Hokkaido University Syllabus					
Course Title					
Inter-Graduate School Classes(Educational Program):One program for Global Goals					
Subtitle					
SDGs Field study: Arctic Exercise: Atmosphere, Oceans and Land Environment and Society（NJE3）					
Instructor (Institution)					
OHNISHI Fujio (Arctic Research Center)					
Other Instructors (Institution)					
OHNISHI Fujio (Arctic Research Center)					
Course Type				Open To Other Faculties / Schools	OK
Year	2026	Semester	1st Semester (Summer Term)	Course Number	101228
Type of Class	Seminar	Number of Credits	2	Year of Eligible Students	～
Eligible Department / Class				Other Information	
Numbering Code	IGS_NAS 5301				
Major Category Code	Major Category Title				
IGS_NAS	Inter-Graduate School Classes_Natural and Applied Sciences				
Level Code	Level				
5	Specialized Subjects (basics) in graduate level (Master's Course and Professional Course), Inter-Graduate School Classes				
Middle Category Code	Middle Category Title				
3					
Small Category Code	Small Category Title				
0					
Language Type					
Classes are in English.					
Course list by the instructor with practical experiences					

Key Words

Arctic Sciences, Ecology, Geocryology, Permafrost, ecosystems, Engineering, Political Economy

Course Objectives

Students gain an understanding of the Arctic environment, including the atmosphere, oceans, land surfaces and ecosystems, life and society in the Arctic, and the societies of indigenous peoples.

Course Goals

Students form groups and work in collaboration with members from different disciplines and cultural backgrounds to identify and solve problems through lectures, discussions and fieldwork.

Course Schedule

In collaboration with the University of Alaska Fairbanks (UAF), lectures, field exercises and group work will be conducted at the University of Alaska Fairbanks. Field exercises will include field surveys to experience and learn about greenhouse gas flux from boreal forest underlain by permafrost and glacier terminus, field trips to periglacial environment, permafrost tunnel and indigenous villages. For the group work and group presentations to showcase outcomes, students will be divided into groups of two to four members. Each group will discuss and analyse the insights and data gained through lectures and fieldwork, culminating in a presentation on the final day.

Through this practical training, the aim is to consider, across disciplines including natural sciences, engineering, humanities and social sciences, how global environmental change is affecting the environment and society in the Arctic region, and further, how the changes and impacts becoming apparent in the Arctic region will affect the environment and society on a global scale. The programme is primarily aimed at Master's students but will also include undergraduate fourth-year students (those taking advanced courses), doctoral students, postdoctoral researchers, and other early-career researchers.

Duration: Approximately two weeks in early September
Location: International Arctic Research Centre (IARC) at the University of Alaska Fairbanks (UAF) and fieldwork
Format: Hybrid of lectures, experiential learning and active learning

Pre-lectures to be held at the end of August

5 September: On-site meeting (Fairbanks, Alaska, the United States of America)
6 September: Orientation (including presentations on individual interests and preliminary research); Visit to the Museum of the North
7 September: Lectures; Excursion to the Fox Tunnel (permafrost) and the Trans-Alaska Pipeline System (TAPS)
8,9,10 September: Field survey at UAF's Porker Flat Research Range (see: https://www.pfrr.alaska.edu/content/welcome-poker-flat)
11 September: Lecture; River Boat tour (visit to indigenous village)
12 September: Day off
13,14 September: Visit to Denali National Park and Preserve or Castner Glacier
15 September: Group discussion
16 September: Group presentations
17 September: On-site dismissal
*The schedule is subject to change. Please attend the orientation to obtain updated schedules.

Homework

Read the text and deepen your understanding of Alaska as the field of this field study. Consult the designated reading material to identify an Arctic issue you wish to explore independently and conduct preliminary research into its causes and background. Setting a research topic linked to the fieldwork will prove effective. Each participant is expected to give a presentation on their preliminary research during the orientation session on the first day (approximately 5 minutes per person).

Grading System

The evaluation of this course will be based on attendance, participation in group discussions, and group presentations.

Practical experience and utilization for classes

Condition of tasking the subject

Textbooks

アラスカ物語 / 新田次郎 : 新潮文庫

Reading List

北極域の研究-その現状と将来構想 / 北極環境研究コンソーシアム : 海文堂出版, 2024

Websites

Website of Laboratory

https://www.arc.hokudai.ac.jp/en/

Additional Information

Update

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Class Method

face to face