

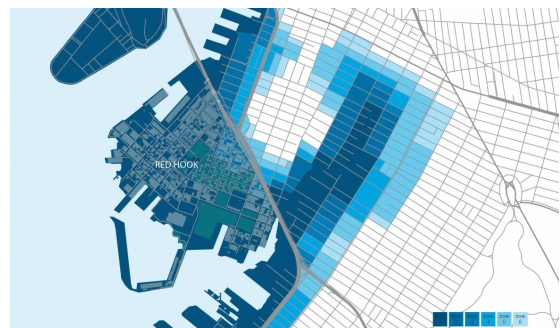
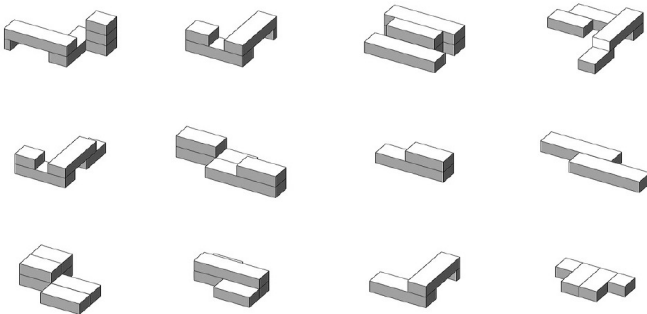
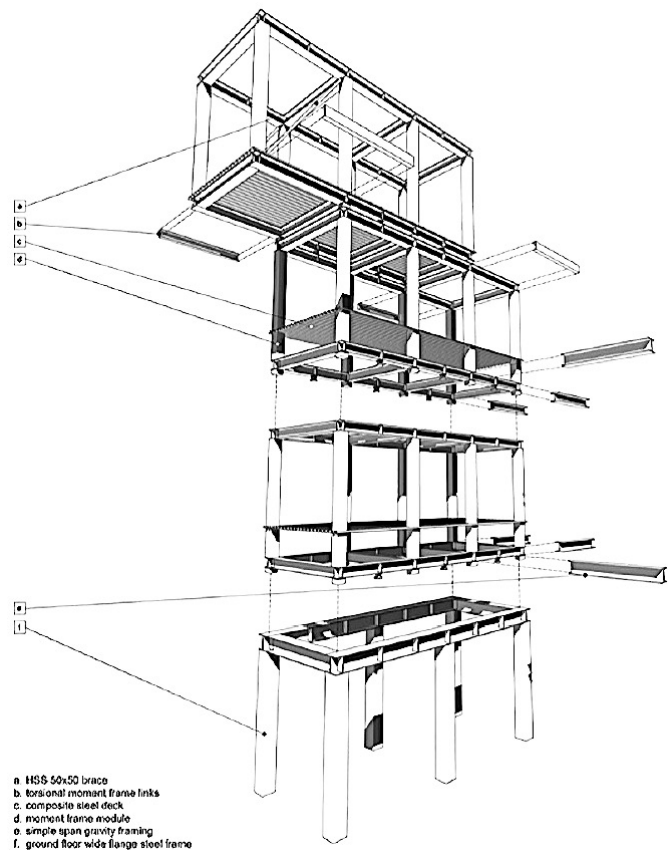
PONDEROSA INTERDISCIPLINARY PRAXIS STUDIO: URBAN ECOLOGY, NEIGHBORHOOD ARCHITECTURE + COMMUNITY ENGAGEMENT

ENVD 3300 | Spring 2018 | MWF 2:00-4:50 ENVD 301 | University of Colorado, Boulder

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Instructors, Program in Environmental Design



Vauban: Freiburg, Germany; modular "tiny" house; small-home ecological community | Anderson Anderson Architecture: "Cantilever House" | 4 Architecture: "Resolution" modular system | Metropolitismag.com; NYC GOV/TerreformONE

COURSE DESCRIPTION

For the first time in history, humans are a predominately urban species. Over 50% of global population now resides in urban areas, a figure that is estimated to increase to 80% by 2100. Throughout the centuries, urban in-migration and growth of cities and towns has presented challenges for urban residents in securing safe and affordable housing; access to water, food, and other basic amenities; sufficient energy supplies; and reliable transportation. However, for many global cities and towns, recent shifts in weather, temperature patterns and changing climate cycles have exacerbated these challenges. In addition, the brunt of these shifts is increasingly felt by threatened and underserved communities worldwide, due to their relative lack of resources to adapt to such environmental shifts.

Boulder is no exception. According to a recent American Community Survey (ACS), 22% of Boulder residents live below the poverty line, and as they experienced in 2013, a catastrophic weather event flooded many areas of the city, including those in which residents living in poverty were unable to economically recover. One such place is the Ponderosa neighborhood in North Boulder, which suffered infrastructure and residential damage resulting in great hardship for many of its residents and is threatened by repeated catastrophe. In response, the City of Boulder has secured over \$4 million in assistance to reimagine and rebuild this relatively underserved community with a focus on resilience.

This praxis studio will explore how best to address the Ponderosa community's future ecological, infrastructure and housing challenges. As ENVD students, you are aware of how well-positioned architects, landscape architects and planners are in designing solutions to address these challenges. This studio will offer you the opportunity to research and design ecological landscapes and resilient homes for this neighborhood at scales that are well-suited to tackling these issues. To inform your design work in this course, you will draw from literature pertaining to urban and landscape ecology, small/modular homes, sustainable design and community resilience as well as from practice, precedent studies and other resources.

STUDIO PRODUCTS

1. Regional urban ecological research and analysis;
2. Neighborhood-scale ecological site design based on urban ecology principles and literature;
3. Building-scale design and models based on sustainable, modular and small-home practices and precedents;
4. Community outreach presentations tailored to the Ponderosa neighborhood community.

COURSE TEXTS (unless otherwise noted, access to class texts will be provided for you)

Forman, Richard T.T. *Urban Ecology: Science of Cities*. Cambridge University Press, 2014.
Turner, Monica G, Gardner, R.H. and O'Neill, R.V. *Landscape Ecology in Theory and Practice*. Springer, 2001.
(additional references TBD)

COURSE SEMINARS

This course is associated with the following seminars:

ENVD 3300-22: Design Resilience and Autonomous Networks (Mat Davis, Instructor)

ENVD 4361-002: Inclusive Community Design (Dr. Bruce Goldstein, Instructor)

COURSE PEDAGOGY

In this course, we will follow a *constructivist* learning approach, an educational philosophy that can be traced back to 20th century Swiss psychologist and learning development researcher Jean Piaget, among others. At its core, constructivism supports a process of classroom co-learning, in which faculty and students work together to define and shape course content. In this way, rather than passively absorbing material and completing assignments in a lock-step fashion, students become active participants in a collaborative environment.

What this means is you will collectively outline design challenges, research and acquire the knowledge and skills necessary to address these challenges, and formulate their solutions, all with the guidance of the faculty. This is of course not to say that you will have free reign to define problems as you wish, but rather that we will combine our efforts to thoroughly and logically investigate and complete all projects. Put simply, we will work together as a team this semester to define and solve problems in a creative, comprehensive, well-researched, logical and coherent manner.

COURSE OBJECTIVES

In this course, you will learn and develop your knowledge of:

1. **Ecological site design:** Learn and apply concepts and theory from urban design, urban ecology, and landscape architecture literatures;
2. **Small-scale residential & modular building design:** Based on modular and small home design theory and practice; develop skills in using materials, methods, and/or emerging technologies central to resiliency and affordable housing typologies;
3. **Community engagement:** Develop skills in working with and communicating to neighborhood residents, particularly those of underserved groups;
4. **Higher order thinking:** Hone ability to draw reasonable inferences from observations and think holistically;
5. **Foundational skills for academic success:** Improve your speaking skills; develop appropriate study skills, research capabilities, and strategies for project completion;
6. **Liberal arts and academic values:** Develop an informed concern about contemporary social issues and an ability to make informed, ethical decisions;
7. **Work and career preparation:** Develop project management skills and your ability to organize and use time effectively;
8. **Personal development:** Develop respect for others and their work, within the context of mutual critique; Develop capacity to make informed decisions about project development and collaborative relationships.

Finally, reading, researching, writing, and engaging in critical discussion are a necessary and important part of this (and any) studio

COURSE SCHEDULE (subject to change at faculty discretion)

Outline:

	january					february					march					april					may															
	week 1		week 2		week 3		week 4		week 5		week 6		week 7		week 8		week 9		week 10		SB	week 12		week 13		week 14		week 15		week 16						
	17	19	22	24	26	29	31	2	5	7	9	12	14	16	19	21	23	26	28	30	2	4	6	9	11	13	16	18	20	23	25	27	30	2	4	
Regional level (Urban Ecologies)	k		1		2		P																													
Neighborhood level (Landscape Ecologies)							k		1		2		3		4																					
midterm presentation																	P																			
Building level (Architectural Ecologies)																	k		1				2		3		4									
Integrated Design																																	P			
key	k = kickoff																																			
	P = Midterm or Final Presentation																																			

Topic	Schedule	Final grade distribution
Research, reading & participation ¹	Weeks 1-14 (TBD)	10%
Project 1: Urban ecological analysis (i.e. Regional level)	Weeks 1-3	20%
Project 2: Ecological landscape design (Neighborhood level)	Weeks 4-8	20%
Project 3: Ecological architecture design** (Building level)	Weeks 9-14	20%
Project 4: Integrated design	Weeks 15-16	30%

Full project details will be outlined in respective project briefs, and grading rubrics for all assignments will be provided based on specific academic objectives.

*Schedule subject to change at faculty discretion

** No class during Week 11 (Spring Break)

COURSE PARTNERS

To ground the studio in a regulatory and consultant framework, we will have opportunities to interact with the following groups and agencies this semester:

The Ponderosa Community (Resident Leadership Committee)
 The City of Boulder (Planning Dept, Housing + Sustainability Dept and Public Works Dept)
 Trestle Strategy Group
 CU's Community Engagement, Design and Research Center (CEDaR)
 Growing Up Boulder

COURSE EXPECTATIONS

As advanced ENVD students, you should now be very familiar with studio culture. For this course, we expect you to:

1. Carefully read the syllabus and follow the course website (D2L);
2. Attend all studio meetings on time and for the entire period, always fully prepared to

- participate;
3. Complete all studio exercises and assignments on deadline, and come prepared for all pin-ups and reviews;
 4. Complete and take notes on all readings and meaningfully participate in discussions;
 5. Inform us of any absences in advance and adhere to university absence and attendance policies (any more than 2 unexcused absences will result in lowering the final grade);
 6. Participate in and contribute to a respectful learning environment;

GRADING

A (Excellent) (A- 90-92.9; A 93-100)

Work that reflects superior and resourceful design and graphic ability; outstanding written and spoken work that is logically considered, well-formulated and presented. This is an outstanding performance in which the student demonstrates a superior grasp of the subject matter, and an ability to go beyond the given material in a critical and constructive manner. The student demonstrates a high degree of creative and/or logical thinking, an above-average ability to organize, analyze, and integrate ideas, and a thorough familiarity with the relevant literature and techniques. The student shows a high level of initiative and self-direction, and produces innovative work that is well-supported and threaded together with a sound argument. The student contributes to class dynamics in an exemplary manner.

B (Good) (B- 80-82.9; B 83-86.9; B+ 87-89.9)

Work that shows good understanding of the theory and concepts involved in the project, is generally above average and in some respects goes beyond the instructor's requirements. This is a work that represents better than average performance in which the student demonstrates a thorough grasp of the subject matter, and an ability to organize and examine the material in a critical and constructive manner. The student demonstrates a good understanding of the relevant issues and a familiarity with the relevant literature and techniques. The student contributes to class dynamics in a positive and effective manner.

C (Acceptable) (C 70-76.9; C+ 77-79.9)

This work indicates average understanding and execution of projects that just meets course objectives. This is an average performance in which the student demonstrates only a moderate ability to examine the material in a critical and constructive manner; arguments are insufficient and ill-researched. The student displays only an average understanding of the relevant issues, and a general familiarity with the relevant literature and techniques. Initiative is weak and the student requires constant guidance by the instructor. Contributions to the class environment are nominal.

D (Minimally complete) (D 60-66.9; D+ 67-69.9)

The work is incomplete and the design and research process and project solution are poor, ill-researched or inconsistent. Work shows lack of comprehension of subject matter and process and research are deficient with respect to one or more of the major course objectives. A barely adequate performance in which the student demonstrates a familiarity with the subject matter, but whose attempts to examine the material in a critical and constructive manner is only partially successful. The student displays little understanding of the relevant issues, and only some familiarity with the relevant literature and techniques.

F (Not acceptable) (below 60)

Work is incomplete and project shows a failure to comprehend and present subject matter resulting

in the lowest rating. Work has not been handed in by the time due.

Late Work:

Meeting a deadline is essential in any profession. In the working world, not meeting a deadline can cause one to lose a job. This course encourages all work to be turned in on time by minimizing the length of time an assignment can be late. **The instructor will accept late work only within 24 hours of the due time and date and will assess a 30% deduction.** No project, reading assignment, written assignment, or other type of assignment will be accepted beyond the 24-hour window and a grade of zero will be assigned.

DISABILITIES

If you qualify for accommodations such as classroom resources or extra time for exams because of a disability, please submit a letter from Disability Services to your professor documenting the accommodation(s) needed, in a timely manner, so your needs can be addressed. Disability Services determines accommodations based on documented disabilities and can be reached at 303-492-8671 or dsinfo@colorado.edu. Their website has information on accommodations and services: <http://disabilityservices.colorado.edu/accommodation-and-or-services>.

If you have a temporary medical condition or injury, use the guidelines posted in the quick link on the Disability Services website: Temporary Medical Conditions <http://disabilityservices.colorado.edu/quick-links/temporary-injuries> and discuss with your professor.

RELIGIOUS OBSERVANCE

Campus policy regarding religious observances requires that faculty make every effort to deal reasonably and fairly with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. Please let your professor know about your religious observance obligations as early as possible in the semester. <http://www.colorado.edu/policies/observance-religious-holidays-and-absences-classes-and-or-exams>

CLASSROOM BEHAVIOR

Students and faculty each have responsibility for maintaining an appropriate learning environment. Those who fail to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, color, culture, religion, creed, politics, veteran's status, sexual orientation, gender, gender identity and gender expression, age, disability, and national origin. Class rosters are provided to the instructor with the student's legal name. We will gladly honor your request to address you by an alternate name or gender pronoun. Please advise us of this preference as early in the semester as possible so appropriate changes can be made to our records. <http://www.colorado.edu/policies/student-classroom-and-course-related-behavior>

DISCRIMINATION AND HARASSMENT

The University of Colorado Boulder (CU-Boulder) is committed to maintaining a positive learning, working, and living environment. The University of Colorado does not discriminate on the basis of race, color, national origin, sex, age, disability, creed, religion, sexual orientation, or veteran status in admission and access to, and treatment and employment in, its educational programs and activities. (Regent Law, Article 10, amended 11/8/2001). 1 CU-Boulder will not tolerate acts of discrimination

or harassment based upon Protected Classes, or related retaliation against or by any employee or student. For purposes of this CU-Boulder policy, "Protected Classes" refers to race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, or veteran status. Individuals who believe they have been discriminated against should contact the Office of Discrimination and Harassment (ODH) at 303-492-2127 or the Office of Student Conduct (OSC) at 303- 492-5550. Information about the ODH, the policies regarding discrimination and harassment and campus resources available to assist individuals regarding discrimination or harassment can be found at <http://www.colorado.edu/policies/discrimination-and-harassment-policy-and-procedures>.

UNIVERSITY HONOR CODE

All students of the University of Colorado at Boulder are responsible for knowing and adhering to the academic integrity policy of this campus. Violations of this policy may include: cheating, plagiarism, aiding academic dishonesty in others, fabrication, lying bribery, and threatening behavior. All incidents of academic misconduct shall be reported to the Honor Code Council: honor@colorado.edu, 303-735-2273. Students who are found to be in violation of the academic integrity policy will be subject to academic sanctions from the faculty instructor and non-academic sanctions including, but not limited to: university probation, suspension, or expulsion. Additional information on the Honor Code and academic integrity can be found at <http://honorcode.colorado.edu> and <http://www.colorado.edu/policies/academic-integrity-policy>