Master's Courses
2025 October (Fall) Admission
2026 April (Spring) Admission
Affiliated School Recommendation

Application Guidelines

Application Period:

2025 October (Fall) Admission
June 12, 2025 — June 18, 2025

2026 April (Spring) Admission
October 9, 2025 — October 15, 2025

Akita University
Graduate School of Engineering Science

https://www.riko.akita-u.ac.jp/

Master's Courses
2025 October (Fall) Admission

Affiliated School Recommendation

Graduate School of Engineering Science
Akita University

Application Guidelines

The Master's Courses are offered by Akita University Graduate School of Engineering Science to international students having a recommendation from one of Akita University's overseas affiliated schools. These cources provide the students with the opportunity to obtain a Master's Degree in either Science, Engineering Science or Engineering. **Japanese will be the main language used in the courses.**

The Akita University's overseas affiliated schools list is posted on our website.

1. Admisson Capacity

Department (Major)	Admisson Capacity
Life Science	a few
Materials Science	a few
Mathematical Science and Electrical-Electronic-Computer Engineering	a few
Systems Design Engineering	a few
Cooperative Major in Sustainable Engineering	a few

2. Application Qualifications

Applicants seeking admission must meet all of requirements below.

・The status of residence of a incoming student must be "College Student."

・All of the qualifications below must be satisfied, and the enrollement at Akita University must be promised once the candidate is accepted.

(1) Applicants will be able to graduate by September 30,2025 or have graduated from one of the Akita University's overseas affiliated universities.

(2) Applicants must have received higher education in the field of related their desired major.

(3) Applicants must have achieved the excellent academic performance.

(4) Applicants need to be people of integrity.

(5) Applicants must be recommended by either the president of their school or the dean of the faculty attended.

Note :

Applicants who are accepted based on the qualifications above, yet are later confirmed as not being able to complete the admission procedures by the deadline will

not be admitted. Details on admission procedures will be sent to all accepted students along with a Letter of Acceptance.

3. Application Period and Mailing Address

(1) Application Period:

From June 12, 2025 to no later than June 18, 2025.

1) If brought in person or by proxy, application documents will be accepted at the Admissions Office between 9:00 a.m. and 4:00 p.m.

2) If mailed, application documents must be sent by registered mail and "Application to Master's Course, Admission by Recommendation, Graduate School of Engineering Science" must appear in red on the front side of the envelope. The documents must reach the Admissions Office no later than 4:00 p.m. on June 18, 2025 (Japan time). Special attention should be paid in estimating the days needed for overseas delivery.

(2) Mailing address:

Admissions Office
Akita University
1-1, Tegata Gakuen-machi
Akita-shi 010-8502 Japan
Tel: +81-18-889-2313
E-mail: nyushi@jimu.akita-u.ac.jp

4. Application Procedures

(1) Documents to be submitted

① Letter of Recommendation

Recommendations must be written by the applicant's supervising instructor and be issued by the president of the school or the dean of the faculty of the affiliated university.

② Application for Admission

Requested information must be entered on the designated form (attached herein).

③ ID Photo Card

A frontal-view photograph of the applicant's face, without a hat, 4.5 cm x 3.5 cm in size and taken within three months prior to this application must be pasted in the designated area of the ID photo Card (attached herein).

④ Certificate of Completion or Prospective Completion or Certificate of Graduation

Must be prepared by the president or the dean of the school attended.

⑤ Academic Record Transcripts

Must be prepared by the president or the dean of the school attended.

⑥ Evaluation Fee Payment

The evaluation fee is 30,000 yen.

・Amount: 30,000 yen
・Remittance Period: May 22, 2025 - June 18, 2025 (Japan time)
・Paying Charge: Sender

Making international payment:

Akita University has partnered with Flywire to streamline international payment process for our students. With Flywire, you can pay online, securely from any country and any bank, typically in your home currency.

How to make a payment:

・At the below, first enter your payment amount and country of origin to initiate your payment booking.
[http://akita-u.flywire.com]
・Follow instructions to send payment funds to Flywire. For debit/credit card payments, enter your card details online to complete your payment in your home currency.
(Additional local payment options may be available depending on the country you are paying from.)
・Receive text and e-mail status updates each step of the way, including a confirmation when your payment has been delivered to your institution. If you have created a Flywire account, then you are also able to track your payment any time by logging into your account.

Flywire Customer Support Information (24hrs):
E-mail: support@flywire.com
Web: flywire.com/help

Note:

a) After remitting the evaluation fee, send an e-mail notifying the Admissions Office as soon as possible.
[E-mail : nyushi@jimu.akita-u.ac.jp]

b) If the evaluation fee received does not meet the required amount of 30,000 yen, the application procedure will be considered incomplete, and the application will not be accepted. The Evaluation Fee will be returned to the applicant, but the remittance fee will be withheld.

c) The Evaluation Fee will not be refunded for any reason after the application documents have been received. The Evaluation Fee is non-refundable in the case of disqualification or withdrawal of entrance by the applicant

d) In case of remitting the evaluation fee from within Japan, please e-mail the address of Admissions Office before remitting the fee.
Admissions Office will give instructions to you.
Please don't remit the fee before receiving instructions.

⑦ Others

- Applicants who live in Japan and do not have Japanese citizenship must submit a certified copy of Alien Registration issued by the municipality where they reside.
- Applicants residing overseas must submit an authorized certificate of his/her family register or proof of citizenship in home country.

(2) Important notices for submitting documents

1) No application will be accepted unless all documents mentioned above are fully and accurately completed.
2) Once submitted, documents will not be returned to applicants for any reason.
3) Applicants are not allowed to change departments, major and cources after submission of application.
4) If Contact Address entered in the application form changes after submission, the Admissions Office must be promptly notified of such change.
[E-mail: nyushi@jimu.akita-u.ac.jp]
5) Attached forms may be either hand-written or typed.

5. Evaluation of Applicants

Screening for admission will be conducted based on analysis of all documents submitted.

6. Pre-consultation for Disabled Applicants

As a preliminary step in the application process, disabled applicants (refer to the chart below) who need special consideration during either the application process or the course itself must submit a document detailing the items listed below (form not designated) together with a medical certificate prepared by a doctor no later than May 16, 2025. Early consultation is recommended since advance preparation may be needed in cases of severe disability.

① Name, age, contact address, telephone number, and desired department(major) .
② Type and degree of disability.
③ Detailed explanation of care needed during application and course study.
④ Special preparation and care taken at the university last attended.
⑤ Description of everyday life.
⑥ Name, address, and telephone number of the university last attended.

If needs arise after the deadline of May 16, 2025 due to accident or other contingency, please contact the Admissions Office immediately.

Type of Disability	Extent of Disability
Visual	Those who are with eyesight of less than 0.3 with both eyes (Universal Eyesight Test Chart) or who have ophthalmologic functional disorders that do not allow easy recognition of normal size letters or diagrams, even with the use of a magnifying glass.
Hearing	Those who are with an auditory capacity of more than 60 decibels (Audiometer testing) who have difficulty listening to normal talking even with a hearing aid.
Physical	1. Those who are not capable of performing basic daily tasks such as walking or writing even with the use of orthopedic or prosthetic devices. 2. Those with physical disabilities not as severe as the above but who need constant medical assistance and/or observation.
Health	1. Those who are under constant medical restrictions due to prolonged chronic respiratory, kidney, nervous system illness, malignant growth, or other disorder. 2. Those placed under medical restrictions due to prolonged weak or feeble health.
Other	Those who are not specifically mentioned above, yet require special consideration when either applying for admission or attending classes during the course of study.

Note:

a) The above are in conformity with Article 22-3 of the School Education Law Enforcement Regulations.

b) Advance contact is also requested if the applicant uses a hearing aid, crutches, or a wheelchair on an everyday basis.

7. Acceptance Notification

Results are tentatively scheduled to be e-mailed to all applicants after 3:00 p.m on July 15, 2025.

Therefore telephone inquiries will not be honored. A letter of Acceptance will be sent to a successful applicant.

8. Promise of Enrollment

Accepted students must submit the Promise of Enrollment upon receipt of the Letter of Acceptance (a form enclosed with the Letter of Acceptance) to the Admissions Office no later than August 18, 2025. If this promise is not received by the deadline, it will be understood that enrollment will not take place.

9. Admissions Procedures

(1) Details for Admission Procedures will be sent to all who are accepted along with the Letter of Acceptance.

(2) School Fees (must be paid in Japanese currency)

① Admission fee: 282,000 JPY (subject to change)

② Tuition: 267,900 JPY for the first semester (535,800 JPY for the first academic year) (subject to change)

Note :

a) Admission fee paid will be not refunded for any reason.

b) The above school fees are projected amounts and are subject to change before or during the course. Revised admission fee will apply to all new students if the revision takes place before the end of the Admission Procedure Period. If the tuition is revised at the time of admission or during the course, the new tuition takes effect at the time of revision.

c) If a candidate cancels one's admission before 5:00 p.m on September 30, 2025 after completion of the Admission Procedures due to unavoidable circumstances, the tuition paid may be refunded upon the payer's request only after designated procedures are completed.

(3) Other information

1) Those with an excellent academic standing yet who have difficulty with paying the admission fee due to financial circumstances and those who demonstrate other financial needs may be eligible upon screening to apply for financial aid. Those accepted will be either exempt from paying all or half of the admission fee, or may be all owed to pay the fee at a later date.

2) Those with an excellent academic standing yet who have difficulty with paying the tuition due to financial circumstances and those who demonstrate other financial needs may be eligible upon screening to apply for financial aid. Those accepted will be either exempt from paying all, half or a third of the tuition, or may be allowed to pay the fee at a later date.

Admissions Office
Akita University
1-1, Tegata Gakuen-machi
Akita-shi 010-8502 Japan
Tel.: +81-18-889-2313
E-mail: nyushi@jimu.akita-u.ac.jp

10. Other Notes

Akita University has established the university's Rules on Security Export Control in accordance with the Foreign Exchange and Foreign Trade Act, and conducts strict examinations for acceptance of international students, etc. Therefore, please be advised that international applicants may be unable to receive their desired education or conduct their desired research due to the restriction by the above regulations.

Master's Courses
2026 April (Spring) Admission

Affiliated School Recommendation

Graduate School of Engineering Science
Akita University

Application Guidelines

The Master's Courses are offered by Akita University Graduate School of Engineering Science to international students having a recommendation from one of Akita University's overseas affiliated schools. These cources provide the students with the opportunity to obtain a Master's Degree in either Science, Engineering Science or Engineering. **Japanese will be the main language used in the courses.**

The Akita University's overseas affiliated schools list is posted on our website.

1. Admisson Capacity

Department (Major)	Admisson Capacity
Life Science	a few
Materials Science	a few
Mathematical Science and Electrical-Electronic-Computer Engineering	a few
Systems Design Engineering	a few
Cooperative Major in Sustainable Engineering	a few

2. Application Qualifications

Applicants seeking admission must meet all of requirements below.

・The status of residence of a incoming student must be "College Student."

・All of the qualifications below must be satisfied, and the enrollement at Akita University must be promised once the candidate is accepted.

(1) Applicants will be able to graduate by March 31,2026 or have graduated from one of the Akita University's overseas affiliated universities.

(2) Applicants must have received higher education in the field of related their desired major.

(3) Applicants must have achieved the excellent academic performance.

(4) Applicants need to be people of integrity.

(5) Applicants must be recommended by either the president of their school or the dean of the faculty attended.

Note :

Applicants who are accepted based on the qualifications above, yet are later confirmed as not being able to complete the admission procedures by the deadline will

not be admitted. Details on admission procedures will be sent to all accepted students along with a Letter of Acceptance.

3. Application Period and Mailing Address

(1) Application Period:

From October 9, 2025 to no later than October 15, 2025.

1) If brought in person or by proxy, application documents will be accepted at the Admissions Office between 9:00 a.m. and 4:00 p.m.

2) If mailed, application documents must be sent by registered mail and "Application to Master's Course, Admission by Recommendation, Graduate School of Engineering Science" must appear in red on the front side of the envelope. The documents must reach the Admissions Office no later than 4:00 p.m. on October 15, 2025 (Japan time). Special attention should be paid in estimating the days needed for overseas delivery.

(2) Mailing address:

Admissions Office
Akita University
1-1, Tegata Gakuen-machi
Akita-shi 010-8502 Japan
Tel: +81-18-889-2313
E-mail: nyushi@jimu.akita-u.ac.jp

4. Application Procedures

(1) Documents to be submitted

① Letter of Recommendation

Recommendations must be written by the applicant's supervising instructor and be issued by the president of the school or the dean of the faculty of the affiliated university.

② Application for Admission

Requested information must be entered on the designated form (attached herein).

③ ID Photo Card

A frontal-view photograph of the applicant's face, without a hat, 4.5 cm x 3.5 cm in size and taken within three months prior to this application must be pasted in the designated area of the ID photo Card (attached herein).

④ Certificate of Completion or Prospective Completion or Certificate of Graduation

Must be prepared by the president or the dean of the school attended.

⑤ Academic Record Transcripts

Must be prepared by the president or the dean of the school attended.

⑥ Evaluation Fee Payment

The evaluation fee is 30,000 yen.

・Amount: 30,000 yen
・Remittance Period: September 30, 2025 - October 15, 2025 (Japan time)
・Paying Charge: Sender

Making international payment:

Akita University has partnered with Flywire to streamline international payment process for our students. With Flywire, you can pay online, securely from any country and any bank, typically in your home currency.

How to make a payment:

・At the below, first enter your payment amount and country of origin to initiate your payment booking.
[http://akita-u.flywire.com]
・Follow instructions to send payment funds to Flywire. For debit/credit card payments, enter your card details online to complete your payment in your home currency.
(Additional local payment options may be available depending on the country you are paying from.)
・Receive text and e-mail status updates each step of the way, including a confirmation when your payment has been delivered to your institution. If you have created a Flywire account, then you are also able to track your payment any time by logging into your account.

Flywire Customer Support Information (24hrs):

E-mail: support@flywire.com
Web: flywire.com/help

Note:

a) After remitting the evaluation fee, send an e-mail notifying the Admissions Office as soon as possible.
[E-mail : nyushi@jimu.akita-u.ac.jp]

b) If the evaluation fee received does not meet the required amount of 30,000 yen, the application procedure will be considered incomplete, and the application will not be accepted. The Evaluation Fee will be returned to the applicant, but the remittance fee will be withheld.

c) The Evaluation Fee will not be refunded for any reason after the application documents have been received. The Evaluation Fee is non-refundable in the case of disqualification or withdrawal of entrance by the applicant

d) In case of remitting the evaluation fee from within Japan, please e-mail the address of Admissions Office before remitting the fee.
Admissions Office will give instructions to you.
Please don't remit the fee before receiving instructions.

⑦ Others

- Applicants who live in Japan and do not have Japanese citizenship must submit a certified copy of Alien Registration issued by the municipality where they reside.
- Applicants residing overseas must submit an authorized certificate of his/her family register or proof of citizenship in home country.

(2) Important notices for submitting documents

1) No application will be accepted unless all documents mentioned above are fully and accurately completed.
2) Once submitted, documents will not be returned to applicants for any reason.
3) Applicants are not allowed to change departments, major and cources after submission of application.
4) If Contact Address entered in the application form changes after submission, the Admissions Office must be promptly notified of such change.
[E-mail: nyushi@jimu.akita-u.ac.jp]
5) Attached forms may be either hand-written or typed.

5. Evaluation of Applicants

Screening for admission will be conducted based on analysis of all documents submitted.

6. Pre-consultation for Disabled Applicants

As a preliminary step in the application process, disabled applicants (refer to the chart below) who need special consideration during either the application process or the course itself must submit a document detailing the items listed below (form not designated) together with a medical certificate prepared by a doctor no later than September 18, 2025. Early consultation is recommended since advance preparation may be needed in cases of severe disability.

① Name, age, contact address, telephone number, and desired department(major) .
② Type and degree of disability.
③ Detailed explanation of care needed during application and course study.
④ Special preparation and care taken at the university last attended.
⑤ Description of everyday life.
⑥ Name, address, and telephone number of the university last attended.

If needs arise after the deadline of September 18, 2025 due to accident or other contingency, please contact the Admissions Office immediately.

Type of Disability	Extent of Disability
Visual	Those who are with eyesight of less than 0.3 with both eyes (Universal Eyesight Test Chart) or who have ophthalmologic functional disorders that do not allow easy recognition of normal size letters or diagrams, even with the use of a magnifying glass.
Hearing	Those who are with an auditory capacity of more than 60 decibels (Audiometer testing) who have difficulty listening to normal talking even with a hearing aid.
Physical	1. Those who are not capable of performing basic daily tasks such as walking or writing even with the use of orthopedic or prosthetic devices. 2. Those with physical disabilities not as severe as the above but who need constant medical assistance and/or observation.
Health	1. Those who are under constant medical restrictions due to prolonged chronic respiratory, kidney, nervous system illness, malignant growth, or other disorder. 2. Those placed under medical restrictions due to prolonged weak or feeble health.
Other	Those who are not specifically mentioned above, yet require special consideration when either applying for admission or attending classes during the course of study.

Note:

a) The above are in conformity with Article 22-3 of the School Education Law Enforcement Regulations.

b) Advance contact is also requested if the applicant uses a hearing aid, crutches, or a wheelchair on an everyday basis.

7. Acceptance Notification

Results are tentatively scheduled to be e-mailed to all applicants after 3:00 p.m on November 17, 2025.

Therefore telephone inquiries will not be honored. A letter of Acceptance will be sent to a successful applicant.

8. Promise of Enrollment

Accepted students must submit the Promise of Enrollment upon receipt of the Letter of Acceptance (a form enclosed with the Letter of Acceptance) to the Admissions Office no later than December 17, 2025. If this promise is not received by the deadline, it will be understood that enrollment will not take place.

9. Admissions Procedures

(1) Details for Admission Procedures will be sent to all who are accepted along with the Letter of Acceptance.

(2) School Fees (must be paid in Japanese currency)

① Admission fee: 282,000 JPY (subject to change)

② Tuition: 267,900 JPY for the first semester (535,800 JPY for the first academic year) (subject to change)

Note :

a) Admission fee paid will be not refunded for any reason.

b) The above school fees are projected amounts and are subject to change before or during the course. Revised admission fee will apply to all new students if the revision takes place before the end of the Admission Procedure Period. If the tuition is revised at the time of admission or during the course, the new tuition takes effect at the time of revision.

c) If a candidate cancels one's admission before 5:00 p.m on March 31, 2026 after completion of the Admission Procedures due to unavoidable circumstances, the tuition paid may be refunded upon the payer's request only after designated procedures are completed.

(3) Other information

1) Those with an excellent academic standing yet who have difficulty with paying the admission fee due to financial circumstances and those who demonstrate other financial needs may be eligible upon screening to apply for financial aid. Those accepted will be either exempt from paying all or half of the admission fee, or may be all owed to pay the fee at a later date.

2) Those with an excellent academic standing yet who have difficulty with paying the tuition due to financial circumstances and those who demonstrate other financial needs may be eligible upon screening to apply for financial aid. Those accepted will be either exempt from paying all, half or a third of the tuition, or may be allowed to pay the fee at a later date.

Admissions Office
Akita University
1-1, Tegata Gakuen-machi
Akita-shi 010-8502 Japan
Tel.: +81-18-889-2313
E-mail: nyushi@jimu.akita-u.ac.jp

10. Other Notes

Akita University has established the university's Rules on Security Export Control in accordance with the Foreign Exchange and Foreign Trade Act, and conducts strict examinations for acceptance of international students, etc. Therefore, please be advised that international applicants may be unable to receive their desired education or conduct their desired research due to the restriction by the above regulations.

Obtaining a Visa

Foreign nationals wishing to stay in Japan for more than 90 days must obtain a "Japan Visa" in advance. There are several types of visas, and visa status is determined by the reason for coming to Japan, status, and position. The "Student" visa applies to international students studying at Japanese universities. The visa application must be made in person at the Japanese embassy or consulate in your country. It takes from a few days to a month from the time of application until the visa is issued.

Procedures differ for MEXT Scholarship students and privately financed students. Please confirm the following and take the necessary procedures.

If you are selected as a MEXT Scholarship student:

Approximately one month prior to enrollment, Akita University will send the "Certificate of Acceptance," which is required for visa application, to the applicant and inform you of the date when you can start the visa application. After receiving this notice, please apply for the visa at the Japanese embassy or consulate in your country with your passport and other necessary documents.

If you are enrolling as a MEXT Scholarship student, you do not need to submit the "Certificate of Eligibility" listed below.

If it is decided that you are enrolling as a privately financed student:

A "Certificate of Eligibility" (hereinafter referred to as "COE") is required to apply for a visa. After you pass the screening process and it is decided that you are enrolling as a privately financed student, Akita University will apply for a COE to the Immigration Bureau of Japan on behalf of you in response to your request. Once the COE is issued, Akita University will send it to you by email. After receiving the COE, please apply for a visa at the Japanese embassy or consulate in your country with your passport and other necessary documents.

〈Procedures for obtaining the Certificate of Eligibility〉

① Contact Akita University International Affairs Division (hereinafter referred to as the "IAD") by e-mail after receiving "Certificate of Acceptance" and it is decided that you are enrolling as a privately financed student.
(the applicant → the IAD)
*E-mail address: ryugaku@jimu.akita-u.ac.jp (the IAD)
*The subject of the e-mail should be "Application for Certificate of Eligibility" and scanned copy of the "Certificate of Acceptance" should be attached.

② Guidance on documents required for the application process for the COE
(the IAD → the applicant)

③ Submission of documents required for the application process for the COE
(the applicant → the IAD)

④ Application for the COE
(the IAD → Sendai Regional Immigration Bureau)
⑤ Issuance of your COE
(Sendai Regional Immigration Bureau → the IAD)
⑥ Email your COE
(the IAD → the applicant)

Note:

· The application process takes time, so applicants should contact the IAD as soon as it is decided that you are enrolling Akita University as a privately financed student. It takes about 6-8 weeks from application to issuance of the COE.

For any questions about obtaining a visa:

Akita University International Affairs Division
1-1, Tegata Gakuen-machi Akita-shi 010-8502 Japan
Tel: +81-18-889-2258
E-mail: ryugaku@jimu.akita-u.ac.jp

Japan Pre-Entry Tuberculosis Screening (JPETS)

Japan Pre-Entry Tuberculosis Screening (JPETS) is a TB test to certify with the TB Clearance Certificate that foreign nationals who intend to enter Japan from target countries and stay for a medium-to long-term do not have active tuberculosis by undergoing a chest x-ray examination, etc. at a Panel Clinic before traveling to Japan. Please check the website of Ministry of Health, Labour and Welfare.

The website for JPETS:

https://jpets.mhlw.go.jp/index.html

Information on dormitories for international students

Website:

https://www.akita-u.ac.jp/honbu/global/en/abroad/inbound/info.html

Contact:

Akita University International Student House and International House
Akita University International Affairs Division
1-1, Tegata Gakuen-machi Akita-shi 010-8502 Japan
Tel: +81-18-889-2258
E-mail: ryugaku@jimu.akita-u.ac.jp

Graduate School Outline

1. Organization

The Graduate School of Engineering Science consists of a two-year Master's Degree Program and a three-year Doctor's Degree Program.

The Master's Degree Program consists of 5 departments (8 courses), the Doctor's Degree Program consists of 1 department (4 fields). The 5 departments in the Master's Degree Program are related to the 4 departments in the undergraduate program.

[Master's Degree Program]

Department (Major)	Course
Life Science	Life Science
Materials Science	Applied Chemistry
	Materials Science and Engineering
Mathematical Science and Electrical-Electronic-Computer Engineering	Mathematical Science
	Electrical and Electronic Engineering
	Human-Centered Computing
Systems Design Engineering	Mechanical Engineering
	Civil and Environmental Engineering
Cooperative Major in Sustainable Engineering	

2. Master's Degree Program Department Outline (as of April 2025)

《Department of Life Science》

The results of research in the life sciences have led to breakthroughs that brought about many new advances in science and technology, as these fields can be seen as carving out the future of human society. This department therefore seeks to develop scientists able to unravel the elaborate workings of life phenomena; human resources who will play core and leading roles in their future professions taking advantage of their high level of knowledge, insight, and research skills in life science; and human resources who, with their grounding in science, will lead research and development in cross-disciplinary and academic fields related to medicine, pharmacology, engineering, agriculture, and other areas, and be active in many different fields related to life science including medicine, pharmaceuticals, food production, and development of bioenergy resources.

1) Life Science Course

This course consists of the Biomolecular Chemistry field, covering areas including structural biology, protein chemistry, analytical chemistry, supramolecular chemistry, organic chemistry, electrochemistry, and computational chemistry, and the Molecular Cell Biology field covering areas such as biochemistry, molecular biology, cell biology, and disease biology. In addition to helping students systematically acquire fundamental knowledge in both fields, the course fosters engineers and scientists capable of independently pursuing research and development based on a high level of specialized expertise.

Course	**Life Science**		
Field of Instruction and Research	Quality	Faculty Member	Instruction Subject
Chemistry and Chemical Biology	Structural and functional analyses of industrially and/or medically important proteins	Prof. Masafumi Odaka	Advanced Bioinorganic Chemistry
	Total synthesis of biologically active natural products	Prof. Kenshu Fujiwara [28]	Synthetic Medicinal Chemistry I, II
	Supramolecular chemistry based on macrocyclic compounds	Associate Prof. Yoshihiko Kondo	Advanced Structural Organic Chemistry I, II
	Exploiting sensing techniques for biomolecules and biological calls	Associate Prof. Hirotoshi Matsumura	Advanced Spectrochemistry I, II
Molecular Cell Biology	Study for neurodegenerative disease and protein aggregation	Prof. Hiroshi Kubota [28]	Frontier in Cell Biology
	Studies on immune responses and molecular physiology in the immune cells	Prof. Masaki Hikida	Molecular Cell Physiology
	Molecular mechanisms of planar cell polarity	Prof. Masakazu Yamazaki	Tissue and Cell Biology I, II
	The opposing hedonic systems driving innate and learned behaviors in fruit flies	Associate Prof. Nobuhiro Yamagata	Advanced Physiology I,II
	Biological functions of p53 and its isoforms in cellular senescence and aging-associated diseases	Lecturer Kaori Fujita	Molecular Cell Physiology II, III

Note: [28] indicate faculty members scheduled to retire in March 2028.

《Department of Materials Science》

Today, as energy problems, environmental degradation, resource depletion, and other global issues become increasingly severe, demands are heightening for technology development toward the promotion of green innovation and highly efficient infrastructure systems. The role to be played by materials science, based on applied chemistry and on materials science and engineering, is becoming more important than ever before. Responding to these needs of society, it is essential that we bring together scientific knowledge across the basic fields of physics, chemistry, and mathematics, pursuing the limits of the potential in materials while aiming to create new materials and functions. This department develops engineers, scientists, and educators equipped with a strong sense of ethics, who are able to deal with various issues relating to materials science facing modern society. The department consists of the Applied Chemistry Course and the Materials Science and Engineering Course, playing a closely interrelated role in the education and research of the Graduate School.

1) Applied Chemistry Course

With chemistry-related knowledge as a foundation, the necessary curriculum is provided for linking material design and synthesis from the atomic and molecular level to creation of original materials. Human resources are fostered who can exercise agility in creating environmentally harmonious materials, such as through the development of new functional materials, effective use of chemical energy in recycling and regeneration, and advanced use of biological functions, and in conducting research and development on leading-edge technologies.

2) Materials Science and Engineering Course

Based on materials science and materials engineering, the necessary curriculum is provided for gaining practical experience in creating new materials and new functions, with the main focus on metals, semiconductors, and ceramics. In this way, human resources are fostered who are able to clarify the expression mechanisms of material properties based on simulations and on organizational and structural analysis from the nanoscale to the macro scale, and to contribute to developing technologies for producing and manufacturing next-generation functional materials in harmony with human society.

Course	**Applied Chemistry**		
Field of Instruction and Research	Quality	Faculty Member	Instruction Subject
Chemistry of Organic Materials	Synthesis and properties of organic functional materials	Prof. Mitsutoshi Jikei	Advanced Molecular Science and Technology
		Associate Prof. Kazuya Matsumoto	Functional Polymer Chemistry I, II
		Associate Prof. Manabu Yamada	Molecular Recognition Chemistry
Applied Physical Chemistry	Design and application of environmental advanced materials from the viewpoint of physical chemistry	Prof. Kenji Murakami	Advanced Surface Chemistry I, II
		Lecturer Yukihiko Inoue [28]	Chemistry of Polymer Functionalities
		Lecturer Ayano Nakamura	Advanced Applied Physical Chemistry I, II
Inorganic Materials Chemistry	Synthesis and characterization of inorganic advanced materials such as porous material, catalytic materials and ceramics	Prof. Sumio Kato	Advanced Inorganic Materials Chemistry
		Associate Prof. Masataka Ogasawara	Advanced Characterization of Inorganic Materials
		Lecturer Kanji Saito	Advanced Inorganic Nanospace Materials Science I, II
Organometallic Chemistry	Development of transition metal complex catalysts utilized for organic syntheses and bio-inspired methods of molecular transformation	Associate Prof. Hidetake Seino (Faculty of Education and Human Studies)	Advanced Organometallic Chemistry
Energy Chemical Engineering	Process design of heterogeneous reaction for efficient utilization of energy and resources	Prof. Hirokazu Okawa	Advanced Electrochemistry
		Associate Prof. Takahiro Kato	Energy Chemical Engineering I, II
Bioprocess Engineering	Bioprocess design and development by integrating biological and biochemicaltechnologies, and creation and application of new functional biomaterials	Prof. Takeshi Gotoh [26] Associate Prof. Ikki Horiguchi	Nanobiotechnology
Environmental material sciences	Education and research about development and utilization of the environmental harmony type composite material using the materials that put low stress on environment superior in a physicochemical characteristic	Lecturer Hideki Murakami (Mathematical Science Course)	Advanced Industrial Raw Materials Science

Note: [26] and [28] indicate faculty members scheduled to retire in March 2026 and March 2028, respectively.

Course	**Materials Science and Engineering**		
Field of Instruction and Research	Quality	Faculty Member	Instruction Subject
Physical Properties of Materials	Research and education on the structural analysis of materials and the development of structural and functional materials by microstructure control	Prof. Kaichi Saito [29]	Diffraction Physics I, II
Fabrication Engineering of Inorganic Materials	Fabrication processes, microstructural control and evaluation of inorganic materials via powder processes	Prof. Shigeo Hayashi [28]	Design of Inorganic Materials I, II
Microstructure Design of Materials	Education and research on numerical simulation for structure formation	Prof. Yukinobu Natsume	Microstructure Design of Materials I, II
Physical Properties of Solids	Research and education on the atomic structure and physical properties of metals and alloys	Associate Prof. Yeong-Gi So	Physical properties of Solid I, II
Magnetic Materials	Development of nano magnetic materials and thin films	Associate Prof. Takashi Hasegawa	Applied Magnetics I, II
Material Science with Quantum Beams	Research and education on the development of phosphor materials for radiation measurements	Associate Prof. Naoki Kawano	Material Science with Quantum Beams I, II
Molecular Electronics	Education for understanding into the basic concepts involved in the field of molecular electronics, and research on phenomenon concerning about electron and photon in molecular structure and their assembly, by understanding of the electrical conduction in single-mole cule circuits, and by introducing to the experimental techniques and theoretical concepts	Lecturer Yutaka Tsujiuchi [29]	Molecular Electronics I, II
Mechanics of Materials	Evaluation of structure and mechanical properties and material design for plastic base, metal base and ceramic base composites	Prof. Ken-ichi Ohguchi	Mechanics of Composite Materials I,II
Thin Film Materials	Fabrication and evaluation of thin film materials for electronic device application	Prof. Satoru Yoshimura	Physical Properties of Thin Film Materials
Ceramic Materials	Physical, mechanical and electrical properties of ceramics and their application to energy generation and use	Associate Prof. Akihiro Nino	Physical and Mechanical Properties of Ceramics Materials I,II
Surface Modification	Modifying process for the functional surface of materials	Associate Prof. Michihisa Fukumoto	Surface Modification I, II
Foundry Engineering	Education and research on fusion and solidification processing for highly functional materials	Associate Prof. Ikuzo Goto	Fusion and Solidification Processing I, II
Electrochemistry of Materials	Education and research on the electrode materials in electrochemical system	Associate Prof. Hiroki Takahashi	Materials for Electrochemistry I, II
Mechanical Materials	Development of metal matrix composites and evaluation of the material properties	Lecturer Kohei Fukuchi	Design of Composite Materials I, II

Note: [28] and [29] indicates faculty members scheduled to retire in March 2028 and March 2029, respectively.

《Department of Mathematical Science and Electrical-Electronic-Computer Engineering》

The human resources to be developed in this department include those who will contribute to the advance of basic industries, solutions to energy problems, and harmony between humans and computers, driving revolutions in technology development, as well as educators and others equipped with highly specialized knowledge, skills, and insight in mathematics, theoretical physics, and computer science, and with advanced knowledge in the field of mathematical science.

Also to be fostered are human resources able to develop technologies for solving regional issues faced by Akita Prefecture with its advanced state of aging, and to communicate these to the world. In addition, they will acquire the skills for exercising leadership based on recognition of the importance of teamwork, and for dealing with unanticipated problems. That is, human resources will be fostered who, with their overview of the enormous specialized knowledge in the fields of mathematical science, electrical and electronic engineering, and computer engineering, are able to create new technologies and value for a highly aging society.

1) Mathematical Science Course

Education and research are carried out concerning advanced mathematical concepts and structures, and for clarifying and investigating the mathematical structures of physical and other phenomena. In this course whose main features include a focus on a systematic curriculum and qualifying examinations, students study advanced mathematics and related areas in order to acquire the ability to solve problems by logical thinking and from a mathematical science perspective.

2) Electrical and Electronic Engineering Course

Along with studies for systematically understanding knowledge in a wide range of specialized fields including electrical energy and equipment, electronics, photonic and electronic devices, and information communications and systems control, students engage in research for creating new applications and technologies by focusing on a particular field or integrating these fields. Through this experience, human resources are developed with creative thinking and flexible application skills.

3) Human-Centered Computing Course

The Human-Centered Computing Course develops human resources who, majoring in computer engineering, are equipped with creative thinking and flexible application skills enabling (i) the use of information and communication technologies (ICT) for supporting healthy longevity and home healthcare of the elderly in regional society, (ii) advancement of technologies and development of application systems related to environmental monitoring, disaster prevention and mitigation, and human sensing, and (iii) use of information networks, ICT, and other tools for realizing a safe and secure society.

Course	**Mathematical Science**		
Field of Instruction and Research	Quality	Faculty Member	Instruction Subject
Discrete Mathematics	Algebra, discrete mathematics, foundations of computer science and their applications	Prof. Akihiro Yamamura [28]	Advanced Algebra I, II, V, VI Information Mathematics I, II
		Associate Prof. Szilard Fazekas	Advanced Discrete Mathematics I, II
		Associate Prof. Masaya Ouchi (Faculty of Education and Human Studies)	Advanced Algebra III, IV
		Associate Prof. Shigeo Sasaki (Faculty of Education and Human Studies)	Lecture for Computer Science I, II
Continuous Mathematics	Analysis, geometry, topology and their applications	Associate Prof. Mahito Kobayashi [29]	Advanced Geometry I, II Advanced Topology III, IV
		Associate Prof. Dingqun Deng	Advanced Analysis I, II, IV, VI
		Lecturer Yasuharu Nakae	Advanced Topology I, II
		Prof. Chikara Uno (Faculty of Education and Human Studies)	Statistical Mathematics I, II
		Associate Prof. Junichi Harada (Faculty of Education and Human Studies)	Advanced Analysis III, V
Theoretical Physics	Fundamental theories for phase transition and transport phenomena in quantum many-body systems such as electron systems in solids and their applications to novel phenomena	Prof. Masaru Onoda	Quantum Many-Body Theory I, II
		Lecturer Yoshito Kuno	Quantum Theory of Many Particle Systems I, II
		Prof. Masahiko Hayashi (Faculty of Education and Human Studies)	Condensed Matter Physics I, II, III, IV
Teaching Profession	Training of mathematics teachers in high schools	Lecturer Shinichi Kato (Faculty of Education and Human Studies)	Advanced Study of Mathematics Education

Note: [28] and [29] indicate faculty members scheduled to retire March 2028 and March 2029, respectively.

Course	**Electrical and Electronic Engineering**		
Field of Instruction and Research	Quality	Faculty Member	Instruction Subject
Electric Energy and Electrification Engineering	Education and researches on generation, conversion and storage of electric energy, and engineering design oriented to human and environment, contributing to a sustainable society	Prof. Seiji Kumagai	Advanced Materials for Electrical Engineering I, II
		Associate Prof. Mahmudul Kabir	Bio Electromagnetic Engineering I, II
		Lecturer Shotaro Takahashi	Advanced Power Electronics I, II
Electronic Device and Measurement Engineering	Education and researches on developments of electronic devices including magnetic, optical, photoelectric conversion, high-frequency electromagnetic and piezoelectric devices, and advancements of sensing, signal processing, information analysis and diagnosis technologies, intended for high speed and large capacity telecommunication and aging society	Prof. Rumiko Yamaguchi [27]	Electronic Display Engineering I, II
		Prof. Marenori Kawamura	Optical Device Engineering I, II
		Prof. Nobuaki Kikuchi	Electron Devices
		Prof. Motoshi Tanaka	Advanced Communication Engineering I, II
		Associate Prof. Yuichi Sato [28]	Advanced Semiconductor Device I, II
		Associate Prof. Makoto Fukuda	Applied Piezoelectric Device Engineering I, II
		Lecturer Shinichi Yodokawa	Advanced Ultra-High-Freguercy Electronics I, II
		Lecturer Ai Hosoki	Signal Processing for Instrumentation I, II

Note: [27] and [28] indicate faculty members scheduled to retire in March 2027 and March 2028,respectively.

Course	**Human-Centered Computing**		
Field of Instruction and Research	Quality	Faculty Member	Instruction Subject
Biomedical and Welfare Engineering	Study on applied evaluation and welfare support systems for elder people,disabilities by virtual reality technology and design of computer and software systems	Prof. Kazutaka Mitobe	Virtual Reality I, II
		Prof. Katsuya Fujiwara	Software System I, II
		Associate Prof. Sawako Nakajima	Well-being Information Engineering with Spoken and Natural Language Processing I, II
Image Information System Engineering	Human sensing focusing on analysis of lip movement and facial expression, remote sensing (satellites and UAV) , image processing, image information applications, visual recognition, affective engineering, behavior analysis, and computer security	Prof. Yoichi Kageyama	Image Information I, II
		Prof. Chikako Ishizawa	Security System I, II
		Lecturer Hikaru Shirai	Remote Sensing Engineering I, II
Spatial Informatics	Modelling, data management, analysis, sharing, simulation and human-centered design for the real world and spatial information communication	Prof. Masatoshi Arikawa［28］	Spatial Informatics I, II
Computer System Engineering	Study on dependable computer systems and design of testable logic circuits	Associate Prof. Hiroshi Yokoyama (Center for Information Technology and Management)	Advanced Digital Logic Design I, II

Note: ［28］ indicate faculty members scheduled to retire in March 2028.

《Department of Systems Design Engineering》

In parallel with rapid advances in science and technology, society is facing problems such as global warming from CO2 emissions and the need to develop renewable energy sources. Here the role of mechanical engineering is of growing importance, in such areas as improving the technologies needed to enhance the functionality of equipment. Meanwhile, in Japan there have been major advances in the aerospace field and in technologies for recycling of waste materials, while the need for creative engineering capable of creating and nurturing new industries has grown. The aging of society has also created an urgent need for technology advances, not only in the health and welfare area but in creating civil engineering technologies in harmony with the environment and improving the functions of urban and regional systems to build and maintain better communities.

The Department of Systems Design Engineering, through education and research on the design and development of these complex and large-scale systems, aims to nurture researchers, developers, and engineers equipped with fundamental knowledge in the specialized fields of mechanical engineering, creative mechanical engineering, and civil and environmental engineering, as well as having knowledge across the fields of system design, and who, with their accurate awareness of regional needs, are able to contribute to local society and to the world. To meet these aims, education and research are carried out in tandem in the following two areas.

1) Mechanical Engineering Course

Our Mechanical Engineering Course provides education and research in the following areas: Aerospace System, Medical System Engineering, and Environmentally Friendly System that will be necessary in the future. Our goal is to foster R&D/Engineers who have both fundamental knowledge in each specialised field and skills to integrate cross-disciplinary ideas to contribute in solving local and international problems.

2) Civil and Environmental Engineering Course

Research and education are aimed at acquiring advanced specialized knowledge in such areas as structural engineering, hydraulic engineering, geotechnics, urban and traffic engineering, and concrete engineering, and on this foundation to build up individual knowledge and skills for applying these to problem solving, while also fostering communication skills for cooperative problem solving, in order to contribute to formation of safe, reliable, and convenient infrastructure for society.

Course	**Mechanical Engineering**		
Field of Instruction and Research	Quality	Faculty Member	Instruction Subject
Aerospace System Field	Creation and evaluation of micro/nano materials, solid mechanics, analysis on the surface structure, and its application to electric-driven, highly efficient and low environmental impact technologies of transportation machineries	Prof. Mikio Muraoka [26]	Overview of Nanotechnology for Mechanical Systems Introduction to Fundamental Physics for Aircraft Systems Engineering
		Prof. Makoto Yamaguchi	Characterization of Subsurface Structure
		Associate Prof. Xu Zhao	Advanced Thin-film Material Engineering
Medical System Engineering Field	Controller design for mechatronics devices with sensors and actuators, human motion measurement and analysis of its mechanism, applications of magnetic fluids in medicine, the influence of surface environment in microfabrication and biomaterials, and its applications to medical and welfare engineering	Prof. Akihiro Naganawa	Advanced Control Engineering I, II
		Prof. Takehiro Iwami	Clinical Biomechanics Health Care Movement Sensing Science
		Associate Prof. Yoshiyuki Yamamoto	Advanced Applied Electromagnetism Physical Properties of Living Organisms
		Associate Prof. Mamoru Takahashi	Micro Processing Biomaterial Processing
		Associate Prof. Yoshihiro Sasaki	Actuator Engineering I, II
		Lecturer Takeshi Seki	Design of Digital Control Systems Optical and AI Therapeutic Engineering
Environmentally Friendly System Field	Ice melting and water freezing, theory and application of renewable energy conversion, basic study for rarefied gas dynamics and its application, measurements for the mechanical design, and its application to sustainable mechanical engineering	Prof. Eiki Okuyama [26]	Ultraprecision Mechanism Design I, II
		Associate Prof. Yoshimi Komatsu	Computational Thermodynamics and Fluid Dynamics
		Associate Prof. Yasuyuki Miyano	Advanced Technology for System Design I, II
		Lecturer Wataru Sugiyama	Kinetic Theory for Molecular Gas

Note: [26] indicates faculty members scheduled to retire in March 2026.

Course	**Civil and Environmental Engineering**		
Field of Instruction and Research	Quality	Faculty Member	Instruction Subject
Structural Mechanics	Linear and nonlinear mechanics and theory of structural design of steel and timber structures	Prof. Humihiko Gotou	Advanced Structural Mechanics
Hydraulics and Hydraulics Engineering	Measurements and numerical modeling of natural disaster in rivers and coastal area	Associate Prof. Kazuya Watanabe	Coastal and river Engineering
Soil Mechanics and Geotechnical Engineering	Physicochemical and mechanical properties of soft soil	Associate Prof. Toshihiro Ogino	Advanced Soil Mechanics
Urban and Traffic Planning	Methods, and analytical techniques used in traffic engineering and planning	Prof. Hidekatsu Hamaoka	Advanced Traffic Engineering
	Philosophy, methods, and analytical techniques used in urban and traffic planning with emphasis on the logic and assumption on which these are based	Associate Prof. Satoru Hino	Advanced Urban Planning
Concrete Engineering	Design of construction materials, maintenance of concrete structures and structural analysis for concrete structures	Prof. Hidenobu Tokushige	Construction Material Design

《Cooperative Major in Sustainable Engineering》

Industrial development has brought about economic growth and technological innovation, and production activities have increased the emission of greenhouse gases such as carbon dioxide, causing global climate change such as global warming and torrential rains, and industrial waste from factories has destroyed the natural environment. The unplanned consumption of energy resources threatens the future survival of society. Greenhouse gases and industrial wastes are undesirable effects of human activities and are considered as environmental burdens that cause problems in environmental conservation, and it is the responsibility of mankind to manage them in a rational manner. In 2015, the United Nations Summit adopted the "2030 Agenda for Sustainable Development" and the Sustainable Development Goals (SDGs). Japan has also set a policy goal of achieving carbon neutrality by 2050, and in the future, industrial technologies that reduce the environmental burden and form a sustainable society while maintaining economic growth will be emphasized. Industry can reduce its environmental impact through environmentally conscious design (life cycle design) that considers the environmental impact of products throughout their life cycle, from resource extraction to refining, transportation, manufacturing, use, and disposal (recycling and reuse), and by rationalizing energy use. In the future, it will be necessary to break away from the industrial technology that was suitable for the industrial revolution and the subsequent era of mass production and mass consumption, and to develop environmentally friendly design throughout the industrial world to enable a sustainable society. In particular, we will promote the electrification of power systems to break away from dependence on fossil fuels for mobile vehicles. The potential for renewable energy in the Akita region is high, and the development of the region will also require the advancement of technology to realize the rationalization of energy use. The study that aims to develop new industrial technology based on environmentally friendly design that promotes production activities while taking the environment into consideration, as well as breaking away from dependence on fossil fuels and the rational use of renewable energy, will be called Sustainable Engineering. The Cooperative Major in Sustainable Engineering has been established as a joint graduate school of Akita University and Akita Prefectural University based on such social needs, and aims to contribute to the sustainable development of the region through education and research in sustainable engineering, and to contribute to the reduction of environmental load and the promotion of industry in Japan and the region by acquiring advanced expertise in sustainable engineering.

The Cooperative Major in Sustainable Engineering aims to bring harmony between the environment and social systems by reducing the environmental load through education and research in the fields of electrification of power systems, environmentally friendly design, and renewable energy utilization in sustainable engineering, and to achieve sustainable development in Japan and the region. However, since the amount of knowledge to be acquired is enormous, specialization will be given to the main education and research fields of electrification of power systems in mobility and environmentally friendly design and use of renewable energy, with the former set as the Electromobility Course and the latter as the Social Environment Systems Course.

Main Features of the Cooperative Major in Sustainable Engineering, and Matters to Note in Taking Entrance Exam

1. The degree granted carries the names of both Akita University and Akita Prefectural University.
2. Students are resident in both Akita University and Akita Prefectural University, but the official university of residence is that of the main supervisor providing primary research guidance.
3. Because students are enrolled in both Akita University and Akita Prefectural University, they can use the facilities and resources of both universities. (Some facilities and resources may not be available due to circumstances of each university.)
4. When the official university of residence is Akita University, research guidance may be received also from sub-supervisors of Akita Prefectural University.
5. Classes taken are those of the joint graduate school consisting of Akita University and Akita Prefectural University.
6. If the faculty member desired as the main supervisor belongs to Akita University, the student makes application to Akita University and takes the entrance examination given by Akita University. In this case, the official university of residence after admission to the major is Akita University, and payment of tuition and charges as well as application for scholarships, etc., is made as a student of Akita University.

Note that for this major it is not possible to apply to both Akita University and Akita Prefectural University.

Course	**Electromobility**		
Field of Instruction and Research	Quality	Faculty Member	Instruction Subject
Heat and Fluid Flow, Atomization, Two-phase flow, Heat Exchanger	Environmental control system for electric aircraft, fluid dynamics and heat transfer	Prof. Takahiro Adachi	Advanced Course for Energy of Heat and Fluid Flow
Electromagnetic Energy Conversion Engineering	Development of new machines and improvement of conventional machines for electromagnetic energy conversion	Prof. Katsubumi Tajima	Electromagnetic Energy Conversion Engineering
Stability and transition in shear flows, Heat and mass transfer, Biofluid mechanics	Hybrid laminar flow control for airfoils, seawater greenhouses for SDGs, Inertial migration in particle-laden flows	Associate Prof. Takeshi Akinaga	Integrated modeling and simulation for design optimisation
Control Engineering, System Engineering	Mathematical model construction and development of analysis methods for various systems	Associate Prof. Takeshi Miura	Advanced Control System Engineering I, II
Electromechanical Energy Conversion	Analysis and design of magnetic devices in electric drive systems	Associate Prof. Yukihiro Yoshida	Modelling and Analysis of Electrical Machinery I, II
Measurement Engineering	Development of surface analysis techniques for revealing quantitative surface nano-scale physical properties on advanced electronic/ magnetic materials	Lecturer Yukinori Kinoshita	Advanced mechanical measurement
Aerospace Engineering	Electric aircraft control, aerospace dynamics, spacecraft, space exploration, space debris	Lecturer Hiroshi Hirayama	Aircraft system control
Fluid Engineering, Multiphase Flow, Turbulence Control	Optimization of flow and heat dissipation in electrified aircraft systems, flow control of pseudo-atmospheric turbulence in wind tunnel	Lecture Kotaro Takamure	Advanced Course on Control and Optimization of Fluid Dynamics and Fluid Machinery

Course	**Social Environment Systems**		
Field of Instruction and Research	Quality	Faculty Member	Instruction Subject
Life Cycle Design Engineering (Design Engineering, Quality Engineering, Value Engineering)	Design methodology studies and ecoefficiency analysis of products or product service systems considering the life cycles	Prof. Nozomu Mishima [28]	Life cycle design engineering basics
Computation of Materials	Research and education of materials computation based on molecular orbital method and molecular dynamics method	Associate Prof. Yoshiyuki Sato [29]	Materials Computation for Molecules I, II
High-temperature physical properties of matter	Studies of fundamental properties of inorganic high-temperature materials, and their applications to high-level radioactive waste treatment and environmentally friendly glass production	Associate Prof. Toru Sugawara	High-temperature physical properties of matter
Chemical Engineering (Unit operation, Separation engineering)	Development of novel chemical processes for resources and their systematization using IoT technology	Associate Prof. Hiroshi Takahashi [28]	Chemical Process Design
Earth Science (Petrology, Geochemistry, Isotope chemistry)	Research of mass transfer and chemical reaction in the earth environmental system, development of analytical techniques	Associate Prof. Mayuko Fukuyama	Earth and Environmental analytical science
Energy systems analysis	Design and analysis of the regional energy systems consisting of resources, conversion technologies, and demand for a sustainable decarbonized society	Associate Prof. Takaaki Furubayashi	Special Theory on Regional Energy Systems

Note: [28] and [29] indicates faculty members scheduled to retire in March 2028 and March 2029, respectively.

3. Requirements for Completion of the Master's Course

A Master's degree is awarded if the student has satisfied the following requirements: have at least two years' residence in the Master's program; acquire a minimum of 30 course credits shown in the chart below; have an acceptable Master's thesis; pass the final comprehensive examination.

Students who demonstrate exceptional achievement may receive the degree with a residence period of as short as 1 year.

Credits Required for Completion of the Master's Program (Except for Cooperative Major in Sustainable Engineering)

Subjects	Credits Required	Remarks
Common Subjects	3 credits (Mandatory)	
Specialized Subjects	13 credits (Mandatory)	
Common Subjects and Specialized Subjects	14 credits or more (Elective)	(1) 10 or more credits from Specialized Subjects of the affiliated course and 2 or more credits from Specialized Subjects of the relevant courses shall be required. (2) Specialized Subjects of Graduate School of Advanced Healthcare Engineering are also available as Specialized Subjects of the relevant course.
Total	30 credits or more	

Credits Required for Completion of the Master's Program (Cooperative Major in Sustainable Engineering)

Subjects	Credits Required	Remarks
Common Subjects	2 credits or more (Mandatory)	(1) 1 or more credits shall be obtained from either Subjects of Foreign Language, etc. or Specialized Subject "Aero-Space Engineering I / II". (2) 1 or more credits shall be obtained from Subjects of Ethics, etc.
Specialized Subjects	15 credits (Mandatory)	
	8 credits or more (Elective)	(1)Students in the Electromobility course must take at least 4 credits from the Electeromobility course, provided that credits of Aero-Space Engineering I and II as foreign language subjects in the Common Subjects are not counted in this requirements. (2) Students in the Social Environment Systems course must take at least 4 credits from the Social Environment Systems course.
Common Subjects and Specialized Subjects	5 credits or more (Elective)	Up to 4 credits obtained through subjects of different Division at Graduate School of Akita University shall be included to the requirements for completion.
Total	30 credits or more	Students must take at least 10 credits from the courses offered at the graduate school of Akita Prefectural University, provided that "Seminar on Sustainable Engineering" and "Special Research of Sustainable Engineering" must be taken from students' own university.

Master's Course
2025 October (Fall) Admission, 2026 April (Spring) Admission
Affiliated School Recommendation
Graduate School of Engineering Science, Akita University

Application for Admission

Admission Category	1. 2025 October Admission 2. 2026 April Admission Circle the option that applies	Application No.	※
Name of Applicant			
Date of Birth	／ ／ momth day year		
Sex	Male ／ Female		
Desired Department (Major)			
Desired Cource			
Desired Supervisor			
Current Address	Address: postal code country Tel.: E-Mail:		
Educational and Employement History	Undergraduate Level Name of School: Major: Date of Graduation: Employement Name of Employer: Period of employment:		

Note:
1. ※ Official use only.
2. Please use BLOCK LETTERS and BLACK INK
3. Please read the Admission Guidelines carefully and enter all the information requested.
4. Contact Address is where applicant wishes to receive correspondence.
   Any changes must be reported immediately.

Master's Course
2025 October (Fall) Admission, 2026 April (Spring) Admission
Affiliated School Recommendation
Graduate School of Engineering Science
Akita University

ID Photo Card

Classification	Recommendation by Affiliated School
Admission Category	1. 2025 October Admission 2. 2026 April Admission Circle the option that applies
Application No.	※
Name	
Desired Field	
Please paste ID photo. (4.5cm x 3.5cm) Upper frontal view of applicant without a hat.	

Note:
1. ※Official use only.
2. Photo must be taken within 3 months prior to application.