SYLLABUS: EARTHSCI 5797.20

EXPLORING ENVIRONMENTAL AND HUMAN HEALTH ISSUES IN JAPAN

MAY 2024 (3 CREDIT)

Course overview

Instructor
Instructor: Motomu Ibaraki
Message: Carmen Inbox – instructor (no email messages will be accepted)
Phone number: 614-292-7528
Office: ML 0229
Office hours – online/in-person and appointment based
Please access https://ibaraki.appointlet.com/ to book an appointment
(online): Carmen zoom https://osu.zoom.us/j/3229963946 (Passcode: cYRD1m)

Host Institution Directors
Prof. Satoko Izumi Barton, School of Integrated Health Sciences, Faculty of Medicine, The University of Tokyo
Prof. Kensuke Taira, School of Veterinary Medicine, Azabu University, Japan
Location: University of Tokyo and Azabu University, Japan

Health and Safety Requirements
All students, faculty and staff are required to comply with and stay up to date on all university safety and health guidance (https://safeandhealthy.osu.edu), which includes following
university mask policies and maintaining a safe physical distance at all times. Non-compliance will be warned first and disciplinary actions will be taken for repeated offenses.” (Updated: Aug. 14, 2020)

Course Description
This course aims to cultivate a comprehensive understanding of the interplay between environmental earth science and society, with a special emphasis on human health issues in Japan. The rationale for offering this course lies in the recognition that the environment exerts a profound influence on both society and human health outcomes. Acquiring a deep understanding of the scientific concepts underpinning environmental earth science is indispensable for effectively addressing the unique challenges encountered by individuals and communities. Environmental Earth Sciences, as described here, is an interdisciplinary field of study that focuses on understanding the Earth's environment and its interactions with human activities. It combines elements of geology, hydrology, biology, environmental engineering, and chemistry to address various environmental issues and challenges. By delving into this interdisciplinary field, students can gain the knowledge and insights necessary to navigate and mitigate the complex dynamics between the environment, society, and human health specifically within the context of Japan.

Course Description for the Catalog
A basic introduction to environmental earth science concepts and practice, and discusses links among environment, human health, and socioeconomic developments with special emphasis on Japanese society.

Course Objectives
- Summarize key environmental earth science concepts linked with society, in particular, human health issues such as environmental contamination, water movement through hydrosphere, natural disaster events, the burden of disease impacted by contamination and natural disasters, and the impact of environmental conditions on individuals and communities.
- Explain the determinants of health and environmental earth science risk factors.
- Compare and discuss the burden of disease in Japan caused by environmental contamination and the atomic bomb in Hiroshima.
- Identify applicable examples addressing issue of health and equity affected by natural disasters such as floods, earthquakes, and tsunamis.
- Discuss contemporary Japanese society, culture, history, environmental and human health issues in Japan.
- Establish links between environmental, human health, cultural, political, and socioeconomic factors with special emphasis on Japan.
Prerequisites:
Completion of GE Foundation Writing and Information Literacy GE category course; good academic standing (Minimum GPA Requirement - 2.0); completion of 4 semesters (2 academic years) of undergraduate education or graduate standing.

Student Responsibilities:
All students are expected to participate on a regular and consistent basis, and to be responsive and respectful team members.

Course Materials
A textbook is not required for the class. Literature readings and website information will be provided.

Course Technology
For help with your password, university e-mail, Carmen, or any other technology issues, questions, or requests, contact the OSU IT Service Desk. Standard support hours are available at [https://ocio.osu.edu/help/hours](https://ocio.osu.edu/help/hours), and support for urgent issues is available 24x7.

- Self-Service and Chat support: [http://ocio.osu.edu/selfservice](http://ocio.osu.edu/selfservice)
- Phone: 614-688-HELP (4357)
- Email: 8help@osu.edu
- TDD: 614-688-8743

Baseline technical skills necessary for online courses
- Basic computer and web-browsing skills
- Navigating Carmen: for questions about a specific functionality, see the [Canvas Student Guide](https://canvas.osu.edu).

Technology skills necessary for this specific course
- Carmen Zoom text, audio, and video chat
- Recording a slide presentation with audio narration
- Recording, editing, and uploading video

Necessary equipment
- Computer: current Mac (OS X) or PC (Windows 7+) with high-speed internet connection
- Webcam: built-in or external webcam, fully installed
- Microphone: built-in laptop or tablet mic or external microphone
• Other: a mobile device (smartphone or tablet) or landline to use for BuckeyePass authentication

Necessary software
• **Microsoft Office 365 ProPlus** All Ohio State students are now eligible for free Microsoft Office 365 ProPlus through Microsoft’s Student Advantage program. Each student can install Office on five PCs or Macs, five tablets (Windows, iPad® and Android™) and five phones.
  o Students are able to access Word, Excel, PowerPoint, Outlook and other programs, depending on platform. Users will also receive 1 TB of OneDrive for Business storage.
  o Office 365 is installed within your BuckeyeMail account. Full instructions for downloading and installation can be found [https://ocio.osu.edu/kb04733](https://ocio.osu.edu/kb04733).

Carmen access
• You will need to use **BuckeyePass** multi-factor authentication to access your courses in Carmen. To ensure that you are able to connect to Carmen at all times, it is recommended that you take the following steps:
  o Register multiple devices in case something happens to your primary device. Visit the [BuckeyePass - Adding a Device](https://icio.osu.edu/kb04733) help article for step-by-step instructions.
  o Request passcodes to keep as a backup authentication option. When you see the Duo login screen on your computer, click “Enter a Passcode” and then click the Send Text me new codes button that appears. This will text you ten passcodes good for 365 days that can each be used once.
  o Download the [Duo Mobile application](https://icio.osu.edu/kb04733) to all of your registered devices for the ability to generate one-time codes in the event that you lose cell, data, or Wi-Fi service.
• If none of these options will meet the needs of your situation, you can contact the IT Service Desk at 614-688-4357 (HELP) and the IT support staff will work out a solution with you.

Grading and faculty response

**Grades**

<table>
<thead>
<tr>
<th>Assignment or category</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Background Research Report (8-page report)</td>
<td>25</td>
</tr>
</tbody>
</table>
Topics for Background research report include:

- Itai-itai disease (the mass cadmium poisoning of Toyama Prefecture, Japan)
- Atomic bombing of Hiroshima
- Minamata disease (a neurological syndrome caused by severe mercury poisoning)
- The 2011 Great East Japan Earthquake and tsunami
- The tragic event at Okawa elementary school that was destroyed in the 2011 Great East Japan Earthquake and tsunami
- Fukushima nuclear disaster
- History of Japan
- Religion in Japan

Topics for group presentations include:

- The challenges of Japan's aging population: Lessons to be learned and applied to other countries
- Earthquake preparedness and health threats due to earthquakes in Japan
- Waste disposal methods in Japan: How do Japanese people treat waste? How does Japan manage its large population's waste with such a limited amount of space?
- The national health insurance system in Japan and its problems: Can we maintain the system while Japan faces a declining/aging population?
- Why are Japanese people so skinny?: Smaller amount of energy consumed or larger amounts of energy used/burned throughout the day?
• Water supply sources for Columbus and Tokyo, and potential threats from environmental contamination in Japan and the United States, and their associated human health risks

Groups will be assigned by the Carmen Canvas system.

Social Media Contributions:

We will utilize the u.osu.edu website as the social media platform.

The grading criteria for social media contributions include:

• Content Relevance - Evaluate the extent to which social media posts relate to the program's themes and learning objectives. (35%)
• Reflective Depth - Look for evidence of critical thinking and connections made between experiences and academic concepts (35%)
• Cultural Sensitivity - Evaluate the awareness and respect that students demonstrate for the host culture in their posts. (30%)

Because of limited time available for this 2.5-week study abroad program, we are not going to intensively compare and contrast environmental issues in Japan with the U.S. environmental issues.

No extra credit will be given and I do not curve grades. I will not respond to messages concerning extra credit or curving grades.

Late Submission Policies

All graded assignments are due on the specified due date. No emailed assignments will be accepted. All assignments turned in after the due date will incur a 10% penalty for each day late, up to a week late. After that no points will be awarded to the assignment. If a doctor’s excuse for illness or excuse for a university-sanctioned event is provided accommodations will be made. Make-up assignments and exams will not be given unless a valid excuse is provided. Late submissions due to technical issues/difficulties will not be accepted, so please plan ahead and prepare.

Grading Scale

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>100 to 93</td>
</tr>
<tr>
<td>A-</td>
<td>&lt; 93 to 90</td>
</tr>
<tr>
<td>B+</td>
<td>&lt; 90 to 87</td>
</tr>
<tr>
<td>B</td>
<td>&lt; 87 to 83</td>
</tr>
<tr>
<td>B-</td>
<td>&lt; 83 to 80</td>
</tr>
</tbody>
</table>
C+  < 80  to  77
C   < 77  to  73
C-  < 73  to  70
D+  < 70  to  67
D   < 67  to  60
E   < 60 to 0

No rounding will be applied

Faculty Feedback and Response Time
I am providing the following list to give you an idea of my intended availability throughout the course. (Remember that you can call 614-688-HELP at any time if you have a technical problem.)

Message (Carmen Conversation)
I will reply to messages within 24 hours on school days. I will not reply to emails.

Discussion and Communication Guidelines
The following are my expectations for how we should communicate as a class. Above all, please remember to be respectful and thoughtful.

- Writing style: While there is no need to participate in class discussions as if you were writing a research paper, you should remember to write using good grammar, spelling, and punctuation. Informality (including an occasional emoticon) is fine for non-academic topics.
- Tone and civility: Let's maintain a supportive learning community where everyone feels safe and where people can disagree amicably. Remember that sarcasm doesn't always come across online.
- Citing your sources: When we have academic discussions, please cite your sources to back up what you say. (For the textbook or other course materials, list at least the title and page numbers. For online sources, include a link.)
- Backing up your work: Consider composing your academic posts in a word processor, where you can save your work, and then copying into the Carmen discussion.
Other course policies

Academic Integrity Policy

Policies for this online course

- **Written assignments**: Your written assignments, including discussion posts, should be your own original work. In formal assignments, you should follow MLA style to cite the ideas and words of your research sources. You are encouraged to ask a trusted person to proofread your assignments before you turn them in—but no one should revise or rewrite your work. **Quoting a passage directly from one of your sources is NOT allowed in your assignments**. When using your sources please paraphrase instead. Assignments will be checked for plagiarism by Carmen.

- **Reusing past work**: In general, you are prohibited in university courses from turning in work from a past class to your current class, even if you modify it. If you want to build on past research or revisit a topic you've explored in previous courses, please discuss the situation with me.

- **Falsifying research or results**: All research you will conduct in this course is intended to be a learning experience; you should never feel tempted to make your results or your library research look more successful than it was.

- **Collaboration and informal peer-review**: The course includes many opportunities for formal collaboration with your classmates. While study groups and peer-review of major written projects is encouraged, remember that comparing answers on a quiz or assignment is not permitted. If you're unsure about a particular situation, please feel free just to ask ahead of time.

Ohio State’s academic integrity policy

Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the University’s *Code of Student Conduct*, and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the University’s *Code of Student Conduct* and this syllabus may constitute “Academic Misconduct.”

The Ohio State University’s *Code of Student Conduct* (Section 3335-23-04) defines academic misconduct as: “Any activity that tends to compromise the academic integrity of the University, or subvert the educational process.” Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the University’s *Code of Student Conduct* is never considered an “excuse” for academic misconduct,
so I recommend that you review the Code of Student Conduct and, specifically, the sections dealing with academic misconduct.

If I suspect that a student has committed academic misconduct in this course, I am obligated by University Rules to report my suspicions to the Committee on Academic Misconduct. If COAM determines that you have violated the University’s Code of Student Conduct (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the University.

If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.

Other sources of information on academic misconduct (integrity) to which you can refer include:

- The Committee on Academic Misconduct web pages (COAM Home)
- Ten Suggestions for Preserving Academic Integrity (Ten Suggestions)
- Eight Cardinal Rules of Academic Integrity (www.northwestern.edu/uacc/8cards.htm)

**Copyright Disclaimer**

The materials used in connection with this course may be subject to copyright protection and are only for the use of students officially enrolled in the course for the educational purposes associated with the course. Copyright law must be considered before copying, retaining, or disseminating materials outside of the course.

**Trigger Warning**

Some contents of this course may involve media that may be triggering to some students due to descriptions of and/or scenes depicting acts of violence, acts of war, or sexual violence and its aftermath. If needed, please take care of yourself while watching/reading this material (leaving classroom to take a water/bathroom break, debriefing with a friend, contacting a Sexual Violence Support Coordinator at 614-292-1111, or Counseling and Consultation Services at 614-292-5766, and contacting the instructor if needed). Expectations are that we all will be respectful of our classmates while consuming this media and that we will create a safe space for each other. Failure to show respect to each other may result in dismissal from the class.

**Statement on Title IX**

Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at http://titleix.osu.edu or by contacting the Ohio State Title IX Coordinator, Kellie Brennan, at titleix@osu.edu
Accessibility Accommodations for Students with Disabilities

The university strives to maintain a healthy and accessible environment to support student learning in and out of the classroom. If you anticipate or experience academic barriers based on your disability (including mental health, chronic, or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion.

If you are isolating while waiting for a COVID-19 test result, please let me know immediately. Those testing positive for COVID-19 should refer to the Safe and Healthy Buckeyes site for resources. Beyond five days of the required COVID-19 isolation period, I may rely on Student Life Disability Services to establish further reasonable accommodations. You can connect with them at slds@osu.edu; 614-292-3307; or slds.osu.edu.

Your Mental Health

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student’s ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing. If you or someone you know are suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life’s Counseling and Consultation Service (CCS) by visiting ccs.osu.edu or calling 614--292--5766. CCS is located on the 4th Floor of the Younkin Success Center and 10th Floor of Lincoln Tower. You can reach an on call counselor when CCS is closed at 614--292--5766 and 24 hour emergency help is also available 24/7 by dialing 988 to reach the Suicide and Crisis Lifeline.

Religious Accommodations

It is Ohio State’s policy to reasonably accommodate the sincerely held religious beliefs and practices of all students. The policy permits a student to be absent for up to three days each academic semester for reasons of faith or religious or spiritual belief.

Students planning to use religious beliefs or practices accommodations for course requirements must inform the instructor in writing no later than 14 days after the course begins. The instructor is then responsible for scheduling an alternative time and date for the course requirement, which may be before or after the original time and date of the course requirement. These alternative accommodations will remain confidential. It is the student's responsibility to ensure that all course assignments are completed.
Academic Support Services

Student Services
For other academic matters the Student Service Center http://ssc.osu.edu/ can help with a range of issues related to paying tuition and fees, track financial aid, register for classes, view your grades, get important updates and much more.

Student Academic Services
Undergraduate academic advising at Ohio State (Columbus campus) is provided by the colleges and/or the departments that offer the programs—the degree(s), the major(s), the minor(s)—a student is pursuing. Therefore, where a student should go to seek academic advice will vary by student and by academic program. The details of the student academic services offered on the OSU main campus can be found at http://advising.osu.edu

Course schedule (tentative)

Outline of Course Activities
The following is a chronological outline of course activities (lecture and site visits) from the 2023 trip.

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Location</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>05/09</td>
<td>National Olympics</td>
<td>National Olympics Memorial Youth Center (NYC),</td>
<td>The program starts</td>
</tr>
<tr>
<td>(Tue)</td>
<td>Memorial Youth Center @ 7:15pm</td>
<td>Tokyo</td>
<td></td>
</tr>
<tr>
<td>05/10</td>
<td>Orientation</td>
<td>NYC, Tokyo</td>
<td>Orientation for the program</td>
</tr>
<tr>
<td>(Wed)</td>
<td>University of Tokyo</td>
<td>University of Tokyo</td>
<td>Group presentations (1) to Univ. of Tokyo students</td>
</tr>
<tr>
<td></td>
<td>Visit (presentation)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>05/11</td>
<td>Azabu University</td>
<td>Azabu University, Kanagawa Prefecture</td>
<td>Group presentations and lectures given by profs of Azabu Univ.</td>
</tr>
<tr>
<td>(Thu)</td>
<td>Visit (presentation and lecture)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>05/12</td>
<td>University of Tokyo</td>
<td>University of Tokyo</td>
<td>Poster presentations by Univ. of Tokyo students and discussions</td>
</tr>
<tr>
<td>(Fri)</td>
<td>Visit (presentation)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>05/13</td>
<td>Azabu University</td>
<td>Azabu University, Kanagawa Prefecture</td>
<td>Poster presentations by Azabu Univ. students and lectures given by profs of the university</td>
</tr>
<tr>
<td>(Sat)</td>
<td>Visit (presentation and lecture)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>05/14</td>
<td>No program activity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Sun)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td>Activity</td>
<td>Location</td>
<td>Description</td>
</tr>
<tr>
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</tr>
<tr>
<td>05/15 (Mon)</td>
<td>Fukushima Daiichi Nuclear Power Plant Tour</td>
<td>Futaba-cho, Fukushima Prefecture</td>
<td>Learn about the decommissioning work of the plant and impacts to the environment and society caused by Fukushima nuclear disaster</td>
</tr>
<tr>
<td>05/16 (Tue)</td>
<td>Disaster prevention experience</td>
<td>Tokyo Fire Dept. Citizen Disaster Prevention Education Center</td>
<td>Learn about natural disasters (earthquakes, flooding, and others) and preparedness</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kanda River / Ring Road No. 7 Underground reservoir tour</td>
<td>Suginami, Tokyo</td>
</tr>
<tr>
<td>05/17 (Wed)</td>
<td>Incineration plant tour</td>
<td>Suginami Incineration Plant, Tokyo</td>
<td>Learn about Tokyo's waste disposal system and environmental and health impacts</td>
</tr>
<tr>
<td>05/18 (Thu)</td>
<td>Presentation and Mercury lectures</td>
<td>NYC, Tokyo</td>
<td>Group presentations (2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Group presentations (2) and learn about mercury in environment and its health impacts</td>
</tr>
<tr>
<td>05/19 (Fri)</td>
<td>Fukagawa Tour</td>
<td>Fukagawa, Tokyo</td>
<td>Learn about historical aspects of Tokyo</td>
</tr>
<tr>
<td></td>
<td>Traveling (Tokyo ⇒ Toyama)</td>
<td>Toyama, Toyama Prefecture</td>
<td>Learn about Itai-Itai disease (Cadmium poisoning), health impacts and environmental restoration processes</td>
</tr>
<tr>
<td></td>
<td>A lecture given by a storyteller</td>
<td>Toyama, Toyama Prefecture</td>
<td>Attend a lecture given by a storyteller who lost her grandmother to the Itai-itai disease</td>
</tr>
<tr>
<td>05/20 (Sat)</td>
<td>Traveling (Toyama ⇒ Hiroshima)</td>
<td>Hiroshima, Hiroshima Prefecture</td>
<td></td>
</tr>
<tr>
<td>05/21 (Sun)</td>
<td>Itsukushima Shrine Visit</td>
<td>Miyajima, Hiroshima Prefecture</td>
<td>Learn about history of the 1430-year-old shrine and Shinto</td>
</tr>
<tr>
<td></td>
<td>Hiroshima City Environment Bureau Naka Plant &quot;Ecoleum&quot; Visit</td>
<td>Hiroshima, Hiroshima Prefecture</td>
<td>Learn about Hiroshima's waste disposal system</td>
</tr>
<tr>
<td>05/22 (Mon)</td>
<td>Hiroshima Atomic Bomb Museum</td>
<td>Hiroshima Atomic Bomb Museum, Hiroshima Prefecture</td>
<td>Learn about the atomic bomb in Hiroshima and environmental, social and health impacts</td>
</tr>
<tr>
<td></td>
<td>A-bomb Experience Lecture</td>
<td>Hiroshima Atomic Bomb Museum, Hiroshima Prefecture</td>
<td>Attend a lecture given by an A-bomb legacy successor whose mother and aunt suffered from the bombing</td>
</tr>
<tr>
<td>05/23 (Tue)</td>
<td>Traveling (Hiroshima ⇒ Shin-Minamata)</td>
<td>Fukuoka, Fukuoka Prefecture</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Traveling (Hakata ⇒ Shin-Minamata)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Minamata Disease Museum lecture
Minamata, Kumamoto Prefecture
Attend a lecture given by a storyteller whose family members suffered from Minamata disease (Mercury poisoning)

Minamata Disease Museum tour
Minamata, Kumamoto Prefecture
Learn about Minamata disease, health impacts, and environmental restoration processes

Traveling (Shin-Minamata ⇒ Kumamoto)

Kumamoto Castle Visit
Kumamoto, Kumamoto Prefecture
Learn about history of the 410-year-old castle and Japanese history

Traveling (Kumamoto ⇒ Hakata)
Fukuoka, Fukuoka Prefecture

05/24 (Wed)
Traveling (Hakata ⇒ Shin-Osaka)

Traveling (Shin-Osaka ⇒ Tokyo)
Sendai, Miyagi Prefecture

05/25 (Thu)
Traveling (Sendai to Ishinomaki)

Japan Red Cross Ishinomaki Hospital Visit (Lecture)
Ishinomaki, Miyagi Prefecture
Attend a lecture given by nurses who helped evacuees affected by the Great East Japan Earthquake

Okawa Elementary School Visit
Ishinomaki, Miyagi Prefecture
Learn about the school that was destroyed in the Great East Japan Earthquake and tsunami

Tradition Lecture
Ishinomaki, Miyagi Prefecture
Attend a lecture given by a storyteller who lost his children to the tsunami

Traveling (Sendai ⇒ Hamamatsucho)
Tokyo

Group Dinner
Tokyo
The last activity of the program

Storytellers/Speakers
The storytellers/speakers are (1) Minamata disease (a neurological disease) patients who were exposed to methylmercury when they were adults or whose mothers were exposed to high levels of methylmercury during pregnancy, (2) A relative of an Itai-Itai disease victim, which is a severe medical condition primarily affecting the bones and kidneys due to prolonged exposure to high cadmium levels, who passed away from the disease, (3) A-bomb legacy successor whose mother and aunt suffered and died as a result of the bombing in Hiroshima, (4) Nurses who helped evacuees affected by the Great East Japan Earthquake, and (5) A parent of a student who lost their life in the tsunami caused by the 2011 Great East Japan Earthquake.

The speakers and their topics will contribute to the course objectives in the following ways:

1. Minamata Disease Patients (Methylmercury Exposure and Poisoning):
a. These patients can provide firsthand accounts of living with the neurological effects of methylmercury exposure, connecting the course content to real-life experiences.
b. Students will gain insight into the long-term consequences of environmental pollution, contributing to the understanding of health determinants and risk factors.
c. Their experiences also illustrate the burden of disease impacted by contamination, addressing one of the primary course objectives.
d. It also contributes to discussions on contemporary Japanese society, culture, history, and environmental and human health issues in Japan.

2. Relative of Itai-Itai Disease Victim (Cadmium Exposure and Poisoning):
   a. This speaker's personal story adds a human dimension to the course content, illustrating the devastating effects of cadmium exposure.
   b. Their stories will help students understand the health consequences of environmental contamination and the interplay between science and society, aligning with the objective of summarizing key environmental earth science concepts linked with human health issues.
   c. The story underscores the burden of disease impacted by contamination, aligning with the course's focus on the health implications of pollution.

3. A-Bomb Legacy Successor (Hiroshima Atomic Bombing):
   a. This speaker offers a unique perspective on the historical impact of the atomic bomb on Hiroshima, highlighting the long-lasting effects on individuals and communities.
   b. Their narrative helps fulfill the objective of discussing the burden of disease caused by the atomic bombing and the socio-cultural aspects of health and equity.
   c. It also provides a cultural and historical context for understanding the interplay between environmental conditions and health.

   a. The nurses' direct involvement in assisting evacuees affected by the Great East Japan Earthquake and implementing measures to prevent infectious diseases among them serves as a modern illustration of health and equity challenges arising from natural disasters.
   b. Their insights will help students identify applicable examples related to health and equity affected by natural disasters, aligning with one of the course objectives.

5. Parent of Tsunami Victim (The 2011 Great East Japan Earthquake):
a. By sharing their experience of losing a loved one in the tsunami, this speaker underscores the human and societal dimensions of natural disasters.

b. Their story directly relates to the objective of identifying applicable examples related to health and equity affected by natural disasters.

In summary, these speakers provide real-world context and personal narratives that enhance students' understanding of the complex relationships between environmental earth science, health, culture, society, and history, all while aligning with the specific course objectives.

Example of Daily Schedule
The following provides a detailed daily schedule of course activities during the 2023 trip.

05/10 (Thu)

<table>
<thead>
<tr>
<th>Time</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>07:40</td>
<td>Gather at the National Olympics Memorial Youth Center (NYC), Tokyo</td>
</tr>
<tr>
<td>07:40 - 08:00</td>
<td>Walk to Sangubashi station</td>
</tr>
<tr>
<td>08:00 - 09:20</td>
<td>Transportation - Sangubashi station to Azabu University</td>
</tr>
<tr>
<td>09:30</td>
<td>Arrive at Azabu University</td>
</tr>
<tr>
<td>09:30 - 9:50</td>
<td>Welcome session</td>
</tr>
<tr>
<td>9:50 - 12:00</td>
<td>Symposium: Environment and Human Health by students from OSU and Azabu University - presentations and discussions involving students from OSU and Azabu University</td>
</tr>
<tr>
<td>12:00 - 13:30</td>
<td>Lunch with Azabu University students</td>
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<tr>
<td>13:30 - 14:40</td>
<td>Lecture: Food-borne parasitic zoonoses given by Prof. Taira of Azabu University - Gain an understanding of the connection between food contamination and its impact on health</td>
</tr>
<tr>
<td>14:40 - 16:00</td>
<td>Tour of Life Museum, campus or laboratories of Azabu Univ. with Azabu University students - Acquire knowledge about how environmental factors influence human health</td>
</tr>
</tbody>
</table>
### 05/22 (Mon)

<table>
<thead>
<tr>
<th>Time</th>
<th>Activities</th>
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<tbody>
<tr>
<td>07:30</td>
<td>Gather at the hotel lobby</td>
</tr>
<tr>
<td>07:50 - 08:15</td>
<td>Transportation - hotel to Hiroshima Peace Memorial Museum</td>
</tr>
<tr>
<td>08:30 - 10:00</td>
<td>A tour to Hiroshima Peace Memorial Museum - Learn about the atomic bomb in Hiroshima and environmental, social and health impacts</td>
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<tr>
<td>10:00 - 11:30</td>
<td>A visit to Hiroshima Peace Memorial Park accompanied by volunteers from local high school and university students in Hiroshima - Learn about the atomic bomb in Hiroshima</td>
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<tr>
<td>11:30 - 13:00</td>
<td>Lunch</td>
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<tr>
<td>13:00 - 14:00</td>
<td>A lecture given by an A-bomb legacy successor - Learn about the atomic bomb in Hiroshima and environmental, social and health impacts</td>
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<tr>
<td>14:00 - 15:00</td>
<td>Visit the Atomic Bomb dome and tour the Hiroshima National Peace Memorial Hall - Learn about the atomic bomb in Hiroshima</td>
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<tr>
<td>16:00 - 17:00</td>
<td>Transportation - Hiroshima, Hiroshima Prefecture to Fukuoka, Fukuoka Prefecture</td>
</tr>
<tr>
<td>17:00 - 17:20</td>
<td>Transportation - Hakata station to hotel</td>
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</tbody>
</table>
Pre-departure meetings

Pre-departure meetings include two one-hour orientation sessions. These sessions cover:

1. **Program Overview:** Participants are given an in-depth understanding of the study abroad program. This includes details on the program's goals, curriculum, academic requirements, cultural immersion activities, and expectations.

2. **Logistics and Travel Information:** Students receive practical information about travel logistics, including flight details, local transportation, and accommodation arrangements. Any necessary travel documents and visas are also discussed.

3. **Health and Safety:** The safety and well-being of students abroad are of paramount concern. Information about health insurance, emergency procedures, and general safety guidelines is shared.

4. **Cultural Sensitivity:** An important aspect of studying abroad is adapting to a new culture. The orientation session includes discussions on local customs, traditions, and potential cultural differences. This helps students prepare for cultural immersion and fosters respect for the host country.

5. **Academic Expectations:** Detailed information about the academic program, including course schedules, assignments, grading, and assessment criteria, is provided.