Kanazawa University
Graduate School of
Natural Science and Technology
(Master’s Level Section)

“Environmental and Energy Technologies International Course”

Applicant Guidelines for International Students (October 2019)
- 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 course 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 course 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

<table>
<thead>
<tr>
<th>Date</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 4 - January 15, 2019 Japan time: 17:00</td>
<td>Application Period</td>
</tr>
<tr>
<td>Middle to late of January, 2019 (tentative)</td>
<td>Notification of schedule on an Oral Examination</td>
</tr>
<tr>
<td>Beginning to middle of February, 2019 (tentative)</td>
<td>Oral Examination</td>
</tr>
<tr>
<td>Beginning of March, 2019 (tentative)</td>
<td>Notification of Results</td>
</tr>
<tr>
<td>October 1, 2019</td>
<td>Admission</td>
</tr>
</tbody>
</table>

2. QUALIFICATIONS

● The number of students to be admitted
  ※ International students: Total 16 students*

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of applicants accepted</th>
</tr>
</thead>
<tbody>
<tr>
<td>International students (as MEXT scholarship students)</td>
<td>3*</td>
</tr>
</tbody>
</table>

*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 Electrical Engineering and Computer Science
  4) Division of Environmental Design
  5) Division of Natural System (Chemical Engineering Course)
● 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://ridb.kanazawa-u.ac.jp/public/](http://ridb.kanazawa-u.ac.jp/public/)

● Age
Applicant must have been born on or after April 2, 1984.

● Academic Background
Applicant must have graduated or will graduate from a Japanese university by September 30, 2019. 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, 2019 a 16-year school curriculum in a foreign country.
[2] is or will be age 22 by September 30, 2019 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, 2019 for admission to a Japanese graduate school.

● Academic Record
Eligible applicants must have GPA (Grade Point Average) of 2.30 or higher over the previous two years.
If an applicant’s university employs the semester system and grades obtained in the last semester have been notified, GPA shall be calculated from the results within last 2 years.
*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

<table>
<thead>
<tr>
<th>Grade Point</th>
<th>4-point scale</th>
<th>4-point scale</th>
<th>4-point scale</th>
<th>5-point scale</th>
<th>5-point scale</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4-point scale</td>
<td>4-point scale</td>
<td>4-point scale</td>
<td>5-point scale</td>
<td>5-point scale</td>
</tr>
<tr>
<td>Excellent</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>S</td>
<td>A</td>
</tr>
<tr>
<td>Good</td>
<td>80~100%</td>
<td>70~79%</td>
<td>60~69%</td>
<td>80~89%</td>
<td>70~79%</td>
</tr>
<tr>
<td>Average</td>
<td>0~59%</td>
<td>0~59%</td>
<td>0~59%</td>
<td>0~59%</td>
<td>0~59%</td>
</tr>
<tr>
<td>Fail</td>
<td>0~59%</td>
<td>0~59%</td>
<td>0~59%</td>
<td>0~59%</td>
<td>0~59%</td>
</tr>
</tbody>
</table>

*Total number of grades (including those with a value of 0)*

\[
\text{Point value} = (\text{number of 3 point grades}) \times 3 + (\text{number of 2 point grades}) \times 2 + (\text{number of 1 point grades}) \times 1 + (\text{number of 0 point grades}) \times 0
\]

\[
\Rightarrow \text{GPA} = \frac{\text{Total number of grades}}{\text{Total number of credits}}
\]

### 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 Common European Framework of Reference for Languages (CEFR) B2 or equivalent/higher level of English ability;
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.*

http://www.mext.go.jp/b_menu/houdou/30/03/__icsFiles/afieldfile/2018/03/26/1402610.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, 2019.

### 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 at the time of their arrival in Japan and the scholarship period;
2. Those who cannot arrive in Japan during the period designated by MEXT or Kanazawa University;
3. Those who are a previous recipient of Japanese Government (MEXT) Scholarship (including those who declined after arrival). However, this does not apply to the people who have educational research experience or work
experience more than three years from the first day of the month following
the final payment of the previous scholarship to the beginning of the payment
of the scholarship, as of October 1, 2019, and the past recipients of Japanese
studies scholarships (who have graduated or are going to graduate from
universities in their home countries), or of Japan-Korea Joint Government
Scholarship Program for the Students in Science and Engineering
Departments, or in the Young Leaders Program:
* MEXT Honors Scholarship is not Japanese Government (MEXT) Scholarship,
so the past recipient can also apply.
[4] Those who are applying for other programs of Japanese Government (MEXT)
Scholarship for 2019:
[5] Those who are already enrolled in a Japanese university with a residence
status of “College Student,” or who are enrolled, or plan to enroll, in a
Japanese university as a privately-financed international student from the
time of application until the beginning of the payment of the scholarship.
However, this does not apply to the people who, even though they are
currently studying as a privately-financed student in Japan, will certainly
complete their studies before the beginning of the payment of the scholarship
and return to their home country:
[6] Those who are planning to receive scholarship money from an organization
other than MEXT (including a government organization of the applicant’s
country) after the beginning of the payment of Japanese Government (MEXT)
Scholarship:
[7] Those who are expected to graduate at the time of application, and cannot
satisfy the qualifications and the conditions related to academic background
by the deadline given:
[8] 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: or
[9] Those who are scheduling, at the time of application, long-term research
activities (internship, fieldwork etc.) outside of Japan or leave of absence.

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. And
then, applicants must send the originals as well.

Application Period and address for submission

Application Period: January 4, 2019 (Fri) ~ January 15, 2019 (Tue) by Japan time:
17:00
Admission Affairs Section, Student Affairs Division, Science and Engineering Administration Department
Kakuma, Kanazawa 920-1192

Email address: s-nyusi@adm.kanazawa-u.ac.jp
HP: 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 (form1)
2) Application form for Japanese Government Scholarship (form2) Both side printing
3) Statement of purpose (form3)
4) A letter of recommendation from the president, Dean, or Director of the institute addressed to the President of Kanazawa University (form4)
5) Academic transcript of each academic year of the last university attended including your GPA and/or ranking in your institution (issued by the same university)
6) Graduation certificate or degree certificate of the last university attended (or an attested document certifying that the application 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 (form5) Both side printing
10) Certificate of official language qualification such as TOEIC or TOEFL-iBT or TOEIC-PBT.
11) Letter of Acceptance from Prospective Supervisor (form6)
※ You should submit PDF only. The prospective supervisor will submit the original to Admission Affairs Section, Student Affairs Division.
12) Photocopy of a passport or birth certificate or certificate of citizenship
13) Certification of health (to be completed by the examining physician) (form7)
14) Pledge to the President of Kanazawa University (form8) Both side printing
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.

※ From form1 to form8 must be printed in A4 sized paper.
※ 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.
※ 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 application on all the subjects studied for each year. (A degree certificate or a graduation certificate simply showing the ranking of the applicant at graduation will not substitute for academic transcripts.)
※ 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.

(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 beginning to middle of February 2019 (tentative)
   Venue of Oral Examination: It will be announced later by prospective supervisor.

2. Announcement of Results
   Date: the beginning of March 2019 (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 takes 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, 2019. 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. 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.

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
### Division of Material Chemistry

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Research Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hiroshi Hasegawa</td>
<td>Professor</td>
<td>Hydrosphere chemistry, environmental chemistry, remediation technology, toxic metals, rare metals</td>
</tr>
<tr>
<td>Tetsuya Taima</td>
<td>Professor</td>
<td>Organic photovoltaic cell, perovskite solar cell, molecular orientation control</td>
</tr>
<tr>
<td>Akio Ohta</td>
<td>Associate Professor</td>
<td>Physical chemistry of interfaces, surfactant science, amino acid-type surfactants, surfactants, biomaterials, calorimetry</td>
</tr>
<tr>
<td>Teruya Maki</td>
<td>Associate Professor</td>
<td>Analytical chemistry, bioaerosols, environmental chemicals phytoplankton</td>
</tr>
<tr>
<td>Takahiro Yamaguchi</td>
<td>Associate Professor</td>
<td>Electrochemistry, Modified electrode, Oxygen reduction reaction</td>
</tr>
<tr>
<td>Asami Mashio</td>
<td>Assistant Professor</td>
<td>Marine chemistry, Environmental chemistry, Analytical chemistry</td>
</tr>
<tr>
<td>SHAHIDUZZAMAN MD</td>
<td>Assistant Professor</td>
<td>Fabrication of Perovskite Solar Cells</td>
</tr>
</tbody>
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### Division of Mechanical Science and Engineering

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Research Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>Takahiro KIWATA</td>
<td>Professor</td>
<td>Fluid Engineering</td>
</tr>
<tr>
<td>Takaaki Kono</td>
<td>Associate Professor</td>
<td>Wind Turbine Engineering, Computational Fluid Dynamics, Wind Engineering</td>
</tr>
<tr>
<td>Hiroshi Enomoto</td>
<td>Associate Professor</td>
<td>Combustion, Internal combustion engine, Biomass usage</td>
</tr>
<tr>
<td>Yoshikazu Teraoka</td>
<td>Associate Professor</td>
<td>thermal engineering, heat transfer</td>
</tr>
<tr>
<td>Akio Kodama</td>
<td>Professor</td>
<td>Adsorption, gas separation, desiccant cooling, air purification, low-temperature heat energy</td>
</tr>
<tr>
<td>Osamu Miki</td>
<td>Professor</td>
<td>Environmental Conservation, Marine Environment Improvement, Recycle</td>
</tr>
<tr>
<td>Takuya Tsujiguchi</td>
<td>Associate Professor</td>
<td>Fuel cell, Desiccant Cooling system, Heat and Mass Transport analysis</td>
</tr>
<tr>
<td>Yugo Osaka</td>
<td>Assistant Professor</td>
<td>Research from combustion gas to production technologies</td>
</tr>
</tbody>
</table>

### Division of Electrical Engineering and Computer Science

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Research Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tatsuo Ishijima</td>
<td>Professor</td>
<td>Plasma Application</td>
</tr>
</tbody>
</table>

### Division of Environmental Design

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Research Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ryoko Ikemoto</td>
<td>Professor</td>
<td>Sewage systems, wastewater treatment, biological waste water treatment, water environment, microbes, sulfate reduction</td>
</tr>
<tr>
<td>Zhen-jiang Shen</td>
<td>Professor</td>
<td>Inventory and total amount control approach for urban environment management simulation, agent-based models</td>
</tr>
<tr>
<td>Masami Furuuchi</td>
<td>Professor</td>
<td>Assessment of atmospheric environment, aerosol, nano-particles, air pollution control technology, assessment of occupational exposures</td>
</tr>
<tr>
<td>Mitsuhiko Hata</td>
<td>Associate Professor</td>
<td>Aerosol, biomass combustion, source countermeasure technologies</td>
</tr>
<tr>
<td>Ryo Honda</td>
<td>Associate Professor</td>
<td>Environmental Process Engineering, Biomass Energy, Environmental Microbiology, Membrane Process, Global Warming Mitigation Technology</td>
</tr>
<tr>
<td>Masashi Ohashi</td>
<td>Associate Professor</td>
<td>Materials physics and chemistry, Thermophysical property, Functional materials, Low temperature, Magnetism</td>
</tr>
<tr>
<td>Kenji Taniguchi</td>
<td>Associate Professor</td>
<td>Numerical weather prediction, River runoff simulation, Impact assessment of global warming</td>
</tr>
<tr>
<td>Norihisa Matsuura</td>
<td>Assistant Professor</td>
<td>Water environmental engineering, wastewater treatment, eco-friendly technology, microbial community analysis</td>
</tr>
<tr>
<td>Hiroe Hara-Yamamura</td>
<td>Assistant Professor</td>
<td>Water environment engineering, Wastewater reclamation, Emerging contaminants</td>
</tr>
<tr>
<td>Name</td>
<td>Position</td>
<td>Research Field</td>
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</tr>
<tr>
<td>Yoshio Otani</td>
<td>Professor</td>
<td>Aerosol technology, nano-particles, air filtration</td>
</tr>
<tr>
<td>Takafumi Seto</td>
<td>Professor</td>
<td>Nano-particles, aerosols</td>
</tr>
<tr>
<td>Kenji Takahashi</td>
<td>Professor</td>
<td>Biomass Refinery, Artificial photosynthesis, chemical reaction processes using</td>
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<td></td>
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<td>ionic liquids, supercritical fluids, plasma and microwave</td>
</tr>
<tr>
<td>Hirohisa Uchida</td>
<td>Professor</td>
<td>High pressure/Supercritical fluid technology, Advanced materials production,</td>
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<td></td>
<td></td>
<td>Crystallization, Thermodynamics</td>
</tr>
<tr>
<td>Mikio Kumita</td>
<td>Associate Professor</td>
<td>Adsorption, Sorption cooling, Heat and mass transfer, Reaction engineering</td>
</tr>
<tr>
<td>Noboru Takiguchi</td>
<td>Associate Professor</td>
<td>Bioprocesses, bioinformatics</td>
</tr>
<tr>
<td>Hidenori Higashi</td>
<td>Associate Professor</td>
<td>Supercritical fluids technology, Aerosol science &amp; technology, Molecular dynamics</td>
</tr>
<tr>
<td>Yayoi Inomata</td>
<td>Associate Professor</td>
<td>Atmospheric Environment Science, Meteorology, Geochemistry</td>
</tr>
</tbody>
</table>