



— Haida Gwaii —  
**HIGHER EDUCATION SOCIETY**

## Conservation Ecology

HGSE 358

**\*\* THIS IS A SAMPLE SYLLABUS, GUESTS, FIELD TRIPS AND OTHER COURSE DETAILS MAY VARY FROM YEAR TO YEAR. Contact HGHE for more details.**

Instructor:	Dr. Dan McCarthy
Credits:	3

### Course Description:

As human beings in an interconnected world, we face a number of complex and seemingly intractable problems including such things as climate change, food security, global poverty and pandemic diseases. Understanding how to address such problems is the first step to solving them. Ultimately we need to foster social and ecological resilience. Resilience is the ability of a linked social and ecological system to respond to stress and build the adaptive capacity of individuals and groups to respond to stress.

This course provides an opportunity to learn and apply conceptual tools in the context of a real case study of fostering social change and building adaptive capacity through interactions with groups/agencies on Haida Gwaii. Students are provided with an introduction to the conceptual tools of systems thinking and resilience that help understand the dynamics of social change and social innovation. These tools will then be used by students, in a team setting, in real case studies fostering social change and building adaptive capacity with groups/agencies on Haida Gwaii.

### Course Objectives:

By the end of this course, students will be able to:

- Through readings and daily discussions, this course is intended to introduce students participating in the Haida Gwaii Semester to, and collaboratively explore:
  - different approaches that have been taken to describe, analyze and intervene in complex systems – that is, an ecosystem approach to problem solving in complex social---ecological systems and;
  - how these can be applied to issues of resilience and sustainability of linked social and ecological systems, including development of social innovations for adaptive management responses to these issues
  
- Apply these tools in a team setting, in a real case study of fostering social change



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and building adaptive capacity with groups/agencies on Haida Gwaii.

### Course Organization:

Project-based, team-oriented, course

- Lectures/seminar discussions will provide students with an introduction to, and (opportunity to explore, a suite of systems---based conceptual tools (systems, resilience and social innovation) that will be applied in the context of a real case study
- Students will work in a team, with Prof. McCarthy and representatives from groups/agencies on Haida Gwaii on real---world project of fostering social change and building adaptive capacity

### Course Evaluation:

**Reflective Paper: 40%** <sup>[L]</sup><sub>[SEP]</sub>

As part of the structure of the course, students will be required to reflect on concepts discussed in a daily written reflection. This enables students to track their learning and understanding of concepts and forms the basis for a final reflective paper. Students will use the final reflective paper to demonstrate their understanding of the concepts in relation to the lecture material but especially the relevant literature and reflect on these concepts as they have changed their understanding of linked social---ecological systems and especially as students attempt to apply them in the case---based, group research project. <sup>[L]</sup><sub>[SEP]</sub>A good final reflective paper will:

- Clearly define and discuss at least four relevant concepts from the course (ex. self-organization, attractors, the adaptive cycle, transition management) using the relevant literature (i.e. course readings and other relevant readings identified by the student).
- Provide clear, concise reflections on these concepts and how they have enabled the student to better understand the structure and dynamics of linked social---ecological systems.
- Reflect on the use of these concepts in your learning within the course and especially in the context of your case---based, group project.



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**Research Report: 40%**

- Developed in collaboration with case study stakeholders, the report should make a relevant contribution to the work of the stakeholders. The report should be relatively brief (10-15 pages), to serve the purposes of the stakeholders but should be grounded in the relevant literature and may also have appendices for relevant data.
- **Presentation: 10% of the Research Report mark** will be your participation in, and contribution to, a **final group presentation** at the end of the module to the rest of the class and hopefully the relevant stakeholders.

**Participation: 20%**

- As this is a small-group, project course, attendance and participation in discussions is crucial. This mark will be based on: your contribution to your group's project; your ability to work successfully in a group-setting; your ability to work with the relevant stakeholders in a constructive and respectful manner; and, your demonstrated comprehension of the readings and input during class discussions.

**Assigned Readings:**

Week	Theme	Readings
One	Systems and complexity	<ul style="list-style-type: none"><li>• Course syllabus and begin to read ahead to days 2 and 3</li><li>• Ecosystem Approach - Chapter 1</li><li>• Giampietro (2004) Chapter 1 - The Crash of Reductionism</li><li>• McCarthy et al. (2011) – Social Justice and the Victor Diamond Mine EA process</li><li>• Takeda &amp; Ropke (2011) – Power and Contestation</li><li>• Spend AT LEAST 30min exploring <a href="http://indigenousfoundations.arts.ubc.ca">http://indigenousfoundations.arts.ubc.ca</a></li><li>• Nadasdy (2006) – The Case of the Missing Sheep</li><li>• Little Bear (2000) – Jagged Worldviews Collide</li><li>• Ecosystems Approach – Chapter 2</li></ul>



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		<ul style="list-style-type: none"> <li>• Ecosystems Approach – Chapters 4 &amp; 6</li> <li>• Ecosystems Approach – Chapter 7</li> <li>• Bella (1994) – Burden of Proof</li> <li>• OPTIONAL – Ulanowicz – 1997 – Ascendency</li> <li>• OPTIONAL – Midgley – 2000 – Systemic intervention (only for the very keen)</li> </ul>
Two	Frameworks and tools for addressing complexity in social-ecological systems	<ul style="list-style-type: none"> <li>• *Gibson (2006) – Sustainability Assessment</li> <li>• Folke (2006) – Resilience socio-ecological</li> <li>• Holling (2001) – Panarchy or complexity</li> <li>• Ecosystems Approach – 10, 14 &amp; 29</li> <li>• Your choice of one of the following: Gibson – 2006 – Mackenzie or Gibson – 2006 – Voisey’s Bay</li> <li>• Geels &amp; Schot (2007) – Typology of Socio-technical Transition Pathways</li> <li>• Westley et al. (2011) – Tipping Towards Sustainability</li> </ul>
Three	Fostering systems change	<ul style="list-style-type: none"> <li>• SIG (2010) – Great Bear Rainforest story</li> <li>• Westley et al. (2007) – Standing Still</li> <li>• Westley et al. (2007) – The Powerful Strangers</li> </ul>

**Course Schedule:**

*Please remember that our schedules are fluid and subject to change*

Week 1	9-12	1-4
Monday	<b>Lecture:</b> Course overview Introduction to complexity and systems thinking	<b>Field trip:</b> Gore Brook trail for ‘lenses exercise’
Tuesday	<b>Lecture:</b> Describing systems: Perspectives and purpose	<b>Guest Lecture:</b> Cooperative management in complex environments with the Archipelago Management Board (AMB)
Wednesday	<b>Lecture:</b> Describing systems: Critical Systems Thinking, Transdisciplinarity, and	<b>Guest Lecture:</b> Representative of the Haida



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	Boundary Judgment	<b>Field trip:</b> Skidegate Haida Immersion Program (SHIP)  <b>Evening:</b> Movie night
Thursday	<b>Lecture:</b> Describing systems: Causal flows and feedbacks	<b>In-Class Activity:</b> System mapping with the Athlii Gwaii case study
Friday	<b>Lecture:</b> Seminar	Independent Study
<b>Week 2</b>		
Monday	<b>Lecture:</b> Resilience thinking and describing systems: tools for deeper understanding	<b>Guest Lecture</b>
Tuesday	<b>Lecture:</b> Sense of place; novel ecosystems	<b>Field trip:</b> Canoe blank near Juskatla
Wednesday	<b>Lecture:</b> The ecosystem approach and decision-making in complex systems	Flex time
Thursday	<b>Lecture:</b> Reconciliation and Indigenous methodologies	<b>Guest Lecture</b>
Friday	<b>Lecture:</b> Seminar	Independent Study
<b>Week 3</b>		
Monday	<b>Lecture:</b> Social innovation and transition management	In-class working session
Tuesday	<b>Lecture:</b> Synthesis and integration	In-class working session
Wednesday	<b>Lecture:</b> TBD	<b>Guest Lecture</b>  <b>Evening:</b> Speakers Series
Thursday	Practice Presentations	Final Presentations
Friday	Seminar	Independent Study