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
Admission: April, October

Message from Program Chair

Our missions are "to foster human resources with wisdom and technologies and allow the good state of the natural environment to be passed on toward 2100." We imagine the future, in which everyone feels happy to be born on the earth." So, we welcome students who can take part in creating and maintaining such 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 3,500 students from thirty some countries. It has fostered 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. In addition, the Program offers more than 46 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 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. Parts of the past theses have been published in many 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 examinations 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
Admission: April, October

Message from Program Chair

Our program was the first to offer environmental science education in Japan. Our goal is to nurture human resources to have broad perspectives in environmental studies through both specific research area and other relevant study areas. You will be trained to become active global leaders in research institutions, administrations, universities, or companies. We have many international students; communications among these students can benefit your future life. We try to keep in touch with you even after graduation to help enhance your life motivation.

Our Vision in Curriculum

The Doctoral Program in Environmental Studies aims to foster professionals and global academic leaders in wide-ranging disciplines. Students 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 their learning processes, 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 publishable outcomes. 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 two open 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 external and highly competitive research and education grants. Depending on academic fields, students can join collaborative research projects with national research institutions outside the campus, including the National Institute of Advanced Industrial Science and Technology (AIST) and the National Institute for Environmental Studies. Our faculty members lead research grants that are funded by the Japan Science and Technology Agency (JST) and the Japan Society for the Promotion of Science (JSPS). Educational grants include JICA's Project for Human Resource Development Scholarship and MEXT's International Priority Graduate Program.

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, Ghana, Indonesia, Japan, Vietnam and Tunisia. Others work for national and municipal governments as high-ranking officials, 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)

Sustainability Science, Technology, and Policy (SUSTEP) Program

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. It is collaboratively managed by the Master's Program in Environmental Sciences and the Doctoral Program in Environmental Studies. It welcomes all graduate students on campus 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 leadership

Students in this certificate program are encouraged to place expert knowledge within multidisciplinary and global/local contexts 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 concerns and interests. These opportunities can lead to research innovation and global leadership visions.

The Four 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.

JDS Special Program

JDS Fellows

The Master's Program in Environmental Sciences and the Doctoral Program in Environmental Studies at the University of Tsukuba have 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, the Maldives, and the 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 one of the very few graduate programs that have persistently offered environmental policy studies to JDS fellows for more than 15 years.

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
Total	**14**	**45**	**67**	**49**	**14**	**26**	**15**	**15**	**7**	**2**	**254**

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 46 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 their lectures but also present their research topics to receive advice from the guests. These seminars aim to improve Fellow's research and expand academic networks, the bedrock of future career development.

Overseas Research & Seminars

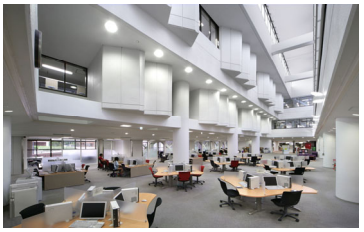
JDS Fellows have opportunities to participate in overseas seminars with at least one of our faculty members so they can learn how to undertake research and survey for data collection. They can also expand their global leadership network.

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 past activities, JDS Fellows observed and examined 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 you make the best use of academic knowledge in the professional field. I understand that a Ph.D. with SUSTEP certification facilitated me to secure a key position in my career in Bangladesh Civil Service. In my current position, I am responsible for coordinating development programs of government departments, non-government affairs, and land administration of a district. I am also 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. I highly encourage young researchers to take the opportunity of the SUSTEP to boost their potential in transforming ideas into actions.

AKHTER Masuma (Master graduate in September 2023)

- Master's program in Environmental Sciences.
- JDS Scholarship
- 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 belonged to the Bio-process Engineering Laboratory. I 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 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.

Chen Xingyu (PhD graduate in September 2023)

- Doctoral Program in Environmental Studies
- Researcher 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.

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 Instargram
https://www.instagram.com/tsukuba.sustep_official/

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