

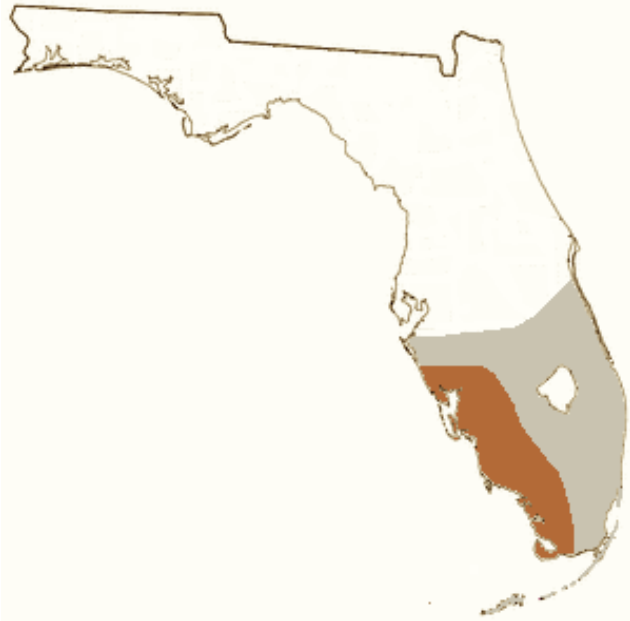
# GULF COAST



## CRAFTING A SUSTAINABLE FUTURE

Learn about multi-pillar sustainability issues, particularly those facing the Gulf of Mexico & SWFL

How to think critically and creatively.



Territory acknowledgement is a way to bring an awareness of land rights into everyday life

Indigenous peoples' collective rights to lands, territories and resources.

A way to recognize the history of colonialism, and that we live in a settler colonial society:

with a history and legacy of colonialism, and of slavery

and that this allows us the privileges we enjoy today

And is foundational to acknowledge the on-going violence and trauma that is built into the structure of the United States because of our history.

This is a core part of thinking about sustainability.



- The Calusa Indians did not farm like the other Indian tribes in Florida.
- Instead, they fished for food on the coast, bays, rivers, and waterways.
- The men and boys of the tribe made nets from palm tree webbing to catch mullet, pinfish, pigfish, and catfish.

## Acknowledging Territory

We acknowledge that we are on the traditional territory of the Calusa, and the Seminole peoples, the original land and water custodians of Florida's southwest coastal region.

# SUSTAINABILITY ACTIONS



SOCIAL  
DISRUPTION

If we understand territorial acknowledgment as a site of disruption

to some extent, we can help undo historical erasure,

we can better understand our own place on these lands and waters,

and this in turn can inform our joint efforts to make our places more sustainable.

If our territorial acknowledgements are more than tokenism, they can be a small disruption in a sea of infinite possible disruptions.





DR. LEA REKOW

(PhD in sustainability and the environment/MA media & comm./Honors Film/BA vis. Arts)

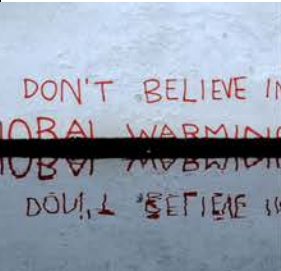
Work with ethnic minorities and marginalized communities, including the Kogi Indigenous shamans in Columbia, in conflict zones in Burma, on large-scale land use reclamation projects on the Navajo Nation, and through Green My Favela, has worked with Rio de Janeiro's Municipal Secretary for the Environment's Hortas Cariocas project to help establish the largest-scale (by density) urban organic food security project in Latin America, in the Manguinhos Complex of favelas. Co-lead and co-curator of BifrostOnline, an international project promoting education for sustainability and climate change awareness. Steering committee for the Humanities for the Environment Circumpolar Observatory and working in Communications & Advocacy for BRIDGES, an emerging UNESCO sustainability program.

Advisor to the Integrated Media and Art and Technology programs at Cal Arts; a member of the Institute for Australian Geographers and of New York Women in Film and Television; executive director of the Center for Contemporary Art in Santa Fe (NM); founding director of Gigantic ArtSpace (NY); media director at the former Center for Peace and Human Security (NY); adjunct professor of media and communications at Pratt Institute (NY); cultural advisor for Advance (Australian consulate in NY); special envoy for the European-based Open & Agile Smart Cities; advisor to the European Urban IxD program; research fellow at the Center for Art and the Environment (NV); consultant for the international sustainability network GlobalCAD. Advisory panels for NYFA, SVA, Parsons, Amnesty International, the MacArthur award, and the Lower Manhattan Cultural Council.

LEAREKOW.COM

BIFROSTONLINE.ORG

GREENMYFAVELA.ORG



# A SUSTAINABLE FUTURE: UNIVERSITY COLLOQUIUM

## DESCRIPTION

Interdisciplinary course designed to explore ecological, social and economic aspects of sustainability through reading, presentations, discussion, writing, field experiences, and service-learning.

College Level Writing Skills course: Develop critical thinking and academic writing skills needed to communicate at a professional level. To acquire and practice these skills, in this class you are asked to write different types of assignments under different circumstances.

## GOALS

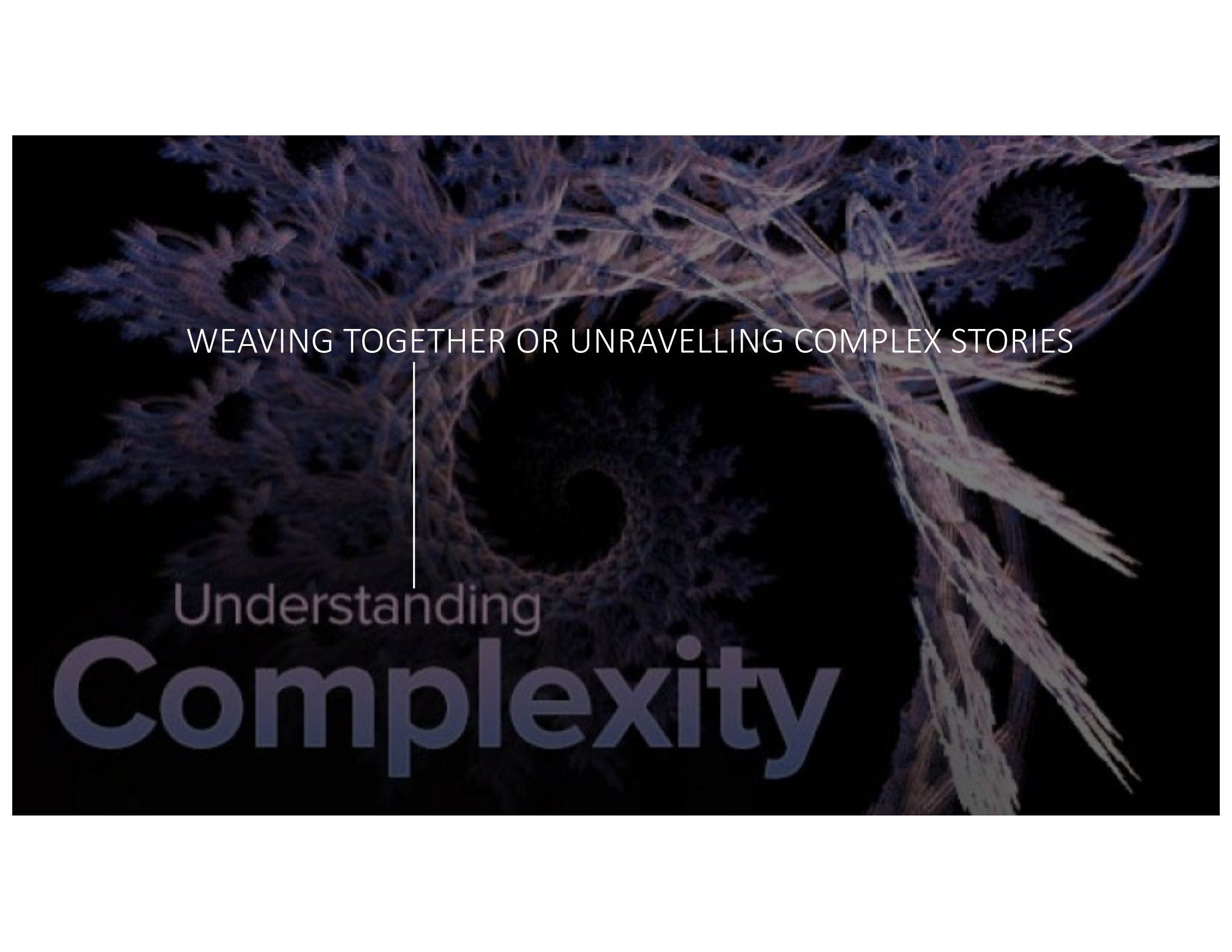
- Identify *socio*-ecological relationships using SWFL as a living laboratory.
- Analyze sustainability concepts and interactions from ecological, economic, and social perspectives.
- Connect principles of sustainability to your academic major, profession, and lifestyle choices.
- Reflect on your sense of place within the context of local, national, and global issues.

## LEARNING OBJECTIVES

- Identify the components (ecological, environmental, economic, societal) of sustainability
- Interpret the interactions between those components
- Relate the value of sustainable practices to your major/career and lifestyle
- Describe what sense of place means
- Explore ethical attachments to place

What does THINKING  
CREATIVELY mean in the  
context of sustainability?





WEAVING TOGETHER OR UNRAVELLING COMPLEX STORIES

Understanding

**Complexity**

At this point in history  
we cannot keep up  
with the rate of change

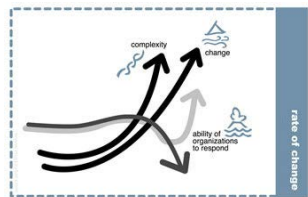
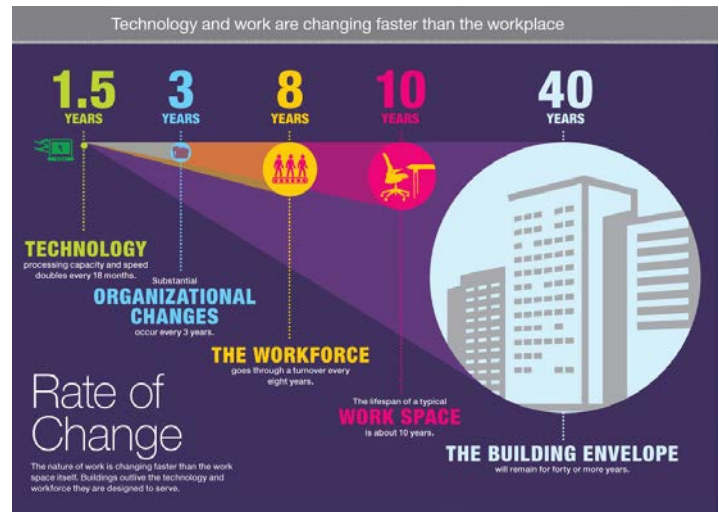
TECHNOLOGY  
ENVIRONMENT  
SOCIETY  
ECONOMICS  
CULTURE

**NOR ARE OUR APPROACHES  
DOING US MUCH GOOD**

INFRASTRUCTURE D+ / \$3 BILLION PHYSICAL INFRASTRUCTURE GAP



Getting faster and faster  
and faster and more  
and more complex and more  
and more volatile.



[www.infrastructurereportcard.org](http://www.infrastructurereportcard.org)



We need to change NOW to have the future we want  
(make marginal adjustments over time – BEGINNING NOW).

“Theory U” (MIT) posits that there is a huge disconnect between our present self and our future self, and it is this disconnect that creates the “results that nobody wants”.



**Fact:**

**YOU ARE NEVER  
GOING TO FEEL  
LIKE IT**



Yetzer demon  
Judaic mythology

# MICROCOSMS / MACROCOSMS

## “the relationships between personal decisions and premature deaths in the United States”

### NOW LEADING CAUSE OF DEATH

Ralph Keeney, Personal Decisions Are the Leading Cause of Death, OPERATIONS RESEARCH Vol. 56, No. 6, November–December 2008, pp. 1335–1347

SOME PEOPLE TACKLE THIS THROUGH ULYSSES PACTS – ALCOHOLICS/GAMBLERS, OTHERS WITH MEDICAL CONDITIONS

IT'S A FEAR-BASED, LEGALLY-BINDING APPROACH TO CONFRONTING FUTURES THAT ARE MORE TERRIFYING THAN THE CONSEQUENCES OF INACTION

***IS THAT USEFUL WHEN CONSIDERING APPROACHES THAT CONFRONT CLIMATE CHANGE?***



There is a distributional effect of  
justice over time.

That means you maximise so  
much at one moment that you  
completely take from the  
future – and the person that  
you take from in the future is  
yourself.

EAT DRINK AND BE MERRY  
FOR TOMORROW WE MAY DIE



There is a distributional effect of justice over time.

It's also true of our home planet. We are using so many resources now, that we are overshooting ecological capacity – and we have reached the point where many of us, particularly youth, are becoming more aware of the critical consequences of that plunder of the now at the expense of the future.

We maximize the moment because of our evolutionary psychology.



# UPDATING OUR SOCIAL OPERATING SYSTEM



The quality of results produced by a system depends on the *quality of awareness from which people in the system operate*.



In order for individuals, teams, organizations and large systems to build the essential leadership capacities needed to address the root causes of today's social, environmental, and spiritual challenges, we need to update our operating codes in our societal systems through shifts in consciousness to move from an ego-system to an *eco-system* awareness.



Social ecology posits that this matrix of interconnected systems relies on cultivating place-based “*fields of care*”.

## POSITIVE MESSAGES / POSITIVE REINFORCEMENT

INSTEAD OF USING WARNINGS, WE CAN USE 3 PRINCIPLES THAT DRIVE OUR MINDS AND BEHAVIORS

### 1. SOCIAL INCENTIVES

(SEE WHAT OTHERS ARE DOING, WE WANT TO DO IT BETTER)

Highlighting what other people are doing is a strong incentive

(but through cooperation rather than competition and consumption)

E.G. Paying taxes

### 2. IMMEDIATE REWARDS

(THE HERE AND NOW YOU - rather than rewards we get in the future)

REWARD PEOPLE NOW FOR FUTURE ACTIONS (but not through more over-consumption)

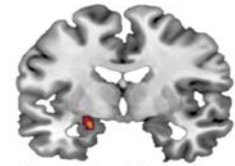
TO BRIDGE THE TEMPORAL GAP

E.G. Reducing energy bills

### 3. HIGHLIGHT PROGRESS RATHER THAN DECLINE

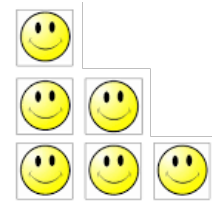
(PROGRESS MONITORING – risk that we understate the threat)

E.G. We've achieved X progress, but if we do a little better, we can achieve even more (XX progress)



*Response to opinion of others  
that leads to change*

Edelson, Sharot, Dolan & Dudai, 2011 - *Science*



*Average brain better at coding information  
about progress*

Sharot, Korn & Dolan, 2011 - *Nature Neuroscience*

## UPDATING OUR OPERATING SYSTEM

The quality of results produced by a system depends on the *quality of awareness from which people in the system operate.*

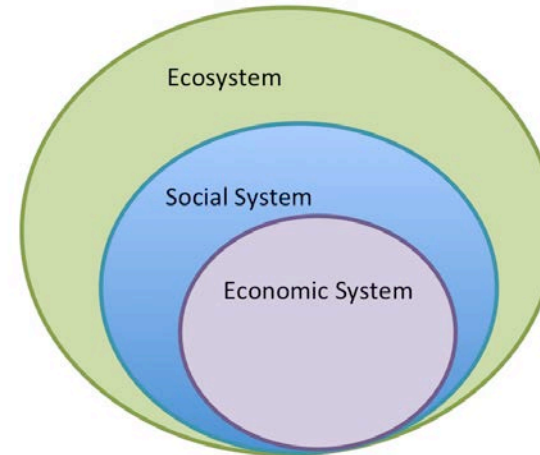
**Reformism & Social ecology**

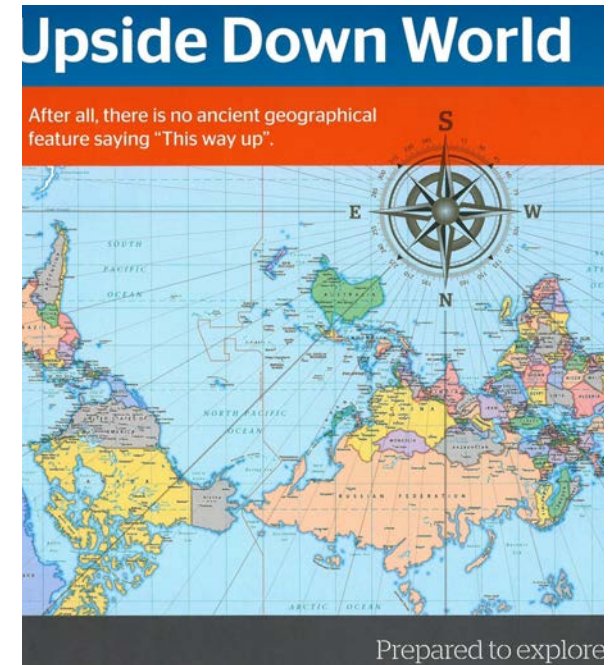


## REPOSITIONING THE TRIPLE BOTTOM LINE



Learn what works and what doesn't to create new contracts or paradigms that are fundamentally socio-ecological in nature and not economic.





**WORK LIKE A SOCCER TEAM - TOGETHER and INDIVIDUALLY**

### **FLIPPED CLASSROOM**

Prepare for productive class time by producing work prior to class. Be prepared to present, to discuss, to participate in a variety of ways.





THIS IS AN OPPORTUNITY  
TO BE CREATIVE

Shift to be an agent of your own meaning-making. Think like a biologist, a creative writer, a business person, or a sociologist—wherever your interests lie.

Practice and perform a variety of ways of thinking:

- think creatively about a text or concept (or several) by thinking metaphorically
- synthesize varied pieces of a complex concept
- articulate your thinking in new and self-authored ways
- synthesize and unify complex, multidimensional thinking
- clearly and effectively explain your ideas
- stretch beyond a typical mode of learning and challenge yourself to organize your thoughts in a new way.



Research

Writing

Media/Arts

Dialoguing

Prototyping

Presentation

PLAY

SOCIAL  
INNOVATION  
DESIGN



**This Canadian Artist Halted  
Pipeline Development by  
Copyrighting His Land as a  
Work of Art**

STRATEGY

---

INTERVENTION



**Peter von Tiesenhausen**  
**The land as artwork**  
2003-ongoing

Without the copyright, von Tiesenhausen would only be entitled to surface rights, meaning that he could still be forced by the provincial government to allow companies access to the land.

\$500 an hour to meet with oil co. execs





#### Monitor Bird Nests

Join NestWatch, a continent-wide project to monitor bird nests. The project was started by the Cornell Laboratory of Ornithology and the Smithsonian Migratory Bird Center.



#### Count Birds

Participate in the Great Backyard Bird Count, an annual event that gets bird watchers to count birds across the continent and then tallies the highest number of birds of each species seen together at one time.



Collecting data to analyse for the Global Lakes ecological Observatory Network



#### Observe Wildlife Anywhere

Photograph plants, animals, and other organisms on your own or as part of a BioBlitz. Use the iNaturalist app or iNaturalist.org to upload your observations and add them to a global database of biodiversity to support local to global research projects.



#### Measure Night-Sky Brightness

Join the Globe at Night program in documenting light pollution by submitting data based on the visibility of constellations.



#### Search Space

Want a chance to have an interstellar dust particle named after you? Help NASA by volunteering for Stardust@home and searching images for tiny interstellar dust impacts.



#### Celebrate Urban Birds

Observe birds in an urban neighborhood for the Celebrate Urban Birds project, and send the data to scientists at the Cornell Laboratory of Ornithology.



#### Collect Weather Data

Volunteer to join the Community Collaborative Rain, Hail, and Snow Network. The data you help collect will be used for weather forecasting and monitoring, severe weather alerts, and climate studies.



#### Observe Coral Bleaching

If you live in Hawaii, join Eyes of the Reef Network to help monitor and report on coral bleaching and disease and marine invasive species.

CITIZEN SCIENCE

ENGAGED EDUCATION

TECHNOLOGY

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CRITICAL  
REFLECTION



**Dirk Fleischmann, *myforestfarm***

## MAPPING

## COLLECTIVE ORGANIZATION



### Jeffery Warren, *Grassroots Mapping*

Warren's first *Grassroots Mapping* project in Lima, Peru, worked with Amazonian Indians living in the informal settlement of Cantagallo. Of Lima's eight million+ residents, 1.3 million homes have no access to water, electricity, garbage, or sewerage infrastructure systems.

**An annotative, locative media project using cameras attached to weather balloons.**

The work helped the community map their territory – the results were to be used in legal strategies to support land tenure rights and infrastructure improvements.

The idea morphed and now operates as Public Lab, which works on a lot of projects based in the Gulf of Mexico.

Public Lab Gulf Coast

Oil Testing Kit beta samples

Sensor Build

MapKnitter of PPigeon Lake Lery Restoration Project

Stormwater Workshop Series

Creosote Superfund site in north Picayune, MS



PAST INFORMS  
THE PRESENT  
AND INDICATES  
FUTURE

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VALUE OF  
CULTURAL  
ECOLOGIES

## Ancient Floridians knew how to cope with rising seas, archaeologists find



Archaeologists work on an ancient burial ground on an island near Cedar Key. &#65279;

### Archaeology of the future

Archaeologists consider such ongoing threats. With the UN IPCC warning that we have 12 years to avoid dire consequences, archaeologists recognize the importance of communicating their understandings of ancient landscapes and the threats that face particularly vulnerable populations. Archaeologists work in the present to understand the past, but also to speak to future crises. Archaeologist Ken Sassaman studies how ancient Indigenous peoples on the northern Gulf coast of Florida lived through 5,000 years of climate change. They navigated dramatic sea-level rises and shoreline retreats (at a rate of a football field every five years) by moving their ancestors (in what must have been an emotional event), shifting their diets, and signaling climate threats to future inhabitants.



# COMMUNITY ENGAGEMENT

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# SERVICES



**Nils Norman, Gerard Winstanley Radical Gardening Space  
Reclamation Mobile Field Center and Weather Station (2000)**

BIO-  
MONITORS

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KNOWLEDGE  
SYSTEMS



David Dunn, *The Sound of Light in Trees*

**Insects, Trees, and Climate:**

**The Bioacoustic Ecology of Deforestation and Entomogenic Climate Change**

**BARK BEETLES / PINYON PINES / FIRE PREDICTIONS**

ACT OF  
GATHERING  
COLLECTIVELY  
IN PUBLIC  
SPACE

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PROTEST OR  
DISRUPTION



**Lea Rekow & Dr. John Fogerty, *Where's Your Power*, 2009**

Participation from Earth Care International's Youth Allies, New Energy Economy, Santa Fe Critical Mass, United World College, UNM's Sustainability students, the Sierra Club, 350.org and hundreds of individuals.

WHERE'S YOUR ELECTRICITY COME FROM?

# What's the carbon footprint of your menu?

CALCULATING  
FOOTPRINTS

CALCULATING  
COSTS





# CONSUMPTION DE/GROWTH



Calculating a tree's use of carbon dioxide

Students take and count core samples from trees to calculate their age, then mathematically calculate how much carbon the tree pulls out of the atmosphere through photosynthesis.

INDIGENOUS  
&  
TRADITIONAL  
ECOLOGICAL  
KNOWLEDGES  

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COMMON  
HEALTH THRU  
RESTORATION  
ECOLOGY



# TRACEABILITY

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# TRANSPARENCY

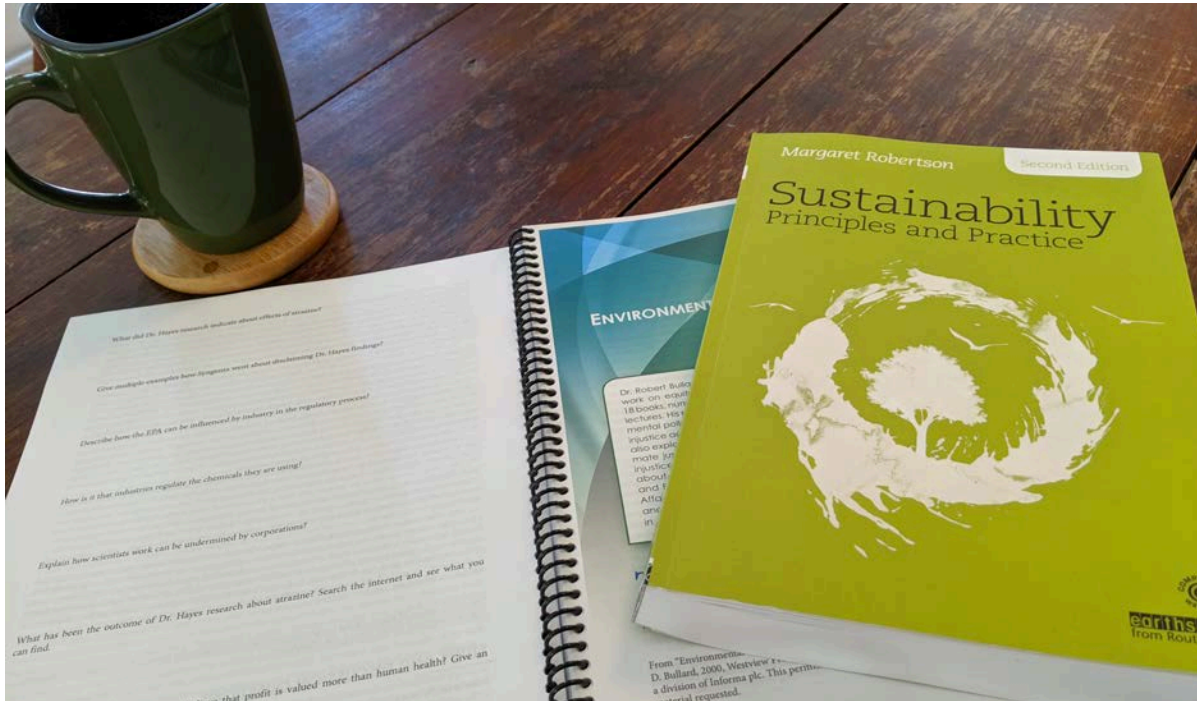


Christien Meindersma, *PIG 05049*



ILLUSTRATIONS BY CORNELIA *Hesse-Honegger*





Using the required readings to become informed about socio-environmental/sustainability issues

Ponder how we can  
**ACT ETHICALLY / WITHOUT HARM**

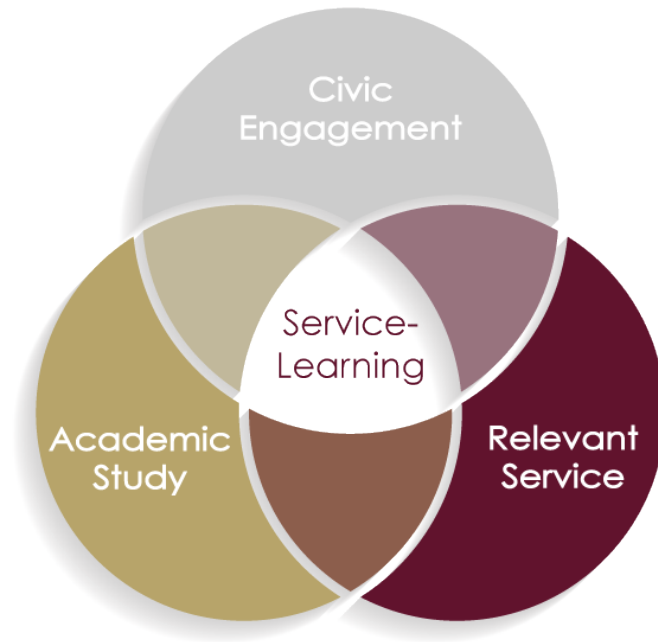
## Directed reading & writing

*Diagram your emerging knowledge frameworks, arguments, or narratives of personal understanding.*

Think of this process as knowledge mapping.

As your experience broadens,  
so does your frames of reference.





## **SERVICE-LEARNING PRESENTATION**

Learning about sustainability is, in large part, a civic education.

Map and engage with sustainability issues and initiatives in the community.

Design a poster/presentation for your community service-learning experience.

Service-learning project

LEARN THROUGH EXPERIENCE



We will see some of the region in which we are located as a *sustainability classroom*.

PLACE-BASED ENGAGEMENT

FIELD TRIPS

Tie your discipline-specific activity to sustainability research as it links to your field. Aim for multidisciplinary



College of Arts & Sciences



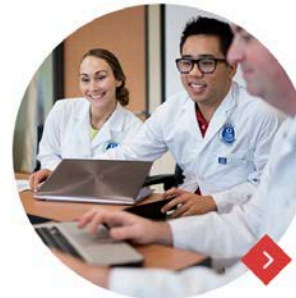
Lutgert College of Business



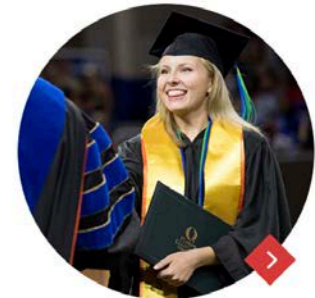
College of Education



U.A. Whitaker College of Engineering



Marieb College of Health & Human Services



Honors College

# Set an action intention

“Our **intention**  
creates  
our **reality.**”

DECIDE ON an INTENTION AND MAP YOUR PROGRESS  
(WITH OR WITHOUT SMILEY FACES)

Meatless Mondays

Walk or cycle Mondays

No plastic Mondays





# RESOURCES

- Repository for powerpoint resources
- Summary of assignments/homework/deadlines
- Required reading
- Assignments
  
- If you require a meeting, I will be available after class on non-field trip days immediately after class (1.15pm) by prior appointment made and confirmed by email communication at least 48 hours before scheduled class.
  
- I will not respond to emails on evenings, weekends, and when I am traveling.



## EXPECTATIONS

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NO EXTENSIONS OR LATE SUBMISSIONS

(9 out of 10 students have no problem producing and delivering work on time )

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INDIVIDUAL WRITING ASSIGNMENTS

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GROUP SERVICE-LEARNING ASSIGNMENT

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FEEL FREE TO TAKE PHOTOS AND NOTES ON FIELD TRIPS, AND DURING YOUR SERVICE LEARNING--HAVE FUN WITH THE PROCESS. NO RECORDING OF CLASSROOM LECTURES AS PER UNIVERSITY POLICY

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PARTICIPATE AS MUCH AS POSSIBLE--PREPARE YOUR WORK FOR YOUR CLASS BEFOREHAND AS A FOUNDATIONAL COMPONENT OF YOUR LEARNING EXPERIENCE

(remember we are working in an inverted classroom, so the work will be done outside of class so you can be prepared for class)

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NO PHONES OR SLEEPING IN CLASS OR DITCHING FIELD TRIPS



**15 week semester (classes) + 5 FIELD TRIPS (ONE ON CAMPUS) + 1 SERVICE-LEARNING PROJECT OF YOUR CHOICE**



Attendance is required, participation is mandatory, prior assignments given will be due in class. This is expected of you throughout the semester.



**YOU** are responsible for communicating with me when you need assistance or have other concerns.



A breakdown of grading/requirements, etc. is outlined in the online materials.



**TELL ME WHAT YOUR FIELD OF STUDY IS AND WHAT YOUR LIFE INTERESTS ARE, AND HOW THESE RELATE TO THE FIELD OF SUSTAINABILITY.**