

# BUILDING A SUSTAINABILITY CAPSTONE

## **AGENDA:**

- (a) Overview
- (b) Project Objectives
- (c) Timeline
- (d) SCIE 220 - Eric Jandcui
- (e) Other Capstone Courses – models?  
ENVR 400 – Tara Ivanochko
- (f) Support and Considerations
- (g) What's Next?

# BUILDING A SUSTAINABILITY CAPSTONE

## COMMITTEE:

- **Andrew Riseman**, Applied Biology and Plant Breeding, Faculty of Land and Food Systems, **UBC Sustainability Initiative Teaching and Learning Fellow**
- **Eric Jandcui**, Strategist, Teaching and Learning Initiatives, Faculty of Science; FOS Sustainability Steering Committee
- **Gary Bradfield**, Department of Botany, Faculty of Science; FOS Sustainability Steering Committee; Former UBC Sustainability Initiative Teaching and Learning Fellow
- **Holly Schmidt**, Manager, Community-Based Experiential Learning
- **Ileana Costrus**, UBC Sustainability Initiative: Manager, Advising and Student Involvement; Former Biology Sustainability Pathway
- **Kai Chan**, Institute for Resources, Environment, and Sustainability; Canada Research Chair, Biodiversity & Ecosystem Services; FOS Sustainability Steering Committee
- **Loch Brown**, Geography: Environment and Sustainability, Faculty of Arts; UBC Sustainability Initiative Teaching and Learning Fellow
- **Nicholas Coops, (Jean Marcus)**, UBC Sustainability Initiative, Director of Teaching and Learning (Forestry)
- **Peter Nemetz**, , Strategy and Business Economics Division, Faculty of Commerce; Former UBC Sustainability Initiative Teaching and Learning Fellow
- **Rob DeWreede**, Associate Dean of Science; FOS Sustainability Steering Committee
- **Shona Ellis**, Associate Head of Biology, Faculty of Science; FOS Sustainability Steering Committee
- **Susan Grossman**, Director, UBC-Community Learning Initiative
- **Susan Nesbit**, Civil Engineering, Faculty of Applied Science; Former UBC Sustainability Initiative Teaching and Learning Fellow
- **Tara Ivanochko**, Director Environmental Sciences, Earth, Ocean and Atmospheric Science, Faculty of Science; FOS Sustainability Steering Committee; UBC Sustainability Initiative Teaching and Learning Fellow

# BUILDING A SUSTAINABILITY CAPSTONE

## COMMITTEE:

- **Andrew Riseman**, Applied Biology and Plant Breeding, **Faculty of Land and Food Systems**, **UBC Sustainability Initiative Teaching and Learning Fellow**
- **Eric Jandcui**, Strategist, Teaching and Learning Initiatives, **Faculty of Science**; FOS Sustainability Steering Committee
- **Gary Bradfield**, Department of Botany, **Faculty of Science**; FOS Sustainability Steering Committee; **Former UBC Sustainability Initiative Teaching and Learning Fellow**
- **Holly Schmidt**, Manager, **Community-Based Experiential Learning**
- **Ileana Costrus**, **UBC Sustainability Initiative**: Manager, Advising and Student Involvement; Former Biology Sustainability Pathway
- **Kai Chan**, **Institute for Resources, Environment, and Sustainability**; Canada Research Chair, Biodiversity & Ecosystem Services; FOS Sustainability Steering Committee
- **Loch Brown**, Geography: Environment and Sustainability, **Faculty of Arts**; **UBC Sustainability Initiative Teaching and Learning Fellow**
- **Nicholas Coops, (Jean Marcus)**, **UBC Sustainability Initiative**, Director of Teaching and Learning (**Forestry**)
- **Peter Nemetz**, Strategy and Business Economics Division, **Faculty of Commerce**; IRES: **Former UBC Sustainability Initiative Teaching and Learning Fellow**
- **Rob DeWreede**, **Associate Dean of Science**; FOS Sustainability Steering Committee
- **Shona Ellis**, Associate Head of Biology, **Faculty of Science**; FOS Sustainability Steering Committee
- **Susan Grossman**, Director, **UBC-Community Learning Initiative**
- **Susan Nesbit**, Civil Engineering, **Faculty of Applied Science**; **Former UBC Sustainability Initiative Teaching and Learning Fellow**
- **Tara Ivanochko**, Director Environmental Sciences, Earth, Ocean and Atmospheric Science, **Faculty of Science**; FOS Sustainability Steering Committee; **UBC Sustainability Initiative Teaching and Learning Fellow**

# CAPSTONE: SCIE/ASIC 420

## Sustainability "Project"

Year 3-4

### BIOLOGY CORE:

*Examples of*

- BIOL 416 (Conservation)
- BIOL 420 (Marine Conservation and Sustainability)
- BIOL 4xx/ENVR 430 (Integrating Environmental Sustainability)

New  
Jan 2014

### REAL WORLD ELECTIVE:

#### ACTIVITY OPTIONS:

- SEEDS
- Community Service Learning (CSL)
- Co-op
- UBC Farm
- BIOL 448
- Go Global CSL

### SUSTAINABILITY ELECTIVES:

*Includes:*

- Arts
- Breadth
- Program Requirements
- Other faculties

SUSTAINABILITY CLUB

Year 2

BIOL 230

SCIE 220

Fundamentals of Sustainability

Offered  
January  
2014

Community  
space

Year 1

BIOL 140  
BIOL 112  
BIOL 121

SCIE 120

Topics in  
Sustainability Science

# CAPSTONE COURSE DEVELOPMENT

## Course Aims:

- (a) Culmination, Application, Reflective Experience, Different perspectives
- (b) Contribute to Community
- (c) Skill development: team building, collaboration, leadership, communication, critical thinking, analytical.....
- (d) System thinking, Awareness/Integration
- (e) Equip students to be agents of positive change
- (f) Career/Graduate School preparation



UBC's USI Teaching and Learning Office  
and 2010 TLO Fellows (qrs.ly/ah2d5zd)

# CAPSTONE COURSE DEVELOPMENT

**Student Learning Objectives:**

.....

# SUSTAINABILITY CONCENTRATION TIMELINE

## 2013W (potentially year 1):

- SCIE 220 – first offering January 2014
- Formalize Electives, Finalize structure of pathway
- Develop framework for Capstone course
- Curriculum forms for ENVR 430/BIOL 4xx?

## 2014W:

- Pilot Capstone as 448
- Curriculum forms (Concentration, Capstone, other courses?)

## 2015W:

- SCIE/ASIC 420 – September to April ?

# CAPSTONE: ASIC 420

## Sustainability “Project”

Year 3-4

**PROGRAM SPECIFIC CORE:**

**Fundamentals: 3xx**

**REAL WORLD ELECTIVE:**

**ACTIVITY OPTIONS:**

- SEEDS
- Community Service Learning (CSL)
- Co-op
- UBC Farm
- BIOL 448
- Go Global CSL

**SUSTAINABILITY ELECTIVES:**

**SUSTAINABILITY CLUB**

Year 2

APBI 100, ASIC 200, CONS 200/211, EOSC 217,  
GEOB 102/103, GEOG 211, SCIE(ASIC) 220

Year 1

Fundamentals of Sustainability



## CAPSTONE COURSE MODELS

- (a) Canada and US (summary/links on blog)
- (b) ENVR 400

**CAPSTONE: ASIC 420**  
Sustainability "Project"

Year 3-4

**PROGRAM SPECIFIC CORE:**

**Fundamentals: 3xx**

**REAL WORLD ELECTIVE:**

**ACTIVITY OPTIONS:**

- SEEDS
- Community Service Learning (CSL)
- Co-op
- UBC Farm
- BIOL 448
- Go Global CSL

**SUSTAINABILITY ELECTIVES:**

**SUSTAINABILITY CLUB**

Year 2

APBI 100, ASIC 200, CONS 200/211, EOSC 217,  
GEOB 102/103, GEOG 211, SCIE(ASIC) 220,

Year 1

Fundamentals of Sustainability

# WHAT NEXT?

## Questions to Ponder:

What background will students have coming into the course?

What other activities/courses support the capstone?

What support/resources do we need for course development and presentation?

Who will teach the course?

What challenges do we face?

.....

# WHAT NEXT?

## **Next Meeting?**

Every two weeks? Monthly?

## **Blog:**

1. Links to capstone courses from other universities
2. Biology/Sustainability Student Learning Objectives
3. Syllabi for foundational courses – please send me the names of foundational courses in your faculty if I missed them.
4. Melbourne’s “Developing Capstone Experiences” and summary (Holly Schmidt)

# WHAT NEXT?

## **First Steps:**

1. How could course fit into curricula in faculties outside of Science? Is there interest in collaboration on the Sustainability Concentration?
2. Capstone Outcomes/Student Learning Objectives (and background needed to support course) – subgroup develop draft.

## **Next Meeting:**

1. Report back on possible collaborations.
2. Potential additional committee members.
3. Discuss drafts of capstone outcomes and learning objectives.
4. Expected background of students taking course (intended audience).
5. What type of capstone experience would be the most effective learning approach?
6. Suggestions for how to use CLI funds.
7. Discuss “Questions to Ponder”.