ISCI 361/461
HAWAII
INFORMATION BOOKLET

STUDY HAWAII
Learn about the Hawaiian system and its sustainability

TRAVEL
Visit a number of academic centres and national parks

ACTIVITIES
Active lava flows, Mauna Kea Observatory, and more
HAWAII FIELD COURSE: SYSTEMS APPROACHES TO REGIONAL SUSTAINABILITY
As argued in ISCI 360, to understand sustainability, we also need to understand unsustainability. We have deliberately adopted systems thinking as the approach for ISCI 361/461, using the logic that any region of the world needs to be understood as an integrated system before we can understand what will happen when that system is perturbed. Systems thinking as an approach to problem-solving argues that the component parts of a system can best be understood in the context of relationships with each other and with other systems, rather than in isolation. A scientific approach to examining the world that embraces systems thinking therefore demands that we consider landscapes, regions or whole continents as systems. In these systems, elements such as land, air, water, human societies, plants, and animals, interact in ways that influence the likelihood that the system will survive or perish.

This course is led by UBC faculty members Lee Groat and Denise Gabriel.
COURSE OUTLINE

In 2022W term 2 ISCI 361/461 will visit and examine the Big Island, Hawaii as a case study region of the world. The course consists of 3 parts:

1. Group research, project and presentation before the trip + required readings (about 3-4 class meetings — date and time will be determined based on schedules of students accepted into the course).

2. We will spend reading week in Hawaii (Feb 18–25, 2023), visiting a number of academic centres, national parks and sites of interest. We will consider input from multiple scientific (and some social science) disciplines to answer a range of questions about the Hawaiian system and its sustainability. How does the underlying geology of the Big Island affect its water systems and agriculture? What advantage do different sources of energy offer this small island? To what degree are these energy systems sustainable? How do the climate and geology of the Big Island affect its ecosystems and agriculture? What special advantages and challenges are unique to this area of the earth system? Some of the topics/activities: volcanism, active lava flows, green sand beach, black sand beach, sea turtles, whales, looking at the effects of tsunamis, snorkeling and reef geology, champagne pools, tropical ecosystem in Polulu valley, Mauna Kea Observatory, Vog, energy - geothermal, solar, wind farms, organic farming... and more.

3. Final Project.

COURSE GOALS

APPLICATION OF SYSTEMS THINKING

Gain hands-on experience in applying principles of systems thinking to scientific investigation of a selected region of the world.

GAIN RESEARCH EXPERIENCE

Gain field research experience through investigation of a local sustainability challenge as a team research project and present your findings to the group.

STUDY YOUR PASSION

Pursue selected Hawaiian sustainability topics of your own choice and compile notes on your observations, further research and learning in a course logbook.

CREATE CONNECTIONS

Build friendships and connections with your peers!
I AM INTERESTED IN SIGNING UP! WHAT ARE MY NEXT STEPS?

CHECK YOUR ELIGIBILITY AND PRE-REQUISITES

This course is open to students with third-year or higher standing in the Faculty of Sciences.

You will be selected based on personal and intellectual maturity and a demonstrated commitment to the learning theme and goals of the program.

LOOK AT FEES AND AWARDS

The cost of this course is approximately $2500 plus the value of a 3-credit tuition, flight and most meals. Note that all qualifying students will receive a $1,000 Go Global Award! Please contact a Global Seminar Advisor if you have questions about the program fee.

APPLY!

The application is available on the Go Global Group study website September 2022. Note that this group-study program will consist of 16 student participants so spaces are limited!

VISIT THE GO GLOBAL WEBPAGE FOR THE APPLICATION AND MORE INFORMATION:

HTTPS://GLOBAL.UBC.CA/GLOBAL-SEMINARS/HAWAII
WHAT TO EXPECT

ABOUT THE EXPERIENCE

We will be staying in a house on a large property on the Hilo side of the Island.

A typical day might include site visits to explore topics related to:

- volcanism, active lava flows, green sand beaches, black sand beaches
- sea turtles, whales, looking at the effects of tsunamis
- snorkeling and reef geology
- tropical ecosystem in Polulu Valley, Mauna Kea observatories
- Climate observatory on Mauna Loa
- Vog, energy - geothermal, solar, wind farms, organic farming
- Lots of walking, hiking, time outdoors.

HAVE QUESTIONS ABOUT THE COURSE?

E-MAIL INTSCI@SCIENCE.UBC.CA
"ISCI 361 is by far the most memorable course of my degree so far. Not only did we learn about the vast beauty of Hawaii, but we also got to experience firsthand what we had learned about. This involved walking through lava tubes to tasting fresh poke at the farmer’s market. It has truly changed the way I will approach future trips in my life and has encouraged me to research future travel destinations before visiting them! The instructors were extremely knowledgeable about the subject matter and came from a variety of backgrounds which provided us with a well-rounded education. They facilitated fun exercises which not only helped us learn so much more but also bond with our fellow classmates! Not only did I leave Hawaii with a large knowledge of volcanoes, island ecosystems and waste management but I was also lucky enough to leave with an amazing group of new friends!"

- Anonymous ISCI student
"ISCI 361 Hawaii was one of the most enriching courses in my UBC experience. I had the opportunity to learn not only from our knowledgeable instructors leading the course but also from passionate local curators, presenters and students who gave us an in-depth view on Hawaii’s sustainability initiatives and history. From learning about initiatives protecting the endangered Hawaiian monk seal to how shield volcanoes form the Hawaiian islands, I found myself marvelling at the experience of seeing everything in person. The learning opportunity was enriching in itself with the level of depth in this case study approach to sustainability, and what made the course even more special was the memories and new friendships. ISCI 361 Hawaii is definitely one of my favourite UBC experiences!"

- Anonymous ISCI student
WANT TO KNOW MORE?

VISIT GO GLOBAL:
WEBPAGE: HTTPS://GLOBAL.UBC.CA/GO-GLOBAL/INTERNATIONAL-EXPERIENCES/GLOBAL-SEMINARS

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