



# Integrating Sustainability and Climate Change Content in your Course

May 31, 2022 – CTLT Spring Institute





# Agenda

1:00 pm - Welcome, acknowledgments and introductions

1:15 pm - Panel discussion: The importance of sustainability and climate education and the role of universities.

1:35 pm - Project presentations + Q&A

2: 00 pm - Small group discussion: What is it that we need to be doing as educators and what needs to happen at an institutional level at UBC? What is your next step?

2:25 pm - Wrap up - highlights and an invitation to action.





## The UBC Sustainability Hub

**Mission: Inspire people to act upon the planet's most urgent challenges through UBC's academic and operational sustainability leadership.**



- ✓ Connector, Curator and Facilitator
- ✓ We partner with other groups to help integrate sustainability themes into teaching, learning, research and international engagement.
- ✓ We support faculty through grants, connections, and resources.

# Introductions

Delanie Austin – 5<sup>th</sup> year student in a dual program of Integrated Sciences and First Nations and Indigenous Studies

Dr. Kerry Renwick – Faculty in the Department of Curriculum and Pedagogy

Dr. Silvia Bartolic – Faculty in the Department of Sociology

Dr. Maggie Low – Faculty in the School of Community and Regional Planning

Dr. Rob Kozak – Dean of the Faculty of Forestry



# Panel discussion questions

- Why is this work important to you?
- What is the role of universities when it comes to sustainability and climate education?



# Projects Presentations and Q + A

1. Dr. Maggie Low (SCARP) and Dr. Allison Earl (SALA)
  - **Urban Planning, Architecture and Indigenous Community Planning in the Context of Sustainability: An Interdisciplinary Curriculum for Education at UBC and Beyond**
2. Dr. Rob Kozak (Forestry) and Dr. Stephen Sheppard (Forest Resources Management)
  - **Climate Hacks in the Community: Developing an Interdisciplinary Field Course on Engaging Citizens in Local Climate Solutions**
3. Dr. Silvia Bartolic (Sociology) and Dr. Kerry Renwick (Curriculum and Pedagogy)
  - **Sustainable Living Through Family Contexts**



# SUSTAINABILITY EDUCATION AT UBC:

## What can we learn from participatory, urban and Indigenous planning?

Project team: Allison Earl, Maggie Low, Ildi Kovacs and Rob Vanwynsberghe



Integrating Sustainability  
and Climate Change  
Content Into Your Course

Centre for Teaching,  
Learning and Technology

May 31st, 2022

## PROJECT OVERVIEW



- Design and deliver four sustainability-oriented and interdisciplinary pilot modules for the Sustainability Cohort of the Teacher Education Program (Year 1)
- Enable teacher candidates by communicating the importance of participatory and democratic planning in education for sustainability (Year 1 and 2)
- Enhance and adapt modules for other UBC units/departments - School of Community and Regional Planning (SCARP), School of Architecture and Landscape Architecture and beyond (Year 2)



## MODULE DELIVERY

	2020/21 Winter Term 1	2020/21 Winter Term 2	2021/22 Winter Term 1	2021/22 Winter Term 2
<b>Participatory Planning with Children &amp; Youth</b>	EDST 401 ARCH 568  Online	DES 130  Online	EDST 401  In-person	LARC 525  In-person
<b>Indigenous Community Planning</b>	EDST 401  Online	DES 130  Online	EDST 401  Online	LARC 525  In-person
<b>Tactical Urbanism: Design Thinking &amp; Citizen Action</b>	EDST 401 ARCH 568  Online	DES 130  Online	EDST 401  Online	LARC 525  In-person
<b>Systems Thinking</b>	EDST 401  Online	DES 130  Online	EDST 401  In-person	LARC 525  In-person

EDST: Department of Educational Studies   ARCH: Architecture   LARC: Landscape Architecture   DES: Design

**LEARNING:**  
Same, same but  
different



## LEARNING: Adapting to student needs

YEAR 1

"I thought this lesson was really interesting. I loved seeing how children's voices were being incorporated in to city planning. We speak a lot about bringing students into nature to do place based teaching, but this lesson gave me many ideas of how to do that in a more urban landscape."

"Fantastic. I've learned a tremendous amount and have been able to make connections from urban planning to other areas of my learning and things I can use in future teaching practice."

YEAR 2

It was really cool to hear [about] planning and how kids are involved. I really think it is beneficial for all to have kids involved in the planning world. It also makes me think all the opportunities there are in the education realm.

I agree that youth should have a say in what goes on in the world around them, but I'm still personally unsure if they typically have enough context or experience to see how their choices affect the future as most adults don't even have that ability right now.

I felt a bit lost throughout the class as it didn't seem to all mesh well

While I found the content in and of itself interesting, and I understand how outside sources and systems will undoubtedly affect our students, I failed to see the connection to how this activity was applicable to us as educators.

Overall I found that this was the first lecture and PRPA that really connected with each other which I really appreciated.

LEARNING:  
Working  
Together!



USI Interdisciplinary Environmental Grant

# Climate Hacks in the Community

A Field Course on Community Engagement

**Stephen Sheppard & Rob Kozak**

**Elisa Kwun (Project Coordinator)**

Jorn Dettmer (Asst. Prof., Wood Products Processing)

Owen Croy (Adjunct Professor, Urban Forestry)

Jorma Neuvonen (Asst. Dean, Professional Education)

MAY 2022

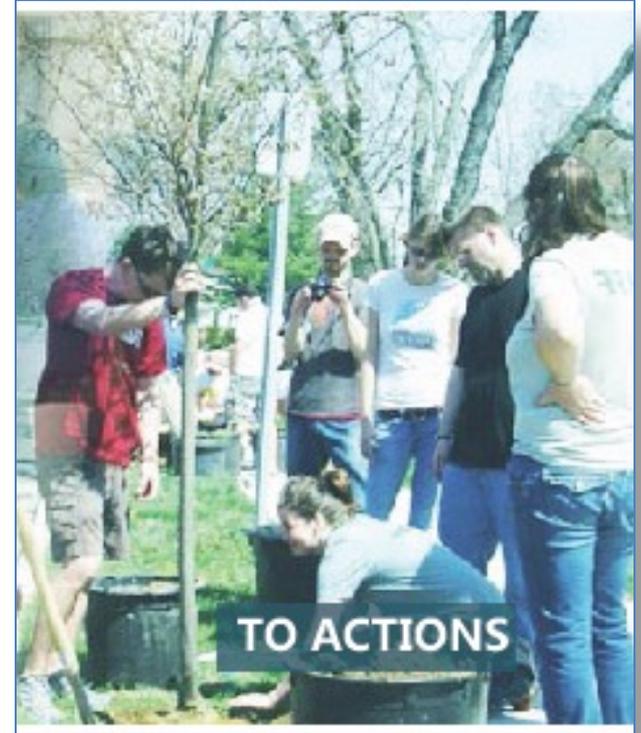


Shea Zwerver

# Project goal

To develop an interdisciplinary field course where Urban Forestry and Wood Products students work together with local residents and youth to design and install **“Climate Hacks”**

- **small climate action projects to tackle the climate emergency in their own neighbourhoods**



# Climate Hacks....



- **tree planting** (cooling, stormwater reduction, sequestration, other ecosystem services)
- **planter boxes** (local food, pollinators)
- **shaded benches** (cooling, gathering places)
- **simple shade structures/screens** (cooling, local food)
- **lawn conversion** (leaf litter retention, reduce fertilizer)
- **signage to identify local climate actions**

...using nature-based solutions  
for adaptation & mitigation...



# Experiential Learning Objectives:

- Developing skills in community engagement
- Appreciating the value of interdisciplinary collaboration
- Understanding how to implement climate action solutions
- Applying students' subject skills in the real world

*Students as agents of change  
in the community*



# Pilot Course Structure

3 credit: UFOR 449c/WOOD 449c

- Students work in **teams** of 4 (2 per program)
- Initial **workshops** for intensive learning
- **Fieldwork** to meet neighbourhood champions/residents, assess sites, see built precedents, co-develop plans, implement projects
- **Mentoring** by instructors & professionals in wood science & urban forestry
- **Final report** documenting the process and evaluating student/community outcomes



# Planned Timeline

**Phase 1:** Developing/preparing course package & partner arrangements, recruiting students (September 2021 – August 2022)

**Phase 2:** Delivering the pilot course (Mid-September 2022- end of March 2023)

**Phase 3:** Course Evaluation (April/May 2023)

**Phase 4:** Finalize course offering



# Progress to date:

- **Established course fit within programs** (via Program Directors)
- **Identified students for pilot:**
  - Worked with Program Directors to identify 8 interested students from both degree programs
  - 4 students signed up so far
- **Identified community partners:**
  - Participants from CALP's **Cool 'Hood Champs** program developing local climate action plans
  - Other community-based groups
- **Identified organizations to supply materials:**
  - **Vancouver Park Board** staff discussions on tree-planting stock and street-tree wood supply
  - **Unbuilders** discussions on recycled wood supply
- **Developed Syllabus**
  - Draft syllabus and schedule finalized





# Sustainable Living through Family Contexts

**Silvia Bartolic, Ph.D., Sociology, Faculty of Arts**  
**Kerry Renwick, Ph.D., Curriculum and Pedagogy, Faculty of  
Education**

USI Fellows

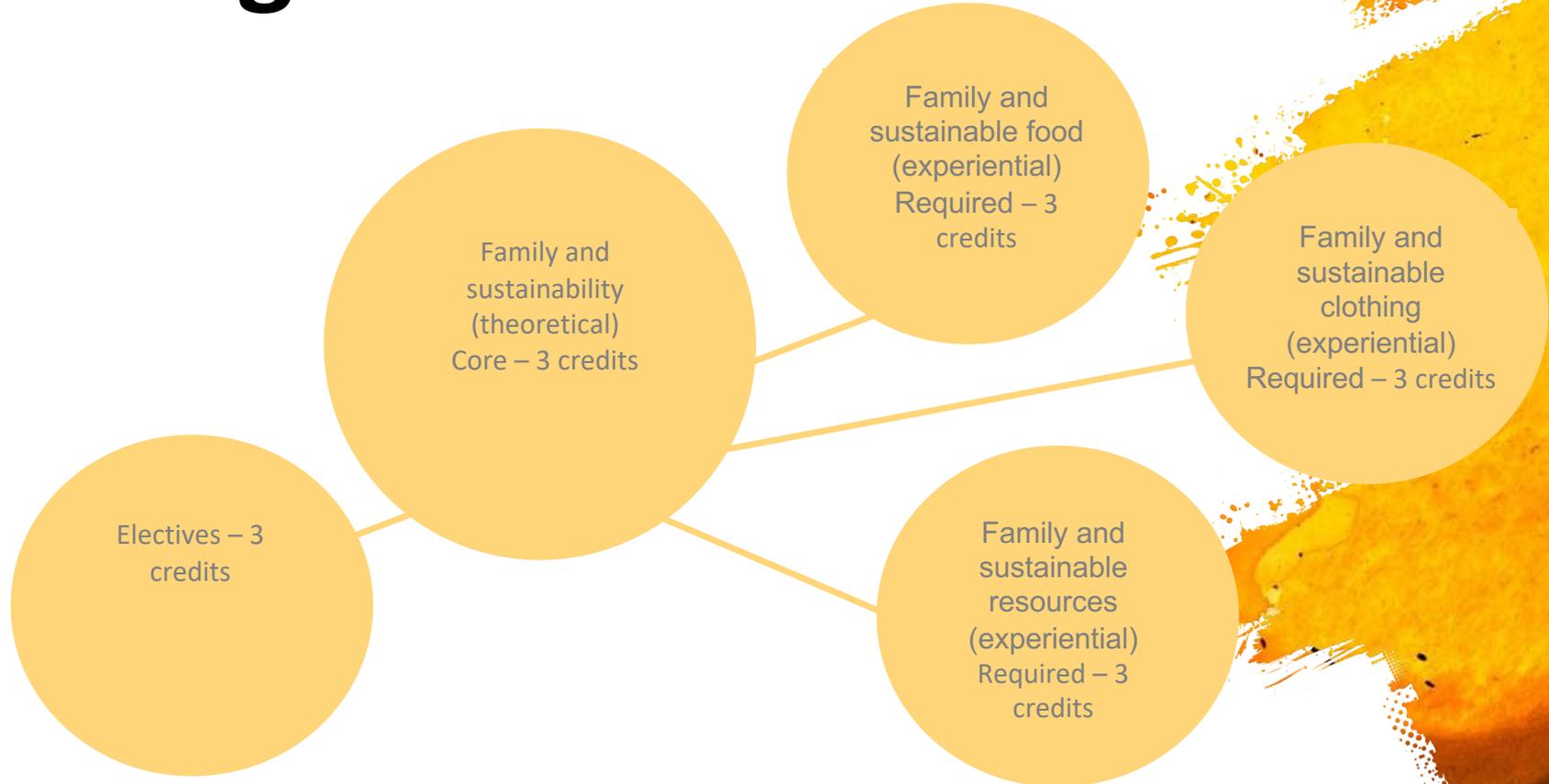


# *Purpose & Overview*

# Purpose

- To address a gap in sustainability education which focuses on the **practices and transmission of values** in every day living decisions that are made in the context of family
  - Families are a main socialization agent of its members
  - And are impacted by social norms and social policy
- To **build appreciation of sustainability** in the context of human ecology and everyday living that **contributes to sustainable practices** in their personal and professional lives

# Program Overview



## Program Objectives

1. Demonstrate and appreciate that all family-based actions have consequences within, between and among systems;
2. Participate in experiential learning as a way to inquire into complex ideas and issues of sustainability as they are experienced in the family context;
3. Establish connections between family-based practices associated with food and textiles and sustainable development;
4. Demonstrate knowledge of how home economics theory, practice and resource equity contribute to sustainability;
5. Appreciate that collaboration and engagement with families and their communities leads to enriched creative problem solving; and
6. Demonstrate empathy for others and the ability to weigh multiple perspectives.

## Course Objectives

### Family Sustainability:

1. Demonstrate how ecological theory can be used to understand the complexities of sustainable everyday living - how all family-based actions have consequences within, between and among systems;
2. Explore and critique factors that help and hinder sustainability in households;
3. Explain how both family practices as well as social structures influence family food, clothing and resource sustainability; and
4. Create a plan to increase sustainable practices in everyday living in their own households.

### Family and Sustainable Food:

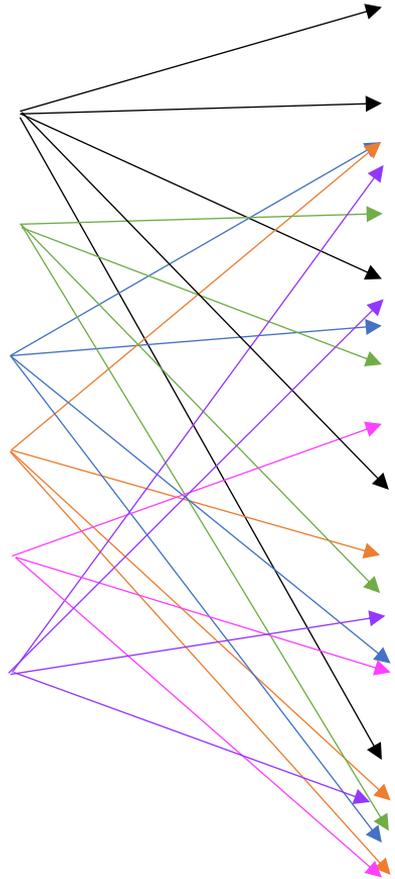
1. Describe how food, health and sustainability are intertwined;
2. Compare linear and circular food systems;
3. Apply a range of techniques and resources for sustainable food in everyday life; and
4. Adapt sustainable food consumption activities for a family context.

### Family and Sustainable Clothing:

1. Understand what ethical fashion, sustainable fashion, slow fashion, and greenwashing represent within the fashion industry;
2. Identify fashion industry examples of triple bottom line accounting;
3. Appraise a range of techniques and resources for sustainable textiles and clothing to be worn in everyday life circumstances; and
4. Design clothing through up-cycling and recycling processes applicable within a contemporary family context.

### Family and Sustainable Resources:

1. Describe family-based practices that produce and consume resources;
2. Compare resource consumption patterns based on social status and wealth;
3. Adapt a family-based resource activity with a focus on ecological and social sustainability.
4. Apply a range of techniques and resources for sustainable resource use in everyday life; and





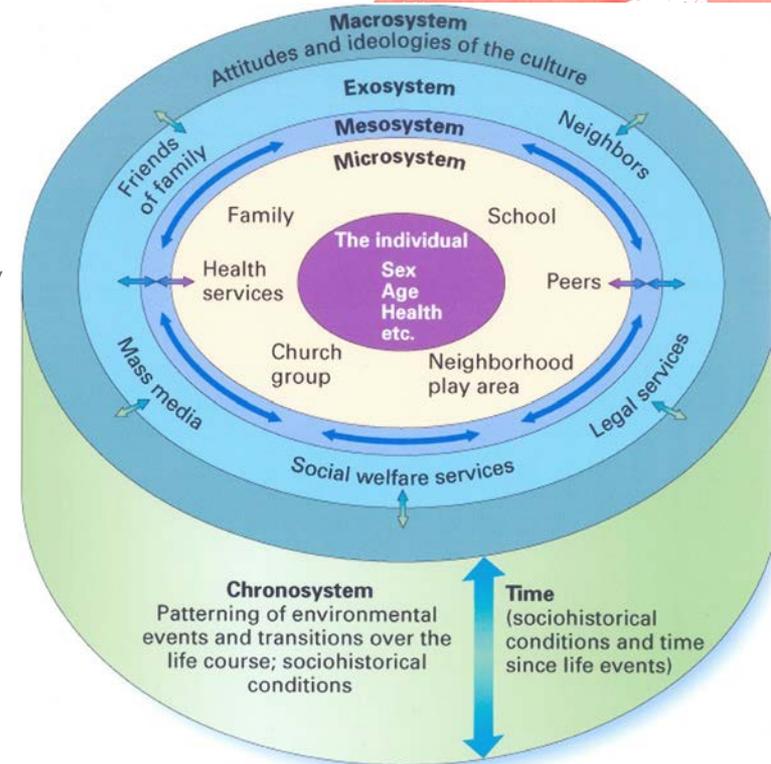
*Sample  
Assessments*

# Multimodal Project

Using Bronfenbrenner's ecological model, show how the family's consumption influences and is influenced by the nested ecosystems in which an individual/family develops and interacts.

Be sure to consider both the individual and population levels. You may choose to focus on the Canadian/North American context or select another region in the world. Focus in on a specific area of family consumption (e.g. food, clothing, etc.)

How do resources affect family choices?



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# Food Journal/Reflection

The production of food invariably creates waste in both linear and circular food production systems. A key component of a circular food systems is the management of waste. Within the household context food waster includes un-eaten food, food scraps and packaging.

- What food waste does my household create?
- Where does my food waste go?
- Create a timeline or mapping of the food waste journey from your household?
- Identify the processes for managing food waste at the household and wider community level.
- Consider what could your household do differently to create less/different food waste?
- Identify protocols for your household that could be implemented Immediately, in the next 6-12 months and in 2 years' time.
- What strategies would need to be implemented at each stage. Provide a justification for each stage and strategy.

# Fast Fashion Dilemma

Select one of the challenges associated with fast fashion:

- Human Rights Violations
- Chemical Pollution
- Textile Waste
- Complex Supply Chains
- Water Waste & Pollution
- Climate Change
- Rate of Consumption

Identify both solutions and challenges in finding to these issues?

- × What is one way you engage with fast fashion? What do you think you have this engage with
- × And provide a strategy that you could implement to move away from fast fashion in each

# Upcycle Challenge and Reflection

With your project group, create an upcycled object from discarded objects and materials (e.g. from your own homes, or from a restore, etc.).

The goal is to reuse the materials to create a product of higher quality than the original.

- Maximum spend is \$15 per group.
- Before and after photos are required.

Items will be put up for sale at a garage sale/auction with all proceeds going to the Downtown Eastside Women's Shelter (or other charity to be voted on by the class).

- For whom would this item be most useful?
- What have you learned from this experience that could inspire others to upcycle?

\* The group that creates the item that sells for the highest amount will receive a prize of ?? and will be showcased on the UBC Sociology and Education websites.



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# Small Group discussion

Guiding questions:

- What is it that we need to be doing as educators?
- What needs to happen at an institutional level at UBC (or generally at other Higher education institutions?)
- What will YOU be doing next?





## Group highlights / reflections

## Resources and What's coming up at [sustain.ubc.ca](https://sustain.ubc.ca)

- CTLT Session - Confronting Climate Distress: Climate Affect, Anxiety and Action - June 2
- Climate Education Grants and Sustainability Education Grants
- Climate Teaching Connector
- Sustainability and Climate Courses list September 22 – Event for faculty who share these interests, at CIRS
- Sign up to our newsletter to receive news on resources and opportunities





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**Sustainability Hub**

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