CO-OP
CITY

HOUSING FOR THE COLLECTIVE GOOD
FROM MININAL DWELLINGS TO MAXIMAL HOUSING

COURSE SYLLABUS
SCOPE OF THE COURSE

As the current crises of health and social justice transform life in our urban landscapes, they put a magnifying glass on one of the biggest chronic crises in our cities: the lack of sustained affordable and adequate housing for all. To counter these issues, we have usually two prevalent mechanisms at our disposal: either some form of (often) rather rigid and consistently marginalized public housing provision schemes, or private housing markets, which should theoretically be demand driven but are systemically inhibited by seeking profit on both property and rental markets. It is apparent that in their current form, both the public and the private sectors are incapable of providing one of the fundamental human rights – the right to shelter – in a comprehensive manner. While at first sight these things might come along as purely policy-related issues, housing is naturally a much more complex and intertwined sector that seamlessly incorporates societal, economic, political and spatial aspects. And because it is so tangible and it affects everybody’s lives in a direct and profound manner, housing’s physical structure, organization and form plays an essential role.

Being confronted with housing crises is unfortunately nothing new. And naturally, the profession of architecture has been involved in developing solutions and designs to improve housing conditions for the masses for a long time. The most prevalent and still very influential paradigm in this regard is rooted in the modernist movement of the early 20th century. Responding to the challenge of providing massive amounts of housing units for society’s poorest and working class communities, the CIAM Congress of 1921 addressed the issue under the topic ‘The Minimum Dwelling’. Driven by the emerging possibilities of new materials and industrial mass production, the architectural propositions resulting from these times were accordingly inspired by processes that mainly focused on quantities and technical efficiencies rather than on qualities and the variety of human conditions. During the post-war era, the early modernist ideas and principles were additionally reduced to pure economic efficiency, and applied in massive scale by governments, private developers and other institutions all over the globe. And so, in the words of Giancarlo De Carlo, “the remedy prescribed [for the housing crisis] was the construction, possibly in series, of the cheapest possible housing, and therefore reduced to the absolute minimum which could be tolerated in terms of surface and space – a minimum which would be called ‘existential’”.

Since the 1970s, the focus on minimal dwellings has experienced an additional impulse through the emerging environmental movement. As one the main consumers of resources and producers of CO2, the construction sector has been increasingly confronted with concerns of environmental sustainability. Through this, the minimal use of space, energy, and resources, as well as a minimal production of waste and CO2 have become a self-evident, constant part for the construction sector in general, and for architects in particular. Again, the modernist legacy has played an important role for how to approach these challenges as well. While understanding environmental concerns within architecture mainly through the lens of technological innovation, the modernist approach has often disregarded contextual, spatial and architectural features when addressing issues of climate control, materiality, resource management, etc. As a result, issues that comprise building systems and resources have been predominantly addressed through rather universal, off-the-shelf technological approaches and systems than through parameters found in local climates, materials and design knowledge.

Finally, and as so many aspects of the modernist era, the provision of affordable housing was predominantly seen as a top-down process, where the architects provided solutions for the respective public, private, and institutional clients. The everyday realities, the inherent necessities, and the potential forms of participation of people who would eventually live in these minimal and cheap dwellings, were hardly part of thinking, development, and design processes.
Seeking to innovate beyond traditional perceptions of minimal applications, austerity frameworks and ideologies of efficiency, we will ask ourselves how affordable and adequate housing could use the tension between minimal resources and maximal aspirations to achieve long term sustainable results for its future inhabitants:

**What are the minimal spatial and social needs a dwelling has to provide?**
**What are the maximal individual and collective benefits housing can provide?**

To explore possible answers to these questions, we will focus on three main aspects. First, while incorporating the urgency and responsibility formulated by early modernist architects as well as the environmental movement’s to provide socially and environmentally sustainable shelter for all, we will attempt to adopt a collective, innovative mindset that goes beyond scarcity, minimal existence, barely acceptable dwellings, and purely individual solutions. Through deliberate analysis and the agency of design, we will seek to maximize the social, spatial, and environmental possibilities of housing within the given constraints.

Second, in order to find more equitable, inclusive and diverse alternatives to purely profit-driven and top-down housing development and design processes, we will explore the potentials of the **limited equity co-operative model** to provide long-term accessibility, affordability and adequacy for housing production. While the co-operative model offers a general approach to build an economy based on democratically organized enterprises, it is, simultaneously, a strongly contextual undertaking that has to be locally rooted and adapted through bottom-up processes in respective communities. Through its non-profit and people-based setup, the co-operative model also has great potential to think and design things differently, to include ideas that would be difficult to achieve within purely public or private setups.

Third, we will embrace the issue of **environmental sustainability through the lens of the ‘2000-Watt Society’ concept**. Calculating a ratio between projected global population, available resources, and energy production, the 2000-Watt Society assumes a global individual energy quota of 2000 Watts per person per year by 2050 in order to ensure long-term sustainable use of energy and resources. In industrialized countries, housing and dwelling represents between 25 and 30% of the yearly energy consumption per person, which means that a reduction – or a sustainable transformation – of individual energy consumption and living areas become an essential part to achieve the stated goals.

Exploring these three themes, we will accordingly consider housing – and with it the act of design – as a means of social integration and environmental responsibility. With this in mind, housing design could be ultimately understood as a form of collective action by not only enabling individual well-being, inclusion and equity, but also by contributing to various aspects of societal and environmental needs – or what could be called the collective good.

The studio’s housing design efforts will engage with our neighborhood around USC Campus. On top of its saturated history that includes segregation, relocation, gentrification, homelessness, etc., the whole area has experienced rising housing prices and accelerated urban transformation in recent years. Both city-wide trends, as well as local development processes have put pressure on the local housing market, particularly for low-income communities. The studio will therefore attempt to critically address these issues through the practice of architecture and housing design.
COURSE STRUCTURE

P1 – REVISITING MINIMAL DWELLINGS: AN EMERGENCY RESPONSE
- 3 weeks: Groups of two / Aggregation of whole section
- Shelter: A space for essential human needs / Between transitional and permanent housing
- Minimal dwelling: Prebaricated unit for homeless members of the community
- Aggregation: Forming a small community with multiple single and family units
- Building systems: Idea for low-tech/high-tech energy and climate control (water, air, sun)
- Site: On Vermont Avenue

P2 – POOL OF REFERENCES: A DATA BASE OF COLLECTIVE FORMS OF HOUSING
- 2 weeks: Groups of two
- Analysis: History, concepts, drawings, etc. of housing global housing references
- References: Precedents of public housing / co-operative housing / collective typologies / utopian housing / sustainable innovations
- Pool: Collection of housing precedents in predetermined format

P3 – DESIGNING MAXIMAL HOUSING: A SYSTEMIC APPROACH
- 10 weeks: individual projects
- Housing: An integral part of the city, neighborhood, community
- Co-operative housing: non-profit units for low-income inhabitants, owned by its residents
- Use: Flexible short- and long-term arrangements, adaptable, community functions
- Materials: Affordable, sustainable, recyclable
- Building systems: Principle for sustainable energy and climate control (water, air, sun)
- Sites: Multiple sites on Vermont Avenue

FACULTY

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GRADING

P1: 20%
P2: 10%
P3: 60%
Participation,
Portfolio,
NAAB Documentation: 10%

STUDIO CONDUCT & COURSE POLICIES

Studio: Attending studio is compulsory, meeting hours are every Monday and Friday from 1:00PM to 5:50PM. When missing studio, please contact your instructor immediately to discuss your situation, determine the status of your absence, and – if possible – setup a potential alternative time or date to meet. Instructors will do their best to accommodate meetings for students who have not been able to travel back to Los Angeles and are still in different time zones. You are strongly encouraged to make the studio your primary workspace in order to benefit from the interactive studio environment. Informal discussion and exchange of ideas with your classmates is critically important. You are expected to work a minimum of two hours outside of class for each hour of scheduled studio time; this is a minimum of 24 hours a week in addition to the 12 hours of studio. Project requirements will be distributed in writing. Daily or weekly assignments may be given verbally or in writing and may differ somewhat from instructor to instructor. Timely completion of all assignments is crucial to your success. Reviews are among the most important elements of your architectural education. Full participation is required at all reviews; you are expected to be attentive, engaged and participating from the beginning until the end of each review.

Documentation: Creating a record of your process is critical. Maintain a binder and/or a digital archive in which reference materials such as handouts, downloads from Blackboard and research materials are kept in an orderly manner. You are required to produce a portfolio
that documents the work of this studio, which will be submitted following final presentations for evaluation by the studio faculty. In addition to your final portfolio, you will be required to submit your work to be shown at the School’s Virtual Expo. Discuss with your instructor a selection of the ten best images / drawings / photos to upload, and follow carefully all naming and formatting protocols. This is the official USC School of Architecture archive of your work, which also offers the opportunity to have your work considered for future school publications.

**Conduct:** Maintain a healthy, collective working environment in studio. Respect your peers, so at a minimum: If you want to listen to music, use headphones - at all hours. Keep cell phones turned off during studio and especially during reviews. Respect others’ equipment, work products and workspace. Studio hours are not mealtimes and the studio is not a lunchroom; please eat elsewhere. Internet use during studio is for direct studio purposes only. Don’t cut on vulnerable surfaces such as floors, desks and drawing boards. Use a cutting mat. Don’t use spray paint, spray adhesive, or other noxious products in the studio. Use such materials outside and only in authorized areas. For the University’s code of conduct see: https://sjacs.usc.edu/students/scampus/

**Submissions:** All work is due at the beginning of studio and must be ready to present or review. All three exercises have to be submitted in time to pass the course. Incomplete or late work is at the discretion of the faculty if it will be reviewed/accepted. All students must submit a portfolio and NAAB documentation in order to complete the course.

**Attendance:** Attendance at all studio sessions, including lectures, reviews, and field trips, is required. Personal illness, family emergency, pre-approved academic reason, or religious observance may be excusable; notify your instructor of such situations as soon as possible and before the affected class session. Unexcused absences from more than three classes will result in the lowering of your final grade one full letter grade. False representation of your attendance is grounds to be considered for a violation of ethics before the University.

**Absence:** The University of Southern California recognizes the diversity of our community and the potential for conflicts involving academic activities and personal religious observation. The University provides a guide to such observances for reference and suggests that any concerns about lack of attendance or inability to participate fully in the course activity be fully aired at the start of the term. As a general principle, students should be excused from class for these events if properly documented and if provisions can be made to accommodate the absence and make up the lost work. Constraints on participation that conflict with adequate participation in the course and cannot be resolved to the satisfaction of the faculty and the student need to be identified prior to the drop/add date for registration. After the drop/add date the University and the School of Architecture shall be the sole arbiter of what constitutes appropriate attendance and participation in a given course. Please contact Sascha Delz at delz@usc.edu by the end of the second week of class if you anticipate conflicts with religious holidays including missing lectures, inability to finish homework assignments on-time, or other items that may hinder your work in this class.

**STATEMENT ON ACADEMIC CONDUCT**

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in SCampus in Part B, Section 11, “Behavior Violating University Standards” https://policy.usc.edu/scampus-part-b/ . Other forms of academic dishonesty are equally unacceptable. See additional information in SCampus and university policies on scientific misconduct, http://policy.usc.edu/scientific-misconduct .
PLATFORMS & FACILITIES

Blackboard: We will use Blackboard for posting general class information and respective documents – such as the syllabus, exercises, readings, and announcements.

Miro: Studio meetings and pin ups will be accompanied by regular postings on Miro (one posting per studio session). Every instructor will establish a Miro Board for their section, where a more detailed collection of each student’s progress can be seen, discussed and documented. While using Miro, please keep the file size as small as possible, to allow steady performance.

Slack: At the discretion of each instructor, Slack can allow to communicate more directly than through Blackboard and email when not in studio.

Model Making: Although we are back in person, access to workshops and materials might still not be as easy as under normal circumstances. We will do our best to adjust to the current or changing circumstances. Regardless, we see model making as a fundamental part of the design and thinking process and encourage everyone to use it not only as a representational, but a design tool. Learning from the limited possibilities that the pandemic imposed on model making, we would like to keep model making and access to it as equitable as possible and we will adapt / announce deliverables accordingly. Access to the wood shop will be restricted to 5 people at the beginning of the semester (this may change). To use the Wood Shop, please read the guidelines posted on Blackboard.

To avoid security breaches and inappropriate intrusions, it is imperative that you do not share or pass on links and access codes of the various virtual rooms and platforms to anybody outside your class.

ACCREDITATION STATEMENT

The USC School of Architecture’s five-year Bachelor of Architecture Program and Master of Architecture Program are accredited by the National Architecture Accreditation Board (NAAB). Conditions for accreditation can be found at: https://www.naab.org/wp-content/uploads/2020-NAAB-Conditions-for-Accreditation.pdf.

As a required course for an accredited professional degree program, this course is accountable for achieving learning outcomes associated with the following NAAB Criteria.

PC.2 Design: The role of the design process in shaping the built environment and conveys the methods by which design processes integrate multiple factors, in different settings and scales of development, from buildings to cities. >>> This course addresses design through a comprehensive approach that integrates contextual specificities, contemporary and historical precedents, social aspects, topics of sustainability, and various scales – from minimal housing units to small housing developments.

Demonstrated in: P1: Minimal housing unit design for homeless population, Readings; P2: Precedent Studies, Readings; P3: Site Analysis, Design of multifamily housing and small housing development, Input on sustainable construction, Readings

PC.3 Ecological Knowledge and Responsibility: A holistic understanding of the dynamic between built and natural environments, enabling future architects to mitigate climate change responsibly by leveraging ecological, advanced building performance, adaptation, and resilience principles in their work and advocacy activities. >>> This course directs students to consider basic sustainable construction techniques, such the use of natural ventilation, sustainable materials, and sun/daylight. It further introduces the sustainability strategy/concept of the 2000 Watt Society, which has additional implications for the amount of used resources.

Demonstrated in: P1: Use of prefabricated wood construction, solar panels, grey water, etc, Readings; P2: Precedent studies with innovative sustainability concepts, Readings; P3: Application of 2000 Watt Society concept through minimal unit areas with larger collective spaces; Readings
PC.4 History and Theory: Histories and theories of architecture and urbanism, framed by diverse social, cultural, economic, and political forces, nationally and globally. >>> This course introduces housing specific readings and precedents to introduce students to local and global approaches, theories and understandings of architectural and policy-related housing delivery.

Demonstrated in: P1: Readings; P2: Precedent studies, Readings; P3: Readings

PC.5 Research and Innovation: Engage and participation in architectural research to test and evaluate innovations in the field. >>> This course asks students to conduct their own investigations for specific socio-cultural, spatial environments and housing layouts, as well as to explore latest sustainable material applications and the potential of recycled materials. These research efforts are supposed to spur new and innovative approaches.

Demonstrated in: P1: Material research; P2: Precedent studies, Readings; P3: Site analysis, Material research, Design of multifamily buildings with innovative layouts and material, Readings

PC.6 Leadership and Collaboration: Approaches to leadership in multidisciplinary teams, diverse stakeholder constituents, and dynamic physical and social contexts, and learn how to apply effective collaboration skills to solve complex problems. >>> This course asks students to work in teams in various constellations and to various degrees. Furthermore, the course implies an active engagement and exchange with local stakeholders

Demonstrated in: P1: Team work; P2: Team work, Readings; P3: Partial team work, Collaboration with local NGO

PC.7 Learning and Teaching Culture: Ensuring a positive and respectful environment that encourages optimism, respect, sharing, engagement, and innovation among its faculty, students, administration, and staff. >>> All students and faculty in the M.Arch and B.Arch programs prescribe to the Studio Culture Document. This document fosters a positive and respectful learning environment that encourages the fundamental values of optimism, respect, sharing, engagement, collaboration and innovation between and among all members of our community.

Demonstrated in: USC Architecture Studio Culture Document

PC.8 Social Equity and Inclusion: Deepening students’ understanding of diverse cultural and social contexts and help them translate that understanding into built environments that equitably support and include people of different backgrounds, resources, and abilities. >>> This course’s aim to design adequate and affordable housing puts questions of social equity, diversity and inclusion at the core of all design activities by focusing on contextual social specificities, participatory aspects, collective spaces, alternative ownership models, adaptive design, flexible and multi-mix use, community engagement, etc.

Demonstrated in: P1: Minimal housing unit design for homeless population, Readings; P2: Precedent Studies, Readings; P3: Site analysis, Design of multifamily housing and small housing development for low-income population, Input on affordable housing, Input on local community, Readings

SC.1 Health, Safety, and Welfare in the Built Environment: Ensuring the understanding of the impact of the built environment on human health, safety, and welfare at multiple scales, from buildings to cities. >>> This course understands affordable and adequate housing as part of overall welfare and personal mental health. The course also introduces basic aspects of performance characteristics related to building safety, such as egress or structural integrity.

Demonstrated in: P1: Design of minimal housing unit; P3: Design of multifamily housing and small housing development
SC.3 Regulatory Context: Fundamental principles of life safety, land use, and current laws and regulations that apply to buildings and sites in the United States, and the evaluative process architects use to comply with those laws and regulations as part of a project. >>> The course asks students to understand and analyze existing standards and regulations and to critically assess and interpret these constraints against the aims and potentials of their projects. 

_Demonstrated in: P1: Design of minimal housing unit; P3: Design of multifamily housing and small housing development_

SC.5 Design Synthesis: Ability to make design decisions within architectural projects while demonstrating synthesis of user requirements, regulatory requirements, site conditions, and accessible design, and consideration of the measurable environmental impacts of their design decisions. >>> This course asks students to design a well-rounded and well-considered, comprehensive housing project that includes site, user, social, environmental, urban, historical, and regulatory considerations.

_Demonstrated in: P1: Design of minimal housing unit, Readings; P2: Precedent studies, Readings; P3: Design of multifamily housing and small housing development, Input on housing policy, Input on sustainable construction, Input on community development, Readings_

SC.6 Building Integration: Develop the ability to make design decisions within architectural projects while demonstrating integration of building (list or describe what content has learning outcomes associated with this criteria) envelope systems and assemblies, structural systems, environmental control systems, life safety systems, and the measurable outcomes of building performance. >>> This course introduces basic assembly of building components, such as envelope, climate control, structure, material choice, etc.

_Demonstrated in: P1: Design of minimal housing unit; P2: Precedent studies, Readings; P3: Design of multifamily housing and small housing development_

**SUPPORT SYSTEMS**

Student Counseling Services (SCS) – (213) 740-7711: Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention (24/7). https://engemannshc.usc.edu/counseling/

National Suicide Prevention Lifeline – 1-800-273-8255: Provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week. http://www.suicidepreventionlifeline.org

Relationship and Sexual Violence Prevention Services (RSVP) – (213) 740-4900: Free and confidential therapy services, workshops, and training for situations related to gender-based harm (24/7). https://engemannshc.usc.edu/rsvp/

Sexual Assault Resource Center: For more information about how to get help or help a survivor, rights, reporting options, and additional resources, visit the website: http://sarc.usc.edu/

Office of Equity and Diversity (OED)/Title IX Compliance – (213) 740-5086: Works with faculty, staff, visitors, applicants, and students around issues of protected class. https://equity.usc.edu/

Bias Assessment Response and Support: Incidents of bias, hate crimes and microaggressions need to be reported allowing for appropriate investigation and response. https://studentaffairs.usc.edu/bias-assessment-response-support/

The Office of Disability Services and Programs: Provides certification for students with disabilities and helps arrange relevant accommodations. http://dsp.usc.edu
Student Support and Advocacy – (213) 821-4710: Assists students and families in resolving complex issues adversely affecting their success as a student EX: personal, financial, and academic. https://studentaffairs.usc.edu/ssa/

Diversity at USC: Information on events, programs and training, the Diversity Task Force (including representatives for each school), chronology, participation, and various resources for students. https://diversity.usc.edu/

USC Emergency Information: Provides safety and other updates, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible, http://emergency.usc.edu

USC Department of Public Safety – 213-740-4321 (UPC) and 323-442-1000 (HSC): For 24-hour emergency assistance or to report a crime. Provides overall safety to USC community. http://dps.usc.edu

LITERATURE


Rainy, James. How Affordable Housing Activists are Trying to Thwart Cutthroat Real Estate Capitalism, in Los Angeles Times, October 21, 2019


Widmer, Hans (P.M.). A Proposal. www.newalliance.earth, 2018

2000-Watt Society Minneapolis. Fighting Climate Change as a 2000 Watt Society, 2018
COURSE SCHEDULE

P1 – REVISITING MINIMAL DWELLINGS: AN EMERGENCY RESPONSE

W01 – Urban Habitat & Fundamental Housing Needs
Monday  Aug. 23  Studio Introduction / Launch P1
Friday  Aug. 27  Desk Review

W02 – Prefabrication & Materials
Monday  Aug. 30  Desk Review
Friday  Sep. 3  Desk Review

W03 – Aggregation & Extension
Monday  Sep. 6  Labor Day
Friday  Sep. 10  Pin Up 1 / Launch P2
>> Last day to add or Drop without a “W” (withdraw) & 100% refund.

P2 – POOL OF REFERENCES: A DATA BASE OF COLLECTIVE FORMS OF HOUSING

W04 – Precedents & Case Studies
Monday  Sep. 13  Desk Review
Friday  Sep. 17  Desk Review

W05 – Precedents & Case Studies
Monday  Sep. 20  Desk Review
Friday  Sep. 24  Pin Up 2 / Launch P3

P3 – DESIGNING MAXIMAL HOUSING: A SYSTEMIC APPROACH

W06 – Context Analysis & Social Inclusivity (Program: Neighborhood, Community, etc.)
Monday  Sep. 27  Desk Review / Input [TBD]
Friday  Oct. 1  Desk Review

W07 – Systems Analysis & Operational Resiliency (Organization: Adaptability, Flexibility, etc.)
Monday  Oct. 4  Desk Review / Input [TBD]
Friday  Oct. 8  Desk Review

W08 – Site Analysis & Environmental Sustainability (Building Systems: Materials, Energy, etc.)
Monday  Oct. 11  Desk Review / Input [TBD]
Friday  Oct. 15  Fall Recess

W09 – Project Development
Monday  Oct. 18  Desk Review
Friday  Oct. 22  Desk Review
W10 – Midterm Review
Monday  Oct. 25  Pin Up 3 / Midterm
Friday  Oct. 29  Desk Review

W11 – Project Development
Monday  Nov. 1  Desk Review
Friday  Nov. 5  Desk Review

W12 – Project Development
Monday  Nov. 8  Desk Review / International Workshop [TBD]
Friday  Nov. 12  Desk Review
>> Last day to drop with a mark of “W” (withdraw)

W13 – Project Development
Monday  Nov. 15  Desk Review
Friday  Nov. 19  Desk Review

W14 – Project Development
Monday  Nov. 22  Desk Review
Friday  Nov. 26  Thanksgiving

W15 – Project Development
Monday  Nov. 29  Desk Review
Friday  Dec. 3  Desk Review
>> Last day of class

W16 – Study Days / Final Reviews
Thursday  Dec. 9  Final Review
Friday  Dec. 10  Final Review

W17 – Portfolio / NAAB Documentation
Monday  Dec. 13  Virtual Expo Upload
Wednesday Dec. 15  Portfolio Upload / Winter Break

W18 – Grading
Tuesday Dec. 21  Final Grades