Student application guidelines



# 2026

Enrollment in October 2025 / April 2026 [Special Admission Examination for International Students]

## Graduate School of Science and Engineering Science and Engineering (Doctoral Course)

- Mathematical Informatics and Data Science Program
- Life, Material and Energy Sciences Program
- Sustainable Global Environmental Studies Program
- Advanced Engineering Program

June 2025

# University of Toyama

In the event of an unexpected situation, the contents of the student application guidelines, including the examination schedule, may be changed. If it is necessary to make such changes, we will inform you on our website, and please be sure to check the latest information. https://www.u-toyama.ac.jp

### Admission Policy for the Doctoral Program of the Graduate School of Science and Engineering. Admission Policy

The doctoral programs of the Graduate School of Science and Engineering at University of Toyama seek the following types of candidates for each program.

< Mathematical Informatics and Data Science Program >

We seek students who are motivated to become highly specialized professionals and researchers in mathematical informatics who can lead technological innovation in terms of mathematics, informatics, and data science, and contribute to improving the well-being of people in the region.

#### < Life, Material and Energy Sciences Program >

We seek students who have a strong interest and basic ability to understand and innovate in the fields of life, materials, and energy from a physical and chemical perspective across the fields of science and engineering, and who are motivated to become engineers and researchers who can contribute to the welfare of humanity by utilizing their specialized knowledge and skills to lead technological innovation and contribute to the advancement of culture in the future. We seek students who are motivated to become engineers and researchers who can contribute to the welfare of mankind by utilizing their expertise and technology to lead technological innovation and contribute to the advancement of culture.

< Sustainable Global Environmental Studies Program >

We seek students who have a strong interest and basic skills in the fields of earth science, biological science, and environmental science, and who are motivated to become engineers and researchers who can contribute to a sustainable society and human welfare by leading technological innovation and contributing to the advancement of culture by utilizing their specialized knowledge and skills.

< Advanced Engineering Program >

We seek students who have a strong interest and basic abilities in the engineering fields of mechanical engineering, electronics, robotics, materials science, and social infrastructure engineering, and who are motivated to become engineers and researchers who can contribute to the welfare of humanity by leading technological innovation and contributing to the advancement of culture through their expertise and technology.

### **Basic Policy for Admission Selection (Type of Entrance Examination and its Evaluation Method)**

< Special Admission Examination for International Students >

Applicants will be evaluated through an oral examination, an interview, and document review to assess their language proficiency necessary for pursuing education in the doctoral program, relevant subjects of their chosen field of research, and their master's thesis and the post-admission research plan.

### Qualities and abilities we are looking for

< Fundamental Competencies >

The student should have a desire to acquire a broad knowledge of a wide range of academic fields with a focus on science and engineering, as well as the basic academic skills required for completion of a master's degree program, including the ability to comprehend, think logically, and express him/herself.

< Expertise >

The student should have a deep interest in the field of science and engineering and have the desire to acquire specialized knowledge and applied skills through specialized research to play an active role in society.

< Ethics >

The student should have a sense of responsibility and ethics as a member of society and be willing to contribute to the sound development of science and technology through independent research.

#### < Creativity >

The student should have acquired a strong desire for research and flexible thinking skills to challenge unknown and cutting-edge problems in order to contribute to the local and international communities.

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### Admission Overview of the Graduate School of Science and Engineering (Doctoral Course)

Number of students to be admitted in October 2025

D	Number of students to be admitted
Program name	Special Admission Examination for International Students
Mathematical Informatics and Data Science	A few
Life, Material and Energy Sciences	A few
Sustainable Global Environmental Studies	A few
Advanced Engineering	A few

Number of students to be admitted in April 2026

D	Number of students to be admitted
Program name	Special Admission Examination for International Students
Mathematical Informatics and Data Science	A few
Life, Material and Energy Sciences	A few
Sustainable Global Environmental Studies	A few
Advanced Engineering	A few

### Schedules related to admission examination

Items	Enrollment in October 2025 and Enrollment in April 2026[The first recruitment] Special Admission Examination for International Students	Enrollment in April 2026[The second recruitment] Special Admission Examination for International Students (Scheduled)
Deadline for inquiry about Examination of Eligibility for Application (Only for relevant applicants)	Thursday, July 3, 2025	Friday, December 5, 2025
Notification of the examination results of eligibility for application (Only for relevant applicants)	By Thursday, July 10, 2025	By Friday, December 12, 2025
Application Period	Friday, July 11 to Friday, July 18, 2025	Monday, December 15 to Friday, December 19, 2025
Issue of Examination Ticket	Wednesday, August 6, 2025 (Scheduled)	Friday, February 6, 2026 (Scheduled)
Examination date	Thursday, August 21, 2025	Thursday, February 19, 2026
Announcement of successful applicants	Tuesday, September 2, 2025	Friday, March 6, 2026
Admission Procedure (Deadline date)	(Enrollment in October 2025) Friday, September 12, 2025 (Scheduled) (Enrollment in April 2026) Wednesday, January 21, 2026 (Scheduled)	Friday, March 13, 2026 (Scheduled)

(Note) The second recruitment may not be conducted depending on whether the first recruitment is filled. Whether or not it will be held will be announced on the university website around October 2025. https://www.gsse.u-toyama.ac.jp/

### Special Admission Examination for International Students

### (Enrollment in October 2025)

### 1. Number of students to be admitted

Program name	Number of students to be admitted
Mathematical Informatics and Data Science Program	A few
Life, Material and Energy Sciences Program	A few
Sustainable Global Environmental Studies Program	A few
Advanced Engineering Program	A few

(Note) Applicants for admission must consult with the relevant academic advisors in the field of their choice in advance regarding the direction of education, research, etc. You cannot apply if you have not decided whom you want to be your academic advisor.

The main purpose of the consultation is to confirm the field of study after admission and the direction of education and research. Please note that the content of the consultation will not directly affect the result of the entrance examination.

### 2. Eligibility for application

· A person who does not have Japanese citizenship

• A person who is qualified to stay in Japan for "Student" specified by the "the Immigration-Control and Refugee-Recognition Act" or a person who is expected to be able to change or obtain the qualification to stay in Japan for "Student" after being admitted to the Graduate School.

A person who meets the above requirements and corresponds to one of the following requirements

- (1) A person who has a Master's degree or a professional degree (referring to a professional degree specified by Article 5-2 of Rules for Academic Degrees (No. 9 Ministerial Order from the Ministry of Education in 1953) based on the regulations specified in Article 104, Paragraph 1 of the School Education Act, hereinafter, the same) and a person who is expected to receive the degree by September 2025.
- (2) A person who has received a degree equivalent to a Master's degree or professional degree in other countries and a person who is expected to receive the degree by September 2025.
- (3) A person who has taken courses of correspondence education offered by a school in other countries or in Japan and received a degree equivalent to a Master's degree or professional degree and a person who is expected to receive the degree by September 2025.
- (4) A person who has completed the courses of an educational institution that is positioned in Japan as a school that offers courses for a foreign graduate school in the school education system of that country and is designated separately by the Minister of Education, Culture, Sports, Science and Technology and received a degree equivalent to a Master's degree or professional degree and a person who is expected to receive the degree by September 2025.
- (5) A person who holds or expects to obtain a Master's degree or equivalent by the end of September 2025, through course completion at the United Nations University (hereinafter referred to as UNU) as prescribed in Article 1 paragraph 2 of the Act on Special Measures Incidental to Enforcement of the Agreement between the United Nations and Japan regarding the Headquarters of the United Nations University (Act No.72 of 1976), which was established under the December 11, 1972 resolution of the General Assembly of the United Nations.
- (6) A person who has been recognized by the Graduate School of Science and Engineering as having academic ability equal to or higher than that of a person holding a master's degree after having completed required course at the United Nations University or an educational institution in a foreign country described in (4) and passed the examination or the equivalent examination that was prescribed in Article 16 paragraph 2 of the Rules on Graduate Schools.
- (Note) For persons wishing to submit an application according to Applications Requirements (6), please enquire in advance to Admission Office (Educational Affairs Division) of the school of Engineering and submit all application documents required by the University of Toyama.
- (7) A person who is designated by the Minister of Education, Culture, Sports, Science and Technology (Notification No. 118 of the Ministry of Education in 1989).
- (8) A person who was recognized by the Graduate School of Science and Engineering to have the ability equal to or surpassing a person with a Master's or professional degree through the individual examination for admission qualification, and will be at least 24 years old by the time of admission.
- (Note) As for certification of the eligibilities (7) and (8) for application, please see "(4) Filing for certification of eligibility for application" of "2. Application Procedures".

### 3. Selection methods

Students eligible to enroll are selected based on the results of the oral examination, interview and submitted documents. The examinees need not take a paper test.

(1) Oral examination and interview

The oral examination is about subjects related to the student's preferred education field, Master's thesis, research plan after admission, etc.

(2) Date of examination (oral examination and interview)

Date	Subjects for Examination, etc.	Time	Site for Examination
August 21	Meeting time	13:00	School of Science/ Engineering, University of
(Thursday), 2025	Oral Examination and interview	13:30~	Toyama (Gofuku Campus)

\* The location of the place of examination will be notified when the examination ticket is issued.

\* For those who reside overseas and have difficulty coming to University of Toyama due to unavoidable circumstances, it is possible to take the examination online.

### Special Admission Examination for International Students

### (Enrollment in April 2026)

### 1. Number of students to be admitted

Program name	Number of students to be admitted
Mathematical Informatics and Data Science Program	A few
Life, Material and Energy Sciences Program	A few
Sustainable Global Environmental Studies Program	A few
Advanced Engineering Program	A few

(Note) Applicants for admission must consult with the relevant academic advisors in the field of their choice in advance regarding the direction of education, research, etc. You cannot apply if you have not decided whom you want to be your academic advisor.

The main purpose of the consultation is to confirm the field of study after admission and the direction of education and research. Please note that the content of the consultation will not directly affect the result of the entrance examination.

### 2. Eligibility for application

· A person who does not have Japanese citizenship

• A person who is qualified to stay in Japan for "Student" specified by the "the Immigration-Control and Refugee-Recognition Act" or a person who is expected to be able to change or obtain the qualification to stay in Japan for "Student" after being admitted to the Graduate School.

A person who meets the above requirements and corresponds to one of the following requirements

- (1) A person who has a Master's degree or a professional degree (referring to a professional degree specified by Article 5-2 of Rules for Academic Degrees (No. 9 Ministerial Order from the Ministry of Education in 1953) based on the regulations specified in Article 104, Paragraph 1 of the School Education Act, hereinafter, the same) and a person who is expected to receive the degree by March 2026.
- (2) A person who has received a degree equivalent to a Master's degree or professional degree in other countries and a person who is expected to receive the degree by March 2026.
- (3) A person who has taken courses of correspondence education offered by a school in other countries or in Japan and received a degree equivalent to a Master's degree or professional degree and a person who is expected to receive the degree by March 2026.
- (4) A person who has completed the courses of an educational institution that is positioned in Japan as a school that offers courses for a foreign graduate school in the school education system of that country and is designated separately by the Minister of Education, Culture, Sports, Science and Technology and received a degree equivalent to a Master's degree or professional degree and a person who is expected to receive the degree by March 2026.
- (5) A person who holds or expects to obtain a Master's degree or equivalent by the end of March 2026, through course completion at the United Nations University (hereinafter referred to as UNU) as prescribed in Article 1 paragraph 2 of the Act on Special Measures Incidental to Enforcement of the Agreement between the United Nations and Japan regarding the Headquarters of the United Nations University (Act No.72 of 1976), which was established under the December 11, 1972 resolution of the General Assembly of the United Nations.
- (6) A person who has been recognized by the Graduate School of Science and Engineering as having academic ability equal to or higher than that of a person holding a master's degree after having completed required course at the United Nations University or an educational institution in a foreign country described in (4) and passed the examination or the equivalent examination that was prescribed in Article 16 paragraph 2 of the Rules on Graduate Schools.
- (Note) For persons wishing to submit an application according to Applications Requirements (6), please enquire in advance to Admission Office (Educational Affairs Division) of the school of Engineering and submit all application documents required by the University of Toyama.
- (7) A person who is designated by the Minister of Education, Culture, Sports, Science and Technology (Notification No. 118 of the Ministry of Education in 1989).
- (8) A person who was recognized by the Graduate School of Science and Engineering to have the ability equal to or surpassing a person with a Master's or professional degree through the individual examination for admission qualification, and will be at least 24 years old by the time of admission.
- (Note) As for certification of the eligibilities (7) and (8) for application, please see "(4) Filing for certification of eligibility for application" of "2. Application Procedures".

### 3. Selection methods

Students eligible to enroll are selected based on the results of the oral examination, interview and submitted documents. The examinees need not take a paper test.

(1) Oral examination and interview

The oral examination is about subjects related to the student's preferred education field, Master's thesis, research plan after admission, etc.

(2) Date of examination (oral examination and interview)

### The first recruitment

Date	Subjects for Examination, etc.	Time	Site for Examination
August 21	Meeting time	13:00	School of Science/ Engineering, University of
(Thursday), 2025	Oral Examination and interview	13:30~	Toyama (Gofuku Campus)

\* The location of the place of examination will be notified when the examination ticket is issued.

\* For those who reside overseas and have difficulty coming to University of Toyama due to unavoidable circumstances, it is possible to take the examination online.

### The second recruitment

Date	Subjects for Examination, etc.	Time	Site for Examination
February 19	Meeting time	13:00	School of Science/ Engineering, University of
(Thursday), 2026	Oral Examination and interview	13:30~	Toyama (Gofuku Campus)

\* The second recruitment may not be conducted depending on whether the first recruitment is filled. Whether or not it will be held will be announced on the university website around October 2025.

\* The location of the place of examination will be notified when the examination ticket is issued.

\* For those who reside overseas and have difficulty coming to University of Toyama due to unavoidable circumstances, it is possible to take the examination online.

### **General Procedure of Application and Admission**

### **1. Application Period**

Test category	Application period
(The first recruitment including admission in October 2025) Special Admission Examination for International Students	Friday, July 11 to Friday, July 18, 2025, at 16:00
(The second recruitment) Special Admission Examination for International Students	Monday, December 15 to Friday, December 19, 2025, at 16:00

All documents required for application must be sent by registered express mail (EMS or other traceable means if mailing from abroad) so that they arrive no later than the application period. Applications cannot be submitted in person. Please mail in plenty of time considering the postal situation.

Please note that applications arriving after the application period will not be accepted. However, application documents will be accepted even if they reach the University after the expiration of the application period on condition that they are delivered by registered express mail with a postmark with the date of the day before the application deadline or before (only a postmark put in Japan is acceptable).

Please note that the University will not respond to inquiries as to whether or not the application envelopes sent to the applicant have arrived at the University (or have been delivered). Please confirm the arrival of the application envelopes by using the tracking services of the respective companies by his /herself.

### 2. Application Procedures

Applications must be submitted online only. The application procedure is completed by sending the required documents by registered express mail within the application period after the registration and payment of the application fee on the Online application website.

Please read the following "Online Application Procedure" carefully and follow the instructions.

### **Online Application Procedure**



### Prepare see page 11

Prepare a PC with an Internet connection and a printer, etc. It may take time for the required documents\* to be issued. Please start preparing them early and ensure that you have them with you before applying.



\*Required Documents : An official transcript, data of your photo, etc. For details, refer to page 12 of the application guidelines.



After completing registration on the Internet application site (STEP 2), the application is completed by paying the examination fee (STEP 3), printing and mailing the required documents (STEP 4, STEP 5). Please note that your application is not complete just by registering.

Online applications are available 24 hours a day.

STEP

However, application documents must arrive by 16:00 on the last day of the application period.

Please make sure to give yourself plenty of time when applying.

### **Create an Account on My Page**

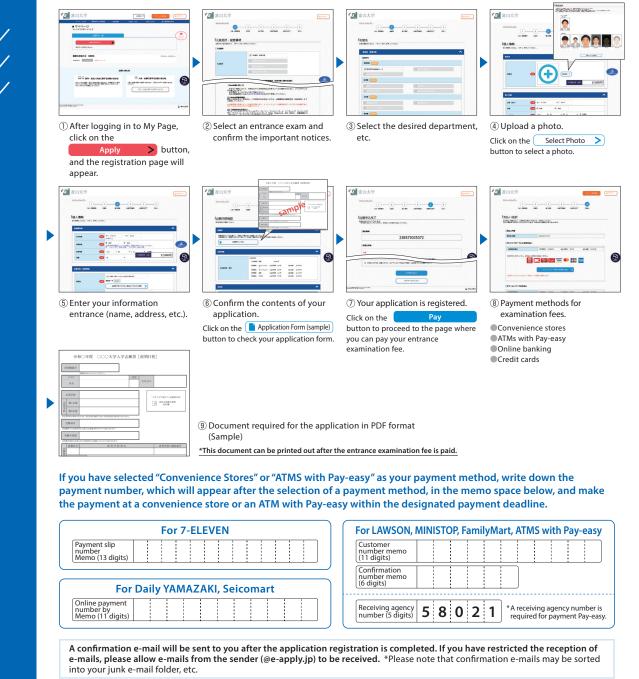
Enter the required information according to the instructions on the screen to create an account on My Page. If you have already registered on My Page, proceed to STEP 2.

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	<ol> <li>If you are registering for the first time, click</li> <li>My Page Registration</li> </ol>	② Register your e-mail address and click on Send an e-mail for temporary registration >	③ Click on the	<ul> <li>4 default password and a registration URL will be sent to your registered e-mail address.</li> <li>*Configure your e-mail settings to receive e-mails from the @e-apply.jp domain.</li> </ul>
	<ul> <li>From the log-in screen, use your registered e-mail address and the default password you received in ④ and click</li> <li>log-in</li> </ul>	⑥ Change your default password.	⑦ Enter your personal information and click Next	⑧ Confirm your personal information and click Register this information



### **Register the Contents of Your Application**

Make sure to check the procedures and important notices on the screen, and then enter the required fields according to the instructions on the screen.



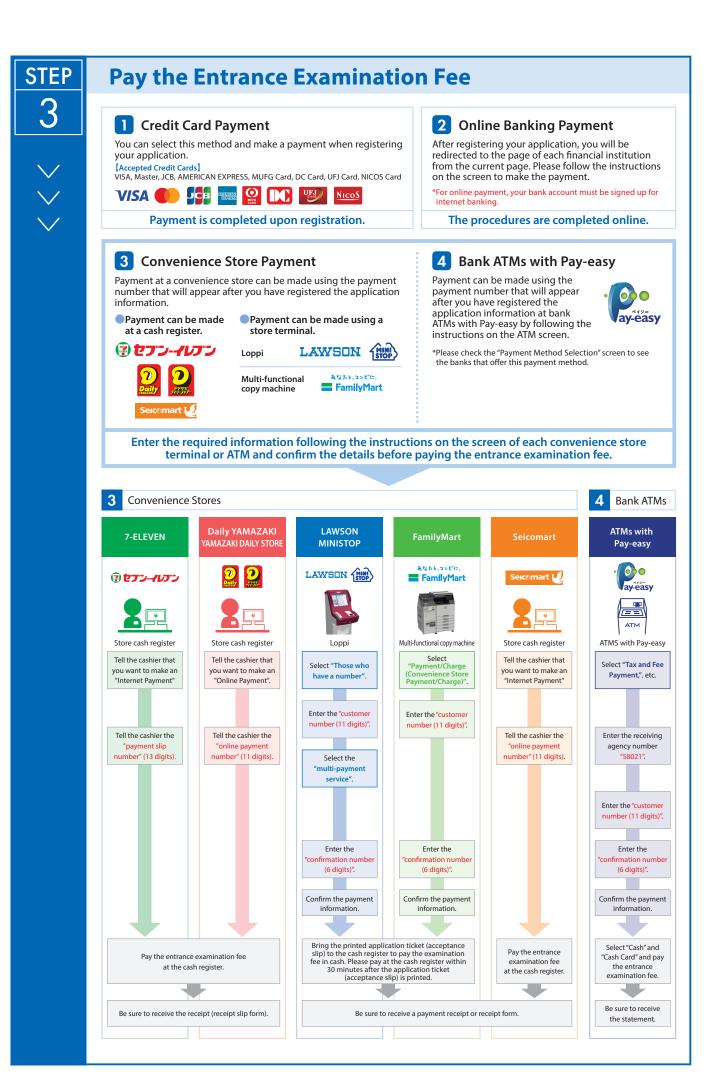
Please be careful not to enter incorrect information, as the registered information cannot be changed or modified after the application registration is completed. However, if you have not yet paid the entrance examination fee, you can substantially modify the information by re-registering using the correct information.

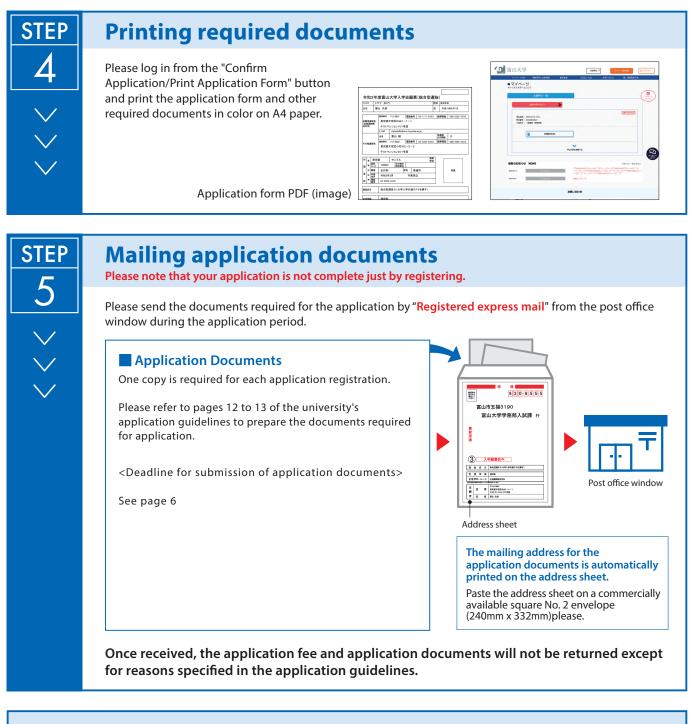


**STEP** 

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\*Please note that if you have selected a credit card for the "Payment Method for the Entrance Examination Fee," the payment will be completed simultaneously with the registration for application.





### < Application completed >

We will not respond to any inquiries regarding acceptance by telephone or other means.



### Print your admission ticket see page

You will be able to print your admission ticket from the online application site after the date of issuance of your admission ticket. Please log in from the "Print Examination Ticket" button and print it. Be sure to print the admission ticket in color on A4 paper and bring it with you on the day of the examination.

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### (1) Advance preparation

Documents, etc.	summary
Recommended	Recommended browsers for PC
System Environments	<ul> <li>Microsoft Edge (latest version)</li> <li>Google Chrome (latest version)</li> <li>Mozilla Firefox (latest version)</li> </ul>
	- Apple Safari (latest version)
	<ul> <li>If you use your browser's tab function to make multiple applications at the same time in several tabs, the selected content may be carried over to another tab, or other problems may occur. Please refrain from using multiple tabs at the same time.</li> <li>To return to the previous screen, please use the "Back" button on the screen instead of your browser's Back button.</li> </ul>
	Recommended Smartphone and Tablet Browsers and OSes The standard browser for each operating system is the recommended environment. - iOS: 12 or later - Android OS: 8 or later - iPadOS: 13 or later
	X If your browser does not display the page properly, please check with
	another browser. You may not be able to view PDF files from the PC version of Chrome when operating from an Android smartphone, so please use the mobile version.
Software needed for downloading or printing PDF files	Adobe Reader distributed by Adobe Systems Incorporated is required to view and print PDF documents such as the admission application form.
E-mail Address	A valid email address is required for your application. Please be ready to provide your email address when you start your online registration for application. If you have registered an e-mail address issued by a smartphone or mobile phone carrier, please follow your carrier's spam filtering instructions and set your e-mail address so that you can receive e-mails from @e-apply.jp.
Personal photo	Face photo data by the applicant in the application (jpeg, jpg, png, bmp) is required.
	In the upper body, no hat, front-facing, Please prepare a clear photograph taken within 3 months prior to submission. File will be up to 10MB. It should be noted that, if it is determined that it is not suitable as application photos, there is a case to be re-submitted.
Printer	In order to output the application form and examination admission ticket (PDF), print on A4 plain paper. You need a color printer that can be used with printing paper (plain paper, PPC paper, OA common paper, copy paper, etc.). Please to mind.
Square 2 envelope	Use a commercially available No. 2 square envelope (240 mm x 332 mm). Please use the "address sheet" that is output when you print the admission application form and paste it on the envelope.

### (2) Examination fee

30,000 yen.

Payment of the application fee will be made after completion of the registration of application details in STEP 2 on page 8 . Please apply through the university's " Online application website (https://e-apply.jp/ds/toyama-gs/)" and pay the application fee after completing the applicant registration. Please check the payment method in STEP 3 (Payment of the Examination Fee) on page 9. After paying the application fee, you will be able to print out the application form. A separate handling fee is required for payment of the examination fee. The fee is to be paid by the payer. In addition, there is a system of exemption from the examination fee for those affected by disasters. For more information, please refer to the University's website.

Once the examination fee has been received, it will not be refunded for any reason, except in the following cases. [1] Cases in which a refund of the examination fee may be requested and the amount of refund.

- (i) If you paid the application fee but did not apply to the University of Toyama (did not submit the application documents, etc. or your application was not accepted) [Refund amount] 30,000 yen
- (ii) In case of double payment of the examination fee [Refund amount] 30,000 yen
- (iii) If you have paid a large amount of the examination fee [Refund amount] The amount you have paid in excess of the examination fee

However, the recipient is responsible for the bank transfer fee when returning the loan.

[2] Method of claiming refund

Please fill out the attached "Written Claim for Return of Examination fee" and mail it to University of Toyama. Send to: Accounting Division I of Finance and Facilities Department, University of Toyama 3190 Gofuku, Toyama City, Toyama 930-8555 Tal: 076 445 6053 (Intl. calls: +81 (0)76 445 6053)

Tel: 076-445-6053 (Int'l calls: +81-(0)76-445-6053)

### [3] Important notes

Intramural students and government-sponsored international students are not required to pay the examination fee. When registering on the Online application website, be sure to check the "Application Fee Waiver" box. For passwords, please contact the contact listed in "8. Cautions (6)" (page 16).

### (3) Application documents, etc.

Applicants must send the required documents in an envelope with an "address sheet" attached by registered express mail (EMS or other traceable means if mailing from abroad). The required documents will be sent after the payment of the examination fee in STEP 3 on page 9 is completed.

	Documents, etc.	
[1]	Application for admission	Please print out the application form in A4 size in color from the Online application website. Printing is available after payment of the application fee.
[2]	Address sheet	Please print out the application form in A4 size in color from the Online application website. Attach it to a commercially available kakugata 2 envelope (240mm x 332mm) without peeling off.
[3]	Pledge	Please print out the application in A4 size from the Online application website. See "9 Security Export Control" on page 17.

### Be sure to check the printed information for errors.

### **②** Documents to be prepared by applicants

	Documents	Remarks	
1	Certificate of (expected) completion of Master's degree <sup>* 1,2</sup>	To be prepared by the dean of the graduate school from which the applicant graduated. However, a person who completed (is expected to complete) an education department/graduate course of the Graduate School of University of Toyama is not required to submit this document.	

2	Certificate of grade report of graduate school <sup>* 1,2</sup>	To be prepared and strictly sealed by the president or dean of the education department (graduate school head) of the university from which the applicant graduated. The certificate using forgery copy prevention paper is not required to be strictly sealed.
3	Certificate of grade report of undergraduate school *1,2	To be prepared and strictly sealed by the president or dean of the university from which the applicant graduated. The certificate using forgery copy prevention paper is not required to be strictly sealed.
4	Research plan	Please use the form designated by the University and fill out a research plan for this School for Education in the form.
5	Copy and abstract of dissertation for Master's degree <sup>* 1</sup>	One copy of the dissertation and its abstract. However, for applicants who are expected to graduate, please describe the progress of the dissertation (within 2,000 characters in Japanese or 1,000 words in English in the designated form). If the applicant has a separate print of a related dissertation, academic lecture, patent, etc., please attach a copy.
6	Certificate of approval for taking examination	Please choose a form. For a person who is enrolled in the Ph.D. program of another university or a person working in a public off ice or company, please attach a certificate of approval for taking an examination issued by the head of the education school (graduate course) of that university or the head of the division to which the applicant belongs.
7	Copy of the certificate of residence	Foreign nationals residing in Japan must submit either a copy of the certificate of residence issued by the head of municipal government or a copy of both sides of the residence card.

<sup>\* 1</sup> A person who corresponds to (7) or (8) eligibility for application and does not have a Master's or Bachelor's degree, the submission of "certificate of completion of Master's degree," "certificate of grade report of graduate school," "certificate of grade report of undergraduate school" and "copy and abstract of dissertation for Master's degree" is not necessary.

<sup>\* 2</sup> Documents written in a foreign language other than English must be accompanied by documents translated into Japanese or English.

### (4) Filing for certification of eligibility for application

- ① The scope specified in the "Eligibility for Application (7)" is a person who meets the following requirements: (a) and (e) or (b) and (e).
- ② The scope specified in the "Eligibility for Application (8)" is a person who meets the following requirements: (c) and (e) or (d) and (e).
  - (a) A person who has the experience of being engaged in research at a university, research institute, etc. for two years or more after graduating from university.
  - (b) A person who has the experience of being engaged in research at a university, research institute, etc. for two years or more after completing 16-years of courses in school education in a foreign country or after completing 16-years of courses in school education in a foreign country by taking courses in Japan through correspondence education offered by a school in that country.
  - (c) A person who graduated from a junior (two-year) college, technical college (specialized vocational high school), special vocational school and other types of school or who has completed a Japanese school of a foreign university, etc. and does not have a Master's degree, but has the experience of being engaged in research at a university, research institute, etc. or who has working experience in a science or technology- related field for two years or more and will be at least 24 years old by the time of admission.
  - (d) A person who has working experience in a science or technology-related field for two years or more after graduating from university.
  - (e)A person who has a research achievement such as his or her book, scientific paper, scientific lecture, scientific report, patent, etc. that is recognized to have the same or more value as the dissertation for a Master's degree.
- ③ A person who applies based on the "Eligibility for Application (7) or (8)" is subject to preliminary review for eligibility. Please gather the following documents and submit them to the Admission Office (Educational Affairs Division) of School of Engineering of University of Toyama by the deadline. When the documents are mailed, they must be received by the above deadline.

ODeadline for submission

- [The first recruitment including admission in October 2025] Thursday, July 3, 2025, at 16:00
- [The second recruitment] Friday, December 5, 2025, at 16:00

ODocuments to be submitted

- · Graduate certificate
- Grade report from the applicant's highest level of schooling (prepared and strictly sealed by the president or dean of the school from which the applicant graduated)
- Review report for certification of eligibility for application for admission examination (The University of Toyama's designated form)
- · Research and working report of achievement (The University of Toyama's designated form)
- · Separate copies of research/scientific papers, etc.

ONotification of screening results

[The first recruitment including admission in October 2025] Thursday, July 10, 2025

[The second recruitment] Friday, December 12, 2025

A person who is certified must complete the application procedures within the designated period.

#### (5) Preliminary consultation for a physically-handicapped applicant

Because a physically-handicapped applicant may need special consideration when taking an examination or attending the university, please consult the Admission Off ice (Educational Affairs Division) of the School of Engineering of the university prior to the application.

During the consultation, we may ask for the submission of a document describing the following matters and a doctor's certificate.

- •Type and severity of disability
- •Matters for which the applicant requests special consideration when taking an exam
- •Matters for which the applicant requests special consideration when attending the university

• Situation of daily living and other matters that can be referred to

① Deadline for consultation:

[The first recruitment including admission in October 2025] Thursday, June 26, 2025, at 16:00 [The second recruitment] Friday, November 28, 2025, at 16:00

2 Contact: Admission Office (Educational Affairs Division) of the School of Engineering

University of Toyama 3190 Gofuku, Toyama City, Toyama 930-8555, Japan Tel: 076-445-6399 (Int'l calls: +81-(0)76-445-6399)

### 3. Printing out the Examination Ticket

(1) The examination ticket will be available for printing on the Online application website after the date of issuance of the ticket after the University receives the application documents sent by the applicant. When the examination voucher is ready to be printed, we will notify the applicant's e-mail address registered at the time of Internet application.

(Note) The date of issuance of examination ticket is tentative and may be subject to change.

- (2) Log in to My Page from "Login" on the Online application website. In order to log in, you will need [your email address and the password you set yourself].
- (3) After log in, please download the examination ticket. Please print out the examination ticket in color on A4 paper and bring it with you on the day of the examination. Please be sure to read the "Precautions for the Examination" printed with the examination ticket. Please be sure to read them carefully before taking the examination.

### Precautions

(1) After printing the examination ticket, be sure to check the information on it. If the information is different from what you registered for the application, please contact Admission Office (Educational Affairs Division) of the School of

Engineering as soon as possible.

Also, be sure to check that the examination number on the computer screen and the number on the printed examination ticket match.

- (2) Even if you do not receive an e-mail, please log in to the Online application website and print out the examination voucher and instructions for the examination.
- (3) The number you receive when you register your application online is not your examination number. Please be sure to bring your examination ticket with you on the day of the examination, as you will not be allowed to take the examination using your reception number.
- (4) On the day of the examination, it is not acceptable to present the examination ticket by displaying it on the screen of a smartphone or other such device. Be sure to bring the printed examination ticket and keep it in a safe place after the examination.

### 4.Announcement of successful applicants

At the time of the day shown below, the examinee number of each successful applicant will be posted on the website of the University of Toyama, and a Letter of Acceptance will be mailed to each successful applicant.

We will not respond to any inquiries by telephone or other means.

Test category	Date of announcement	
(The first recruitment including admission in October 2025) Special Admission Examination for International Students	15:00 on Tuesday, September 2, 2025	
(The second recruitment) Special Admission Examination for International Students	15:00 on Friday, March 6, 2026	

### **5.Admission procedures**

The admission procedures shall be as follows, but the successful applicants will be notified of the details individually.

### (1) Deadline for admission procedures

Test category	Admission procedure starting date	
(October 2025 Enrollment) Special Admission Examination for International Students	Friday, September 12, 2025 (Scheduled)	
(The first recruitment) Special Admission Examination for International Students	Wednesday, January 21, 2026 (Scheduled)	
(The second recruitment) Special Admission Examination for International Students	Friday, March 13, 2026 (Scheduled)	

### (2) Expenses required for admission procedures

① Enrollment fee: 282,000 Japanese yen (subject to change)

However, if you have completed a master's course at one of the graduate schools of the University of Toyama and wish to continue to a doctoral course at the Graduate School, you do not need to pay the admission fee. The above enrollment fee is the scheduled amount. If the enrollment fee is revised at the time of admission, a new enrollment fee will be applicable from the time of revision.

② Other expenses such as disaster and injury insurance for students, and education and research fees will be required separately.

(Notes)

- 1. The tuition may be paid after admission. The exact amount of the fees and detailed method of payment will be explained at the time of the admission procedures. The tuition of academic year 2025 was 535,800 Japanese yen.
- 2. The paid enrollment fee can not be refunded for any reason.
- 3. If he or she has difficulty arranging the payment of the enrollment fee and tuition, the successful applicant may be exempted or his/her payment postponed.

### (3) Caution

If a person does not complete the admission procedures by the deadlines, he or she will be considered to have

withdrawn from admission.

### 6. Protection of personal information of an applicant for admission

The personal information possessed by the University shall be handled based on the "Act on the Protection of Personal Information." and "University of Toyama Rules for Protection of Personal Information."

- (1) The names, addresses and other personal information of applicants learned at the time of application shall be used for ① selection of students to be enrolled (application processing, implementation of selection), ② announcement of successful applicants, ③ admission procedures, ④ survey/study in the selection method of enrolled students, and ⑤ operations associated with these purposes.
- (2) Among the personal information learned at the time of application, only the information of those who completed the procedures for admission to our university shall be used for post-admission operations related to ① educational instruction (school registry, attending instruction, etc.), ② student support (health management, application for tuition waiver/scholarship, career support, etc.), ③ collection of tuition, and ④ statistical survey and data analysis.
- (3) Only the applicant ID numbers, names and addresses of successful applicants may be used for contact with the organizations associated with the university, alumni association and co-op. Note: If a successful applicant does not wish to have any contact with the above organizations, please inform the Admission Off ice (Educational Affairs Division) of the School of Engineering to that effect.
- (4) In the use of personal information for various types of operations, some of the operations may be conducted by a vendor contracted with the relevant operations from our university (hereinafter referred to as "contractor"). When contracting the operations, all or part of the personal information learned shall be provided to the contractor within the limit necessary to perform the contracted operations. We supervise the use of information to ensure compliance with confidentiality.

### 7.Long-term curriculum program

A long-term curriculum program is a program intended for those who cannot complete the curriculum under the standard course term because the curriculum hours for classes and research instruction are limited due to reasons such as they are working (full-time) and they intend to complete educational courses in a planned manner during a certain period longer than the standard course term. In our Ph.D. program, the student's school days are accepted up to a total of 6 years. If permitted at the time of admission, the total amount of tuition to be paid in the standard course term (3 years) can be paid evenly for each school term during the period accepted as a long-term curriculum period.

\* Details, including the method of application for this program, shall be notified to applicants when the documents for admission procedures are sent.

\* Please note that not every applicant is necessarily permitted to enter this program.

### 8. Cautions

- (1) If there are any defects in the application documents, the application may not be accepted.
- (2) If there is a shortage in the entrance examination fee payment, the application shall not be accepted.
- (3) The use of generative AI such as ChatGPT in documents prepared by applicants is prohibited.
- (4) The application documents, etc. once accepted shall not be returned for any reason.
- (5) If any fact that is different from the description in the submitted documents is found, even after acceptance of admission, the admission of a successful applicant may be cancelled.
- (6) Please forward any inquiry about the application or other matters to the following address. Admission Off ice (Educational Affairs Division) of the School of Engineering University of Toyama

3190 Gofuku, Toyama City, Toyama 930-8555, Japan Tel: 076-445-6399 (Int'l calls:+81-(0)76-445-6399)

### 9.Security Export Control

University of Toyama has established the "University of Toyama Security Export Control Regulations" based on the "Foreign Exchange and Foreign Trade Act", and conducts strict screening for security export control in the perspective of providing technology and export of research equipment and materials. If applicants who fall under any of the regulated items, you may not be able to get the permission to enroll, and receive the desired education at the university. There may be restrictions on your desired research activities.

For more information, please visit the University website.

[Reference] "University of Toyama Security Export Control Regulations" URL

http://www3.u-toyama.ac.jp/soumu/kisoku/pdf/0110401.pdf

### **10. Admissions Disclosure**

The following are the criteria for determining the pass/fail Graduate School of Science and Engineering (Doctoral Course), as well as the intent of the questions.

(1) Criteria for determining pass/fail

Oral examinations, interviews, and application documents are evaluated and assessed using an evaluation system (A, B, C).

(2) Purpose of questions, etc.

Oral examinations and interviews: Intent of the examination will be announced later.

(3) Other

- [1] Intentions of the questions will be announced on the website of the Graduate School.
- [2] Scores of the entrance examination will not be disclosed.

### Guide of Graduate School of Science and Engineering (Doctoral Course)

The Doctoral Program in Science and Engineering of Graduate School of Science and Engineering consists of four programs: Mathematical Informatics and Data Science Program, Life, Material and Energy Sciences Program, Sustainable Global Environmental Studies Program, and Advanced Engineering Program. The overview of each program is as follows.

(Note) Faculty members marked with an asterisk (\*) are scheduled to retire in March 2027.

### (1) Mathematical Informatics and Data Science Program

In today's rapidly advancing information society, there is a need for further improvement of the environment to cope with an aging society and to enable people in general to live safely and comfortably.

In this program, we aim to train advanced professionals and researchers who can foresee further advancements in the informatized society and equip themselves with a solid foundation in mathematics, information science, and data science. They will gain comprehensive knowledge in mathematical informatics, critical thinking skills, and problem-solving abilities, allowing them to play important roles in the increasingly informatized society of the future.

Educational field	Education and Research	Supervisors	Related lectures
	We conduct education and research on software	Prof. Shigeki Hirobayashi	Advanced signal processing
Basic computer engineering	development for practical use of computers, analysis and development of algorithms for useful software and advanced signal processing	Associate Prof. Tadanobu Misawa	Advanced machine learning
	analysis in computer systems.	Junior Associate Prof. Takuma Watanabe	Microwave Sensing
	We conduct education and research on visual	Prof. Hideyuki Hasegawa	Advanced Medical Ultrasonics
	information processing engineering, emotional information processing engineering, sensing and imaging technologies, signal and image	Prof. Takashi Katagiri	Advanced Bio-medical Optics
	processing, pattern recognition, color engineering, evaluation and analysis of CG/3-D visible images, optical and visual environment engineering,	Prof. Toshihide Tabata	Advanced biological information processing
Bio-medical informatics	traffic visual environment engineering, urban landscape lighting, the hot issues of development of universal design for elderly persons and people with synesthesia, visual neurophysiology, neural computing, synaptic plasticity, bioinformatics, evaluation of human cognition and social interaction and development of hardware and software for image information processing inspired by intriguing human sensory information	Project Prof. Yusuke Oshima	Advanced clinical informatics engineering
		Associate Prof. Mamoru Takamatsu	Advanced kansei information processing
		Associate Prof. Ryo Nagaoka	Advanced medical ultrasonic measurement
	processing mechanisms.	Associate Prof. Masaaki Omura	Advanced Medical Ultrasonics
Human Informatics	We conduct education and research on the analysis and evaluation of human cognition and social interaction, and on the design of information technologies that support people's intellectual activities in real life. For this	Prof. Takayuki Nozawa	Advanced Cognitive Interaction
riuman informatics	purpose, we employ a combination of multimodal measurement of brain, psychological, physiological, and behavioral activities with data science and artificial intelligence techniques.	Associate Prof. Shigeki Ikeda	Brain Information Engineering
Artificial intelligence	We conduct education and research on the design, analysis, and evaluation of various artificial intelligent methodologies, including the artificial neural networks which are inspired by the human brain's architecture and information processing mechanisms, the deep	Prof. Shangce Gao	Advanced computational intelligence
	learning which is able to learn by itself, particle swarm optimization, ant colony optimization, error back-propagation method, genetic algorithm, evolutionary strategy, and other machine learning technologies.	Assistant Prof. Zhenyu Lei	Advanced Deep Learning

Computational Science	We conduct education and research on designing, implementing, and using mathematical models, numerical analysis, and numerical simulations to analyze and solve	Prof. Toshihiro Kawaguchi Associate Prof.	Advanced Cosmic Science Informatics Advanced Computational
	scientific problems.	Takayuki Haruki	Science
		Prof. Hiroyuki Yamane	Advanced representation theory
	In order to respond to the rapid development of state-of-the-art technologies such as computers	Prof. Masato Kikuchi	Advanced stochastic process
	and communication technologies, we actively conduct research on information mathematical science from a position to analyze the	Prof. Keiichi Ueda	Advanced computational mathematics
Mathematical	mathematical models and mathematical rules underlying them, and conduct education on representation theory, nonlinear analysis and	Project Prof. Katsuhiko Sato	
analysis	stochastic process. We also aim to cultivate experts with the ability to analyze mathematical phenomena making full use of computers; such	Associate Prof. Hideo Deguchi	Advanced mathematical phenomenal analysis
	experts would be able to perform research and development that are necessary for running advanced information of the science and	Associate Prof. Masakazu Akiyama	Advanced mathematical sciences based on modeling and analysis
	technology society.	Project Junior Associate Prof. Tomoki Uda	mouching and analysis
		Assistant Prof. Ken Furukawa	
		Prof. Keiko Fujita	Advanced complex analysis
	We conduct education and research on the basic theory of mathematical science that supports the society depending on the complex and advanced science and technology, search for reliability in a comprehensive manner, and explore methods of mathematical analysis for mathematical phenomena. We also aim to cultivate specialists who excel in mathematical thinking and logic-composing by deepening their ability to analyze mathematical structures.	Prof. Takashi Koda	Advanced geometry
Mathematical		Associate Prof. Tatsuya Kawabe	Advanced theory of geometric structures
structural science		Associate Prof. Iwao Kimura	Advanced number theory
		Assistant Prof. Yuki Shimizu	
		Assistant Prof. Naoki Genra	
Quantum	We are working on quantum information theory where application of quantum mechanics offers revolutionary improvements to information processing. Our interest includes proposal	Prof. Kiyoshi Tamaki	Advanced quantum informationprocessing
information	of quantum cryptgraphic protocols and side- channel attacks against them, security analyses of quantum protocols, and analyses of quantum repeaters.	Junior Associate Prof. Akihiro Mizutani	Advanced quantum computing
Quantum Control Theory	Our principal interests are in the theory of quantum control, which will support the future technologies based on quantum mechanical effects. We study mathematical foundations of quantum many-body dynamics from the control perspective.	Project Prof. Koji Maruyama	Information Thermodynamics
Computer Vsion	If machines can recognize, track, and inspect in place of the human eye, these "mechanical eyes," which never need to rest, can tirelessly perform their tasks. We conduct research and education to realize the human function of "seeing" through machines (cameras).	Project Prof. Chao Zhang	

### (2) Life, Material and Energy Sciences Program

Our course offers a wide range of research fields including life and material chemistry, advanced clean energy, physics and applied physics which are keys to modern science and technology and indispensable for our future. Students will acquire skills and knowledge, both basic and applied, through reading academic articles, giving scientific reports, and participating in conferences and symposiums as well as communications among researchers and research fields. We are proud of producing highly innovative graduates.

Educational field	Education and Research	Supervisors	Related lectures
Neural system and cell electrical engineering	<ul> <li>We conduct education and research on the following topics.</li> <li>Phase-dependent processing of sensory information in synchronous neural activities and dynamic interaction among the nonlinear oscillators in a brain as well as between the brain and rhythmic sensory inputs, using relatively simple invertebrate system.</li> <li>Applications to cell sensors and cell separation as a fusion field of cell engineering and electrical engineering.</li> </ul>	Prof. Shigenori Kawahara * Junior Associate Prof. Minoru Suga	Advanced Lecture on Dynamics in Brain and Neural Systems Advanced Lecture on Biological Dielectric Phenomena
Molecular and cellular bioengineering	Education and research will be conducted on the development of monoclonal antibodies for diagnostic and therapeutic use, as well as on the functional analysis of biomolecules using antibodies and their application in biotechnology. Education and research will be conducted to elucidate the mechanism of protein metabolism in vivo and develop artificial regulation methods of protein metabolism. Education and research will be conducted to develop material production processes by bioreaction engineering using microorganisms and to elucidate their microbial cellular mechanisms. Education and research will be conducted to deepen our understanding of life using synthetic biology techniques, which aim to artificially build life and biological systems by reconstituting biological molecules, and apply this knowledge to various fields, such as environmental issues and advancing healthcare.	Prof. Nobuyuki Kurosawa Associate Prof. Tomonao Inobe Associate Prof. Tatsuhiko Ozawa Junior Associate Prof. Maki Moriwaki Junior Associate Prof. Seiichi Koike	Advanced Course in Antibody Engineering Advanced Course in Protein Metabolism Advanced Course in Immune Engineering Advanced Course in Microbial Reaction Engineering Advanced Course in Synthetic Cell Biology
Pharmacology	Education and research will be conducted on intractable chronic pain diseases such as postherpetic neuralgia, migraine, and cancer pain, and intractable chronic pruritic diseases such as atopic dermatitis, in order to elucidate their pathological mechanisms and to discover novel therapeutic agents.	Associate Prof. Ichiro Takasaki	Advanced Pharmacology and Genetic Engineering
Medicinal Chemistry	Research and education on drug discovery research, including synthetic studies of natural products exhibiting unique biological activities and design, synthesis, and structure-activity relationship studies of novel drugs based on small organic molecules.	Associate Prof. Takuya Okada	Advanced Bioorganic and Medicinal Chemistry
Condensed matter physics	We perform education and research on the relationship between atomic-level structure of materials and their physical properties. Emphasis is placed on the understanding transition mechanism via advanced experimental method for metallic, semiconducting, magnetic and superconducting materials. Methods of structural analysis such as X-ray diffraction and X-ray absorption spectroscopy, computational analysis and experimental techniques for physical transport properties will be introduced to proceed with the education and researches.	Prof. Tomohiko Kuwai Prof. Hiroyuki Ikemoto * Associate Prof. Takashi Tayama Associate Prof. Keisuke Hatada Assistant Prof. Yuji Matsumoto	Advanced condensed- mater physicsPhysics of disordered systemAdvanced low temperature physicsTransport properties of advanced materialsAdvanced strength of materials

	We conduct wide-ranging education and	Associate Prof.	Advanced relativistic
Energy material basic science	research about what is a basic material, what kind of forces are working between the materials, how the Universe has been	Mitsuru Kakizaki Assistant Prof. Yuuki Nakano	cosmology
	formed and developed and what mathematical expressions are appropriate for ultimate theories of material, time and space.	Assistant Prof. Motoko Fujiwara	
	We conduct education and research to identify molecular spectra and to derive precise molecular structures. These are	Prof. Yoshiki Moriwaki	Advanced quantum electronics
	important for physical chemistry, astronomy and environmental science by using laser and microwave spectroscopy. Techniques of	Prof. Kaori Kobayashi	Advanced microwave molecular spectroscopy
Molecular energy basic science	trapping and cooling of atoms and molecules are also investigated and are applied to determine the precise frequencies and to verify	Associate Prof. Katsunari Enomoto	Advanced molecular spectroscopy
	the parameters of fundamental physics. We are also developing KAGRA, gravitational wave detector at Kamioka (Gifu prefecture), especially, technologies related with laser and	Associate Prof. Kazuhiro Yamamoto Assistant Prof.	Advanced gravitational wave physics
	mirror. We conduct education and research on	Mai Takeo	
Materials science for electronic	the nanodevices, MEMS (Micro Electro Mechanical Systems) and their integrated circuits, and the growth and characterization of semiconductor heteroepitaxial films.	Prof. Masayuki Mori	Advanced semiconductor thin film technology
devices	Crystal structure and dielectric properties of ferroelectric single crystals, ceramics, and thin film are also studied.	Associate Prof. Toshio Kikuta	Ferroelectric devices
Organic optoelectronic devices engineering	We conduct education and research in the optoelectronics, thin-film engineering, alignment controlling, and application of optoelectronic devices using organic	Prof. Shigeki Naka	Advanced organic electronic device
engineering	semiconductors.		
	We perform education and research on the relationship between electronic/atomic structure of materials and their mechanical/ physical properties. Emphasis is placed on the	Prof. Kenji Matsuda	Advanced nano material structural analysis
Material design	understanding deformation mechanism via advanced deformation method and the development of new functions via micro/nano-structure control, surface	Prof. Norio Nunomura	Advanced computational materials modelling
	modification, or control of phase transformation/precipitation with metallic, ceramic, magnetic and superconducting	Associate Prof. Takahiro Namiki	Transport properties of advanced materials
	materials. Electron microscopy, computational analysis and experimental techniques for physical transport properties will be introduced to proceed with the education and researches.	Associate Prof. Seungwon Lee	Advanced strength of materials
Materials chemistry	Education and research are conducted into the fundamentals and applications of smelting, refining, and recycling processes of inorganic materials, mainly metals, by dry and wet methods.	Prof. Hideki Ono	Advanced refining engineering of materials
Plasma Science	Nonlinear and nonequilibrium phenomena of plasmas (such as nonlinear waves, turbulence, generation processes of non-thermal particles, and so on), and application of mathematical modeling	Associate Prof. Yasuhiro Nariyuki	Plasma astrophysics
Atomic and Molecular Physics	Education and research on the physics of fundamental processes in the interaction of high-energy photon with atoms and molecules will be carried out through experimental studies	Prof. Yasumasa Hikosaka	Advanced Atomic and Molecular Physics
molecular raysics	of photoionization processes of atoms and molecules using synchrotron radiation.	Junior Associate Prof. Hayato Ohashi	Advanced Highly- charged Ion Physics
High frequency engineering	We conduct education and research on mobile communication systems, regarding multipath radio propagation, adaptive signal processing using array antennas and its over-the-air testing method, and angle of arrival estimation.	Associate Prof. Kazuhiro Honda	Advanced radio wave propagation

Photofunctional Material	Education and research are conducted into the design and synthesis of new photofunctional materials based on surface-modified nanomaterials that enable hybridization with organic or inorganic materials so that they can be used in the development of artificial photosynthesis systems and applications in the field of nanomedicine.	Prof. Yutaka Takaguchi	Advanced photofunctional material
Biomaterials Processing and Engineering	Education and research into the physico- chemical properties of biomaterials for tissue engineering and processing techniques for biomaterials at the nano- and micro-scale.	Assistant Prof. Shintaro Iwanaga	Advanced Biomedical Engineering
Particle design Process <not available=""></not>	We conduct education and research on particle design for creation of high-functional new materials accompanied by generation of fine powder and advanced technologies for development and design of their industrial manufacturing process.	Associate Prof. Taketoshi Kurooka Assistant Prof. Guiqing Liu	Advanced process analysis Selected topics in chemical and environmental process
Nanomaterials chemistry	We conduct education and research on synthesis and fabrication of photo-functional nanomaterials for light energy conversion and development of novel functions.	Junior Associate Prof. Hiroyasu Nishi	Advanced photo- functional materials chemistry
photofunctional molecular science	We conduct educational research on elucidating reaction dynamics and excited-state structures for the photo-functional molecules converting light energy into chemical energy or electrical energy, especially the photo function of molecular systems containing heavy metals such as transition metal complexes, developing observation and analysis methods.	Junior Associate Prof. Munetaka Iwamura Assistant Prof. Tsukasa Takanashi	photochemistry of transition metal complexes
Synthetic coordination chemistry	We conduct education and research on synthesis, structures, and physical and chemical properties of mono- to multi-nuclear coordination compounds with various properties including luminescence, redox activity, and response to external stimuli.	Prof. Kiyoshi Tsuge Associate Prof. Hideki Ohtsu Associate Prof.	Advanced synthetic coordination chemistry Advanced functional coordination chemistry Advanced structural
Synthetic organic chemistry	We conduct education and research on the design and synthesis of novel extended pi- conjugated systems, their application to supramolecular functional materials, the development of novel organic reactions, and their applications to the synthesis of biologically active natural compounds.	Honoo Suzuki * Prof. Naoto Hayashi Junior Associate Prof. Hajime Yokoyama Assistant Prof. Junro Yoshino	solution chemistryAdvanced organic nano scienceAdvanced synthetic natural products chemistryAdvanced organo-main
Biofunctional Chemistry	Elucidation of the molecular bases of naturally occurring RNAs acting as enzymes and receptors. Generation of novel structures and functions of artificial RNA molecules, assembly of these RNA molecules to construct RNA-based molecular systems.	Prof. Yoshiya Ikawa Junior Associate Prof. Shigeyoshi Matsumura	group element chemistry         Advanced bimolecular- system science         Evolutionary Molecular Engineering
Organic Electrosynthesis	Our focus is on developing new synthetic reactions for nitrogen-containing compounds using an electrochemical approach.	Assistant Prof. Kazuhiro Okamoto	
Environmental and analytical chemistry	Education and research will be conducted into the development of new separation materials and methods for efficient separation and concentration of trace elements contained in solutions, and their applications in analytical and environmental chemistry, such as determination of trace and ultra-trace elements in environmental and biological samples, recovery of valuable elements in waste, and removal of hazardous elements from waste.	Prof. Shigehiro Kagaya Associate Prof. Makoto Genmei Assistant Prof. Akira Kanno	Advanced separation science for trace element Advanced biointerface science Advanced analytical chemistry for living organisms

Computational Biomolecular Science	We construct an interaction model for biomolecules based on quantum chemical principles and analyze their molecular structure and dynamics through computer simulation technique. By calculating static and dynamic physical quantities based on statistical mechanics theories from the molecular trajectories obtained through molecular simulations, we elucidate biological phenomena at the molecular level.	Prof. Tatsuya Ishiyama	Biomolecular Simulation
Nanobiomolecular Engineering	The aim of our research is to understand the chemical and molecular mechanism of biological activities, and to develop new biosensing methods.	Associate Prof. Masafumi Sakono	Advanced Biofunctional Engineering
Nano-biomaterial design	Research theme of this field is that 1) design and synthesis of functional molecules, biopolymers, and proteins for constructing biomedical devices, and 2) development of novel functional biomaterials using biopolymer, protein and functional molecules. Additionally, we aim to elucidate and understand the correlation between biomaterial and biomolecules such as cell, protein, bacteria etc. Various information obtained by various in vitro and in vivo experiments will be used to develop biomedical devices that can be used in practical applications.	Associate Prof. Tadashi Nakaji	Lecture for development of nanomaterials and biomaterials
Synthetic inorganic chemistry	We conduct education and research on the preparation, characterization and physical properties of molecular solid-state systems based on organic, inorganic and organometallic molecules, including surface-functionalized metal nanoparticles, which exhibit novel functions such as electrical conductivity and magnetism.	Associate Prof. Akira Miyazaki	Advanced properties of molecular solid-state materials
Process Chemistry for harmaceuticals	Education and research on the development of efficient synthetic methods for biologically active compounds, including pharmaceuticals, and various functional organic molecules.	Prof. Hitoshi Abe	Advanced Synthetic Chemistry of Functional Molecules
Energy environment science	We conduct education and research on the physicochemical properties of hydrogen isotopes and the development of functional materials for safe and efficient utilization of hydrogen isotopes as fuels of fusion reactors and hydrogen energy systems. Our research topics are in an interdisciplinary field that covers materials science, physical chemistry, nuclear fusion engineering, and hydrogen energy engineering.	Prof. Takayuki Abe Associate Prof. Hidehisa Hagiwara Associate Prof. Masanori Hara Junior Associate Prof. Akira Taguchi Assistant Prof. Satoshi Akamaru	Advanced hydrogen energy materialsEnergy conversion engineeringAdvanced lecture for measurement and detection of radiationAdvanced catalytic transformationAdvanced inorganic functional materials
Molecularreaction engineering	We aim to solve energy and environmental problems for the foundation of a future society by making full use of knowledge about catalytic chemistry, chemical reaction engineering, and molecular dynamics. Our study focuses on advanced application of resources such as biomass, carbon dioxide, green hydrogen and sun-light, as well as chemical reaction and chemical engineering processes that pose low environmental burdens. It also explores nano-materials with novel functions.	Prof. Noritatsu Tsubaki	Advanced catalysis Engineering

### (3) Sustainable Global Environmental Studies Program

We conduct education and research on the past, present, and future history and changes of the atmosphere, hydrosphere, geosphere, and biosphere that make up the Earth's environment, as well as their interactions, from the earth's interior to outer space, to develop human resources with interdisciplinary knowledge and thinking ability. Specifically, education and research are conducted on the structure, behavior, evolution, and diversity of organisms in the Earth's environment, and the mechanisms of transmission, expression, and regulation of genetic information. Based on the knowledge obtained from these studies, we conduct education and research on (1) genetic engineering for the industrial production of useful materials, (2) analysis of the relationship between biological functions and the internal and external environment, (3) conservation and restoration of the environment using chemical and biological methods, (4) changes in the crustal structure, (5) prediction of a sustainable society.

Educational field	Education and Research	Supervisors	Related lectures
		Prof. Yasuo Ishizaki	Advanced volcanology
Geological Science	We conduct education and research for unveiling the origins of underground resources and changes in the global environment during 4.6 billion years of the Earth history. The primary targets of our study are solid substances that record the Earth history such as minerals, rocks, and sedimentary strata. From the targets, we explore the material cycle, chemical reaction, heat history, and environmental changes of the Earth from its birth to the present on the basis of accurate age dating.	Prof. Shin-ichi Sano	Earth and life history
		Associate Prof. Ken-ichi Yasue	Advanced neotectonics
		Junior Associate Prof. Ai Kawamura	Vertebrate Paleontology
		Assistant Prof. Hikaru Sawada	Advanced earth material science
		Assistant Prof. Toru Nakajima	Advanced Orogenic Geology
	As global warming progresses, extreme weather events are becoming more severe and frequent. The Hokuriku region is also affected by these significant climate changes, facing increased risks of various local disasters such as heavy snowfall, thunderstorms, heatwaves, and storm surges. To protect safe urban functions and rich social life from these risks, we aim to study the mechanisms behind climate system changes from a global perspective and develop highly capable individuals who can apply this knowledge to solve local problems.	Prof. Kazuaki Yasunaga	Advanced dynamic meteorology
Geophysics of		Prof. Kazuma Aoki	Advanced atmospheric radiation
		Prof. Konosuke Sugiura	Advanced geoglaciology
Atmosphere, Ocean, and Cryosphere		Prof. Bunmei Taguchi	Advanced ocean and climate dynamics
Cryosphere		Prof. Masahiro Hori	Advanced remote sensing
		Associate Prof. Wataru Shimada	Advanced snow and ice science
		Associate Prof. Atsushi Hamada	Advanced atmospheric physics
Solid Earth Geophysics	Our education and research are aiming to advance our understanding of the structure of the solid Earth and its dynamics, especially around the Central Japan. We are investigating the crustal structure, seismic and volcanic activities, and environmental changes in this area through geophysical observations, field surveys, and laboratory experiments. Students are trained to contribute to the prediction, prevention and mitigation of natural disasters	Prof. Tohru Watanabe	Advanced physics of the Earth's interior
		Prof. Naoto Ishikawa *	Advanced paleomagnetism and rock magnetism
		Associate Prof. Kazuo Kawasaki	Advanced resource and environmental geophysics
		Assistant Prof. Kohei Hotta	Advanced geodesy

		Prof.	Advanced Biochemistry
		Kouhei Matsuda	for Organic Molecules
Regulatory biology	Education and research are conducted on adaptive significance of biological rhythms and sleep system, endocrine system, and behavioral system of an individual organism or population in changing external environments.	Prof. Masayuki Ikeda	
		Prof. Kimiko Shimizu	
		Associate Prof. Tomoko Yoshikawa	Advanced biological clocks
		Junior Associate Prof. Norifumi Konno	Advanced endocrinology
		Junior Associate Prof. Tomoya Nakamachi	Advanced behavioral physiology
		Junior Associate Prof. Eri Morioka	Advanced invertebrate neuroethology
		Prof. Ichirou Karahara	Advanced plant morphology
Life information	We study the molecular mechanisms underlying cell differentiation and organ development, as well as genome structure, inheritance, and gene expression in diverse plant species. We also investigate how plants perceive, transduce, and respond to environmental and endogenous signals, including light and hormones.	Project Associate Prof. Tomoaki Nishiyama	
science		Junior Associate Prof. Masayuki Yamamoto	Advanced plant molecular genetics
		Junior Associate Prof. Daisuke Tamaoki	Advanced plant cell biology
		Associate Prof. Yuji Yamazaki	Living structure science
	We analyze various processes in the biological developments, morphogenesis, structural features, phylogenetic relationships, diversity,	Associate Prof. Kiyoto Maekawa	Advanced evolutionary developmental biology
Living structure science	behavioral ecology and evolution through comparative study in living structures. Thus, we conduct education and research to	Associate Prof. Tsutomu Tsuchida	Advanced biology of symbiosis
	understand the fundamental principles and rules.	Assistant Prof. Kyouko Sato	Advanced plant cytotaxonomy
		Assistant Prof. Gohta Kinoshita	
	Our group focuses on exploring techniques from chemical approaches in solving and	Prof. Jing Zhang	Advanced marine geochemistry
Environmental and analytical chemistry	clarifying environmental problems. For example, we are developing simple and rapid analytical methods to measure harmful	Prof. Hideki Kuramitsu	Advanced water analysis
	components related to environmental pollution. The dynamics of these components are then	Prof.	Isotope studies in environmental science
	studied, and based on these findings, we perform basic research to remove the pollutants from waste water. Furthermore, our research	Keiji Horikawa Junior Associate Prof.	Advanced environmental water
	also includes geochemical monitoring of CO <sub>2</sub> which consists of water rock interaction in	Kazuto Sazawa	quality
	geothermal fields. We also clarify and evaluate material cycling systems and mechanisms and changes in oceanic and terrestrial water	Assistant Prof. Takanori Kagoshima	Advanced Solid Earth Geochemistry
	systems, using major ions, trace elements, and stable isotopes.	Project Assistant Prof. Hidetaka Kobayashi	Advanced Ocean Dynamics

Environmental BiologyWe conduct research on the functions of organisms, which are important components of the biosphere, from the molecular to ecosystem level. In particular, education and research will be conducted on the effects of environmental factors such as light, water, metal ions, andProf. Prof. Hiroshi IshiiAdvanced micro Advanced plant Hiroshi IshiiEnvironmental BiologyAdvanced plant the biosphere, from the molecular to ecosystem level. In particular, education and research will be conducted on the effects of environmental factors such as light, water, metal ions, andAdvanced plant the physiology	ecology
We conduct research on the functions of organisms, which are important components of the biosphere, from the molecular to ecosystem level. In particular, education and research will be conducted on the effects of environmental factors such as light, water, metal ions, andProf.Advanced plantEnvironmental BiologyEnvironmental factors such as light, water, metal ions, andProf.Advanced plant	
organisms, which are important components of the biosphere, from the molecular to ecosystem level. In particular, education and research will be conducted on the effects of environmental factors such as light, water, metal ions, andHiroshi IshiiAdvanced plantEnvironmental Biologyfactors such as light, water, metal ions, andHiroshi IshiiAdvanced plant	
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Environmental Biologylevel. In particular, education and research will be conducted on the effects of environmental factors such as light, water, metal ions, andAssociate Prof. Hiroyuki KamachiAdvanced plant physiology	
Environmental Biology be conducted on the effects of environmental factors such as light, water, metal ions, and Hiroyuki Kamachi physiology	
Biology factors such as light, water, metal ions, and	
chemical substances on the physiological Associate Prof. Advanced strati	graphy
functions of organisms, the effects of global Kenji Kashiwagi	515
environmental change, and interactions Advanced	
between individual organisms and between Junior Associate Prof. environmental r	nolecular
species. Akihiro Sakatoku biology	
Junior Associate Prof. Advanced isoto	pe
Tamihisa Ohta ecology	
Our group's primary focus is advancing	
environmental sustainability through rigorous	
research that emphasizes the conservation and	
responsible management of natural ecosystems, Prof. Advanced Cons	ervation
including land use land cover (LULC) and Naoya Wada Ecology	
forestry, agricultural landscapes, plantations,	
coastal and marine seascapes, and urban green Prof. spaces. We mentor Ph.D. candidates in Geetha Mohan	
Environmental anotoning maintaining and sustainably using Associate Prof.	
Sustainability ecological systems. Our research includes Chakraborty Shamik	
Science detailed analysis of land-use practices and	
ecosystem services in environmental systems Assistant Prof.	
such as freshwater and marine fish habitats, Shishir Sharmin	
water resources, and agroecosystems from a	
sustainability science point of view. Assistant Prof.	
Additionally, we develop and implement Peterson Miles Isao	
sustainable management frameworks designed	
to ensure the long-term viability and resilience	
of environmental systems.	

### (4) Advanced Engineering Program

Education and research are conducted in the fields of mechanical engineering, electronics, robotics, materials science, and civil engineering to develop human resources with broad knowledge and specialized skills in engineering fields and the ability to solve problems in a sustainable society. Specifically, education and research will be conducted in the following fields and also aim at exchanges among the fields: a wide range of fields that integrate electronic and electrical engineering and mechanical engineering, with an understanding of natural sciences such as electromagnetism and various dynamics, the creation of a foundation for industrial and technological innovation through material innovation based on material science, and the design of safe, secure and comfortable cities through the advanced use of data science.

Educational field	Education and Research	Supervisors	Related lectures
Organic optoelectronic devices	We conduct education and research in the optoelectronics, thin-film engineering, alignment controlling, and application of	Prof. Shigeki Naka	Advanced organic device
engineering	optoelectronic devices using organic semiconductors.	Associate Prof. Masahiro Morimoto	Advanced organic thin films
High frequency engineering	We conductors. We conduct education and research on mobile communication systems, regarding multipath radio propagation, adaptive signal processing using array antennas and its over-the-air testing method, and angle of arrival estimation.	Associate Prof. Kazuhiro Honda	Advanced radio wave propagation
Materials science for electronic devices	We conduct education and research on the nanodevices, MEMS (Micro Electro Mechanical Systems) and their integrated circuits, and the growth and characterization of semiconductor heteroepitaxial films. Crystal structure and dielectric properties of ferroelectric single crystals, ceramics, and thin film are also studied.	Prof. Masayuki Mori Associate Prof. Toshio Kikuta	Advanced semiconductor thin film technology Ferroelectric devices

	We perform education and research on the relationship between electronic/atomic	Prof. Kenji Matsuda	Advanced nano material structural analysis
	structure of materials and their mechanical/ physical properties. Emphasis is placed on the understanding deformation mechanism via advanced deformation method and the development of new functions via	Prof. Norio Nunomura	Advanced computational materials modelling
Material design	micro/nano-structure control, surface modification, or control of phase	Associate Prof. Takahiro Namiki	Transport properties of advanced materials
	transformation/precipitation with metallic, ceramic, magnetic and superconducting materials. Electron microscopy, computational	Associate Prof. Seungwon Lee	Advanced strength of materials
	analysis and experimental techniques for physical transport properties will be introduced to proceed with the education and researches.	Assistant Prof. Taiki Tsuchida	Advanced Materials Fabrication Engineering
	Education and research are conducted into the fundamentals and applications of smelting,	Prof. Hideki Ono	Advanced refining engineering of materials
Materials chemistry	refining, and recycling processes of inorganic materials, mainly metals, by dry and wet methods and into the improvement of corrosion resistance, surface modification, and surface	Associate Prof. Masahiko Hatakeyama Assistant Prof.	Advanced chemical analysis
	functionality by electrochemical methods. Education and research are conducted into the	Kengo Kato	
Photofunctional Material	design and synthesis of new photofunctional materials based on surface-modified nanomaterials that enable hybridization with organic or inorganic materials so that they can be used in the development of artificial photosynthesis systems and applications in the field of nanomedicine.	Prof. Yutaka Takaguchi	Advanced photofunctional material
	Various theories and technologies have been	Prof. Seiji Saikawa *	Advanced material forming and engineering
Material process	established in the creation and application processes of excellent new materials and functional materials, and in the molding of metals. Education and research are conducted	Prof. Tetsuo Aida	Advanced material manufacturing and plasticity theory
	on the industrial application of molecular functional materials.	Associate Prof. Takashi Hashizume	Advanced Hydrothermal Processing for Inorganic Materials
Materials for Biofunctionalizatio n	Education and research will be conducted into the design of artificial materials from the viewpoints of both macroscopic shape and microscopic material properties, not only to improve the functionality and performance of the material itself, but also to improve the functionality of the living body through the	Prof. Takuya Ishimoto Assistant Prof. Tomoyo Manaka	Advanced Biomaterials Engineering
Transfer phenomenon system	application of the material. We conduct education and research on transport phenomena of momentum, heat and mass occurring in industrial manufacturing processes such as polymer coating and alloy casting, aiming to develop mathematical models for simulation of unit operations constituting a process, methods for optimization of operating conditions, and technologies for saving energy and cost.	Associate Prof. Masamichi Yoshida *	Theory of transport phenomena
Molecular mechanical	We conduct education and research on molecular dynamics and quantum mechanics for new materials as well as on the evaluation	Prof. Takeshi Seta	Advanced Computational Thermo-Fluid Dynamics
engineering	of mechanical function and performance of molecular devices including electronic ones.	Junior Associate Prof. Tatiana N. ZOLOTOUKHINA	Advanced nano dynamics
Strength and	We conduct education and research on establishment of optimal and safe design methods for mechanical components and structure. We also focus on greation and	Prof. Noriyasu Oguma	Advanced mechanical engineering design for special environments
fracture of engineering materials	structures. We also focus on creation and application of new functional materials through understanding the strength and fracture mechanisms of engineering materials,	Associate Prof. Koichi kasaba	Strength and properties of advanced functional materials
	establishment of database for material properties, and reliability analysis.	Associate Prof. Kenichi Masuda	Advanced nonlinear structural analysis

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		Prof. Tohru Sasaki	Advanced measurement system
	The functions of high-speed, high-precision and complex systems range from non-bio to bio functions and have become subdivided.	Prof. Kenji Hirata	Decentralized and cooperative control systems
		Prof. Yoshiyuki Matsumura	Advanced intelligent system
Function control engineering	We conduct education and research to develop elements and systems for measurement. We also focus on control systems that can	Prof. Toshiyuki Yasuda	Advanced adaptive systems
	efficiently deal with high functionalization and multi-functionalization as well as establishment of the theories.	Associate Prof. Kenji Terabayashi	Advanced image measurement
		Associate Prof. Junya Yamauchi	Advanced Learning- Based Control
		Junior Associate Prof. Masahiro Sekimoto	Advanced robot dynamics and control theory
Material	We conduct education and research on processing systems that not only improve the level of processing technologies and processing quality but also respond to superprecision and	Prof. Tomomi Shiratori	Advanced plasticity process
processing	miniaturization by developing processing methods for new materials with multiple functions and elucidate their processing mechanisms.	Junior Associate Prof. Noboru Takano	Advanced microfabrication
	On the basis of mechanics such as studies on the strength of materials, computational mechanics, and experimental mechanics,	Prof. Katsuyuki Kida	Advanced solid Mechanics
Solid mechanics	we perform education and research on the strength of new materials, their combined materials, and functional materials. We also	Associate Prof. Koshiro Mizobe	Advanced fracture mechanics
	carry out mechanical evaluation of machine, components, and structures.	Assistant Prof. Soji Matsubayashi	
Intelligent systems	We conduct education and research on robotics, medical robotics system, rehabilitation systems, intelligent algorithms, and intelligent control.	Associate Prof. Hideki Toda	Biosignal measurement and processing for robot application
Bio-information engineering	We conduct education and research which promote design and development of the method of measuring biological information and the method of analyzing biological information for estimating a biological state.	qProf. Kazuki Nakajima	Advanced bio-instrumentation engineering
Computer applications engineering	We conduct education and research on human and traffic flow measurement for industrial applications using information sensing technology, human well being measurement technology using smart devices, QoE of multimedia applications/services, intellectual image processing for ITS, energy management system using IoT devices, construction DX technology.	Prof. Yuukou Horita *	Advanced image communication
TTL 1 1	We conduct education and research on electromagnetic simulation, device fabrication	Prof. Seiichiro Ariyoshi	
Ultra-high frequency engineering	and measurement, and signal and image processing. Furthermore, we conduct education and research on imaging in the millimeter and	Associate Prof. Tatsuo Nozokido *	Advanced ultra-high frequency engineering
	terahertz wave regions.	Associate Prof. Masafumi Fujii	Advanced FDTD analysis
Electric energy system	On the basis of high efficient power conversion and high voltage/current technologies, we conduct education and research on linear motor and actuator, magnetic louitation	Prof. Hiroaki Ito	High voltage and high current engineering
	motor and actuator, magnetic levitation, magnetic bearing, power electronics, renewable energy utilization, pulsed power, high power pulsed particle beam, atmospheric pressure	Prof. Takahisa Ohji	Advanced electromagnetic engineering
	and high density plasma, and observation and projection of lightning discharge.	Associate Prof. Kenji Amei	Advanced power conversion engineering

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	Our research in fluid and thermal sciences has both fundamental and applied studies in energy	Prof. Seiichiro Izawa	Turbulent flow and transport
Thermofluid system	conversion, heat and mass transport, and technologies for their usage. Basic research efforts in energy systems include multiphase	Junior Associate Prof. Atsushi Kase	Advanced applied fluid engineering
	flows, coherent turbulent structure, and bioengineering.	Junior Associate Prof. Daisuke Watanabe	Advanced applied fluid engineering
Design Management	<ul> <li>Design excellence of public space and urban infrastructure from the perspectives of functionality and urban landscape</li> <li>Institutional capacity and governance (e.g., international comparative studies of public procurement systems)</li> <li>Revitalization of and community building in urban areas (e.g., residential living in the urban core, street audit and analysis)</li> </ul>	Prof. Yoshiaki Kubota Assistant Prof. Yongcheng Wang	Advanced Design for Urban spaces
Hydraulic Engineering	We will elucidate the mechanisms and scenarios of various environmental problems and disaster prevention problems in rivers, coasts, and lakes. Furthermore, we will conduct education and research on measures to solve these problems from both hardware and software aspects.	Prof. Ichiro Kimura	Advanced River Hydraulics
Reliability design on geotechnical structure	Education and research of reliability design on geotechnical structure from the viewpoints, heterogeneous characteristics of natural ground, uncertainties of subsurface exploration and resistance evaluation of geotechnical structure, is conducted.	Prof. Takashi Hara Associate Prof. Naoki Tatta	Special lecture of geotechnical structure design
Infrastructure Planning and Management	Education and research on the following points will be conducted. -Social impact assessment of public transportation development. -Methods of public participation in transportation and urban planning. Evaluation of its effectiveness. -Analyze the impact of disasters on transportation and propose countermeasures. -Evaluation of transportation nodes and pedestrian spaces.	Associate Prof. Hiroto Inoi Junior Associate Prof. Qiang Liu	Advanced Urban and Transportation Planning
Evaluation of structural performance	how to set the required performance, how to satisfy the required performance	Associate Prof. Tetsuya Kohno	Structural Design and Maintenance Engineering
Structural Mechanics and Bridge Engineering	We conduct education and research on structural mechanics and bridge engineering. In specific, with regard to steel, steel-concrete composite and fiber reinforced polymer bridge structures, the mechanical behavior of connection of members, the load carrying mechanism, the performance evaluation, the rational design and so on are studied.	Associate Prof. Yasuo Suzuki	Advanced Bridge Engineering