

**Department of Architecture, College of ENV Design
Cal Poly Pomona**

Interim Progress Report for Year Five

Instructions and Template

November 30, 2019

Contents

1. Instructions and Template Guidelines
2. Executive Summary of the Two Most Recent NAAB Visits: 2007 and 2013
3. Template
 - a. Progress in Addressing Not-Met Conditions and Student Performance Criteria identified in the review of the Interim Progress Report for Year 2
 - b. Progress in Addressing Causes of Concern
 - c. Changes or Planned Changes in the Program
 - d. Summary of Responses to Changes in the 2014 NAAB Conditions
 - e. 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; samples of required student work).
4. Requirements for the Use of Digital Content in Interim Progress Reports

1. INSTRUCTIONS AND TEMPLATE GUIDELINES

Purpose

Continuing accreditation is subject to the submission of interim progress reports at defined intervals of 2 years and 5 years after an eight-year term of continuing accreditation is approved.

This narrative report, supported by documentation, covers four areas:

1. The program's progress in addressing not-met Conditions and Student Performance Criteria (SPC) from the Interim Progress Report Year 2 review.
2. Progress in Addressing Causes for Concern.
3. Changes or Planned Changes in the Program.
4. Summary of Responses to Changes in the 2014 NAAB Conditions.

Supporting Documentation

1. The narrative should describe in detail all changes in the program made in response to not-met Conditions and Student Performance Criteria, including detailed descriptions of changes to the curriculum that have been made in response to not-met SPC that were identified in the review of the Interim Progress Report Year 2. Identify any specific outcomes expected to student performance. Attach new or revised syllabi of required courses that address unmet SPC.
2. Evidence of student work is only required to address deficiencies in the following cases: (1) If there are any SPCs that have not been met for two consecutive visits; (2) If there are three not-met SPCs in the same realm in the last visit.
Provide three examples of minimum-pass work for each deficiency and submit student work evidence to the NAAB in electronic format. (Refer to the "Guidelines for Submitting Digital Content in IPRs" for the required format and file organization.)
3. Provide information regarding changes in leadership or faculty membership. Identify the anticipated contribution to the program for new hires and include either a narrative biography or one-page CV.
4. Provide additional information that may be of interest to the NAAB team at the next accreditation visit.

Outcomes

IPRs are reviewed by a panel of three: one current NAAB director, one former NAAB director, and one experienced team chair.¹ The panel may make one of three recommendations to the Board regarding the interim report:

1. Accept the interim report as having demonstrated satisfactory progress toward addressing deficiencies identified in the report of the Interim Progress Report Year 2.
2. Accept the interim report as having demonstrated progress toward addressing deficiencies but require the program to provide additional information (e.g., examples of actions taken to address deficiencies). This report shall be due within six weeks of the receipt of this outcome report.
3. Reject the interim report as having not demonstrated sufficient progress toward addressing deficiencies and advance the next accreditation sequence by at least one calendar year, thereby shortening the term of accreditation. In such cases, the chief academic officer of the institution will be notified and a copy of the decision sent to the program administrator. A schedule will be determined so that the program has at least six months to prepare an Architecture Program Report. The annual statistical report (see Section 9 of the 2014 Conditions) is still required.

Deadline and Contacts

IPRs are due on November 30. They shall be submitted through the NAAB's Annual Report System (ARS). As described in Section 10 of the 2015 NAAB Procedures for Accreditation "...the program will be assessed a fine of \$100.00 per calendar day until the IPR is submitted." If the IPR is not received by January 15 the program will automatically receive Outcome 3 described above. Email questions to forum@naab.org.

¹ The team chair will not have participated in a team during the year in which the original decision on a term of accreditation was made.

Instructions

1. Type all responses in the designated text areas.
2. Reports must be submitted as a single PDF following the template format. Pages should be numbered.
3. Reports are limited to 40 pages/20 MBs.
4. Supporting documentation should be included in the body of the report.
5. Remove the #4 "Requirements for the Use of Digital Content in Interim Progress Reports" pages before submitting the interim progress report.

2. EXECUTIVE SUMMARY OF 2014 NAAB VISIT

CONDITIONS NOT MET

2014 VTR
None

STUDENT PERFORMANCE CRITERIA NOT MET

2014 VTR
B.2 Accessibility
B.12 Building Materials and Assemblies Integration

CAUSES OF CONCERN

2014 VTR
Studio Culture
Writing Ability (B. Arch only)
Applied Research
Comprehensive Design
Strategic Planning

Response from NAAB of 2 year IPR

From Judith Kinnard, FAIA, August 4, 2017 letter to the Cal Poly Pomona Department Chair:

“ After reviewing the Interim Progress Program Report (IPR) submitted by CalPoly, Pomona Department of Architecture, the National Architectural Accrediting Board (NAAB) has concluded that the program has demonstrated satisfactory progress toward addressing deficiencies identified in the most recent Visiting Team Report. No further information is required until the 5-year IPR...”

3. TEMPLATE

Interim Progress Report Year 5
California State Polytechnic University, Pomona
College of ENV Design, Department of Architecture
B.Arch. [five year undergraduate degree]
M. Arch. [undergraduate degree + 57 credits]
Year of the previous visit: 2014

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

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

Dean: Dr. Lauren Bricker. (Interim Dean, College of ENV Design. Member, Faculty of Architecture)

Individual submitting the Interim Progress Report: Prof. George Proctor, Chair of Architecture Dept.

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

Chief academic officer for the Institution:

Provost: Dr. Sylvia A. Alva

President of the institution: Dr. Soraya M. Coley

Text from the IPR Year 2 review is in the gray text boxes. Type your response in the designated text boxes.

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

a. Progress in Addressing Not-Met Conditions

From Judith Kinnard, FAIA, August 4, 2017 letter to the Cal Poly Pomona Department Chair:

“ After reviewing the Interim Progress Program Report (IPR) submitted by CalPoly, Pomona Department of Architecture, the National Architectural Accrediting Board (NAAB) has concluded that the program has demonstrated satisfactory progress toward addressing deficiencies identified in the most recent Visiting Team Report. No further information is required until the 5-year IPR...”

CalPoly, Pomona Department of Architecture, 2018 Response: The Department continues its due diligence to ensure NAAB conditions will be met with its next full report and site visit.

b. Progress in Addressing Not-Met Student Performance Criteria

From Judith Kinnard, FAIA, August 4, 2017 letter to the Cal Poly Pomona Department Chair:

“ After reviewing the Interim Progress Program Report (IPR) submitted by CalPoly, Pomona Department of Architecture, the National Architectural Accrediting Board (NAAB) has concluded that the program has demonstrated satisfactory progress toward addressing deficiencies identified in the most recent Visiting Team Report. No further information is required until the 5-year IPR...”

CalPoly, Pomona Department of Architecture, 2018 Response: The Department continues its due diligence to ensure NAAB student performance criteria will be met with its next full report and site visit.

II. Progress in Addressing Causes of Concern

From Judith Kinnard, FAIA, August 4, 2017 letter to the Cal Poly Pomona Department Chair:

“ After reviewing the Interim Progress Program Report (IPR) submitted by CalPoly, Pomona Department of Architecture, the National Architectural Accrediting Board (NAAB) has concluded that the program has demonstrated satisfactory progress toward addressing deficiencies identified in the most recent Visiting Team Report. No further information is required until the 5-year IPR...”

CalPoly, Pomona Department of Architecture, 2018 Response: The Department continues its due diligence to ensure there are no areas of concern for the NAAB with its next full report and site visit.

III. 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).

CalPoly, Pomona Department of Architecture, 2018 Response:

Faculty retirement/succession planning:

Since the 2014 NAAB site visit there have not been new tenure track hires, the Department has increased the number of lecturers (adjunct faculty) teaching in the program. The Department has seen Professor Denis Lawrence Phd. and Professor Gary McGavin faculty fully retire, and Professors Hofu Wu Phd. and Luis Hoyos retire to 50% (though the university's faculty early retirement program, aka FERP.)

- Professor Lawrence, an anthropologist, primarily taught through the Center for Regenerative Studies, and her courses in programming have been assumed by Professor Sarah Lorenzen.
- Professor McGavin AIA, taught structures and building technology. Before retiring he worked to help recruit his eventual replacement, Marc Schultiz NCARB who is now tenured and advanced to Associate Professor.
- Professor Hofu Wu teaches full time for half the year, and he provides direction to the healthcare design track that some students pursue through professional electives and upper division topic studios. We have numerous adjunct lecturers with institutional experience who each may assume portions of this curriculum when Professor Wu fully retires.
- Professor Hoyos teaches half time all year and his focus is on preservation, urban and large scale design. Professors Ramirez, Lorenzen, and Proctor all have urban design professional degrees so there are faculty resources who can fill in when Professor Hoyos fully retires.

The Department anticipates the university will allow the Department to conduct faculty searches each year for next 4-5 years. For the term of this report, there were no new tenure track hires, however starting in January 2020, Victor Jones AIA, a new faculty of African origin, will be joining the Department. Additionally a search is currently underway for another new hire to start in 2020-21.

The Department also maintains a diverse and gender balanced list of professionals who have explicitly stated an interest in teaching, an extensive list of contacts for design firms in the region, and alumni, as a resource for lecturers, design studio critics, and final design jury panelists. Generally we keep adjunct faculty schedules concentrated on a MWF or TTH schedule so their other professional obligations and activity are not adversely impacted.

Administration changes (dean, department chair, provost):

For the period covered by this report the Cal Poly Pomona President, Provost and Dean of the College have not changed. However, beginning with the current academic year 2019-20, Dean Michael Woo has retired and Architecture faculty Dr. Lauren Bricker stepped in as Interim Dean while the university conducts its search for a new permanent Dean.

The Department Chair also changed. Professor Sarah Lorenzen AIA stepped down in December 2016 and Professor George Proctor AIA assumed the role of department chair in January 2017. The Department Chair position is normally filled by a full professor on the faculty, an external search is not conducted for a chair. Chairs serve on a four year cycle. The Department rotates junior faculty through its Associate Chair position to prepare future department leadership. The Associate Chair, serves at the pleasure of the Chair, and oversees remote campus studios, and handles various facilities and coordination tasks, and sits with the chair to discuss operational matters. Currently Assistant Professor Robert Alexander holds this position, the year preceding it was held by Assistant Professor Katrin Terstegen. Should the department wish to pass the responsibilities on to another faculty, a new chair will be decided by election and assume responsibilities in January 2021.

Enrollment (increases, decreases, new external pressures):

California State Polytechnic University, Pomona								
Institutional Research, Planning, and Analytics								
Headcount								
Architecture	IPEDS Ethnic Group	Male		Female		Total		Grand Total
		FT	PT	FT	PT	FT	PT	
College of Environmental Design	Asian Only	60	4	80	2	140	6	146
	Black/African American Only	4	0	5	1	9	1	10
	Hispanic/Latino (any race)	142	6	103	6	245	12	257
	Native Hawaiian or Other Pacific Islander Only	1	0	0	0	1	0	1
	Non-Resident Alien	29	3	31	2	60	5	65
	Two or More Races	12	1	11	1	23	2	25
	Unknown	6	0	9	0	15	0	15
	White Only	50	3	59	6	109	9	118
		304	17	298	18	602	35	637

Our student population is very diverse, a reflection of the Los Angeles region. Students are the strength of Cal Poly Pomona Architecture. Many are the first in their family to attend college, most come from diverse backgrounds and a substantial number of students transfer from a community college to fulfill their dream of becoming an architect. The students of CPP/ARC bring a drive and work ethic that allows them to excel, to establish their careers and to contribute to the design of the built environments of California and beyond.

With population growth, all California State Universities are experiencing increased demand for programs. The state funds a three tiered post-secondary education system, Community Colleges(CC), California State University (CSU), and University of California (UC). Cal Poly is one of only two Architecture programs in the CSU. Annual tuition is about \$7500, a bargain to study architecture. The quality of the program and the affordable price generates more applications than space. About 1 in 20 applicants are accepted. The CSU Chancellor is expecting all programs to absorb a fair share of growth. This is a significant pressure on the Department, and the Department is exploring a variety of approaches to this issue.

New opportunities for collaboration:

Most upper division topic design studios are supported by professional firms or by an advisory group, with both expertise and financial assistance. Topic studios have provided collaborative opportunities with the Cal Poly campus community and with the external professional world. The activities undertaken in topic studios are some of the best examples of teacher-scholar, and faculty-student research in the college. The Department cultivates new relationships with industry each year to support topic studio programs, which benefit students and faculty alike. Themed Environments Studio – run jointly with Dept. of Landscape Architecture and sponsored by Disney Imagineering.

- Education Design Studio – Sponsored by HMC Architects, who also provide expertise to the studio with lectures, reviews, and project site visits.
- Healthcare Design Studio – Sponsored by the Healthcare Initiative, a consortium that includes HOAG, Cedars Sinai, McCarthy, and LPA
- Transit Oriented Development Studio – Sponsored by Architects Orange, who also provide expertise to the studio with lectures, reviews, and project site visits.
- Structures and Building Envelopes Studio – which has been sponsored by both grants and donation, is most often run with Engineering. Currently is will receive support form Arktura, <https://arktura.com/> and Enclos, <https://www.enclos.com/>
- Design Village Construction Project – Alumni donors support 3 teams' participation in this annual competition.

The Department is also cultivating stronger relationships with local Community Colleges with improved articulation agreements. The Cal Poly President and Provost have approved the Department's exploration of offering components of the program, or the program in total at remote sites, likely in collaboration with Community College campuses having a strong relationship with Cal Poly. Funding of the Community College system in California, which has a focus on tremendous physical resources, may then be available to Architecture program students.

The Department initiated an alumni advisory board to assist the Department's quest to become a center of excellence, diversity, and innovation, and to be a conduit for communication between the profession, alumni, students, and faculty. The Advisory Board will provide a forum for curriculum review and input and continually work with the Department to provide an educational environment benefiting the professional community through teaching, research, and service. The founding alumni members are leaders from some of the region's major firms: Gensler LA, RiosClementiHale, Gehry Technologies; LPA; HMC Architects

Financial Resources (increases, decreases, external pressures):

Membership in the American Institute of Architects (AIA) and maintenance of an architect license require regular continuing education units approved by the AIA. Memberships in the AIA ensure the currency of the department's programs and the credibility of its instructors. Department funds are allocated to each T/TT faculty, supporting membership in the American Institute of Architects (or other professional organization if appropriate), and partial support to attend academic and/or AIA conferences. Alternatively faculty can use these resources in support of classroom activities.

An Architecture alumna's (BA1980) donated funds have provided significant program improvements. After lengthy discussions between the faculty, the Chair and Dean, and negotiated by the Dean with University Development and the President, a plan was devised for spending this gift. The funds were designated to be used for a variety of capital improvements, shop upgrades, department promotion and development, an enhanced lecture series named in honor of co-founding faculty Bernard Zimmerman, an annual fellowship named after retired design faculty Paul Helmle, and support for topic studios and department studio monographs/reports.

Gifted Funds Plan

1. Technology upgrades: \$517,551 total cost.
2. Visiting Fellowship program, exhibition, and publication: \$30,000 per year for 15 years (\$450,000 total cost).
3. Distinguished Lecture Series: \$20,000 per year for 6 years (\$120,000 total cost).
4. A/V upgrade of ENV Atrium: \$150,000 total cost.
5. Directed outreach: \$60,000 per year (\$360,000 for 6 years)
6. Teacher-Scholars, student research, and topic studios: \$60,000 per year (\$360,000 for 6 years).

Significant changes in educational approach or philosophy:

There have not been any significant change in educational approach. The program was mandated to convert from quarters to semesters in 2018-19. ALL courses were a direct conversion. Only one new course was added to advance integrated design – ARC4400/4402a Design Development, which was combined with the spring 3rd year design studio (see syllabus at the end).

Changes in physical resources (e.g., deferred maintenance, new building planned, cancellation of plans for new building):

New Fabrication and Structures Labs were added to Department resources since the last NAAB visit. Our FabLab has three laser cutters (we now have 5), seven 3d printers, and a large format flatbed plotter. These new tools complement an existing print services lab run by the College of ENV Design. The Structures Lab is outfitted with bench equipment to test the structural properties of materials and test principles of statics and dynamics.

The Department has upgraded its model shop with substantially improved safety features, new saws, multi-axis milling, and vacuum-forming.

<https://vimeo.com/267867167>

The Department has also built two Zoom-Rooms to enable remote collaboration, which also hold the potential to offer hybrid course components.

The resources for these improvements have come from the gifted funds identified above.

IV. Summary of Responses to Changes in the [2014 NAAB Conditions](#)

CalPoly, Pomona Department of Architecture, 2018 Response:

I.1.3 Social Equity:

An essential part of the CPP/ARC mission is to offer opportunities to minorities and economically disadvantaged students who are poorly represented in architecture. At CPP/ARC women and men are equally represented, with diverse cultural/ethnic backgrounds. Many are first or second generation Americans. A large number of our students are the first in the family to go to college. Diversity is essential to the education of young architects who must learn to work with a variety of people, places, cultures and problems. In the studio model, classmates are often some of the best resources for alternative views and attitudes for solving design problems.

The department maintains a studio culture policy that takes into consideration the totality of demands on a student's time with a guideline for both students and faculty. Student representatives attend faculty meetings and provide input to faculty (see <https://env.cpp.edu/arc/studio-culture>)

I.1.4 Defining Perspectives: Change - programs should define their approach to values and core principles held in common throughout the profession and the academy relative to both the practice and discipline of architecture.

The Cal Poly Pomona Department of Architecture follows the polytechnic motto of learn-by-doing. The Program requires a 500-hour internship to be completed to graduate. Every Spring, the Department in collaboration with the Department of Landscape Architecture, runs a job fair in its studio building where students attend a symposium and interview firms for potential employment. Typically more than 100 regional design firms participate. Representatives from most of these same firms are in a jury pool to be invited to final project reviews. Some of these same firms also contribute adjunct lecturers to our technical

courses, such as our upper division digital practices course taught by experts from Trimble (formerly Gehry Tech.) The opportunities for Cal Poly students to grow professionally are numerous, given the substantial number of firms in the Los Angeles region.

<https://vimeo.com/267868283>

The Cal Poly Pomona Department of Architecture also finds that students need to be offered a diverse set of experiences as a part of their education and training. In the 4th year of the 5 year BArch, students can choose to study abroad through one of the CSU or CPP programs in Denmark, Italy, Germany or Asia. Alternatively, those who do not go overseas select from a series of Topic Studios, many of which are sponsored and include a brief period of travel to locations in the US, like New York, Chicago, Texas, the northwest and southwest corners of the country. And almost every upper division design studio has some element of service learning connected to its activities.

The Cal Poly Pomona Department of Architecture also finds that integrated design and sustainable practices thrive in the context of a comprehensive project. In the Spring of 3rd year for the BArch (and, in parallel, in the Spring of 2nd year MArch) students fully develop a design, with all building systems, structure, environmental and energy systems, and construction methods resolved. (see syllabus at end) The developed design is assembled into a bound package equivalent to that required to pass scrutiny at a municipal planning and design department. To achieve this outcome, Department faculty coordinate a series of courses so that students need only work on one project, through which they must account for the rigors and technology of all integrated building concerns. The outcomes are often what students take to their job interviews, off campus, and at the Department's annual Job Fair. Firms are known to comment with very high regard on the design package CPP/ARC students produce from this 3rd year series.

The Cal Poly Pomona Department of Architecture also finds that students need multiple opportunities and contexts for developing "Collaborative Culture". Studio or Collaborative culture is incubated in the core years through group reviews and discussions of student work. As students advance into the program, projects in construction, structures, environmental controls, history and upper division electives incorporate collaborative projects and exercises. Some upper division topic studios also include collaboration with Landscape Architecture, Engineering, and other departments on campus.

The Cal Poly Pomona Department of Architecture supports Sustainable Practices in collaboration with the College of ENV Design, Lyle Center for Regenerative Studies, Directed by Architecture faculty Dr. Pablo LaRoche. Dr. LaRoche teaches environmental controls and sustainable practices courses through the center for all members of the university community.

<http://env.cpp.edu/rs/rs>

Many Department of Architecture faculty have design practices and bring real professional experience into the learning environment. At the local, national and international level, Faculty serve on professional organizations that address environmental, urban, preservation, and technological issues. Department faculty publish books and articles, present at professional conferences, serve on design reviews, and curate exhibits. Faculty in professional practice add a significant dimension to the program, providing students with access to valuable current real world issues, trends, and insights. Faculty have participated in the design and development of projects, ranging from single family residences to high-rise buildings. Architectural design and development of built work is a central mission for the Department, including the faculty's "concern for ecological and social health, safe and sustainable communities, and the uplifting aspirations of good design".

II.4.6. Admissions and Advising Change - new public information

All admissions and advising information is posted on our website.

BArch Admissions

<http://env.cpp.edu/arc/degree/bachelor-architecture>

Admission to the undergraduate program is possible either as a first-time freshman or as a transfer student from a recognized college.

Undergraduate admissions are processed and managed by the University (not by the Department of Architecture).

The undergraduate program in the Department of Architecture is considered to be "impacted," that is, many more students apply than can be accommodated each year and a supplementary admissions process is required by the University and the Department; all candidates must meet regular University admission standards as well as additional standards required by the Department of Architecture.

Freshman Applicants

Generally, admission of undergraduate students from high school to the university is determined by a formula that combines the high school grade point average and ACT (American College Test) or SAT (Scholastic Aptitude Test) score. In general, students in approximately the upper third of the high school graduating class are eligible for admission.

Freshman applicants must meet the minimum California State University eligibility requirements to be considered for admission. If you meet the minimum CSU requirements, Cal Poly Pomona will consider your application using supplemental criteria that may vary depending on the academic major you have chosen.

<https://www.cpp.edu/admissions/freshmen/requirements.shtml>

Transfer Applicants

Admission of transfer students from community colleges is based on college grade point averages. As of fall 2004 admissions, the University is only accepting upper division transfers.

Upper division transfers must complete 60 semester (90 quarter) units of transferable coursework, including 30 semester (45 quarter) units of courses equivalent to general education requirements, with a grade of C or better by the end of the spring quarter to be considered for the next fall quarter.

For additional information on Transfer Admissions, please refer to:

<https://www.cpp.edu/~admissions/transfer/app-checklist.shtml>.

Transfer students must have a 3.2 GPA or greater to gain admission into the architecture program. Not all students that have a GPA of 3.2 GPA or higher will be admitted as the number of students admitted each year is based on the number of spaces available. The admissions office selects students based on highest GPA and works down the list (from highest to lowest GPA) until all seats have been filled.

Transfer students who are offered admissions to the program or are placed on a wait list for admission will be invited to submit an 8 1/2" by 11" bound portfolio of their work so that the Department can

determine in which year of study each student should be placed. THE PORTFOLIO IS NOT USED TO DETERMINE ADMISSIONS, IT IS ONLY USED TO DETERMINE PLACEMENT (1ST, 2ND OR 3RD YEAR).

If no portfolio is submitted, students will be automatically placed in the first year design studio.

The portfolio plays a key role in determining advanced standing. In addition to successful completion of prerequisites or equivalents. <http://env.cpp.edu/arc/degree/bachelor-architecture>

MArch Admissions

<http://env.cpp.edu/arc/degree/master-architecture>

For admission to the Master of Architecture program an applicant must have received a baccalaureate degree and have attained an overall undergraduate grade point average of at least 3.0. An applicant who does not meet these criteria may be admitted on a conditional basis if evidence of compensating qualifications can be furnished.

Upon admission to the Department of Architecture, the student will meet with the coordinator of the graduate program to prepare a reasonable sequence of course work. The curriculum thus specified may be altered only by written request submitted in accordance with university regulations.

For specific information, application instructions, and requirements please refer to the Masters Admissions page: <https://www.cpp.edu/~admissions/graduate/apply.shtml>

In addition to the standard university requirements, the Department of Architecture requires the following materials to be mailed directly to the Department Office:

- A copy of your application
- Official transcripts (directly from all of your undergraduate university coursework)
- TOEFL scores for those whose native language is not English. A minimum TOEFL score of 550 (paper based)/213 (computer based)/80 (Internet) is required for admissions
- A statement of purpose of intentions, explaining your interests, motivations, and goals in pursuing a professional degree in Architecture. The statement of purpose should be on a separate sheet and NOT included in the application
- Three letters of recommendation from those in a position to assess the applicant's potential for either the profession of architecture or of a master's level academic program. (The recommendation should be written in letter format on letterhead, there is no form to complete.)
- A portfolio, (NO LARGER THAN 9' X 12" BOUND) illustrating creative or analytic ability in written, graphic, or mathematical form, of any work you have done with regard to visual work (should not be original material). A self-addressed postage-paid envelope must be included if you want your portfolio returned. Portfolios will be kept in the Department of Architecture's office for 6 months; if uncollected after this date, all portfolios will be discarded/destroyed

The Cal Poly Pomona Department of Architecture submits annual data reports to NAAB.

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

CalPoly, Pomona Department of Architecture, 2018 update:

- The Department has not hired any new tenure track faculty since the last NAAB review.
- The Department has undergone a university mandated conversion from quarters to semester system. All courses were directly converted, a table was provided with the previous report. Only one new course was added to the curriculum, Design Development ARC4400/4402a which has been combined with the third year Design Lab 3021L. The syllabus can be found below.

Department of Architecture (CPPARC)
College of Environmental Design
California State Polytechnic University, Pomona

ARC 3021L, Third Year Design I Laboratory (3 Units) ARC 4400-4402A Design Development (3 Units)

Spring Semester 2019

Instructors:

Kip Dickson RA, Professor, 3rd Year Coordinator

kadickson@cpp.edu

Juintow Lin AIA, Professor

juintowlin@cpp.edu

Nadim Itani RA, Lecturer

nrmi@sbcglobal.net

Marta Perlas AIA, Lecturer

mp@mythograph.com

Barry Milofsky RA, Lecturer

bamilofsky@cpp.edu

Giovanni D Fruttaldo, AIA NCARB, Lecturer

gfruttaldo@cpp.edu

Course Times and Location:

MWF 3:00pm-5:50pm 6:00pm- 7:20pm.

Classroom: Building 7, Room 100

Office Hours: As posted at the Department Office

1. [Catalog Description \(Third Year Design Laboratory\)](#)

Interaction of construction technology, human behavior, site development in the design of multi-family housing in a specific context. Introduction to urban issues.

2. [Prerequisites and Components](#)

Undergraduate standing in architecture, and ARC 3011 Concurrent Enrolment ARC 4400 and 4402A. The combined courses ARC 3011, ARC 4400 and 4402A provide for Integrative Design.

3. [Course Description](#)

The studio aims to integrate knowledge of contemporary production of housing, including application of specific construction materials and systems in relation to tectonics, expression, and affordability; working knowledge about the dwelling, its internal order, relevant dimensional limits and ranges; an ability to relate multiple dwellings; and a social understanding of how architectural design affects the human environment. These will be approached through an emphasis on analysis of the cultural and physical context of the city; the individual living unit and the communal space; the study of typology and precedent; and the ability to draw and model relations between contemporary formal concepts and historical shifts or adaptations.

Studio discussions provide technical information that serves as a background and support materials related to multi-family housing. Subjects include; design approach/typology, zoning code, building code, circulation/unit typology, parking design, bathroom/kitchen design. Students will develop the design for a housing project during the first part of the semester and this design will be further developed as a design development package in the ARC 4400-4402A comprehensive portion of the co-requisite. Students will investigate material selection and the integration of structural, mechanical plumbing and electrical information.

4. [Combined Course Objectives](#)

- Ability to produce an architectural solution that demonstrates the ability to make design decisions about a single project while demonstrating broad integration and consideration of environmental

stewardship, technical documentation, accessibility, site conditions, life safety, environmental systems, structural systems, and building envelope systems and assemblies.

Course Objectives and Learning Outcomes (ARC 3021L)

- Demonstrated ability to understand the development of multi-family housing through an exploration of historical and organization types.
- Demonstrated ability to perform research, analysis, and design phases of a multi-family housing project.
- Demonstrated social understanding of how architectural design affects human behavior in the dwelling environment.
- Demonstrated understanding of contemporary housing design, application of construction materials and systems in relation to tectonics, affordability, and livability.
- Demonstrated understanding of the dwelling, its internal order, dimensional limits and ranges.
- Demonstrated ability to develop and evaluate site criteria in development of conceptual alternatives in which dwellings relate other dwellings thereby serving as a housing type making an urbanistic model.
- Demonstrated ability to demonstrate advanced presentation techniques and use them to describe the design process and final design solution

Course Objectives and Learning Outcomes (4400 and 4402A)

- Demonstrated understanding of building code as it relates to detailed development of the Small Lot project.
- Demonstrated ability to develop a typical floor horizontal framing plan for a bearing wall stacked bearing wall structure. Students shall develop an understanding of required wood and concrete shear wall and partial steel moment resisting lateral systems.
- Demonstrated ability to draw diagrams exhibiting a thorough understanding of the structural framing system and load diagrams for a specified studio design project.
- Demonstrate an ability to identify and diagram electrical, plumbing and HVAC systems on a typical floor and diagram how vertical connections are made throughout the design.
- Ability to create large-scale partial elevations and create corresponding large scale wall sections and typical details for foundation, framing, openings, material transitions and waterproofing systems at the roof.

5. Assignments

Below is an outline for the assignments. Additional information specifying requirements for each assignment will be described in class and in the assignment brief. All work must be original, produced and/or written by the student receiving the grade for the course. All projects referencing work by others must be properly cited and acknowledged.

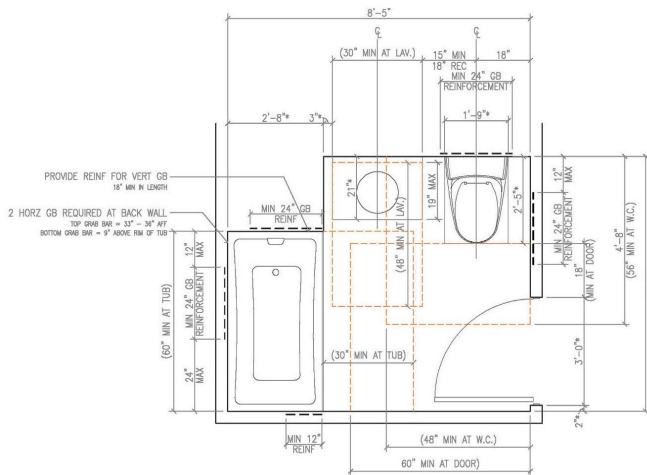
Project One: How big is your environment? Students will work independently and measure their own personal environment. Measure your bathroom and your kitchen where you live. Be specific and precise in your measurements. Record your measurements using AutoCAD, Revit or Vectorworks software. Illustrator, Photoshop, Sketch up or Rhinoceros are not appropriate tools. Provide a dimensioned hard line plan at $\frac{1}{2}'' = 1'-0''$ scale on a 24" x 36" format. The drawings are due on Friday January 25, 2019

Project Two: The Cube

Students will work independently to develop a prototype unit that must conform to a 30'x30'x30' cube. You need not use all of the space within the cube but a surface of your design must touch each side of the cube at some point. Students will demonstrate the ability to organize a residential environment horizontally and vertically to accommodate functional needs, privacy, view, natural light/ventilation. Stairs may conform to residential 7x10 format.

Program:

- 30'x 30' x 30' cubic volume.
 - 2,700 sf maximum enclosed space
 - 2 car garage/bike storage
 - Entry vestibule
 - Kitchen
 - Dining space
 - Living space
 - Master Bedroom with attached bath and closet
 - 2 bedrooms with closet
 - 2nd bathroom (ADA Compliant regardless of floor level)
 - Vertical circulation
 - Exterior open space
- Bathroom Template:**



Cube Presentation requirements:

- 24" x 36" presentation sheets (Black & White)
- 1/4" detailed floor plans with room sizes and furnishing
- 1/4" Building Sections
- 1/4" Axonometric View

Project Three: Small Lot Subdivision' Site Planning and Parking (Week 3)

Students will investigate the use of 30' cube units developed in Project 2 and adapt them to the selected Small Lot Subdivision site and investigate the impact of Site and required access on the design. They will develop strategies focused on pedestrian and vehicular access and the development of clearly defined open space. Massing and site strategies will investigate urban edge, access and parking demonstrating the understanding of site planning, sectional relationships and required access. Design to City of Los Angeles Small Lot Subdivision standards:

<http://planning.lacity.org/urbandesign/content/docs/SmallLotDesignStandards.pdf>

The site, located at the corner of Marmion Way and Avenue 59, across from the Highland Park Light Rail METRO station, is 150' x 80' with alley access off of Avenue 59. While there is a slight slope to the site, students shall treat the site as though it were level. Site plan layout to accommodate between 4-6 units and corner context will require refinement to the 30' cube as previously developed.

Program:

Minimum parking aisle is 24'

24" x 36" horizontal format

Students will integrate zoning/building code/program/parking-access investigations into a single preliminary design proposal that is a fully integrated design concept.

Small Lot Presentation requirements:

24" x 36" presentation sheets

1/16" Site Plan showing adjacent context

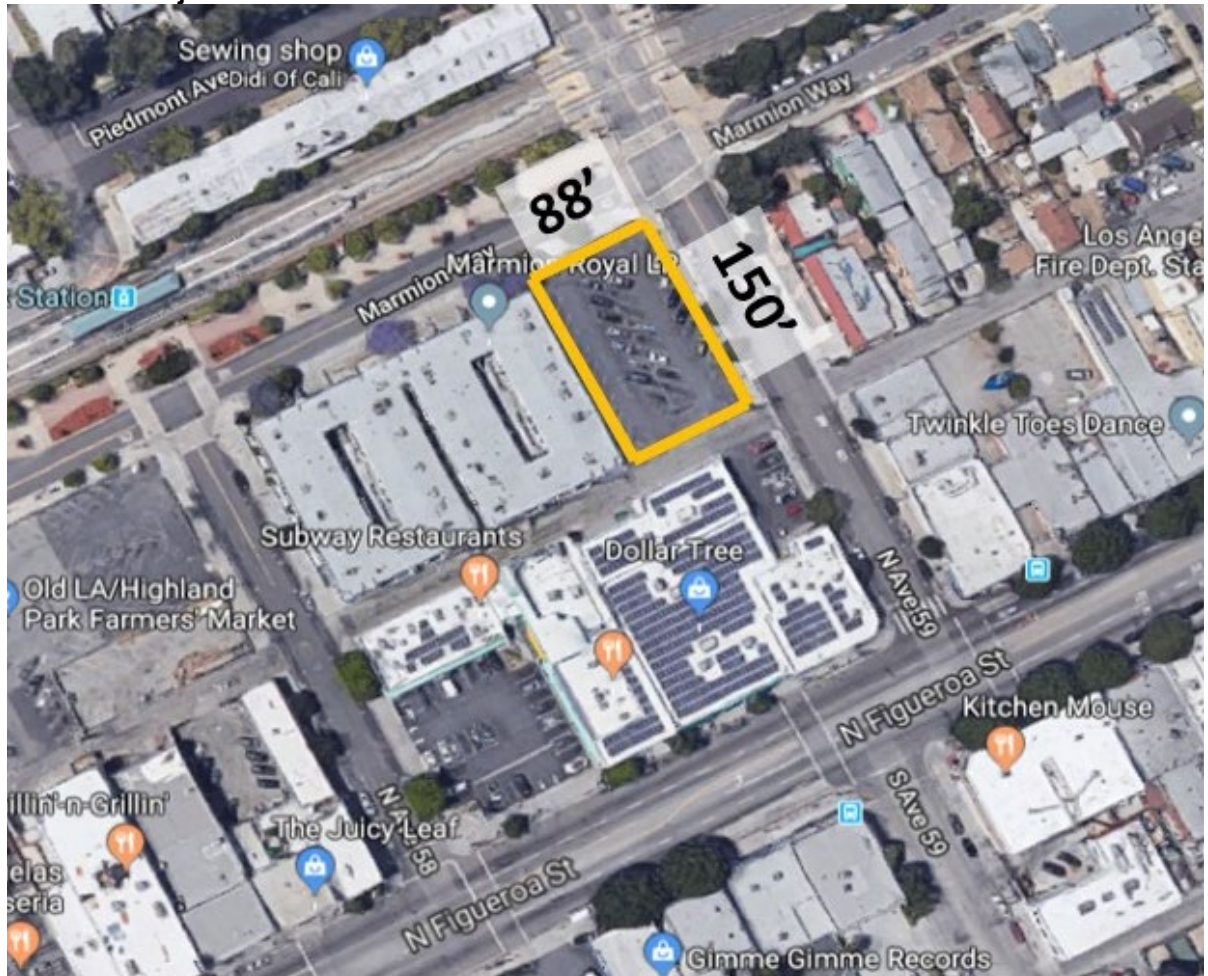
1/8" Building Plan showing ground floor plan and site detail

1/8" Floor Plans showing schematic furnishings

1/8" Building/Site Sections at a key location showing sidewalks and streets

Physical study model in context

Additional requirements per instructor

Small Lot Project Site

Project Four: WEHO. Working independently students will develop a detailed design proposal for a multi-family urban housing project on the subject site. The design proposed in ARC 3021 must be resolved and be able to translate to basic Type V construction techniques. Concrete and steel may augment the design for ground level construction and in the development of moment frames when warranted. However, the goal will be to utilize a simple Type V shear wall construction technique that is

common in the region and housing industry as the standard. Students must consider that the development of a mixed-use urban design solution has multiple considerations including:

- Recognition of the street as an essential public space that must be defined and supported with form and ground level functions.
- Urban form often complements existing or adjacent structures and strive to be creative particularly at a corner or intersection yet relate to and not dominate the local context.
- Vehicular access and parking in Southern California remains an important consideration despite the development of public transportation and ridesharing apps that facilitate movement with less parking.
- Residential spaces must provide privacy and security for the residents
- Building code and exiting requirements from the codes class must be documented
- Building opening size relative to property lines must be maintained
- Units shall provide common and open space per the WEHO design guidelines.
- An essential part of solutions to the development of multi-family housing is efficiency and recognition of the cost of form, material and structural impact design strategies that are somewhat more restrained than in a detached home.
- Students should consider privacy, natural light, ventilation, views, access to unit, personal identity, defined/designed shared open space and vertical circulation as essential parts of the design.

Links to applicable code and useful sties:

http://maps.assessor.lacounty.gov/GVH_2_2/Index.html?configBase=http://maps.assessor.lacounty.gov/Geocortex/Essentials/REST/sites/PAIS/viewers/PAIS_hv/virtualdirectory/Resources/Config/Default

<http://www.weho.org/city-hall/city-departments/community-development/current-and-historic-preservation-planning/west-hollywood-zoning-map>

<http://qcode.us/codes/westhollywood/>

<http://qcode.us/codes/westhollywood/view.php?topic=19&expand=1&frames=off>

<http://www.weho.org/city-hall/download-documents/-folder-155>

http://www.leginfo.ca.gov/pub/03-04/bill/sen/sb_1801-1850/sb_1818_bill_20040930_chaptered.pdf

Project Site

7450 SANTA MONICA BLVD WEST HOLLYWOOD CA 90046

<http://maps.assessor.lacounty.gov/Geocortex/Essentials/REST/sites/PAIS/VirtualDirectory/AssessorMaps/ViewMap.html?val=5531-022>

The property is located at the southeast corner of the intersection at Santa Monica Blvd. and Vista Street in West Hollywood The site has two existing commercial buildings and parking spaces that will be demolished for the new development. Students should consider replacing the existing commercial space as a minimum for the ground floor.

The site has 140' of street frontage along Monica Blvd. The adjacent alley to the south is 20' wide and may provide vehicular access. The site is to be assumed flat in the design. Adjacent power lines are to be assumed will be moved underground as part of the development. The FAR is to be assumed as 2.5 and the maximum height is 55' with a 15' podium commercial base included.



Program:

7,000 sf. Ground floor Commercial with 21 Parking spaces

1,000 sf. Ground Floor Lobby

200 sf. Trash room

100 sf. Electrical Room

24,000 sf. Housing 24 Units with 32 parking spaces

- 8 Studios
- 8 One Beds
- 8 Two Beds

120 sf. Private open space per unit

1,000 sf. Common open space

Suggested Starting Points (Inside-out/outside-in) (Per Instructors direction and interest)

Mixed-use urban design projects often have competing design agendas that must be resolved. A good project does little to help ease the housing crunch if the units are too expensive to build or purchase. Yet while the creative designer seeks to find efficiency working from the inside-out stacking and repetitive units one most consider that modular schemes often do not fit perfectly into well-defined urban site. Standard unit plans are most likely a necessity but just because the units work does not necessarily mean that the project fits well in the context. Other designers start working from the outside-in and develop an overall building form and then seek to divide the mass and provide circulation that permits the form to be usable for the desired program. This approach can yield interesting form but often fall short in addressing cost and functional relationships. There is no right approach to the problem but most successful projects are a process of give and take between the conceptual form making/program and more efficient foundational repetitive approaches to solving the problem. In the most simplistic side students will probably find that the circle and the triangle are not your best friends and should be used sparingly in order to succeed in the period that is allotted for the effort.

Kitchens and bathrooms must utilize known sizes along with room proportions discovered in the warm-up exercise however they must be sized to accommodate ADA requirements. Students are encouraged to look at existing models or case studies in the development of these units and how they can be combined together to form larger organizations of multiple units.

Suggested Net Unit typology:

- Studio unit 400-500 sf.
- One Bedroom unit 800-1,000 sf.
- Two Bedroom two Bath unit 1,200-1,500 sf.
- Two Bedroom two and ½ bath town house unit 1200-1400 sf. (ADA Bathroom Required at entry floor.)

Recommended net area minimums:

- Living spaces 14' clear
- Bedrooms 11' Clear

Presentation requirements:

- 24" x 36" presentation sheets
- 1/8" Rendered Site Plan showing adjacent context
- 1/8" Detailed Building Plans all floors
- 1/8" building/site section with partial elevation showing adjacent buildings and parking
- 1 typical unit ¼" Detailed Floor Plans showing furnishings and fixtures
- 1/8" detailed exterior elevations 2 minimum.
- Perspective Section-Large size sectional view through the project that illustrates key sectional relationships between parking, living and public exterior spaces.
- Rendered 3 dimensional perspective view of the proposals set within the surrounding site context
- Physical study model in context
- Additional requirements per instructor

Project Five: Design Development. The final project of the semester will return students to their unit plan that they developed for the Small Lot housing Design. Students will isolate one of the Small lot units for further development that demonstrates a student's ability to execute a more comprehensive project. Students will establish a graphical format that corresponds to the a full size 24"x 36" sheet. Student work will be displayed at full size and submittals to instructors will be made at 11"x17"

Structure/Framing

Students will develop horizontal and vertical structural systems that demonstrate the students ability to provide basic wood framing plans and integrate secondary beams, columns, sheer walls and indicate lateral systems and hold downs.

- Floor Plan Revisions and Development
- Lateral Support Diagram
- ¼" Roof Framing Plan
- ¼" Floor Framing Plans
- ¼" Ground Level Foundation Plan
- ¼" Draft Structural Computer Framing Model.

Wall Sections/Elevations

Students will develop 2 detailed wall sections and corresponding Elevations that demonstrate the building enclosure from the foundation to the roof. These sections and elevations are to incorporate the framing and lateral resisting systems outlined in the first exercise. systems that demonstrate the students ability to provide basic wood framing plans and integrate secondary beams, columns, sheer

walls and indicate lateral systems and hold downs. The drawings and details shall indicate appropriate insulation systems and waterproofing systems/details.

- Floor Plan Revisions and Development
- 1" - 0" Wall Sections
- 1" - 0" Detailed/Rendered Corresponding Elevations
- 3"-0" Details (Minimum 8)

Stairs/Kitchen/Bathroom

Students will develop detailed plans/sections and elevations that demonstrate the detailed design development of stairs, kitchen and one bathroom. Students will provide cross-referenced large-scale plan that integrate finish with code related dimensioning.

- 1/2" Stair Plan
- 1/2" Stair Sections Full Height (2)
- 3"-0" Details (Minimum 3)
- 1/2" Kitchen Plan
- 1/2" Kitchen Axon/Perspective
- 1/2" Bathroom Plan
- 1/2" Bathroom Axon/Perspective

HVAC/Electrical/Plumbing

Students will develop detailed reflected ceiling plans and diagrams that illustrate the integration of lighting/electrical systems as well as the integration of a simple package system/ductwork HVAC layout as well as plumbing stack.

- 1/4" Electrical/Lighting Plans
- 1/4" Roof Drainage Plan
- 1/4" HVAC Plans
- 1/4" Plumbing Plans
- 1/4" Coordination Model with Structure Framing and Enclosure

Revised/Plans/Sections/Elevations

Students will develop final rendered plans sections

- 1/4" Floor Plans
- 1/4" Building Sections
- 1/4" Rendered Elevations
- 1/4" Material Board (Digital)

Interior/Exterior Perspective Views

Students will develop a minimum of 4 rendered perspective views.

- Daylight Interior View
- Night (Lighting) Interior View
- 2 Exterior Views

Tentative Schedule:

Week 1

Studio: How big measurement
Activity: Measurement/Presentation

Week 2

Studio: The Cube
Activity: Concept/Development

Week 3

Studio: Small Lot Subdivision
Activity: Site Organization

Week 4

Studio: Small Lot Subdivision
Activity: Unit Development

Week 5

Studio: WEHO Urban Housing
Activity: Site Analysis/Code

Week 6

Studio: WEHO Urban Housing
Activity: Outside In/ Inside Out

Week 7

Studio: WEHO Urban Housing
Activity: Site Development/Movement Systems

Week 8

Lecture: WEHO Urban Housing
Activity: Development

Week 9

Lecture: WEHO Urban Housing
Activity: Development/Presentation/Due

Week 10 Spring Break

Week 11

Studio: Comprehensive Design
Activity: Structure/Sections/Plan Development

Week 12

Studio: Comprehensive Design
Activity: Wall Sections/Elevation Development

Week 13

Studio: Comprehensive Design
Activity: Stairs/Kitchen/Bathroom

Week 14

Studio: Comprehensive Design
Activity: HVAC/Electrical/Plumbing

Week 15

Studio: Comprehensive Design
Activity: Project Development

Week 16

Studio: Comprehensive Design
Activity: Project Development

Week 17 Finals

Studio: Lecture Course Finals
Activity: Mandatory Clean Out

Project Delivery

In most assignments, work must be submitted as a paper version and/or a pdf. If requested to submit it as a PDF-file, the assignment is to be presented as a single multipage PDF file. The PDF-files must comply with the University's email/blackboard/internet system (limitations on file sizes must be considered). The procedure how to turn it in will be stated in the assignment. A PDF-file's name must be formatted as follows:

19F_ARC4400_(Instructor Last Name)(Activity Section#)_A(Assignment#)_(Student's LastName)_(Student's FirstName)_..._Rev(X)... .pdf

Due date

All assignments are due on the day and time and the place stated in the class discussion and may be adjusted by the instructor based on student progress and satisfaction of learning objectives.

Field Trips: Field trips to construction sites will be set up during the semester. With close to 120 students this number of students is very large to deposit in a single place especially where people are living. Students may go on their own to visit the project sites or individual instructors may organize studio trips in smaller numbers. Field trips may occur during class time or on a weekend depending on the location. Field trips are not mandatory but those students that go must fill out the required release forms and if they fill out the forms they must attend or notify the instructor that they are not coming. Students need to be mindful of safety issues that are present at construction sites and understand that proper shoes and clothing is needed to attend. This is not a time for beachwear and you must be prompt and professional in your arrival and decorum.

Desk Assignment and Studio Clean-up:

All desks must be covered by the second studio session. Students should use grey chipboard (1/8" thickness minimum) cut to desk size (48" x 30"). Adhere the chipboard with 1" wide electrical tape or drafting tape (continuously tape the edges of chipboard on all four sides). With a black sharpie marker, label your chipboard with the desk on the lower right with your desk number, your full name, and the quarter. For example: #213, Kanye West, Winter 2014.

Students are responsible for cleaning up after themselves. There will be mandatory studio clean-up done every week on Wednesdays from 2-2:30pm. Note that not showing up for clean-up sessions will have a 15% penalty off your final studio grade (see grading and attendance).

All students are required to turn in a digital archive of the quarter's work. All file names must be formatted as follows:

18F_ARC301_S[section number]_[last name]_[first name]_A[assignment number]_[description]

e.g. 17F_ARC301_S2_SMITH_JOHN_A3_perspective.jpg

This is the 2019 Spring quarter course ARC3021 section 2 work of John Smith. It contains assignment 3's perspective.

All work must be submitted as indicated in the assignments and as a single PDF at the end of the term. Files will be uploaded to Blackboard or as indicated by the studio instructors/coordinator.

6. [References and Resources / Hardware and Software](#)

Minimum Student Material

Students must maintain a sketch book, pencils, ink pens, markers, and an architectural scale. Students must maintain access to drawing implements and model making tools. Students must provide their own computer/software meeting department specifications.

School Facilities

Course instruction shall take place in classrooms equipped for audio-visual presentations suitable for large class format and guest speakers. Blackboard online learning environment will provide student support and communication with instructors. Model shop for model making and working with tools and materials under supervision is also required.

Hardware/Software

Each student must provide their own computer/software meeting department specifications. It is important to note that while students have been exposed to a range of software packages all drawings and diagrams will be required to be prepared using a measured drawing software. Illustrator, Photoshop Students are expected to have their own laptop computer equipped with the most current version of:

- Adobe Creative Cloud (Photoshop, Illustrator, InDesign, Acrobat,).
- CAD Programs (Revit, AutoCAD, Rhino, Sketch-Up)
- Microsoft Office

Online

Course materials will be posted on the course's blackboard page and/or online. All students will need to upload assignments to Blackboard in addition to turning in hard copies.

In addition, the University provides access to Lynda.com for all students. Students are encouraged to utilize this resource to learn the CAD software programs required for this course.

University Resources

Student Services has a website - <http://www.cpp.edu/~campus-life/student-services/index.shtml>. Here are a few that might be especially helpful:

- Learning Resource Center offers Math and science tutoring, writing help, reading help, and tutoring on other topics.
 - Website: <http://www.cpp.edu/~lrc/>
 - Phone: (909) 869-3502
 - Location: Bldg 15-2921 (inside the Library building)
- Student Support & Equity Programs is the academic home for all undeclared students, and much more
 - Website: <http://www.cpp.edu/~ssep/index.shtml>
 - Phone: (909) 869-3660
- Counseling & Psychological Services offers individual counseling, couples/marriage counseling, family therapy, crisis intervention
 - Website <http://www.cpp.edu/~healthcounseling/index.shtml>
 - Phone: (909) 860-3220
 - Location: Bldg 66-116
- Student Health Services offers urgent care, pharmacy, immunization, wellness services
 - Website: <http://www.cpp.edu/~healthcounseling/index.shtml>
 - Phone (909) 869-4000,
 - Location: Bldg 46

If you have a physical or a learning disability, please talk to your instructor privately and/or contact the Disability Resource Center (DRC) at drc@cpp.edu or 909-869-3333. The location is at Bldg 9-103 to coordinate course accommodations. For further information, visit the DRC website at <http://www.cpp.edu/~drc/index.shtml>.

Other Resources

- Cal Poly Pomona University Library
- <http://www.cpp.edu/~library/index.shtml>
- List other online or physical resources

Drawing & Model Making Tools:

Each student must maintain access to pencils, ink pens, markers, and an architectural scale. Each student must maintain access to drawing implements including but not limited to, 30/60 and 45/45 triangles, a straight edge, and either a parallel bar, T-square, or rolling parallel straight-edge, X-Acto knives and blades, and metal cutting edge. A cutting mat is essential for model making. (Please note policies regarding the use of school facilities, tables, chairs, etc.)

Suggested Readings:

- De Chiara and Callender, Crosbie. Time Saver Standards for Building Types. 3rd Ed. 1987 and later. McGraw Hill, New York, NY.
- Fernandez, Aurora, D Book - Density, Data, Diagrams, Dwellings: A Visual Analysis of 64 Collective Housing Projects, A&T Ediciones, Spain 2007
- International Building Code 2015 (or latest version). International Building Code Council, Inc., Country Club Hills, IL.
- Jacobs, A.B. Great Streets, the MIT Press, 1995
- McLeod, Virginia, Encyclopedia of Detail in Contemporary Residential Architecture. Laurence King Publishing, Ltd., London, 2010, 2014 edition.
- Ramsey, George Charles. Architectural Graphic Standards. 8th Ed. or later. John Wiley and Sons, New York, NY. 1988.
- Rowe, Peter. Modernity and Housing. MIT Press, Cambridge, MA. 1993.
- Sherwood, Roger. Modern Housing Prototypes, Harvard University, 197
- McLeod, Virginia. Encyclopedia of Detail in Contemporary Residential Architecture. Laurence King Publishing, 2010.
- Wittasek N, Gentile J., Interactive guide to the 2012 International Building Code, an illustrated checklist. ISBN #978-1-60983-452-4. International Code Council, 2013.
- Grondzik, Walter T., and Alison G. Kwok. Mechanical and Electrical Equipment for Buildings. 12th ed., John Wiley & Sons, 2015.
- Architects, American Institute of, and Dennis J. Hall. Architectural Graphic Standards, 12th Edition. John Wiley & Sons, 2016 or the much more economical version Architects, American Institute of, et al. Architectural Graphic Standards, Student Edition. 12th ed., John Wiley & Sons, Incorporated, 2017.
- 2012 IBC (International Building Code) published by ICC [or 2016 CBC (California Building Code)] ... the CBC is published in its entirety on line. Students should find and bookmark this code as it will be referred to often during the quarter and students must be able to quickly find information in the code.
- Structural Engineer Quimby website with simplified structural drawings for a small house. Note, these drawings are not complete. While this house is not exactly the same as your design project, it does show what in general is expected for the structural drawings this quarter. We will review these drawings in class and you are expected to make appropriate notes to augment your structural drawings for ARC3420. Make certain that you read the copyright notice on the Quimby website. <http://www.bgstructuralengineering.com/HmwrkDwg/House/House.htm>
- Building Codes Illustrated: A Guide to Understanding the 2012 International Building Code Paperback– July 10, 2012 by Francis D. K. Ching (Author), Steven R. Winkel (Author)
- A Beginner's Guide To Structural Engineering Homework/Example Problem Structures
- Ching, Francis D. K. Building Construction Illustrated. 5th ed., John Wiley & Sons, Inc., 2014.

- McLeod, Virginia. Encyclopedia of Detail in Contemporary Residential Architecture. Laurence King Publishing, 2010.
- Wittasek N, Gentile J., Interactive guide to the 2012 International Building Code, an illustrated checklist. ISBN #978-1-60983-452-4. International Code Council, 2013.
- Grondzik, Walter T., and Alison G. Kwok. Mechanical and Electrical Equipment for Buildings. 12th ed., John Wiley & Sons, 2015.
- Architects, American Institute of., and Dennis J. Hall. Architectural Graphic Standards, 12th Edition. John Wiley & Sons, 2016 or the much more economical version Architects, American Institute of, et al. Architectural Graphic Standards, Student Edition. 12th ed., John Wiley & Sons, Incorporated, 2017.
- 2012 IBC (International Building Code) published by ICC [or 2016 CBC (California Building Code)] ... the CBC is published in its entirety on line. Students should find and bookmark this code as it will be referred to often during the quarter and students must be able to quickly find information in the code.
- Structural Engineer Quimby website with simplified structural drawings for a small house. Note, these drawings are not complete. While this house is not exactly the same as your design project, it does show what in general is expected for the structural drawings this quarter. We will review these drawings in class and you are expected to make appropriate notes to augment your structural drawings for ARC3420. Make certain that you read the copyright notice on the Quimby website. <http://www.bgstructuralengineering.com/HmwrkDwg/House/House.htm>
- Building Codes Illustrated: A Guide to Understanding the 2012 International Building Code Paperback– July 10, 2012 by Francis D. K. Ching (Author), Steven R. Winkel (Author)
- A Beginner's Guide To Structural Engineering Homework/Example Problem Structures
- Ching, Francis D. K. Building Construction Illustrated. 5th ed., John Wiley & Sons, Inc., 2014.
- Fernandez, John and Bell, Victoria Material architecture. Routledge, 2005. ISBN-13: 978-0750664974
- Amato, Ivan. Stuff. Harper Collins, 1997
- CBC (California Building Code) Current Edition, published as modifications to the International Building Code (IBC) modified as the California Building Code on 3 year cycles
- CSI Specifications and Product Manufacturer Materials
- Ed. Bechthold, Griggs, Schodek and Steinberg , Working With Designers: A Fabricator's Perspective,
- Milgo Bufkin Company. from New Technologies in Architecture 2000.
- Brownell, Blaine. Transmaterial. Princeton Architectural Press, 2005.
- Gordon, J. E. The New Science of Strong Materials. New Jersey: Princeton University Press, 1984.
- Kennedy, Sheila. KVA: Material Misuse. London: Architectural Association. 2001.
- Lupton, Ellen. Skin. London: Laurence King, 2002.
- Lavin, Sylvia. Plasticity at Work. Mood River (organized by Jeffrey Kipnis and Annetta Massie). Wexner Center, 2002.
- Paola Antonelli, Mutant Materials in Contemporary Design, New York, 1995.
- Picon, Antoine. Architecture and The Virtual: Towards a New Materiality. Praxis 06, 2005.
- Toshiko Mori, Immaterial/ Ultramaterial, architecture, design, and materials. 2000

Links to applicable code and useful sties:

- http://maps.assessor.lacounty.gov/GVH_2_2/Index.html?configBase=http://maps.assessor.lacounty.gov/Geocortex/Essentials/REST/sites/PAIS/viewers/PAIS_hv/virtualdirectory/Resources/Config/Default
- <http://www.weho.org/city-hall/city-departments/community-development/current-and-historic-preservation-planning/west-hollywood-zoning-map>
- <http://qcode.us/codes/westhollywood/>
- <http://qcode.us/codes/westhollywood/view.php?topic=19&expand=1&frames=off>
- <http://www.weho.org/city-hall/download-documents/-folder-155>

- http://www.leginfo.ca.gov/pub/03-04/bill/sen/sb_1801-1850/sb_1818_bill_20040930_chaptered.pdf

7. Course Requirements and Grading

All courses in the Department of Architecture are evaluated for core competencies in, 1) Oral Communication, 2) Critical Thinking, 3) Information Literacy and 4) Quantitative Reasoning to determine if a student's work meets Introductory, Developing, or Mastery level outcomes. In this studio course, student outcomes are evaluated according to the attached grading rubric for Critical Thinking and (Oral) Communication.

Critical Thinking are reviewed in three categories: Thought Process, Technical Mastery, and Originality. Each category contains four statements, which describe how to fulfill the following goals:

- Problem: Student Identifies and summarizes the problems/questions/issues
- Perspective: Student identifies and analyzes other perspectives (arguments) and presents his/her own perspective or position
- Evidence: Student uses evidence to support student's perspective or position
- Conclusions: Student draws adequate conclusions given the evidence

(Oral) Communication are reviewed in one category Presentation/Communication. This category contains four statements, which describe how to fulfill the following goals:

- Central Message: Clarity of message
- Organization: Development of ideas
- Language: Word choice and arrangement
- Delivery: Oral presentation skills
- Presentation Aids: Use of visual or other aids used during the presentation

Fully satisfying each criterion in each category constitutes an A: Excellent. On average, satisfying three criteria in each heading constitutes a B: Above Average. On average, satisfying two criteria constitutes a C: Average. On average, satisfying one criterion constitutes a D: Minimally acceptable. Satisfying less than one criterion per heading on average will be evaluated as F: Failure.

Each student is required to complete assignments in a timely fashion and to coordinate their studio work as it pertains to requirements in other courses. Assignments may be contingent upon the execution of work done within another courses.

For information on the meaning of specific letter grades please see:

http://catalog.cpp.edu/content.php?catoid=10&navoid=1223#Grading_System See also [Graduate Studies section](#)

- The grading policy for the course is as follows:
 - 5% Project One
 - 5%Project Two
 - 10%Project Three
 - 40%Project Four
 - 30%Project Five
 - 10% Class participation and attendance

Attendance:

Student with more than (3) unexcused absences will be subject to a lower letter grade. Instructor also holds the right to administratively drop (or to fail) the student if their absences exceed four. Note that attendance grade for studio courses includes attendance at Department Lecture Series and end of the year cleanup. Students who do not remove personal items, models, and unused materials at the end of the semester will have their grade withheld until items are removed.

The rubric used to evaluate core competencies of course assignments will be as follows:

- Thought Process
- Technical Mastery
- Originality
- Presentation/Communication

8. Academic Policies

University:

Students must adhere to University policies with regard to academic integrity (plagiarism), health (drug and alcohol abuse), conduct and discipline and proper relations between students, faculty and staff, including policies on sexual harassment. The policies are contained in the University Catalog, available online. Students are encouraged to familiarize themselves with these policies. All courses within ENV utilize safe practices and strive for students' success within a safe environment. Failure to comply with written safety practices may result in referral to the [Office of Student Conduct & Integrity for Disciplinary Action](#).

Visit: <https://www.cpp.edu/~studentconduct/student-conduct-code.shtml> to read Cal Poly Pomona's Student Conduct Code.

Title IX:

The University is committed to creating and sustaining a positive learning and working environment, free from discrimination, including sexual violence, dating violence, domestic violence and stalking. All forms of such behaviors are not tolerated and are prohibited both by law and university policy. The University will respond promptly to reports of such behavior and will take appropriate action to prevent, correct, and when necessary discipline behavior that violates University policy. If you experience sexual assault, domestic violence, dating violence or stalking, you are encouraged to seek immediate assistance from police, a confidential sexual assault counselor or advocate, and healthcare provider for your physical safety, emotional support and medical care.

We encourage you to review the Title IX website for additional information: <http://www.cpp.edu/~title-ix/index.shtml>

University policy requires me, as a faculty member, to report any of the above behaviors that are disclosed to me, to the University Title IX Coordinator so that the University may take immediate action to prevent, correct, and/or discipline as appropriate. Given this, please know that if I feel that you are beginning to share information with me concerning sexual assault, domestic violence, dating violence or stalking, I may gently interrupt you to advise you of this and to allow you an opportunity to decide whether you would like to continue to disclose this information to me or whether you would prefer a confidential resource. I care for your physical and emotional health and safety and will do my best to assist you with resources and support, which may include interim accommodations.

Recording Lectures:

Students may not record (audio or video) in this class except in accordance with ADA accommodations. Any recordings made in connection with a disability accommodation are for the student's personal academic use only and may not be distributed in any manner to any other individual.

Studio Safety:

The College of ENV Design and the Department of Architecture have established specific policies regarding studio culture and safety. These policies are described on the architecture website. Key policies are listed below:

- a) Students are encouraged to bring their own personal computer to the studio, though the security of such item will be the sole responsibility of each student (their owner).

- b) Students are responsible for transportation to and from field trip destinations.
- c) Students are responsible for maintaining a clean and safe personal workspace, cleaning up their studio every week and thoroughly at the end of the semester. All personal items must be removed at the end of each semester. Students will not receive a grade until all personal items are removed from the studio.
- d) Students are responsible to undertake training and/ or follow safety procedures and maintain a safe learning environment. Students that do not know how to perform an activity safely are responsible for asking a faculty or staff member for assistance. In an emergency call (cell) 909-869-3070 or ext. 3070 from a campus phone to reach the police and medical assistance.
- e) Students will be held responsible on the appropriate use of studio space, furniture and equipment. Students that damage school property (such as cutting or gluing on desks or spray-painting sidewalks) will be referred to the Office of Student Conduct & Integrity.
- f) Students must keep items clear of fire lanes, fire extinguisher cabinets and doorways. Items found within these zones may be confiscated.
- g) Students may use the area under their desk for storage. Students are not allowed to bring storage cabinets, microwaves/refrigerator, couches, or other large household items into the studio.
- h) No power tools may be used indoors except in the ENV Model Shop. A Shop staff member or student assistant supervisor must be present. Student power tools or other items that are used improperly or in prohibited locations may be confiscated.
- i) All electrical extension cords must be undamaged and in good condition and be used and located properly.
- j) Eye protection, gloves, and other safety-related Personal Protective Equipment (i.e. proper respirators and clothing) are to be kept in good condition and used whenever and wherever appropriate.
- k) Spray products such as spray mounts or paints may not be used indoors. Outdoor areas such as sidewalks must be properly protected to prevent their damage from overspray. All chemicals must be accurately labeled. Concrete may not be stored, mixed or used indoors. All hazardous materials must be removed from campus immediately after use.
- l) Failure to comply with stated College of ENV Design and Department of Architecture safety policies and practices will result in referral to the Office of Student Conduct & Integrity for Disciplinary Action.

9. Course Requirements and Grading

All courses in the Department of Architecture are evaluated for core competencies in, 1) Oral Communication, 2) Critical Thinking, 3) Information Literacy and 4) Quantitative Reasoning (applies to technology courses) to determine if a student's work meets Introductory, Developing, or Mastery level outcomes. In this lecture course, student outcomes will be evaluated according to the attached grading rubric for Critical Thinking and Quantitative Reasoning.

Critical Thinking will be reviewed in three categories: Thought Process, Technical Mastery, and Originality. Each category contains four statements, which describe how to fulfill the following goals:

- Problem: Student Identifies and summarizes the problems/questions/issues
- Perspective: Student identifies and analyzes other perspectives (arguments) and presents his/her own perspective or position
- Evidence: Student uses evidence to support student's perspective or position
- Conclusions: Student draws adequate conclusions given the evidence

(Oral) Communication will be reviewed in one category Presentation/Communication. This category contains four statements, which describe how to fulfill the following goals:

- Central Message: Clarity of message
- Organization: Development of ideas
- Language: Word choice and arrangement

- Delivery: Oral presentation skills
- Presentation Aids: Use of visual or other aids used during the presentation

Fully satisfying each criterion in each category constitutes an A: Excellent. On average, satisfying three criteria in each heading constitutes a B: Above Average. On average, satisfying two criteria constitutes a C: Average. On average, satisfying one criterion constitutes a D: Minimally acceptable. Satisfying less than one criterion per heading on average will be evaluated as F: Failure.

Each student is required to complete assignments in a timely fashion and to coordinate their studio work as it pertains to requirements in other courses. Assignments may be contingent upon the execution of work done within other courses.

a. The grading policy for the course is as follows:

Assignments	90%
Class participation and attendance	10%

b. For information on the meaning of specific letter grades please see:

http://catalog.cpp.edu/content.php?catoid=10&navoid=1223#Grading_System See also [Graduate Studies section](#)

c. Attendance: Student with more than three unexcused absences will be subject to a lower letter grade. Instructor also holds the right to administratively drop (or to fail) the student if their absences exceed four. Note that attendance grade for lecture courses include end of the year cleanup. Students who do not remove personal items, models, and unused materials at the end of the semester will have their grade withheld until items are removed.

d. The rubric used to evaluate core competencies of course assignments will be as follows:

A	Thought Process	20%
B	Technical Mastery	30%
C	Originality	20%
D	Presentation / Communication	30%

Late Assignments

Scoring procedures for late assignments are as follows: When a late assignment is collected, the number of late days is recorded. For each two late days or part thereof, assignment's grade will drop by the equivalent of a full grade (i.e. from B to C or 10% of the score). The counting starts at the initial due time. Most assignments are time stamped via Blackboard. One second late is marked the same as One day late. Work turned in later than five days after the due date and/or later than the last lecture of the quarter will receive no credit at all.

Desk Assignment and Studio Clean-up: All desks should be covered by the second studio session. Students should use grey chipboard (1/8" thickness minimum) cut to desk size (48" x 30"). Adhere the chipboard with 1" wide electrical tape or drafting tape (continuously tape the edges of chipboard on all four sides). With a black sharpie marker, label your chipboard with the desk on the lower right with your desk number, your full name, and the quarter. For example: #213, Kanye West, Winter 2014.

Students are responsible for cleaning up after themselves. There will be mandatory studio clean-up done every week on Wednesdays from 2-2:30pm. Note that not showing up for clean-up sessions will have a 15% penalty off your final studio grade (see grading and attendance).

10. Academic Policies

University

Students must adhere to University policies with regard to academic integrity (plagiarism), health (drug and alcohol abuse), conduct and discipline and proper relations between students, faculty and staff, including policies on sexual harassment. The policies are contained in the University Catalog, available online. Students are encouraged to familiarize themselves with these policies. All courses within ENV utilize safe practices and strive for students' success within a safe environment. Failure to comply with written safety practices may result in referral to the Office of Student Conduct & Integrity for Disciplinary Action.

Visit <https://www.cpp.edu/~studentconduct/student-conduct-code.shtml> to read Cal Poly Pomona's Student Conduct Code.

Title IX

The University is committed to creating and sustaining a positive learning and working environment, free from discrimination, including sexual violence, dating violence, domestic violence and stalking. All forms of such behaviors are not tolerated and are prohibited both by law and university policy. The University will respond promptly to reports of such behavior and will take appropriate action to prevent, correct, and when necessary discipline behavior that violates University policy. If you experience sexual assault, domestic violence, dating violence or stalking, you are encouraged to seek immediate assistance from police, a confidential sexual assault counselor or advocate, and healthcare provider for your physical safety, emotional support and medical care.

We encourage you to review the Title IX website for additional information: <http://www.cpp.edu/~title-ix/index.shtml>

University policy requires me, as a faculty member, to report any of the above behaviors that are disclosed to me, to the University Title IX Coordinator so that the University may take immediate action to prevent, correct, and/or discipline as appropriate. Given this, please know that if I feel that you are beginning to share information with me concerning sexual assault, domestic violence, dating violence or stalking, I may gently interrupt you to advise you of this and to allow you an opportunity to decide whether you would like to continue to disclose this information to me or whether you would prefer a confidential resource. I care for your physical and emotional health and safety and will do my best to assist you with resources and support, which may include interim accommodations.

Recording Lectures

Students may not record (audio or video) in this class except in accordance with ADA accommodations. Any recordings made in connection with a disability accommodation are for the student's personal academic use only and may not be distributed in any manner to any other individual.

Studio Safety

The College of ENV Design and the Department of Architecture have established specific policies regarding studio culture and safety. These policies are described on the architecture website. Key policies are listed below:

- Students are encouraged to bring their own personal computer to the studio, though the security of such item will be the sole responsibility of each student (their owner).
- Students are responsible for transportation to and from field trip destinations.
- Students are responsible for maintaining a clean and safe personal workspace, cleaning up their studio every week and thoroughly at the end of the semester. All personal items must be removed at the end of each semester. Students will not receive a grade until all personal items are removed from the studio.
- Students are responsible to undertake training and/ or follow safety procedures and maintain a safe learning environment. Students that do not know how to perform an activity safely are responsible for asking a faculty or staff member for assistance. In an emergency call (cell) 909-869-3070 or ext. 3070 from a campus phone to reach the police and medical assistance.

- Students will be held responsible on the appropriate use of studio space, furniture and equipment. Students that damage school property (such as cutting or gluing on desks or spray-painting sidewalks) will be referred to the Office of Student Conduct & Integrity.
- Students must keep items clear of fire lanes, fire extinguisher cabinets and doorways. Items found within these zones may be confiscated.
- Students may use the area under their desk for storage. Students are not allowed to bring storage cabinets, microwaves/refrigerator, couches, or other large household items into the studio.
- No power tools may be used indoors except in the ENV Model Shop. A Shop staff member or student assistant supervisor must be present. Student power tools or other items that are used improperly or in prohibited locations may be confiscated.
- All electrical extension cords must be undamaged and in good condition and be used and located properly.
- Eye protection, gloves, and other safety-related Personal Protective Equipment (i.e. proper respirators and clothing) are to be kept in good condition and used whenever and wherever appropriate.
- Spray products such as spray mounts or paints may not be used indoors. Outdoor areas such as sidewalks must be properly protected to prevent their damage from overspray. All chemicals must be accurately labeled. Concrete may not be stored, mixed or used indoors. All hazardous materials must be removed from campus immediately after use.
 - Failure to comply with stated College of ENV Design and Department of Architecture safety policies and practices will result in referral to the Office of Student Conduct & Integrity for Disciplinary Action