



Graduate offering

COURSE SPECIFICS

COURSE DESCRIPTION

This class investigates *architectural design processes and methods* through design exercises, comparative analysis, and critical discussions, both theoretically and practically. The overall premise is that every design process occurs within a general methodology that (pre)determines its ideology, universe, and mode of inquiry (i.e., questions, strategies, and tactics), knowledge base, representation techniques, goals, and expectations. During the first part of the semester, the focus is on understanding the fundamental nature of the design process, whereas the second (and longer) part is devoted to studying a variety of architectural design methods. In addition to readings and lectures geared to establish a conceptual framework, the course uses short, hands-on assignments and case studies. A final project asking students to critically revisit their past design processes is employed to summarize the insights collected throughout the semester.

INSTRUCTORS INFORMATION

- **Julio Bermudez**, Professor
Email: bermudez@cua.edu
Phone: (202) 319-5755
Interaction between faculty students will be in person during class time or email after hours.
- **Tommy Vince**, Adjunct faculty
Email: tommy.vince@dmsas.com
Phone: (301) 509-3604
Interaction between faculty students will be in person during class time or email after hours.

CLASS MEETINGS

- Mondays & Wednesdays
- 11:10am-12:25pm
- CROUGH B-016

OFFICE HOURS

- CROUGH 206 (Bermudez). By appointment
- Studio desk (Vince). By appointment

PREREQUISITES

Graduate standing

COURSE GOALS

OBJECTIVES

In this course, students will:

- Study the fundamental characteristics of design as a process and method of inquiry-research-making with its own nature, purpose, functions, psychology, logic, history, and traditions (i.e., and as different from sciences and engineering, the arts, and the humanities);
- Learn different theories explaining the design process and how they apply to architectural design;
- Discern and articulate the differences between process, tactics, strategy, method, methodology, goal-objective, paradigm, and ideology;
- Realize the variety of ideologies and their methods available to address architectural problems;
- Investigate and explain how each one presents a 'biased' set of processes, ideas, expectations, and techniques with various strengths and weaknesses;
- Establish links between architectural history, theory, and practice vis-à-vis design decision-making;
- Develop, negotiate, and utilize rules of interactions to successfully cooperate with others.

OUTCOMES

Successful completion of this course will enable students to:

- Find, interpret, analyze, synthesize, and utilize relevant information to a given research task;
- Understand, develop, and use comparative criticism/analysis to study, interpret, organize, and present diverse processes and methods;
- Deploy appropriate written, oral, and graphic means to present gained insights;
- Realize and respectfully acknowledge other frames of (professional, cultural, etc.) reference in relation to one's own;
- Apply class knowledge and skills to figure own attitude toward design processes and methods (metacognition);
- Understand and apply subjective-phenomenological (1st Person), intersubjective-social (2nd Person), objective-empirical (3rd person), and integrative-combined/comparative (4th Person) approaches in architectural research and thinking.

Arguably, the most important thing a student will take from their architectural education, is the toolbox allowing them to approach, think, critique, communicate, and make architecture. In other words, a battery of design methods and processes. Hence, the thrust of studios and other classes centers in teaching techniques, tactics, strategies, and approaches that advance such learning. While understandable, this noble intention must be balanced with a simultaneous development of reflection-in-action, that is, one's ability to monitor and manage one's own design approach/process/method prior, during, and at the end of a given task.

The goal of this graduate course is exactly that: to bring the necessary attention, knowledge, and understanding to cultivate students' awareness and skills to (critically) recognize what/why/when/how to use a particular approach, method and process. In order to accomplish such objective, the class makes use of the rich architectural tradition, in practice, theory, and scholarship, addressing design methods and processes. The course is broken down into three learning units:

- **Unit [1] (2.5 weeks):** *Design Process Fundamentals* introduces the essential nature, function, conditions, psychology, models, and paradigms of the design process. This unit establishes the course's general theoretical approach and knowledge-base. Students begin to test what they are learning through two hands-on design assignments. Work is done individually.

- **Unit [2] (6.5 weeks): *Design Methods Fundamentals*** presents and studies the most commonly employed methods of architectural design, focusing on their strengths, weaknesses, ideology, attitudes, etc. This is done within a comparative framework that enables critical and insightful comparisons. Work is done in teams.
- **Unit [3] (6 weeks): *Application***. Students engage in the investigation, analysis, and introspection of their own design processes and methods applying what they have learned in the course to observe and critique the work they have done thus far in their architectural studies. Individual effort

INSTRUCTIONAL DELIVERY

This course will be taught in person. We will also utilize digital supporting tools (e.g., google-drive, ZOOM, and MIRO). Course materials will be always up to date and available online here:

<http://juliobermudez.com/courses/636/index.htm>

CONTINGENCY PLANNING

In the event that the University as a whole, or this class in particular, must shift to entirely online course delivery, the following adjustments will be made to the mode of instruction, assignments, and assessments for that specified time period: We will meet on the same days and times using **ZOOM** (and other supporting digital tools such as emails, website/blackboard, and/or MIRO software) as our communication platform. The **ZOOM link** for this class is: <https://cua.zoom.us/j/88154914202>

Students may still be required to quarantine due to close contact or to isolate at times over the course of the semester due to a positive COVID test result. In these cases where students are told by the Student Health and/or the Dean of Students that they cannot attend class in person, students will have access to course materials, teaching, and interaction with the instructor using the same digital platform and support defined above. This class is not taught as a hybrid course which means that this accommodation is made only for those students that are required to quarantine.

In rare circumstances, students may make requests for alternative class participation arrangements for a limited time period due to their personal health, family emergency, or extraordinary circumstance. In such a case, students may request to have access to course materials and instruction in place of in-person attendance only for these circumstances. All of these arrangements are at the exclusive discretion of the instructor.

INSTRUCTIONAL METHODS AND COURSE REQUIREMENTS

The course uses a variety of pedagogic tools to accomplish its goals, namely (1) lectures that introduce and frame the realm of study, reflection and practice; (2) design exercises that provide hands-on learning of essential concepts, principles and methods; (3) research assignments that demand discovery, analysis, and synthesis of relevant written and design material using a comparative framework; and (4) reflective, argumentative and application tasks that critically use what has been learned to illuminate student's own design process/methods. Feedback and evaluation will take the form of criticism (individual and group), informal and formal class pin-ups/reviews and discussions, and public juries.

RECOMMENDED & REQUIRED MATERIALS

We will depend on a variety of sources. However, overall, the following books and articles will be used throughout the semester as general guides. Other texts will be necessary during the semester and depend on the research assignment (Exercise 3) that each student team gets. Papers/Books marked in **bold** are particularly relevant to this class.

Antoniades, Anthony. *Poetics of Architecture: Theory of Design*. New York: Van Nostrand Reinhold, 1992

Bayles, David and Orland, Ted. *Art & Fear*. Santa Cruz, CA: The Image Continuum, 1993.

Bermudez, Julio. "On Paradigms & Avant Garde," *Design Methods* 30:3 (1996), pp.2368-2396

Ching, Francis. *Architecture: Form, Space, and Order*. New York: Wiley, 2007

Clark, Roger and Pause, Michael. *Precedents in Architecture*. New York: Wiley, 2012

Cross, Nigel. "Designerly ways of knowing," *Design Studies* 3:4 (1982) pp. 221-227

Cross, Nigel. *Design Thinking*. New York: Bloomsbury Academic, 2016

Gladwell, Malcom. *Blink. The Power of Thinking without Thinking*. New York: Little, Brown, and Co., 2005

Groat, Linda and Wang, David. *Architectural Research Methods*. Hoboken, NJ: Wiley, 2013

Jones, J. Christopher. *Design Methods: Seeds of Human Futures*. New York: Wiley, 1981

Lawson, Bryan. *How Designers Think*. Burlingam, MA: Architectural Press, 2005

Lawson, Bryan. *What Designers Know*. Burlingam, MA: Architectural Press, 2004

Leatherbarrow, David. *The Roots of Architectural Inventions*. New York: Cambridge University Press, 1993

Plowright, Philip. *Revealing Architectural Design: Methods, Frameworks and Tools*. New York: Routledge, 2014

Mallgrave, Harry Francies. *The Architect's Brain*. UK: Wiley-Blackwell, 2011

Rowe, Peter. *Design Thinking*. Cambridge, MA: MIT Press, 1987

Schön, Donald. *The Reflective Practitioner*. New York: Basic Books Inc., 1983

Unwin, Simon. *Metaphor. An Exploration of the Metaphorical Dimensions and Potential of Architecture*. New York: Routledge, 2019

Zeisel, John. *Inquiry by Design*. New York: Norton & Company, 2006

Other materials (readings, bibliography, web links and info, etc.)

Please, refer to each particular assignment (to be handed-out separately) for specifics. See course website.

Libraries

Specifically, our school library (but also CUA Libraries at large) offers a wide range of resources and services, including image databases, online journals, etc. FAQs are here:

<https://libraries.catholic.edu> For assistance on papers and assignments, consult the research guides here: <https://guides.lib.cua.edu/a> or schedule an appointment with a librarian here: <https://cua.libcal.com>

CLASS POLICIES

In-person attendance during class time is expected. Technology requirements follow those specified by our school. Late assignments will be graded one letter down for every late day unless a doctor or other legitimate excuse is provided in writing. Students are requested to inform the faculty of any situation or problem they foresee as soon as possible in order find ways to mitigate or address the matter fairly and successfully.

TEAMWORK

Units 1 and 3 are done individually. Unit 2 units that compress 40% % of the semester make students work in teams. This is an explicit recognition of how most architectural practice and research actually happen —both are largely cooperative enterprises in which different people bring their expertise and ideas into a task. Teamwork will afford students the opportunity to develop collaborative skills and their own strengths as individuals, at the same time. The faculty (who is team-teaching) will assist such effort but it is important that students positively engage in productive dialogic interaction based on respect to diversity and difference.

GRADES

Grades will be communicated either via evaluation sheets or email throughout the semester at regular intervals per the course deliverables schedule, including at midterm and at final. Please note: interim/midterm grades do not necessarily forecast the final course grade, as they may not reflect outstanding assignments. See below for the weighting of the different assignment in the overall course grade. The University grading system is available:

- Graduates - <https://policies.catholic.edu/students/academicgrad/gradesfull.html#iii>
- Additional Requirements per the School of Architecture and Planning – See Grading Policy located here: <https://architecture.catholic.edu/academics/undergraduate-advising/policies/index.html>

Reports of grades in courses are available at the end of each term on <https://csprrd.cua.edu/psp/csprrd/?cmd=login&languageCd=ENG&>.

ASSESSMENT OF LEARNING

The weight of each of the five Learning Unit will be broken down as follows:

Unit [1] :	<i>Design Process Fundamentals (individual work)</i>	10%
Unit [2] :	<i>Design Methods Fundamentals (team work)</i>	40%
Unit [3] :	<i>Application (individual work)</i>	40%
Total		90%

While projects will be primarily evaluated using the review/jury system and a set of criteria (different for each phase-project), the faculty will also consider the level of inquiry (breadth, depth, method, logic and creativity) that the student acquired in the process. Other pedagogic dimensions such as student growth (i.e., improvements in skills, knowledge, attitude, questioning, etc.), participation, collaborative practice, insights gained in Exercise 0 (Book Review), citizenship, and/or committed effort throughout the semester will count toward the ***remaining 10% of the grade***.

STUDENT WORK NAMING CONVENTIONS

All student work uploaded to the course google drive MUST be named accordingly:

- CourseNumber_Semester_InstructorLastName_StudentWork_StudentLastName_AssignmentName.PDF

For Example:

- ARPL401-01_Fall2023_Bermudez_StudentWork_Smith-Toffler_Assignment2.PDF

As part of the final grade, all students are to upload a single PDF that includes all student work, organized by assignment, separating each assignment with a one-page cover sheet. For all assignments that include any group work, this cover sheet is to include a description of the individual student contribution to the group work for that particular assignment. This PDF is to be less than 25MB. A passing grade will be withheld until this digital submission is uploaded successfully. The title of the PDF is to be "Last Name_Course Number.pdf". For Example: "*Bermudez_ARPL636.pdf*"

PROFESSIONAL STANDARDS ADDRESSED – NATIONAL ARCHITECTURE ACCREDITING BOARD (NAAB) 2020 CONDITIONS FOR ACCREDITATION FOR PROFESSIONAL DEGREE PROGRAMS IN ARCHITECTURE Program and Student Criteria

These criteria seek to evaluate the outcomes of architecture programs and student work within their unique institutional, regional, national, international, and professional contexts, while encouraging innovative approaches to architecture education and professional preparation. The following criteria are required to be met by this course:

- **PC.4 History and Theory** —How the program ensures that students understand the histories and theories of architecture and urbanism, framed by diverse social, cultural, economic, and political forces, nationally and globally.
- **PC.5 Research and Innovation** — How the program prepares students to engage and participate in architectural research and evaluate innovations in the field.
- **PC.7 Learning and Teaching Culture** —How the program fosters and ensures a positive and respectful environment that encourages optimism, respect, sharing, engagement, and innovation among its faculty, students, administration, and staff.

Indirectly, this class also advances **PC.1 Career Paths** and **PC.2 Design**.

COURSE SCHEDULE & BIBLIOGRAPHY

COURSE SCHEDULE

See attached SEMESTER CALENDAR or visit course website. Since modifications may occur during the semester, students are expected to review the updated schedule at regular intervals.

BIBLIOGRAPHY

See “Recommended Texts” above and each assignment (or visit course website).

CATHOLIC UNIVERSITY POLICIES

GRADUATE LEVEL

All members of the Catholic University community have a shared responsibility to know and to abide by the University's policies, especially relating to:

- Academic Integrity
- Accommodations for Students with Disabilities
- Attendance
- Conduct
- Final Exams
- Grades and appeals

All of Catholic University's policies are detailed at <https://policies.catholic.edu/index.html>. Please follow up with the instructor if you have any policy-related questions.

Of particular note are the policies regarding Academic Integrity, Accommodations for Students with Disabilities, and Final Exams, which are described below.

ACADEMIC INTEGRITY

Academic dishonesty at The Catholic University of America is not tolerated (<https://policies.catholic.edu/students/academicundergrad/integrityfull.html> and <https://policies.catholic.edu/students/academicundergrad/integrityprocedures.html>)

As such, academic integrity is not merely avoiding plagiarism or cheating, but it certainly includes those things. Academic integrity means, above all else, taking responsibility for your work, your ideas, and your effort, and giving credit to others for their work, ideas, and effort. If you submit work that is not your own – whether test answers, whole papers, or something in-between – that is considered to be academic dishonesty. University procedures related to academic dishonesty are conducted with respect and dignity, while also preserving accountability, and they presuppose that all participants will treat each other with respect and dignity.

The following sanctions are presented in the University procedures related to Student Academic Dishonesty:

“The presumed sanction for undergraduate students for academic dishonesty will be failure for the course. In the context of graduate studies, the expectations for academic honesty are greater, and therefore the presumed sanction for dishonesty is likely to be more severe, e.g., expulsion. ...In the more unusual case, mitigating circumstances may exist that would warrant a lesser sanction than the presumed sanction.”

At times, you may do group work for an in-class presentation or group project. For that *specific* assignment, you are allowed to share material, ideas and information; however, for any related work that is to be submitted on an individual basis, your submission is expected to be your own in its entirety. If there is no group work in the class you should not collaborate with classmates on work that is to be submitted for an individual grade.

For more information about what academic integrity means at CUA, including your responsibilities and rights, visit <https://integrity.catholic.edu/index.html>.

Accommodations for students with disabilities: Any student who feels s/he may need a reasonable accommodation based on the impact of a disability should contact the Office of Disability Support Services (<https://dss.catholic.edu/index.html>) by email at CUA-DSS@cua.edu or call 202-319-5211 to make an appointment to discuss possible accommodations. DSS recommends that a student with a disability meet with DSS staff during the first week of every semester since accommodations are not retroactive. Please note that instructors will only provide those accommodations included in the DSS accommodation letter. DSS is located in PRYZ 127.

Final Exam: The final exam must be given on the day and time assigned by Enrollment Services. Please plan accordingly for travel, work, special events, or appointments.

A student having an exam scheduling conflict as defined in the policy must report to her/his school's Academic Dean's Office no later than fourteen calendar days before the end of classes. The dean will assist the student in rescheduling the exam(s) for the course having the lowest enrollment(s). All make-up exams must be completed at the earliest possible time during the final examination period.

UNIVERSITY RESOURCES

- **Libraries** <https://libraries.catholic.edu/>
- **Center for Academic and Career Success** <https://success.catholic.edu/>
- **Math Center** <https://success.catholic.edu/academic-support/math-center/index.html>
- **Tutoring Services** <https://success.catholic.edu/academic-support/tutoring-services/index.html>
- **Writing Center** <https://success.catholic.edu/academic-support/writing-center/index.html>
- **Office of Disability Support Services** <https://dss.catholic.edu/index.html>
- **Counseling Center** <https://counseling.catholic.edu/index.html>
- **Student Health Services** <https://health.catholic.edu/index.html>
- **Dean of Students Office** <https://deanofstudents.catholic.edu/index.html>