



# **Kanazawa University**

## **Graduate School of Natural Science and Technology**

### **(Master's Level Section)**

“Graduate Program on Science and Engineering for Sustainable Development : Environmental/Energy Science and Engineering (Environmental and Energy Technologies International Course)”

Applicant Guidelines for International Students (October 2024)  
- Japanese Government (MEXT) Scholarship Applicants-

#### **Application Outline for Admission**

Environmental and energy engineers who can contribute to the global society are expected to be equipped with not only the advanced knowledge and skills of environmental and energy engineering but also the ability to propose and design the skills and processes that are in harmony with the regional society and the understanding of regional cultures and history. This program will train individuals who can contribute to the global society by providing education on (1) advanced knowledge and skills on environmental and energy engineering, (2) advanced communications skills for collaborating with engineers from other nations and to understand the historical and cultural background of the regional residents who will be the users of the environmental and energy technology, and (3) the leadership to propose the appropriate skills and processes for each regional circumstances surrounding the environmental problems that occur across national borders. Moreover, the program will nurture individuals who will act as a bridge with Japan at the site of research and technological development in the fields of environment and energy and who will contribute to the sustainable development of the society through cooperation across national borders.

## 1. SCHEDULE

Date	Details
December 18, 2023 - January 5, 2024 Japan time: noon	Application Period
Middle of January, 2024 (tentative)	Notification of schedule on an Oral Examination
Late January to beginning of February, 2024 (tentative)	Oral Examination
Late February, 2024 (tentative)	Notification of Results
October 1, 2024	Admission

## 2. QUALIFICATIONS

### ●The number of students to be admitted

※ International students: Total 16 students\*

Category	Number of applicants accepted
International students (as MEXT scholarship students)	3*

\*The number is subject to change. For the number of special quota and self-financed quota, please refer to the application guideline for those.

- ※ In this application guideline, we recruit only those who wish to Japanese Government (MEXT) Scholarship. Those who do not need the Scholarship please refer to the application guideline for special quota and self-financed quota.
- ※ If applicants wish, they can also become a candidate for special quota and self-financed quota in the application based on this application guideline, by selecting the corresponding check box in the form 1.
- ※ An applicant who is applying for another university with MEXT scholarship at the same time is not eligible. If identified after acceptance of the scholarship grantees, the applicant will be required to withdraw from the scholarship.

### ●Divisions offered

- 1) Division of Material Chemistry (Applied Chemistry Course)
- 2) Division of Mechanical Science and Engineering
- 3) Division of Frontier Engineering
- 4) Division of Electrical, Information and Communication Engineering
- 5) Division of Geosciences and Civil Engineering (Course in Civil Engineering)

●**Field of Study**

Environmental engineering fields (atmospheric environment, water environment, soil environment, waste management, etc.) and energy technology

●**Research field and supervisor**

Please select your intended field of specialization at Kanazawa University, and your preference for Supervisor.

For the professors who can accept students in this course, please refer to the Appendix.

Prior to application, applicants must contact their preferred supervisors directly via email in order to discuss the possibility of studying under their guidance. Then, applicants must receive a letter of acceptance from prospective supervisor. Note that we cannot accept the application without the letter of acceptance from prospective supervisor.

Reference URL: <http://www.nst.kanazawa-u.ac.jp/etic/english/research/>

●**Age**

Applicant must have been born on or after April 2, 1989.

●**Academic Background**

Applicant must have graduated or will graduate from a Japanese university by September 30, 2024. Applicant will be deemed to have academic ability equal or superior to that of a Japanese university graduate, if he / she

[1] has completed or will complete by September 30, 2024, a 16-year school curriculum in a foreign country.

[2] is or will be age 22 by September 30, 2024, or older and has taken an individual entrance qualification examination and has been judged by a graduate school as being equal or superior in academic ability to a university graduate.

Note: Eligible applicants include those who otherwise satisfy or will satisfy the qualification requirements by September 30, 2024, for admission to a Japanese graduate school.

●**Academic Record**

Eligible applicants must have GPA (Grade Point Average) of 2.30 or higher at the last university attended.

\*NOTICE\*

After admission, applicants should keep his/her GPA higher than 2.30 point as well. If his/her GPA will be lower than 2.30 point each year, he/she will be disqualified from the MEXT scholarship student.

### Method to Determine GPA

	Grade Point				
4-point scale		Excellent	Good	Average	Fail
4-point scale		A	B	C	F
4-point scale		80~100%	70~79%	60~69%	0~59%
5-point scale	S	A	B	C	F
5-point scale	A	B	C	D	F
5-point scale	90~100%	80~89%	70~79%	60~69%	0~59%
Point value	3	3	2	1	0

$(\text{number of 3 point grades}) \times 3 + (\text{number of 2 point grades}) \times 2 + (\text{number of 1 point grades}) \times 1 + (\text{number of 0 point grades}) \times 0$   
Total number of grades (including those with a value of 0)

#### ●Language

An applicant must have enough English skills to conduct academic research and education. An applicant is required to satisfy any of the following conditions.

- (1) An applicant who has a score of any test of English language ability equivalent to/higher level than Common European Framework of Reference for Languages (CEFR) B2, the test date must be after November 1, 2021.;
- (2) An applicant who completed the curriculum which meets the qualification to enter Japanese Master's course of graduate school in an institution where main instruction was in English.;
- (3) An applicant who can be concluded that the person has English ability equivalent to or higher than (1).

\*If you want to convert your English scores into CEFR, please refer to the website below.  
[https://www.mext.go.jp/a\\_menu/koutou/koudai/detail/\\_icsFiles/afieldfile/2019/09/25/1420500\\_3\\_2.pdf](https://www.mext.go.jp/a_menu/koutou/koudai/detail/_icsFiles/afieldfile/2019/09/25/1420500_3_2.pdf)

#### ●Health

Applicant must be physically and mentally fit to pursue the study at university.

#### ●Arrival in Japan

Applicant is able to leave for and arrive in Japan within two weeks of October 1, 2024.

#### ●Visa Requirement

Selected applicants must obtain a College Student (ryugaku) visa from the Japanese consulate general in the country of their nationality.

#### ●Other

Any applicant who meets any or all of the following conditions is ineligible.

- [1] Those who are military personnel or military civilian employees;
- [2] Those who cannot arrive in Japan by the date specified by MEXT or the accepting university;
- [3] Those who are previous grantees of Japanese Government (MEXT) Scholarship programs (including those who withdraw from the scholarship program after acquisition of student status). However, this does not apply to those who wish to apply for Research Students program and meet any one of the following conditions. In addition, since the Monbukagakusho Honors Scholarship for Privately-Financed International Students does

not apply to the Japanese Government (MEXT) Scholarship programs, the previous grantees can apply.

- those who have at least three years of educational or work experience following the end of the payment of the previous scholarship and the start of this scholarship;
- the past grantees of Japanese Studies Students program who have graduated or are going to graduate from universities in their home countries, Japan-Korea Joint Government Scholarship Program for the Students in Science and Engineering Departments and Young Leaders' Program;
- those who have obtained or are expected to obtain a degree as undergraduate students of the Japanese Government (MEXT) Scholarship programs (university recommendation/special selection).

[4] Those who are currently also applying to another program under the Japanese Government (MEXT) Scholarship system. This includes the programs for which scholarship payments will begin in FY2024;

[5] Those who are planning to receive scholarship money from an organization other than MEXT (including a government organization of the applicant's country) on top of the scholarship money provided by MEXT after the start of the scholarship payment (the acquisition of student status);

[6] Those who are expected to graduate at the time of application and cannot satisfy the condition of academic background by the deadline given;

[7] Holders of dual nationality at the time of application who cannot verify that they will give up Japanese nationality by the time of the arrival in Japan (the acquisition of student status);

[8] Those who plan to, from the time of application for the MEXT scholarship program, engage in long-term research (such as fieldwork or internship) outside Japan or plan to take a long-term leave of absence from the university;

[9] Those who have no intention to obtain a degree.

### 3. APPLICATION PROCEDURES AND SELECTION

#### (1) Application Procedure

##### ●Submit documents

Applicants must submit the following PDF documents to the Student Affairs Division, Graduate School of Natural Science and Technology, Kanazawa University and prospective supervisor **as e-mail attachment** by the deadline. After receiving a notification of application complete, applicants must send the originals.

##### **Application Period and address for submission**

Application Period: December 18, 2023 (Mon) ~ January 5, 2024 (Fri) by Japan time: noon

Admission Affairs Section, Student Affairs Division,  
Science and Engineering Administration Department  
Kakuma, Kanazawa 920-1192

Email address: [s-nyusi@adm.kanazawa-u.ac.jp](mailto:s-nyusi@adm.kanazawa-u.ac.jp)  
(please include "[ETIC]" in the subject header)

Website: <http://www.nst.kanazawa-u.ac.jp/etic/english/>

**Note:**

If applicants find it difficult to send documents to us because of exceeds size or any other reasons please split them into several files and send them separately.

**Required Documents**

- 1) Cover Sheet \*
  - 2) Application form for Japanese Government Scholarship \* In electronic files (with photo)
  - 3) Statement of purpose \*
  - 4) A letter of recommendation from the president, Dean, or above of the institute addressed to the President of Kanazawa University \*
  - 5) Academic transcript of the last university attended
  - 6) Graduation certificate or degree certificate of the last university attended (or an attested document certifying that the applicant will graduate from the school, where applicable)
  - 7) Students Registration Certificate (for current students)
  - 8) Summary of Graduation Thesis, etc. (free format, 2-3 A4 sized pages)
  - 9) Field of Study and Research plan form \* In electronic files
  - 10) Certificate that proves your English ability.
    - [1] A certificate stating that the main instruction is English, from an institution you have completed / will have completed which meets the qualification to enter Japanese Master's course of graduate school.And / or
    - [2] An original score of any test of English language ability such as TOEFL-iBT or IELTS. In case you cannot submit both [1] and [2], submit any documents showing your English ability.
  - 11) Letter of Acceptance from Prospective Supervisor \*  
※ You should submit PDF only. The prospective supervisor will submit the original to Admission Affairs Section, Student Affairs Division.
  - 12) A copy of applicant's passport (or copy of a certificate of family register, certificate of citizenship or other identification issued by the government of his/her home country)
  - 13) Certification of health (to be completed by the examining physician) \*
  - 14-1) Pledge to the President of Kanazawa University \* Both side printing
  - 14-2) Pledge to the Director of Graduate school of Natural Science and Technology, Kanazawa University
  - 15) For those who are currently employed, a letter of release / recognition from their supervisor, recognizing their right to apply and / or pursue further education in Kanazawa University.
- ※ Items with \* must be printed in A4 sized paper using prescribed forms.  
※ Above documents must be written in either Japanese or English. A document written in any other language must accompany a Japanese or English translation.  
※ Photographs (4.5×3.5cm) to be pasted on the application must be taken with in the past 6

months. And it must be of upper body, uncapped, full-faced, and solid-color background. Name and nationality must be indicated on the back. Electronic data can be acceptable.

- ※ Applicant should clearly describe his/her research program on Field of Study and Study plan form because it will serve as important materials for placement of the applicant at a university.
- ※ The academic transcripts of the last university attended must show the grade scale applied and the grades earned by the applicant on all the subjects studied. (A degree certificate or a graduation certificate simply showing the ranking of the applicant at graduation will not substitute for academic transcripts.) If it is impossible to calculate your GPA, for example because your grade is judged only by pass / fail etc., please include in “4) A letter of recommendation” the meaning that your academic record is in the top 30% of faculty, university or graduate school.
- ※ For abstracts of the theses, abstracts of the graduation thesis and presented papers will suffice. Please note that these abstracts will be used as basic data for evaluation of the applicant’s academic ability.
- ※ Not all students who want to be recommended as international students of special quota to MEXT can be recommended.
- ※ Applications will not be accepted if any of the documents are incomplete, incorrect, or not supported by evidence, or if they are not received by the specified deadline. Once submitted, documents cannot be modified and will not be returned.
- ※ If any information of the documents is later found to be false, admission can be canceled at any time after enrollment.

## (2) Examination

### 1. Screening Method

Selection will be based on the results of an Oral Examination over the Internet and the screening of the submitted documents.

Date of Oral Examination: about the late January to beginning of February 2024 (tentative)

Venue of Oral Examination: It will be announced later by prospective supervisor.

### 2. Announcement of Results

Date: the late February 2024 (tentative)

※ The results will be notified by e-mail and document.

## 4. SCHOOL FEE

Applicants need not to pay examination fee.

For the international student who passes the exam as a MEXT scholarship student, admission fee, and tuition fee will be waived.

(For the international student who passes the exam as a student of special quota, admission fee, and tuition fee will be waived.

For the international student who passes as a student of self-financed quota, admission fee and tuition fee need to be submitted.

Admission fee: 282,000JPY

Tuition fee (Annually): 535,800JPY

(First semester: 267,900JPY / Second semester: 267,900JPY)

※If amendment of admission fee and tuition fee take place, the new fee will apply from the date of revision.)

## 5. SCHOLARSHIP FOR JAPANESE GOVERNMENT (MEXT) SCHOLARSHIP STUDENTS

※An applicant who is applying for another university with MEXT scholarship at the same time is not eligible. If identified after acceptance of the scholarship grantees, the applicant will be required to withdraw from the scholarship.

144,000 yen per month. (In case that the recipient research in a designated region, 2,000 or 3,000 yen per month will be added. The monetary amount each year may be subject to change due to budgetary reasons.) Stipend will be paid for 2 years from October, 2024. The scholarship is cancelled in principle if the recipient is absent from the university for an extended period. The scholarship will be also cancelled in principle in the following situations. If the recipient has been receiving the scholarship despite his/her falling under any of the following situations, the recipient will be ordered to return the amount of scholarship that he/she received during the period wherein he/she was involved with any of the following situations.

- ① The recipient is determined to have made a false;
- ② The recipient violates any article of his/her pledge to the Minister of Education, Culture, Sports, Science and Technology;
- ③ The recipient is expelled from Kanazawa University or receives other punishment, or is removed from enrollment;
- ④ It has been determined that it will be impossible for the recipient to complete the training course within the standard time period because of poor academic grades or suspension from Kanazawa University;
- ⑤ The recipient does not obtain a College Student (ryugaku) visa before arriving Japan or the recipient's residence status has changed to one other than College Student;
- ⑥ The recipient has received a scholarship from another institution (excluding those specified for research expenditures);
- ⑦ If he/she proceeds to a more advanced level of education without receiving approval for an extension of the specific period of the scholarship;
- ⑧ The recipient drops out from Kanazawa University or transfers to another graduate school;
- ⑨ The recipient's GPA is lower than 2.30 point each year. This GPA will be calculated by the method which is designated by MONBUKAGAKUSHO;

## 6. FORCE MAJEURE



Due to force majeure, the schedule to come to Japan may be changed, the scholarship may be canceled, or the contents of the application guidelines may be changed at any time before or after the notification of acceptance.

Force majeure means events beyond the reasonable control of Monbukagakusho, such as natural disasters, government (including local governments; hereinafter the same applies in this section), or acts of government agencies (including border measures such as immigration restrictions and travel restrictions by the Japanese government or national governments concerning infectious diseases), compliance with laws, regulations or orders, fire, storm, flood or earthquake, war (whether declared or not), rebellion, revolution or riot, strike or lockout including but not limited to.

## 7. NOTES

- (1) Each applicant is advised to learn the Japanese language and to acquire some information on Japanese weather, climate, customs, university education, and conditions in Japan, as well as about the difference between the Japanese legal system and that of his/her home country before departing for Japan.
- (2) The successful applicant should bring approximately 250,000JPY or the equivalent to cover the immediate needs after arrival in Japan (rent of apartment, insurance, etc.).
- (3) Additional details of this program are available from the contact information below.
- (4) Do not use erasable ball-point pens for application documents.



Admission Section, Student Affairs Division,  
Science and Engineering Administration Department,  
Kanazawa University  
Kakuma, Kanazawa, Ishikawa 920-1192 JAPAN  
Phone: +81-76-234-6823 Fax: +81-76-234-6844  
<http://www.nst.kanazawa-u.ac.jp/etic/>  
E-mail: [s-nyusi@adm.kanazawa-u.ac.jp](mailto:s-nyusi@adm.kanazawa-u.ac.jp)

**Graduate Program on Science and Engineering for Sustainable Development : Environmental/Energy Science and Engineering (Environmental and Energy Technologies International Course)**  
Instructors and Research

**Division of Material Chemistry**

Name	Position	Research Field
Hiroshi Hasegawa	Professor	Hydrosphere chemistry, environmental chemistry, remediation technology, toxic metals, rare metals
Tetsuya Taima	Professor	Organic photovoltaic cell, perovskite solar cell, molecular orientation control
Akio Ohta	Associate Professor	Physical chemistry of interfaces, surfactant science, amino acid-type surfactants, surfactants, biomaterials, calorimetry
Takahiro Yamaguchi	Associate Professor	Electrochemistry, Modified electrode, Oxygen reduction reaction
Asami Mashio	Associate Professor	Marine chemistry, Environmental chemistry, Analytical chemistry
SHAHIDUZZAMAN MD	Assistant Professor	Fabrication of Perovskite Solar Cells
WONG KUO HONG	Assistant Professor	Biogeochemical cycles, Chemical oceanography, Aquatic Analytical Chemistry, Trace metals, Microorganism
ASAKAWA, Hitoshi	Associate Professor	Atomic force microscopy, Solid-liquid interface, Intermolecular interactions
NAKANO, Masahiro	Assistant Professor	photovoltaic devices, self-assembled monolayer, organic spintronic materials

**Division of Mechanical Science and Engineering**

Name	Position	Research Field
Takahiro KIWATA	Professor	Fluid Engineering
Takaaki Kono	Associate Professor	Wind Turbine Engineering, Computational Fluid Dynamics, Wind Engineering
Hiroshi Enomoto	Associate Professor	Combustion, Internal combustion engine, Biomass usage
Yoshikazu Teraoka	Associate Professor	thermal engineering, heat transfer
Akio Kodama	Professor	Adsorption, gas separation, desiccant cooling, air purification, low-temperature heat energy
Takuya Tsujiguchi	Professor	Fuel cell, Desiccant Cooling system, Heat and Mass Transport analysis
Yugo Osaka	Associate Professor	Thermal battery, Heat/Electricity integrated energy management system, Exhaust gas purification
Masashi Haruki	Professor	Heat storage, New energy device and system, Controlling thermal conductivity, Thermophysical property, Supercritical fluid technology

**Division of Frontier Engineering**

Name	Position	Research Field
Takafumi Seto	Professor	Nano-particles, aerosols
Hirohisa Uchida	Professor	High pressure/Supercritical fluid technology, Advanced materials production, Crystallization, Thermodynamics
Mikio Kumita	Professor	Adsorption, Sorption cooling, Heat and mass transfer, Reaction engineering
Noboru Takiguchi	Associate Professor	Bioprocesses, bioinformatics
Yayoi Inomata	Associate Professor	Atmospheric Environment Science, Meteorology, Geochemistry

**Division of Electrical, Information and Communication Engineering**

Name	Position	Research Field
Tatsuo Ishijima	Professor	Plasma Application
Yasunori Tanaka	Professor	Power engineering/Power conversion/Electric machinery, Plasma science
Takeo MARUYAMA	Associate Professor	Optoelectronics, Silicon Photonics, Optical Wireless Power Transmission, Semiconductor Devices
Yusuke NAKANO	Assistant Professor	Electrical Discharge, Electrical Insulation, Current Interruption, Power System

**Division of Geosciences and Civil Engineering**

Name	Position	Research Field
Zhen-jiang Shen	Professor	Inventory and total amount control approach for urban environment management simulation, agent-based models
Mitsuhiko Hata	Professor	Aerosol, biomass combustion, source countermeasure technologies
Ryo Honda	Professor	Environmental process engineering, Environmental microbiology, Water treatment process
Masashi Ohashi	Professor	Materials physics and chemistry, Thermophysical property, Functional materials, Low temperature, Magnetism
Kenji Taniguchi	Professor	Numerical weather prediction, River runoff simulation, Impact assessment of global warming
Tatsuya Nishino	Professor	Architectural Planning, Living Environment for the Elderly, Restructuring of Public Facilities
Seiya Hanamoto	Associate Professor	Environmental chemistry
Norihisa Matsuura	Associate Professor	Water environmental engineering, wastewater treatment, eco-friendly technology, microbial community analysis
Hiroe Hara-Yamamura	Associate Professor	Water environment engineering, Wastewater reclamation, Emerging contaminants
Yuri Nishiwaki-Akine	Associate Professor	biomass conversion, surface chemistry
TENG, Xiao	Assistant Professor	National land use planning, Smart city and zero energy buildings