University of Tsukuba

Master's Program in Environmental Sciences
Doctoral Program in Environmental Studies

University of Tsukuba

Master's Program in Environmental Sciences

2-year program
Degree: Master's in Environmental Sciences

Message from Program chair

Our Mission is "To create wisdom and technology and develop human resources that can hand over the environment in 2100, where everyone feels happy to have been born on the earth." So, we are always waiting for students who want to contribute to the maintenance and creation of a wonderful environment for the future. Let's study together in the beautiful city of Tsukuba.

Our Vision in Curriculum

The Master's Program in Environmental Sciences is the oldest graduate school in environmental studies in Japan. Since its establishment in 1977, it has offered truly multidisciplinary curriculum choices to more than 3,000 students from twenty some countries. It has aimed to foster skills and knowledge for the students to become outstanding global environmental leaders/practitioners. Our graduates now contribute their skills/knowledge to governments, research/education institutions, NGOs, consulting companies, and other corporations.

One of three core courses in this Program aims to foster multidisciplinary and global visions by introducing wide-ranging environmental science topics that are approached from ecology, hydrology, chemistry, economics, ethics, policies, health, disaster prevention/mitigation/adaptation, and meteorology, among others. Another core course is based on field and laboratory practices that are accompanied with an in-class exercise course to enhance knowledge/skill acquisition in fields and laboratories. In addition, the Program offers more than 70 elective courses to meet diverse academic interests among students. Our acclaimed signature courses on international internships have offered hands-on seminars about ten countries in Africa, Asia, Europe, and North America.






Thesis Research

In this Program, every student becomes an expert in conducting thesis research and writing a master's thesis by forming her/his own committee, consisting of one academic supervisor and two or more sub-supervisors who help refine research topic/scope. In the middle of the second year, all students present their research progress in the interim presentation, in which other faculty members attend and help refine their researches. The master's theses are expected to make original/significant contributions to environmental sciences. Some of the past theses have been published in academic journals and books.

Admission

Admission is based on the submission of necessary documents (e.g., authentic English test score) and the result of entrance examination that is offered by the Program. A few different types of examination are available to meet applicants' diverse backgrounds. The detailed schedule for these examinations and application processes is available on the following website: www2.envr.tsukuba.ac.jp/eng/masters-program-admission.
For all inquiries regarding entrance examination, please contact our office at: admission@envr.tsukuba.ac.jp.

	1st Year		2nd Year		Outcome
	1st Semester	2nd Semester	1st Semester	2nd Semester	
Research	• Program guidance • Select academic supervisor			• Progress research presentation	• Final thesis presentation and oral defense • Master's thesis submission
	Proceed with individual research for master's thesis				
	Field survey and Internships / Laboratories				
Courses	Compulsory core courses (3 credits): • Introduction to Env. Sciences • Exercises in Env. Sciences • Field and Laboratory Practices	Thesis seminar in Env. Sciences (3 credits X 3 semesters)			In total 30 credits or more (40 advisable)
	Seminar in Env. Sciences (1.5 credits X 4 semesters) Elective courses (12 or more credits)				

*An academic year is divided into two semesters: Spring (April – July) and Fall (October – February).
*Early completion schedule is also available.

Doctoral Program in Environmental Studies

3-year program
Degree: Doctor in Environmental Studies

Message from Program chair

Our course is the first one to start environmental science education in Japan. Our goal is to nurture human resources to have various kinds of perspectives in environmental studies via not only studying specific research area but also the other study area, which are related to the environments. We really hope that you will be able to be active as global leaders in research institutes, administrative agency, universities, companies, and so on. Additionally, there are lots of international students coming from many countries; communications between students must be important for your future life. Please keep contacts after your graduation to increase your motivation in your life.

Our Vision in Curriculum

The Doctoral Program in Environmental Studies aims to foster professionals and global academic leaders in wide-ranging disciplines that are related to environment studies. Students can refine professional skills that are essential in undertaking scientific studies or making policy/planning. They can also enhance practical skills for conducting field surveys or laboratory experiments. Throughout the Program, students are encouraged to connect their research interests to wider social and environmental needs for sustainability.

Every doctoral student in this Program forms her/his own advisory committee that guides research and ensures its publishable outcome as well as dissertation. The committee should consist of one academic supervisor and two or more sub-supervisors. In addition, a doctoral student is expected to make at least three presentations on research progress, which are evaluated by two or more faculty members other than advisory committee members in the Program.






Multidisciplinary Research Initiatives

The Program hosts a number of innovative research projects. Depending on academic fields, students join collaborative research projects with national research institutions outside the campus, including the National Institute of Advanced Industrial Science and Technology (AIST). Our faculty members also lead some large research projects that are funded by the Japan Science and Technology Agency (JST) and the Japan Society for the Promotion of Science (JSPS) as well as various other corporations.

Admission

To enroll in this program, a master's degree is required. Admission is based on the submission of necessary documents and entrance examination, which is offered by faculty members of the Program. For more detailed information about application and admission, please visit our website at: www2.envr.tsukuba.ac.jp/eng/doctoral-program-admission.
For all inquiries regarding entrance examination, please contact our office at:
admission@envr.tsukuba.ac.jp.

Career Path

Many of our graduates have become faculty members or researchers at universities and research institutions in Bangladesh, China, Indonesia, Japan, Vietnam and Tunisia. Others work for national and municipal governments and private corporations like NTT Data and Toyota Motor Engineering & Manufacturing.

	1st Year	2nd Year	3rd Year	Outcome
Research	• Decide supervisor and TAC* members • Begin thesis research Work on publication and conference presentations		Preliminary thesis defense (TAC*)	Doctoral defense (TAC*) Thesis submission Publications
Courses	• Program guidance • Decide AC* and EC* members Special Exercise of Sustainable Environmental Studies I, II, III (under the supervision of AC* and EC*) Forum courses on Sustainable Environmental Studies I, II, III / Internships			In total 7 credits or more

*TAC= Thesis Advisory Committee; AC= Advisory Committee; EC= Evaluation Committee
*Early completion schedule is also available.

Certificate Program:

Sustainability Science, Technology, and Policy (SUSTEP)

The 4 Majors

Environmental Hydrology and Disaster Prevention in Climate Change (E-HyDIP-CC)

The hydrological cycle is the principal component in the global environment and life. Also, natural disasters profoundly affect human life in a variety of regions on earth. Both phenomena are relevant climate change issues. In this Major, students are expected to make important contributions to maintaining a sustainable and safe water environment, disaster prevention and climate system.

Ecosystem and Biodiversity Conservation and Remediation (EBCR)

Ecosystem and biodiversity protection, rehabilitation, and restoration are urgently needed. In response to human-induced and natural disturbances such as air and water pollution, deforestation and natural disasters, animals, plants, and microorganisms have developed their survival abilities through defense mechanisms and remediate environments, which may contain breakthrough ideas to solve interlocked problems. This major will help students enhance their ability to create innovative measures to mitigate complicated environmental issues.

Integrated Resource and Waste Management (IRWM)

This Major offers a set of intensive courses for students who wish to acquire advanced knowledge about best available technologies and management systems that control and reduce the generation of waste through the whole product and system lifecycle. It also focuses on adaptive control approaches that improve such system performance. This Major also provides students with advanced professional and technical knowledge in the management of environmental risk, including the risk of toxic waste to human health and the management of e-waste. The seminar courses for Master`s Thesis include weekly presentations and discussions about research progress. Each student will be supervised by an academic committee, which consists of academic advisory committee members and one supervisor.

Environmental Policy and Planning (EPP)

This major aims to foster experts who are able to: (1) identify socio-economic and ecological factors behind environmental problems; (2) profile the structure and mechanism of trade-off; (3) identify suitable and adaptable environmental remediation technologies and policies in order to control the environment and natural resources; and (4) construct a comprehensive environmental plan. Main topics of interests are environmental economics, environmental leadership, ethics, geography, urban planning, and science.

The Sustainability Science, Technology, and Policy (SUSTEP) Certificate Program is designed to foster global leaders with both specific scientific expertise and broader knowledge/ insights in natural science, social science, humanity, and diplomacy/ leadership.
This program is collaboratively managed by the Master's Program in Environmental Sciences and the Doctoral Program in Environmental Studies. It welcomes all graduate students and offers them a unique set of expert training courses with concentration areas called "Majors".
A SUSTEP certificate will be conferred upon the completion of required credits and theses. The latter should be conductive to the SUSTEP concept.

Toward Global leader ship

Students in this certificate program are encouraged to place expert knowledge within multidisciplinary and global/ local context by taking some common courses in addition to major courses. They also have opportunities to participate in international seminars and discuss global leadership on specific issues with guest experts from renowned research institutions and universities around the world. Here students in different majors come together and discuss/ share their concern and interests. These opportunities can lead to research innovation and global leadership visions.

JDS Special Program

JDS Fellows

The Master's program in Environmental Sciences and The Doctoral program in Environmental Studies at the University of Tsukuba has offered an environmental policy-related degree program to a number of young environmental leaders. They have come from Bangladesh, Mongolia, the Kyrgyz Republic, Vietnam, Sri Lanka, Myanmar, Ghana, Laos, Maldives, and Philippines and were/ are funded by the prestigious Japanese government's grant for human resources development scholarship or JDS. Among many graduate schools in Japan, we are the only graduate program that offers environmental policy studies to JDS fellows.

Number of JDS Fellows

Country	Kyrgyzstan	Mongolia	Vietnam	Bangladesh	Myanmar	Sri Lanka	Ghana	Laos	Maldives	Philippines	Total
2007	1	1									2
2008	1	2	2								5
2009	1	2	3								6
2010		3	5	2							10
2011		4	6	2							12
2012		2	6	2							10
2013		2	5	2							9
2014		2	4	2	2	2					12
2015	2	2	4	3	2	2	3				18
2016	3	2	5	4	2	3	3				22
2017	2	4	4	4	1	3	3	2			23
2018	2	4	3	4	2	2	3	2			22
2019		4	5	4	2	3	3	2			23
2020		4	6	4	2	4		2			22
2021		2	4	5	1	2		2	2		18
2022		3	1	6		2		2	4		18
2023	2	2	4	5		3		3	1	2	22
2024	2	3	4	4		2	1	3	2	3	24
Total	**16**	**48**	**71**	**53**	**14**	**28**	**16**	**18**	**9**	**5**	**278**

When JDS fellows join our environmental sciences program with a major focus on environmental policies, they become part of the Japan's oldest graduate program in environmental sciences, the history of which has spanned more than 30 years. This tradition continues with our unbroken commitment to scholarly innovation and social/ international responsibilities. And most of our JDS graduates have inherited this tradition in pursuing their advanced career paths in their respected countries. Once admitted, JDS Fellows will also register for the SUSTEP program.

JDS "Special" Tailor-made Program

Annual International Seminars

We invite distinguished Speakers from top-notch universities or research institutions in Japan and other countries. JDS Fellows not only listen to the lectures of these guests but also present their research topics in order to receive advice from the guests. These seminars seek to improve each Fellow's research and help to expand their academic network.

Overseas Research & Seminars

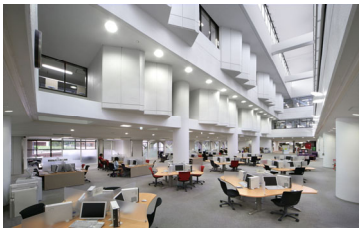
JDS Fellows have opportunities to participate in overseas seminars with at least one of our faculty members so they can learn how to undertake research and survey for data collection. They can also expand their global leadership network.

Field Trip in Japan

JDS Fellows join Field trips in Japan that are specially designed to respond to development issues of their own countries. In the previous activities, JDS Fellows visited sites where they can observe and examine issues that are related to waste treatment, recycling technology, forest conservation, protected area policies, rural development, urban planning, biodiversity, tourism, environmental disaster prevention, pollution, climate change, energy problems, and more.

Learning Environment

Our program has webpages designed for JDS Fellows. By having access to these websites, JDS Fellows and other students can receive course information, reading materials important information about courses. Campus-wide online courses registration is also available in English.



Message From SUSTEP Members

■ Kisinger Chakma (PhD graduate in September 2022)

- Doctoral Program in Environmental Studies
- JDS Scholarship
- Deputy Commissioner, Chuadanga District of Bangladesh

SUSTEP is a very special program that amalgamates academic hands-on learning with one's professional experience. This program helps to make the best use of academic knowledge in the professional field. I understand that the Ph.D. with SUSTEP certification facilitated me in securing a key position in my career in Bangladesh Civil Service. In my current position, I am responsible for coordinating development programs of the government departments, non-government affairs, and land administration of a district. I also remain responsible for maintaining law and order in the district. I feel proud to mention that my SUSTEP experience made me confident in delivering my service.
I believe that the SUSTEP program helps young researchers' dreams come true for positive social change. I highly encourage young researchers to take the opportunity of the SUSTEP to boost their potential in transforming ideas into actions.

■ Chen Xingyu (PhD graduate in September 2023)

- Doctoral Program in Environmental Studies
- I will work for the National Institute of Advanced Industrial Science and Technology (AIST) in Japan.

Our program encourages us to enjoy the diversification of education and learning while improving our professional skills and cultivating our personalities in a loving atmosphere. There are supportive professors, a strong academic atmosphere and a good platform here, which enabled me to feel all-around development. Although these 3 years passed by startlingly quickly, the creativity and profundity that I have learned here will always motivate me.

■ AKHTER Masuma (Master graduate in September 2023)

- Master's program in Environmental Sciences.
- JDS Scholarship
- Working for the Department of Livestock Services in Bangladesh.

The University of Tsukuba is a source of self-motivation, enthusiasm, and dreams through its diverse course curriculum, extracurricular activities, and fascinating internships, is more than an educational institute to me. It is such a place where a student enrolls as a seed and after graduation, emerges as a tree. The close monitoring and supervision by the professors, thorough and amiable instructions from the program office made my days colorful and enjoyable here.

■ Gajasinghe Kavindi (PhD graduate in March 2023)

- Doctoral Program in Environmental Studies
- Postdoctoral researcher at the Institute for Agro-environmental Sciences, National Agriculture and Food Research Organization (NARO), Tsukuba

During my Ph.D. studies, I was attached to the Bio-process Engineering Laboratory. I have developed biomass-derived co-carbonized hydrochar to realize high functional adsorbent material and contributed to the maximization of the resource utilization potential of waste.

The doctoral program in environmental studies is designed to expand our view across the different dimensions of environmental problems and mitigation measures, not only through theoretical knowledge but also through hands-on experiences. In addition, ample extracurricular activities, career guidance and follow-up programs conducted by the University support the smooth transition from student life to professional life. Life at the University is the home away from home where I never ever felt alone due to dear friends and professors who were always beside me in need. Of course, life in Tsukuba city is appealing for international students as it is home to many foreigners with a friendly and healthy environment adjacent to Tokyo.

Master's/ Doctoral Program Official Website
https://www.envr.tsukuba.ac.jp/eng/

SUSTEP Program Official Website
https://www.envr.tsukuba.ac.jp/~sustep/

SUSTEP Program Official Instagram
https://www.instagram.com/tsukuba.sustep_official/

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