



# Sustainable Design/Build Program: A Yestermorrow and UMass Collaboration

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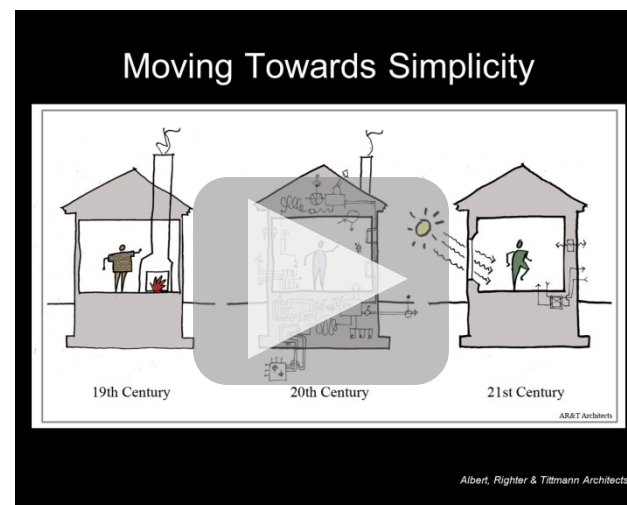
Form Follows Energy

Research, Building Science and Architecture

Detailing for Durability

Healthy Homes Research

Researching Resiliency



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# Course Description 1 of 2

In the fall of 2011 and 2012, Yestermorrow Design Build School and UMass Amherst Architecture+Design Program ran their new Sustainable Design|Build Semester program in rural Vermont. Open to undergraduate students from any discipline and school, the program addresses far-reaching sustainability topics through the lenses of small scale architecture and collaborative design/build. Over the course of two respective single fall semesters, students have designed and built two small houses. While referencing other national design|build models, this program distinguishes itself for four unique parameters: an interdisciplinary design approach, a sustainable design agenda, a consensus model of decision-making, and an immersion “study away” campus experience.



# Course Description 2 of 2

With that in mind, presenter, José Galarza, in conjunction with Carey Clouse, AIA, defines the basic methods for running effective design/build studios. This presentation covers the first two projects completed: two semesters of design|build with two different groups. The work covered will discuss sustainable systems, design, and strategies, and explain of techniques used to address building safety and user comfort in the context of a very small building. The course provides an introduction to the design and construction of very small spaces, along with an overview of teaching considerations for this unique classroom alternative.



# Learning Objectives

1. Develop innovative sustainable systems, design, and strategies for small houses.
2. Understand techniques used to address building safety and user comfort in the context of a very small building.
3. Explain key resources for an equitable, consensus model of decision-making.
4. Understand interdisciplinary approach to sustainable design.





**José Galarza**

Director of Semester Programs  
Yestermorrow Design/Build School  
Warren, VT  
Speaker



**Carey Clouse, AIA**

Assistant Professor  
University of Massachusetts Amherst  
Amherst, MA  
Speaker



**Stephen Schreiber, FAIA**

University of Massachusetts Amherst  
Moderator

Submit a question to the moderator via the Chat box. They will be answered as time allows.





A photograph of four students working on a wooden structure, likely a greenhouse or a small building. One student is on a ladder, another is on the ground, and two others are looking up. The structure is made of light-colored wood and has large windows. The background shows trees and a clear sky.

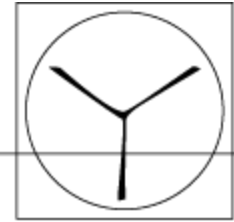
# SUSTAINABLE

# DESIGN/ BUILD PROGRAM



YESTERMORROW

DESIGN / BUILD SCHOOL

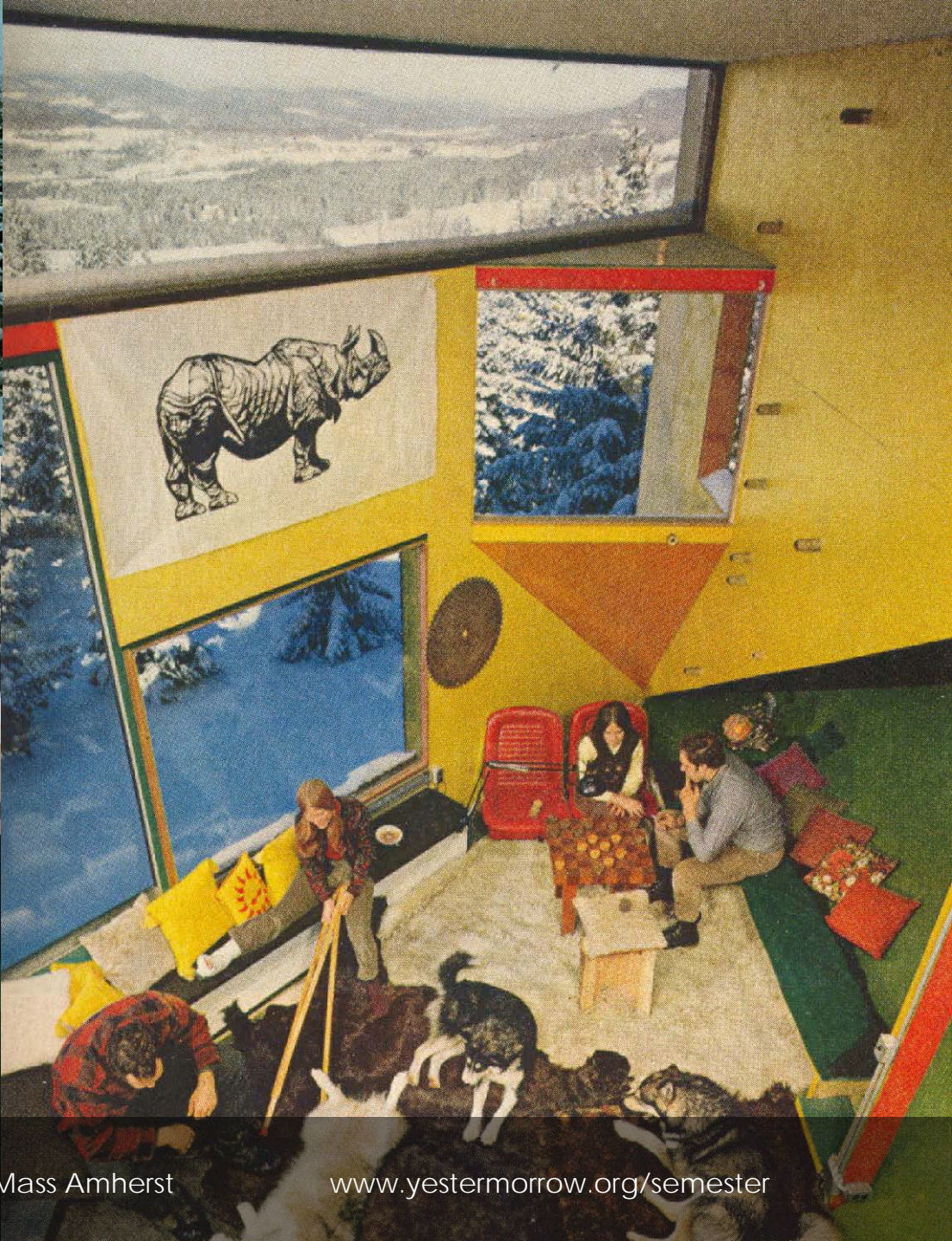


UMASS  
AMHERST

Continuing & Professional Education





































# WHAT DOES SUSTAINABLE DESIGN

## BUILD MEAN TO YOU?

INCLUSION: ALL ARE WELCOMED INTO THE DESIGN PROCESS AND CAN BRING ASPECTS OF THE DESIGN PROCESS.

HEALTHY COLLABORATION BETWEEN ALL PLAYERS AT ALL PHASES



FUNCTIONALITY: THE NEEDS TO SERVE A PURPOSE & WORK WELL.

→ LONGEVITY: SEEING BEYOND 40 YEARS

"BUILDING TO LAST"

"QUALITY"

→ HOLISTIC: CONVERSATION BETWEEN MATERIALS, SITE, & CONTEXT: COMM. INTENT. UNITY, SITE, EDUCATION, "HOME", ETC.

**ECOLOGY**: LOOKING @ A BIG PICTURE OF BUILDING & SITE/MAT. & BUILDING/SITE & COMMUNITY.

**USE/REUSE**

**HOLISTIC:**

ARTISTIC  
ENVIRONMENTAL  
STRUCTURAL

CARE: CREATING IDEAS OF USE, FUTURE FOR AN ARTIFACT(S) THAT WILL BE CARED FOR.

CONSIDER THE IMPACT.

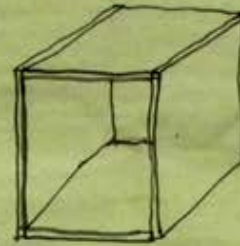
**INTENTION**: CLEAR

ALL ASPECTS OF CREATION

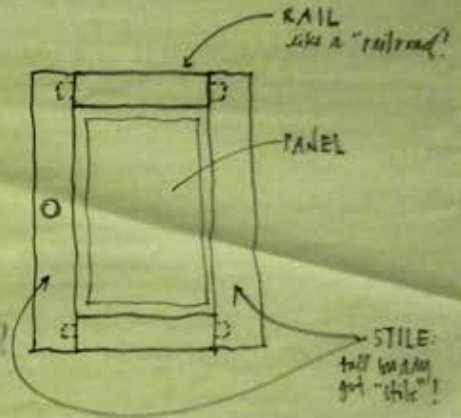
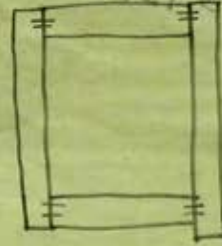
INHABITANTS: DWELLERS WITHIN HAVE SPECIAL NEEDS WHICH SHOULD BE CONSIDERED & HONORED.

23 AUGUST 2012

# CABINETS: a box with a pretty face!



A BOX ...



A DOOR!

FACE FRAME TRADITIONAL/WESTERN

EURO-STYLE/EUROPEAN STYLE

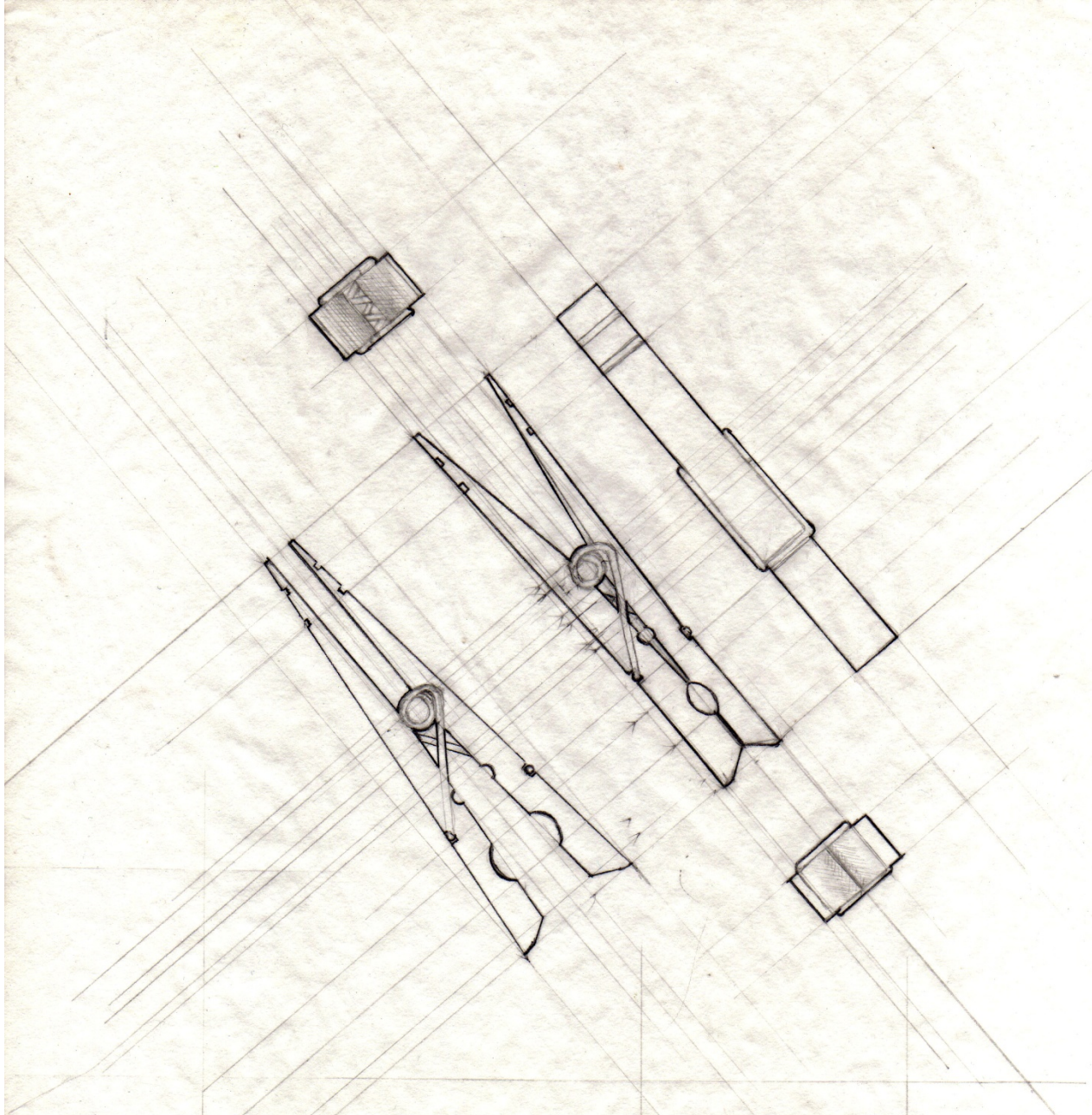
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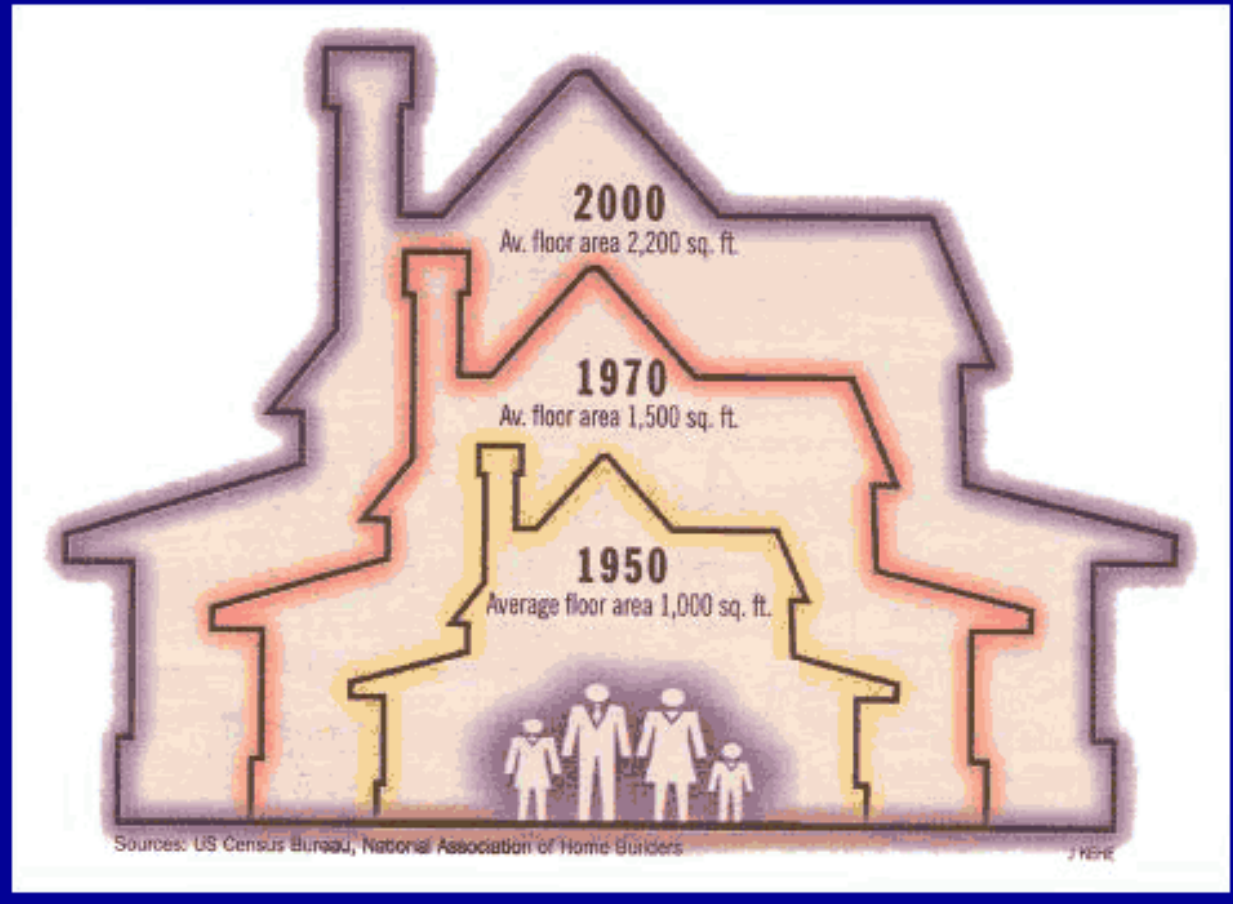




2011



1950 3.37 people per household - 297 s.f. per person  
1970 3.14 people per household - 478 s.f. per person  
2000 2.62 people per household - 840 s.f. per person

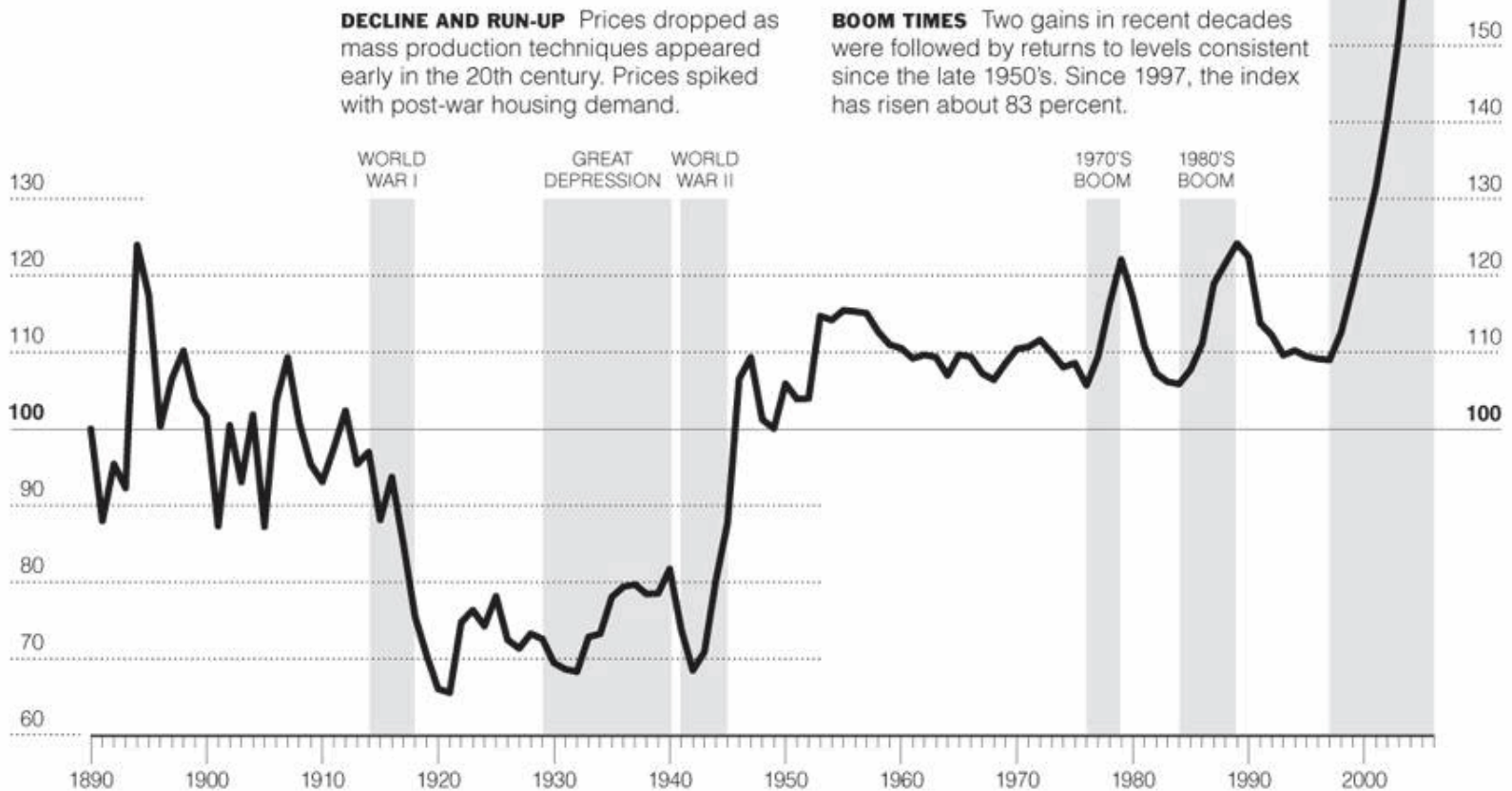




## A History of Home Values

The Yale economist Robert J. Shiller created an index of American housing prices going back to 1890. It is based on sale prices of standard existing houses, not new construction, to track the value of housing as an investment over time. It presents housing values in consistent terms over 116 years, factoring out the effects of inflation.

The 1890 benchmark is 100 on the chart. If a standard house sold in 1890 for \$100,000 (inflation-adjusted to today's dollars), an equivalent standard house would have sold for \$66,000 in 1920 (66 on the index scale) and \$199,000 in 2006 (199 on the index scale, or 99 percent higher than 1890).



Source: "Irrational Exuberance," 2nd Edition, 2006, by Robert J. Shiller

Bill Marsh/The New York Times





Yestermorrow Semester in Sustainable Design/Build 2011

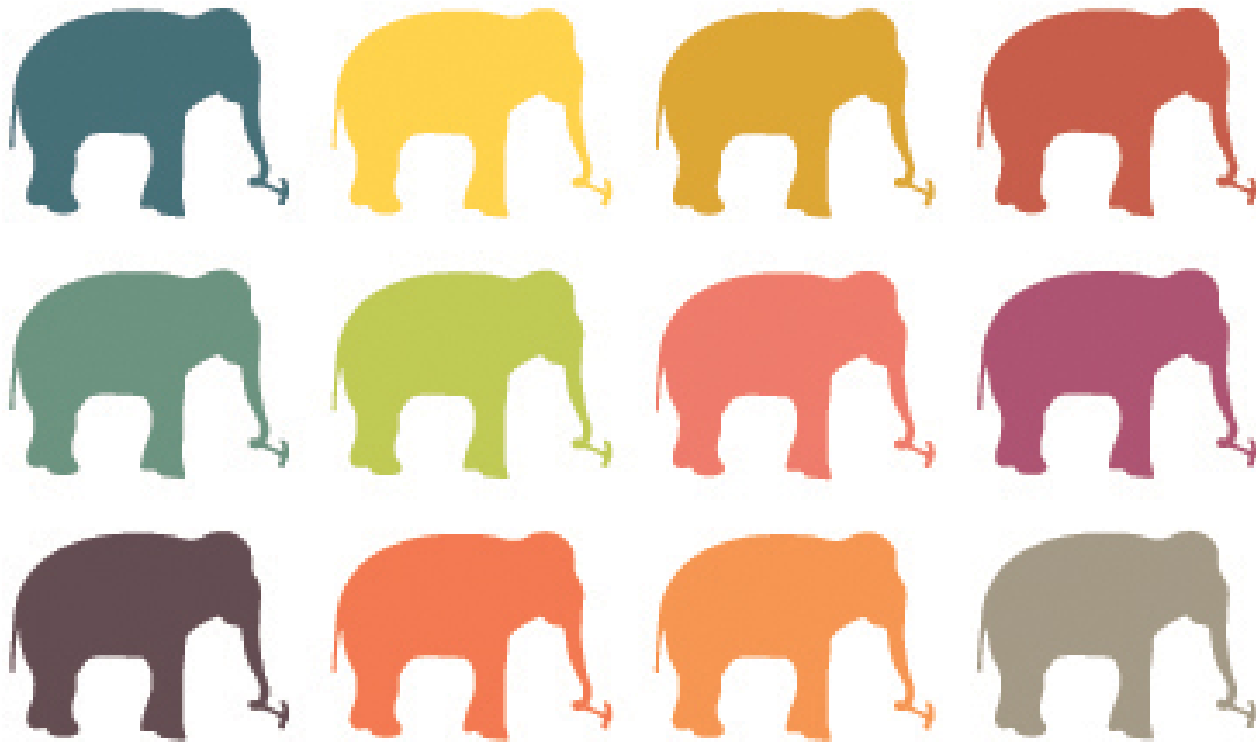
# It's okay to be tiny.

Somewhere in a McMansion someone is trying to mop the floors.  
All of them.

Our little house thinks you deserve better.  
It isn't afraid to be different. Or cheap. Or sustainable.  
And it knows you aren't either.

See the big picture in your tiny house.



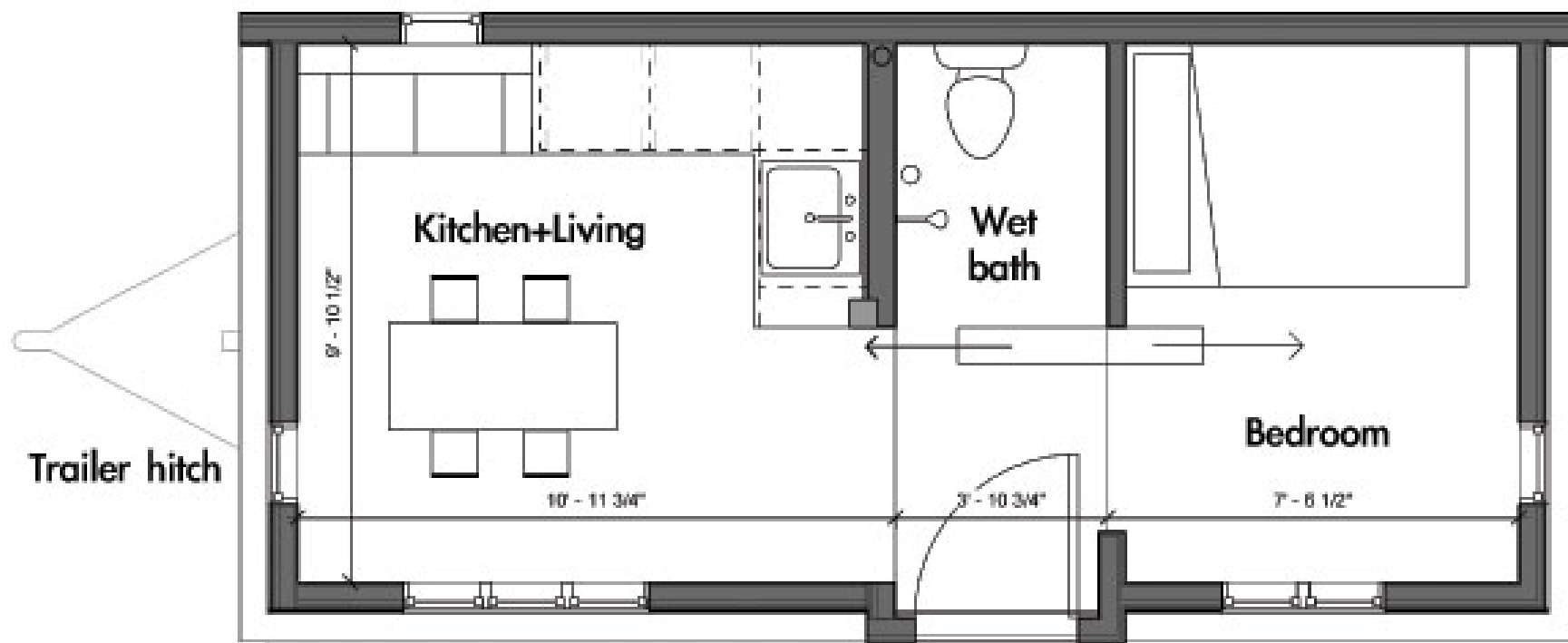


it's okay to be tiny.











# Tiny House (227 SQFT)

## 2012 WMAIA Honor Award Winner

Features Include:

- Transportable
- 50 AMP electric (suitable for PV)
- Composting Toilet
- Charred Cedar Shiplap Siding
- Recycled/Salvaged Material Throughout

















Yestermorrow Design/Build School | UMass Amherst



[www.yestermorrow.org/semester](http://www.yestermorrow.org/semester)





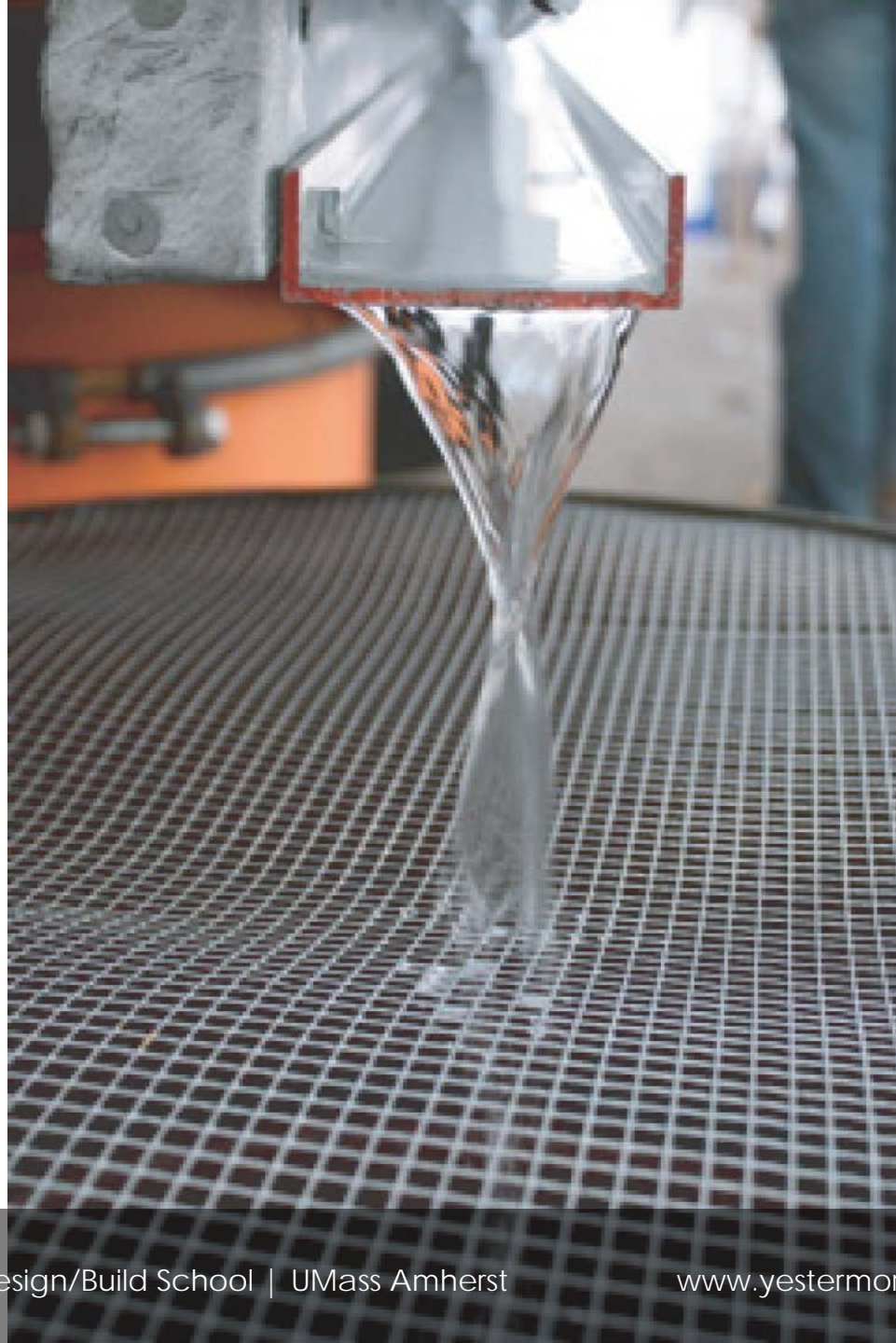
































  
*it's okay to be tiny*  
Yestermorrow Design/Build School in Design/Build 2012

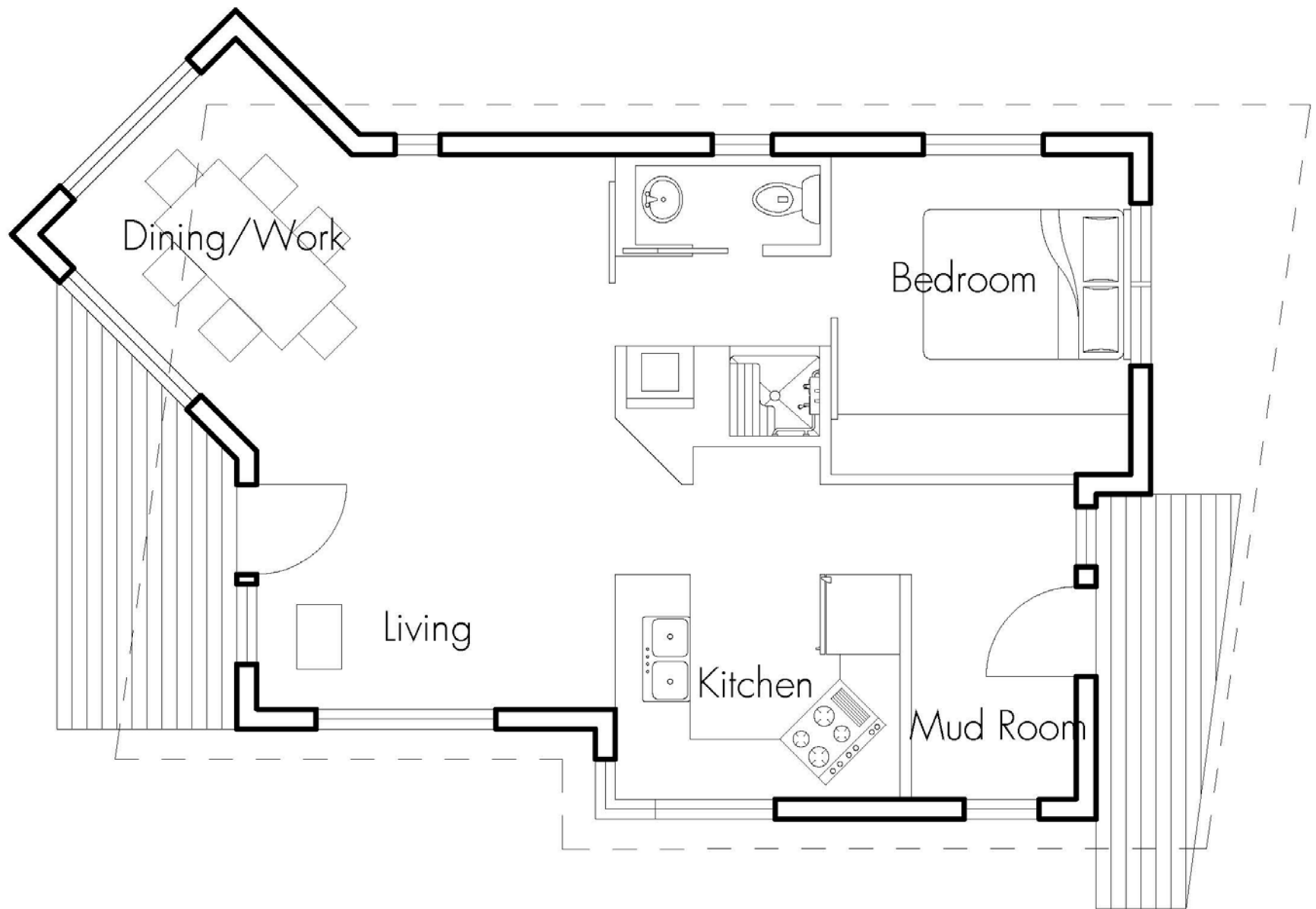
**OPEN HOUSE TODAY**  
**3:30-6PM**  
Come celebrate the 40th anniversary of Yestermorrow's first semester in sustainable design/build.





2012







# Small House (625 SQFT)

Features Include:

- Multiple cantilevers
- Salvaged cherry as exterior cladding
- Visible heavy steel structure
- Shop-built corner wood
- Super insulated cellulose blown walls
- Locally built Elm Woodstove
- Sheet steel wrap on exterior









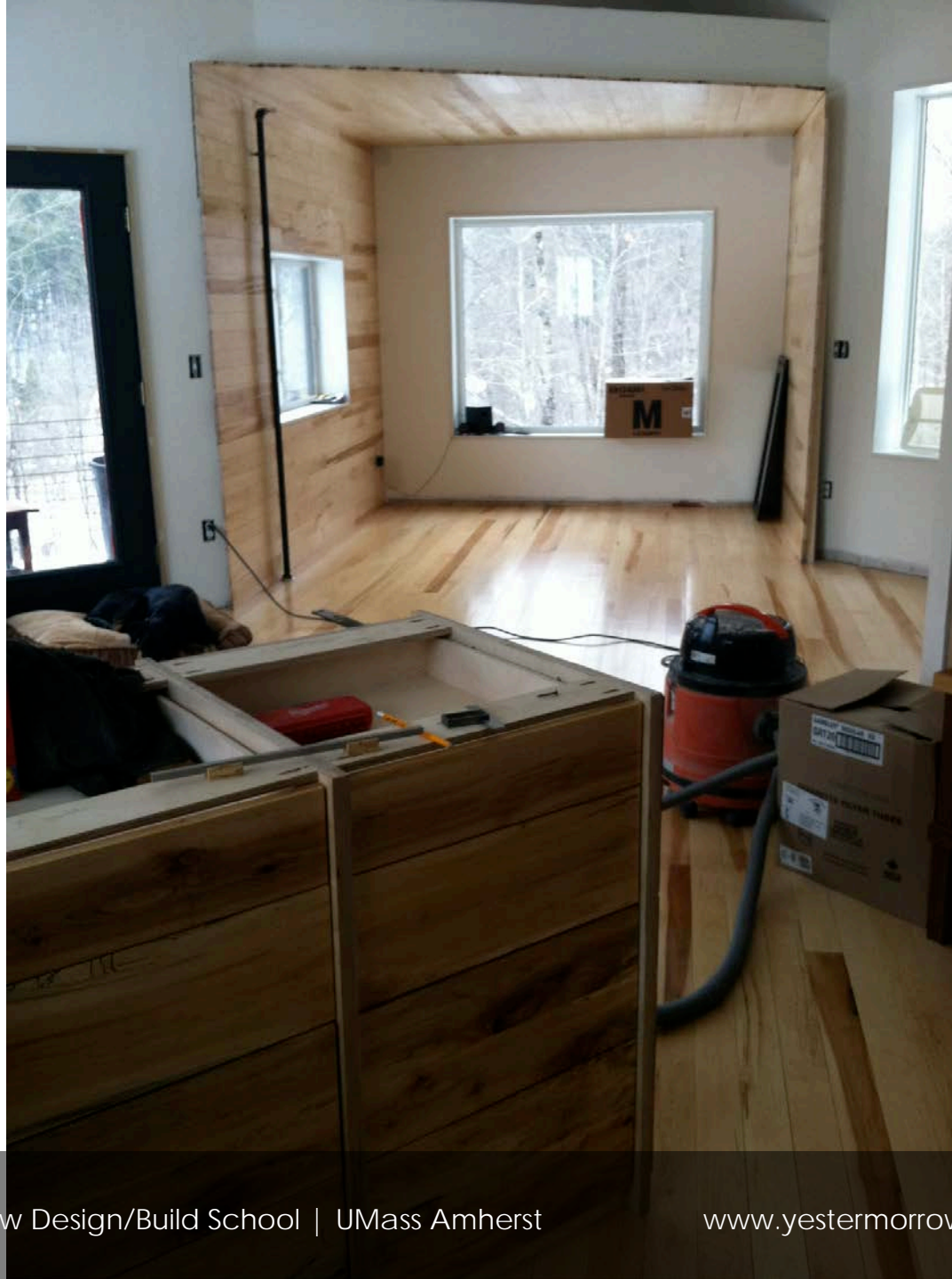


























INSTRUCTORS: BEN CHENEY, CAREY CLOUSE, JOSÉ GALARZA, JOSH JACKSON,  
ANNIE MURPHY, ANNA LUCEY ○ STUDENTS: ERIC STUMPF (SKIDMORE COLLEGE),  
EVAN MORRIS (CLEMSON UNIVERSITY), HARRY HARRIS (POMONA COLLEGE),  
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(BATES COLLEGE), GRACE BENNETT (UNIVERSITY OF OREGON), JENNIFER  
CAVANAUGH (HAMPSHIRE COLLEGE), MIRA LIEMAN-SIFRY (TUFTS UNIVERSITY)

# 2011 - 2012



# For more info:

[www.yestermorrow.org/semester](http://www.yestermorrow.org/semester)  
[jose@yestermorrow.org](mailto:jose@yestermorrow.org)  
(802) 496 – 5545

*Stay in touch with us via our website, e-newsletter, blog, Facebook group, Twitter or LinkedIn.*

Follow the student produced blogs from 2011 & 2012 semesters:  
<http://ym-semester.tumblr.com/>  
<http://ym-semester12.tumblr.com/>





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# Thank you for joining us!

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