

## **Tohoku University (National) Graduate School of Environmental Studies**

### ◆ Program name

International Post-Graduate Program in Human Security "Human Security and Disaster Risk Reduction (DRR)"  
"Human Security and Environment"

### ◆ Degrees

Master of Environmental Studies  
Master of Interdisciplinary Studies  
Master of Disaster Science

### ◆ Credit and years needed for graduation:

30 credits, 2 years

### ◆ Address

468-1 Aramaki Aza Aoba, Aoba-ku  
Sendai, Miyagi 980-8572 JAPAN



## **Features of University** <https://www.tohoku.ac.jp/en/>

### **Philosophy & Mission**

Tohoku University, founded in 1907, has a long history of excellence in education and research, guided by its core principles of "Research First," "Open Doors," and "Practice-Oriented Research and Education." It aims to address the complex challenges of the 21st century while fostering ethical international leaders and advancing groundbreaking research. The university, home to a wide range of schools and research institutes, is known for its innovative research and strong global partnerships. In November 2024, it was accredited as a University for International Research Excellence, highlighting its commitment to enhancing research capabilities and becoming a globally competitive institution. A 10 trillion JPY university fund has been allocated to support the development of its research systems.

### **Characteristics**

#### **1) Three Foundational Ideals**

"Research First," "Open Doors," and "Practice-Oriented Research and Education" — soon after its founding, Tohoku University established this set of unique ideals, the substance of which it is continually developing in response to our changing times.

#### **2) Rich Educational Environment**

Tohoku University has numerous research organizations and facilities, primarily comprising 10 undergraduate schools, 15 graduate schools, 3 professional graduate schools, and 6 research institutes. Research institute staff also participate in educational activities.

#### **3) Research University**

Tohoku University is a school that continuously produces numerous internationally recognized research results and concertedly pushes forward with leading-edge research and education.

#### **4) Active Regional/Industrial-Academic Ties**

The university is actively working to expand its diverse regional and industrial ties.

#### **5) Globalizing Education and Research**

Among Japan's national universities, Tohoku University is one of the top schools in terms of agreements with overseas universities. It is actively expanding exchange in education and research. The university strives to foster globally active individuals through strong support for studying abroad by Japanese students, as well as recruitment of numerous international students.

## **Features of the Graduate School** <https://www.kankyo.tohoku.ac.jp/en/>

### **Environmental Studies Unique to Tohoku University**

By bringing together the multidisciplinary knowledge of Tohoku University, the Graduate School of Environmental Studies (GSES) aims to establish environmental science as an integrated discipline that transcends the traditional divisions of the humanities and sciences in order to establish a culture supporting sustainable development as well as technologies and systems needed to establish resource-circulating societies. To achieve this goal, GSES has set the educational objective of fostering individuals equipped with a combination of broad knowledge and deep expertise relevant to the understanding and solving of environmental problems. By effectively integrating insights from existing academic fields while creating new frontiers of knowledge, GSES seeks to foster environmental professionals capable of playing an active role in the international community. GSES is looking for students who share these goals. We especially welcome applicants with a strong desire and ability to carry out study and research, and the fundamental academic skills needed to achieve their goals.



The faculty members of the GSES are the top leaders in various academic fields not only in engineering and natural sciences but also in social sciences and the humanities. They have been leading their own fields and, at the same time, have communicated with each other to find a common horizon for Environmental Studies. Now, we will take a step further toward a practical use of Environmental Studies, where we will be able to indicate a way to solve environmental issues by connecting the knowledge from diverse fields.

## **Features of the Program** <https://www.kankyo.tohoku.ac.jp/en/intlprograms.html>

<https://sites.google.com/tohoku.ac.jp/iphs/home>

<https://sites.google.com/tohoku.ac.jp/iphs-hsdr//%E3%83%9B%E3%83%BC%E3%83%A0>

### **Understanding Human Security**

In the post-Cold War era a new concept of “Human Security” focusing on the protection of human lives against pestilence, poverty, environmental destruction, climate change and dispute, has attracted considerable attention in place of the conventional idea of “Nation Security”, which focuses on armaments. Following this present trend, the Japanese government is moving toward the incorporation of this new concept of “Human Security” as the central basis for international cooperation. Especially in developing countries, with its cultural diversity and varied levels of economic development, many people have spent their lives in danger against a background of poverty, disasters, poor environmental hygiene, malnutrition, and social unrest including active disdain for human dignity. In addition, international epidemics such as HIV/AIDS, SARS, and Covid-19, environmental and food pollution, terrorism and drug trafficking jeopardize human security across borders. The “human insecurity” of the 21st century is caused by a very wide range of factors. Therefore, to solve the above-mentioned problems both in theory and practice, those in leadership positions must have obtained multiple perspectives beyond the conventional academic disciplines and for methodologies to be in place that incorporate interdisciplinary skills and knowledge.

### **IPHS and Course Purpose**

The International Post-Graduate Program in Human Security (IPHS) is an international educational program conducted by linking the Graduate School of Agricultural Science, the Graduate School of Medicine, the Graduate School of International Cultural Studies (-2017) and the Graduate School of Environmental Studies since April 2005 under the unified theme of “Human Security,” in cooperation with each graduate school in their respective research fields (health, food and agriculture, environment, and disaster risk reduction (DRR)). The objective of the IPHS is to develop professionals and researchers who can contribute to the realization of human security as leaders of policies and local communities in domestic and international societies with a deep understanding of the complex structure of various issues related to threats to human existence and dignity.

IPHS is currently composed of 4 programs, “Food & Agriculture for Human Security”, “Public Health Sciences for Human Security”, “Human Security and Environment”, and “Human Security and DRR.” Each graduate school

provides curricula designed to develop an understanding of the intricate structure of various problems related to the areas of Food, Health, Environment, DRR, and Regional Community. This enables JDS fellows to take a wide range of related subjects according to their interests.

### **Content and course structure**

Students enroll in the course "Human Security and DRR" offered by the Graduate School of Environmental Studies to obtain a degree. The Course in this program consists of "common subjects" offered by the three graduate schools and two related graduate schools (the Graduate School of International Cultural Studies and the Graduate School of Engineering) from their respective fields of specialization, "major subjects" offered independently by each graduate school, and "thesis guidance and preparation." In addition to these courses, although they do not generate credits, the program provides opportunities for students to interact with each other beyond the boundaries of the graduate school through courses on how to write papers in English, joint seminars as official events, and so on. The goal of this program is to contribute intellectually to the clarification of the reality of human insecurity and the realization of a new international society that aims for people-centered problem solving through the development of human resources equipped with interdisciplinary knowledge and multiple perspectives that transcend conventional areas of specialization.

### **Learning Outcomes**

Since this program is offered in collaboration with other graduate schools, students can take a wide range of related courses according to their interests. Students will learn basic knowledge and methods to tackle their research projects in lectures and receive specialized guidance from their laboratories and academic advisors. In addition, through the program's unique interdisciplinary curriculum, students will receive guidance and advice from faculty members of other graduate schools and sub-supervisors, enabling them to analyze issues from multiple and diverse perspectives and to work on problem-solving. In addition, for the graduation thesis, students are provided with opportunities for practical educational research based on a theme set by each student to cultivate research and problem-solving abilities.

## ***Necessary Curriculum to Obtain the Degrees***

The JDS fellows taking the "Human Security and DRR" need to belong to the **Department of Frontier Sciences for Advanced Environment; Cultural Environmental Studies**. The requirements of the department, in addition to some lectures provided by the IPHS, must be completed.

### **•Master Course**

A minimum of 30 credits are required for a master's degree including the followings;

### **【Human Security and DRR】 TBC**

The JDS fellows are required to acquire a total of 30 credits or more, including 24 credits from compulsory subjects and 6 credits from elective subjects, and to pass a master's thesis examination after receiving the necessary research guidance. To be eligible for the program certificate, the JDS fellows must complete a total of 10 credits from common subjects, in addition to earning 4 credits from the courses "Pre-disaster DRR Investment for Sustainable Development" and "Pre-disaster DRR Investment for Sustainable Development (Practicum)."

### **<Major Subjects>**

Subject	Crdt	Remarks	Subject	Crdt	Remarks
International Trend and Practical Knowledge for Disaster Risk Reduction	2	Compulsory	Introduction to Environmental Studies	2	Compulsory
Pre-disaster DRR Investment for Sustainable Development	2	Compulsory	Pre-disaster DRR Investment for Sustainable Development (Practicum)	2	Compulsory
Seminar on Human Security	4	Compulsory	Master Course Seminar on Human Security	6	Compulsory
Basics of Disaster and Safety Sciences I	1	Elective	Basics of Disaster and Safety Sciences II	1	Elective

Advanced Environmental Studies	2	Elective	Water and Urban Environments	2	Elective
Environment and Civilization I	2	Elective	Social Anthropology of Northeast Asia	2	Elective
Introduction to Environmental Studies for Advanced Society I	2	Elective	Introduction to Environmental Studies for Advanced Society II	2	Elective
Practical Lecture for Principle & Knowledge of Project Management	2	Elective	Seminar on Environmental Studies	2	Elective
Special Lecture I	1	Elective	Special Seminar I	1	Elective
Internship for Master Course Students	1~2	Elective			

### <Common Subjects>

Subject	Crdt	Remarks	Subject	Crdt	Remarks
Environmental Security and Energy Security 【Environmental Studies】	2	Compulsory	Hydro-Environmental Studies/ Hydrology 【Environmental Studies】	2	Compulsory
Disaster Control System 【Engineering】	2	Compulsory	Health and Social Resilience for Large-Scale Disaster 【Medicine】	2	Elective
Human Security and Global Health 【Medicine】	2	Elective	International Development Studies 【Agricultural Science】	2	Elective
Food Economics 【Agricultural Science】	2	Elective	Energy and Resource Strategies 【Environmental Studies】	2	Elective
Global Governance and Safety 【Int'l Cultural Studies】	2	Elective	International Society II 【Int'l Cultural Studies】	2	Elective

※Subjects in parentheses indicate the Graduate School offering the course.

## List of Faculty Members Capable of Guiding JDS Fellows

<https://www.kankyo.tohoku.ac.jp/en/faculty/>

List of academic advisors ("Human Security and DRR")

Name of Supervisor	Research Feilds
Professor Ono, Yuichi	Green innovation, water resources, environmental impact assessment, disaster management, and related policies and institutions
Professor Sano, Daisuke	Green innovation, water resources, environmental impact assessment, disaster prevention, waste management, urban development, and related policies and institutions
Specially Appointed Professor Nagami, Kozo	Disaster prevention, urban development, critical infrastructure development (including transport traffic, roads, electricity, etc.), and related policies and institutions
Specially Appointed Professor Komori, Daisuke	Green innovation, forest conservation (including REDD+), water resources, environmental impact assessment, disaster management, waste management, electricity (but only regarding hydropower potential), and related policies and institutions
Associate Professor Kubota, Kengo	Green innovation, water resources, environmental impact assessment, disaster prevention, waste management, urban development, and related policies and institutions

Associate Professor Sasaki, Daisuke	Green innovation, water resources, environmental impact assessment, disaster management, and related policies and institutions
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The JDS fellows will primarily be supervised by the 6 professors listed above. Listed below are the secondary academic advisor.

Name	Graduate School	Research field
Professor Nakaya, Tomoki	Environmental Studies	Geographic information science, spatial epidemiology, health geography
Professor Yoshioka, Toshiaki	Environmental Studies	Resource recovery process studies, waste management
Professor Egawa, Shinichi	International Research Institute of Disaster Science (Medicine)	International Cooperation in Disaster Medicine
Professor Murao, Osamu	International Research Institute of Disaster Science (Engineering)	International Strategy for Disaster Reduction
Assis. Professor Hara, Yuta	International Research Institute of Disaster Science (Environmental Studies)	Geography, natural symbiotic systems, climate and landscape, regional studies, regional planning
Professor Oshitani, Hitoshi	Medicine	Virology, infectious disease epidemiology
Professor Fuyuki, Katsuhito	Agricultural Science	International development studies
Professor Shirakawa, Hitoshi	Agricultural Science	Nutrition
Professor Yu, Jeongsoo	International Cultural Studies	Science of Sustainability, Waste Management, Resource Recycling
Professor Li, Yu-You	Engineering	Environmental conservation engineering

Other faculty members of the GSES can be found at the attached URL.

### ***Academic Schedule***

NOTE: The AY2026 schedule will be subject to change based on the graduate school.

#### **Academic Calendar of AY2025**

Events	Date
Spring Semester	April 8, 2025 - August 6, 2025
Summer Break	August 7, 2025 - September 30, 2025
Open Campus (No class)	July 30, 2025 - July 31, 2025
Fall Semester	October 2, 2025 - February 3, 2026
University Festival (No class)	October 24, 2025
Winter Break	December 29, 2025 - January 2, 2026
Common Test for University Admissions (No class)	January 16, 2026
Semester-end Vacation	February 4, 2026

**Facilities** <https://www.kankyo.tohoku.ac.jp/en/facility.html>

### <AOBAYAMA New Campus>

#### Main Building of the GSES

In October 2015, the main building of the Graduate School of Environmental Studies was completed in the new campus area of Aobayama. The building allows for passive energy-saving methods such as efficient natural ventilation, natural lighting, and "green curtains", with the aim of reducing energy consumption and raising environmental awareness.



#### Laboratory (on Aobayama East Campus)

There is a wooden school building, "Ecollab," completed in the spring of 2010. "Ecollab" means "Ecology," "Collaboration," and "Laboratory. Inside the building, which has a simple, light, modern exterior and the warmth of a wooden structure, the results of research that fuses nature and technology to create next-generation lifestyles with less environmental impact are applied.



#### AOBAYAMA Commons

This building includes an **Agricultural Library**, **Lecture Halls**, **Learning Commons**, **Health Care Center**, **Shop**, and **Cafeteria**. Everyone can do many kinds of activities among the green in this building.



#### AOBAYAMA Midori Welfare Facilities

This building is a welfare facility faced to the Campus Mall. There is a **Convenience Store**, **Café and Noodle Shop**, **Campus Life Support Plaza**, and **Nursery** located in this building.

#### University Housing

Tohoku University offers well-equipped dormitories for international students. One of the dormitories, **University House Aobayama** is located on Aobayama new campus.

[http://campus.bureau.tohoku.ac.jp/en\\_campusguide/en\\_newaob\\_top.html](http://campus.bureau.tohoku.ac.jp/en_campusguide/en_newaob_top.html)

<https://www.tohoku.ac.jp/en/about/facilities/index.html>

## **Message for the Applicants**

The program is designed to train the current and next generations of leaders and experts who will actively participate in the areas of policy planning and regional communities at the international and domestic levels.

Students from the Graduate Schools of Environmental Studies, Medicine and the Agricultural Science who participate in the program take lectures and conduct research in addition to the regular curriculum, which is designed to develop their international and interdisciplinary research skills. There are abundant opportunities for students to acquire practical skills in interdisciplinary 'resilience studies' after completing specializations contributing to human security and acquiring knowledge in basic fields, and to hone their qualities as researchers and practitioners equipped with problem- and project-solving learning skills from a multilayered perspective.

We look forward to your active participation in the program, as you are full of enthusiasm and a spirit of challenge, and are eager to spread your wings to the world.