should exhibit knowledge of optimized settlement density options, programmatic use diversity and adaptability (including agricultural opportunities), pedestrian oriented environment considerations, and wildlife habitat preservation.

WATER – This area is focused on issues relating to natural water cycles, scarcity, conservation, and management.
Learning Outcomes: students should exhibit knowledge of natural, local and regional water cycles and flow patterns, availability, scarcity concerns, capturing and re-use systems, and strategies for biologic systems enhancement through storm water management.

ENERGY – This area is focused on issues of sustainability as they pertain to the production and consumption of energy by and through the built environment in addition to closely related uses.
Learning Outcomes: students should exhibit knowledge of renewable sources of energy, correlation between building configuration and energy consumption / human comfort, and principles of net-zero energy design.

MATTER – This area is focused on issues of sustainability as they relate to the use of physical materials and the processes by which they are manipulated for use in the built environment.
Learning Outcomes: students should exhibit knowledge of material life-cycle processes, conservation and re-use opportunities, the concept of embodied carbon footprints, and purposeful use of locally available and/or repurposed, non-toxic, materials, that are produced through fair labor and trade practices.

WELLNESS – This area is focused on optimized healthfulness of all people through the design and maintenance of a built environment providing universal modes of mobility, and equal access to natural light, fresh air, and natural settings.
Learning Outcomes: students should exhibit knowledge of strategies for providing living and working environments that are physically and psychologically healthful for all. This should include access to daylight, fresh air, and natural settings that are accessible to all members of society regardless of economic status or physical ability.

CULTURATION (CULTURE, HISTORY, AND TRADITIONS) – This area is focused on the recognition and application of established local cultural practices as they relate to the sustainable continuity and renewal of the built environment.
Learning Outcomes: students should exhibit knowledge of local precedents and principles of the construction and maintenance of sustainable built environments that are integral and contemporary to the cultures which they serve, or have served. Additionally, students should show evidence of the application /adaptation of these principles in a contemporary cultural and physical context.

COURSE COMPONENTS + CRITERIA OF EVALUATION

This course is designed to achieve the learning objectives indicated. Because architecture is an art as well as a science, and because every student and student-group present new challenges in the teaching of design, instructors may add, alter, or modify assignments, criteria, or project weights in order to adapt to evolving circumstances that are inherent in the practice of Architecture, and also to evaluate students' abilities to make such adaptations. The Instructor will notify the students in advance of such changes; students for their part will notify the professor within one week of such notification if the proposed changes will cause undue hardship. Students acknowledge the dynamic nature of this course.

The graded components of this course are currently anticipated to be as follows, but are subject to change as set forth above:

The course is comprised of two components; ***Studio*** and ***History Theory.*** There is one grade for the course, 75% of which is Studio and 25% History Theory.

There are two ***Studio*** projects assigned for the course. Individual grades for each project are based on design, craft (drafting and model making) and sketchbook (hand drawing). Final drawings and models will be presented at a class-wide exhibition at the completion of each project. The ***Studio*** grade distribution is as follows:
23% P1

23% P2

23% P3

23% P4

6% Participation/Collegiality/Progress/Collective Spirit

In ***History Theory***, there will be two assignments for the term in the form of a brief essay and scanned (hand drawn and written) lecture notes. The grade distribution is as follows:
25% L1

25% L2

25% L3

25% L4

Project assignments will be posted to D2L (https://d2l.arizona.edu)

SEMESTER SCHEDULE A course calendar is attached to this syllabus.

POLICIES + STATEMENTS

GRADING: Evaluations will be distributed at intervals during the semester and will indicate performance according to the stated criteria of evaluation. Students are expected to use this system to monitor and adjust their performance and to seek additional support from the professor, as appropriate. Evaluations will be based primarily on student's work, rather than effort expended. Students are expected to acquire knowledge and skill, not merely *endeavor* to do so.

GRADING SCHEDULE

scale	undergraduate criteria
A (90-100)	Excellence in most areas of evaluation, high competence in others.
B (80 to <90)	High Competence in most areas of evaluation, competence in others.
C (70 to <80)	Fulfilled all course requirements with competence. (Competence: the answering of all requirements; adequate fitness, ability, capacity; sufficient for the purpose.)
D (60 to <70)	Less than competent work in one or more areas of evaluation. One or more requirements lacking and/or sub-standard quality.
E (0 to <60)	Substantially incomplete work and/or work of an unsatisfactory quality.
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THREATENING BEHAVIOR: The UA Threatening Behavior by Students Policy prohibits threats of physical harm to any member of the University community, including to oneself: http://policy.arizona.edu/education-and-student-affairs/threatening-behavior-students

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RETENTION OF WORK: The School of Architecture may retain samples of student work produced in this course as part of the accreditation process of the National Architectural Accrediting Board, Inc. (NAAB) or other University purposes. This may include models, mock-ups, prints, and other physical documents. Students will be notified of work that needs to be retained and shall submit those to the Archivist or the Instructor, as determined by the Instructor, before grades will be released. After accreditation review, the owners of the retained work will be given the opportunity to reclaim it at their own expense (at the name and email address affixed to the product by the student at the time of submittal) for up to 30 days after notification. By contributing work students aid the School in certifying its work, which is essential to the standing and reputation of the institution, for which the Faculty is grateful.

End of syllabus

ARC 101b Schedule

	m	t	w	th	f	s	s
october	P3 Assigned Lecture	HT Lecture 16		HT Lecture 17			
week 9	15	16	17	18	19	20	21
october	MID TERM GRADE REPORTS DUE	HT Lecture 18		HT Lecture 19			
week 10	22	23	24	25	26	27	28
october/november		HT Lecture 20		HT Lecture 21			
week 11	29	30	31	1	2	3	4
november	P3 Exhibition	HT Lecture 22	Post HT 3 to D2L	P4 Assigned Lecture	Post P3 to D2L		
week 12	5	6	7	8	9	10	11
november		Techniqe Liecture		HT Lecture 23			
week 13	12	13	14	15	16	17	18
november		HT Lecture 24		Thanksgiving	Thanksgiving		
week 14	19	20	21	22	23	24	25
november/december					P4 Exhibition		
week 14	26	27	28	29	30	1	2
december	Studio Clean-Up	Studio Clean-Up	**Last Day of ARC 101b** Post HT4 to D2L		Post P4 to D2L		
week 15	3	4	5	6	7	8	9
december	FINAL GRADE REPORTS DUE						
week 16	10	4	5	6	7	8	9

All Lectures are in Koeffler, Rm. 218

D2L Posts no later than 10:00PM ib due date

COURSE DATA

ARC 220: History of Applied Building Technology
Fall 2017
3-credit units
FACULTY
Carrie Eastman, Adjunct Lecturer
ceastman@email.arizona.edu
Office Hours: To Be Determined

CRITERIA

FULFILLMENT

This course is an elective.

PREREQUISITES

There are no prerequisites for this course; however, students may find it beneficial to have a basic understanding of architectural concepts and western history.

ENROLLMENT

A Maximum enrollment of fifty (50) is allowed for this course.

CRITERIA

This is an online course. Specific, weekly meeting times are TBD.

WEB + D2L

This is an online course that will be supported by D2L, VoiceThread, and email.

HONORS CREDIT

Students wishing to contract this course for Honors Credit should email me to set up an appointment to discuss the terms of the contract. Information on Honors Contracts can be found at http://www.honors.arizona.edu/faculty-and-advisors/contracts.

COST

There are no additional costs associated with this course; however, students are responsible for purchasing, borrowing, or renting the primary required texts.

COURSE CREDIT

This course may be applied toward an ARCE major or to a General Education requirement, but not to both.
http://catalog.arizona.edu/policy/double-use-courses-double-dipping

COURSE CONTENT

CATALOGUE DESCRIPTION

This course provides an overview of global architectural history since the Industrial Revolution with an emphasis on how architects apply historical knowledge in contemporary practice.

COURSE DESCRIPTION

This course will survey global architecture from the Industrial Revolution to the present with the intention of revealing the ways in which contemporary architecture is informed by history, particularly in terms of the influence advancements in engineering, materials, and building technologies have had on design.

Architectural history will serve as the framework to achieve this intention; students will be asked to consider both significant architectural movements and how they relate to broad shifts in culture and building technologies, as well as seminal works, the architects who designed them, and the methods employed by these architects.

In addition, where appropriate, discussions will link themes in present professional practice to past ways of working. Examples of these themes include the way architects obtain commissions and collaborate with other disciplines, as well as long standing issues in the field such as lack of diversity and multinational practice and its relationship to colonialism. The purpose of this secondary exploration is to give students a realistic perspective on the current working environment of architects and engineers.

COURSE OBJECTIVES

Upon the successful completion of this course, students will have the ability to do the following:

- Comprehend the overall, chronological history of building from the Industrial Revolution to the present;
- Possess and employ the nomenclature and concepts specific to the subject matter;
- Understand the relationship of present building methods to those of the past, including vernacular traditions;
- Understand the changing ways architectural history has influenced architectural practice;

• Contemplate global architecture, design, and building relative to Western traditions.

LEARNING OUTCOMES
The learning outcomes for this course are that students will have the ability to do the following:
• Classify, in terms of type, period, construction method, and style a built work upon seeing or experiencing it;
• Identify major movements and seminal works in architecture since the Industrial Revolution;
• Analyze how contemporary architecture is informed by past methods of design and building;
• Identify important architects of this time and their specific methods of practice;
• Trace the historical origins of contemporary architecture;
• Outline relevant topics and concerns in professional practice;
• Process ideas in the form of carefully crafted written arguments based on the synthesis of required texts and group discussions.

ABET CRITERIA
Primary
(g) an ability to communicate effectively
(h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
(i) a recognition of the need for, and an ability to engage in life-long learning
(j) a knowledge of contemporary issues
Secondary
(f) an understanding of professional and ethical responsibility

COURSE COMPONENTS AND CRITERIA
Reading and Writing Groups
In order to foster an environment of collaboration where students learn from their peers, there will be Reading and Writing Groups associated with this course. These groups are mentioned below in the description of Reading Journals and Essays. The instructor will determine the groups during the first week of the semester.

The components of this course are:

Readings
There are approximately 25 pages of required reading per week as well as the required viewing of films and other media when noted.

Discussions
The instructor will post 1 or more topics of discussion associated with each week's topic.

Students are required to participate in online discussions every week of the semester. Participation includes responding to the instructor's post(s) and responding to the discussion thread(s).

Participation includes all of the following:
• Respond with comments or questions to both of the instructor’s discussion topics;
• Respond to 2 comments or questions posted by classmates;
• Post 2 comments or questions that have not yet been posted.

This is an online course and lack of participation or late participation is the equivalent of being absent.

Writing Assignments
There will be 3 writing assignments during the semester. The topics of these writing assignments will pertain to the reading and discussions that have taken place up to that point. The topics will be released on D2L prior to their due dates. Students may use sources beyond those required or recommended for the course; all sources shall be properly cited. Each essay shall be 3-4 pages, double spaced, 12 point font with 1” margins.

Students are required to submit a first draft of each writing assignment for peer review and in turn, become a peer reviewer. The peer review structure will be based on how many student enroll in the course and determined at that time.

WEIGHT

The course components will be weighted as follows:

3 Writing Assignments@15% each:	45%
Writing Assignment Peer Review	5%
3 Quizzes @10% each:	30%
Discussions	20%
Total:	100%

ARC 303: INVESTIGATING THE EXHIBITION, 3-CU, 2017 SoA, CAPLA
Instructor: Ashley Simone University of Arizona

COURSE DATA
ARC 303 Investigating the Exhibition fall 2017
3-credit units

FACULTY
Ashley Simone, Adjunct Lecturer
simonea@email.arizona.edu

office hours by appointment

Lily Wong, Teaching Assistant
lilywong@email.arizona.edu

office hours by appointment

CRITERIA FULFILLMENT

This course is an elective and satisfies History & Theory Stream requirements and is applicable to the Minor in Architectural History.

PREREQUISITES

Completion of one Art History or Architectural History course.

ENROLLMENT
Minimum enrollment is ten students; maximum is seventy-five.

WEB + D2L
This course will be taught online through D2L.

COURSE CONTENT

CATALOGUE DESCRIPTION

This course will examine curatorial theory and contemporary exhibitions in the Americas and Europe with the intention sensitizing the student to cultural institutions, the ideas and discourse of curatorial practice, and connections between art, design and architecture.

COURSE DESCRIPTION

On January 29th, 2015 The New York Times published an article entitled *No Detail Goes Unnoticed When Art is a Click Away: Art Museum are Increasingly Adding Their Collections Online*. Nicholas Serota, the director of the Tate in London is quoted in the article as follows: "Those institutions which take up this notion fastest and furthest will be the ones which have the authority in the future."

As a means to study exhibitions over the course of a semester students will draw upon historical references as well as contemporary exhibition catalogs, and the ever-expanding online resources maintained by cultural institutions. In addition to drawing on the resources maintained by larger institutions in major metropolitan areas such as London, Paris, New York, Los Angeles, and Rome, the course will examine exhibitions presented at more intimate New York venues, which may include, The Drawing Center, The Sculpture Center, the International Center of Photography, and contemporary art galleries.

The goal of the course is to provide students with the tools to critically evaluate curatorial practice and examine contemporary exhibitions, the subject matter of which does not adhere to chronology in a macro sense. The public consumes what institutions and curators put forward. The student of the museum shuttles through time and topics, is challenged to piece together history, to draw associations across time.

The course will guide analysis of exhibitions from multiple perspectives: concept, content, design, approach (historical, narrative, aesthetic). The intention of the course is to [i] generate an understanding of contemporary issues, related to art and architecture, as well as the cross-disciplinary nature of architecture, and [ii] foster the development of analytical skills with the intention of training students to read and interpret exhibitions on multiple levels - as curatorial exercises, design projects, spatial constructs, modes of communication, and sites with the potential to generate new ways of thinking.

OBJECTIVES AND OUTCOMES

1. Develop an awareness of contemporary exhibitions as a means to garner an understanding of aesthetic, social and political issues within architecture and related disciplines as well as the role of historical references as precedent and subject matter for/of contemporary exhibitions.
2. Develop the ability to understand and critique formal and conceptual aspects of exhibitions.
3. Hone the ability to critically evaluate curatorial practice in a variety of contexts.
4. Collaborate with and offer criticism to classmates and learn to receive productive criticism using the online format.

5. Contextualize architecture, art and design as associative practices.
6. Develop writing skills. This course fulfills Tier II writing requirements.

Graduate Students – in addition to developing awareness as indicated above, graduate students will be required to select an exhibition not covered in the course content and develop an analysis and critique under the guidance of the instructor. Critiques put forward by graduate students should be steeped in contextual/meta/historical understanding of the exhibition content. In many cases exhibition content is contextualized by curators; given this graduate students will further their ability to critique via evaluation of such contextualization.

STRUCTURE AND ORGANIZATION

The course will explore a variety of exhibitions per the schedule below. The study of each exhibition will be divided into three parts: [i] formal/spatial/aesthetic, [ii] concept / content (curatorial position), [iii] connotations / references. Students will write illustrated papers and participate in online discussions (see course components + criteria for evaluation for specific undergraduate/graduate requirements).

COURSE COMPONENTS + CRITERIA OF EVALUATION

The graded components of this course and their criteria of evaluation are listed below. **Please note the grade weight varies for undergraduate and graduate students**. While each student is required to participate in online discussions related to media + readings and to write papers, undergraduates will submit regular, short response papers (3-4 pages typed), while graduate students will select a particular topic to be explored over the course of the semester in a midterm (10 pages typed) and final paper (15 pages typed). Graduate student participation on the weekly discussion boards is weighted more heavily as they are expected to contribute in a more substantial way, both qualitatively and quantitatively.

TEXTS

All readings will be made available on D2L.

ONLINE POSTS + DISCUSSION

GOALS: The goal of the online discussion is to expand understanding of the course texts through conversation about the topics in the text and the relationships between the texts and the week's featured exhibition. In a campus classroom environment, group discussions would include questions, opinions and personal connections; online discussions are meant to accomplish the same via posts to an online bulletin board. The point is for students to post their own thoughts and questions and, in turn, respond to those of their classmates. Such discussions are meant to stimulate thinking and learning, and this only happens through participation.

PROCEDURE: Online discussions will take place on the course D2L site, under the "Discussions" tab, then divided into "Forums" and "Topics." Forums will be posted weekly by the instructor in response to the required texts. The instructor will also post Topics each week as "conversation starters." Students are welcome to add their own topics to the message board *so long as they pertain to the Forum topic and the course.* Off-topic conversations will be removed by the instructor and will result in a lower grade for the student.

REQUIREMENTS: The instructor will post media to D2L weekly in the form of prompts, exhibition content and/or links to relevant online exhibition documentation. Students are required to do each of the following, every week, to show "participation":

- **TOPICS**: **Read each topic** posted by the instructor and **post at least two (2) responses**. Each response should be about a paragraph (5-6 sentences) long and contain original thoughts about the subject. This does *not* mean students should not post their own thoughts if someone else has said something similar. Relate the topic to personal experience if possible.

- **QUESTIONS**: **Post at least one question** under the appropriate Forum or Topic. This should be a critical and thoughtful question that can open up the discussion in new ways. Thoughtless and careless questions will be removed by the instructor and the student will be notified. **Questions must be posted no later than Tuesdays at 11:30 PM to allow for discussions to generate.**

- **REPLIES**: Post at least two **replies** to another student's response**.** This is done using the "reply" button. Keep replies connected to the original post.

- **POSTS**: Make **6 posts per week, minimum**. The "replies" above count as two (2) of your posts.

- **READ**: You must read at least twenty (20) posts

DEADLINES: All posts for the week's readings must be **completed by 11:30pm Thursdays** – see the Guidelines for Online Discussions for more details.

Additional participation on the discussion board is encouraged! For example, students may post links to content-related websites, podcasts, videos, images, and other related media that is relevant and interesting for this course.

PROJECTS/ESSAYS

Projects will take the forms of short response papers related to readings and the exhibitions studied. There will be a total of three (3) papers, the last will be a final paper or project. And will require the submission of a draft. **Essays are due by 11:30pm on the Thursdays they are due** – see the Guidelines for Written Assignments for more details.

TIER II WRITING REQUIREMENTS

In order to adhere to the Tier II writing requirements for the University, there will be a written component for each project and the final (approx. 1000 words each, 3-4 pages). In addition to a full text, students will produce shorter abstracts for each of their response papers (150 words). The abstract is a useful tool to concisely present concepts. Final papers will be subject to a peer review and the instructor will provide comments to an early draft of the final paper.

GRADES

The Course Components will be weighted as follows:

UNDERGRADUATE REQUIREMENTS		
PROJECTS		
Paper 01	15	
Paper 02	15	
Final Paper (Draft 10, final 15)	25	
subtotal, papers		55
TEXTS / Discussions		45
Total		100%
GRADUATE REQUIREMENTS		
MIDTERM PAPER		30
TEXTS / Discussions		30
FINAL		40
Total		100%

REFERENCES

REQUIRED

A select list of exhibitions and institutions and resources is listed below.

Final bibliography will be contingent on the exhibitions selected during the course.

GENERAL

Bibliography related to critically framing exhibitions generally follows.

SEMESTER SCHEDULE

A course calendar is attached.

SEMESTER SCHEDULE

A course calendar is attached to the end of this syllabus and posted on D2L.

POLICIES + STATEMENTS

GRADING

Evaluations will be distributed at intervals during the semester and will indicate performance according to the stated criteria of evaluation. Students are expected to use this system to monitor and adjust their performance and to seek additional support from the professor, as appropriate. Evaluations will be based primarily on student's work, rather than effort expended. Students are expected to acquire knowledge and skill, not merely *endeavor* to do so.

LATE WORK

Work submitted after the deadline will be graded at the discretion of the instructor and may not be graded at all. The minimum grade reduction for late papers is one full letter grades below what would have been awarded had the work been submitted on time. The instructor may choose not to grade the late work at all.

INCOMPLETE WORK

Work submitted that is incomplete will be graded one full letter grade below what would have been awarded had the work been complete, appropriate to the extent of incompletion.

GRADING ONLINE WORK (DISCUSSIONS)

Online participation is worth 45% (undergraduate) 30% (graduate) of the final grade and will be assessed weekly. Failure to participate could result in failure of the course.

Grading of online discussion will be defined as follows (graduate scale in parentheses):

A (A): Exceeded the minimum number of posts; read more than 50 posts written by fellow students; posts were thoughtful, well-conceived, and brought up specific examples from the texts; additional texts, images, and other material was posted to support the discussion; questions and responses were original and insightful (i.e. a fellow student had not posted the question previously).

B: Completed all required posts; read at least 25 posts by fellow students; questions were thoughtful, relevant, and stimulated valuable discussion by peers.

C (B): Completed all required posts; read at least 10 posts by fellow students; questions were competent and relevant.

D (C): Completed less than the required posts; read at least 5 posts by fellow students; questions were posted but were redundant; did not cite specific examples from the texts.

E (E): Less than required for a D (C).

GRADING SCALE

Evaluation will be based on participation, quality of work, and online presence.
Grades will be defined as follows.

scale	undergraduate criteria	graduate criteria
A (90-100)	Excellence in most areas of evaluation, high competence in others.	Excellence to High Competence in most areas of evaluation.
B (80-89)	High Competence in most areas of evaluation, competence in others.	Very good to competent work in most areas of evaluation; fulfilled requirements.
C (70-79)	Fulfilled all course requirements with competence. (Competence: the answering of all requirements; adequate fitness, ability, capacity; sufficient for the purpose.)	Less than complete or competent work in some areas; requirements lacking and/or sub-standard quality.
D (60-69)	Less than competent work in one or more areas of evaluation. One or more requirements lacking and/or sub-standard quality.	Substantially incomplete or inadequate quality.
E (0-59)	Substantially incomplete work and/or work of an unsatisfactory quality.	Grossly inadequate.
Incomplete	Work left incomplete at the end of the semester *due to circumstances beyond the student's control.*	Work left incomplete at the end of the semester *due to circumstances beyond the student's control.*

In co-convened and joint assignments, graduate students will produce a greater quantity and higher quality of work than their undergraduate counterparts in meeting these criteria.

WRITTEN ASSIGNMENT GRADING RUBRIC

The rubric for the grading of Written Assignments may be found in the Content section of D2L.

GRADE APPEAL

Students who believe they have been unfairly graded should follow the multi-step procedure outlined in the CAPLA Grade Appeal:
http://architecture.arizona.edu/student-forms-and-procedures

ATTENDANCE

Online participation is required in lieu of attendance. Each week you are required to participate in online discussions, which requires posting questions and responding to prompts and peer questions. You must check-in online once prior to 11PM on Tuesday and complete discussion requirements by 11PM on Thursdays.

DOCUMENTATION STANDARDS

All work produced in fulfillment of University requirements becomes the property of, and may be retained by, the School. Work shall be submitted for this course that demonstrates both the learning objectives and the final project(s), as requested by the professor. Digital files shall be submitted in the following naming convention: ARC 303_assignmentnumber (01-03 or FINAL)_Last Name-First Initial

COURSE BEHAVIOR

Students are responsible for checking their UA email and course D2L sites Monday-Friday, at least once every twenty-four hours, for communications from the Professor.

ONLINE RULES OF CONDUCT

BE CONCISE: Long posts (more than a single screen) are difficult to follow. Be clear, short, and to the point.

FREQUENCY: Log in to the discussion board at least three times per week in order to promote discussion and response. Logging in only after initial posts is not adequate participation.

NOT PERMITTED: Violation of the following standards will result in the removal of the post, loss of credit related to that post, and possible lowering of the course grade or forced withdrawal from the course:

Profanity: Blasphemous or obscene language; a swear word or oath; an irreligious or irreverent remark.

Derogatory Comments: Negative or disrespectful remarks that demean individuals or groups (distinct from insightful criticism which, though potentially negative, deal with course content in an insightful way).

Sexually Explicit Material: Sexually explicit language, material, or links to sexually explicit material; suggestive commentary in this vein, even if not explicit.

Copyrighted Material: Posts containing copyrighted material for which the user does not have rights.

Academic Dishonesty: Academically dishonest or unethical actions or content.

Commercial Material or Solicitations: Commercial content or solicitations that promote products or services.

Personal Information: Posting phone numbers, email addresses, home or work addresses, last names, grades, or personal information (about the student or others).

Be Polite: Online conversations do not have the benefit of vocal tone or physical cues that may indicate humor, irony, or other intentions that can alter the way content is received. Material that is not respectful, polite, or tolerant of the rights of others to have different opinions and different points of view is not acceptable.

ACADEMIC POLICIES

Academic policies can be found in The University of Arizona General Academic Catalog:

http://catalog.arizona.edu/allcats.html

For the principles, policies, and procedures governing issues of academic integrity, see: http://deanofstudents.arizona.edu/codeofacademicintegrity.

PLAGIARISM

The practice of taking someone else's work or ideas and passing them off as one's own is known as plagiarism and is a serious violation of academic and professional ethics. The consequences for plagiarism are severe, including a failing grade for the course, suspension, or expulsion from the University per the UA policy on plagiarism:
http://deanofstudents.arizona.edu/codeofacademicintegrity

TESTING: In any testing situation, whether graded or not, students shall not refer to outside resources (whether printed materials, such as books and journals, texts, Internet, e-mail, Google, instant messaging, or other resources) unless explicitly instructed to do so by the professor of record. Students operating digital devices in testing situations when not authorized to do so shall be assumed to be cheating.

CITATION: Plagiarism applies to the intellectual property of professional and public works, as well as to the work produced by peers. Students shall be assiduous in citing the work of others, whether in copying a graphic, either in part or in total, in quoting a text, or in building upon ideas, designs, or forms. Citation is used to give credit to the original author and to allow others to identify and trace source material.

Building upon the work of others is an inevitable part of learning and inherent to scholarship; hence it is an acceptable practice as long as the original sources are properly cited. Textual citations should follow the *Chicago Manual Of Style*. Citations of buildings and other designed works should include both a) project and b) source information:

a) project citation: the work's name or title, its location, the name of its designer(s), and the date designed (or, if built, constructed).

b) source citation: the source from which the information or illustration of the work was obtained formatted according to the Notes and Bibliography format specified in the *Chicago Manual Of Style:*

http://www.chicagomanualofstyle.org/tools_citationguide.html

PRODUCTION: Using the labor of others, whether paid or freely given, offers the beneficiary an unfair advantage relative to peers and is prohibited unless expressly authorized in writing by the professor(s) of record.

THREATENING BEHAVIOR

All participants must follow the University of Arizona's Policy on student behavior:

http://deanofstudents.arizona.edu/sites/deanofstudents.arizona.edu/files/disruptive_threat_bklt_Web_0.pdf

ACCESSIBILITY AND ACCOMMODATIONS

Universal Design is the obligation of every architect and should be a quality of every environment. It is also the University's goal that learning experiences be as accessible as possible. If you anticipate or experience physical or academic barriers based on disability, please contact the professor or Disability Resources (520-621-3268) to establish reasonable accommodations.

http://drc.arizona.edu/teach/syllabus-statement.html

RETENTION OF WORK

Work produced in this course is the property of the School of Architecture, which may retain any student project for display, accreditation, documentation, or other purposes.

CHANGES

This syllabus is subject to change with notice, as deemed appropriate by the instructor.

The purpose of a detailed syllabus is to make the course as transparent and as objective as possible, and thus to empower students to understand and earn the grades to which they aspire. It is not the intention of such a system to be used against learning or fairness.

Consequently, the professor retains the right to make adjustments that account for circumstances that were unforeseen when the course was designed and will notify the students when such changes are made. It may, for example, be advantageous to add or alter assignments or their criteria, or to modify criteria or project-weights, if it becomes evident that it is in the best interest of learning and fairness to do so. Students will notify the professor within one week of notification if such changes engender a hardship, after which time it will be agreed that students understand and are in accord with the change.

end of syllabus

References and Further Reading

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Benjamin, Walter. “The Work of Art in the Age of Mechanical Reproduction.” *Illuminations*. Trans. Harry Zohn. New York: Schocken Books, 1968, 217-251.

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Bergdoll, Barry and Blau, Eve. “Reviewing Architectural Exhibitions: Exhibiting Ideas–Curating History,” Editorials, *Journal of the Society of Architectural Historians 57* (1998): 256–257, 366.

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Brown, Denise Scott. “Little Magazines in Architecture and Urbanism.”

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Colomina, Beatriz and Craig Buckley, eds. *Clip Stamp Fold: The Radical Architecture of Little Magazines 196X to 197X*. Actar and MM Books, Media and Modernity Program, Princeton University, 2010.

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Hitchcock, Henry-Russell and Philip Johnson. *The International Style*. New York: W.W. Norton & Company, Inc, 1932.

Huxtable, Ada Louise. *On Architecture. Collected Reflections on a Century of Change*. New York; Walker and Company, 2008.

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Manaugh, Geoff. "Blogging 101: 01 - La storia = The history." *Abitare* 2010 Oct., n.506, p.40-43 (AB Ab59).

Obrist, Hans Ulrich "Curating, Exhibitions and the *Gesamtkunstwerk*"

Obrist, Hans Ulrich "Biennials"

O'Doherty, Brian. "Notes on the Gallery Space." *Inside the White Cube: the Ideology of the Gallery Space*. Santa Monica: The Lapis Press, 1986. 13-34.

Phillips, Andrea. "Pavilion Politics." *Log 20* (Fall 2010). 105-115.
Rappaport, Nina and Erica Stoller, eds. *Ezra Stoller, Photographer*. New Haven and London: Yale University Press, 2012.

Schafer, Ashley and Amanda Reeser Lawrence, eds. "Exhibiting Architecture. The Praxis Questionnaire for Architectural Curators." *Untitled Number Seven. Praxis: a journal of writing+building*. Issue 7 2005. 106-119.

Sontag, Susan. *On Photography*. New York: Anchor Books, 1990.

EXHIBITION VENUES – SELECT LIST

Benesse Art Site, Naoshima, Japan

Centre Pompidou, New York

Canadian Centre for Architecture, Montreal

Chateau La Coste, Lacoste, France

Drawing Center, New York

Guggenheim Museum, New York

International Center of Photography, New York

MAXXI, Rome

The Metropolitan Museum of Art, New York

Museum of Contemporary Art, San Francisco

Museum of Modern Art, New York

Neue Museum, Berlin

Royal Academy of Art, London Sculpture Center, New York

Serpentine Gallery, London

Swiss Architecture Museum, Basel

Whitney Museum, New York

BLOGS / SITES RELATED TO ART + ARCHITECTURE

Anarchitecture (http://www.an-architecture.com/)

ArchDaily (http://www.archdaily.com/)

A/N Blog (http://blog.archpaper.com/wordpress/)

A Daily Dose of Architecture (http://archidose.blogspot.com/) Archinect (http://archinect.com/)

Architizer (http://www.architizer.com/en_us/)

BLDGBLOG - Geoff Manaugh (http://bldgblog.blogspot.com/)

City of Sound - Dan Hill (http://cityofsound.com/)

Curbed (http://ny.curbed.com/)

Design Boom (http://www.designboom.com/eng/)

Design Observer (http://designobserver.com/)

Dezain (http://www.dezain.net/en/)

Dezeen - Marcus Fairs; http://www.dezeen.com/

Flickr (http://www.flickr.com/)

General Economy (http://tinyletter.com/geneconyc)

Hello Beautiful! - Edward Lifson; (http://www.edwardlifson.blogspot.com/)

Interactive Architecture - Ruairi Glynn (http://www.interactivearchitecture.org/)

Kazys Varnelis (http://varnelis.net/blog)

Loud Paper (http://loudpaper.typepad.com/)

MAS studio blog (http://mas-studio.tumblr.com/)

One-Way Street - Richard Prouty (http://onewaystreet.typepad.com/one_way_street/)

otrootroblog - Alejandro Hernandez Galvez (http://otrootroblog.blogspot.com/)

Plataforma Arquitectura - Chile (http://www.plataformaarquitectura.cl/)

Pruned - Alexander Trevi (http://pruned.blogspot.com/)

Scaffoldage (http://www.scaffoldage.com/)

Scouting NY (http://www.scoutingny.com/)

Tropolism (http://www.tropolism.com/)

Visual complexity (http://www.visualcomplexity.com/vc/)

arc **303** semester schedule

A course calendar is attached to this syllabus.

- Assignments and other Deadlines in RED – all assignments are due by 1130PM
- WRITTEN ASSIGNMENTS ARE DUE ON THURSDAYS
- DISCUSSIONS ARE DUE ON THURSDAYS

** Details for Assignments, Essay Topics, Procedures, etc. posted in D2L Content section

Week 1:	Introduction
8/21– 8/27	REVIEW: Syllabus, Schedule, D2L, Guidelines for Discussions and Written Assignments READING: *JL Cohen Mirror of Dreams Cynthia Davidson, "Drawn In" Week 1 Discussions / Student Introductions (must be posted by 8/24*) Week 1 D2L Quiz, Due Thursday 8/24* <<the percentage grade you receive on the quiz will not have an effect on your final grade; however, you MUST access the quiz from the D2L Main Menu and complete it to ensure you know how to use D2L – inability to successfully use D2L will have an effect on your grade. It is your responsibility to know and use the site.>> * * IF YOU REGISTER LATE DO THESE ASSIGNMENTS IMMEDIATELY. IT IS YOUR RESPONSIBILITY TO CATCH UP. THESE ASSIGNMENT WILL NOT BE AVAILABLE AFTER 9/4.
Week 2:	*WHAT IS AN EXHIBITION? HISTORICAL VIEW + CONTEMPORARY SHIFTS*
8/28 – 9/3	READING: *JL Cohen Mirror of Dreams (read it again) *Brian O'Doherty, "Notes on the Gallery Space" in "Inside the White Cube" OPTIONAL: Ellen Lupton, "From Noun to Verb" Week 2 Discussions (must be posted by 8/31)
Week 3:	*(RE)PRESENTATION*
9/4- 9/10 *9/4 Labor Day	READING: * Roland Barthes, "The Photographic Message" * Susan Sontag, "On Photography" OPTIONAL: Rosalind Krauss, "Photography's Discursive Spaces: Landscape/View" Feature: *Perpetual Revolution*, International Center of Photography (NYC), 2017 Week 3 Discussions (must be posted by 9/07)

Week 4: *(RE)PRODUCTION*

9/11-9/17 READING:
* Walter Benjamin, "The Work of Art in the Age of Mechanical Reproduction"
* Sylvia Lavin, "Showing Work"
* OPTIONAL: Beatriz Colomina, "On Architecture, Production, and Reproduction"

Feature: Richard Serra, Gagosian Gallery (NYC), 2016

Week 4 Discussions (must be posted by 9/14)

Week 5: *AUTHORSHIP*

9/18-9/24 READING:
* Hans Ulrich Obrist, "Curating, Exhibitions and the *Gesamtkunstwerk*"
* Michel Foucault, "What is An Author?" (excerpts)

Feature: *Esperanza Spalding Selects*, Cooper Hewitt National Design Museum (NYC), 2017

Week 5 Discussions (must be posted by 9/21)

Week 6: ***ESSAY: ON PRODUCTION***

9/25-10/1 WORK ON ESSAY ONE
1 Essay on Weeks 1 - 5, Due 9/28**

Week 7: *EXHIBITING WORK, EXHIBITING ARCHITECTURE*

10/2-10/8 READING:
* Tina DiCarlo, "Exhibitionism"
*Barry Bergdoll, "*At Home in the Museum*"
*Barry Bergdoll, "Out of Site / In Plain View: One the Origins and Actuality of the Architecture (check D2L for inclusion)
* Aaron Levy & William Menking, "Architecture on Display" (check D2L for inclusion)

Feature: *Home Delivery: Fabricating the Modern Dwelling*. MoMA (NYC), 2008

Week 7 Discussions (must be posted by 10/5)

Week 8: *THE BIENNIAL + THE VENICE BIENNALE*

10/9-10/15 READING:
* Hans Ulrich Obrist, "Biennials"
* Carson Chan, "Diary from Venice"
* Carson Chan, "Learning from Venice"
*Cynthia Davidson, "*Observations on the 14th International Architecture Exhibition*"

Feature: Venice Architectural Biennale, various years

Week 8 Discussions (must be posted by 10/12)

Week 9: *THE MUSEUM AS PHYSICAL + VIRTUAL SPACE*

10/16 – 10/22 READING:

*Ken Johnson, "No Detail Goes Unnoticed When Art is a Click Away"

(The New York Times 1/29/2015) Link to "No Detail" (also on D2L)

Week 9 Discussions (must be posted by 10/19)

Feature: Instagram, Social Media + Museums (check discussion section on D2L)

Week 10: ***ESSAY: ON EXHIBITIONS + THE MUSEUM AS AN EVOLVING INSTITUTION***

10/23 – 10/29 WORK ON ESSAY TWO
2 Essay on Weeks 7-9, Due 10/26**

Week 11: *CASE STUDIES: HISTORICAL EXHIBITIONS*

10/30 – 11/05 READING: See D2L Content Section for Exhibition Summaries
CS1: *Italy: The New Domestic Landscape*. MoMA (NYC), 1972
CS2: *Frank Lloyd Wright: From Within Outward*. Guggenheim Museum (NYC), 2009
CS3: *Italian Futurism 1909-1945*. Solomon Guggenheim Museum, 2014

Week 11 Discussions (must be posted by 11/02)

Week 12: *CASE STUDIES: EXPERIMENTAL + HYBRID ART/ARCHITECTURE PRACTICE*

11/6 – 11/12 READING: See D2L Content Section for Exhibition Summaries
CS1: Ernesto Neto. *Anthopodino*. Park Avenue Armory (NYC), 2009
CS2: *Skin + Bones: Parallel Practices in Fashion and Architecture*. Museum of Contemporary Art (LA), 2006

Week 12 Discussions (must be posted by 11/09)

Week 13: *CASE STUDIES: EXPERIENTIAL EXHIBITIONS*

11/13 – 11/19 READING: See D2L Content Section for Exhibition Summaries
*Juhani Pallasmaa, "The Eyes of the Skin: Architecture and the Senses"
CS: *Sensing Spaces: Architecture Reimagined*. Royal Academy of Art (London), 2014

Week 13 Discussions (must be posted by 11/16)

Week 14: *CASE STUDIES: THE ARCHITECTURAL RETROSPECTIVE*

11/20 – 11/26 READING: See D2L Content Section for Exhibition Summaries
CS: *Bernard Tschumi: Concept and Notation*. Centre Pompidou (Paris), 2014

Week 14 Discussions (must be posted by WEDS 11/22**)

*11/23-26 Thanksgiving Holidays **note discussions due 1 day earlier due to holiday

Week 15:	FINAL ***ESSAY (DRAFT): CASE STUDY***
11/27-12/3	WORK ON DRAFT OF FINAL ESSAY
	# 3, FINAL Essay, DRAFT Due 11/30**
	Week 15 Discussions (must be posted by WEDS 11/30**)

Week 16:	FINAL ***ESSAY: CASE STUDY***
12/4 – 12/14	WORK ON FINAL ESSAY
	# 3, FINAL Essay, Due 12/14**

COURSE DATA

ARC 461a / 561a: WATER EFFICIENCY IN BUILDINGS
Fall2017
3-credit units

FACULTY

Courtney Crosson, Assistant Professor
AIA, LEED AP BD+C, LEED AP ND
ccrosson@email.arizona.edu
Office ARCH 203f

CRITERIA

FULFILLMENT

This course is required for the MS.Arch degree, an elective for the WSP Masters, and an elective to all other students. It is recommended to students at the masters level and upper level undergraduate students interested in Water Efficiency in Buildings.

PREREQUISITES

None.

CO-REQUISITES

None

CONTACT

Th 12:30-3:15 pm CAPLA 204c

WEB + D2L

This course will be supported over D2L.

COST

None.

COURSE CONTENT

CATALOGUE DESCRIPTION

Learn methods and advanced techniques that conserve urban water usage while promotes water harvesting, water reuse, and water energy generation technologies in and around buildings.

COURSE DESCRIPTION

The course focuses on the effective use of water and its impact on energy consumption and building performance. It emphasizes the issue of water/energy nexus through a proposed four-faceted body of knowledge addressing 1) Water Conservation, 2) Water Harvesting, 3) Water Reuse, and 4) Water Energy Generation Technologies. Although water reduction and water harvesting have recently become more common in green buildings, water reuse and water energy generation are relatively newer technologies that demonstrates greater promise to contribute to the affordability of water and its use as alternative energy sources. The course also emphasizes the environmental benefits from integrating water saving strategies to modify thermal conditions --that would otherwise use energy to achieve-- while the saved water will facilitate exterior landscape development. Course delivery will include calculative and empirical methods, use of computer simulation, design nomographs and water budgets, and hands on inquiry based learning through selected laboratory sessions.

OBJECTIVES AND OUTCOMES

After taking this course, students should be able to:

1. Understand the major factors affecting water use and consumption in and around buildings, its effect on thermal conditions and energy savings.
2. Be aware of building water codes and benchmark consumption set by the industry standard for green building design.

3. Acquire the necessary skills to conduct building and site survey techniques, the use of tools and site instruments, and data acquisition systems.
4. Conduct calculative and empirical methods, use of computer simulation, design nomographs and water budget, and hands on inquiry based learning through selected laboratory sessions.

COURSE COMPONENTS + CRITERIA OF EVALUATION

The graded components of this course and their criteria of evaluation are:

TEXT

Students will be assigned weekly readings and required to submit research reports on the reading material. Graduate students must submit additional case studies relevant to the reading material and explain the significance, depth, relevance, and logic of the research method used in these case studies.

PROJECTS

Students will be engaged in four projects each will include either a design or investigation of water efficiency in buildings. Depending on the module, for new designs, they will introduce methods and skills learned in the classroom supported by calculation methods, computer simulation or design nomographs and water budgets. For existing buildings, they will investigate water consumption using tools and instrumentation to then estimate water conservation savings and explain their proposed strategies. Graduate students must elaborate further and submit additional experiment (mathematic or empirical) to validate their proposed strategies.

OTHER

A final written exam will be administered and graded based on instructor criteria of comprehensiveness as well as completeness of the answers.

WEIGHT

The Course Components will be weighted as follows:

Module 1: Water Conservation		**20%**
Reading assignment	5	
(Graduate students must analyze and submit one case study)		
Module project	15	
(Graduate students must submit water saving calculations)		
Module 2: Water Harvesting		**20%**
Reading assignment	5	
(Graduate students must analyze and submit one case study)		
Module project	15	
(Graduate students must submit water harvesting calculations)		
Module 3: Water Reuse		**20%**
Reading assignment	5	
(Graduate students must submit one case study)		
Module project	15	
(Graduate students must submit living machine calculations)		
Module 4: Water Energy Generation		**20%**
Reading assignment	5	
(Graduate students must submit one case study)		
Module project	15	
(Graduate students must submit energy production calculations)		
Final Exam		**20%**
TOTAL		**100%**

REFERENCES

REQUIRED

Brad Lancaster, *Rainwater Harvesting for Drylands and Beyond*, Volume 1, (Rainsource Press, 2007)
Heather Kinkade-Levario, Design for Water; Rainwater Harvesting, Stormwater Catchment, and Alternate Water Reuse, (New Society, 2007)

Amy Vicks, *Handbook of Water Use and Conservation: Homes, Landscapes, Industries, Businesses, Farms,* (WaterPlow Press, 2002).

RECOMMENDED

Buildings Energy Data Book, D.o. *Chapter 8: water*. 2014 [cited 2014 04/20/2014] http://buildingsdatabook.eren.doe.gov/ChapterIntro8.aspx.
USGS. *How much water does the average person use at home per day?* [cited 2014] http://water.usgs.gov/edu/qa-home-percapita.html.
Rewater Grey Water Drip Irrigation Leed Greywater. 2014

http://fillable-formtax.rhcloud.com/rewater-grey-water-drip-irrigation-leed-greywater-/.
Maven. *Water use reduction*. [2014] http://mavensnotebook.com/2014/02/04/blog-round-up-bloggers-on-the-drought-emergency-water-legislation-the-bdcp-and-fracking-and-more/.
Green building. *Environmental Building News*: http://www2.buildinggreen.com/article/alternative-water-sources-supply-side-solutions-green-buildings.
alaskan, A. *Home Power Hydrogen Fuel Cells*. [cited 2014] http://www.absak.com/library/small-hydrogen-fuel-cell-generators.

LINKS

1. http://buildingsdatabook.eren.doe.gov/ChapterIntro8.aspx
2. http://roemeragency.com/?m=201308
3. http://cals.arizona.edu/pubs/review/az1501/
4. http://wrrc.arizona.edu/sites/wrrc.arizona.edu/files/products/watermap/assets/WaterMap2010-web.jpg
5. http://www.waterfootprint.org/?page=files/YourWaterFootprint
6. http://water.usgs.gov/edu/qa-home-percapita.html
7. http://www.waterfootprint.org/WFP_files/Img/GlobalWaterFootprintMap.jpg
8. http://www.breezair.com/us/why-evaporative/how-evaporative-workssemester schedule

ACKNOWLEDGEMENTS

Dr Nader Chalfoun has made great contributions in the formation of this course and establishment of this syllabus. His efforts and intellectual contribution are immensely appreciated.

SEMESTER SCHEDULE

A course calendar is attached to this syllabus.

POLICIES + STATEMENTS

GRADING

Evaluations will be distributed at intervals during the semester and will indicate performance according to the stated criteria of evaluation. Students are expected to use this system to monitor and adjust their performance and to seek additional support from the professor, as appropriate. Evaluations will be based primarily on student's work, rather than effort expended. Students are expected to acquire knowledge and skill, not merely *endeavor* to do so.

CHANGE

By its very nature, the practice of architecture requires an ability to adapt to change, both by responding to unforeseen events in the delivery of services and in the revision of the work. Because an ability to adapt and embrace change is an essential skill in our profession, it may be considered in evaluations for this course.

LATE WORK

Work submitted after the deadline will be penalized 5% for every 12 hour period the work is delinquent.
to clarify:
less than 12hrs late 5% assignment grade reduction
12hrs – 24hrs late 10% assignment grade reduction
24hrs – 36hrs late 15% assignment grade reduction
36hrs – 48hrs late 20% assignment grade reduction, etc.

INCOMPLETE WORK

Work submitted that is incomplete will be graded one or more letter grades below what would have been awarded had the work been complete, appropriate to the extent of incompletion.

GRADING SCALE

Grades will be defined as follows:

scale	undergraduate criteria	graduate criteria
A (90-100)	Excellence in most areas of evaluation, high competence in others.	Excellence to High Competence in most areas of evaluation.
B (80-89)	High Competence in most areas of evaluation, competence in others.	Very good to competent work in most areas of evaluation; fulfilled requirements.
C (70-79)	Fulfilled all course requirements with competence. (Competence: the answering of all requirements; adequate fitness, ability, capacity; sufficient for the purpose.)	Less than complete or competent work in some areas; requirements lacking and/or sub-standard quality.
D (60-69)	Less than competent work in one or more areas of evaluation. One or more requirements lacking and/or sub-standard quality.	Substantially incomplete or inadequate quality.
E (0-59)	Substantially incomplete work and/or work of an unsatisfactory quality.	Grossly inadequate.
Incomplete	Work left incomplete at the end of the semester *due to circumstances beyond the student's control.*	Work left incomplete at the end of the semester *due to circumstances beyond the student's control.*

In co-convened and joint assignments, graduate students will produce a greater quantity and higher quality of work than their undergraduate counterparts in meeting these criteria.

GRADE APPEAL

Students who believe they have been unfairly graded should follow the multi-step procedure outlined in the CAPLA Grade Appeal:
http://architecture.arizona.edu/student-forms-and-procedures

ATTENDANCE

Students are required to attend all classes for their duration. Upon the 3rd Absence (whether in part or for a session's entirety), the final grade will be lowered by 5% per absence.
to clarify:
3rd Absence 5% final grade reduction
4th Absence 10% final grade reduction
5th Absence 15% final grade reduction
6th Absence 20% final grade reduction, etc.

EXCEPTIONS

All holidays or special events observed by organized religions will be honored for those students who show affiliation with that particular religion in writing in advance of the event.

Observances pre-approved by the UA Dean of Students will be honored, as listed at:
http://www.registrar.arizona.edu/religiousholidays/calendar.htm

EXCUSED ABSENCE

The Instructor may grant an Excused Absence for an outside educational opportunity at the request of the Director or another instructor. Students granted an Excused Absence remain responsible for turning in work on time, even if due on the excused date, as well as getting all information and assignments covered during an Excused Absence. An Excused Absence does not count against the number of Absences specified above.

EMERGENCY ABSENCE

The Instructor may grant an Emergency Absence for bona fide events outside the control of the student, such as sudden serious illness requiring hospitalization, bodily harm, or immediate family emergency. Emergency Absences must be certified by a professional in writing, such as doctor's excuses, police reports, or evidence of funeral; evidence must be submitted by the student within two weeks of the event and must include the certifying professional's contact information. "Immediate Family" is limited to parents, children, stepchildren, and co-habiting partners and spouses. To qualify as an Emergency Absence, an illness must be a true emergency ("requiring immediate professional medical attention"); otherwise it will be treated as a standard Absence. Scheduled doctor consultations do not qualify. Students granted an Emergency Absence remain responsible for turning in all work as well as for getting all information and assignments covered, but may be granted extended deadlines. Instructors are not obliged to grant Emergency Absences if the period missed makes it impossible for the student to achieve a competent level of accomplishment consistent with expectations for the rest of the class.

DOCUMENTATION STANDARDS

A professional standard in contract documents insures that every page indicates sufficient information to link it to its host set and, similarly, every drawing provides sufficient metadata that it is clearly linked to its dataset. In keeping with this data standard, documentation in this course will comply with the following standards:

PROJECT DOCUMENTATION

Every sheet of every project will indicate the following information on its face:

- ☐ course number
- ☐ semester/year
- ☐ professor
- ☐ student author(s)
- ☐ current date of the work
- ☐ page or sequence number

DRAWING DOCUMENTATION

Every drawing will indicate:

- ☐ drawing type (plan, section, elevation, perspective, axonometric, etc.)[1]
- ☐ graphic scale[2]
- ☐ orientation indicator (north arrow for plan; directional description for vertical projections (e.g., South Elevation; Perspective Looking North)
- ☐ reference indicators (section and elevation markers, blow-up references) that link the drawing to relevant documents

ARCHIVE DOCUMENTATION

Work shall be submitted for this course that demonstrates both the learning objectives and the final project(s), as requested by the professor. Digital files shall be submitted in the following naming convention:

ARCXXX_YYYYS_category_Lastname_F

where
ARCXXX is the course number, e.g., ARC401;
YYYYS is the year and semester (F/S/SUM), e.g., 2013F;
category is the assignment type or drawing type, e.g., SitePlan, LongitudinalSection3, Homework4; and
Lastname_F is the student's last name and first initial

STUDIO BOOK

This studio will produce a book of the work from the studio, available to the masterplan team, University of Arizona administration, and students. A template with submittal requirements will be provided to students before mid-term. Each student's final grade will not be released until a complete and properly formatted submission for the book has been received.

CLASSROOM BEHAVIOR + STUDIO CULTURE

As a condition of enrollment, students agree to abide by the standards set forth in the Student Code of Conduct:
http://azregents.asu.edu/rrc/Policy Manual/5-308-Student Code of Conduct.pdf

The use of cell phones, pagers, electronic devices or other materials unrelated to course specific activities are not permitted during course hours; neither are unauthorized discussions amongst students or other disturbances.

All electronic media are limited to narrowcasting (headsets) at all times, set to a volume that is not audible to others. Per the University policy, non-assist animals are forbidden from University buildings.

Students are responsible for checking their UA email and course D2L sites Monday-Friday, at least once every twenty-four hours, for communications from the Professor.

ACADEMIC POLICIES

Academic policies can be found in The University of Arizona General Academic Catalog:
http://catalog.arizona.edu/allcats.html

For the principles, policies, and procedures governing issues of academic integrity, see:
http://deanofstudents.arizona.edu/codeofacademicintegrity.

PLAGIARISM

The practice of taking someone else's work or ideas and passing them off as one's own is known as plagiarism and is a serious violation of academic and professional ethics. The consequences for plagiarism are severe, including a

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[1] A "DETAIL" is not a drawing type. Every drawing is a detail, considered from some perspective.
[2] It is essential that all drawings have *graphic* scales, as notational scales are meaningless with digital documentation and dissemination.

failing grade for the course, suspension, or expulsion from the University per the UA policy on plagiarism:
http://deanofstudents.arizona.edu/codeofacademicintegrity

TESTING: In any testing situation, whether graded or not, students shall not refer to outside resources (whether printed materials, such as books and journals, texts, Internet, e-mail, Google, instant messaging, or other resources) unless explicitly instructed to do so by the professor of record. Students operating digital devices in testing situations when not authorized to do so shall be assumed to be cheating.

CITATION: Plagiarism applies to professional and public works, as well as to the work produced by peers. Students shall be assiduous in citing the work of others, whether in copying a graphic, either in part or in total, in quoting a text, or in building upon ideas, designs, or forms. Citation is used to give credit to the original author and to allow others to identify and trace source material.

Building upon the work of others is an inevitable part of learning and inherent to scholarship; hence it is an acceptable practice as long as the original sources are properly cited. Textual citations should follow the *Chicago Manual Of Style*. Citations of buildings and other designed works should include both a) project and b) source information:

a) project citation: the work's name or title, its location, the name of its designer(s), and the date designed (or, if built, constructed).

b) source citation: the source from which the information or illustration of the work was obtained formatted according to the Notes and Bibliography format specified in the *Chicago Manual Of Style:*
http://www.chicagomanualofstyle.org/tools_citationguide.html

PRODUCTION: Using the labor of others, whether paid or freely given, offers the beneficiary an unfair advantage relative to peers and is prohibited unless expressly authorized in writing by the professor(s) of record.

THREATENING BEHAVIOR

All participants must follow the University of Arizona's Policy on student behavior:
http://policy.arizona.edu/education-and-student-affairs/threatening-behavior-students

ACCESSIBILITY AND ACCOMMODATIONS

Universal Design is the obligation of every architect and should be a quality of every environment. It is also the University's goal that learning experiences be as accessible as possible. If you anticipate or experience physical or academic barriers based on disability, please contact the professor or Disability Resources (520-621-3268) to establish reasonable accommodations.
http://drc.arizona.edu/instructors/syllabus-statement

RETENTION OF WORK

The School of Architecture may retain samples of student work produced in this course as part of the accreditation process of the National Architectural Accrediting Board, Inc. (NAAB) or other University purposes. This may include models, mock-ups, prints, and other physical documents. Students will be notified of work that needs to be retained and shall submit those to the Archivist or the Instructor, as determined by the Instructor, before grades will be released. After accreditation review, the owners of the retained work will be given the opportunity to reclaim it at their own expense (at the name and email address affixed to the product by the student at the time of submittal) for up to 30 days after notification. By contributing work students aid the School in certifying its work, which is essential to the standing and reputation of the institution, for which the Faculty is grateful.

INCLUSIVE EXCELLENCE

This course will follow the UA diversity initiative designed to create a welcoming environment for all. Instructors and students will use names and pronouns as requested and will accommodate modifications to names and/or pronouns after course registration.
http://diversity.arizona.edu/

ELECTIVE NAME AND PRONOUN USE

This course sponsors an educational environment of inclusion and mutual respect, including elective gender pronoun use and self-identification; rosters indicating such choices will be updated throughout the semester, upon student request.

NONDISCRIMINATION + ANTI-HARASSMENT

Students are encouraged to express well-formed opinions and their reasons there for. They are expected to create a tolerant and open environment where such opinions can be expressed without bullying or discrimination. The University is committed to creating and maintaining an environment free of discrimination:
http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy

end of syllabus

TEMPLATE VERSION: 2016.08.15

COURSE DATA

ARC 471b/571b **Contemporary Urbanity and Public Space: From global debates to local circumstances.**
Fall 2017
3-credit units

FACULTY

Elena Canovas, Professor of Practice
ecanovas@email.arizona.edu
CAPLA West 314
Office hours: by appointment.

CRITERIA

FULFILLMENT

This course is an elective in the History+Theory Stream and an allowable course for the Architectural History+Theory minor.

PREREQUISITES

M.Arch and B.Arch students in their 4th(coluld be 3rd) -Years and above; 3rd Year B.Arch and other CAPLA students by permission of instructor.

ENROLLMENT

This course is limited to 20 students.

CONTACT

One/two sessions per week: ; Room tbd.

WEB + D2L

This course will be supported over D2L.

COST

The course requires printing & binding a booklet with the final works (suggested format: 1/2 letter size, aprox. 80/120 pages, open technique bind / print). Students will be responsible for expenses associated. There is a **maximum** budget for this of $60. The design, content and format will be adapted to the maximum budget.

COURSE CONTENT

CATALOGUE DESCRIPTION

This course explores architectural history/theory topics in depth; it may be taken up to four times under different topics by permission of the Stream Coordinator.

COURSE DESCRIPTION

The course *Contemporary Urbanity and Public Space: From global debates to local circumstances* will review and discuss how the construction of contemporary public urban space has developed from late 20th century to the present and considers possible future developments. The definition of public space, urbanity and its dynamics will be the focus point of the seminar using the theoretical and applied history of European public spaces as a reference and will incorporate a wide variety of perspectives while following the current international debate and discourse of public space including how low-density urban configurations figure into the global conversation. The seminar will proceed in a multi-layered approach including the following frames of reference:

- Historical and emerging concepts of public space.
- The shifting and diffused boundaries between urban and non-urban environments (and all the in-betweens).
- Physical and geometrical magnitudes and accountable parameters (scale, density, economic, social and politic statistics…).
- Other non-apparent / non-physical conditions.

Relevant European case studies will be introduced as examples of possible strategies able to produce celebrated qualified and diverse public spaces. Barcelona will be a referential case study along with a review of examples taken from other cities including comparison of mutual effects with contemporary American cities. A local site will be chosen to demonstrate how the precedents and concepts introduced in the course can be applied. Graphic (mapping) and written techniques will be explored to describe/research/speculate the given site and to encourage debates about possible urban activities.

OBJECTIVES AND OUTCOMES

After taking this course, students should be able to:

- Understand historically and conceptually ideas about public space and urbanity.
- Analyze and describe verbally and graphically contemporary public spaces from micro to macro scales.
- Distill the various elements that compose urbanity.
- Recognize the interactions between them as part of the actual debates.

COURSE COMPONENTS + CRITERIA OF EVALUATION

This course is designed to achieve the learning objectives indicated. Because architecture is an art as well as a science, and because every student and student-group present new challenges in the teaching of design, instructors may add, alter, or modify assignments, criteria, or project weights in order to adapt to evolving circumstances that are inherent in the practice of Architecture, and also to evaluate students' abilities to make such adaptations. The Instructor will notify the students in advance of such changes; students for their part will notify the professor within one week of such notification if the proposed changes will cause undue hardship. Students acknowledge the dynamic nature of this course.

The graded components of this course and their criteria of evaluation are currently anticipated to be as follows, but are subject to change as set forth above:

TEXTS

See listed References below. Some readings will follow current debates and lectures online since many discussions on public space are evolving in real time. The general reading is open to the needs of the research process and student performance.

PROJECTS

- Case-study research and presentation
  The presentation will review the notion of urban public space in the specific case: initial conditions, parameters, variables, (cartographies / description / programs /…), present and historical development. Specific bibliographical and documentary references will be given during class sessions. The case study sites will be selected during the first weeks of classes over the process of the assignment's work.
- Research/writing, including personal graphics if needed.
  Each student is required to maintain a record of the research process. It will consist in the organized addition of writings, readings and personal research, properly indexed and organized. The production of the Personal Research Catalogue Public Space and Urbanity wills to be a tool for future designs and researches.

WEIGHT

There will be weekly or bi-weekly assignments that must be uploaded the night before may be presented in class (see documentation standards). Deliveries, presentations and meetings must follow punctually the courses schedule. Continuity in the assignments will generate substantial support for the final work.

The work will be reviewed during classes, in the midterm and final presentations, following the schedule.

Review 1, midterm:
Includes readings, research and assignments to date and the first draft of the Case Proposal and Documentation including a proper table of contents.

Review 2, Final presentation:
Includes all the assignments, a summary presentation with notes on class discussions; a complete bibliography of all sources of information, text, and images.

The Course Components are forecast to be

ASSIGNMENTS AND CASE-STUDY		
Research/reading*	15	
Case Proposal	15	
Writing *	15	
Graphics***	15	
		60
TEXTS required reading and discussion**		15
COLLABORATION class sessions**		10
DOCUMENTATION presentation and booklet ***		
Review 1	5	
Review 2	10	
Subtotal, Documentation		15
Total		100%

*Quality, depth of knowledge and ability to expose clearly the thoughts during the presentation
**Quality of participation during class discussions and readings comments.
***Clarity in the organization of contents and quality of the edition

REFERENCES

- Gamble, David and Heyda, Patty. *Rebuilding the American Cities*. New York: Routledge, 2015.
- Gehl, Jahn and Brigitte Svarre. *How to study public life*. Washington, DC: Island Press, 2013.
- Gray, Diane. *Europe City: Lessons from the European Prize for Urban Public Space.* Zurich*:* Lars Müller Publishers, 2016.
- Guallart, Vicente. *The self-sufficient city: Internet has changed our lives but does not have changed our cities ye*t. Barcelona: Actar 2012. English version Actar 2014.
- Solà Morales, Manuel. *"The impossible project of Public space",* in *In Favour of public space.* Barcelona: Actar/CCCB Centre de Cultura Contemporània, 2011. http://www.publicspace.org/en/archive.
- Fernández, Aurora and Arpa, Javier, ed. **"***The public chance. New urban landscapes".* Madrid: a+t 38 Magazine, 2005.
- Various authors. "*Writings, interviews, projects"*. Barcelona: CCCB Centre de Cultura Contemporània. Public Space Archive, 2000-2017. http://www.publicspace.org/en/archive.

GENERAL
Bibliographical references and general readings as historical support.

- Busquets, Joan. *Barcelona: The Urban Evolution of a Compact City*. Boston: Harvard University Graduate School of Design, 2005.
- Anderson, Stanford, ed. *On Streets*. Cambridge: MIT Press, 1986.
- Certeau de, Michel. *The practice of everyday life*. Berkeley: University of California Press, 1988.
- Jacobs, Jane. *The Death and Life of Great American Cities*. New York: Random House, 1961.
- Jacobs, Jane. *The economy of cities.* New York: Random House, 1969.
- Morris, A.E. J. *History of urban Form. Before the Industrial Revolutions.* Harlow: Longman Scientific & Technical, 1974. London: Godwin, 1979.
- Mumford, Lewis. *The City in History*. New York: Harcourt, Brace & World, 1961.
- Perec, Georges. *Species of Spaces and Other Pieces*. Edited and translated by John Sturrock. London: Penguin, 1997; rev. ed. 1999 from *Espèces d'espaces* Paris: Galilée 1974.
- Sandweiss, Eric. *The evolution of an American Urban Landscape*. St. Louis: Temple University Press, 2001.
- Sennet, Richard. *The Conscience of the Eye*. New York: Knopf, 1991.
- Sitte, Camilo. "City Planning according to artistic principles", *The Birth of Modern City Planning.* Dover: Dover Publications, 2006.

SEMESTER SCHEDULE

		wed		due
w1	Jan	10	Course Introduction	
w2		17	The impossible definition of public space	Assignment #1
w3		24	The European Public Space archive	Assignment #2
w4		31	European cities/Public chances	Assignment #3
w5	Feb	7	American cities/Public chances	Assignment #4
w6		14	Barcelona as a case study: On Land/built/craft	Work in progress
w7		21	Small groups/Individual meetings in class	Assignments 1+2+3+4 revision
w8		**28**	**Midterm presentation**	Review1
w9	Mar	**7**	SPRING RECESS	
w10		14	Urban chances/Urban catalysts	Assignment #5
w11		21	On the thresholds: architectures of public space	Assignment #6
w12		28	The public spaces in the data society	Assignment #7
w13	Apr	4	Small groups/Individual meetings in class	Assignments 1+2+3+4 revision
w14		**11**	**Presentation 2**	Review 2
w15		18	Conclusions	Printed booklet draft
w16		25	Printed booklet due	Documentation
		2	Last day of classes	

POLICIES + STATEMENTS

GRADING

Evaluations will be distributed at intervals during the semester and will indicate performance according to the stated criteria of evaluation. Students are expected to use this system to monitor and adjust their performance and to seek additional support from the professor, as appropriate. Evaluations will be based primarily on student's work, rather than effort expended. Students are expected to acquire knowledge and skill, not merely *endeavor* to do so.

CHANGE

By its very nature, the practice of architecture requires an ability to adapt to change, both by responding to unforeseen events in the delivery of services and in the revision of the work. Because an ability to adapt and embrace change is an essential skill in our profession, it may be considered in evaluations for this course.

LATE WORK

Work submitted after the deadline will be graded one or more letter grades below what would have been awarded had the work been submitted on time, appropriate to the length of delay and the importance of the assignment, at the Instructor's discretion.

INCOMPLETE WORK

Work submitted that is incomplete will be graded one or more letter grades below what would have been awarded had the work been complete, appropriate to the extent of incompletion and the importance of the assignment, at the Instructor's discretion.

GRADING SCALE

Grades will be defined as follows:

scale	undergraduate criteria	graduate criteria
A (90-100)	Excellence in most areas of evaluation, high competence in others.	Excellence to High Competence in most areas of evaluation.
B (80 to <90)	High Competence in most areas of evaluation, competence in others.	Very good to competent work in most areas of evaluation; fulfilled requirements.
C (70 to <80)	Fulfilled all course requirements with competence. (Competence: the answering of all requirements; adequate fitness, ability, capacity; sufficient for the purpose.)	Less than complete or competent work in some areas; requirements lacking and/or sub-standard quality.
D (60 to <70)	Less than competent work in one or more areas of evaluation. One or more requirements lacking and/or sub-standard quality.	Substantially incomplete or inadequate quality.
E (0 to <60)	Substantially incomplete work and/or work of an unsatisfactory quality.	Grossly inadequate.
Incomplete	Work left incomplete at the end of the semester *due to circumstances beyond the student's control*.	Work left incomplete at the end of the semester *due to circumstances beyond the student's control*.

In co-convened and joint assignments, graduate students will be expected to produce a greater quantity or higher quality of work than their undergraduate peers in meeting these criteria.

GRADE APPEAL

Students who believe they have been unfairly graded should follow the multi-step procedure outlined in the CAPLA Grade Appeal:
http://architecture.arizona.edu/student-forms-and-procedures

ATTENDANCE

Students are required to attend all classes for their duration. Upon the 3rd Absence (whether in part or for a session's entirety), the final grade will be lowered by 5% per absence.

The UA's policy concerning Class Attendance, Participation, and Administrative Drops:
http://catalog.arizona.edu/2015-16/policies/classatten.htm

EXCEPTIONS

The UA policy regarding absences for any sincerely held religious belief, observance or practice will be accommodated where reasonable:
http://policy.arizona.edu/human-resources/religious-accommodation-policy.

Observances pre-approved by the UA Dean of Students will be honored, as listed at:
http://www.registrar.arizona.edu/religiousholidays/calendar.htm

Absences pre-approved by the UA Dean of Students (or Dean Designee) will be honored:
https://deanofstudents.arizona.edu/absences

EXCUSED ABSENCE

The Instructor may grant an Excused Absence for an outside educational opportunity at the request of the Director or another instructor. Students granted an Excused Absence remain responsible for turning in work on time, even if due on the excused date, as well as getting all information and assignments covered during an Excused Absence. An Excused Absence does not count against the number of Absences specified above.

EMERGENCY ABSENCE

The Instructor may grant an Emergency Absence for bona fide events outside the control of a student, such as sudden serious illness, bodily harm, or other emergency.

written excuse

Emergency Absences must be certified by a professional in writing, such as doctor's excuses, police reports, or evidence of funeral. Written evidence must be submitted by the student within two weeks of the event and must include the certifying professional's contact information. Faculty or staff may verify the legitimacy of the source but may not inquire into the student's related personal information.

validity

"Immediate Family" is limited to parents, children, stepchildren, siblings, and cohabitating partners and spouses. To qualify as an Emergency Absence, the illness or event must be an actual emergency (i.e., events that require immediate attention); otherwise it will be treated as a standard Absence. Scheduled doctor consultations do not qualify.

make-up work

Students granted an Emergency Absence remain responsible for turning in all work as well as obtaining all information and assignments covered in their absence. At the Instructor's discretion, the student may be granted extended deadlines appropriate to the impact of the event. Instructors are not obliged to grant Emergency Absences if the period missed makes it impossible for the student to achieve a competent level of accomplishment consistent with expectations for the rest of the class.

DOCUMENTATION STANDARDS

A professional standard in contract documents insures that every page indicates sufficient information to link it to its host set and, similarly, every drawing provides sufficient metadata that it is clearly linked to its dataset. In keeping with this data standard, documentation in this course will comply with the following standards:

ARCHIVE DOCUMENTATION

Work shall be submitted for this course that demonstrates both the learning objectives and the final project(s), as requested by the professor. Digital files shall be submitted in the following naming convention:

ARCXXX_YYYYS_category_Lastname_F

where
ARCXXX is the course number, e.g., ARC401;
YYYYS is the year and semester (F/S/SUM), e.g., 2013F;
category is the assignment type or drawing type, e.g., SitePlan, LongitudinalSection3, Homework4; and
Lastname_F is the student's last name and first initial

CLASSROOM BEHAVIOR + STUDIO CULTURE

As a condition of enrollment, students agree to abide by the standards set forth in the Student Code of Conduct:
http://azregents.asu.edu/rrc/Policy Manual/5-308-Student Code of Conduct.pdf

The use of cell phones, pagers, electronic devices or other materials unrelated to course specific activities are not permitted during course hours; neither are unauthorized discussions amongst students or other disturbances.

All electronic media are limited to narrowcasting (headsets) at all times, set to a volume that is not audible to others. Per the University policy, non-assist animals are forbidden from University buildings.

Students are responsible for checking their UA email and course D2L sites Monday-Friday, at least once every twenty-four hours, for communications from the Professor.

ACADEMIC POLICIES

Academic policies can be found in The University of Arizona General Academic Catalog:
http://catalog.arizona.edu/allcats.html

ACADEMIC INTEGRITY

Students are encouraged to share intellectual views and discuss freely the principles and applications of course materials. However, graded work/exercises must be the product of independent effort unless

otherwise instructed. Students are expected to adhere to the UA Code of Academic Integrity as described in the UA General Catalog:
http://deanofstudents.arizona.edu/codeofacademicintegrity.

INCLUSIVE EXCELLENCE

This course will follow the UA diversity initiative designed to create a welcoming environment for all.
http://diversity.arizona.edu/

NONDISCRIMINATION + ANTI-HARASSMENT

Students are encouraged to express well-formed opinions and their reasons there for. They are expected to create a tolerant and open environment where such opinions can be expressed without bullying or discrimination. The University is committed to creating and maintaining an environment free of discrimination:
http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy

ELECTIVE NAME AND PRONOUN USE

This course sponsors an educational environment of inclusion and mutual respect, including elective gender pronoun use and self-identification; rosters indicating such choices will be updated throughout the semester, upon student request.

PLAGIARISM

The practice of taking someone else's work or ideas and passing them off as one's own is known as plagiarism and is a serious violation of academic and professional ethics. The consequences for plagiarism are severe, including a failing grade for the course, suspension, or expulsion from the University per the UA policy on plagiarism: http://deanofstudents.arizona.edu/codeofacademicintegrity

TESTING: In any testing situation, whether graded or not, students shall not refer to outside resources (whether printed materials, such as books and journals, texts, Internet, e-mail, Google, instant messaging, or other resources) unless explicitly instructed to do so by the professor of record. Students operating digital devices in testing situations when not authorized to do so shall be assumed to be cheating.

CITATION: Plagiarism applies to professional and public works, as well as to the work produced by peers. Students shall be assiduous in citing the work of others, whether in copying a graphic, either in part or in total, in quoting a text, or in building upon ideas, designs, or forms. Citation is used to give credit to the original author and to allow others to identify and trace source material.

Building upon the work of others is an inevitable part of learning and inherent to scholarship; hence it is an acceptable practice as long as the original sources are properly cited. Textual citations should follow the *Chicago Manual Of Style*. Citations of buildings and other designed works should include both a) project and b) source information:

a) project citation: the work's name or title, its location, the name of its designer(s), and the date designed (or, if built, constructed).

b) source citation: the source from which the information or illustration of the work was obtained formatted according to the Notes and Bibliography format specified in the *Chicago Manual Of Style:*
http://www.chicagomanualofstyle.org/tools_citationguide.html

PRODUCTION: Using the labor of others, whether paid or freely given, offers the beneficiary an unfair advantage relative to peers and is prohibited unless expressly authorized in writing by the professor(s) of record.

COPYRIGHT

Materials in this course may be copyrighted. They are intended for use only by students registered and enrolled in the course and are only for instructional activities associated with and for the duration of the course. They may not be retained in another medium or disseminated, including being uploaded to file-sharing sites on the internet or elsewhere, without the written permission of the instructor. They are provided in compliance with the provisions of the Teach Act:
http://www.copyright.com/Services/copyrightoncampus/basics/teach.html.

Students should refer to University copyright polities:
http://www.library.arizona.edu/help/tutorials/copyright/index.html

THREATENING BEHAVIOR

The UA Threatening Behavior by Students Policy prohibits threats of physical harm to any member of the University community, including to oneself:
http://policy.arizona.edu/education-and-student-affairs/threatening-behavior-students

ACCESSIBILITY AND ACCOMMODATIONS

Universal Design is the obligation of every architect and should be a quality of every environment. It is also the University's goal that learning experiences be accessible. Students who anticipate or experience physical or academic barriers based on disability, should discuss them with the Instructor; If barriers remain or if students are uncomfortable speaking with the Instructor, they are encouraged to explore possible accommodations with the Disability Resources Center (520-621-3268).
http://drc.arizona.edu/instructors/syllabus-statement

RETENTION OF WORK

The School of Architecture may retain samples of student work produced in this course as part of the accreditation process of the National Architectural Accrediting Board, Inc. (NAAB) or other University purposes. This may include models, mock-ups, prints, and other physical documents. Students will be notified of work that needs to be retained and shall submit those to the Archivist or the Instructor, as determined by the Instructor, before grades will be released. After accreditation review, the owners of the retained work will be given the opportunity to reclaim it at their own expense (at the name and email address affixed to the product by the student at the time of submittal) for up to 30 days after notification. By contributing work students aid the School in certifying its work, which is essential to the standing and reputation of the institution, for which the Faculty is grateful.

end of syllabus Elena Canovas_Jan 2018

TEMPLATE VERSION:
2017.10.24

COURSE DATA

ARC 471b/571b: Trans Journal
SPRING 2018
3-credit units

FACULTY

Instructor:
Clare Robinson, Ph.D
clarerobinson@email.arizona.edu
office hours: Thursday 11-noon

CRITERIA

FULFILLMENT

This course is a History/Theory Stream elective and fulfills credit requirements for the minor in Architectural History and may fulfill other History/Theory Stream substitution requirements.

PREREQUISITES

B.Arch students must have completed and passed ARC231 and ARC 232, or have the permission of the instructor; M.Arch students must have completed and passed ARC529, or have the permission of the instructor.

ENROLLMENT

This course is limited to 15 upper division graduate and undergraduate students enrolled in CAPLA.

CONTACT

Time Tuesday 3:30pm-6pm
Room CAPLA 205A

WEB + D2L

This course will use good docs, box, and D2L as needed.

COST

Costs related to this class include the minimal costs associated with the production of a student-edited journal. Students are responsible for the cost of prints to complete the assignments, research and readings; they are not responsible for costs of printing or disseminating the final product.

Required software: Adobe Creative Suite.

COURSE CONTENT

CATALOGUE DESCRIPTION

This course explores architectural history/theory topics in depth; it may be taken up to four times under different topics by permission of the Stream Coordinator.

COURSE DESCRIPTION

This is a team-based course designed to instruct students on a variety of professional and academic skills related to the creation of a student-edited journal. Through group and individual exercises, students will learn how to be critical editors of written and graphic content.

Individually, each student will learn to:

- Critically review academic and student-edited journals from the past and present.
- Create a catalogue of critical reviews.
- Use critical review skills to evaluate submissions for [TRANS-].

In addition, depending on their choice of team objective, they will learn one or more of the following:

- Craft a well-written Call for Submissions for [TRANS-].
- Apply for a grants, including the Douglas Haskell Award for Student Journals.
- Design intelligent graphical branding content for [TRANS-].
- Design and manage a website.
- Engage the architectural community to attract potential contributors for [TRANS-].
- Use InDesign to create and publish a physical journal, a PDF, and an eBook copy of [TRANS-].

OBJECTIVES AND OUTCOMES

After taking this course, students should be able to:

1. Demonstrate an historical understanding of academic journals and architectural discourse by considering ideas and images in their socio-political, economic, cultural contexts.
2. Understand effective written and visual communication through critical analysis of past and present, peer-reviewed and new works.
3. Think critically and independently about academic discourse as it relates to the aspirations of designers and theoretical ideas involved in architectural design.
4. Collaborate to organize and execute tasks associated with the publication of a journal.

COURSE COMPONENTS + CRITERIA OF EVALUATION

This course is designed to achieve the learning objectives indicated. Because architecture is an art as well as a science, and because every student and student-group present new challenges in the teaching of design, instructors may add, alter, or modify assignments, criteria, or project weights in order to adapt to evolving circumstances that are inherent in the practice of Architecture, and also to evaluate students' abilities to make such adaptations. The Instructor will notify the students in advance of such changes; students for their part will notify the professor within one week of such notification if the proposed changes will cause undue hardship. Students acknowledge the dynamic nature of this course.

The graded components of this course and their criteria of evaluation are currently anticipated to be as follows, but are subject to change as set forth above:

PROJECTS

Module 01: Architectural Journal Research Catalogue (30% of semester grade)

- **Assignment Type:** Individual
- **Duration:** Weeks 1-4
- **Purpose:** To gain an understanding of the canon of architectural journals, organization by theme, and written and graphical content types editing processes.
- **Deliverables:** Each student is responsible for writing critical reviews of two academic journals and two articles chosen with permission of the instructor. These critical reviews will then be compiled in a catalog of research and precedents of existing architectural journals and articles.
- **Graded By:** Instructor
- **Grading Criteria:** Clarity of writing; Completeness; Demonstration of critical understanding of academic journals.

Module 02: Interim Team-Based Development Projects (20% of semester grade)

- **Assignment Type:** Team
- **Duration:** Weeks 5-9
- **Purpose:** To work collaboratively towards the completion of team tasks, gain leadership, professional, and academic skills related to the chosen field.
- **Deliverables:**
  - Public Relations Team:
    - Promotion of 2018 Call for Submissions on web-based platforms, email, and networking (ex. send Call for Submissions to ArchDaily, Bustler, ACSA, AIAS, University of Arizona, Alumni email, professional and academic contacts, word-of-mouth, etc.)
    - Email communication in response to questions and queries in regards to the journal
    - Email instructions and reminders to participants in the 2018 [TRANS-]journal
    - Graphics and website to accompany the 2018 Journal*** (collaborate with design team)
  - Writing Team:
    - 2019 Call for Submissions
    - 2018 Statement of Journal Intent
    - Grant writing* (collaborate other teams)
  - Design Team:
    - Catalogue of Architectural Journal Critical Reviews
    - Graphics and website to accompany the 2018 Journal and 2019 Call for Submissions** (collaborate with public relations team)
- **Graded By:** Team Evaluations with feedback and assessment by instructor

- **Grading Criteria:** Participation; Quantitative contribution; Qualitative contribution; Ability to work with others

Module 03: Review Submissions (20% of semester grade)

- **Assignment Type:** Individual
- **Duration:** Weeks 11-12
- **Purpose:** To synthesize and practice critical reviews skills learned during Module 01 and to critically review submissions to [TRANS-] based on topicality and quality.
- **Deliverables:**
  - Scoring sheets for submissions
  - Participation in discussions about acceptance or rejection of submissions
- **Graded By:** Instructor
- **Grading Criteria:** Completeness; Demonstration of thoughtful evaluation; Ability to thoughtfully discuss the pro's and con's of accepting or rejecting submissions

Module 04: Final [TRANS-] journal Development (30% of semester grade)

- **Assignment Type:** Team
- **Duration:** Weeks 11-18
- **Purpose:** To work collaboratively towards the completion of team tasks, gain leadership, professional, and academic skills related to the chosen field.
- **Deliverables:**
  - Public Relations Team:
    - Collection and management submissions through email
    - Communication with submitters in response to acceptance or rejection, and/or more information
    - Promotion of finished 2018 [TRANS-]journal
  - Writing Team:
    - 2017 Letter from the Editors (based on Statement of Journal Intent)
    - Editing of included works (written and visual) for grammatical errors or other possibilities for improvement
  - Design Team:
    - Design and formatting of the 2018 [TRANS-]journal for print and online editions
- **Graded By:** Team Evaluations with feedback and assessment by instructor
- **Grading Criteria:** Participation; Quantitative contribution; Qualitative contribution; Ability to work with others

WEIGHT

The Course Components are forecast to be:

Project 1: Architectural Journal Research Catalogue	30%
Project 2: Interim Team-Based Development Projects	20%
Project 3: Submission Review	20%
Project 4: Final [TRANS-] journal Development	30%
Total	100%

REFERENCES

REQUIRED

Lange, Alexandra (2012). Writing About Architecture: Mastering the Language of Buildings and Cities (New York: Princeton University Press).

GENERAL

Additional material related to the class readings can be found in:

Rethinking Architecture, Neal Leach, ed.

Programs and Manifestoes of the Twentieth Century, Ulrich Conrads, ed.

Theorizing a New Agenda for Architecture, Kate Nesbit, ed.

Architecture Theory Since 1968, K. Michael Hays, ed.

Architecture Culture 1943-1968, Joan Ockman, ed.

Oppositions Reader: Selected readings from a journal for ideas and criticism in architecture, 1973-1984, K. Michael Hays, ed.

Architectural Theory: An Anthology from 1871-2005, Harry Francis Mallgrave, ed.

Excellent histories of architectural theory can be found in:

Modern Architectural Theory: A Historical Survey 1673-1968, by Henry Francis Mallgrave

Words and Buildings: A Vocabulary of Modern Architecture, by Adrian Forty

Contemporary journals that publish architectural theory:

AA Files

AD (Wiley)

Future Anterior

Grey Room (available through Jstor)

Harvard Design Magazine

Journal of Architecture (UK)

Journal of Architectural Education (available through Jstor)

Log

Perspecta (available through Jstor)

Praxis

306090

Thresholds

Volume

Out of print of worth a look:

Assemblege (available through Jstor)

Oppositions

FURTHER RESOURCES

Chicago Manual Style (available online at the University of Arizona).

SEMESTER SCHEDULE

See semester schedule attached at the end of this syllabus.

Module 01: Architectural Journal Research Catalogue (Week 01 - Week 04)

Module 02: Formatted Catalogue, Call for Submissions 2018; Statement of Journal Intent; Website for 2018 [TRANS-] Edition (Week 04 - 09)

Module 03: Submission Review (Week 11 - Week 13)

Module 04: Grant, Submission Management, Final Editing, Final Publication Design (Week 11 - Week 18)

POLICIES + STATEMENTS

GRADING

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C (70 to <80)	Fulfilled all course requirements with competence. (Competence: the answering of all requirements; adequate fitness, ability, capacity; sufficient for the purpose.)	Less than complete or competent work in some areas; requirements lacking and/or sub-standard quality.
D (60 to <70)	Less than competent work in one or more areas of evaluation. One or more requirements lacking and/or sub-standard quality.	Substantially incomplete or inadequate quality.
E (0 to <60)	Substantially incomplete work and/or work of an unsatisfactory quality.	Grossly inadequate.
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The UA policy regarding absences for any sincerely held religious belief, observance or practice will be accommodated where reasonable:

http://policy.arizona.edu/human-resources/religious-accommodation-policy.

Observances pre-approved by the UA Dean of Students will be honored, as listed at:

http://uhap.web.arizona.edu/policy/appointed-personnel/7.04.02

Absences pre-approved by the UA Dean of Students (or Dean Designee) will be honored:

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EXCUSED ABSENCE

The Instructor may grant an Excused Absence for an outside educational opportunity at the request of the Director or another instructor. Students granted an Excused Absence remain responsible for turning in work on time, even if due on the excused date, as well as getting all information and assignments covered during an Excused Absence. An Excused Absence does not count against the number of Absences specified above.

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The Instructor may grant an Emergency Absence for bona fide events outside the control of a student, such as sudden serious illness, bodily harm, or immediate family emergency.

written excuse

Emergency Absences must be certified by a professional in writing, such as doctor's excuses, police reports, or evidence of funeral. Written evidence must be submitted by the student within two weeks of the event and must include the certifying professional's contact information. Faculty or staff may verify the legitimacy of the source but may not inquire into the student's related personal information.

validity

"Immediate Family" is limited to parents, children, stepchildren, siblings, and cohabitating partners and spouses. To qualify as an Emergency Absence, the illness or event must be an actual emergency (i.e., events that require immediate attention); otherwise it will be treated as a standard Absence. Scheduled doctor consultations do not qualify.

make-up work

Students granted an Emergency Absence remain responsible for turning in all work as well as obtaining all information and assignments covered in their absence. At the Instructor's discretion, the student may be granted extended deadlines appropriate to the impact of the event. Instructors are not obliged to grant Emergency Absences if the period missed makes it impossible for the student to achieve a competent level of accomplishment consistent with expectations for the rest of the class.

DOCUMENTATION STANDARDS

A professional standard in contract documents insures that every page indicates sufficient information to link it to its host set and, similarly, every drawing provides sufficient metadata that it is clearly linked to its dataset. In keeping with this data standard, documentation in this course will comply with the following standards:

ARCHIVE DOCUMENTATION

Work shall be submitted for this course that demonstrates both the learning objectives and the final project(s), as requested by the professor. Digital files shall be submitted in the following naming convention:

ARCXXX_YYYYS_category_Lastname_F

where
ARCXXX is the course number, e.g., ARC401;
YYYYS is the year and semester (F/S/SUM), e.g., 2013F;
category is the assignment type or drawing type, e.g., SitePlan, LongitudinalSection3, Homework4; and
Lastname_F is the student's last name and first initial

CLASSROOM BEHAVIOR + STUDIO CULTURE

As a condition of enrollment, students agree to abide by the standards set forth in the Student Code of Conduct:

http://azregents.asu.edu/rrc/Policy Manual/5-308-Student Code of Conduct.pdf

The use of cell phones, pagers, electronic devices or other materials unrelated to course specific activities are not permitted during course hours; neither are unauthorized discussions amongst students or other disturbances.

All electronic media are limited to narrowcasting (headsets) at all times, set to a volume that is not audible to others. Per the University policy, non-assist animals are forbidden from University buildings.

Students are responsible for checking their UA email and course D2L sites Monday-Friday, at least once every twenty-four hours, for communications from the Professor.

ACADEMIC POLICIES

Academic policies can be found in The University of Arizona General Academic Catalog:

http://catalog.arizona.edu/allcats.html

ACADEMIC INTEGRITY

Students are encouraged to share intellectual views and discuss freely the principles and applications of course materials. However, graded work/exercises must be the product of independent effort unless

otherwise instructed. Students are expected to adhere to the UA Code of Academic Integrity as described in the UA General Catalog:
http://deanofstudents.arizona.edu/academic-integrity/students/academic-integrity

INCLUSIVE EXCELLENCE

This course will follow the UA diversity initiative designed to create a welcoming environment for all.

http://diversity.arizona.edu/

NONDISCRIMINATION + ANTI-HARASSMENT

Students are encouraged to express well-formed opinions and their reasons there for. They are expected to create a tolerant and open environment where such opinions can be expressed without bullying or discrimination. The University is committed to creating and maintaining an environment free of discrimination:
http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy

ELECTIVE NAME AND PRONOUN USE

This course sponsors an educational environment of inclusion and mutual respect, including elective gender pronoun use and self-identification; rosters indicating such choices will be updated throughout the semester, upon student request.

PLAGIARISM

The practice of taking someone else's work or ideas and passing them off as one's own is known as plagiarism and is a serious violation of academic and professional ethics. The consequences for plagiarism are severe, including a failing grade for the course, suspension, or expulsion from the University per the UA policy on plagiarism: http://deanofstudents.arizona.edu/codeofacademicintegrity

TESTING: In any testing situation, whether graded or not, students shall not refer to outside resources (whether printed materials, such as books and journals, texts, Internet, e-mail, Google, instant messaging, or other resources) unless explicitly instructed to do so by the professor of record. Students operating digital devices in testing situations when not authorized to do so shall be assumed to be cheating.

CITATION: Plagiarism applies to professional and public works, as well as to the work produced by peers. Students shall be assiduous in citing the work of others, whether in copying a graphic, either in part or in total, in quoting a text, or in building upon ideas, designs, or forms. Citation is used to give credit to the original author and to allow others to identify and trace source material.

Building upon the work of others is an inevitable part of learning and inherent to scholarship; hence it is an acceptable practice as long as the original sources are properly cited. Textual citations should follow the *Chicago Manual Of Style*. Citations of buildings and other designed works should include both a) project and b) source information:

a) project citation: the work's name or title, its location, the name of its designer(s), and the date designed (or, if built, constructed).

b) source citation: the source from which the information or illustration of the work was obtained formatted according to the Notes and Bibliography format specified in the *Chicago Manual Of Style:*

http://www.chicagomanualofstyle.org/tools_citationguide.html

PRODUCTION: Using the labor of others, whether paid or freely given, offers the beneficiary an unfair advantage relative to peers and is prohibited unless expressly authorized in writing by the professor(s) of record.

COPYRIGHT

Materials in this course may be copyrighted. They are intended for use only by students registered and enrolled in the course and are only for instructional activities associated with and for the duration of the course. They may not be retained in another medium or disseminated, including being uploaded to file-sharing sites on the internet or elsewhere, without the written permission of the instructor. They are provided in compliance with the provisions of the Teach Act:

http://www.copyright.com/Services/copyrightoncampus/basics/teach.html.

Students should refer to University copyright polities:

http://www.library.arizona.edu/help/tutorials/copyright/index.html

THREATENING BEHAVIOR

The UA Threatening Behavior by Students Policy prohibits threats of physical harm to any member of the University community, including to oneself:

http://policy.arizona.edu/education-and-student-affairs/threatening-behavior-students

ACCESSIBILITY AND ACCOMMODATIONS

Universal Design is the obligation of every architect and should be a quality of every environment. It is also the University's goal that learning experiences be accessible. Students who anticipate or experience physical or academic barriers based on disability, should discuss them with the Instructor; students are encouraged to explore possible accommodations with the Disability Resources Center (520-621-3268).

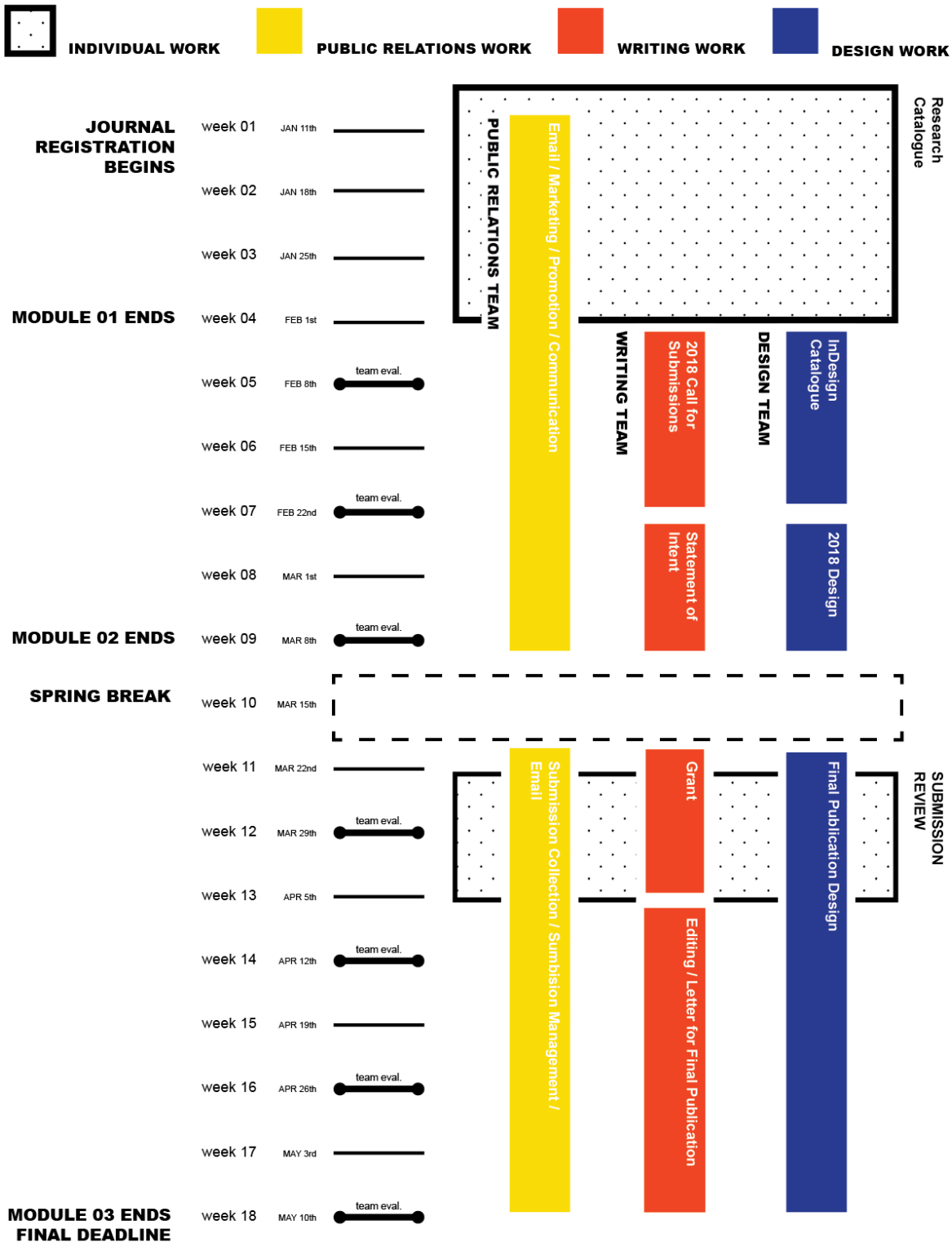
http://drc.arizona.edu/instructors/syllabus-statement

RETENTION OF WORK

The School of Architecture may retain samples of student work produced in this course as part of the accreditation process of the National Architectural Accrediting Board, Inc. (NAAB) or other University purposes. This may include models, mock-ups, prints, and other physical documents. Students will be notified of work that needs to be retained and shall submit those to the Archivist or the Instructor, as determined by the Instructor, before grades will be released. After accreditation review, the owners of the retained work will be given the opportunity to reclaim it at their own expense (at the name and email address affixed to the product by the student at the time of submittal) for up to 30 days after notification. By contributing work students aid the School in certifying its work, which is essential to the standing and reputation of the institution, for which the Faculty is grateful.

end of syllabus

TEMPLATE VERSION:
2017.08.24—Section 2: changes to 100% Engagement (now Student Engagement and Career Development);
2017.09.11—Section 3: added copyright section and deleted copyright clause at end-of-syllabus footer.
2017.10.24—Section 1: Added Honors clause. Section 3: revised Emergency Absence policy.


INDIVIDUAL WORK
PUBLIC RELATIONS WORK
WRITING WORK
DESIGN WORK
JOURNAL REGISTRATION BEGINS
week 01 JAN 11th
week 02 JAN 18th
week 03 JAN 25th
MODULE 01 ENDS
week 04 FEB 1st
week 05 FEB 8th
week 06 FEB 15th
week 07 FEB 22nd
week 08 MAR 1st
MODULE 02 ENDS
week 09 MAR 8th
SPRING BREAK
week 10 MAR 15th
week 11 MAR 22nd
week 12 MAR 29th
week 13 APR 5th
week 14 APR 12th
week 15 APR 19th
week 16 APR 26th
week 17 MAY 3rd
MODULE 03 ENDS
FINAL DEADLINE
week 18 MAY 10th
team eval.
Research Catalogue
PUBLIC RELATIONS TEAM
Email / Marketing / Promotion / Communication
WRITING TEAM
2018 Call for Submissions
Statement of Intent
DESIGN TEAM
InDesign Catalogue
2018 Design
SUBMISSION REVIEW
Submission Collection / Sumbision Management / Email
Grant
Editing / Letter for Final Publication
Final Publication Design

Schedule (subject to change)

Week 2: Jan 16
Course introduction, introduction to [Trans] and other journals, introduction to 2018 theme "media"

Homework
Create google or box folder for shared docs
Review and edit proposed 2018 "call for submissions"
Review and propose graphic approach to website

Read 1-3 chapters of Marchall McLuhan and Terrence Gordon Understanding Media: the extension of Man (New York: Gingko Press, 2013)
- All read The Medium is the Message, then choose at least one of the following:
- Roads and Paper Routes
- Clothing: our extended skin
- Housing: new look and new outlook
- Clocks: the scent of time
- The Print: how to dig it
- The printed word: architect of nationalism
- Wheel, Bicycle, and airplane
- The Photograph: the brothel-without-walls
- Motorcar: the mechanical bride
- Ads: keep upset with the Joneses
- …or another chapter of a student choice
- Write a 1 paragraph summary of key takeaways/main points

Week 3: Jan 23
Finalize "call for submissions"
Determine deadline for submissions (suggest beginning of week 10 or 11 (no later))
Determine information/data desired from authors
Assign journals/articles for review A

Homework
Build and launch website with call for submissions and submission portal (or use email)
Email "call" to CAPLA and beyond
Review journals/articles, write 1 paragraph summary and 1 paragraph critique

Week 4: Jan 30
Discuss review of journals/articles A
Assign review of journals/articles B

Homework
Review journals/articles, write 1 paragraph summary and 1 paragraph critique

Week 5: Feb 6
Discuss review of journals/articles B
Examine style of previous [Trans] journals

Homework
Graphics team: create template for current [Trans] journal to include font and sizes, bold, italic, capitals, margins, spaces between title/author/first paragraph/all paragraphs, page number location, etc. [Use the previous version as the starting point. ONLY change template when layout did not work well]
Graphics team: collect images for graphic approach to front and back cover for class vetting/discussion
Writing and communication team: draft submission review criteria and form

Week 6: Feb 13
Review of journal template
Discussion of front/back cover
Discussion of review criteria, possible responses to author questions

Homework:
Graphics team: finalize template, develop top front/back cover options
Writing and communications team: finalize review criteria and form
All: research 2019 journal themes (identify key words, identify key theoretical texts in which to "hang" call for submissions)

Week 7: Feb 20
Discuss and choose direction of front/back cover of current issue
Brainstorm and choose future journal theme

Homework
Graphics team: develop the top front/back cover of current issue, collected possibilities for future issue website of journal that correspond to future theme
Writing and communications team: draft call for submissions
All: read article/skim book on future theme

Week 8: Feb 27
Discuss front/back cover of current issue
Discuss future call for submissions, subthemes, theory
Discuss web images for future theme

Homework
Graphics team: narrow/develop top images for future theme website
Writing and communications team: redraft call for submissions

Week 9: spring break

Week 10: March 13
Discuss redrafted call for submissions for next year's journal
Discuss/narrow direction of graphics for future journal
Prepare to review submissions (criteria, form, and recruitment of TSD members)

Week 11: March 20
Discuss submissions received

Homework
All: review submissions (mark accept, accept with minor revisions, accept with major revisions, reject; note relevance to theme, note strengths/concerns)

Week 12: March 27
Determine short list of acceptances

Homework:
Review and vet questionable submissions that need further consideration

Week 13: April 3
Determine the final list of submissions to accept, determine protocol for major revisions
Discuss table of contents/order to publish work
Discuss front/back cover design, formatting, etc.

Homework:
Graphics team: mock up journal with unedited work to see heft and the quantity of decisions to make about graphic design
Writing and communications team: conduct minor edits (major edits will need permission and review of the author, send requests) and upload to common folder

Week 14: April 10
Review and discuss full mock up

Homework:
Graphics team: continue to finalize graphic design with edited submissions that are ready for print
Writing and communications team: follow up on major edits/requests for major edits, complete as many as possible, upload to common folder
Prepare website to promote and sell journals

Week 15: April 17
Review and discuss almost final journal

Homework: assigned as needed

Week 16: April 24
Review and discuss final journal

Homework: assigned as needed

Week 17: May 1
Launch party (assuming the journal has been uploaded to Blurb!)

COURSE DATA

ARC 496d/596d Social and Behavioral Issues in Built Environments
Fall 2018
3-credit units

FACULTY

Altaf Engineer, Ph.D., NCARB, LEED AP BD+C
aengineer@email.arizona.edu
Smith House, 1195 E. Speedway Blvd., Bldg. 199A

OFFICE HOURS: TUE, 1:00 PM – 3:00 PM

CRITERIA

FULFILLMENT

This course is a recommended elective for MS.Arch. students in the Health and the Built Environment (HBE) program and for master's level and upper level undergraduates interested in pursuing careers that integrate human health and wellbeing in the built environment.

PREREQUISITES

Undergraduate architecture majors 4th year and above may take this course with the permission of the instructor.

ENROLLMENT

This course is limited to 16 students.

CONTACT

Tue: 9:00am – 11:30am | Smith House

WEB + D2L

This course will be supported over D2L.

COURSE CONTENT

CATALOGUE DESCRIPTION

This course explores specific Technology topics in depth; it may be taken up to four times under different topics by permission of the Stream Coordinator.

COURSE DESCRIPTION

This course introduces students to social and psychological issues in architecture and urban design and to the burgeoning field of environment and behavior. Students will examine social and behavioral factors in environmental design through case studies, critical thinking and discussions, and small-scale design exercises. A variety of built environments will be discussed, ranging from building interiors to parks, urban plazas, streets, and sidewalks.

Students will understand how to apply the outcomes of environment-behavior research to their design projects and existing places and spaces. As future designers committed to social responsibility, students must anticipate and respond to people's needs. Ignoring these needs not only leads to costly errors, but also negatively influences health, wellbeing, productivity, and performance.

LEARNING OUTCOMES

Upon successful completion of this course, students will be able to:

1. Critically analyze major works and synthesize useful information for social and behavioral issues in architecture and urban design
2. Conduct small-scale environment-behavior studies in built indoor and outdoor environments
3. Communicate research outcomes for evidence-based design recommendations via effective oral, written, and visual techniques

In addition, students who complete the graduate course will be able to:

1. Identify research studies in the social sciences and environmental psychology with findings that

may apply to human-centered architecture and urban design, and synthesize this information into a research report or publication

COURSE STRUCTURE AND ORGANIZATION

This course meets once a week and is comprised of interactive lectures and student participation and presentations, both informal and formal. The course is broken into the following phases:

- **Leading a seminar discussion** on social and behavioral issues in the built environment
- **Environmental-Behavior studies**
- **Final project: Environment-Behavior study of a public plaza**
- **Synthesis:** Documentation, and compilation of a final research report (Graduate students only)

There are regular reading assignments, and assigned tasks that involve finding and critiquing additional research articles not in the required reading list for each phase. Students will also present design recommendations based off of the readings for each phase, and participate in field exercises in which they observe and document social and behavioral issues in existing spaces on campus and make design recommendations for improvements.

COURSE COMPONENTS + CRITERIA OF EVALUATION

This course is designed to achieve the learning objectives indicated. Because architecture is an art as well as a science, and because every student and student-group present new challenges in the teaching of design, instructors may add, alter, or modify assignments, criteria, or project weights in order to adapt to evolving circumstances that are inherent in the practice of Architecture, and also to evaluate students' abilities to make such adaptations. The Instructor will notify the students in advance of such changes; students for their part will notify the professor within one week of such notification if the proposed changes will cause undue hardship. Students acknowledge the dynamic nature of this course.

The graded components of this course and their criteria of evaluation are currently anticipated to be as follows, but are subject to change as set forth above:

TEXTS

Reading assignments are outlined on the syllabus and course calendar; these assignments should be supplemented with more in-depth research and readings by students. Do not rely solely on web-based sources. While you will have a number of these referenced within the class, please be aware that the instructor knows that these sites are creditable and reliable. The instructor may frequently recommend other sources for in-depth readings. Students should also be prepared to share useful sources that they find on their own, with other classmates. All class sessions will in part, be group discussion format.

PROJECTS

1. **Leading a seminar discussion:** Develop an informative and engaging slide presentation discussing any one chapter in your textbook: *Environmental Psychology for Design*. Using the text as a basis for your information, expand upon it with additional sources drawn from other readings in this syllabus or your own research. Lead a class discussion and engage other students in discussion questions or activites listed in your chapter as well as your own. Compare, analyze, and critique two different, contrasting designs of any one building type based on concepts discussed in the chapter. Include your evaluation of these two designs in your slides and present to class. <u>This is an individual assignment.</u>

2. **Environment-behavior studies:** This assignment is subdivided in four small-scale environment-behavior studies based on concepts discussed in class, readings, and sources drawn from your own research. Details of each exercise will be provided in advance. Potential research questions for these studies will include: How do people perceive and recognize the environment? How do they manage their personal space? How does this impact their experience and use of different spaces – both indoor and outdoor? Your studies should also reflect your understanding of wayfinding and territoriality. Study methods may include participant observations, short interviews, and surveys. Present your findings to the class in a slide presentation and discuss their design implications. Further details of presentation requirements will be discussed in class. <u>These are individual assignments.</u>

3. **Final project: Environment-behavior study of a public plaza:** The goal of this exercise is for you to employ qualitative research strategies learned throughout the semester to analyze the use of an existing urban plaza and subsequently propose improvements to improve its experience. Select a public plaza – preferably on-campus or in an urban setting. Your approach will be based on the premise that every public place has a distinct subculture with physical and social characteristics. Become a participant observer in the scene by familiarizing yourself with the place, observing, and interviewing people. Maintain a field notebook, and develop graphic representations for your observations and analyses. Interviews may help reveal rules of conduct, norms of behavior, and rituals of public life that are supported or hindered by the physical environment. Compile all behaviors and activity patterns in a composite map. Suggest design improvements for the plaza based on your findings.

   Present your findings and potential design improvements to the class in a slide presentation. Presentations must include the processes described above; further details of presentation requirements will be discussed in class. Class time will be allotted to discuss ideas, show progress and get feedback from instructor as well as peers. This is an individual assignment and also the final one for this class.

PARTICIPATION
Discussion and peer critiques are a large part of what makes this course successful. Students are expected to engage in these activities regularly throughout the semester in addition to their own presentations.

DOCUMENTATION
Documentation of slide presentations and exhibits in PDF format, uploaded to the shared class folder on time (noted on the course calendar) is required to get full credit noted below, under Weight. Graduate students, are required to synthesize their findings into an additional research report that has potential for publication or conference presentation in consultation with the instructor.

WEIGHT

The Course Components are forecast to be:

PROJECTS		
Leading a Seminar Discussion	10	
E-B Study 2a	10	
E-B Study 2b	10	
E-B Study 2c	10	
E-B Study 2d	10	
Final Project	30	
subtotal, Projects		80
PARTICIPATION		10
DOCUMENTATION		
Instructor review		10
Total		100%

Grading criteria for graduate and undergraduate students for each project will be different, and will vary according to the deliverables of the specific project. Instructor will provide students with this information before the beginning of the project.

REFERENCES

REQUIRED

Kopec, Dak. *Environmental Psychology for Design*. New York: Fairchild Books Inc., Third ed., 2018.

GENERAL

ADDITIONAL READING RECOMMENDATIONS:

Alexander, Christopher, Sara Ishikawa, and Murray Silverstein. *A Pattern Language: Towns, Buildings, Construction.* New York, NY: Oxford University Press, 1977.

Engineer, Altaf, and Kathryn H. Anthony. *Shedding New Light on Art Museum Additions: Front Stage and Back Stage Experiences.* New York: Routledge, 2018.

Hall, Edward T. *The Hidden Dimension.* New York: Anchor Books, 1990.

Kopec, David Alan, and Susan S. Szenasy. *Health and Well-being for Interior Architecture*. New York, NY: Routledge, 2017.

Lynch, Kevin. *The Image of the City.* Cambridge, MA: MIT Press, 1960.

Nassar, Jack, Wolfgang Preiser, and Thomas Fisher (eds.). *Designing for Designers*. New York: Fairchild Books, 2007.

Newman, Oscar. *Defensible Space; Crime Prevention Through Urban Design*. New York: Collier Books, 1973.

Sommer, Robert. *Design Awareness.* Corte Madera, CA: Rinehart Press, 1972.

Sommer, Robert. *Social Design: Creating Buildings with People in Mind*. NJ: Prentice Hall, Inc., 1983.

Sommer, Robert. *Personal Space: The Behavioral Basis of Design*. Englewood Cliffs, N.J: Prentice-Hall, 1969.

Sommer, Robert and B.B. Sommer. *A Practical Guide to Behavioral Research: Tools and Techniques*. New York: Oxford University Press, 1980.

Ulrich, Roger S. "View Through a Window May Influence Recovery from Surgery." *Science* 224, no. 4647 (1984): 420-421.

Whyte, William H. *The Social Life of Small Urban Spaces*. Washington DC: The Conservation Foundation, reprinted by Project for Public Spaces, 1980.

Zeisel, John. *Inquiry by Design*. New York, NY: W.W. Norton & Company, 2012.

USEFUL WEB LINKS FOR YOUR REFERENCE:

Environmental Design Research Association (EDRA): www.edra.org

SEMESTER SCHEDULE

A course calendar is included at the end of this syllabus.

POLICIES + STATEMENTS

GRADING

Evaluations will be distributed at intervals during the semester and will indicate performance according to the stated criteria of evaluation. Students are expected to use this system to monitor and adjust their performance and to seek additional support from the professor, as appropriate. Evaluations will be based primarily on student's work, rather than effort expended. Students are expected to acquire knowledge and skill, not merely *endeavor* to do so.

CHANGE

By its very nature, the practice of architecture requires an ability to adapt to change, both by responding to unforeseen events in the delivery of services and in the revision of the work. Because an ability to adapt and embrace change is an essential skill in our profession, it may be considered in evaluations for this course.

LATE WORK

Work submitted after the deadline will be graded one or more letter grades below what would have been awarded had the work been submitted on time, appropriate to the length of delay and the importance of the assignment, at the Instructor's discretion.

INCOMPLETE WORK

Work submitted that is incomplete will be graded one or more letter grades below what would have been awarded had the work been complete, appropriate to the extent of incompletion and the importance of the assignment, at the Instructor's discretion.

GRADING SCALE

Grades will be defined as follows:

scale	undergraduate criteria	graduate criteria
A (90-100)	Excellence in most areas of evaluation, high competence in others.	Excellence to High Competence in most areas of evaluation.
B (80 to <90)	High Competence in most areas of evaluation, competence in others.	Very good to competent work in most areas of evaluation; fulfilled requirements.
C (70 to <80)	Fulfilled all course requirements with competence. (Competence: the answering of all requirements; adequate fitness, ability, capacity; sufficient for the purpose.)	Less than complete or competent work in some areas; requirements lacking and/or sub-standard quality.
D (60 to <70)	Less than competent work in one or more areas of evaluation. One or more requirements lacking and/or sub-standard quality.	Substantially incomplete or inadequate quality.
E (0 to <60)	Substantially incomplete work and/or work of an unsatisfactory quality.	Grossly inadequate.
Incomplete	Work left incomplete at the end of the semester *due to circumstances beyond the student's control*.	Work left incomplete at the end of the semester *due to circumstances beyond the student's control*.

In co-convened and joint assignments, graduate students will be expected to produce a greater quantity or higher quality of work than their undergraduate peers in meeting these criteria.

GRADE APPEAL

Students who believe they have been unfairly graded should follow the multi-step procedure outlined in the CAPLA Grade Appeal:
http://architecture.arizona.edu/student-forms-and-procedures

ATTENDANCE

Students are required to attend all classes for their duration. Upon the 2nd unexcused Absence (whether in part or for a session's entirety), the final grade will be lowered by 5% per each unexcused absence beyond the initial 2nd.

The UA's policy concerning Class Attendance, Participation, and Administrative Drops:
http://catalog.arizona.edu/policy/class-attendance-participation-and-administrative-drop

EXCEPTIONS

The UA policy regarding absences for any sincerely held religious belief, observance or practice will be accommodated where reasonable:
http://policy.arizona.edu/human-resources/religious-accommodation-policy.

Observances pre-approved by the UA Dean of Students will be honored, as listed at:
http://uhap.web.arizona.edu/policy/appointed-personnel/7.04.02

Absences pre-approved by the UA Dean of Students (or Dean Designee) will be honored:
https://deanofstudents.arizona.edu/absences

EXCUSED ABSENCE

The Instructor may grant an Excused Absence for an outside educational opportunity at the request of the Director or another instructor. Students granted an Excused Absence remain responsible for turning in work on time, even if due on the excused date, as well as getting all information and assignments covered during an Excused Absence. An Excused Absence does not count against the number of Absences specified above.

EMERGENCY ABSENCE

The Instructor may grant an Emergency Absence for bona fide events outside the control of a student, such as sudden serious illness, bodily harm, or other emergency.

written excuse

Emergency Absences must be certified by a professional in writing, such as doctor's excuses, police reports, or evidence of funeral. Written evidence must be submitted by the student within two weeks of

the event and must include the certifying professional's contact information. Faculty or staff may verify the legitimacy of the source but may not inquire into the student's related personal information.

validity

"Immediate Family" is limited to parents, children, stepchildren, siblings, and cohabitating partners and spouses. To qualify as an Emergency Absence, the illness or event must be an actual emergency (i.e., events that require immediate attention); otherwise it will be treated as a standard Absence. Scheduled doctor consultations do not qualify.

make-up work

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DOCUMENTATION STANDARDS

A professional standard in contract documents insures that every page indicates sufficient information to link it to its host set and, similarly, every drawing provides sufficient metadata that it is clearly linked to its dataset. In keeping with this data standard, documentation in this course will comply with the following standards:

- archive documentation

Work shall be submitted for this course that demonstrates both the learning objectives and the final project(s), as requested by the professor. Digital files shall be submitted in the following naming convention:

ARCXXX_YYYYS_category_Lastname_F

where
ARCXXX is the course number, e.g., ARC401;
YYYYS is the year and semester (F/S/SUM), e.g., 2013F;
category is the assignment type or drawing type, e.g., SitePlan, LongitudinalSection3, Homework4; and
Lastname_F is the student's last name and first initial

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As a condition of enrollment, students agree to abide by the standards set forth in the Student Code of Conduct:
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The use of cell phones, pagers, electronic devices or other materials unrelated to course specific activities are not permitted during course hours; neither are unauthorized discussions amongst students or other disturbances.

All electronic media are limited to narrowcasting (headsets) at all times, set to a volume that is not audible to others. Per the University policy, non-assist animals are forbidden from University buildings.

Students are responsible for checking their UA email and course D2L sites Monday-Friday, at least once every twenty-four hours, for communications from the Professor.

ACADEMIC POLICIES

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http://catalog.arizona.edu/allcats.html

along with the UA Final Exam Regulations:
https://www.registrar.arizona.edu/courses/final-examination-regulations-and-information

and Final Exam Schedule:
http://www.registrar.arizona.edu/schedules/finals.htm

Requests for incomplete (I) or withdrawal (W) must be made in accordance with University policies:
http://catalog.arizona.edu/policy/grades-and-grading-system#incomplete
http://catalog.arizona.edu/policy/grades-and-grading-system#Withdrawal

ACADEMIC INTEGRITY

Students are encouraged to share intellectual views and discuss freely the principles and applications of course materials. However, graded work/exercises must be the product of independent effort unless otherwise instructed. Students are expected to adhere to the UA Code of Academic Integrity as described in the UA General Catalog:
http://deanofstudents.arizona.edu/academic-integrity/students/academic-integrity

INCLUSIVE EXCELLENCE

This course will follow the UA diversity initiative designed to create a welcoming environment for all.
http://diversity.arizona.edu/

NONDISCRIMINATION + ANTI-HARASSMENT

Students are encouraged to express well-formed opinions and their reasons there for. They are expected to create a tolerant and open environment where such opinions can be expressed without bullying or discrimination. The University is committed to creating and maintaining an environment free of discrimination:
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ELECTIVE NAME AND PRONOUN USE

This course sponsors an educational environment of inclusion and mutual respect, including elective gender pronoun use and self-identification; rosters indicating such choices will be updated throughout the semester, upon student request.

PLAGIARISM

The practice of taking someone else's work or ideas and passing them off as one's own is known as plagiarism and is a serious violation of academic and professional ethics. The consequences for plagiarism are severe, including a failing grade for the course, suspension, or expulsion from the University per the UA policy on plagiarism: http://deanofstudents.arizona.edu/codeofacademicintegrity

TESTING: In any testing situation, whether graded or not, students shall not refer to outside resources (whether printed materials, such as books and journals, texts, Internet, e-mail, Google, instant messaging, or other resources) unless explicitly instructed to do so by the professor of record. Students operating digital devices in testing situations when not authorized to do so shall be assumed to be cheating.

CITATION: Plagiarism applies to professional and public works, as well as to the work produced by peers. Students shall be assiduous in citing the work of others, whether in copying a graphic, either in part or in total, in quoting a text, or in building upon ideas, designs, or forms. Citation is used to give credit to the original author and to allow others to identify and trace source material.

Building upon the work of others is an inevitable part of learning and inherent to scholarship; hence it is an acceptable practice as long as the original sources are properly cited. Textual citations should follow the *Chicago Manual Of Style*. Citations of buildings and other designed works should include both a) project and b) source information:

a) project citation: the work's name or title, its location, the name of its designer(s), and the date designed (or, if built, constructed).

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http://www.chicagomanualofstyle.org/tools_citationguide.html

PRODUCTION: Using the labor of others, whether paid or freely given, offers the beneficiary an unfair advantage relative to peers and is prohibited unless expressly authorized in writing by the professor(s) of record.

COPYRIGHT

Materials in this course may be copyrighted. They are intended for use only by students registered and enrolled in the course and are only for instructional activities associated with and for the duration of the course. They may not be retained in another medium or disseminated, including being uploaded to file-sharing sites on the internet or elsewhere, without the written permission of the instructor. They are provided in compliance with the provisions of the Teach Act:

http://www.copyright.com/Services/copyrightoncampus/basics/teach.html.

THREATENING BEHAVIOR

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end of syllabus

TEMPLATE VERSION:
2018.01.24—Section 1: Changed title of OBJECTIVES AND OUTCOMES to LEARNING OUTCOMES at request of the Graduate College; added tips and a guide to distinguishing between Learning Outcomes and Course Objectives.
Section 2, COURSE STRUCTURE AND ORGANIZATION: Added clarifying notes requested by the Office of Academic Affairs.
Section 3, ATTENDANCE: Revised clause to make it clear that the grade penalty takes effect after the specified number of allowed unexcused absences; Added notes pertaining to online courses; updated link to UA policy.
MAKE-UP WORK: Clause revised according to Graduate College.
ACADEMIC POLICIES: Expanded to include new required sections by Office of Academic Affairs.

COURSE DATA

ARC 496d/596d Daylighting, Health, and Behavior
Spring 2018
3-credit units

FACULTY

Altaf Engineer, Ph.D., NCARB, LEED AP BD+C
aengineer@email.arizona.edu
Smith House, 1195 E. Speedway Blvd., Bldg. 199A
Office hours: Wed, 2:00 PM – 5:00 PM

CRITERIA

FULFILLMENT

This course is a recommended elective for MS.Arch. students in the Health and the Built Environment (HBE) program and for master's level and upper level undergraduates interested in pursuing careers that integrate human health and wellbeing in the built environment.

ENROLLMENT

The minimum-maximum enrollment will be determined annually by the School Director in consultation with the instructor of this course.

CONTACT

Tue/Thu: 9:30am – 10:45am | Architecture, Rm 205A

WEB + D2L

This course will be supported over D2L.

COURSE CONTENT

CATALOGUE DESCRIPTION

This course explores specific Technology topics in depth; it may be taken up to four times under different topics by permission of the Stream Coordinator.

COURSE DESCRIPTION

Daylighting influences the social, cultural, and behavioral aspects of spaces. Daylight can be used as a creative medium; it can be sculpted and controlled to impart a spirit of place as well as influence physical and mental health outcomes.

This course focuses on the critical analysis and design of daylighting systems for human comfort, physical and psychological wellbeing. Students will investigate the phenomenon of natural light in built environments via observations and surveys, study how these findings may impact human behavioral and social factors in design, and how they may be implemented to achieve multiple goals of sensory design, comfort, wellbeing, and productivity. We will study the integration of natural and artificial lighting systems in the building design process. We will test various daylighting design strategies discussed in class via group and individual projects which will include physical scale modeling in the sky simulator as well as the outdoor environment, photography, and computer simulations.

OBJECTIVES AND OUTCOMES

After taking this course, students should be able to:

1. Formulate their own definitions of what constitutes good daylighting.
2. Understand how daylighting strategies impact occupants' health, behavior, and performance via qualitative research methods.
3. Analyze an existing daylighting scheme and create a new, improved scheme via scale modeling, photography, and simulation techniques.
4. Learn how to use daylight as a creative medium in design, integrate it with artificial lighting systems in a building, develop a comprehensive lighting strategy for their project, and communicate it via suitable presentation and documentation techniques.

COURSE COMPONENTS + CRITERIA OF EVALUATION

This course is designed to achieve the learning objectives indicated. Because architecture is an art as well as a science, and because every student and student-group present new challenges in the teaching of design, instructors may add, alter, or modify assignments, criteria, or project weights in order to adapt to evolving circumstances that are inherent in the practice of Architecture, and also to evaluate students' abilities to make such adaptations. The Instructor will notify the students in advance of such changes; students for their part will notify the professor within one week of such notification if the proposed changes will cause undue hardship. Students acknowledge the dynamic nature of this course.

The graded components of this course and their criteria of evaluation are currently anticipated to be as follows, but are subject to change as set forth above:

TEXTS

Reading assignments are outlined on the syllabus; these assignments should be supplemented with more in-depth research and readings by students. Do not rely solely on web-based sources. While you will have a number of these referenced within the class, please be aware that the instructor knows that these sites are creditable and reliable. The instructor may frequently recommend other sources for in-depth readings. Student should also be prepared to share useful sources that they find on their own, with other classmates. All class sessions will in part, be group discussion format.

PROJECTS

1. **Case study and precedent analysis:** Perform an in-depth case study of daylighting in an existing building on campus or in a geographically close area. Discuss your building selection with the instructor before proceeding with the study. Focus on the lighting features of the building using class lectures, examples and case studies described in the textbook and additional readings, as reference guides. Gather information on the building space, document lighting strategies by photographs, and collect illumination measurements with light meters (to be provided by instructor). Select one large space/room in the building such as a large classroom, conference room, auditorium, library reading room, atrium, or art gallery for a more in-depth, daylighting analysis. Measure illumination levels in different parts of the room. Select two precedent studies that employ daylighting strategies similar to what you would like to pursue in the next assignment: #2, Daylighting design. Present your analysis of the existing space, along with a minimum of two precedent studies per team, in a slideshow to the class. Further details of presentation requirements will be discussed in class. <u>This is a two-person team assignment.</u>

2. **Daylighting Improvements:** Based on lighting deficiencies found in your survey and analysis of the existing space and precedent studies, suggest a design improvement—through modifications or additions or both—in the form of daylighting strategies. This new strategy should focus on the following improvements: 1) Introduce daylight into spaces currently without daylight 2) Get daylight to penetrate deeper into spaces with some daylighting already, via light shelves, skylights, or other innovative strategies. Present this improvement to the instructor in the form of drawings, sketches, and rough study models in class and get approval to proceed with a final model. Construct a physical scale model (min. scale of 1" = 1') for testing daylighting strategies for the selected space in a sky simulator as well as the outdoor environment. Present drawings, photographs of your scale models with improvements, and daylight measurements of illuminance levels in a sky simulator to the class in a slideshow. This presentation should effectively demonstrate how you have improved the daylighting scenario in the room, potentially leading to implications for occupant satisfaction, health, productivity, and energy savings in the entire building. Further details of presentation requirements will be discussed in class. <u>This is a two-person team assignment; the team should be same as the one in the previous assignment.</u>

3. **Daylighting Design:** The goal of this exercise is for you to create an effective daylighting design scheme for your individual projects. Select one large space in your design studio project or design a new space with the goal of demonstrating efficient daylighting strategies and integrating it with the artificial lighting scheme. Examples of such spaces include meeting rooms, conference rooms, class rooms, auditoriums, a large retail space, one residential space

(such as the living room), etc. Create a three-dimensional computer model, a physical model, or a combination of both so that your renderings and photographs represent an accurate, real-world lighting scenario. Class time will be allotted to discuss ideas, show progress and get feedback from instructor as well as peers. Register for the International Velux Design Award (http://iva.velux.com), review award brief, document as per award guidelines and present in a final review. This is an individual assignment and also the final one for this class.

PARTICIPATION
Discussion and peer critiques are a large part of what makes this course successful. Students are expected to engage in these activities regularly throughout the semester in addition to their own presentations.

DOCUMENTATION

Students will prepare one image, landscape layout, 32 inches wide X 18 inches high (9600 wide X 5400 pixels high) in line with the International Velux Design Award submission requirements. Students will present this image in a final review.

See International Velux Design award website (http://iva.velux.com/competitions/international-velux-award-2018/pages/award-brief--2) for further detail on award submission requirements.

WEIGHT

The Course Components are forecast to be:

PROJECTS		
Case study and precedent analysis	20	
Daylighting improvements	20	
Daylighting design	40	
subtotal, Projects		80
PARTICIPATION		10
DOCUMENTATION		
review 1	10	
subtotal, Documentation		10
Total		100%

Grading criteria for graduate and undergraduate students for each project will be different, and will vary according to the deliverables of the specific project. Instructor will provide students with this information before the beginning of the project.

REFERENCES

REQUIRED

Tregenza, Peter, and Michael Wilson. *Daylighting: Architecture and Lighting Design*. New York: Routledge, 2013.

GENERAL

Additional reading recommendations:

Ander, Gregg D. *Daylighting Performance and Design*. New York: Van Nostrand Reinhold, 1995.

Baker, Nick and Koen Steemers. *Daylight Design of Buildings: A Handbook for Architects and Engineers*. New York: Earthscan, 2014.

Brown, G. Z., and Mark DeKay. *Sun, Wind & Light: Architectural Design Strategies* (2nd ed.). New York: J. Wiley, 2001.

Cuttle, Christopher. *Lighting Design: A Perception-based Approach*. New York: Routledge, 2015.

Engineer, Altaf, and Kathryn H. Anthony. *Shedding New Light on Art Museum Additions: Front Stage and Back Stage Experiences.* New York: Routledge, 2018.

Evans, Benjamin H. *Daylight in Architecture*. New York: Architectural Record Books, 1981.

Gordon, Gary. *Interior Lighting for Designers*. New Jersey: John Wiley & Sons, 2003.

Grosslight, Jane and Jeffrey W. Verheyen. *Light, Light, Light: Effective Use of Daylight and Electric Lighting in Residential and Commercial Spaces*. Tallahassee, FL: Durwood Publishers, 1998.

Lam, William M. C. *Sunlighting as Formgiver for Architecture*. New York: Van Nostrand Reinhold, 1986.

Lechner, Norbert. *Heating, Cooling, Lighting: Sustainable Design Methods for Architects*. New York: Wiley, 2014.

Meek, Christopher and Kevin Van Den Wymelenberg. *Daylighting and Integrated Lighting Design*. New York: Routledge, 2015.

Minnaert, Marcel and L. Seymour, L. *Light and Color in the Outdoors*. New York: Springer, 1995.

Muneer, Tariq. *Solar Radiation and Daylight models.* Boston: Elsevier Butterworth-Heinemann, 2004.

Phillips, Derek. *Daylighting: Natural Light in Architecture*. Amsterdam; Boston: Elsevier, 2004.

Plummer, Henry. *Poetics of Light = Kenchiku, kō no shigaku*. Tokyo: a+u Pub. Co., 1987.

Plummer, Henry. *Light in Japanese Architecture*. Tokyo: a+u Pub. Co., 1995.

Plummer, Henry. *Masters of Light: Twentieth-century Pioneers.* Tokyo: a+u Pub. Co., 2003.

Robbins, Claude L. *Daylighting: Design and Analysis*. New York: Van Nostrand Reinhold., 1986.

Tregenza, Peter and David Loe. *The Design of Lighting*. New York: Routledge., 2014.

USEFUL WEB LINKS FOR YOUR REFERENCE:

Center for the Built Environment (CBE), University of California, Berkeley: http://www.cbe.berkeley.edu

Designing with Light companion site: http://www.designinglight.com

Daylighting Pattern Guide: http://patternguide.advancedbuildings.net/

Daylighting Whole building Design Guide (WBDG): http://www.wbdg.org/resources/daylighting.php

“Daylight Dividends”, Lighting Research Center research and case studies: http://www.lrc.rpi.edu/programs/daylighting/

Sun position calculation: http://www.susdesign.com/sunposition/index.html

Sun angle calculation: http://www.susdesign.com/sunangle/

UC Davis, California Lighting Technology Center: http://cltc.ucdavis.edu/index.php

U.S. Department of Energy High Performance Buildings Database: http://www.eere.energy.gov/buildings/highperformance/case_studies/index.cfm

SEMESTER SCHEDULE

A course calendar is included at the end of this syllabus.

POLICIES + STATEMENTS

GRADING

Evaluations will be distributed at intervals during the semester and will indicate performance according to the stated criteria of evaluation. Students are expected to use this system to monitor and adjust their performance and to seek additional support from the professor, as appropriate. Evaluations will be based primarily on student’s work, rather than effort expended. Students are expected to acquire knowledge and skill, not merely *endeavor* to do so.

CHANGE

By its very nature, the practice of architecture requires an ability to adapt to change, both by responding to unforeseen events in the delivery of services and in the revision of the work. Because an ability to adapt and embrace change is an essential skill in our profession, it may be considered in evaluations for this course.

LATE WORK

Work submitted after the deadline will be graded one or more letter grades below what would have been awarded had the work been submitted on time, appropriate to the length of delay and the importance of the assignment, at the Instructor's discretion.

INCOMPLETE WORK

Work submitted that is incomplete will be graded one or more letter grades below what would have been awarded had the work been complete, appropriate to the extent of incompletion and the importance of the assignment, at the Instructor's discretion.

GRADING SCALE

Grades will be defined as follows:

scale	undergraduate criteria	graduate criteria
A (90-100)	Excellence in most areas of evaluation, high competence in others.	Excellence to High Competence in most areas of evaluation.
B (80 to <90)	High Competence in most areas of evaluation, competence in others.	Very good to competent work in most areas of evaluation; fulfilled requirements.
C (70 to <80)	Fulfilled all course requirements with competence. (Competence: the answering of all requirements; adequate fitness, ability, capacity; sufficient for the purpose.)	Less than complete or competent work in some areas; requirements lacking and/or sub-standard quality.
D (60 to <70)	Less than competent work in one or more areas of evaluation. One or more requirements lacking and/or sub-standard quality.	Substantially incomplete or inadequate quality.
E (0 to <60)	Substantially incomplete work and/or work of an unsatisfactory quality.	Grossly inadequate.
Incomplete	Work left incomplete at the end of the semester *due to circumstances beyond the student's control*.	Work left incomplete at the end of the semester *due to circumstances beyond the student's control*.

In co-convened and joint assignments, graduate students will be expected to produce a greater quantity or higher quality of work than their undergraduate peers in meeting these criteria.

GRADE APPEAL

Students who believe they have been unfairly graded should follow the multi-step procedure outlined in the CAPLA Grade Appeal:
http://architecture.arizona.edu/student-forms-and-procedures

ATTENDANCE

Students are required to attend all classes for their duration. Upon the 3rd Absence (whether in part or for a session's entirety), the final grade will be lowered by 5% per absence.

EXCEPTIONS

The UA policy regarding absences for any sincerely held religious belief, observance or practice will be accommodated where reasonable:
http://policy.arizona.edu/human-resources/religious-accommodation-policy.

Observances pre-approved by the UA Dean of Students will be honored, as listed at:
http://uhap.web.arizona.edu/policy/appointed-personnel/7.04.02

Absences pre-approved by the UA Dean of Students (or Dean Designee) will be honored:
https://deanofstudents.arizona.edu/absences

EXCUSED ABSENCE

The Instructor may grant an Excused Absence for an outside educational opportunity at the request of the Director or another instructor. Students granted an Excused Absence remain responsible for turning in work on time, even if due on the excused date, as well as getting all information and assignments covered during an Excused Absence. An Excused Absence does not count against the number of Absences specified above.

EMERGENCY ABSENCE

The Instructor may grant an Emergency Absence for bona fide events outside the control of a student, such as sudden serious illness, bodily harm, or other emergency.

written excuse

Emergency Absences must be certified by a professional in writing, such as doctor's excuses, police reports, or evidence of funeral. Written evidence must be submitted by the student within two weeks of the event and must include the certifying professional's contact information. Faculty or staff may verify the legitimacy of the source but may not inquire into the student's related personal information.

validity

"Immediate Family" is limited to parents, children, stepchildren, siblings, and cohabitating partners and spouses. To qualify as an Emergency Absence, the illness or event must be an actual emergency (i.e., events that require immediate attention); otherwise it will be treated as a standard Absence. Scheduled doctor consultations do not qualify.

make-up work

Students granted an Emergency Absence remain responsible for turning in all work as well as obtaining all information and assignments covered in their absence. At the Instructor's discretion, the student may be granted extended deadlines appropriate to the impact of the event. Instructors are not obliged to grant Emergency Absences if the period missed makes it impossible for the student to achieve a competent level of accomplishment consistent with expectations for the rest of the class.

DOCUMENTATION STANDARDS

A professional standard in contract documents insures that every page indicates sufficient information to link it to its host set and, similarly, every drawing provides sufficient metadata that it is clearly linked to its dataset. In keeping with this data standard, documentation in this course will comply with the following standards:

☐ archive documentation

Work shall be submitted for this course that demonstrates both the learning objectives and the final project(s), as requested by the professor. Digital files shall be submitted in the following naming convention:

ARCXXX_YYYYS_category_Lastname_F

where
ARCXXX is the course number, e.g., ARC401;
YYYYS is the year and semester (F/S/SUM), e.g., 2013F;
category is the assignment type or drawing type, e.g., SitePlan, LongitudinalSection3, Homework4; and
Lastname_F is the student's last name and first initial

CLASSROOM BEHAVIOR + STUDIO CULTURE

As a condition of enrollment, students agree to abide by the standards set forth in the Student Code of Conduct:
http://azregents.asu.edu/rrc/Policy Manual/5-308-Student Code of Conduct.pdf

The use of cell phones, pagers, electronic devices or other materials unrelated to course specific activities are not permitted during course hours; neither are unauthorized discussions amongst students or other disturbances.

All electronic media are limited to narrowcasting (headsets) at all times, set to a volume that is not audible to others. Per the University policy, non-assist animals are forbidden from University buildings.

Students are responsible for checking their UA email and course D2L sites Monday-Friday, at least once every twenty-four hours, for communications from the Professor.

ACADEMIC POLICIES

Academic policies can be found in The University of Arizona General Academic Catalog:
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http://www.copyright.com/Services/copyrightoncampus/basics/teach.html.

Students should refer to University copyright polities:
http://www.library.arizona.edu/help/tutorials/copyright/index.html

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end of syllabus

TEMPLATE VERSION:
2017.10.24—Section 1: Added Honors clause. Section 3: revised Emergency Absence policy.

ARC 496d/596d
Daylighting, Health, and Behavior
Spring 2018, 3 CU

Instructor: Altaf Engineer

COURSE CALENDAR (subject to change)

Date/ Week	Topic	Readings/Preparation work	Deliverable
Week 1: Thu 01/11	Introduction to the course, syllabus, assignments, and schedule overview Light and perception; Fundamentals of lighting; Introduction to assignment 1	Please save the course syllabus and schedule sent to you, print or access electronically for class (you may bring your laptops). • Tregenza chapter 2 • Livingston: Start reading chapters 1 though 5 and complete by next class.	Form teams of two for Assignments 1 and 2, begin looking at options for case studies. Begin background research and data collection on your selected case study. Contact design firms (architecture and lighting) or use campus resources as necessary, to get more information.
Week 2: Tue 01/16 & Thu 01/18	Daylighting strategies with examples; sample case studies; in-depth discussion of assignments 1and 2. Introduction to light meters and in-class demonstration. Location TBD.	• Tregenza chapters 3 and 4 • Finish Livingston chapters 1 through 5, and read chapter 10	Thursday 01/18: Meet at location decided by instructor for workshop on light meters and how to make daylight observations. Submit team names and case study choice for Assignments 1 and 2
Week 3: Tue 01/23 & Thu 01/25	Field visit: Observation of daylighting strategies. Tour of Ball-Paylor house by Arthur Brown, to be given by Professor Christopher Domin	• Tregenza chapter 9 • Livingston chapters 6 and 13.	Tuesday, 01/23: Meet directly at Ball-Paylor house at 9:30 am Thursday 01/25: Teams will show collected data for Assignment 1 and discuss case study with instructor in class.
Week 4: Tue 01/30 & Thu 02/01	Attend lecture by Kappl + Piippo on Monday 01/29, Tucson Museum of Art at 6 pm. This lecture will count as an official class; no class on Tuesday 01/20.	• Tregenza – "Worksheets", section 11: "*How to* measure light" • Independent research from general, recommended readings list and websites	**Thursday, 02/01: Team presentations of case study to class: Assignment 1** Upload team presentations in PDF format by 12 am on

Date/ Week	Topic	Readings/Preparation work	Deliverable
	Attend lighting workshop on Tuesday 01/30 for 2 guaranteed participation points. Daylighting case study: Team presentations	as required	this day to assigned location in D2L. Start working on modifications/ additions to proposed daylighting design strategies of case study based on instructor and student feedback in class.
Week 5: Tue 02/06 & Thu 02/08	Daylighting analysis workshop: Introduction to VELUX Daylight Visualizer + in-class analysis exercises	• Tregenza chapter 1 • Livingston chapter 16 • Independent research from general, recommended readings list and websites as required • Download Velux Daylight Visualizer on your computers prior to class. Review program tutorials and additional online sources as necessary.	Teams to begin working on Assignment 2: New daylighting strategies and proposed design modifications—discuss with instructor, and finalize. Please show sketches, drawings, and rough study models to instructor. Begin final models and start using Daylight Visualizer program for your daylighting analysis.
Week 6: Tue 02/13 & Thu 02/15	Daylighting, health, and productivity; Discussion of daylighting design strategies continued Daylighting and energy efficiency	• Tregenza chapters 5 and 6 • Livingston chapters 14 and 15	Teams to continue presentation work and final models for Assignment 2. Please show sketches, drawings, and models to instructor.
Week 7: Tue 02/20 & Thu 02/22	Overview of previous student work on daylighting projects Daylighting improvements exercise - continued.	• Independent research from general, recommended readings list and websites as required	Teams to continue presentation work and final models for Assignment 2. Please show sketches, drawings, and models to instructor.
Week 8: Tue 02/27 & Thu 03/01	Daylighting Improvements exercise: Team presentations	• Independent research from general, recommended readings list and websites as required	Tuesday, 02/27 & Thursday, 03/01: **Assignment 2: Team presentations of daylighting improvements to class** Upload team presentations in PDF format by 12 am on

Date/ Week	Topic	Readings/Preparation work	Deliverable
			this day to assigned location in D2L. This includes teams that will present in the next class on Thursday. Register for International Velux Design Awards 2018 online at: http://iva.velux.com/users/new
Week 9		Spring Break	
Week 10: Tue 03/13 & Thu 03/15	Guest speaker: Claudia Kappl and Concept Lighting Labs. Integration of daylighting with electrical lighting strategies, color, temperature, controls, and how they influence human perception and comfort	• Livingston chapters 7, 8 and 9 • Bring your current design studio project drawings (plans and sections) printed on 11 x 17 size sheets or any materials required to discuss a new design project	Begin Assignment 3: Select an area/room in your current design studio project and discuss its possible daylighting design individually with instructor. OR Design a new space on-campus to demonstrated desired daylighting design strategies Note: This project will also be your submission for the International Velux Award.
Week 11: Tue 03/20 & Thu 03/22	Electrical lighting fundamentals and integration with natural light	• Livingston chapters 11 and 12	Continue Assignment 3: Begin sketches and conceptual models – 3D or physical, for your project.
Week 12: Tue 03/27 & Thu 03/29	Daylight in the outdoors: Understanding the natural phenomenon via observations	• Minnaert et al: Light and Color in the Outdoors	Thursday, 03/29: Continue Assignment 3
Week 13: Tue	In-class daylighting design workshop: Individual student	• Please bring any drawings, physical models, etc. that are	Complete Assignment 3: Individual daylighting design projects and get

Date/ Week	Topic	Readings/Preparation work	Deliverable
04/03 & Thu 04/05	discussions with instructor	required for discussing your daylighting design. Be prepared to work in class on your laptops.	final approval for its design from instructor. Begin Assignment 4: Select one large interior space in your project and discuss its lighting design individually with instructor. Begin modeling it in the program for lighting simulations.
Week 14: Tue 04/10 & Thu 04/12	Energy implications of daylighting design via case studies	• Independent research in consultation with instructor	Thursday, 04/12: Discuss individual daylighting computer simulations with instructor in-class
Week 15: Tue 04/17 & Thu 04/19	Daylighting design project: Individual presentations	• Independent research in consultation with instructor	**Assignment 3, final review; design: Individual presentations of daylighting design projects to class:** All students will upload their presentation in PDF format by 12 am on Tuesday 04/17 to assigned location in D2L. This includes all students who are presenting in the next class on Thursday.
Week 16: Tue 04/24 & Thu 04/26	Daylighting design project documentation: Individual presentations Final questions, clarifications, and overview of concepts discussed in class	• Independent research for required material in consultation with instructor	**Tuesday, 04/24 and Thursday, 04/26 (cont'd.): Assignment 4, final review; documentation: Individual presentations of daylighting design project documentation to class.** All students will upload their presentation in PDF format by 12 am on Tuesday 04/24 to assigned location in D2L. This includes all students who are presenting in the next class on Thursday. Submit final image on International Velux Awards

Date/ Week	Topic	Readings/Preparation work	Deliverable
			2018 website.

ARC 497B & 597B: Latin American Practice Traditions, 3-CU, 2017 SoA, CAPLA
Instructor: Eduardo Guerrero, MUD University of Arizona

COURSE DATA

ARC 497B & 597B Latin American Practice Traditions
Fall 2017
3-credit

FACULTY

Eduardo Guerrero, Assistant Lecturer
Contact information: eduardoguerrero@email.arizona.edu / guerrero.archud@gmail.com
Office hours: by appointment

CRITERIA

FULFILLMENT
This course is an elective.

ENROLLMENT
18 students maximum.

CONTACT

Thursdays, 5:30 to 8 PM.

WEB + D2L

Essential course information is posted on D2L.

COST

None.

COURSE CONTENT

CATALOGUE DESCRIPTION

This research course explores a specific aspect of the practice of architecture in depth.

COURSE DESCRIPTION

This course presents professional practice in the context of Latin cultures, introducing Spanish architectural vocabulary, to native and non-native speakers. It allows students to translate what they learn in the School's professional degrees, based on American standards, to the Latin context. From how architects think about design and professional services, to how those services are rendered, to contracting methods, to how buildings are permitted and built, this course illuminates the cultural differences that distinguish Anglo and Latin practices. It also offers a guide to professional nomenclature in Spanish as well as tips for job searching in Latin cultures.

As part of this course, students will research case studies in design and professional practices in Central and South America.

The course is taught in English. Fluency in Spanish is not a prerequisite or needed to excel in the class.

LEARNING OBJECTIVES AND OUTCOMES

After taking this course, students should be able to:

1. Demonstrate an understanding of architecture, landscape architecture, and urbanism characteristic of Central and South America, thus expanding the students' understanding of global architectural practices.
2. Demonstrate an ability to compare and contrast buildings and modes of professional practice in varying social, economic, and political contexts.
3. Work analytically through research and drawing.
4. Identify the key components of the built environment in Spanish, including exterior and interior spaces, structures, and finishes.

COURSE COMPONENTS + CRITERIA OF EVALUATION

The graded components of this course and their criteria of evaluation are:

TEXTS

Required texts (averaging 1 per week) are posted on D2L and must be read prior to the day they are discussed. Graduate students read the same texts but are expected to conduct more in- depth analysis.

1. Davids, René.,***Shaping Terrain: City Building in Latin America*** (University of Florida Press, 2016)
2. Gallanti, Fabrizio.,***MCHAP 1: The Americas*. Mies Crown Hall Americas Prize.**(New York: IITAC and Actar, 2016)
3. Barry Bergdoll, Carlos Eduardo Comas, Jorge Francisco Liernur, and Patricio del Real, editors, ***Latin America in Construction: Architecture 1955–1980*** (New York: Museum of Modern Art, 2015)
4. Carranza, Luis E. and Lara, Fernando Luiz., ***Modern Architecture in Latin America*** (Austin: University of Texas Press, 2014)
5. Ching, Francis D.K., ***Diccionario Visual de Arquitectura*** (Barcelona: Gustavo Gili, 2013). Ching, Francis D.K., ***Arquitectura. Forma, espacio y orden*** *3a edicion revisada y actualizada* (Barcelona: Gustavo Gili, 2012)
6. Plaut, Jeanette and Sarovic, Marcelo., ***Pulsos 2 New Architecture in Latin America*** (Santiago: Constructo 2014)
7. De Brea, Ana., ***Total Latin American Architecture*** (New York, Barcelona: Actar 2016)

RESEARCH PROJECTS

Students will research and analyze several recent architectural projects in Central and South America, noting form, materials, structural strategies, construction methods, and professional practices. Through research, analysis, presentation, and discussion, students will learn the variety of architectural practice traditions in these countries. Research projects are short in duration and meant to rapidly introduce themes and concepts.

Prezi presentation. 8 slides minimum per project.

Groups of 2-3 selecting 2 or 3 projects to present.

See project brief for more information.

STUDIO PROJECT PRESENTATION

Students enrolled in a studio course will translate and annotate presentation drawings in Spanish, and present an element of the project. Non-studio students will be assigned a project to translate and annotate for presentation participation.

Graphic presentation. Studio boards or Printed Prezi presentation paper 11x17.

See project brief for more information.

ANALYTICAL CASE STUDY

Students will research and analyze an iconic architectural project in Central or South America, noting form, materials, structural strategies, construction methods, and professional practices. Through research, analysis, presentation, and discussion students will further their understanding of architectural practice traditions in these countries. Analytical case studies are longer in duration and developed for several weeks in the course.

Graphic presentation paper 11x17.

Individual project.

See project brief for more information, including a suggested list of projects.

QUIZZES

Students will practice architectural Spanish vocabulary at the beginning of each class, based on course's texts and a selection of terms provided by the instructor. At two points in the semester, students will be quizzed on their knowledge of key Spanish nomenclature.

PARTICIPATION
Faithful attendance and participation is an important part of learning. Students are expected to participate and share their critical intellectual points of view during each class session.

WEIGHT
The Course Components will be weighted as follows:

Participation	10%
Quizzes	5%
Research Projects	25%
Studio Project Presentation	25%
Analytical Case Study	35%

REFERENCES
See texts above.

http://www.plataformaarquitectura.cl http://www.archdaily.com/ http://www.arquitecturaviva.com/ http://www.arq.com.mx/ http://sitioarquitectura.com/ http://ggili.com/es/tienda/arquitectura http://en.wikiarquitectura.com/index.php/Category:Country https://arch.iit.edu/prize/mchap/nominated

GENERAL
Use complete citation, formatted per the *Chicago Manual of Style,* "Notes and Bibliography" style *Chicago Manual of Style* (http://www.chicagomanualofstyle.org/tools_citationguide.html) when applicable.

SEMESTER SCHEDULE
A course calendar is attached to this syllabus.

POLICIES + STATEMENTS

GRADING
Evaluations will be distributed at intervals during the semester and will indicate performance according to the stated criteria of evaluation. Students are expected to use this system to monitor and adjust their performance and to seek additional support from the professor, as appropriate. Evaluations will be based primarily on student's work, rather than effort expended. Students are expected to acquire knowledge and skill, not merely *endeavor* to do so.

LATE WORK
Work submitted after the deadline will be graded one or more letter grades below what would have been awarded had the work been submitted on time, appropriate to the length of delay.

INCOMPLETE WORK
Work submitted that is incomplete will be graded one or more letter grades below what would have been awarded had the work been complete, appropriate to the extent of incompletion.

GRADING SCALE
Grades will be defined as follows:

scale	undergraduate criteria	graduate criteria
A (90-100)	Excellence in most areas of evaluation, high competence in others.	Excellence to High Competence in most areas of evaluation.
B (80-89)	High Competence in most areas of evaluation, competence in others.	Very good to competent work in most areas of evaluation; fulfilled requirements.
C (70-79)	Fulfilled all course requirements with competence. (Competence: the answering of all requirements; adequate fitness, ability, capacity; sufficient for the purpose.)	Less than complete or competent work in some areas; requirements lacking and/or sub-standard quality.
D (60-69)	Less than competent work in one or more areas of evaluation. One or more requirements lacking and/or sub-standard quality.	Substantially incomplete or inadequate quality.
E (0-59)	Substantially incomplete work and/or work of an unsatisfactory quality.	Grossly inadequate.
Incomplete	Work left incomplete at the end of the semester *due to circumstances beyond the student's control.*	Work left incomplete at the end of the semester *due to circumstances beyond the student's control.*

In co-convened and joint assignments, graduate students will produce a greater quantity and higher quality of work than their undergraduate counterparts in meeting these criteria.

GRADE APPEAL

Students who believe they have been unfairly graded should follow the multi-step procedure outlined in the CAPLA Grade Appeal:
http://architecture.arizona.edu/student-forms-and-procedures

ATTENDANCE

Students are required to attend all classes for their duration. Upon the 3rd Absence (whether in part or for a session's entirety), the final grade will be lowered by 5% per absence.

EXCEPTIONS

All holidays or special events observed by organized religions will be honored for those students who show affiliation with that particular religion in writing in advance of the event.

Observances pre-approved by the UA Dean of Students will be honored, as listed at:
http://www.registrar.arizona.edu/religiousholidays/calendar.htm

EXCUSED ABSENCE

The Instructor may grant an Excused Absence for an outside educational opportunity at the request of the Director or another instructor. Students granted an Excused Absence remain responsible for turning in work on time, even if due on the excused date, as well as getting all information and assignments covered during an Excused Absence. An Excused Absence does not count against the number of Absences specified above.

EMERGENCY ABSENCE

The Instructor may grant an Emergency Absence for bona fide events outside the control of the student, such as sudden serious illness requiring hospitalization, bodily harm, or immediate family emergency. Emergency Absences must be certified by a professional in writing, such as doctor's excuses, police reports, or evidence of funeral; evidence must be submitted by the student within two weeks of the event and must include the certifying professional's contact information. "Immediate Family" is limited to parents, children, stepchildren, and co-habiting partners and spouses. To qualify as an Emergency Absence, an illness must be a true emergency ("requiring immediate professional medical attention"); otherwise it will be treated as a standard Absence. Scheduled doctor consultations do not qualify. Students granted an Emergency Absence remain responsible for turning in all work as well as for getting all information and assignments covered, but may be granted extended deadlines. Instructors are not obliged to grant Emergency Absences if the period missed makes it impossible for the student to achieve a competent level of accomplishment consistent with expectations for the rest of the class.

DOCUMENTATION STANDARDS

A professional standard in contract documents insures that every page indicates sufficient information to link it to its host set and, similarly, every drawing provides sufficient metadata that it is clearly linked to its dataset. In keeping with this data standard, documentation in this course will comply with the following standards:

ARCHIVE DOCUMENTATION

All work produced in fulfillment of University requirements becomes the property of, and may be retained by, the School. Work shall be submitted for this course that demonstrates both the learning objectives and the final project(s), as requested by the professor. Digital files shall be submitted in the following naming convention:

ARC XXX_YYYYS_category_Lastname_F

where
ARC XXX is the course number, e.g., ARC 401;
YYYYS is the year and semester (F/S/SUM), e.g., 2013F;
category is the assignment type or drawing type, e.g., SitePlan, LongitudinalSection3, Homework4; and
Lastname_F is the student's last name and first initial

CLASSROOM BEHAVIOR + STUDIO CULTURE

The use of cell phones, pagers, electronic devices or other materials unrelated to course specific activities are not permitted during course hours; neither are unauthorized discussions amongst students or other disturbances.

All electronic media are limited to narrowcasting (headsets) at all times, set to a volume that is not audible to others. Per the University policy, non-assist animals are forbidden from University buildings.

Students are responsible for checking their UA email and course D2L sites Monday-Friday, at least once every twenty-four hours, for communications from the Professor.

ACADEMIC POLICIES

Academic policies can be found in The University of Arizona General Academic Catalog:
http://catalog.arizona.edu/allcats.html

For the principles, policies, and procedures governing issues of academic integrity, see:
http://deanofstudents.arizona.edu/codeofacademicintegrity.

PLAGIARISM

The practice of taking someone else's work or ideas and passing them off as one's own is known as plagiarism and is a serious violation of academic and professional ethics. The consequences for plagiarism are severe, including a failing grade for the course, suspension, or expulsion from the University per the UA policy on plagiarism: http://deanofstudents.arizona.edu/codeofacademicintegrity

TESTING: In any testing situation, whether graded or not, students shall not refer to outside resources (whether printed materials, such as books and journals, texts, Internet, e-mail, Google, instant messaging, or other resources) unless explicitly instructed to do so by the professor of record. Students operating digital devices in testing situations when not authorized to do so shall be assumed to be cheating.

CITATION: Plagiarism applies to the intellectual property of professional and public works, as well as to the work produced by peers. Students shall be assiduous in citing the work of others, whether in copying a graphic, either in part or in total, in quoting a text, or in building upon ideas, designs, or forms. Citation is used to give credit to the original author and to allow others to identify and trace source material.

Building upon the work of others is an inevitable part of learning and inherent to scholarship; hence it is an acceptable practice as long as the original sources are properly cited. Textual citations should follow the *Chicago Manual Of Style*. Citations of buildings and other designed works should include both a) project and b) source information:

a) project citation: the work's name or title, its location, the name of its designer(s), and the date designed (or, if built, constructed).

b) source citation: the source from which the information or illustration of the work was obtained formatted according to the Notes and Bibliography format specified in the *Chicago Manual Of Style:*
http://www.chicagomanualofstyle.org/tools_citationguide.html

PRODUCTION: Using the labor of others, whether paid or freely given, offers the beneficiary an unfair advantage relative to peers and is prohibited unless expressly authorized in writing by the professor(s) of record.

THREATENING BEHAVIOR

All participants must follow the University of Arizona's Policy on student behavior:
http://policy.arizona.edu/education-and-student-affairs/threatening-behavior-students

ACCESSIBILITY AND ACCOMMODATIONS

Universal Design is the obligation of every architect and should be a quality of every environment. It is also the University's goal that learning experiences be as accessible as possible. If you anticipate or experience physical or academic barriers based on disability, please contact the professor or Disability Resources (520-621-3268) to establish reasonable accommodations.
http://drc.arizona.edu/instructors/syllabus-statement

RETENTION OF WORK

Work produced in this course is the property of the School of Architecture, which may retain any student project for display, accreditation, documentation, or other purposes.

CHANGES

This syllabus is subject to change with notice, as deemed appropriate by the instructor.

The purpose of a detailed syllabus is to make the course as transparent and as objective as possible, and thus to empower students to understand and earn the grades to which they aspire. It is not the intention of such a system to be used against learning or fairness.

Consequently, the professor retains the right to make adjustments that account for circumstances that were unforeseen when the course was designed and will notify the students when such changes are made. It may, for example, be advantageous to add or alter assignments or their criteria, or to modify criteria or project-weights, if it becomes evident that it is in the best interest of learning and fairness to do so. Students will notify the professor within one week of notification if such changes engender a hardship, after which time it will be agreed that students understand and are in accord with the change.

end of syllabus

TEMPLATE VERSION: 2015.08.06 / 2016.03.06

Semester Schedule - Course Calendar Latin American Practice Traditions, 3-CU, August 2017 / ARC 497B & 597B Eduardo Guerrero M.U.D.		
Week	**Objectives and Outcomes**	**Activities**
1	Lecture 1	Presentation of the Course / Introduction / Vocabulary
2	1A Demonstrate an understanding of architecture, landscape architecture, and urbanism characteristic of Spanish-speaking countries.	Research project: **Climatic** features of Latin America countries and impact in design Prezi presentation.
3	1B Demonstrate an understanding of architecture, landscape architecture, and urbanism characteristic of Spanish-speaking countries.	Research project: **Emblematic** projects of Latin America: Social / Economic / Politic / Prezi presentation.
4	1C Demonstrate an understanding of architecture, landscape architecture, and urbanism characteristic of Spanish-speaking countries.	Research project: **Two** native **architects** of Latin America / Prezi presentation.
5	Lecture 2	Vernacular Architecture and Natives + debate
6	4 Identify the key components of the built environment in Spanish, including exterior and interior spaces, structures, and finishes.	Studio project presentation: **Practice** Graphic presentation, Prezi or 11x17.
7	3A Work analytically through research and drawing.	Analytical Case Study: Analyze an iconic architectural precedent of a country Graphic presentation 11x17.
8	3A Work analytically through research and drawing.	Analytical Case Study: Analyze an iconic architectural precedent of a country Graphic presentation 11x17.
9	Lecture 3	PREVI LIMA and ELEMENTAL + debate
10	4 Identify the key components of the built environment in Spanish, including exterior and interior spaces, structures, and finishes.	Studio project presentation: **Practice** Graphic presentation, Prezi or 11x17.
11	2A Demonstrate an ability to compare and contrast buildings and modes of professional practice in varying social, economic, and political contexts.	Research project: Professional practice differences between two countries Prezi presentation.
12	Lecture 4	Latin American Architects + debate
13	2B Demonstrate an ability to compare and contrast buildings and modes of professional practice in varying social, economic, and political contexts.	Research project: Compare similar program/use building in two different countries Prezi presentation.
14	--------	Thanks Giving
15	4 Identify the key components of the built environment in Spanish, including exterior and interior spaces, structures, and finishes.	Studio project presentation **Final** Graphic presentation 11x17.
16	--------	Studio week

Some case study projects

CHILE Quinta Monroy, Elemental. Iquique Universidad Adolfo Ibañez, Peñalolén, Santiago Ruca Dwellings by Undurraga Devés Arquitectos. La Pincoya, Huechuraba, Santiago CEPAL Economic Commission for Latin America and the Caribbean, Santiago Santuario de Auco by Undurraga Devés Arquitectos. Calle Larga, Región de Valparaíso Mestizo Restaurant, Santiago Termas de Puritama / Termas Geometricas	**BRAZIL** Parque Do Flamengo, Rio de Janeiro Parque Novo Santo Amaro V Social Housing in Sao Paulo Museum of Modern Art of Rio de Janeiro (MAM), Rio de Janeiro Plaza of the three powers, Brasilia Museum of Modern Art, Rio de Janeiro Contemporary Art Museum Niteroi
PERU PREVI Lima - Proyecto Experimental de Vivienda, Lima House in Cañete, Cañete Equis House, Playa La Escondida Pre School for Early Childhood, Timayui Cao Museum, Magdalena de Cao Classroom building Inca Roca Ricardo Palma University, Santiago de Surco	**MEXICO** El Pedregal de San Angel, Mexico City CUBE Tower, Guadalajara National Autonomous University of Mexico, Mexico City House of Diego Rivera and Frida Kahlo, Mexico City Casa Barragan, Mexico City
URUGUAY Iglesia del Cristo Obrero, Church in Atlántida Fair of Craftsmen, Sheds for Fishermen, Services and Design of public Space, Punta del Diablo	**ARGENTINA** Bank of London and South America (now Banco Hipotecario), Buenos Aires Altamira Residential Building, Rosario Atelier ciudad de las Artes, Córdoba
CUBA National School of Plastic Arts, Ricardo Porro, Havana Coppelia (Gelato), Havana	**BOLIVIA** Campus Universidad Andina Simón Bolívar, Sucre Mamani Silvestre, El Alto
COLOMBIA CAI - Peripheral Immediate Attention Center, Medellín Transmilenio transit system, Bogotá Park Towers, Bogota Bamboo Childhood Center FORMAKERS _ Canopy, Medellín Pre School for Early Childhood, Kindergarten Ciudad de La Alegria, Timayui in Santa Marta	**GUATEMALA** National Theater, Guatemala City **VENEZUELA** University of Central Venezuela, Caracas, (Ciudad Universitaria de Caracas)
DOMINICAN REPUBLIC Fair of Peace and Fraternity of the Free World Site, Santo Domingo Corporativo 2010, Santo Domingo	**ECUADOR** Entre Muros House, Quito X House, La Tola, Quito

////////////// Other sources:

MCHAP. Mies Crown Hall Americas Prize (Illinois Institute of Technology)
https://arch.iit.edu/prize/mchap/nominated
https://arch.iit.edu/life/inaugural-mchap-outstanding-projects-announced

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COURSE DATA

ARC 497B / 597B Reading Architecture
Fall 2015
3-credit units

FACULTY

Dan Hoffman, Professor of Practice~~Adjunct Lecturer~~
hoffman@studioma.com

CRITERIA

FULFILLMENT

This course is an elective in the Practice Stream requirement

PREREQUISITES

M.Arch and B.Arch students in their 4th-Year and above; 3rd Year B.Arch and other CAPLA graduate students by permission of instructor.

ENROLLMENT

This course is limited to 16 students.

CONTACT

One session per week; time and place TBD.

WEB + D2L

This course will not be supported over D2L.

COST

The course requires a three-day trip to Los Angeles to tour and study contemporary architecture. Students will be responsible for all expenses associated with this trip.

COURSE CONTENT

CATALOGUE DESCRIPTION

This course explores specific Practice topics in depth; it may be taken up to four times under different topics by permission of the Stream Coordinator.

COURSE DESCRIPTION

Increasingly buildings are justified solely by their relations rather than by their autonomous qualities. Rather than speaking about the inherent nature of a building, its spatial organization, the manner of its construction, its particular sensual and phenomenal qualities, buildings are described as interconnected sets of information which serve to break the building down into simple, rationalized units while at the same time expanding its effects to increasingly larger scales. (From carbon to global warming.) This tendency makes it increasingly difficult to understand a building on its own terms, as an autonomous object existing amongst other entities. ~~This is not to say that architecture is without relation to hyper objects such as global warming, capitalism, or discrete objects such as cell phones. For this course, an architectural object is simply a starting point from which other objects are referenced.~~

The course is based upon the *close reading* of a contemporary architecture based upon the *Quaddruple Object* framework offered by the philosopher Graham Harman. The framework offers a way to understand an object through four phenomenological frames; perception (Merleau-Ponty), intentionality (Husserl), presence/absence (Heidegger) and technics,Taken together the four frames offer a deeper understanding of architecture and its meaning potential.

Significant contemporary buildings will be used as case study demonstrations of the Fourfold framework, providing a method through which students can begin to assess the meaning potential in their work.

~~(using the actual, physical characteristics of a building) as a step towards understanding how its meaning as something more than the sum of its parts while partly withholding itself from relations to other entities.~~

~~The *reading* will be based upon a selection of contemporary buildings in Los Angeles using existing documentation, the form of drawings and published photographs. A *re-reading* of these buildings will take the form of a re-drawing and re-representation of the building based upon experience gathered from a visit to the building. Case Study examples of other significant buildings will be presented in class.~~

OBJECTIVES AND OUTCOMES

After taking this course, students will:

1. Understand how a building can provide a unique and meaningful experience for the viewer.
2. Understand the concepts of intention, perception, context and technics can be used to "read" the inherent meaning in a building/object.
3. Understand how to "read" a building through a close examination of its physical (real) qualities.
4. Gain an awareness of contemporary philosophy and its application to architecture.

COURSE COMPONENTS + CRITERIA OF EVALUATION

This course is designed to achieve the learning objectives indicated. Because architecture is an art as well as a science, and because every student and student-group present new challenges in the teaching of design, instructors may add, alter, or modify assignments, criteria, or project weights in order to adapt to evolving circumstances that are inherent in the practice of Architecture, and also to evaluate students' abilities to make such adaptations. The Instructor will notify the students in advance of such changes; students for their part will notify the professor within one week of such notification if the proposed changes will cause undue hardship. Students acknowledge the dynamic nature of this course.

The graded components of this course and their criteria of evaluation are currently anticipated to be as follows, but are subject to change as set forth above:

TEXTS

See References, below.
See below for grade weight of texts. A 1,000 word precis of each required reading will be required.

PROJECTS

See below for the grade weight of the required project: an analysis of an existing built and proposed (Capstone) project using the Fourfold framework.

WEIGHT

The Course Components are forecast to be:

- Precis of Assigned Text 1
- Precis of Assigned Text 2
- Student Project Analysis – Initial
- Student Project Analysis - Final

RE -REPRESENTATION PROJECT

Precis 1 and 2	30	
Student Project Analysis	30	
subtotal		60
DISCUSSING TEXTS		15
WRITING		15
COLLABORATION (with one other student)		10
Total		100%

REFERENCES

REQUIRED

Harman, Graham, *The Quadruple Object* (United Kingdom: Zero Books, 2011).

Harman, Graham, *Guerrilla Metaphysics: Phenomenology and the Carpentry of Things* (Peru, Illinois: Open Court, 2005).

Harman, Graham, "Brief SR/OOO Tutorial," *Object-Oriented Philosophy, Retrieved23* (September, 2011).

~~Morton, Timothy, "Sublime Objects," *Speculations II* (2011), 207–227~~Heidegger, Martin, Basic Writing, *Building, Dwelling, Thinking,* pp. 343-364.

M. Merleau Ponty, The Visible and the Invisible, *Eye and Mind,* pp. 121-130.

Husserl, Edmund, The Crises of European Sciences, and Transcendental Phenomenology

Serres, Michel, Hermes, Literature, Science, Philosophy, *What Thales Saw,* pp. 84-98.~~-~~

~~GENERAL~~
~~Harman, Graham, Guerrilla Metaphysics: Phenomenology and the Carpentry of Things (Peru, Illinois: Open Court, 2005).~~

~~Graham Harman, Peter Carl, et. al., "Is there an object oriented architecture?" (London: The Architecture Exchange, Series #1, May/June 2013).~~

SEMESTER SCHEDULE
Week 1: Introduction and Review of Course
Week 2: Selected Readings in Object Oriented Ontology - Perception ~~(1)~~
Week 3: Selected Readings in Object Oriented Ontology – Intentionality ~~(2)~~
Week 4: Selected Readings in Object Oriented Ontology – Presence/Absence, Context~~Presentation of Case Study Example (1)~~
Week 5: Selected Readings in Object Oriented Ontology - Technics~~Site Visit to Los Angeles~~
Week 6: Case Study 1: Mies van der Rohe, The Receding Horizon ~~Review of Site Visit Material~~
Week 7: Case Study 2: LeCorbusier – Koolhaas, Programmatic Topologies (Site Visit to Los Angeles)~~Commence Redrawing of Selected Buildings~~
Week 8: Case Study 3: Frei Otto – Fusing the Physical and Computational~~Preliminary Building Narrative~~
Week 9: Mid-Review of Student Project Analysis~~Presentation of Case Study Example (2)~~
Week 10: Case Study 4: Kanzai Airport – Phenomenology of Flow~~Mid-Review of Building Drawings and Narratives~~
Week 11: Case Study 5: OOO Specuatlions~~Presentation of Case Study Example (3)~~
Week 12: Presentation of Building Drawings and Narratives

POLICIES + STATEMENTS

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By its very nature, the practice of architecture requires an ability to adapt to change, both by responding to unforeseen events in the delivery of services and in the revision of the work. Because an ability to adapt and embrace change is an essential skill in our profession, it may be considered in evaluations for this course.

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Work submitted after the deadline will be graded one or more letter grades below what would have been awarded had the work been submitted on time, appropriate to the length of delay and the importance of the assignment, at the Instructor's discretion.

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GRADING SCALE
Grades will be defined as follows:

scale	undergraduate criteria	graduate criteria
A (90-100)	Excellence in most areas of evaluation, high competence in others.	Excellence to High Competence in most areas of evaluation.
B (80-89)	High Competence in most areas of evaluation, competence in others.	Very good to competent work in most areas of evaluation; fulfilled requirements.
C (70-79)	Fulfilled all course requirements with competence. (Competence: the answering of all requirements; adequate fitness, ability, capacity; sufficient for the purpose.)	Less than complete or competent work in some areas; requirements lacking and/or sub-standard quality.
D (60-69)	Less than competent work in one or more areas of evaluation. One or more requirements lacking and/or sub-standard quality.	Substantially incomplete or inadequate quality.
E (0-59)	Substantially incomplete work and/or work of an unsatisfactory quality.	Grossly inadequate.
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ATTENDANCE

Students are required to attend all classes for their duration. Upon the 2nd Absence (whether in part or for a session's entirety), the final grade will be lowered by 5% per absence.

EXCEPTIONS

All holidays or special events observed by organized religions will be honored for those students who show affiliation with that particular religion in writing in advance of the event.

Observances pre-approved by the UA Dean of Students will be honored, as listed at:
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EXCUSED ABSENCE

The Instructor may grant an Excused Absence for an outside educational opportunity at the request of the Director or another instructor. Students granted an Excused Absence remain responsible for turning in work on time, even if due on the excused date, as well as getting all information and assignments covered during an Excused Absence. An Excused Absence does not count against the number of Absences specified above.

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The Instructor may grant an Emergency Absence for bona fide events outside the control of a student, such as sudden serious illness, bodily harm, or immediate family emergency.

written excuse

Emergency Absences must be certified by a professional in writing, such as doctor's excuses, police reports, or evidence of funeral. Written evidence must be submitted by the student within two weeks of the event and must include the certifying professional's contact information. Faculty or staff may verify the legitimacy of the source but may not inquire into the student's related personal information.

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DOCUMENTATION STANDARDS

A professional standard in contract documents insures that every page indicates sufficient information to link it to its host set and, similarly, every drawing provides sufficient metadata that it is clearly linked to its dataset. In keeping with this data standard, documentation in this course will comply with the following standards:

ARCHIVE DOCUMENTATION

Work shall be submitted for this course that demonstrates both the learning objectives and the final project(s), as requested by the professor. Digital files shall be submitted in the following naming convention:

ARCXXX_YYYYS_category_Lastname_F

where
ARCXXX is the course number, e.g., ARC401;
YYYYS is the year and semester (F/S/SUM), e.g., 2013F;
category is the assignment type or drawing type, e.g., Site Plan, Longitudinal Section3, Homework4; and
Lastname_F is the student's last name and first initial

CLASSROOM BEHAVIOR + STUDIO CULTURE

As a condition of enrollment, students agree to abide by the standards set forth in the Student Code of Conduct:
http://azregents.asu.edu/rrc/Policy Manual/5-308-Student Code of Conduct.pdf

The use of cell phones, pagers, electronic devices or other materials unrelated to course specific activities are not permitted during course hours; neither are unauthorized discussions amongst students or other disturbances.

All electronic media are limited to narrowcasting (headsets) at all times, set to a volume that is not audible to others. Per the University policy, non-assist animals are forbidden from University buildings.

Students are responsible for checking their UA email and course D2L sites Monday-Friday, at least once every twenty-four hours, for communications from the Professor.

ACADEMIC POLICIES

Academic policies can be found in The University of Arizona General Academic Catalog:
http://catalog.arizona.edu/allcats.html

For the principles, policies, and procedures governing issues of academic integrity, see:
http://deanofstudents.arizona.edu/codeofacademicintegrity.

PLAGIARISM

The practice of taking someone else's work or ideas and passing them off as one's own is known as plagiarism and is a serious violation of academic and professional ethics. The consequences for plagiarism are severe, including a failing grade for the course, suspension, or expulsion from the University per the UA policy on plagiarism: http://deanofstudents.arizona.edu/codeofacademicintegrity

TESTING: In any testing situation, whether graded or not, students shall not refer to outside resources (whether printed materials, such as books and journals, texts, Internet, e-mail, Google, instant messaging, or other resources) unless explicitly instructed to do so by the professor of record. Students operating digital devices in testing situations when not authorized to do so shall be assumed to be cheating.

CITATION: Plagiarism applies to professional and public works, as well as to the work produced by peers. Students shall be assiduous in citing the work of others, whether in copying a graphic, either in part or in total, in quoting a text, or in building upon ideas, designs, or forms. Citation is used to give credit to the original author and to allow others to identify and trace source material.

Building upon the work of others is an inevitable part of learning and inherent to scholarship; hence it is an acceptable practice as long as the original sources are properly cited. Textual citations should follow the *Chicago Manual of Style*. Citations of buildings and other designed works should include both a) project and b) source information:

a) project citation: the work's name or title, its location, the name of its designer(s), and the date designed (or, if built, constructed).

b) source citation: the source from which the information or illustration of the work was obtained formatted according to the Notes and Bibliography format specified in the *Chicago Manual Of Style:*
http://www.chicagomanualofstyle.org/tools_citationguide.html

PRODUCTION: Using the labor of others, whether paid or freely given, offers the beneficiary an unfair advantage relative to peers and is prohibited unless expressly authorized in writing by the professor(s) of record.

THREATENING BEHAVIOR

All participants must follow the University of Arizona's Policy on student behavior:
http://policy.arizona.edu/education-and-student-affairs/threatening-behavior-students

ACCESSIBILITY AND ACCOMMODATIONS

Universal Design is the obligation of every architect and should be a quality of every environment. It is also the University's goal that learning experiences be accessible. Students who anticipate or experience physical or academic barriers based on disability, should free to discuss them with the Instructor; If barriers remain or if students are uncomfortable speaking with the Instructor, students are encouraged to explore possible accommodations with the Disability Resources Center (520-621-3268).
http://drc.arizona.edu/instructors/syllabus-statement

RETENTION OF WORK

The School of Architecture may retain samples of student work produced in this course as part of the accreditation process of the National Architectural Accrediting Board, Inc. (NAAB) or other University purposes. This may include models, mock-ups, prints, and other physical documents. Students will be notified of work that needs to be retained and shall submit those to the Archivist or the Instructor, as determined by the Instructor, before grades will be released. After accreditation review, the owners of the retained work will be given the opportunity to reclaim it at their own expense (at the name and email address affixed to the product by the student at the time of submittal) for up to 30 days after notification. By contributing work students aid the School in certifying its work, which is essential to the standing and reputation of the institution, for which the Faculty is grateful.

end of syllabus

TEMPLATE VERSION: 2016.03.30

COURSE DATA

ARC 497b/597b Health and Wellbeing in the Built environment: A Tour of the Senses and Beyond
Spring 2018
3-credit units

FACULTY

Altaf Engineer, Ph.D., NCARB, LEED AP BD+C
aengineer@email.arizona.edu
Smith House, 1195 E. Speedway Blvd., Bldg. 199A
Office hours: WED, 2:00 pm – 5:00 pm

CRITERIA

FULFILLMENT

This course is a requisite for MS.Arch. students in the Health and the Built Environment (HBE) program and a recommended elective for master's level and upper level undergraduates interested in pursuing careers that integrate human health and wellbeing in the built environment.

ENROLLMENT

The minimum-maximum enrollment will be determined annually by the School Director in consultation with the instructor of this course.

CONTACT

WED: 9:00a – 11:30 l Smith House

WEB + D2L

This course will be supported over D2L.

COURSE CONTENT

CATALOGUE DESCRIPTION

The practical application of theoretical learning within a group setting and involving an exchange of ideas and practical methods, skills, and principles. Students may take 497B/597B up to four times provided the topics are different.

COURSE DESCRIPTION

What we see, hear, and breathe affects our wellbeing. Consequently, designers have a profound impact on the people who inhabit their buildings. This course will offer future design professionals experience in the scientific understanding needed to capitalize on advancements in design informed by research. Designers who can not only understand, but translate existing research into practice will be more competitive in the market and have a larger impact. The course begins with a primer on scientific literacy in the context of design, followed by modules that dive into the physiology, psychology, and design implications related to our senses.

Students will learn how to find and critique research that connects wellbeing outcomes with the built environment through written *paper critiques* in each module (Visual, Haptic, Aural, Gaseous, and Natural Systems). At the end of each module, students will prepare a *design implication* strategy informed by the required readings + one additional research paper. Finally, each student will prepare a final course project that critiques a current studio project or an existing built space on campus and makes design recommendations. This final project may be presented in the form of a poster, a paper with photographs and diagrams/sketches, or a slide deck, depending on the student's individual goals and expertise.

OBJECTIVES AND OUTCOMES

After taking this course, students should be able to:

1. Exhibit how to find research articles that are relevant to health and wellbeing and the built environment;
2. Exhibit a scientific base of understanding of how existing human health and wellbeing research can impact design;

3. Critique existing research for its scientific relevancy to the design world and for the appropriateness of the methodologies used;
4. Communicate scientific literature critiques effectively to other students through writing, speaking, and visuals;
5. Synthesize and communicate design recommendations and implications based on existing health and wellbeing research

STRUCTURE AND ORGANIZATION

This course meets twice a week and is comprised of interactive lectures and student participation and presentations, both informal and formal. The course is broken into the following phases:

- **Introduction** to the science of health and wellbeing in the context of design
- **Module 1:** Visual systems
- **Module 2:** Haptic and Aural systems
- **Module 3:** Gaseous systems
- **Module 4:** Natural systems
- **Synthesis:** Final course project

There are regular reading assignments, and assigned tasks that involve finding and critiquing additional research articles not in the required reading list for each module. Students will also present design recommendations based off of the readings for each module, and culminate with a final project that critiques an existing space on campus and makes design recommendations.

COURSE COMPONENTS + CRITERIA OF EVALUATION

This course is designed to achieve the learning objectives indicated. Because every student and student-group present new challenges in the teaching of design, instructors may add, alter, or modify assignments, criteria, or project weights in order to adapt to evolving circumstances that are inherent in the practice of Architecture, and also to evaluate students' abilities to make such adaptations. The Instructor will notify the students in advance of such changes; students for their part will notify the professor within one week of such notification if the proposed changes will cause undue hardship. Students acknowledge the dynamic nature of this course.

The graded components of this course and their criteria of evaluation are currently anticipated to be as follows, but are subject to change as set forth above:

TEXTS | PAPER CRITIQUES

Students will submit written summaries and critiques of required readings and additional research articles found on their own outside of the reading list. Instructor will provide, in advance, a list of questions that will need to be answered as well as serve as an outline for each summary and critique. These summaries will be submitted on D2L and discussed with the class once per module and once during the course introduction weeks for a total of 25 points.

PROJECTS | DESIGN IMPLICATIONS

Students will present to the class a design implication based off of the required readings and their own additional research articles of choice for each module. These will be submitted in slide format for a total of 40 points. Students may select an existing built environment as a case study or a current studio project for this exercise.

FINAL PROJECT

Students will synthesize their readings over the semester into a set of evaluative criteria that inform a final project that is a critique with design recommendations for an existing space on campus or a current studio project. The format can be a slide deck or design poster—agreed upon after discussion with the instructor considering the student's future endeavors and specific skill set. Graduate students are required to prepare and submit an additional research report that has potential for publication or conference presentation in consultation with the instructor.

Although the final project may be delivered in different formats, there are common criteria for evaluation:

- Appropriately cited readings and graphics
- Lack of grammatical errors
- Documentation of the existing space2
- Annotated, original graphics regarding design recommendations for the existing space
- Explanation of potential benefits of the design recommendations

- Overall cohesiveness (each project needs to convey to the audience the process involved, from interpreting existing literature to its translation to design recommendations)

PARTICIPATION

Discussion and peer critiques are a large part of what makes this course successful. Students are expected to engage in these activities regularly throughout the semester in addition to their own presentations.

WEIGHT

The Course Components are forecast to be:

PAPER CRITIQUES		
Introduction Module	5	
Visual Module	5	
Haptic and Aural Module	5	
Gaseous Module	5	
Natural Systems Module	5	
		25
DESIGN IMPLICATIONS		
Visual Module	10	
Haptic and Aural Module	10	
Gaseous Module	10	
Natural Systems Module	10	
		40
FINAL PROJECT		25
PARTICIPATION		10
Total		100%

Graduate students are expected to engage in the research in this course at a more comprehensive level. To ensure this, each module's deliverables will be evaluated according to the use and interpretation of all readings listed for each section, whereas undergraduates are responsible for a subset of the listed readings. Graduate students will lead certain class discussions based on these readings and this activity will count towards their participation points. They are also required to submit an additional research report as part of their final project in alignment with their individual interests and in consultation with the instructor.

REFERENCES

REQUIRED

Sternberg EM. *Healing spaces: the science of place and well-being.* Cambridge, Mass: Belknap Press of Harvard University Press; 2009.

Kopec DA, Szenasy SS. *Health and Well-being for Interior Architecture*. New York, NY: Routledge; 2017.

All other required readings for this course listed below (subject to change), are posted on the D2L site in PDF or electronic link format, and are subject to change based on developments in relevant research. Graduate student readings are **bolded.**

1. **Youngstedt SD, Kripke DF. Does bright light have an anxiolytic effect? - an open trial. *BMC Psychiatry.* 2007;7:62.**
2. Partonen T, Lönnqvist J. Bright light improves vitality and alleviates distress in healthy people. *J Affect Disord.* 2000;57(1):55-61.
3. Stevens RG, Brainard GC, Blask DE, Lockley SW, Motta ME. Breast cancer and circadian disruption from electric lighting in the modern world. *CA Cancer J Clin.* 2014;64(3):207-218.
4. Figueiro MG, Plitnick BA, Lok A, et al. Tailored lighting intervention improves measures of sleep, depression, and agitation in persons with Alzheimer's disease and related dementia living in long-term care facilities. *Clin Interv Aging.* 2014;9:1527-1537.
5. **Figueiro M, Overington D. Self-luminous devices and melatonin suppression in adolescents. *Light Res Technol.* 2015;0:10.**

6. Shin JY, Yun GY, Kim JT. View types and luminance effects on discomfort glare assessment from windows. *Energy and Buildings.* 2012;46:139-145.
7. Hwang T, Kim JT. Effects of Indoor Lighting on Occupants' Visual Comfort and Eye Health in a Green Building. *Indoor Built Environ.* 2010;20(1):75-90.
8. **Leather P, Pyrgas M, Beale D, Lawrence C. Windows in the Workplace: Sunlight, View, and Occupational Stress. *Environ Behav.* 1998;30(6):739-762.**
9. Benedetti F, Colombo C, Barbini B, Campori E, Smeraldi E. Morning sunlight reduces length of hospitalization in bipolar depression. *J Affect Disord.* 2001;62(3):221-223.
10. **Walch JM, Rabin BS, Day R, Williams JN, Choi K, Kang JD. The effect of sunlight on postoperative analgesic medication use: a prospective study of patients undergoing spinal surgery. *Psychosom Med.* 2005;67(1):156-163.**
11. Thayer JF, Verkuil B, Brosschot JF, et al. Effects of the physical work environment on physiological measures of stress. *Eur J Cardiovasc Prev Rehabil.* 2010;17(4):431-439.
12. Schust M. Effects of Low Frequency Noise up to 100 Hz. *Noise Health.* 2004;6(23):73-85.
13. Folscher LL, Goldstein LN, Wells M, Rees D. Emergency department noise: mental activation or mental stress? *Emerg Med J.* 2014;32(6):468-473.
14. Evans GW, Johnson D. Stress and open-office noise. *J Appl Psychol.* 2000;85(5):779-783.
15. **Waye KP, Bengtsson J, Rylander R, Hucklebridge F, Evans P, Clow A. Low frequency noise enhances cortisol among noise sensitive subjects during work performance. *Life Sci.* 2002;70(7):745-758.**
16. Kaarlela-Tuomaala A, Helenius R, Keskinen E, Hongisto V. Effects of acoustic environment on work in private office rooms and open-plan offices - longitudinal study during relocation. *Ergonomics.* 2009;52(11):1423-1444.
17. Mitchell CS, Zhang JJ, Sigsgaard T, et al. Current state of the science: health effects and indoor environmental quality. *Environ Health Perspect.* 2007;115(6):958-964.
18. Ilyas S, Emery A, Heerwagen J, Heerwagen D. Occupant perceptions of an indoor thermal environment in a naturally ventilated building. *ASHRAE Trans.* 2012;118:114-121.
19. **Allen JG, MacNaughton P, Laurent JG, Flanigan SS, Eitland ES, Spengler JD. Green Buildings and Health. *Curr Environ Health Rep.* 2015;2(3):250-258.**
20. Allen JG, MacNaughton P, Satish U, Santanam S, Vallarino J, Spengler JD. Associations of Cognitive Function Scores with Carbon Dioxide, Ventilation, and Volatile Organic Compound Exposures in Office Workers: A Controlled Exposure Study of Green and Conventional Office Environments. *Environ Health Perspect.* 2015:1-32.
21. Clements-Croome DJ, Awbi HB, Bako-Biro Zs, Kochhar N, Williams M. Ventilation rates in Schools. *Building Environ.* 2008;43(3):362-367.
22. Milton DK, Glencross PM, Walters MD. Risk of Sick Leave Associated with Outdoor Air Supply Rate, Humidification, and Occupant Complaints. *Indoor Air.* 2000;10(4):212-221.
23. **Melikov AK, Skwarczynski MA, Kaczmarczyk J, Zabecky J. Use of personalized ventilation for improving health, comfort, and performance at high room temperature and humidity. *Indoor Air.* 2013;23(3):250-263.**
24. Chawla L. Benefits of Nature Contact for Children. *J Plan Lit.* 2015;30(4):433-452.
25. Ulrich R. View through a window may influence recovery from surgery. *Science.* 1984;224(4647):420-421.
26. Taylor AF, Kuo FE, Sullivan WC. Views of Nature and Self-Discipline: Evidence from Inner City Children. *Journal of Environmental Psychology.* 2002;22(1-2):49-63.
27. **Kardan O, Gozdyra P, Misic B, et al. Neighborhood greenspace and health in a large urban center. *Sci Rep.* 2015;5:11610.**
28. **Kaplan S. The restorative benefits of nature: Toward an integrative framework. *J Environ Psychol.* 1995;15(3):169-182.**
29. Berman MG, Jonides J, Kaplan S. The cognitive benefits of interacting with nature. *Psychol Science.* 2008;19(12):1207-1212.
30. **Gamble KR, Howard JH, Jr., Howard DV. Not just scenery: viewing nature pictures improves executive attention in older adults. *Exp Aging Res.* 2014;40(5):513-530.**
31. Faber Taylor A, Kuo FE. Children with attention deficits concentrate better after walk in the park. *Journal of Attention Disorders.* 2009;12(5):402-409.
32. Bratman GN, Hamilton JP, Hahn KS, Daily GC, Gross JJ. Nature experience reduces rumination and subgenual prefrontal cortex activation. *Proc Natl Acad Sci U S A.* 2015;112(28):8567-8572.

33. Jansson M, Fors H, Lindgren T, Wiström B. Perceived personal safety in relation to urban woodland vegetation – A review. *Urban for. urban green.* 2013;12(2):127-133.
34. Li Q, Otsuka T, Kobayashi M, et al. Acute effects of walking in forest environments on cardiovascular and metabolic parameters. *Eur J Appl Physiol.* 2011;111(11):2845-2853.
35. Ward Thompson C, Roe J, Aspinall P, Mitchell R, Clow A, Miller D. More green space is linked to less stress in deprived communities: Evidence from salivary cortisol patterns. *Landscape and Urban Planning.* 2012;105(3):221-229.
36. Detweiler MB, Sharma T, Detweiler JG, et al. What is the evidence to support the use of therapeutic gardens for the elderly? *Psychiatry Investig.* 2012;9(2):100-110.

GENERAL
ADDITIONAL READING RECOMMENDATIONS:

1. Gruchalla RS, Pongracic J, Plaut M, et al. Inner City Asthma Study: Relationships among sensitivity, allergen exposure, and asthma morbidity. J Allergy Clin Immunol. 2005;115(3):478-485.
2. Freedman DM, Dosemeci M, McGlynn K. Sunlight and Mortality from Breast, Ovarian, Colon, Prostate, and Non-Melanoma Skin Cancer: A Composite Death Certificate Based Case-Control Study. Occup Environ Med. 2002;59(4):257-262.
3. Appleman K, Figueiro MG, Rea MS. Controlling light-dark exposure patterns rather than sleep schedules determines circadian phase. Sleep Med. 2013;14(5):456-461.
4. Kuo M. How might contact with nature promote human health? Promising mechanisms and a possible central pathway. Front Psychol. 2015;6:1093.
5. Wilson EO. Biophilia. Harvard University Press; 1984.
6. Kellert SR, Heerwagen J, Mador M. Biophilic design: the theory, science and practice of bringing buildings to life. John Wiley & Sons; 2008.
7. Heerwagen J. Biophilia, health, and well-being. Restorative commons: creating health and well-being through urban landscapes: U.S. Department of Agriculture, Forest Service, Northern Research Station; 2009:38-57.
8. Fjørtoft I. Landscape as Playscape: The Effects of Natural Environments on Children's Play and Motor Development. Child Youth Environ. 2004;14(2):21-44.
9. Ohtsuka Y, Yabunaka N, Takayama S. Shinrin-yoku (forest-air bathing and walking) effectively decreases blood glucose levels in diabetic patients. Int J Biometeorol. 1998;41(3):125-127

SEMESTER SCHEDULE
A course calendar is included at the end of this syllabus.

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scale	undergraduate criteria	graduate criteria
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B (80 to <90)	High Competence in most areas of evaluation, competence in others.	Very good to competent work in most areas of evaluation; fulfilled requirements.
C (70 to <80)	Fulfilled all course requirements with competence. (Competence: the answering of all requirements; adequate fitness, ability, capacity; sufficient for the purpose.)	Less than complete or competent work in some areas; requirements lacking and/or sub-standard quality.
D (60 to <70)	Less than competent work in one or more areas of evaluation. One or more requirements lacking and/or sub-standard quality.	Substantially incomplete or inadequate quality.
E (0 to <60)	Substantially incomplete work and/or work of an unsatisfactory quality.	Grossly inadequate.
Incomplete	Work left incomplete at the end of the semester *due to circumstances beyond the student's control*.	Work left incomplete at the end of the semester *due to circumstances beyond the student's control*.

In co-convened and joint assignments, graduate students will be expected to produce a greater quantity or higher quality of work than their undergraduate peers in meeting these criteria.

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Students are required to attend all classes for their duration. Upon the 3rd Absence (whether in part or for a session's entirety), the final grade will be lowered by 5% per absence.

EXCEPTIONS

The UA policy regarding absences for any sincerely held religious belief, observance or practice will be accommodated where reasonable:
http://policy.arizona.edu/human-resources/religious-accommodation-policy.

Observances pre-approved by the UA Dean of Students will be honored, as listed at:
http://uhap.web.arizona.edu/policy/appointed-personnel/7.04.02

Absences pre-approved by the UA Dean of Students (or Dean Designee) will be honored:
https://deanofstudents.arizona.edu/absences

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The Instructor may grant an Excused Absence for an outside educational opportunity at the request of the Director or another instructor. Students granted an Excused Absence remain responsible for turning in work on time, even if due on the excused date, as well as getting all information and assignments covered during an Excused Absence. An Excused Absence does not count against the number of Absences specified above.

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A professional standard in contract documents insures that every page indicates sufficient information to link it to its host set and, similarly, every drawing provides sufficient metadata that it is clearly linked to its dataset. In keeping with this data standard, documentation in this course will comply with the following standards:

PROJECT DOCUMENTATION

Every sheet of every project will indicate the following information on its face:

- ☐ course number
- ☐ semester/year
- ☐ professor
- ☐ student author(s)
- ☐ current date of the work
- ☐ page or sequence number

ARCHIVE DOCUMENTATION

Work shall be submitted for this course that demonstrates both the learning objectives and the final project(s), as requested by the professor. Digital files shall be submitted in the following naming convention:

ARCXXX_YYYYS_category_Lastname_F

where
ARCXXX is the course number, e.g., ARC401;
YYYYS is the year and semester (F/S/SUM), e.g., 2013F;
category is the assignment type or drawing type, e.g., SitePlan, LongitudinalSection3, Homework4; and
Lastname_F is the student's last name and first initial

CLASSROOM BEHAVIOR + STUDIO CULTURE

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a) project citation: the work's name or title, its location, the name of its designer(s), and the date designed (or, if built, constructed).

b) source citation: the source from which the information or illustration of the work was obtained formatted according to the Notes and Bibliography format specified in the *Chicago Manual Of Style:*
http://www.chicagomanualofstyle.org/tools_citationguide.html

PRODUCTION: Using the labor of others, whether paid or freely given, offers the beneficiary an unfair advantage relative to peers and is prohibited unless expressly authorized in writing by the professor(s) of record.

COPYRIGHT

Materials in this course may be copyrighted. They are intended for use only by students registered and enrolled in the course and are only for instructional activities associated with and for the duration of the course. They may not be retained in another medium or disseminated, including being uploaded to file-sharing sites on the internet or elsewhere, without the written permission of the instructor. They are provided in compliance with the provisions of the Teach Act:
http://www.copyright.com/Services/copyrightoncampus/basics/teach.html.

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end of syllabus

TEMPLATE VERSION:
2017.10.24—SECTION 1: ADDED HONORS CLAUSE. SECTION 3: REVISED EMERGENCY ABSENCE POLICY.

ARC 497b/597b
Health and Wellbeing in the Built Environment: *A Tour of the Senses and Beyond*
Spring 2018, 3 CU

Instructor: Altaf Engineer

COURSE CALENDAR (subject to change)

Date/Week	Topic	Readings (Note: graduate student readings are **bolded**)	Deliverable
Week 1 01/10	**Introduction to wellbeing and design; overview of modules**		
Week 2 01/17	**Scientific research and the designer** Guest Lecture: Why is scientific research important? How does it inform design? Critical thinking as scientific thinking. Where can you find it? Primer on scientific literacy. Designers as public health practitioners	Sternberg CH 1 & 2	
Week 3 01/24	***Visual module*** Physiological and psychological background.	**1**, 2, 3, 4, **5**	Paper critique 1 due (wellbeing and design; scientific research)
Week 4 01/31	***Visual module*** Guest Lecture (tentative): Applied health and wellbeing research. Design implications, case studies, and special populations. Visual comfort research at CAPLA	6, 7, **8**, 9, **10**, 11	
Week 5 02/07	***Visual module*** Student presentations and group discussions		Paper critique 2 (visual systems) Design implication presentation 1 (visual systems)
Week 6 02/14	***Haptic and Aural module*** Physiological and psychological background.	Sternberg CH 3, 12, 13	Final project topic submission

Week 7 02/21	***Haptic and Aural module*** Applied health and wellbeing research. Design implications, case studies, and special populations. Designing for haptic and aural senses	14, **15**, 16	Paper critique 3 due (haptic and aural systems)
Week 8 02/28	***Haptic and Aural module*** Student presentations and group discussions		Design implication presentation 2 (haptic and aural systems)
Week 9 I 03/07 – No classes – Spring break			
Week 10 03/14	Guest Lecture (tentative): Healing Spaces; current sensing methods		Final project check-in
Week 11 03/21	***Gaseous module*** Physiological and psychological background. Applied health and wellbeing research. Design implications, case studies, and special populations.	Sternberg CH 4, 17, 18, **19**, 20, 21, 22, **23**	Final project draft discussions
Week 12 03/28	***Gaseous module*** Presentations and group discussions		Paper critique 4 (gaseous systems) Design implication presentation 3 (gaseous systems)
Week 13 04/04	***Natural systems module*** Applied health and wellbeing research. Design implications, case studies, and special populations.	Sternberg CH 12, 24, 25, 26, **27**, **28**, 29, **30**	
Week 14 04/11	***Natural systems module*** Presentations and group discussions	31, 32, 33, **34**, 35, 36	Paper critique 5 (natural systems) Design implication presentation 4 (natural systems)
Week 15	**Class workshop for final project presentations**		Discussion of final projects

04/18			
Week 16 04/25	**Course project presentations**		Final project presentations

COURSE DATA

ARC 497k l 597k The Portfolio
Fall 2017
3-credit units

FACULTY

Anna Koosmann, Architect, Assistant Professor
akoosmann@email.arizona.edu
office location: Smith House
office hours: by appointment

CRITERIA

FULFILLMENT

This course is an elective in the Practice Stream.

PREREQUISITES

B.Arch – ARC 302

M.Arch – ARC 510d

MLA – LAR 610

ENROLLMENT

This course is limited to 24 upper division graduate and undergraduate students enrolled in the College of Architecture, Planning, and Landscape Architecture.

CONTACT

Tuesday 5:15pm – 6:30pm Lab; CAPLA West l Room 205 Computer Classroom

Thursday 5:15pm – 6:30pm Lecture; CAPLA West l Room 302A

WEB + D2L

Course material will be available at the course D2L site (https://d2l.arizona.edu). It is the student's responsibility to regularly check D2L for updates.

COST

Students are responsible for all course expenses and materials for project assignments and the final, physical portfolio. Actual amounts will vary among students, with an estimate cost of $100.

COURSE CONTENT

CATALOGUE DESCRIPTION

The architecture portfolio is a timeless way to represent a cohesive body of work and it is essential for seeking employment and academic advancement for the emerging professional. This course takes students through a process of discovery and formal graphic composition that will enhance the final, physical portfolio for career development.

COURSE DESCRIPTION

This course is a practical overview that draws from current trends in the profession. Through self-assessment and reflection, the course is structured to evaluate student work and develop a professional style and narrative. Students will research firms and professional opportunities to identify an audience and develop a resume, cover letter, and an elevator pitch. Applying a hands-on approach using computer tools, students will enrichen their practical skills for creating and completing both a physical and a digital, web-hosted portfolio. Students will apply their cumulative knowledge over the course of the semester and solidify the experience through mock interviews facilitated by invited, practicing professionals. The class will meet in two locations (see CONTACT above): the computer lab for hands-on learning with computer-aided editing tools; and a traditional classroom for lectures, peer discussion, and reviews.

OBJECTIVES AND OUTCOMES

After taking this course, students should be able to:

1. EVALUATE: previous works for strengths and weaknesses in five architecture streams: design studio, design communications, history and theory, practice, and technology.
2. IDENTIFY: current trends and a professional audience that will inform the aesthetic content of the final portfolio project.
3. IDENTIFY: professional goals to guide the portfolio process.
4. CREATE: a narrative through written, visual, and verbal presentation that reinforces a cohesive style in delivering a professional resume, cover letter, elevator pitch, work samples, and portfolio.
5. COMPETENCY: in presentation and graphic representation.
6. EMPLOY: computer-aided graphic and editing tools to streamline workflow.

NAAB PERFORMANCE CRITERIA:

There are no NAAB Performance Criteria defined for this course.

STRUCTURE AND ORGANIZATION

Students will be graded on assignments, the physical and web-hosted portfolio, and class participation. Students will develop cumulative work throughout the semester that will inform the final portfolio. Assignments will be issued to engage self-assessment and reflection, written, verbal, and graphical representation. Lectures will be enhanced through discussions, small group learning, and peer reviews. Student participation is essential to creating a dynamic learning environment. Students will get time during class to explore topics and complete assignments; however, sufficient research and execution will require additional time outside of scheduled hours. Students will complete assignments on time and upload their work to D2L to receive full credit.

COURSE COMPONENTS + CRITERIA OF EVALUATION

This course is designed to achieve the learning objectives indicated. At any point modifications may be adapted to better serve student learning. The Instructor will notify the students in advance of such changes; students for their part will notify the professor within one week of such notification if the proposed changes will cause undue hardship. Students acknowledge the dynamic nature of this course.

Course expectations and outcomes will vary based on individual majors and academic level.

Graduate students will explore a topic of interest and give a class tutorial in a mode of architectural visualization, computer graphics, and web-based formats.

The graded components of this course and their criteria of evaluation are currently anticipated to be as follows, but are subject to change as set forth above:

PORTFOLIO

The portfolio will be developed through iterative engagement and assignments throughout the course. Students will use Adobe Creative Suites to edit and compose images, develop layout templates, and work samples, for the completion of a physical and digital, web-hosted portfolio.

WRITTEN

Graphic work will be supplemented with written documents to provide project narratives and descriptions. In addition to the portfolio written documents, students will compose and format a resume and cover letter for a complete, professional package. Students will compose and present an elevator pitch.

MOCK INTERVIEW

Students will prepare all documents for an end-of-semester mock interview facilitated by professionals in practice.

PARTICIPATION

Student participation is an essential part of this workshop and enhances the learning experience. Participation will be graded according to the level of student engagement through: attendance, constructive discussion, inquiry and investigation, peer and small group discussion, providing assistance to classmates, collaboration, and overall classroom productivity.

***TUTORIAL – FOR GRADUATE STUDENTS ONLY**

Graduate students will be individually responsible for researching and presenting a tutorial to the class one time during the semester. The topic will be chosen and a presentation date will be identified during the first weeks of class.

WEIGHT

The Course Components are forecast to be:

PORTFOLIO		**50**	
assessment	10		
template	10		
draft	10		
digital	10		
physical	60		
	100		
WRITTEN		**20**	
resume	40		
cover letter	40		
elevator pitch	20		
	100		
MOCK INTERVIEW		**10**	
PARTICIPATION		**20**	***10**
***TUTORIAL (GRADUATE ONLY)**			***10**
Total			**100%**

REFERENCES

REQUIRED

There are no required texts for this course.

GENERAL

"**A Student's Guide to the Architectural Portfolio**," *The Build LLC blog*, April 1, 2014, http://blog.buildllc.com/

Currier, Danielle and Larry Volk. ***No Plastic Sleeves: Portfolio and Self-Promotion Guide for Photographers and Designer**s*. New York, NY: Focal Press, 2014

Engen, Kathy and Linda Heath. ***[Goal]: A Curated Guide for the Modern Day Job Hunt***. Wise Ink Creative Publishing, Minneapolis 2017

Greusel, David. ***Architect's Essentials of Presentation Skills***, John Wiley & Sons Inc., New York 2002

Stahl, Ashley. "**The Perfect Elevator Pitch**," *The Ashley International blog*, January 27, 2014, accessed July 30, 2017, http://ashleyinternational.com/

Hancock, Ellen. "**Announcing the winners of Architect UK Portfolio Competition 2017!**," *Architect Features*, July 27, 2016, accessed July 28, 2017, http://archinect.com/

Hubbard, Brandon. "**6 Tips on Creating the Perfect Two-Page Portfolio to Win a Job Interview**," *ArchDaily News*, August 7,2015, accessed July 28, 2017, http://www.archdaily.com/

Hubbard, Brandon. "**How to Write the Perfect Architecture Resume (CV)**," *The Architect's Guide blog*, April 12, 2017, accessed July 28, 2017, https://www.thearchitectsguide.com/

Kogan, Gabriel translated by Matthew Valletta. "**12 Tips For Making an Outstanding Architecture Portfolio**," *ArchDaily News*, February 1, 2016, accessed July 28, 2017, http://www.archdaily.com/

Lewis, Karen. ***Graphic Design for Architects: A Manual for Visual Communication***. New York, NY: Routledge, 2015

Linton, Harold. ***Portfolio Design (Fourth Edition)***. New York, NY: W.W. Norton & Company, 2012

SEMESTER SCHEDULE

WEEK	DAY	ROOM	CLASS
1	TU Aug 22 TH Aug 24	205 302A	Introductions and Course Overview Lecture: Portfolio Overview **Issued: Assignment 1**
2	TU Aug 29 TH Aug 31	205 302A	Computer: Orientation and Work Flow Lecture: Assessment **Due: Assignment 1**
3	TU Sep 05 TH Sep 07	205 302A	Computer: InDesign Lecture: Audience and Precedent **Issued: Assignment 2**
4	TU Sep 12 TH Sep 14	205 302A	Computer: Creative Suites **Due: Assignment 2**
5	TU Sep 19 TH Sep 21	205 302A	Computer: Graphic Design Lecture: Layout **Issued: Assignment 3**
6	TU Sep 26 TH Sep 28	205 302A	Computer: Layout Lecture: Images and Text **Due: Assignment 3**
7	TU Oct 03 TH Oct 05	No Class 302A	Design Studio 301 Field Trip Lecture: Resume, Cover Letter, and Elevator Pitch **Issued: Assignment 4**
8	TU Oct 10 TH Oct 12	205 302A	Computer: Graphic Design **Due: Assignment 4**
9	TU Oct 17 TH Oct 19	205 302A	Computer: Lecture: Representation
10	TU Oct 24 TH Oct 26	205 302A	Computer: Lecture:
11	TU Oct 31 TH Nov 02	205 302A	Computer: Lecture: Printing and Binding
12	TU Nov 07 TH Nov 09	205 302A	Computer: Work Day Lecture: Digital Format and Web-hosting **Due: Portfolio Draft**
13	TU Nov 14 TH Nov 16	205 302A	***Tutorial Presentations Graduate Students*** **Mock Interviews** and Work Day
14	TU Nov 21 TH Nov 23	205 No Class	***Tutorial Presentations Graduate Students*** Thanksgiving
15	TU Nov 28 TH Nov 30	205 302A	**Mock Interviews** and Work Day **Mock Interviews** and Work Day
16	TU Dec 12	-	**Due: Final Portfolio 5:00pm Smith House l Koosmann's office**

POLICIES + STATEMENTS

GRADING

Evaluations will be distributed at intervals during the semester and will indicate performance according to the stated criteria of evaluation. Students are expected to use this system to monitor and adjust their performance and to seek additional support from the professor, as appropriate. Evaluations will be based primarily on student's work, rather than effort expended. Students are expected to acquire knowledge and skill, not merely *endeavor* to do so.

CHANGE

By its very nature, the practice of architecture requires an ability to adapt to change, both by responding to unforeseen events in the delivery of services and in the revision of the work. Because an ability to adapt and embrace change is an essential skill in our profession, it may be considered in evaluations for this course.

LATE WORK

Work submitted after the deadline will be graded one or more letter grades below what would have been awarded had the work been submitted on time, appropriate to the length of delay and the importance of the assignment, at the Instructor's discretion.

10% assignment deduction for each 24 hour period past the due date

INCOMPLETE WORK

Work submitted that is incomplete will be graded one or more letter grades below what would have been awarded had the work been complete, appropriate to the extent of incompletion and the importance of the assignment, at the Instructor's discretion.

GRADING SCALE

Grades will be defined as follows:

scale	undergraduate criteria	graduate criteria
A (90-100)	Excellence in most areas of evaluation, high competence in others.	Excellence to High Competence in most areas of evaluation.
B (80 to <90)	High Competence in most areas of evaluation, competence in others.	Very good to competent work in most areas of evaluation; fulfilled requirements.
C (70 to <80)	Fulfilled all course requirements with competence. (Competence: the answering of all requirements; adequate fitness, ability, capacity; sufficient for the purpose.)	Less than complete or competent work in some areas; requirements lacking and/or sub-standard quality.
D (60 to <70)	Less than competent work in one or more areas of evaluation. One or more requirements lacking and/or sub-standard quality.	Substantially incomplete or inadequate quality.
E (0 to <60)	Substantially incomplete work and/or work of an unsatisfactory quality.	Grossly inadequate.
Incomplete	Work left incomplete at the end of the semester *due to circumstances beyond the student's control*.	Work left incomplete at the end of the semester *due to circumstances beyond the student's control*.

In co-convened and joint assignments, graduate students will be expected to produce a greater quantity or higher quality of work than their undergraduate peers in meeting these criteria.

GRADE APPEAL

Students who believe they have been unfairly graded should follow the multi-step procedure outlined in the CAPLA Grade Appeal:
http://architecture.arizona.edu/student-forms-and-procedures

ATTENDANCE

Students are required to attend all classes for their duration. Upon the **3rd Absence** (whether in part or for a session's entirety), the final grade will be lowered by 5% per absence.

The UA's policy concerning Class Attendance, Participation, and Administrative Drops is available at:
http://catalog.arizona.edu/policy/class-attendance-participation-and-administrative-drop

EXCEPTIONS

The UA policy regarding absences for any sincerely held religious belief, observance or practice will be accommodated where reasonable:
http://policy.arizona.edu/human-resources/religious-accommodation-policy.

Observances pre-approved by the UA Dean of Students will be honored, as listed at:
http://www.registrar.arizona.edu/religiousholidays/calendar.htm

Absences pre-approved by the UA Dean of Students (or Dean Designee) will be honored:
https://deanofstudents.arizona.edu/absences

EXCUSED ABSENCE

The Instructor may grant an Excused Absence for an outside educational opportunity at the request of the Director or another instructor. Students granted an Excused Absence remain responsible for turning in work on time, even if due on the excused date, as well as getting all information and assignments covered during an Excused Absence. An Excused Absence does not count against the number of Absences specified above.

EMERGENCY ABSENCE

The Instructor may grant an Emergency Absence for bona fide events outside the control of a student, such as sudden serious illness, bodily harm, or immediate family emergency.

written excuse

Emergency Absences must be certified by a professional in writing, such as doctor's excuses, police reports, or evidence of funeral. Written evidence must be submitted by the student within two weeks of the event and must include the certifying professional's contact information. Faculty or staff may verify the legitimacy of the source but may not inquire into the student's related personal information.

validity

"Immediate Family" is limited to parents, children, stepchildren, siblings, and cohabitating partners and spouses. To qualify as an Emergency Absence, the illness or event must be an actual emergency (i.e., events that require immediate attention); otherwise it will be treated as a standard Absence. Scheduled doctor consultations do not qualify.

make-up work

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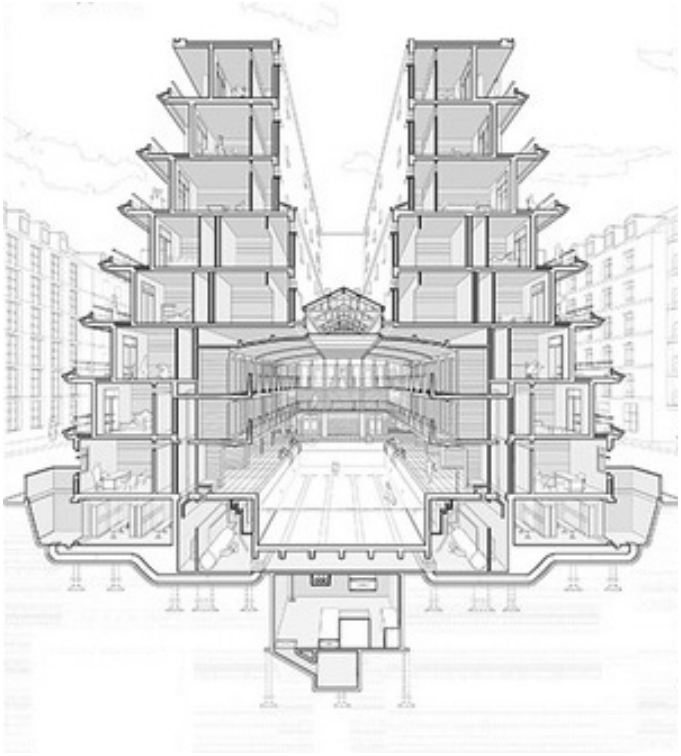
end of syllabus

TEMPLATE VERSION: 2017.03.22

ARC 521A: Integrated Technologies 1, 3-CU, 2018 CAPLA: School of Architecture
Instructor: Christopher Domin University of Arizona



COURSE DATA

ARC 521A Integrated Technologies 1
Fall 2018
3-credit units

FACULTY
Christopher Domin
Architect + Associate Professor
Office: CAPLA West #312
Email: *cdomin@u.arizonaa.edu*

CO-REQUISITES
ARC 510b

ENROLLMENT
This course is limited to 24 students.

CONTACT
Monday (204c) 9:00 – 11:15 a.m.
Tuesday (204c) 9:00 – 11:15 a.m.

OFFICE HOURS
Tuesday (312 CAPLA West) 8:00 – 9:00 a.m.

WEB +D2L
This course will be supported over D2L.

FULFILLMENT
This course satisfies a Technology Stream requirement for the M.Arch degree.

COST
Students are responsible for all personal expenses, including that required for class projects, course documentation and a research field trip. Estimated average expense: $100-$125 (Modeling expenditures will vary greatly contingent upon design intention, material selection and resourcefulness). $100-$150 (Field trip expenditures will vary greatly contingent upon proactive planning and resourcefulness).

COURSE CONTENT

CATALOGUE DESCRIPTION
Introduction to principles of structures, materials and methods of construction, and environmentally adaptive systems as integrated technologies.

COURSE DESCRIPTION
This is the first integrated technologies course introducing principles and precedent of structures (40% course content), materials and methods of construction (40% course content), and environmentally adaptive systems (20% course content). Through analysis of integrated technology, students gain an understanding of how building technologies work together as a system.

COURSE OBJECTIVES
1. Understanding of the fundamental principles of material properties.
2. Understanding of fundamental structural principles, forces, and elements.
3. Understanding of thermal properties as they relate to various building materials.
4. Awareness of relevant precedent demonstrating material, structural and thermal principles.

Image: 13 Rue Amiraux, Henri Sauvage Architect from Manual of Section

COURSE OUTCOMES

1. Awareness of regional precedents demonstrating material assemblies, structural systems and environmentally adaptive systems in small to medium scale buildings.
2. Understanding of traditional and emergent building structural systems, materials, and assemblies.
3. Ability to understand the structural design logic of a small-to-medium scale buildings and the interrelationship of structural systems, elements, and connections.
4. Understanding of passive systems in small-to-medium scale buildings

NAAB PERFORMANCE CRITERIA:
The material covered in this course offers students proficiency (at the indicated level of accomplishment) in the following subject areas as defined by the National Architectural Accrediting Board (NAAB), http://www.naab.org/accreditation/2009_Conditions.aspx:1

A.6.u Use of Precedents ABILITY to examine and comprehend the fundamental principles present in relevant precedents and to make informed choices about the incorporation of such principles into architecture and urban design projects.
A.2.i Design Thinking Skills ABILITY to raise clear and precise questions, use abstract ideas to interpret information, consider diverse points of view, reach well-reasoned conclusions, and test alternative outcomes against relevant criteria and standards.
B.6.i Environmental Systems ABILITY to demonstrate the principles of environmental systems' design, how design criteria can vary by geographic region, and the tools used for performance assessment. This demonstration must include active and passive heating and cooling, solar geometry, daylighting, natural ventilation, indoor air quality, solar systems, lighting systems, and acoustics.
B.8.pi Building Materials and Assemblies, Introductory claim: UNDERSTANDING of the basic principles used in the appropriate selection of interior and exterior construction materials based on their inherent performance, including environmental impact and reuse.

STRUCTURE AND ORGANIZATION
Course organization is included in WEIGHT.

COURSE COMPONENTS + CRITERIA OF EVALUATION
This course is designed to achieve the learning objectives indicated. Because architecture is an art as well as a science, and because every student and student-group present new challenges in the teaching of design, instructors may add, alter, or modify assignments, criteria, or project weights in order to adapt to evolving circumstances that are inherent in the practice of Architecture, and also to evaluate students' abilities to make such adaptations. The Instructor will notify the students in advance of such changes; students for their part will notify the professor within one week of such notification if the proposed changes will cause undue hardship. Students acknowledge the dynamic nature of this course.

Students will lead and participate in graduate lecture and seminar discussions related to assigned readings as indicated on the Semester Schedule.

The graded components of this course and their criteria of evaluation are currently anticipated to be as follows, but are subject to change as set forth above:

PROJECTS
Semester assignments will include an initial precedent study and two subsequent integrated technologies projects with due dates as per the Semester Schedule.

COLLABORATION
Student will take responsibility for aspects of leadership as well as teamwork on collaborative projects as per project briefs.

[1]**Understanding:** The capacity to classify, compare, summarize, explain and/or interpret information.
Ability: Proficiency in using specific information to accomplish a task, correctly selecting the appropriate information, and accurately applying it to the solution of a specific problem, while also distinguishing the effects of its implementation.

DOCUMENTATION

Students will be evaluated on the thorough and timely representation and documentation of projects.

WEIGHT

The Course Components are forecast to be:

PROJECT	
Regional Precedent	10
Integrated project 1	10
Integrated project 2	30
EXAM	
Midterm	25
Final	25
TOTAL	100%

REQUIRED READING

Constructing Architecture: Materials, Processes, Structures [Paperback]
Andrea Deplazes, ed. Current Edition, Birkhäuser Architecture.

Louis I. Kahn: Building Art and Building Science [Paperback]
Thomas Leslie, George Braziller.

Heschong, Lisa. *Thermal Delight in Architecture.* Cambridge, Mass: MIT Press, 1979.

GENERAL READING

Allen, Edward & Joseph Iano. *The Architect's Studio Companion: Rules of Thumb for Preliminary Design.* Wiley, 5th Edition, 2011.
Alread, Jason and Leslie, Thomas and Whitehead, Rob. *Design Tech.* Routledge, 2nd Edition. 2014.
Ambrose, James & Patrick Tripeny. *Building Structures.* Wiley, 3rd Edition, 2011.
Banham, Reyner. *The Architecture of the Well-Tempered Environment*. Chicago: University of Chicago, 1969.
Billington, David P. *The Tower and the Bridge*. Basic Books Inc, 1983.
Ching, Francis D.K. *Building Structures Illustrated: Patterns, Systems, and Design.* Wiley, 2nd Edition, 2013.
Dabby, Ramsey & Ashwani Bedi. *Structure for Architects: A Primer.* Wiley, 1 Edition, 2012.
Daniels, Klaus. *Low-Tech Light-Tech High-Tech: Building in the Information Age.* Translated by Elizabeth Schwaiger. Berlin, Germany: Birkhauser, 2000.
Engel, Heino. *Structure Systems.* DVA, Stuttgart. 1967.
Fernández-Galiano, Luis. *Fire and memory: on architecture and energy*. Cambridge, Mass: MIT Press, 2000.
McCleary, Peter, "An Interpretation of Technology." Journal of Architectural Education, 37/2 (Winter 1983): 2-4.
Meistermann, Alfred. *Loadbearing Systems.* Birkhauser, 2007.
Minke, Gernot. Building with Earth. Birkhauser, 2006.
Pallasmaa, Juhani. *The Eyes of the Skin: Architecture and the Senses*. London: Academy Editions, 1996
Rael, Ronald. *Earth Architecture*. New York: Princeton Architectural Press, 2010.
Sandaker, Bjorn & Arne Eggen. *The Structural Basis of Architecture.* Routledge, 2nd Edition.
Schodek, Daniel and Bechthold, Martin. *Structures.* Seventh Ed. Prentice Hall, 2014.
Silver, Pete and McLean, Will and Evans, Peter. *Structural Engineering for Architects: A Handbook*. Laurence King Publishing. 2013.
Underwood, James. *Structural Design: A Practical Guide for Architects.* Wiley, 2nd Edition, 2007.
Zeumer, Martin, et.al. *Energy Manual: Sustainable Architecture.* Basel, Switzerland: Birkhåuser, 2008.

SEMESTER SCHEDULE

A course calendar is attached to this syllabus.

POLICIES + STATEMENTS

GRADING

Evaluations will be distributed at intervals during the semester and will indicate performance according to the stated criteria of evaluation. Students are expected to use this system to monitor and adjust their performance and to seek additional support from the professor, as appropriate. Evaluations will be based primarily on student's work, rather than effort expended. Students are expected to acquire knowledge and skill, not merely *endeavor* to do so.

CHANGE

By its very nature, the practice of architecture requires an ability to adapt to change, both by responding to unforeseen events in the delivery of services and in the revision of the work. Because an ability to adapt and embrace change is an essential skill in our profession, it may be considered in evaluations for this course.

LATE WORK

Work submitted after the deadline will be graded one or more letter grades below what would have been awarded had the work been submitted on time, appropriate to the length of delay and the importance of the assignment, at the Instructor's discretion.

INCOMPLETE WORK

Incomplete work will be graded as such and points will only be given for the work that is submitted.

GRADING SCALE

Grades will be defined as follows:

scale	graduate criteria
A (90-100)	Excellence to High Competence in most areas of evaluation.
B (80 to <90)	Very good to competent work in most areas of evaluation; fulfilled requirements.
C (70 to <80)	Less than complete or competent work in some areas; requirements lacking and/or sub-standard quality.
D (60 to <70)	Substantially incomplete or inadequate quality.
E (0 to <60)	Grossly inadequate.
Incomplete	Work left incomplete at the end of the semester *due to circumstances beyond the student's control*.

GRADE APPEAL

Students who believe they have been unfairly graded should follow the multi-step procedure outlined in the CAPLA Grade Appeal:
http://architecture.arizona.edu/student-forms-and-procedures

ATTENDANCE

Students are required to attend all classes for their duration. Upon the 3rd Absence (whether in part or for a session's entirety), the final course grade will be lowered by 5% per each unexcused absence beyond the initial 2.

The UA's policy concerning Class Attendance, Participation, and Administrative Drops:

http://catalog.arizona.edu/policy/class-attendance-participation-and-administrative-drop

EXCEPTIONS

The UA policy regarding absences for any sincerely held religious belief, observance or practice will be accommodated where reasonable:
http://policy.arizona.edu/human-resources/religious-accommodation-policy.

Observances pre-approved by the UA Dean of Students will be honored, as listed at:
http://uhap.web.arizona.edu/policy/appointed-personnel/7.04.02

Absences pre-approved by the UA Dean of Students (or Dean Designee) will be honored:
https://deanofstudents.arizona.edu/absences

EXCUSED ABSENCE

The Instructor may grant an Excused Absence for an outside educational opportunity at the request of the Director or another instructor. Students granted an Excused Absence remain responsible for turning in work on time, even if due on the excused date, as well as getting all information and assignments covered during an Excused Absence. An Excused Absence does not count against the number of Absences specified above.

EMERGENCY ABSENCE

The Instructor may grant an Emergency Absence for bona fide events outside the control of a student, such as sudden serious illness, bodily harm, or other emergency.

written excuse

Emergency Absences must be certified by a professional in writing, such as doctor's excuses, police reports, or evidence of funeral. Written evidence must be submitted by the student within two weeks of the event and must include the certifying professional's contact information. Faculty or staff may verify the legitimacy of the source but may not inquire into the student's related personal information.

validity

"Immediate Family" is limited to parents, children, stepchildren, siblings, and cohabitating partners and spouses. To qualify as an Emergency Absence, the illness or event must be an actual emergency (i.e., events that require immediate attention); otherwise it will be treated as a standard Absence. Scheduled doctor consultations do not qualify.

make-up work

Students granted an Emergency Absence remain responsible for turning in all work as well as obtaining all information and assignments covered in their absence. At the Instructor's discretion, the student may be granted extended deadlines appropriate to the impact of the event. Instructors are not obliged to grant Emergency Absences if the period missed makes it unlikely for the student to be able to achieve a competent level of accomplishment consistent with expectations for the rest of the class; in such cases students are advised to drop the course or seek a medical withdrawal.

DOCUMENTATION STANDARDS

A professional standard in contract documents insures that every page indicates sufficient information to link it to its host set and, similarly, every drawing provides sufficient metadata that it is clearly linked to its dataset. In keeping with this data standard, documentation in this course will comply with the following standards:

PROJECT DOCUMENTATION

Every sheet of every project will indicate the following information on its face:

- ☐ course number
- ☐ semester/year
- ☐ professor
- ☐ student author(s)
- ☐ current date of the work
- ☐ page or sequence number

DRAWING DOCUMENTATION

Every drawing will indicate:

- ☐ drawing type (plan, section, elevation, perspective, axonometric, etc.)[2]
- ☐ graphic scale[3]
- ☐ orientation indicator (north arrow for plan; directional description for vertical projections (e.g., South Elevation; Perspective Looking North)
- ☐ reference indicators (section and elevation markers, blow-up references) that link the drawing to relevant documents

ARCHIVE DOCUMENTATION

Work shall be submitted for this course that demonstrates both the learning objectives and the final project(s), as requested by the professor. Digital files shall be submitted in the following naming convention:
ARCXXX_YYYYS_category_Lastname_F

where
ARCXXX is the course number, e.g., ARC401;
YYYYS is the year and semester (F/S/SUM), e.g., 2013F;
category is the assignment type or drawing type, e.g., SitePlan, LongitudinalSection3, Homework4; and
Lastname_F is the student's last name and first initial

CLASSROOM BEHAVIOR + STUDIO CULTURE

As a condition of enrollment, students agree to abide by the standards set forth in the Student Code of Conduct:
http://azregents.asu.edu/rrc/Policy Manual/5-308-Student Code of Conduct.pdf

The use of cell phones, pagers, electronic devices or other materials unrelated to course specific activities are not permitted during course hours; neither are unauthorized discussions amongst students or other disturbances.

All electronic media are limited to narrowcasting (headsets) at all times, set to a volume that is not audible to others. Per the University policy, non-assist animals are forbidden from University buildings.

Students are responsible for checking their UA email and course D2L sites Monday-Friday, at least once every twenty-four hours, for communications from the Professor.

ACADEMIC POLICIES

Academic policies can be found in The University of Arizona General Academic Catalog:
http://catalog.arizona.edu/allcats.html

along with the UA Final Exam Regulations:
https://www.registrar.arizona.edu/courses/final-examination-regulations-and-information

and Final Exam Schedule:
http://www.registrar.arizona.edu/schedules/finals.htm

Requests for incomplete (I) or withdrawal (W) must be made in accordance with University policies:
http://catalog.arizona.edu/policy/grades-and-grading-system#incomplete
http://catalog.arizona.edu/policy/grades-and-grading-system#Withdrawal

ACADEMIC INTEGRITY

Students are encouraged to share intellectual views and discuss freely the principles and applications of course materials. However, graded work/exercises must be the product of independent effort unless otherwise instructed. Students are expected to adhere to the UA Code of Academic Integrity as described in the UA General Catalog:
http://deanofstudents.arizona.edu/academic-integrity/students/academic-integrity

INCLUSIVE EXCELLENCE

This course will follow the UA diversity initiative designed to create a welcoming environment for all.
http://diversity.arizona.edu/

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[2] A "DETAIL" is not a drawing type. Every drawing is a detail, considered from some perspective.
[3] It is essential that all drawings have *graphic* scales, as notational scales are meaningless with digital documentation and dissemination.

NONDISCRIMINATION + ANTI-HARASSMENT

Students are encouraged to express well-formed opinions and their reasons there for. They are expected to create a tolerant and open environment where such opinions can be expressed without bullying or discrimination. The University is committed to creating and maintaining an environment free of discrimination:
http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy

ELECTIVE NAME AND PRONOUN USE

This course sponsors an educational environment of inclusion and mutual respect, including elective gender pronoun use and self-identification; rosters indicating such choices will be updated throughout the semester, upon student request.

PLAGIARISM

The practice of taking someone else's work or ideas and passing them off as one's own is known as plagiarism and is a serious violation of academic and professional ethics. The consequences for plagiarism are severe, including a failing grade for the course, suspension, or expulsion from the University per the UA policy on plagiarism: http://deanofstudents.arizona.edu/codeofacademicintegrity

TESTING: In any testing situation, whether graded or not, students shall not refer to outside resources (whether printed materials, such as books and journals, texts, Internet, e-mail, Google, instant messaging, or other resources) unless explicitly instructed to do so by the professor of record. Students operating digital devices in testing situations when not authorized to do so shall be assumed to be cheating.

CITATION: Plagiarism applies to professional and public works, as well as to the work produced by peers. Students shall be assiduous in citing the work of others, whether in copying a graphic, either in part or in total, in quoting a text, or in building upon ideas, designs, or forms. Citation is used to give credit to the original author and to allow others to identify and trace source material.

Building upon the work of others is an inevitable part of learning and inherent to scholarship; hence it is an acceptable practice as long as the original sources are properly cited. Textual citations should follow the *Chicago Manual Of Style*. Citations of buildings and other designed works should include both a) project and b) source information:

a) project citation: the work's name or title, its location, the name of its designer(s), and the date designed (or, if built, constructed).

b) source citation: the source from which the information or illustration of the work was obtained formatted according to the Notes and Bibliography format specified in the *Chicago Manual Of Style:*
http://www.chicagomanualofstyle.org/tools_citationguide.html

PRODUCTION: Using the labor of others, whether paid or freely given, offers the beneficiary an unfair advantage relative to peers and is prohibited unless expressly authorized in writing by the professor(s) of record.

COPYRIGHT

Materials in this course may be copyrighted. They are intended for use only by students registered and enrolled in the course and are only for instructional activities associated with and for the duration of the course. They may not be retained in another medium or disseminated, including being uploaded to file-sharing sites on the internet or elsewhere, without the written permission of the instructor. They are provided in compliance with the provisions of the Teach Act:
http://www.copyright.com/Services/copyrightoncampus/basics/teach.html.

Students should refer to University copyright polities:
http://www.library.arizona.edu/help/tutorials/copyright/index.html

THREATENING BEHAVIOR

The UA Threatening Behavior by Students Policy prohibits threats of physical harm to any member of the University community, including to oneself:
http://policy.arizona.edu/education-and-student-affairs/threatening-behavior-students

ACCESSIBILITY AND ACCOMMODATIONS

Universal Design is the obligation of every architect and should be a quality of every environment. It is also the University's goal that learning experiences be accessible. Students who anticipate or experience physical or academic barriers based on disability, should discuss them with the Instructor; students are encouraged to explore possible accommodations with the Disability Resources Center (520-621-3268).
http://drc.arizona.edu/instructors/syllabus-statement

RETENTION OF WORK

The School of Architecture may retain samples of student work produced in this course as part of the accreditation process of the National Architectural Accrediting Board, Inc. (NAAB) or other University purposes. This may include models, mock-ups, prints, and other physical documents. Students will be notified of work that needs to be retained and shall submit those to the Archivist or the Instructor, as determined by the Instructor, before grades will be released. After accreditation review, the owners of the retained work will be given the opportunity to reclaim it at their own expense (at the name and email address affixed to the product by the student at the time of submittal) for up to 30 days after notification. By contributing work students aid the School in certifying its work, which is essential to the standing and reputation of the institution, for which the Faculty is grateful.

end of syllabus

TEMPLATE VERSION:
2017.08.24—Section 2: changes to 100% Engagement (now Student Engagement and Career Development);
2017.09.11—Section 3: added copyright section and deleted copyright clause at end-of-syllabus footer.
2017.10.24—Section 1: Added Honors clause. Section 3: revised Emergency Absence policy.
2018.01.24—Section 1: Changed title of OBJECTIVES AND OUTCOMES to LEARNING OUTCOMES at request of the Graduate College; added tips and a guide to distinguishing between Learning Outcomes and Course Objectives.
Section 2, COURSE STRUCTURE AND ORGANIZATION: Added clarifying notes requested by the Office of Academic Affairs.
Section 3, ATTENDANCE: Revised clause to make it clear that the grade penalty takes effect after the specified number of allowed unexcused absences; Added notes pertaining to online courses; updated link to UA policy. MAKE-UP WORK: Clause revised according to Graduate College.
ACADEMIC POLICIES: Expanded to include new required sections by Office of Academic Affairs.
2018.06.14—Section 2: added MatLAB online safety certification.

ARC 521b: Integrated Technologies II, 3-CU, 2019 SoA, CAPLA
Instructor: Aletheia Ida University of Arizona

COURSE DATA

ARC 521b Integrated Technologies II
Spring 2019
3-credit units

FACULTY

Aletheia Ida, Ph.D., Assistant Professor
School of Architecture, Office Rm. 203e
aida@u.arizona.edu
Office hours: W. 9am-11am, or by appointment

CRITERIA

FULFILLMENT

This course is required for the Master of Architecture.

PREREQUISITES

ARC 521a or admission to M.Arch II.

CO-REQUISITES

ARC510c

ENROLLMENT

This course is limited to 24 students.

CONTACT

TU 2:30pm – 3:20pm	Arch. Rm. 205A
TU 3:30pm – 4:45pm	Arch. Rm. 205 (Computer Lab)
TH 2:30pm – 3:20pm	Arch. Rm. 205A
TH 3:30pm – 4:45pm	Arch. Rm. 205A (or Material Lab, see schedule)

WEB + D2L

This course will be supported over D2L

COST

Costs associated with required components of the course—required lab projects and/or field trip[s]—will be the responsibility of the student. Out-of-town trips may be organized in coordination with the concurrent design studio, at the option of the Instructor. Estimated average expense: $100-$200 (modelling expenditures will vary greatly contingent upon design intention, material selection and resourcefulness). $100-$150 (Field trip expenditures will vary greatly contingent upon proactive planning and resourcefulness).

COURSE CONTENT

CATALOGUE DESCRIPTION

This course introduces fundamentals of small to medium building structures, materials and methods, and environmentally adaptive architectural design.

COURSE DESCRIPTION

This is the second integrated technologies course. It covers precedents and principles of structural systems (40% course content), materials and methods of construction (20% course content), and environmentally adaptive systems (40% course content) in small to medium scale buildings. By presenting the course material as integrated technologies, students gain a deep understanding of how building technologies work together.

LEARNING OUTCOMES

Upon successful completion of this course, students will have an:

1. Awareness of precedents demonstrating material assemblies, structural systems and environmentally adaptive systems in small to medium scale buildings.

2. Understanding of systems and assemblies as communicated through technical drawings, detailed models, and digital modelling and analysis.

3. Ability to conceive and develop a schematic comprehensive structural design of a small-to-medium scale building and understanding of the interrelationships of structural systems, elements, and connections.

4. Ability to identify structural loading conditions and reactions / internal stress through physical model testing as part of an iterative design process driven by design intent and building synthesis.

5. Understanding of appropriate selection processes for environmentally adaptive systems relative to performance and choreographed environmental flows (climate, solar, light, airflow); understanding of how these choices affect building synthesis and site response.

6. Understanding of passive systems as the preferable design agenda, with active systems used to supplement performance, in small-to-medium scale buildings; understanding of how to conceive and design building envelope assemblies in line with environmentally adaptable systems integration.

NAAB PERFORMANCE CRITERIA:

The material covered in this course offers students proficiency (at the indicated level of accomplishment) in the following subject areas as defined by the National Architectural Accrediting Board (NAAB) http://www.naab.org/wp-content/uploads/01_Final-Approved-2014-NAAB-Conditions-for-Accreditation.pdf[1]

The “I” designation in each of these claims is designated by CAPLA as an introductory claim and is not intended to fully satisfy NAAB criteria.

B.5.i Structural Systems
ABILITY to demonstrate the basic principles of structural systems and their ability to withstand gravitational, seismic, and lateral forces, as well as the selection and application of the appropriate structural system.

B.6.i Environmental Systems
ABILITY to demonstrate the basic principles of structural systems and their ability to withstand gravitational, seismic, and lateral forces, as well as the selection and application of the appropriate structural system.

B.7.i Building Envelope Systems and Assemblies
UNDERSTANDING of the basic principles involved in the appropriate selection and application of building envelope systems relative to fundamental performance, aesthetics, moisture transfer, durability, and energy and material resources.

B.10.i Financial Considerations
UNDERSTANDING of the fundamentals of building costs, which must include project financing methods and feasibility, construction cost estimating, construction scheduling, operational costs, and life-cycle costs.

C1.ai Research (Applied)
UNDERSTANDING of the theoretical and applied research methodologies and practices used during the design process.

[1] **Understanding:** The capacity to classify, compare, summarize, explain and/or interpret information. **Ability:** Proficiency in using specific information to accomplish a task, correctly selecting the appropriate information, and accurately applying it to the solution of a specific problem, while also distinguishing the effects of its implementation.

COURSE STRUCTURE AND ORGANIZATION

The class convenes in two basic formats: collaborative learning lectures and lab sessions. This course is designed around four primary learning modules. Each learning module lasts for a period of 3-weeks during which time students will develop and complete a lab assignment for submission at the end of each module. There is a fundamentals quiz in the beginning of the semester to aid in assessment of foundation knowledge in order to address any gaps before advancing with the course learning contents. The students will also submit a final project based on a synthesis of all prior lab assignments. The lab assignments and final project are focused on the structural design development and iterative environmental analysis of an architect's studio for the individual student to be located in a climate site of their choice anywhere in the world.

COURSE COMPONENTS + CRITERIA OF EVALUATION

This course is designed to achieve the learning objectives indicated. Because architecture is an art as well as a science, and because every student and student-group present new challenges in the teaching of design, instructors may add, alter, or modify assignments, criteria, or project weights in order to adapt to evolving circumstances that are inherent in the practice of Architecture, and also to evaluate students' abilities to make such adaptations. The Instructor will notify the students in advance of such changes; students for their part will notify the professor within one week of such notification if the proposed changes will cause undue hardship. Students acknowledge the dynamic nature of this course.

The graded components of this course and their criteria of evaluation are currently anticipated to be as follows, but are subject to change as set forth above:

EXAMS

An early exam will be conducted to evaluate the learning performance of individual students on a baseline understanding of physics fundamentals. Exam content will be based on lecture materials and assigned readings.

LAB PROJECTS

Lab projects will be executed for each fundamental segment of the course and will be based on a simple building program that will be assigned to all students individually. The lab projects consist of both physical and digital empirical methods of analysis and evaluation. Labs will be primarily conducted in-class during dedicated lab sessions and will be executed following directed instruction for methods to be employed. The lab projects are intended to serve as a pedagogical tool for students to engage in applied learning of the contents delivered during the lectures and in the assigned readings for this course.

FINAL PROJECT

The final project for the course is a comprehensive synthesis of the accumulative and iterative progression of lab project exercises. The final project is intended to allow students a final iteration on their proposed design developed through the previous lab exercises. Final projects must improve upon the earlier studies and integrate the appropriate balance of design strategies for the given climate conditions, regional context, and structural forces.

PARTICIPATION

Students are expected to actively participate in all course activities. This requires that students attend all classes as per the Course Schedule and be prepared for active engagement as per any assigned readings or assignments. Attendance at classes will be regularly documented, and pop quizzes in lectures may be conducted based on assigned readings or current lecture material. Active participation will be required at all lab sessions, which requires students to be present with the required lab materials appropriately prepared for assigned lab activities.

READING ASSIGNMENTS

Readings will be assigned on a weekly basis as per content from the required textbooks or otherwise posted on the course D2L site. The reading assignments are intended to prepare students for active listening, participation, and engagement during lecture and lab sessions, and thus should be completed prior to the beginning of class as indicated on the course schedule. Pop Reading quizzes may be conducted during lecture sessions without prior notice and will contribute to the student's Participation grade.

WEIGHT

The Course Components are forecast to be:

EXAMS		**10**
Exam 1 Physics Fundamentals	10	
LAB PROJECTS		**60**
Lab 01 Structures + Climate Fundamentals	15	
Lab 02 Framing + Solar Fundamentals	15	
Lab 03 Envelope + Daylighting Fundamentals	15	
Lab 04 Detailing + Airflow Fundamentals	15	
FINAL PROJECT		**25**
Comprehensive Passive Design	25	
PARTICIPATION		**5**
Total Weight		**100**

REFERENCES

REQUIRED

Millais, Malcolm. Building Structures: Understanding the Basics. Routledge, 3rd Edition, 2017.
Zeumer, Martin, et.al. Energy Manual: Sustainable Architecture. Basel, Switzerland: Birkhäuser, 2008.
http://site.ebrary.com.ezproxy1.library.arizona.edu/lib/arizona/detail.action?docID=10831468

REQUIRED SOFTWARE

The software required for this course will be available on all computers in the CAPLA Computer Lab and may also be installed directly on student computers for their use in conducting the digital component of assigned lab exercises and executing the documentation thereof:

Rhino 5 (for Windows)
https://www.rhino3d.com/order-na-std

Grasshopper
http://www.grasshopper3d.com/page/download-1

Ladybug + Honeybee
http://www.food4rhino.com/project/ladybug-Honeybee?ufh
https://github.com/mostaphaRoudsari/ladybug/blob/master/resources/Installation_Instructions.md

Kangaroo (2.4.2)
http://www.food4rhino.com/app/kangaroo-physics

GHPython (0.6.0.3)
http://www.food4rhino.com/project/ghpython?ufh

Radiance (4.2)
http://radsite.lbl.gov/radiance/download.html

DAYSIM (4.0)
http://daysim.ning.com/page/download

EnergyPlus (8.3.0)
https://energyplus.net/downloads

Autodesk Flow Design
http://www.autodesk.com/education/free-software/flow-design

Adobe Creative Suite 6
https://store1.adobe.com/cfusion/store/html/index.cfm?event=displayProduct&categoryOID=7253693&store=OLS-EDU

ADDITIONAL TEXTS

The following texts can be found at the University of Arizona Science or Main Library to supplement the assigned readings and lecture content of this course:

GENERAL

Banham, Reyner. *The architecture of the well-tempered environment*. Chicago: University of Chicago, 1969.
Fernández-Galiano, Luis. *Fire and memory: on architecture and energy*. Cambridge, Mass: MIT Press, 2000.
Heschong, Lisa. *Thermal delight in architecture.* Cambridge, Mass: MIT Press, 1979.

Leslie, Thomas, and Louis I. Kahn. *Louis i. Kahn: building art, building science*. New York: George Braziller, 2005.
Pallasmaa, Juhani. *The eyes of the skin: architecture and the senses*. London: academy editions, 1996.
Allen, Ed. *The Architect's Studio Companion*. New York: Wiley, 2011.
Allen, Ed. *Architectural Detailing: Function, Constructibility and Aesthetics*, New York: Wiley, 2006.
AIA. *Architectural Graphic Standards*. New York: Ramsey/Sleeper, 2007.
Bachman. *Integrated Buildings: The Systems Basis of Architecture*. New York: Wiley, 2002.
Braham, William W., Jonathan A. Hale, and John Stanislav Sadar. *Rethinking technology a reader in architectural theory*. London: Routledge, 2007.
Brookes, Alan J. + Meijs, Maarten. *Cladding of Buildings*. Oxon: Taylor and Francis, 2008.
Campagno, Andrea. *Intelligent Glass Facades: Material, Practice, Design*. Basel: Birkhauser, 2002.
Frampton, Kenneth. *Studies in Tectonic Culture*. Cambridge: MIT Press, 1995.
Hensel, Michael. *Performance-oriented architecture rethinking architectural design and the built environment*. Hoboken, N.J.: Wiley, 2013. (eBook through UA Library)
Herzog, Krippner, Lang. Ed. *Façade Construction Manual*. Basel: Birkhauser, 2004.
Kaltenbach, Frank, ed. *Translucent Materials*. Basel: Birkhauser, 2004.
Kiernan, Stephen + Timberlake, James. *Refabricating Architecture*. McGraw Hill: New York, 2004.
Mostafavi, Mohsen + Leatherbarrow, David. *On Weathering*. Cambridge: MIT Press, 1993.
Moussavi, Farshid, and Michael Kubo, editors. *The Function of Ornament*. Barcelona: Actar, 2006.
Murrey, Scott. *Contemporary Curtain Wall*. New York: Princeton Architectural Press, 2009.
Oesterle, et al. *Double Skin Facades*. Munich: Prestel, 2001.
Riley, Terrance, ed. *Light Construction*. New York: MoMA, 1995.
Schittich, Staib, Balkow, Schuler, Sobek. *Glass Construction Manual*. Basel: Birkhauser, 1999.
Schittich, Christian. *In Detail: Solar Architecture*. Basel: Birkhauser, 2003.
Schittich, Christian. *In Detail: Building Skins.* Basel: Birkhauser, 2006.
Yeang, Ken. *The Green Skyscraper: The Basis for Designing Sustainable Intensive Buildings*. Munich: Prestel, 1999.
The PLAN - Architecture and Technologies in Detail. Bologna, Italy: Centauro Edizioni Scientifiche, 2001-current.

MATERIALS AND METHODS

Banham, Reyner. *The Architecture of the Well-tempered Environment.* London: The Architectural Press, 1969.
Contemporary Curtain Wall Architecture, Scott Murray, Princeton Architectural Press, 2009
Hensel, M., Menges, A and Weinstock, M. *Emergent Technologies and Design*. Abingdon, UK: Routledge, 2010.
Corser, P., ed. *Fabricating Architecture: selected readings in digital design and manufacturing.* New York, NY: Princeton Architectural Press, 2010.
Kieran, Stephen and Timberlake, J. *Refabricating Architecture: how manufacturing technologies are poised to transform building construction*. New York, NY: McGraw-Hill, 2004.
Leach, N., Turnbull, D., and Williams, C., *Digital Tectonics.* Chichester, UK: John Wiley & Sons Ltd., 2004
McDonough, William and Braungart, Michael. *Cradle to Cradle.* New York: North Point Press, 2002.

STRUCTURES

**Millais, Malcolm. Building Structures: Understanding the Basics. Routledge, 3rd Edition, 2017.
**Pilla, Dominick R. Elementary Structural Analysis and Design of Buildings. CRC Press, 1st Edition, 2017.
Allen, Edward & Joseph Iano. The Architect's Studio Companion: Rules of Thumb for Preliminary Design. Wiley, 5th Edition, 2011.
Alread, Jason and Leslie, Thomas and Whitehead, Rob. Design Tech. Routledge, 2nd Edition. 2014.
Ambrose, James & Patrick Tripeny. Building Structures. Wiley, 3rd Edition, 2011.
Ching, Francis D.K. Building Structures Illustrated: Patterns, Systems, and Design. Wiley, 2nd Edition, 2013.
Dabby, Ramsey & Ashwani Bedi. Structure for Architects: A Primer. Wiley, 1 Edition, 2012.
Doczi, Gyorgy. The Power of Limits. Shambhala Publications, Inc., 1981.
Engel, Heino. Structure Systems. DVA, Stuttgart. 1967.
Sandaker, Bjorn & Arne Eggen. The Structural Basis of Architecture. Routledge, 2nd Edition.
Schodek, Daniel and Bechthold, Martin. Structures. Seventh Ed. Prentice Hall, 2014.

Silver, Pete and McLean, Will and Evans, Peter. Structural Engineering for Architects: A Handbook. Laurence King Publishing. 2013.
Underwood, James. Structural Design: A Practical Guide for Architects. Wiley, 2nd Edition, 2007.

ENVIORNMENTAL SYSTEMS

Albers, Josef. *Interaction of Color.* New Haven, CT: Yale University Press, 1971.
Braham, William W. and J. A. Hale, Eds. *Rethinking Technology: A Reader in Architectural Theory*. New York, NY: Routledge, 2007
Daniels, Klaus. *Advanced Building Systems: A Technical Guides for Architects and Engineers.* Translated by Elizabeth Schwaiger. Berlin, Germany: Birkhauser, 2003.
Daniels, Klaus. *Low-Tech Light-Tech High-Tech: Building in the Information Age.* Translated by Elizabeth Schwaiger. Berlin, Germany: Birkhauser, 2000.
Graham, Peter. *Building Ecology: First Principles for a Sustainable Built Environment*. Oxford, England: Blackwell, 2003.
Moe, Kiel. *Convergence: An Architectural Agenda for Energy.* London, England: Routledge, Taylor & Francis Group, 2013.
Moe, Kiel. *Building Systems: Design Technology and Society.* London, England: Routeledge, 2012.
Moe, Kiel. *Thermally Active Surfaces in Architecture.* New York, NY: Princeton Architectural Press, 2010.
Moe, Kiel. *Integrated Design in Contemporary Architecture.* New York, NY: Princeton Architectural Press, 2008.
Prigogine, Ilya. *From Being to Becoming: Time and Complexity in the Physical Sciences*. New York, NY: W.H. Freeman and Co., 1980.
Zeumer, Martin, et.al. *Energy Manual: Sustainable Architecture.* Basel, Switzerland: Birkhåuser, 2008.

SEMESTER SCHEDULE

A course calendar is distributed to students separately and will be available on the course D2l page.

POLICIES + STATEMENTS

GRADING

Evaluations will be distributed at intervals during the semester and will indicate performance according to the stated criteria of evaluation. Students are expected to use this system to monitor and adjust their performance and to seek additional support from the professor, as appropriate. Evaluations will be based primarily on student's work, rather than effort expended. Students are expected to acquire knowledge and skill, not merely *endeavor* to do so.

CHANGE

By its very nature, the practice of architecture requires an ability to adapt to change, both by responding to unforeseen events in the delivery of services and in the revision of the work. Because an ability to adapt and embrace change is an essential skill in our profession, it may be considered in evaluations for this course.

LATE WORK

Work submitted after the deadline will be graded one or more letter grades below what would have been awarded had the work been submitted on time, appropriate to the length of delay and the importance of the assignment, at the Instructor's discretion.

INCOMPLETE WORK

Work submitted that is incomplete will be graded one or more letter grades below what would have been awarded had the work been complete, appropriate to the extent of incompletion and the importance of the assignment, at the Instructor's discretion.

GRADING SCALE

Grades will be defined as follows:

scale	graduate criteria
A (90-100)	Excellence to High Competence in most areas of evaluation.
B (80 to <90)	Very good to competent work in most areas of evaluation; fulfilled requirements.
C (70 to <80)	Less than complete or competent work in some areas; requirements lacking and/or sub-standard quality.
D (60 to <70)	Substantially incomplete or inadequate quality.
E (0 to <60)	Grossly inadequate.
Incomplete	Work left incomplete at the end of the semester *due to circumstances beyond the student's control*.

GRADE APPEAL

Students who believe they have been unfairly graded should follow the multi-step procedure outlined in the CAPLA Grade Appeal:
http://architecture.arizona.edu/student-forms-and-procedures

ATTENDANCE

Students are required to attend all classes for their duration. Upon the 3rd unexcused Absence (whether in part or for a session's entirety), the final grade will be lowered by 5% per each unexcused absence.

EXCEPTIONS

The UA policy regarding absences for any sincerely held religious belief, observance or practice will be accommodated where reasonable:
http://policy.arizona.edu/human-resources/religious-accommodation-policy.

Observances pre-approved by the UA Dean of Students will be honored, as listed at:
http://uhap.web.arizona.edu/policy/appointed-personnel/7.04.02

Absences pre-approved by the UA Dean of Students (or Dean Designee) will be honored:
https://deanofstudents.arizona.edu/absences

EXCUSED ABSENCE

The Instructor may grant an Excused Absence for an outside educational opportunity at the request of the Director or another instructor. Students granted an Excused Absence remain responsible for turning in work on time, even if due on the excused date, as well as getting all information and assignments covered during an Excused Absence. An Excused Absence does not count against the number of Absences specified above.

EMERGENCY ABSENCE

The Instructor may grant an Emergency Absence for bona fide events outside the control of a student, such as sudden serious illness, bodily harm, or other emergency.

written excuse

Emergency Absences must be certified by a professional in writing, such as doctor's excuses, police reports, or evidence of funeral. Written evidence must be submitted by the student within two weeks of the event and must include the certifying professional's contact information. Faculty or staff may verify the legitimacy of the source but may not inquire into the student's related personal information.

validity

"Immediate Family" is limited to parents, children, stepchildren, siblings, and cohabitating partners and spouses. To qualify as an Emergency Absence, the illness or event must be an actual emergency (i.e., events that require immediate attention); otherwise it will be treated as a standard Absence. Scheduled doctor consultations do not qualify.

make-up work

Students granted an Emergency Absence remain responsible for turning in all work as well as obtaining all information and assignments covered in their absence. At the Instructor's discretion, the student may be granted extended deadlines appropriate to the impact of the event. Instructors are not obliged to grant Emergency Absences if the period missed makes it unlikely for the student to be able to achieve a competent level of accomplishment consistent with expectations for the rest of the class; in such cases students are advised to drop the course or seek a medical withdrawal.

DOCUMENTATION STANDARDS

A professional standard in contract documents insures that every page indicates sufficient information to link it to its host set and, similarly, every drawing provides sufficient metadata that it is clearly linked to its dataset. In keeping with this data standard, documentation in this course will comply with the following standards:

PROJECT DOCUMENTATION

Every sheet of every project will indicate the following information on its face:

- ☐ course number
- ☐ semester/year
- ☐ professor
- ☐ student author(s)
- ☐ current date of the work
- ☐ page or sequence number

DRAWING DOCUMENTATION

Every drawing will indicate:

- ☐ drawing type (plan, section, elevation, perspective, axonometric, etc.)[2]
- ☐ graphic scale[3]
- ☐ orientation indicator (north arrow for plan; directional description for vertical projections (e.g., South Elevation; Perspective Looking North)
- ☐ reference indicators (section and elevation markers, blow-up references) that link the drawing to relevant documents

[2] A "DETAIL" is not a drawing type. Every drawing is a detail, considered from some perspective.

[3] It is essential that all drawings have *graphic* scales, as notational scales are meaningless with digital documentation and dissemination.

ARCHIVE DOCUMENTATION

Work shall be submitted for this course that demonstrates both the learning objectives and the final project(s), as requested by the professor. Digital files shall be submitted in the following naming convention:
ARCXXX_YYYYS_category_Lastname_F

where
ARCXXX is the course number, e.g., ARC401;
YYYYS is the year and semester (F/S/SUM), e.g., 2013F;
category is the assignment type or drawing type, e.g., SitePlan, LongitudinalSection3, Homework4; and
Lastname_F is the student's last name and first initial

CLASSROOM BEHAVIOR + STUDIO CULTURE

As a condition of enrollment, students agree to abide by the standards set forth in the Student Code of Conduct:
http://azregents.asu.edu/rrc/Policy Manual/5-308-Student Code of Conduct.pdf

The use of cell phones, pagers, electronic devices or other materials unrelated to course specific activities are not permitted during course hours; neither are unauthorized discussions amongst students or other disturbances.

All electronic media are limited to narrowcasting (headsets) at all times, set to a volume that is not audible to others. Per the University policy, non-assist animals are forbidden from University buildings.

Students are responsible for checking their UA email and course D2L sites Monday-Friday, at least once every twenty-four hours, for communications from the Professor.

ACADEMIC POLICIES

Academic policies can be found in The University of Arizona General Academic Catalog:
http://catalog.arizona.edu/allcats.html

along with the UA Final Exam Regulations:
https://www.registrar.arizona.edu/courses/final-examination-regulations-and-information

and Final Exam Schedule:
http://www.registrar.arizona.edu/schedules/finals.htm

Requests for incomplete (I) or withdrawal (W) must be made in accordance with University policies:
http://catalog.arizona.edu/policy/grades-and-grading-system#incomplete
http://catalog.arizona.edu/policy/grades-and-grading-system#Withdrawal

ACADEMIC INTEGRITY

Students are encouraged to share intellectual views and discuss freely the principles and applications of course materials. However, graded work/exercises must be the product of independent effort unless otherwise instructed. Students are expected to adhere to the UA Code of Academic Integrity as described in the UA General Catalog:
http://deanofstudents.arizona.edu/academic-integrity/students/academic-integrity

INCLUSIVE EXCELLENCE

This course will follow the UA diversity initiative designed to create a welcoming environment for all.
http://diversity.arizona.edu/

NONDISCRIMINATION + ANTI-HARASSMENT

Students are encouraged to express well-formed opinions and their reasons there for. They are expected to create a tolerant and open environment where such opinions can be expressed without bullying or discrimination. The University is committed to creating and maintaining an environment free of discrimination:
http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy

ELECTIVE NAME AND PRONOUN USE

This course sponsors an educational environment of inclusion and mutual respect, including elective gender pronoun use and self-identification; rosters indicating such choices will be updated throughout the semester, upon student request.

PLAGIARISM

The practice of taking someone else's work or ideas and passing them off as one's own is known as plagiarism and is a serious violation of academic and professional ethics. The consequences for plagiarism are severe, including a failing grade for the course, suspension, or expulsion from the University per the UA policy on plagiarism: http://deanofstudents.arizona.edu/codeofacademicintegrity

TESTING: In any testing situation, whether graded or not, students shall not refer to outside resources (whether printed materials, such as books and journals, texts, Internet, e-mail, Google, instant messaging, or other resources) unless explicitly instructed to do so by the professor of record. Students operating digital devices in testing situations when not authorized to do so shall be assumed to be cheating.

CITATION: Plagiarism applies to professional and public works, as well as to the work produced by peers. Students shall be assiduous in citing the work of others, whether in copying a graphic, either in part or in total, in quoting a text, or in building upon ideas, designs, or forms. Citation is used to give credit to the original author and to allow others to identify and trace source material.

Building upon the work of others is an inevitable part of learning and inherent to scholarship; hence it is an acceptable practice as long as the original sources are properly cited. Textual citations should follow the *Chicago Manual Of Style*. Citations of buildings and other designed works should include both a) project and b) source information:

a) project citation: the work's name or title, its location, the name of its designer(s), and the date designed (or, if built, constructed).

b) source citation: the source from which the information or illustration of the work was obtained formatted according to the Notes and Bibliography format specified in the *Chicago Manual Of Style:* http://www.chicagomanualofstyle.org/tools_citationguide.html

PRODUCTION: Using the labor of others, whether paid or freely given, offers the beneficiary an unfair advantage relative to peers and is prohibited unless expressly authorized in writing by the professor(s) of record.

COPYRIGHT

Materials in this course may be copyrighted. They are intended for use only by students registered and enrolled in the course and are only for instructional activities associated with and for the duration of the course. They may not be retained in another medium or disseminated, including being uploaded to file-sharing sites on the internet or elsewhere, without the written permission of the instructor. They are provided in compliance with the provisions of the Teach Act:
http://www.copyright.com/Services/copyrightoncampus/basics/teach.html.

Students should refer to University copyright polities:
http://www.library.arizona.edu/help/tutorials/copyright/index.html

THREATENING BEHAVIOR

The UA Threatening Behavior by Students Policy prohibits threats of physical harm to any member of the University community, including to oneself:
http://policy.arizona.edu/education-and-student-affairs/threatening-behavior-students

ACCESSIBILITY AND ACCOMMODATIONS

Universal Design is the obligation of every architect and should be a quality of every environment. It is also the University's goal that learning experiences be accessible. Students who anticipate or experience physical or academic barriers based on disability, should discuss them with the Instructor; students are encouraged to explore possible accommodations with the Disability Resources Center (520-621-3268).
http://drc.arizona.edu/instructors/syllabus-statement

RETENTION OF WORK

The School of Architecture may retain samples of student work produced in this course as part of the accreditation process of the National Architectural Accrediting Board, Inc. (NAAB) or other University purposes. This may include models, mock-ups, prints, and other physical documents. Students will be notified of work that needs to be retained and shall submit those to the Archivist or the Instructor, as determined by the Instructor, before grades will be released. After accreditation review, the owners of the retained work will be given the opportunity to reclaim it at their own expense (at the name and email address affixed to the product by the student at the time of submittal) for up to 30 days after notification. By

contributing work students aid the School in certifying its work, which is essential to the standing and reputation of the institution, for which the Faculty is grateful.

end of syllabus

TEMPLATE VERSION:

2018.01.24—Section 1: Changed title of OBJECTIVES AND OUTCOMES to LEARNING OUTCOMES at request of the Graduate College; added tips and a guide to distinguishing between Learning Outcomes and Course Objectives.
Section 2, COURSE STRUCTURE AND ORGANIZATION: Added clarifying notes requested by the Office of Academic Affairs.
Section 3, ATTENDANCE: Revised clause to make it clear that the grade penalty takes effect after the specified number of allowed unexcused absences; Added notes pertaining to online courses; updated link to UA policy.
MAKE-UP WORK: Clause revised according to Graduate College.
ACADEMIC POLICIES: Expanded to include new required sections by Office of Academic Affairs.

2018.06.14—Section 2: added MatLAB online safety certification.

2018.09.12—Section 2: Changed Learning Outcomes to Learning Objectives; added Course Objectives section.

2018.10.02—Section 2: Changed Learning Objectives back to Learning Outcomes; Section 3: Clarified ATTENDANCE policy; Sections 1+2: Added structured discussion section language.

C 521C: Integrated Technologies 3, 3-CU, 2018 SoA, CAPLA
Instructor: Valerie A. Lane University of Arizona

COURSE DATA

ARC 521C: Integrated Technologies 3
Fall 2018
3-credit units

FACULTY
Valerie A. Lane, Senior Lecturer
School of Architecture, Office Rm. 310
laneva@email.arizona.edu
Office hours: by appointment

CRITERIA

FULFILLMENT
This course satisfies a Technology Stream requirement.

PREREQUISITES
ARC 521 A+B or admission to M. Arch II.

CO-REQUISITES
ARC510d

ENROLLMENT
This course is limited to 24 students.

CONTACT
Tuesday & Thursday: Lecture Arc 205A 12:30-1:20pm
Monday & Wednesday: Lab Studio - Arc A304 11:30am-12:45pm

WEB + D2L
This course will be supported over D2L. You are responsible for checking this daily – announcements will be posted there regularly.

COST
Costs associated with required components of the course—required lab projects and/or field trip[s]—will be the responsibility of the student. Out of town trips may be organized in coordination with the concurrent design studio. Estimated average expense: $100-$200 (modelling expenditures will vary greatly contingent upon design intention, material selection and resourcefulness). $100-$150 (Field trip expenditures will vary greatly contingent upon proactive planning and resourcefulness).

COURSE CONTENT

CATALOGUE DESCRIPTION
Advanced structures, materials and methods of construction, and environmentally adaptive systems as integrated technologies.

COURSE DESCRIPTION
This is the third integrated technologies course covering precedents and principles of structural systems (40% course content), materials and methods of construction specific to building envelopes and primary structural systems (40% course content), and environmentally adaptive systems (20% course content) in medium to large scale buildings. By presenting them as integrated technologies, students gain a deep understanding of how building technologies work together as a system.

LEARNING OUTCOMES
Upon successful completion of this course, students will be able to:

1. Identify and analyze the application of elements in building precedents demonstrating various material assemblies, structural systems and environmentally adaptive systems in medium to large scale buildings.
2. Make technically clear drawings and construct physical and digital models illustrating and identifying building systems and assembly of materials as a means for communicating building design intent.
3. Conceive and develop a schematic comprehensive structural frame design of a medium to large scale building and demonstrate an understanding of the interrelationships of structural systems, elements, and material connections through technical drawings and models.
4. Analyze and diagram structural loading conditions and reactions through physical model testing and utilize this information in an iterative design process driven by design intent and building synthesis.
5. Select and communicate application of building envelope systems relative to performance, aesthetic, moisture transfer, durability, energy and material resources and explain how these choices affect building synthesis and construction sequencing.
6. Integrate active and passive environmentally adaptive systems in medium to large scale buildings and articulate conceived building envelope assemblies as they relate to those environmental systems through technical drawings and modeling.

NAAB PERFORMANCE CRITERIA:

The material covered in this course offers students proficiency (at the indicated level of accomplishment) in the following subject areas as defined by the National Architectural Accrediting Board (NAAB), http://www.naab.org/accreditation/2009_Conditions.aspx:1

B.4.e Technical Documentation

ABILITY to make technically clear drawings, prepare outline specifications, and construct models illustrating and identifying the assembly of materials, systems, and components appropriate for a building design [.e] related to building envelope.

B.5.hi Structural Systems

ABILITY to demonstrate the basic principles of structural systems and their ability to withstand gravitational, seismic, and lateral forces, as well as the selection and application of the appropriate structural system. HIGH-RISE UNDERSTANDING of the fundamental principles of gravitational, seismic, and lateral forces in multi-story buildings.

B.7-p Building Envelope Systems and Assemblies

UNDERSTANDING of the basic principles involved in the appropriate selection and application of building envelope systems relative to fundamental performance, aesthetics, moisture transfer, durability, and energy and material resources. PRINCIPLES of selection.

B.8-p Building Materials and Assemblies

UNDERSTANDING of the basic principles involved in the appropriate selection of interior and exterior construction materials, finishes, products, components, and assemblies based on their inherent performance, including environmental impact and reuse. PRINCIPLES of selection.

MATERIALS LAB SAFETY CERTIFICATION

In support of modeling craft and safety, each student will take the proctored online MaterialsLAB safety certification. This is not a graded component of this course but your ability to utilize the materials lab is integral to your success in this course. All students enrolled will be required to participate in the construction of models as outlined in project statements.

STRUCTURE AND ORGANIZATION

Through lectures, readings, discussions, and short writing assignments, students will be introduced to structural principles and mechanisms that relate to and support the building form and patterns. Pointed attention will be paid to the buildings' envelope, and therefore the threshold between indoor and outdoor environments. Students will test their understanding of lecture content through group and individual projects. In project 1, students will work in teams to review a series of case study examples of built works that are comparable programmatic precedents to their concurrent studio work. Students will be asked to review notable buildings / structures and document conditions in preparation for application to their own designs. Project 2 is the application of concepts learned in project 1. Students will go through a similar task breakdown as Project 1, but instead of studying built works, they will utilize the process to communicate and develop their own studio designs. There is an intentional collaboration with Studio instructors to provide students the opportunity to cultivate a deeper level of complexity in their Studio design work.

COURSE COMPONENTS + CRITERIA OF EVALUATION

This course is designed to achieve the learning objectives indicated. Because architecture is an art as well as a science, and because every student and student-group present new challenges in the teaching of design, instructors may add, alter, or modify assignments, criteria, or project weights in order to adapt to evolving circumstances that are inherent in the practice of Architecture, and also to evaluate students' abilities to make such adaptations. The Instructor will notify the students in advance of such changes; students for their part will notify the professor within one week of such notification if the proposed changes will cause undue hardship. Students acknowledge the dynamic nature of this course.

The graded components of this course and their criteria of evaluation are currently anticipated to be as follows, but are subject to change as set forth above:

SEMINAR

Students will lead and participate in seminar discussions related to assigned readings as assigned in class. Seminar discussions may take the place of lectures on various occasions. Participation in these discussions is vital for deeper learning and will enrich the experience of the collective whole of the class.

PROJECTS

Semester assignments will include an initial precedent study and subsequent integrated technologies projects with due dates as per the Semester Schedule.

COLLABORATION

Student will take responsibility for aspects of leadership as well as teamwork on collaborative projects as per project briefs.

DOCUMENTATION

Students will be evaluated on the thorough and timely representation and documentation of projects. Work is expected to be turned in on time and complete for instructors to provide valuable feedback as design work progresses throughout the semester.

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[1] **Understanding:** The capacity to classify, compare, summarize, explain and/or interpret information.
Ability: Proficiency in using specific information to accomplish a task, correctly selecting the appropriate information, and accurately applying it to the solution of a specific problem, while also distinguishing the effects of its implementation.

SEMESTER SCHEDULE

A course calendar is attached to this syllabus and will be available to students on the course D2L site.

WEIGHT

The Course Components are forecast to be:

Precedent – Project 1 (group – precedents chosen with input from Studio instructor)	
Project 1.1 – precedent studies - typology analysis	25%
Project 1.2 – structure/envelope fundamentals – digital documentation	25%
Project 1.3 – structure/envelope fundamentals – projected detailing	25%
Project 1.4 – structure/envelope fundamentals – physical model	25%
Sub total Project 1:	35 points
Integrated Design – Project 2 (individual and in collaboration with studio design work)	
Project 2.1 – overall structural and form resolution – building integration	25%
Project 2.2 – structure/envelope fundamentals – digital documentation	25%
Project 2.3 – structure/envelope fundamentals – projected detailing	25%
Project 2.4 – structure/envelope fundamentals – physical model	25%
Sub total Project 2:	55 points
Subtotal Projects	90 points
Participation / Attendance	10 points
Total Course	100 points

REFERENCES

REQUIRED

There is no current required textbook for this course. Be aware that useful resources will be recommended during class that you would benefit from gaining access to. Any required readings will be made available to students by distributed copies in class or by post to the course D2L site.

MATERIALS AND METHODS

Banham, Reyner. *The Architecture of the Well-tempered Environment*. London: The Architectural Press, 1969.
Contemporary Curtain Wall Architecture, Scott Murray, Princeton Architectural Press, 2009
Hensel, M., Menges, A and Weinstock, M. *Emergent Technologies and Design*. Abingdon, UK: Routledge, 2010.
Corser, P., ed. *Fabricating Architecture: selected readings in digital design and manufacturing*. New York, NY: Princeton Architectural Press, 2010.
Kieran, Stephen and Timberlake, J. *Refabricating Architecture: how manufacturing technologies are poised to transform building construction*. New York, NY: McGraw-Hill, 2004.
Leach, N., Turnbull, D., and Williams, C., *Digital Tectonics*. Chichester, UK: John Wiley & Sons Ltd., 2004
McDonough, William and Braungart, Michael. *Cradle to Cradle*. New York: North Point Press, 2002.

STRUCTURES

*Millais, Malcolm. Building Structures: Understanding the Basics. Routledge, 3rd Edition, 2017.
** Allen, Edward & Joseph Iano. The Architect's Studio Companion: Rules of Thumb for Preliminary Design. Wiley, 5th Edition, 2011.

Alread, Jason and Leslie, Thomas and Whitehead, Rob. Design Tech. Routledge, 2nd Edition. 2014.
Ambrose, James & Patrick Tripeny. Building Structures. Wiley, 3rd Edition, 2011.
Ching, Francis D.K. Building Structures Illustrated: Patterns, Systems, and Design. Wiley, 2nd Edition, 2013.
Dabby, Ramsey & Ashwani Bedi. Structure for Architects: A Primer. Wiley, 1 Edition, 2012.
Doczi, Gyorgy. The Power of Limits. Shambhala Publications, Inc., 1981.
Engel, Heino. Structure Systems. DVA, Stuttgart. 1967.
Pilla, Dominick R. Elementary Structural Analysis and Design of Buildings. CRC Press, 1st Edition, 2017.
Sandaker, Bjorn & Arne Eggen. The Structural Basis of Architecture. Routledge, 2nd Edition.
Schodek, Daniel and Bechthold, Martin. Structures. Seventh Ed. Prentice Hall, 2014.
Silver, Pete and McLean, Will and Evans, Peter. Structural Engineering for Architects: A Handbook. Laurence King Publishing. 2013.
Underwood, James. Structural Design: A Practical Guide for Architects. Wiley, 2nd Edition, 2007.

POLICIES + STATEMENTS

GRADING

Evaluations will be distributed at intervals during the semester and will indicate performance according to the stated criteria of evaluation. Students are expected to use this system to monitor and adjust their performance and to seek additional support from the professor, as appropriate. Evaluations will be based primarily on student's work, rather than effort expended. Students are expected to acquire knowledge and skill, not merely *endeavor* to do so.

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By its very nature, the practice of architecture requires an ability to adapt to change, both by responding to unforeseen events in the delivery of services and in the revision of the work. Because an ability to adapt and embrace change is an essential skill in our profession, it may be considered in evaluations for this course.

LATE WORK

Work submitted after the deadline will be graded one or more letter grades below what would have been awarded had the work been submitted on time, appropriate to the length of delay and the importance of the assignment, at the Instructor's discretion.

INCOMPLETE WORK

Incomplete work will be graded as such and points will only be given for the work that is submitted.

GRADING SCALE

Grades will be defined as follows:

scale	graduate criteria
A (90-100)	Excellence to High Competence in most areas of evaluation.
B (80 to <90)	Very good to competent work in most areas of evaluation; fulfilled requirements.
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Incomplete	Work left incomplete at the end of the semester *due to circumstances beyond the student's control*.

GRADE APPEAL

Students who believe they have been unfairly graded should follow the multi-step procedure outlined in the CAPLA Grade Appeal:
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ATTENDANCE

Students are required to attend all classes for their duration. Students may be administratively dropped for excessive absences. Students will be counseled by the instructor at 3 absences and referred to the department's academic advisor upon 6 absences.

Upon the 4th unexcused absence (whether in part or for a session's entirety), the final grade will be lowered by 5% per each unexcused absence beyond the initial 4.

The UA's policy concerning Class Attendance, Participation, and Administrative Drops:
http://catalog.arizona.edu/policy/class-attendance-participation-and-administrative-drop

EXCEPTIONS

The UA policy regarding absences for any sincerely held religious belief, observance or practice will be accommodated where reasonable:

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Observances pre-approved by the UA Dean of Students will be honored, as listed at:
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The Instructor may grant an Excused Absence for an outside educational opportunity at the request of the Director or another instructor. Students granted an Excused Absence remain responsible for turning in work on time, even if due on the excused date, as well as getting all information and assignments covered during an Excused Absence. An Excused Absence does not count against the number of Absences specified above.

EMERGENCY ABSENCE

The Instructor may grant an Emergency Absence for bona fide events outside the control of a student, such as sudden serious illness, bodily harm, or immediate family emergency.

written excuse

Emergency Absences must be certified by a professional in writing, such as doctor's excuses, police reports, or evidence of funeral. Written evidence must be submitted by the student within two weeks of the event and must include the certifying professional's contact information. Faculty or staff may verify the legitimacy of the source but may not inquire into the student's related personal information.

validity

"Immediate Family" is limited to parents, children, stepchildren, siblings, and cohabitating partners and spouses. To qualify as an Emergency Absence, the illness or event must be an actual emergency (i.e., events that require immediate attention); otherwise it will be treated as a standard Absence. Scheduled doctor consultations do not qualify.

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- course number
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- professor
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DRAWING DOCUMENTATION

Every drawing will indicate:

- drawing type (plan, section, elevation, perspective, axonometric, etc.)[2]
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Work shall be submitted for this course that demonstrates both the learning objectives and the final project(s), as requested by the professor. Digital files shall be submitted in the following naming convention:

ARCXXX_YYYYS_category_Lastname_F

where
ARCXXX is the course number, e.g., ARC401;
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Lastname_F is the student's last name and first initial

CLASSROOM BEHAVIOR + STUDIO CULTURE

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The use of cell phones, pagers, electronic devices or other materials unrelated to course specific activities are not permitted during course hours; neither are unauthorized discussions amongst students or other disturbances.

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ACADEMIC POLICIES

Academic policies can be found in The University of Arizona General Academic Catalog:
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along with the UA Final Exam Regulations:
https://www.registrar.arizona.edu/courses/final-examination-regulations-and-information

and Final Exam Schedule:
http://www.registrar.arizona.edu/schedules/finals.htm

Requests for incomplete (I) or withdrawal (W) must be made in accordance with University policies:
http://catalog.arizona.edu/policy/grades-and-grading-system#incomplete
http://catalog.arizona.edu/policy/grades-and-grading-system#Withdrawal

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INCLUSIVE EXCELLENCE

This course will follow the UA diversity initiative designed to create a welcoming environment for all.
http://diversity.arizona.edu/

NONDISCRIMINATION + ANTI-HARASSMENT

Students are encouraged to express well-formed opinions and their reasons there for. They are expected to create a tolerant and open environment where such opinions can be expressed without bullying or discrimination. The University is committed to creating and maintaining an environment free of discrimination:
http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy

ELECTIVE NAME AND PRONOUN USE

This course sponsors an educational environment of inclusion and mutual respect, including elective gender pronoun use and self-identification; rosters indicating such choices will be updated throughout the semester, upon student request.

PLAGIARISM

The practice of taking someone else's work or ideas and passing them off as one's own is known as plagiarism and is a serious violation of academic and professional ethics. The consequences for plagiarism are severe, including a failing grade for the course, suspension, or expulsion from the University per the UA policy on plagiarism: http://deanofstudents.arizona.edu/codeofacademicintegrity

TESTING: In any testing situation, whether graded or not, students shall not refer to outside resources (whether printed materials, such as books and journals, texts, Internet, e-mail, Google, instant messaging, or other resources) unless explicitly instructed to do so by the professor of record. Students operating digital devices in testing situations when not authorized to do so shall be assumed to be cheating.

CITATION: Plagiarism applies to professional and public works, as well as to the work produced by peers. Students shall be assiduous in citing the work of others, whether in copying a graphic, either in part or in total, in quoting a text, or in building upon ideas, designs, or forms. Citation is used to give credit to the original author and to allow others to identify and trace source material.

Building upon the work of others is an inevitable part of learning and inherent to scholarship; hence it is an acceptable practice as long as the original sources are properly cited. Textual citations should follow the *Chicago Manual Of Style*. Citations of buildings and other designed works should include both a) project and b) source information:

a) project citation: the work's name or title, its location, the name of its designer(s), and the date designed (or, if built, constructed).

b) source citation: the source from which the information or illustration of the work was obtained formatted according to the Notes and Bibliography format specified in the *Chicago Manual Of Style:*
http://www.chicagomanualofstyle.org/tools_citationguide.html

PRODUCTION: Using the labor of others, whether paid or freely given, offers the beneficiary an unfair advantage relative to peers and is prohibited unless expressly authorized in writing by the professor(s) of record.

COPYRIGHT

Materials in this course may be copyrighted. They are intended for use only by students registered and enrolled in the course and are only for instructional activities associated with and for the duration of the course. They may not be retained in another medium or disseminated, including being uploaded to file-sharing sites on the internet or elsewhere, without the written permission of the instructor. They are provided in compliance with the provisions of the Teach Act:
http://www.copyright.com/Services/copyrightoncampus/basics/teach.html.

Students should refer to University copyright polities:
http://www.library.arizona.edu/help/tutorials/copyright/index.html

THREATENING BEHAVIOR

The UA Threatening Behavior by Students Policy prohibits threats of physical harm to any member of the University community, including to oneself: http://policy.arizona.edu/education-and-student-affairs/threatening-behavior-students

ACCESSIBILITY AND ACCOMMODATIONS

Universal Design is the obligation of every architect and should be a quality of every environment. It is also the University's goal that learning experiences be accessible. Students who anticipate or experience physical or academic barriers based on disability, should discuss them with the Instructor; students are encouraged to explore possible accommodations with the Disability Resources Center (520-621-3268). http://drc.arizona.edu/instructors/syllabus-statement

RETENTION OF WORK

The School of Architecture may retain samples of student work produced in this course as part of the accreditation process of the National Architectural Accrediting Board, Inc. (NAAB) or other University purposes. This may include models, mock-ups, prints, and other physical documents. Students will be notified of work that needs to be retained and shall submit those to the Archivist or the Instructor, as determined by the Instructor, before grades will be released. After accreditation review, the owners of the retained work will be given the opportunity to reclaim it at their own expense (at the name and email address affixed to the product by the student at the time of submittal) for up to 30 days after notification. By contributing work students aid the School in certifying its work, which is essential to the standing and reputation of the institution, for which the Faculty is grateful.

end of syllabus

TEMPLATE VERSION:

2017.08.24—Section 2: changes to 100% Engagement (now Student Engagement and Career Development);
2017.09.11—Section 3: added copyright section and deleted copyright clause at end-of-syllabus footer.
2017.10.24—Section 1: Added Honors clause. Section 3: revised Emergency Absence policy.
2018.01.24—Section 1: Changed title of OBJECTIVES AND OUTCOMES to LEARNING OUTCOMES at request of the Graduate College; added tips and a guide to distinguishing between Learning Outcomes and Course Objectives.
Section 2, COURSE STRUCTURE AND ORGANIZATION: Added clarifying notes requested by the Office of Academic Affairs.
Section 3, ATTENDANCE: Revised clause to make it clear that the grade penalty takes effect after the specified number of allowed unexcused absences; Added notes pertaining to online courses; updated link to UA policy. MAKE-UP WORK: Clause revised according to Graduate College.
ACADEMIC POLICIES: Expanded to include new required sections by Office of Academic Affairs.
2018.06.14—Section 2: added MatLAB online safety certification.

ARC 521D: Integrated Technologies 4, 3-CU, 2018 SoA, CAPLA
Instructors: Valerie A. Lane, Ray Barnes University of Arizona

COURSE DATA

ARC 521D Integrated Technologies 4
Spring 2018
3-credit units

FACULTY

Valerie A. Lane, Lecturer
School of Architecture, Office Rm. 310
laneva@email.arizona.edu
Office hours: by appointment

Ray Barnes, Lecturer
School of Architecture, Office Rm. 212
rbarnes@email.arizona.edu
Office hours: by appointment

CRITERIA

FULFILLMENT
This course is required for the Master of Architecture.

PREREQUISITES
ARC 521a, 521b, and 521c, or advanced placement to M. Arch II.

CO-REQUISITES
ARC510e

ENROLLMENT
This course is limited to 24 students.

CONTACT

MON 9:00pm – 9:50pm (Lecture)	Arch. Rm. ARC 200
MON 10:00pm – 11:15pm (Lab)	Arch. Rm. ARC 304
WED 9:00pm – 9:50pm (Lecture)	Arch. Rm. ARC 200
WED 10:00pm – 11:15pm (Lab)	Arch. Rm. ARC 304

WEB + D2L

This course will be supported over D2L.

COST

Costs associated with required components of the course—required lab projects and/or field trip[s]—will be the responsibility of the student. Out of town trips may be organized in coordination with the concurrent design studio, at the option of the Instructor. Estimated average expense: $100-$200 (modelling expenditures will vary greatly contingent upon design intention, material selection and resourcefulness). $100-$150 (Field trip expenditures will vary greatly contingent upon proactive planning and resourcefulness).

COURSE CONTENT

CATALOGUE DESCRIPTION

This course covers advanced concepts of medium to large scale building structures, materials and methods of construction, and environmentally adaptive systems designs.

COURSE DESCRIPTION

This is the fourth integrated technologies course. It covers precedents and principles of structural systems (40% course content), materials and methods of construction (20% course content), and environmentally adaptive systems (40% course content) in medium to large scale buildings. By presenting the course material as integrated technologies, students gain a deep understanding of how building technologies work together as a system.

OBJECTIVES AND OUTCOMES

After taking this course, students will have an:

1. Awareness of precedents demonstrating material assemblies, structural systems, and environmentally adaptive systems in large-scale buildings.

2. Understanding of systems and assembles as communicated through technical drawings, detailed models, and digital models of building service systems.

3. Ability to conceive and develop a schematic structural frame design of a large-scale building and understanding of the interrelationships of structural systems, elements, and connections in large-scale building design.

4. Ability to analyze and diagram structural load conditions in long span and tower designs. Ability to predict internal stress distribution and load transfer is developed by physical modelling and load test observations.

5. Understanding of selection processes for building envelopes, structural systems, and building service systems in large-scale buildings that meet specific performance, durability, energy, and material criteria.

6. Understanding the integration of active systems as the primary design agenda, with passive systems to supplement, in large-scale buildings; conceptualizing and designing building envelope assemblies for environmentally adaptable systems integration.

NAAB PERFORMANCE CRITERIA

The material covered in this course offers students proficiency (at the indicated level of accomplishment) in the following subject areas as defined by the National Architectural Accrediting Board (NAAB)
http://www.naab.org/wp-content/uploads/01_Final-Approved-2014-NAAB-Conditions-for-Accreditation.pdf[1]

B.6 Environmental Systems
ABILITY to demonstrate the basic principles of structural systems and their ability to withstand gravitational, seismic, and lateral forces, as well as the selection and application of the appropriate structural system.

B.7 Building Envelope Systems and Assemblies
UNDERSTANDING of the basic principles involved in the appropriate selection and application of building envelope systems relative to fundamental performance, aesthetics, moisture transfer, DURABILITY, AND ENERGY AND MATERIAL RESOURCES.

B.9 Building Service Systems
UNDERSTANDING of the basic principles and appropriate application and performance of building service systems, including lighting, mechanical, plumbing, electrical, communication, vertical transportation, security, and fire protection systems.

COURSE COMPONENTS + CRITERIA OF EVALUATION

This course is designed to achieve the learning objectives indicated. Because architecture is an art as well as a science, and because every student and student-group present new challenges in the teaching of design, instructors may add, alter, or modify assignments, criteria, or project weights in order to adapt to evolving circumstances that are inherent in the practice of Architecture, and also to evaluate students' abilities to make such adaptations. The Instructor will notify the students in advance of such changes; students for their part will notify the professor within one week of such notification if the proposed changes will cause undue hardship. Students acknowledge the dynamic nature of this course.

The graded components of this course and their criteria of evaluation are currently anticipated to be as follows, but are subject to change as set forth above:

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[1] **Understanding:** The capacity to classify, compare, summarize, explain and/or interpret information. **Ability:** Proficiency in using specific information to accomplish a task, correctly selecting the appropriate information, and accurately applying it to the solution of a specific problem, while also distinguishing the effects of its implementation.

LAB PROJECTS

Lab projects will be executed for each fundamental segment of the course. Lab 1 consists of digital and physical modelling of a large scale building of non-descript program and design. A generic 3-D model will be provided and will become the learning vehicle for a design process geared at implementing complex environmentally adaptive systems designs into the structural shell. Students will simultaneously design and model all building systems and determine an appropriate structural system with member sizing and connection detailing. Lab 2 consists of the same set of projects dictated through Lab 1 but will apply knowledge to student designs being developed in the concurrent studio course.

COLLABORATION / PARTICIPATION

Student will take responsibility for aspects of leadership as well as teamwork on collaborative projects as per project briefs. Students are expected engage actively in the learning process. This requires students to attend all classes per the course schedule and be prepared for active participation in all class activities. Active participation is required at all lab sessions, which requires students to be present with the required lab materials appropriately prepared for assigned lab activities.

DOCUMENTATION

Students will be evaluated on the thorough and timely representation and documentation of projects in accordance with project briefs.

SEMESTER SCHEDULE

A course calendar will be distributed to students separately and will be available on the course d2l page.

WEIGHT

The Course Components are forecast to be:

PROJECTS

LAB 1 – Transfer Building (Group)	30
LAB 2 – Studio Structures Component (Individual)	40
Sketch Journal (Cumulative)	20
Participation / Attendance	10
TOTAL POINTS	100

*EACH PROJECT HAS MULTIPLE DELIVERABLES OR ITERATIONS, EACH COMPONENT CONTRIBUTING TO OVERALL GRADE – FOR GRADING BREAKDOWN FOR EACH PROJECT, REFER TO RESPECTIVE PROJECT STATEMENTS PROVIDED IN CLASS AND ON D2L.

REFERENCES

REQUIRED TEXTS

Millais, Malcolm. *Building Structures: Understanding the Basics.* Routledge, 3rd Edition, 2017.
Smith, David Lee. *Environmental Issues for Architecture.* Wiley, 2011.

REQUIRED SOFTWARE

The software required for this course will be available on all computers in the CAPLA Computer Lab and may also be installed directly on student computers for their use in conducting the digital component of assigned lab exercises and executing the documentation thereof:

Autodesk Revit

Rhino 5 (for Windows)
https://www.rhino3d.com/order-na-std

Adobe Creative Suite 6
https://store1.adobe.com/cfusion/store/html/index.cfm?event=displayProduct&categoryOID=7253693&store=OLS-EDU

ADDITIONAL TEXTS

The following texts can be found at the University of Arizona Science or Main Library to supplement the assigned readings and lecture content of this course:

STRUCTURES

**Millais, Malcolm. Building Structures: Understanding the Basics. Routledge, 3rd Edition, 2017.
**Pilla, Dominick R. Elementary Structural Analysis and Design of Buildings. CRC Press, 1st Edition, 2017.
Allen, Edward & Joseph Iano. The Architect's Studio Companion: Rules of Thumb for Preliminary Design. Wiley, 5th Edition, 2011.
Alread, Jason and Leslie, Thomas and Whitehead, Rob. Design Tech. Routledge, 2nd Edition. 2014.
Ambrose, James & Patrick Tripeny. Building Structures. Wiley, 3rd Edition, 2011.
Ching, Francis D.K. Building Structures Illustrated: Patterns, Systems, and Design. Wiley, 2nd Edition, 2013.
Dabby, Ramsey & Ashwani Bedi. Structure for Architects: A Primer. Wiley, 1 Edition, 2012.
Doczi, Gyorgy. The Power of Limits. Shambhala Publications, Inc., 1981.
Engel, Heino. Structure Systems. DVA, Stuttgart. 1967.
Sandaker, Bjorn & Arne Eggen. The Structural Basis of Architecture. Routledge, 2nd Edition.
Schodek, Daniel and Bechthold, Martin. Structures. Seventh Ed. Prentice Hall, 2014.
Silver, Pete and McLean, Will and Evans, Peter. Structural Engineering for Architects: A Handbook. Laurence King Publishing. 2013.
Underwood, James. Structural Design: A Practical Guide for Architects. Wiley, 2nd Edition, 2007.

ENVIORNMENTAL SYSTEMS

Albers, Josef. *Interaction of Color.* New Haven, CT: Yale University Press, 1971.
Braham, William W. and J. A. Hale, Eds. *Rethinking Technology: A Reader in Architectural Theory*. New York, NY: Routledge, 2007
Daniels, Klaus. *Advanced Building Systems: A Technical Guides for Architects and Engineers.* Translated by Elizabeth Schwaiger. Berlin, Germany: Birkhauser, 2003.
Daniels, Klaus. *Low-Tech Light-Tech High-Tech: Building in the Information Age.* Translated by Elizabeth Schwaiger. Berlin, Germany: Birkhauser, 2000.
Graham, Peter. *Building Ecology: First Principles for a Sustainable Built Environment*. Oxford, England: Blackwell, 2003.
Moe, Kiel. *Convergence: An Architectural Agenda for Energy.* London, England: Routledge, Taylor & Francis Group, 2013.
Moe, Kiel. *Building Systems: Design Technology and Society.* London, England: Routeledge, 2012.
Moe, Kiel. *Thermally Active Surfaces in Architecture.* New York, NY: Princeton Architectural Press, 2010.
Moe, Kiel. *Integrated Design in Contemporary Architecture.* New York, NY: Princeton Architectural Press, 2008.
Prigogine, Ilya. *From Being to Becoming: Time and Complexity in the Physical Sciences*. New York, NY: W.H. Freeman and Co., 1980.
Zeumer, Martin, et.al. *Energy Manual: Sustainable Architecture.* Basel, Switzerland: Birkhåuser, 2008.

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http://deanofstudents.arizona.edu/codeofacademicintegrity.

INCLUSIVE EXCELLENCE

This course will follow the UA diversity initiative designed to create a welcoming environment for all.
http://diversity.arizona.edu/

NONDISCRIMINATION + ANTI-HARASSMENT

Students are encouraged to express well-formed opinions and their reasons there for. They are expected to create a tolerant and open environment where such opinions can be expressed without bullying or discrimination. The University is committed to creating and maintaining an environment free of discrimination:
http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy

ELECTIVE NAME AND PRONOUN USE

This course sponsors an educational environment of inclusion and mutual respect, including elective gender pronoun use and self-identification; rosters indicating such choices will be updated throughout the semester, upon student request.

PLAGIARISM

The practice of taking someone else's work or ideas and passing them off as one's own is known as plagiarism and is a serious violation of academic and professional ethics. The consequences for plagiarism are severe, including a failing grade for the course, suspension, or expulsion from the University per the UA policy on plagiarism:
http://deanofstudents.arizona.edu/codeofacademicintegrity

TESTING: In any testing situation, whether graded or not, students shall not refer to outside resources (whether printed materials, such as books and journals, texts, Internet, e-mail, Google, instant messaging, or other resources) unless explicitly instructed to do so by the professor of record. Students operating digital devices in testing situations when not authorized to do so shall be assumed to be cheating.

CITATION: Plagiarism applies to professional and public works, as well as to the work produced by peers. Students shall be assiduous in citing the work of others, whether in copying a graphic, either in part or in total, in quoting a text, or in building upon ideas, designs, or forms. Citation is used to give credit to the original author and to allow others to identify and trace source material.

Building upon the work of others is an inevitable part of learning and inherent to scholarship; hence it is an acceptable practice as long as the original sources are properly cited. Textual citations should follow the *Chicago Manual Of Style*. Citations of buildings and other designed works should include both a) project and b) source information:

a) project citation: the work's name or title, its location, the name of its designer(s), and the date designed (or, if built, constructed).

b) source citation: the source from which the information or illustration of the work was obtained formatted according to the Notes and Bibliography format specified in the *Chicago Manual Of Style:*
http://www.chicagomanualofstyle.org/tools_citationguide.html

PRODUCTION: Using the labor of others, whether paid or freely given, offers the beneficiary an unfair advantage relative to peers and is prohibited unless expressly authorized in writing by the professor(s) of record.

COPYRIGHT

Materials in this course may be copyrighted. They are intended for use only by students registered and enrolled in the course and are only for instructional activities associated with and for the duration of the course. They may not be retained in another medium or disseminated, including being uploaded to file-sharing sites on the internet or elsewhere, without the written permission of the instructor. They are provided in compliance with the provisions of the Teach Act:
http://www.copyright.com/Services/copyrightoncampus/basics/teach.html.

Students should refer to University copyright polities:
http://www.library.arizona.edu/help/tutorials/copyright/index.html

THREATENING BEHAVIOR

The UA Threatening Behavior by Students Policy prohibits threats of physical harm to any member of the University community, including to oneself:
http://policy.arizona.edu/education-and-student-affairs/threatening-behavior-students

ACCESSIBILITY AND ACCOMMODATIONS

Universal Design is the obligation of every architect and should be a quality of every environment. It is also the University's goal that learning experiences be accessible. Students who anticipate or experience physical or academic barriers based on disability, should discuss them with the Instructor; students are encouraged to explore possible accommodations with the Disability Resources Center (520-621-3268).
http://drc.arizona.edu/instructors/syllabus-statement

RETENTION OF WORK

The School of Architecture may retain samples of student work produced in this course as part of the accreditation process of the National Architectural Accrediting Board, Inc. (NAAB) or other University purposes. This may include models, mock-ups, prints, and other physical documents. Students will be notified of work that needs to be retained and shall submit those to the Archivist or the Instructor, as determined by the Instructor, before grades will be released. After accreditation review, the owners of the retained work will be given the opportunity to reclaim it at their own expense (at the name and email address affixed to the product by the student at the time of submittal) for up to 30 days after notification. By contributing work students aid the School in certifying its work, which is essential to the standing and reputation of the institution, for which the Faculty is grateful.

end of syllabus

TEMPLATE VERSION:
2017.08.24—Section 2: changes to 100% Engagement (now Student Engagement and Career Development);
2017.09.11—Section 3: added copyright section and deleted copyright clause at end-of-syllabus footer.
2017.10.24—Section 1: Added Honors clause. Section 3: revised Emergency Absence policy.

APPENDIX IV

New Faculty Curricula Vitae

NAME	TITLE	ANTICIPATED CONTRIBUTIONS TO PROGRAM
Jonathan Bean	Assistant Professor	Teaching: start-up MS.Arch subplan in Sustainable Market Transformations; sustainability and business expertise. Funded/Research in changes in the design and building industry due to conversion to sustainability practices; collaborations with Eller College of Management.
Andrea Bertassi	Assistant Professor of Practice	Teaching: European perspective on design and practice.
Elena Canovas	Professor of Practice	Teaching: European perspective on design and practice; leadership in mid-level B.Arch studios; expertise on urban design.
Laura Carr	Lecturer	Teaching: Revit and construction documents expertise; mid- to upper-level B.Arch studios; professional practice topics. Outreach: experience in work with native nations.
Carrie Eastman	Lecturer	Teaching: contributions to GenED teaching.
Altaf Engineer	Assistant Professor	Teaching: start-up MS.Arch subplan in Health and the Built Environment; expertise in daylighting. Funded Research in Health and the Built Environment; collaborations with Institute for Place and Well-Being and College of Medicine.
Alex Ford	Lecturer	Teaching: beginning design students.
Laura Hollengreen	Associate Professor of Practice	Administration: extend expertise and capacity for supporting and developing faculty; managing study-abroad; develop multi-discipinary partnerships. Teaching: add to History+Theory expertise.
Anna Koosmann	Assistant Professor	Teaching: succession hire for Prof. Hardin; design/build pedagogy; professional practice pedagogy. Research: Post-occupancy evaluations.
Oscar Lopez	Lecturer	Teaching: lower-level design B.Arch studios; study-abroad. Service: Liaison to AIAS.
Prabhjeet Matharoo	Lecturer	Teaching: beginning design students; fabrication and design/build.
Stefan Mostert	Lecturer	Teaching: lower-level design B.Arch studios; study-abroad.
William Sarnecky	Adjunct Lecturer	Teaching: upper-level B.Arch studios.
Doug Thompson	Lecturer	Teaching: metal and shop fabrication.
Eric Watson	Adjunct Lectuer	Teaching: upper-level B.Arch studios.
Omar Youssef	Lecturer	Teaching: online energy courses.

JONATHAN BEAN, PH.D., CPHC
Assistant Professor

Courses Taught:
ARC 461q/561q Architecture Competition
SBE 301 Design Thinking
SBE 201 Sustainable Design and Planning

Educational Credentials:
2011 Ph.D., University of California Berkeley
2009 M.S. Arch, University of California Berkeley
2002 B.A. Arch, University of California Berkeley

Teaching Experience:
2017–present. School of Architecture, School of Planning and Landscape Architecture, and Eller College of Management, University of Arizona: Assistant Professor of Architecture, Sustainable Built Environments, and Marketing
2013–2017. School of Management, Bucknell University: Assistant Professor of Markets, Innovation, and Design
2011–2013. Parsons, The New School: Postdoctoral Fellow in Design Studies

Professional Experience:
2016–present. Research-consulting on high performance building design

Licenses/Registration:
Passive House Institute United States: Certified Passive House Consultant

Professional Memberships:
American Sociological Association
Society of Building Science Educators
Association for Computing Machinery
Association for Consumer Research
Consumer Culture Theory Consortium

Selected Publications and Recent Research:

2018 Keynote speech: "Demand Less, Expect More." 2018 Humid Climate Conference, Austin, Texas.

2018 "Demand Less: Making a Market for Better Buildings," TEDxUofA, Tucson, Arizona.

2015 "Moral Foundations in the US Passive House Movement," Research Into Action, Portland, Oregon.

2015 "Architects and Market Transformation: Lessons from the US Passive House Movement." Carnegie Mellon University.

* National Science Foundation CAREER Grant: "Net-Zero to Normal—Reshaping the Public's Expectation of Buildings with Action Research." (PI). Under review.

* Department of Energy Building Technology Office Building America Industry Partnerships and Research Priorities for High Performance Housing Innovation – 2018 Grant: "Demand, Standard Practice, and the Deployment of Innovation in the Building Industry." (PI; Hope Schau and Matt Mars, University of Arizona contributing). Under review.

Bean, Jonathan, Shelly Pottorf, and Mary Rogero. "Getting to Zero."

Data collection underway. Submission January 2019.
Target: *Journal of Architectural Education*.

Bean, Jonathan. "Moral Foundations and Market Transformation: The US Passive House Movement."

Data collected, analysis completed, writing in progress. Submission January 2019.
Target: *Journal of Public Policy and Marketing.*

ANDREA BERTASSI ARCHITECT, NL/IT Registered Architect
Assistant Professor of Practice

Courses Taught:
ARC 201 Design Studio I (Fall 2016, Fall 2017, Fall 2018)
ARC 202 Design Studio II (Spring 2017)
ARC 302 Land Ethic (Spring 2018)
ARC 451b/510f (Fall 2016, Fall 2017)

Educational Credentials:
2004. M.Arch., University of Venice (Italy)
1996. Master degree in Music, Conservatory F.A. Bonporti, Trento (Italy)

Teaching Experience:
2018–present. School of Architecture, University of Arizona: Assistant Professor of Practice
2016-2018. School of Architecture, University of Arizona: Lecturer
2014-2016. School of Architecture at Taliesin (Scottsdale, AZ/Spring Green, WI): Visiting Teaching Fellow (Faculty Chair 2015-16)
2013-2014. KRVIA, University of Mumbai, India: Guest Professor
2013. TU Delft: Tutor
2011-2012. Piet Zwart Institute at the Academie voor Bouwkunde in Rotterdam, The Netherlands: Guest Professor
2009. University of Central America in San Salvador, El Salvador: Visiting Professor
2007. University of Cagliari, Italy: Visiting Professor

Professional Experience:
2008–present. XCOOP (Rotterdam, The Netherlands): Associate Architect, Partner, Co-Founder.
2005–2009. Office for Metropolitan Architecture (Rotterdam, The Netherlands): Architect.
2006-2009. Vincent De Rijk Werkplaats (Rotterdam, The Netherlands): Freelance Designer.
2005. GroupA (Rotterdam, The Netherlands): Junior Architect.
2004-2005. Ferlenga Architetti Associati (Milan, Italy): Junior Architect.

Licenses/Registration:
Italy (Ordine degli Architetti), The Netherlands (Stichting Architectenregister)

Professional Memberships:
Ordine degli Archtietti della Provincia di Cagliari, Italy

ELENA CÁNOVAS, ARCHITECT
Professor of Professional Practice

Courses Taught:
ARC 201 Second Year Studio
ARC 302 Third Year Year Studio
ARC 401 FourthYear Studio
ARC 451a Option Studio
ARC 471b/571b Contemporary Urbanity and Public Space

Educational Credentials:
2007. Diploma of Advanced Studies (DEA) and Advanced Research Accreditation (ABD) Doctorate Program ETSA Barcelona, UPC (Universitat Politecnica de Catalunya)

1992. Architect, ETSA Barcelona, UPC (Universitat Politecnica de Catalunya)
Master's Degree in Architecture, expertise in Urban design (level 7, European Qualifications Framework (EQF)
Bachelor's Degree in Architecture, Major in Design, Town Planning and History

Teaching Experience:
2017–present. Professor of Practice, School of Architecture, University of Arizona.
2016–2017. Professor of Practice, Washington University in St Louis, Sam Fox School of Design and Visual Arts College of Arch.
2013–2016. Senior Lecturer, Washington University in St Louis, Sam Fox School of Design and Visual Arts College of Arch.
Fall 2012, 2011, 2003. Visiting Professor, Washington University in St Louis, Sam Fox School of Design and Visual Arts College of Arch.
2008–2014. Associate Professor Abroad, Barcelona Summer Program MARCH, Washington University in St Louis, Sam Fox School of Design and Visual Arts College of Arch.
2012. Workshop "Archaeology's Places and Contemporary Uses," Università di Venezia, Venice.
2008–2012. Coordinator of 1st year Design Studio, Escola Tecnica Superior Arquitectura, Barcelona, Universitat Politècnica de Catalunya.
2001. Guest Professor_University of Clemson,South Carolina, Barcelona Architecture Center, UPC. 2001
2001–2004. Associate Professor, Course Coordinator: vice-director Vertical Workshop: European Skyscrapers, Escola Tecnica Superior Arquitectura, Barcelona, Universitat Politècnica de Catalunya.
1997–2013. Associate Professor, Escola Tecnica Superior Arquitectura, Barcelona, Universitat Politècnica de Catalunya.
1996–1995. Coordinator of the PhD Program Department of Design "New Instruments of Architecture," Escola Tecnica Superior Arquitectura, Barcelona, Universitat Politècnica de Catalunya.

Professional Experience:
1996–present. aSZ arquitectes, Founder and Co-Principal

Licenses/Registration:
Licensed architect in October 1992, Spain. European Community registration System.

Professional Memberships:
Member #23.694-6 of the Architectural Association Col.legi d'Arquitectes de Catalunya (COAC) since January 1993.

Awards:
2004. FAD prize 2004, finalists, Cidade da Cultura Towers, memorial John Hejduk.
2008. ECOLA (European Conference of Leading Architects) award finalist.
2012. Venice Biennale Architecture- Pavelló Catalunya.

LAURA CARR
Lecturer

Courses Taught:
ARC 101 Foundation Studio I.
ARC 102 Foundation Studio II.
ARC 441 Contract Documents
ARC 541 Contract Documents
ARC 422 Structures III
ARC 202 Design Studio
ARC 401 Design Studio

Educational Credentials:
2005 B.Arch, University of Arizona
1995. BA Mathematics, Northern Arizona University

Teaching Experience:
2017–present. School of Architecture, University of Arizona: Lecturer.

Professional Experience:
1996 - 1997 Native Americans for Community Action (Flagstaff, AZ): Mathematics Instructor
1997 - 2000 Coconino Community College (Flagstaff, AZ): Mathematics Instructor
2004 - 2007 Drachman Institute, CAPLA (Tucson, AZ): Project Manager
2007 - 2009 Taylor Design Build (Tucson, AZ): Project Architect
2010 - 2012 Recreational Equipment Inc. (Phoenix, AZ): Market Outreach Specialist (Education, Marketing, Volunteerism)
2012 - 2014 GoLite, LLC (Phoenix, AZ / Boulder, CO): Regional Merchandiser
2012 - 2017 Nelsen Partners Architects and Planners (Scottsdale, AZ): Project Architect

Licenses/Registration:
Not Licensed

Professional Memberships:
None

Selected Publications and Recent Research:
None

CARRIE EASTMAN, LEED AP
Lecturer

Courses Taught:
ARC 220 History of the Built Environment
ARC 471s History 4: Theory (online)

Educational Credentials:
Master of Landscape Architecture, University of Virginia.
Bachelor of Arts, History of Art and Architecture, Brown University

Teaching Experience:
2017–present. School of Architecture, University of Arizona: Lecturer.

Professional Experience:
Landscape Architect. RGR Landscape Architecture and Architecture, NYC.
Freelance Landscape Designer, NYC.
Marketing Coordinator. Perkins Eastman Architects, NYC.

Professional Memberships:
United States Green Building Council

Selected Projects:
East River State Park, Brooklyn, NY.
Scenic Hudson RiverWalk Park, Tarrytown, NY.
Etsy Headquarters, Brooklyn, NY
4 World Trade Center

ALTAF ENGINEER, Ph.D., NCARB, LEED AP BD+C
Assistant Professor

Courses Taught:
ARC 496d/596d Daylighting, Health, and Behavior
ARC 497b/597b Health and Wellbeing in the Built Environment: A Tour of the Senses and Beyond
ARC 496d/596d Social and Behavioral Issues in the Built Environment
DSC 558 Daylighting
ARCH 374 Junior design studio: Architecture and the City
ARCH 475 Senior design studio: Institute for Glass Technology
ARCH 272 Sophomore design studio: Pavilion; Single Family Home
ARCH 475 Junior design studio: The Museum of Ancient Life

Educational Credentials:
2015, Ph.D. in Architecture, University of Illinois at Urbana-Champaign
2005. M.Arch., University of Illinois at Urbana-Champaign
2002. B.Arch., IES College of Architecture, Mumbai University, India

Teaching Experience:
2017–present. School of Architecture, University of Arizona: Assistant Professor.
2016. School of Architecture, University of Arizona: Assistant Professor.
2012–2014. Illinois School of Architecture, University of Illinois at Urbana-Champaign: Instructor.
2005. Illinois School of Architecture, University of Illinois at Urbana-Champaign: Teaching Assistant.

Professional Experience:
2015–present. Architects For Society P.S.C. (Minneapolis, MN): Advisory Board Member, Co-Founder
2007–2011. Stantec (Washington DC): Project Architect.
2005–2007. BellArchitects PC (Washington DC): Project Architect.
2003. Ranjit Sinh Associates (Mumbai, India): Associate Architect.
2001–2003. Ved Segan Associates (Mumbai, India): Intern Architect.

Licenses/Registration:
New York, License # 039740, 2017–present.
Council of Architecture, India, License # CA/2007/40389
NCARB Certification, Certificate # 87188, 2007–present.

Professional Memberships:
National Council of Architectural Registration Boards (NCARB) (member), 2017–present.
Council of Architecture, India (member), 2005–present.
U.S. Green Building Council (USGBC) (member), 2008–present.

Selected Publications and Recent Research:
Engineer, A. and Anthony, K. (2018). *Shedding new light on art museum additions: Front stage and back stage experiences*. New York, NY: Routledge Research in Architecture Series, Taylor & Francis Group.

Engineer, A., Sternberg, E.M., and Najafi, B. (2018, August). Designing interiors to mitigate physical and cognitive deficits related to aging and promote longevity in older adults: A review. *Gerontology.*

*Engineer, A. and *Bliss, A. (2015, February). [Re]Making History: Authenticity, architecture, and tourism. *International Journal of the Constructed Environment,* 5(3-4), 21-33. (*Both lead authors.)

Engineer, A. (2015, April). The art of illumination: Daylighting in museums and its implications. EDRA Connections, 5, 8-11.

ALEXANDER FORD
Lecturer

Courses Taught:
ARC 101 Foundation Studio I.
ARC 102 Foundation Studio II.

Educational Credentials:
2016. MS.HP Columbia University
2014. B.Arch., University of Arizona

Teaching Experience:
Fall 2017–present. School of Architecture, University of Arizona: Lecturer.

Professional Experience:
2013–2018. Mt. Lykaion Excavation and Survey Project (Tucson, AZ): Assistant Field Director for Architecture
2015–2016. Studio Daniel Libeskind (New York, NY): Archival Research Assistant
2015. Blank Studio Architects (Phoenix, AZ): Intern.
2012. Design Build Collaborative (Tucson, AZ): Intern.

Selected Publications and Recent Research:
Forthcoming (May 2019): CONTACT 67 CENOTAPH
"Single-Handedly" by Nalina Moses. Princeton Architectural Press.

Forthcoming (2019): U.S.S. ARIZONA MEMORIAL RE-DESIGN (with Nicholas Gervasi)
Inflection Journal, Volume 05. University of Melbourne.

Forthcoming (2019) DOG SKIN HOUSE (with Nicholas Gervasi)
[TRANS-] Journal, Volume 04: Media. University of Arizona

Forthcoming (contracted, publication date undetermined): VERUM FICTUM. Editor
by Brian Delford Andrews. Culicidae Architectural Press.

2017: A TOMB THAT LIVES (with Nicholas Gervasi)
INTaR Journal for Adaptive Re-Use, Volume 08: Water as Catalyst. Rhode Island School of Design

2017: PHX2065 (with Blank Studio Architects)
Amarillo Museum of Art, Biennial 600 Exhibition.

2015: A DESIGN INTERVENTION FOR THE TERRACE ON THE PARK (with Nicholas Gervasi)
Cleo and James Marston Fitch Prize for Preservation, Columbia University

2015: PHX2065 (with Blank Studio Architects)
Phoenix AIA Metro's "Make A Place" design competition; First Prize

LAURA HOLLENGREEN
Associate Professor of Practice and Associate Director

Courses Taught:
ARC 231/530: History + Theory I: Early World Architecture, Ancient to Medieval
ARC 499/599: History + Theory Independent Study: How Do We Dwell?

Educational Credentials:
1998. Ph.D., University of California, Berkeley
1989. M.A., University of California, Berkeley
1985. A.B., Princeton University

Teaching Experience:
2017-present. School of Architecture, University of Arizona: Associate Professor of Practice.
2009–2016. School of Architecture, Georgia Institute of Technology: Associate Professor.
2006-2009. School of Architecture, University of Arizona: Associate Professor.
2000-2006. School of Architecture, University of Arizona: Assistant Professor.
1999. School of Art, University of Arizona: Instructor.
1997. Department of History of Art, University of California, Berkeley: Instructor.
1995-2000. School of Architecture, University of Arizona: Lecturer.
1995. Department of the History of Art, University of California, Riverside: Lecturer.

Professional Memberships:
Arizona Center for Medieval and Renaissance Studies (member), 1995-present.
Association of Collegiate Schools of Architecture (member), 2000–present.
College Art Association (member), 1988-present.
International Center of Medieval Art (member and officer), 1988-present.
Medieval Academy of America (member), 1988-present.
Society of Architectural Historians (member), 2000-present.

Selected Publications and Recent Research:
Publications
Hollengreen, Laura H. "Gothic Skins: Penitents at the Cathedral." In *Architecture and the Body, Science and Culture*, pp. 67-85. Edited by Kim Sexton. London and New York: Routledge, 2018.

Hollengreen, Laura; Pearce, Celia; Rouse, Rebecca; and Schweizer, Bobby, eds. *Meet Me at the Fair: A World's Fair Reader*. Pittsburgh: ETC Press, Carnegie Mellon University, 2014.

Hollengreen, Laura H., ed. *Translatio, or the Transmission of Culture* (Proceedings of the 10th Annual Conference, Arizona Center for Medieval and Renaissance Studies). Arizona Studies in the Middle Ages and the Renaissance 13. Turnhout, Belgium: Brepols, 2008.

Recent Research
My recent research, in collaboration with a colleague at Rensselaer Polytechnic Institute, has focused on a "genealogy" of the effects of immediacy and hypermediacy reaching back from digital media to works of art from the premodern past. It has resulted in the following peer-reviewed conference papers that have been or will be delivered:
[July 2019 "Virtual and Augmented Reality in the Middle Ages." 26th International Medieval Congress, University of Leeds, U.K.

[April 2019 "Wall, Window, World: Augmented Architectural Reality Then and Now." Society of Architectural Historians, Providence, RI.]

November 2018 "Are Mixed Realities Really 'Mixed'? A Theoretical and Historical Investigation of Medieval Antecedents to Contemporary Digital Environments." Society for the History of the Humanities, Amsterdam, The Netherlands.

October 2018 "Space, Seam, Scenario: Medieval Architecture and Architectural Representation as an Analogue to Contemporary Augmented Reality." Southeast Chapter of the Society of Architectural Historians, Manhattan, KS.

ANNA KOOSMANN, NCARB
Assistant Professor

Courses Taught:
University of Arizona
ARC 301 Design Studio III
ARC 451a Design Studio VI
ARC 451b/510f Design Studio VII
ARC 459/550c Ethics and Practice
ARC 497k/597k Portfolio
ARC 499 Independent Study
ARC 509a Summer Immersion Design Studio
ARC 509b Summer Immersion Seminar
ARC 510a Summer Immersion Design Studio
ARC 540a Design Communications
ARC 599 Independent Study

Foundation University
ARCH 42a Design Studio 8
ARCH 47a Building Technology 5
ARCH 48a Research Methods
ARCH 51a Design Studio 9
ARCH 52a Design Studio 10
ARCH 57a Community, Planning, and Development
ARCH 60a Comprehensive

Educational Credentials:
2007. M.Arch., University of Washington
2002. B.S.Arch., University of Wisconsin – Milwaukee, *cum laude*, minor Art History

Teaching Experience:
2017–present. School of Architecture, University of Arizona: Assistant Professor.
2015. US Dept. of State (Philippines): Fulbright Scholar.
2012–2014. Department of Architecture, Foundation University, Dumaguete City, Philippines: Visiting Instructor.

Professional Experience:
2015. Meyer Scherer & Rockcastle (Minneapolis, MN): Project Architect.
2007–2012. Schreiber Starling and *Whitehead (formerly *Lane) (Seattle, WA): Architectural Designer.
2004–2005. Skidmore, Owings, Merrill LLP (SOM) (Chicago, IL): Interior Design Architect.

Licenses/Registration:
Washington
NCARB Certification

Professional Memberships:
Association of Collegiate Schools of Architecture (member), 2017–present.

Selected Publications and Recent Research:
Koosmann, Anna. "When Bold Design Can Lead to Build Blunder: Lessons on Design-Build Failure," Proceedings for the Design-Build X Change Virtual Conference *Working Out: Thinking While Making III* Sep 2018

Koosmann, Anna. "Building Resilience in the Time of Super Typhoons: Evaluating the First Filipino Design-Build University Program," Proceedings for the ACSA International Conference *New Instrumentalities* June 2018

Koosmann, Anna. "Evaluating the First Filipino Design-Build University Program," 2018 EDRA Core Recipient Project Profiles www.edra.org/page/2018_core_recipients

Koosmann, Anna. *Proportion and Space: An Investigation and Installation*. Seattle: University of Washington, 2007 (Master's Thesis)

OSCAR LOPEZ, ASSOCIATE AIA
Lecturer

Courses Taught:
ARC 201 Dwelling Studio I.
ARC 202 Dwelling Studio II.
ARC 496a/596a Special Topics in Architecture
ARC 497b/597b Special Topics in Architecture

Educational Credentials:
2009. B.Arch., Arizona State University
2012. M.Arch., Arizona State University

Teaching Experience:
2016–present. School of Architecture, University of Arizona: Lecturer.

Professional Experience:
2016–present: s p a c e BUREAU (Tucson, AZ): Principal.
2016-2017: Repp+McLain Design and Construction (Tucson, AZ): Architect in Training
2013–2016: Rick Joy Architects (Tucson, AZ): Architect in Training
2012-2013: StarkJames Design & Build (Phoenix, AZ): Architect in Training

Licenses/Registration:
N/A

Professional Memberships:
American Institute of Architects (Associate Member), 2016–present.

Selected Publications and Recent Research:
2019–AIA Western Mountain Region Pettigrew Leadership Scholarship
2018–AIA Arizona Associate Award
2018–AIA Western Mountain Region Design Excellence, Merit Award: Local Nomad
2018–AIA Western Mountain Region Design Excellence, Citation Award: Anello
2018–AIA Arizona Design Excellence, Merit Award: Anello
2018–AIA Southern Arizona Design Excellence, Merit Award: Anello
2017–AIA Arizona Design Excellence, Citation Award: Local Nomad
2017–AIA Southern Arizona Design Excellence, Merit Award: Local Nomad

PRABHJEET SINGH MATHAROO
Lecturer

Courses Taught:
ARC 101 Foundation Studio I
ARC 102 Foundation Studio II

Educational Credentials:
2016. MS.Arch., University of Arizona, School of Architecture
2009. B.Arch., University of Arizona, School of Architecture

Teaching Experience:
2017–present. School of Architecture, University of Arizona: Lecturer.

Professional Experience:
Summer 2010/Summer 2011. Module Engineering Consultancy (Muscat, Oman), Intern
May–June 2012. Matharoo Trading and Contracting Company LLC (Muscat, Oman): Intern
June–July 2012. Muriya Tourism (Muscat, Oman), Intern
2012–2014 UA School of Architecture (Tucson, AZ). Material Lab Monitor
August–October 2014. HA|RU Studios, LLC (Tucson, AZ) Designer and Fabricator
January–December 2016. UA School of Architecture (Tucson, AZ). Teaching Assistant
November 2014–July 2015/August 2016-December 2017. Lori Carroll & Associates (Tucson, AZ) Designer
August 2017–Present. UA School of Architecture (Tucson, AZ) Lecturer

Licenses/Registration:
AWS D1.1 3G+4G Welding Certificate

Professional Memberships:
American Institute of Architects (member), 2016

Selected Publications and Recent Research:
ASCA 2018 Architectural Education Award Winner – Sonoran Pentapus S-Cape
AIA–Arid City Synergy Design Competition – Honorable Mention
AIA–Southern Arizona Design Awards – Sonoran Bus Shelters – Citation Award

STEFAN MOSTERT, SACAP (South Africa)
Lecturer

Courses Taught:
ARC 101 Foundation Studio I.
ARC 102 Foundation Studio II.
ARC 103 Foundation Studio III.

Educational Credentials:
2009. M.Arch. University of the Free State, South Africa
2005. B.Arch. University of the Free State, South Africa

Teaching Experience:
2016–present. School of Architecture, University of Arizona: Lecturer.
2010-2015. School of Architecture, University of Kwazulu-Natal, Durban, South Africa: External Lecturer.

Professional Experience:
2017–present. Studio Caban (Tucson, AZ): Architect.
2013–2016. Aecom (Durban, South Africa): Senior Architect.
2010-2013. Koop Design (Durban, South Africa): Architect

Licenses/Registration:
Professional Architect South Africa (SACAP)

WILLIAM G. SARNECKY, NCARB
Adjunct Lecturer

Courses Taught:
ARC 451b Design Studio VII.

Educational Credentials:
1992. B.A. History, University of Arizona
1999. M.Arch., University of New Mexico

Teaching Experience:
2006-2017 College of Architecture, Art and Design, American University of Sharjah: Associate Professor
2017 College of Architecture and Design, New Jersey Institute of Technology: Adjunct Instructor
2018–present. School of Architecture, University of Arizona: Adjunct Instructor

Professional Experience:
1999–Present. Sarnecky Design (Tucson, AZ): Principal
2005–2006. Marengo Morton Architects (La Jolla, CA): Project Coordinator
2000–2002. Brooks Scarpa Architecture (Santa Monica, CA): Project Coordinator
1999–2000. Hagy Belzberg Architects (Santa Monica, CA): Project Coordinator

Licenses/Registration:
New Mexico #004870
NCARB Certification #70201

Professional Memberships:
2006–Present. Association of Collegiate Schools of Architecture (member), 2006–present.

Selected Publications and Recent Research:
2015 Sarnecky, William and Amir Berbic. 2015. "Form, Furniture and Graphics: A Reciprocal Cross-Disciplinary Collaboration." Paper presented at the Ninth International Conference on Design Principles and Practices, Chicago, IL, March 12-14, 2015.

2014 Sarnecky, William. 2014. "Tarkeeb Assembly Lab: (Im)Precision in Digital and Analog Fabrication." Project and poster presented at and in proceedings of Globalizing
Architecture/Flows and Disruptions, the 102nd Annual ACSA Meeting, Miami Beach, April 10- 12, 2014.

2013 Sarnecky, William and Amir Berbic. 2013. "Form, Furniture and Graphics: A Reciprocal Cross-Disciplinary Collaboration." Paper and poster to be presented at the Dialects of Design Education IDA Congress, Istanbul, Turkey, November 15-17, 2013.

2013 Sarnecky, William. 2013. "Gulf Material Traditions Semantically Reconsidered: A Case Study of Three Digital Approaches in Furniture Design and Fabrication." In Proceedings of Future Traditions 2013 1st eCAADe International Regional Meeting, Oporto, 2013, 193-204.

2011 Sarnecky, William. 2011. "The Impact of "Learning by Doing" in a Non-Democratic Culture." Paper presented at Intercad 2011 The International Conference on Architecture & Design, Vienna, Austria, November 26-27, 2011.

2011 Sarnecky, William. 2011. "Bespoke Furniture: Technê, Technology and the Search for Specificity in Dubai's Generic Landscape." Paper presented at the Design Principles & Practices International Conference, Rome, Italy, February 2-4, 2011.

Awards:
2016. Andreu World Int'l Furniture Design Competition—Special Mention for Wedge Table
2015. AIA/Middle East Design Award for Excellence—CAAD Display Wall design/build ("Design Award" equivalent to Honor Award")
2013. AIA/Middle East Merit Award CAAD Display Wall design/build—Unbuilt Architecture Award;
2013. AIA/Middle East Merit Award Salone Satellite Booth B-51

DOUG THOMPSON
Lecturer

Courses Taught:
ARC 297m Digital Fabrication I

Teaching Experience:
2017–present. Lecturer, School of Architecture, University of Arizona.

Professional Experience:
1980–present. President and Founder of DT Metalcraft

Professional Memberships:
Artist Blacksmith Association of North America

ERIC D WATSON, AIA, LEED AP BD+C
Lecturer

Courses Taught:
ARC 401 Design Studio V Technical Systems Integration

Educational Credentials:
2001. M.Arch., Montana State University
2001. B.Arch., Montana State University

Teaching Experience:
2018–present. School of Architecture, University of Arizona: Lecturer.

Professional Experience:
2017–present. coLAB Studio (Phoenix, AZ): Principal.
2015–2017. Smith Group JJR (Phoenix, AZ): Senior Project Architect + Associate
2013–2015. Jones Studio (Phoenix, AZ): Project Architect
2005–2013. Smith Group (Phoenix, AZ): Project Architect + Associate
2002–2005. Architekton (Tempe, AZ): Architectural Designer

Licenses/Registration:
Arizona

Professional Memberships:
American Institute of Architects (member), 2005–present.
United States Green Building Council (member), 2008–present.
International Living Future Institute

Selected Publications and Recent Research:
Sources in Design (Design Icon) – Issue 13, 2018

Guest Speaker AIA WMR – 2018 - “Data Driven Design with a Touchy-Feely Edge”

Guest Speaker Taliesin West -2018 – Vali Homes “Designing net Zero Housing”

OMAR YOUSSEF, PH.D.
Lecturer

Courses Taught:
ARC 461a 561a Water Efficiency in the Built Environment
ARC 461e 561e Sustainable Design and the LEED Initiative
ARC 461k 561k Energy and the Environment
ARC 461l 561l Energy Use in Buildings
ARC 461m 561m Energy Efficient Design
ARC 461n 561n Energy Modeling and Auditing
ARC 461p 561p Environmental Science Laboratory
ARC 461q 561q Special Topics in Architectural Research

Educational Credentials:
2018. Ph.D., University of Arizona, USA
2014. M.Sc.Arch., University of Arizona, USA
2010. B.Sc.Arch. Eng., Greenwich University, UK
2010. B.Sc.Arch. Eng., Modern Sciences and Arts University, Egypt

Teaching Experience:
2014–present. School of Architecture, University of Arizona: Lecturer.

Professional Experience:
2010–present. EO-Designs (Cairo, Egypt): Principal.
2010–2013. rmc (Cairo, Egypt): Architect.
2008-2010. rmc (Cairo, Egypt): Intern.

Licenses/Registration:
Cairo, Egypt

Professional Memberships:
US. Green Building Council (AZ Ambassador), 2016-2018

Selected Publications and Recent Research:
Youssef, O., Elzomor, M. (2018) Advancing Haptic Learning through Technology, American Society for Engineering Education – abstract accepted

Youssef, O., Elzomor, M. (2018) Integrating Social Media Platforms in STEM Increases Student Engagement and Retention, American Society for Engineering Education – abstract accepted

Youssef, O., Chalfoun, N., Sternberg, E., Rosheidat, A., Crimmins, M., Marsh, S., ElZomor, M., A Human-Centered Climatic Design Methodology for Transitional Spaces in Hot-Arid Regions. Systemic, Cybernetics and Informatics: WMSCI (in review)

Youssef, O., Chalfoun, N., Sternberg, E., Rosheidat, A., Crimmins, M., Marsh, S., ElZomor, M., Objective and non-obtrusive assessment of the impact of environmental attributes within transitional spaces in arid-regions on active people. Journal of Architecture Media Politics Society (Amps) (in review)

Elzomor, M., & Youssef, O. (2017). Pragmatic Passive Sustainable Construction Practices In Proc. of the 54th ASC Annual Conference. The Associated Schools of Construction

Youssef, O., Chalfoun, N., Sternberg, E., Rosheidat, A., Crimmins, M., Marsh, S., ElZomor, M., Objective and non-obtrusive assessment of the impact of environmental attributes within transitional spaces in arid-regions on active people. International Journal of Climate Change: Impacts & Responses (Initial Acceptance)

Elzomor, M., & Youssef, O. (2017). Introducing Community Resiliency through CSR. Construction Research Congress (CSR). Journal of the American Society of Civil Engineers (ASCE) Proc. Construction Research Congress 2018, New Orleans, Louisiana, USA, April 2-5

Chalfoun, N., & Youssef, O. (2016). Development of innovative urban water efficiency systems and a four-legged education curriculum addressing water reduction, harvesting, reuse, and energy generation technologies. Urban Water Systems & Floods,165, 143.

Chalfoun, N. V., Youssef, O. & Elwekil, E. (2015). Research, development, and optimization of schematic design and environmental energy efficiency systems for the Blackman Residence in Tucson, Arizona, USA. In International Institute of Informatics and Systemics, IIIS.