

Incorporating traditional Indigenous knowledge in Integrated Sciences sustainability courses

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Overview & Objectives

Although Indigenous communities play a large role in sustainability issues that have impacted or are impacting regions studied in ISCI sustainability courses, the knowledge and perspectives of these communities have not been reflected in the curriculum.

This project strengthens three highly interdisciplinary and experiential courses (ISCI 360, 361, 461) by enhancing engagement with Indigenous community leaders and incorporating an Indigenous lens in explorations of sustainability.

For students enrolled in the courses, the project provides an experiential platform to engage with and learn from Indigenous leaders. Students will be able to visit regional sites of interest and/or participate in case studies that represent a unique perspective on sustainability, and to reflect on these perspectives when considering a more holistic, systems thinking approach to sustainability challenges.

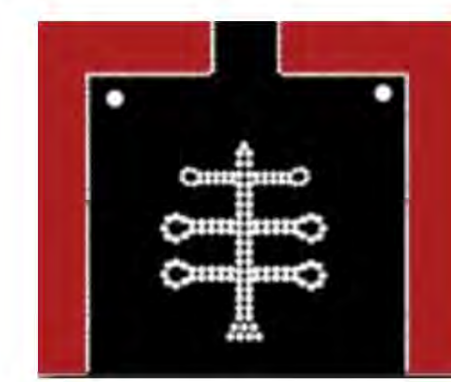


Fig 1. Students in ISCI 361 learning about Hawai'i's Indigenous ceremonies, sacred sites, and relationship with the land and its flora and fauna at Pu'uhonua o Honaunau National Historic Park, Big Island, HI

ISCI 360: Systems Approaches to Regional Sustainability

An Indigenous curriculum component was developed for ISCI 360.

Allen Edzerza from the T'Logodena Wolf Clan, elder of the Tahltan First Nation shared his expertise on sustainable mining practices in support of critical salmon fisheries in BC and his expanding involvement with sustainable resource extraction in Canada and globally.



Guiding Principles

- **Respect is Paramount**
Respect for ourselves, each other, the land and environment is a core value passed on by our ancestors.
- **Water is Sacred**
As part of our life-blood, water is a sacred and precious resource, and must be protected and respected.
- **Balance must be Maintained**
Balance must be maintained with our land and all our relations now and for future generations.
Sharing is an important principle of our culture, including the sharing of the land and the benefits derived from the land.

Fig 2. Example slide from Tahltan elder, Allen Edzerza's, guest lecture in ISCI 360

At the Museum of Anthropology, ISCI 360 students explored the cultures and traditions of Indigenous peoples in BC in the context of sustainable practices and working collaboratively with the environment.

Work in Progress

- We are continuing to build relationships with Indigenous leaders working in areas related to regional sustainability.
- We are working to connect Indigenous sustainability issues to course material and pedagogical goals through, for example, inclusion of Indigenous texts and ways of knowing
- We are examining course surveys and learning assessments to evaluate the overall impact of the project.

ISCI 361/461: Hawaii Field Course

A one day module linking Indigenous issues to pre-existing course material was developed. We invited Indigenous leaders to participate in delivery of the module through an experiential community activity.

We connected with local representatives at Pu'uhonua o Honaunau and the Lyman museum to develop a one-day community engagement module with Hawaiian Indigenous leaders with a focus on topics in environmental sustainability. We offered the module during the course in February 2023.

Surveys showed that prior to the trip most students were either slightly familiar or not familiar at all with Indigenous history and culture of Hawaii.

All students indicated that the experiential component had a strong positive impact on their understanding of Indigenous Hawaiian culture and ways of knowing.

Work in Progress

- We are assessing the surveys and incorporating changes into the next offering of the course.
- We are considering further ways to expand Indigenous partnerships.
- We are creating a manual for new instructors teaching the course.

Preliminary Observations and Challenges

- Most students felt the course increased their knowledge of Indigenous Hawaiian culture and expressed that this content should be further emphasized in future courses
- We have been exploring ways to intentionally and respectfully balance or integrate Indigenous content with other material (e.g., a stand-alone module vs. regular discussion/reflection).

ISCI 361/461 Iceland Field Course

Through ongoing partnerships with academic and private industry professionals in Iceland, the project team has been exploring historical expertise on Vikings settlement in Iceland and Greenland and the comparative relationship between human settlement, colonial impacts, and the environment in these regions.

The team is working with Dr. Timothy Bourns, an expert on medieval Icelandic and Greenland folklore and the environmental impact of settlement in these regions. Dr. Bourns has developed two modules on the history of Icelandic settlement and its impact on the environment for the virtual ISCI 361 Iceland course that was offered in June 2022.

Work in Progress

- In collaboration with Dr. Timothy Bourns, we are developing a module exploring Viking settlement, colonization, and influence on sustainability in Iceland and Greenland.
- We will be examining pre-and post-course surveys and learning assessments to evaluate the module's learning and overall impact of the project.



Fig 3. National Park guide and Indigenous community representative, Kanani, educating about Hawaiian history and culture at Pu'uhonua o Honaunau National Historic Park, Big Island, HI

Acknowledgement

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