

**Recommendation
System**

Graduate School of Engineering, Osaka Prefecture University

Master's Degree Program

Admission Guidelines on the Recommendation System

〔 September 2021, October 2021 Admission: Master's Degree Program
April 2022 Admission: Master's Degree Program 〕



April 2021

Graduate School of Engineering, Osaka Prefecture University

<http://www.eng.osakafu-u.ac.jp/>

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Important Notice

Osaka Prefecture University is currently in the process of applying to the Ministry of Education, Culture, Sports, Science and Technology (MEXT) for approval to establish and inaugurate the Osaka Metropolitan University (tentative name) in April 2022. If this establishment is approved, students admitted to the graduate school of Osaka Prefecture University in 2022 will be enrolled under the Osaka Metropolitan University (tentative name).

Accordingly, those who wish to enroll must refer to the “List of transfer destinations available at the Osaka Metropolitan University (tentative name)” published on the university’s website of Osaka Prefecture University (In Japanese only) and submit the “Osaka Metropolitan University (tentative name) graduate school/ division/ program/ department confirmation form” (University designated form) along with other relevant documents that are necessary for their application.

If the establishment of the Osaka Metropolitan University (tentative name) is not approved, the organization of Osaka Prefecture University will not be changed, and successful applicants will be enrolled directly in the graduate school/ division/ program/ department to which they apply.

Admission Policy

Graduate School of Engineering, Osaka Prefecture University

(Master's Degree Program)

The Graduate School of Engineering is located in the cosmopolitan city of Sakai, a place with a long and rich history as the cradle of Japanese civilization. Our mission is “to engender a free and enterprising spirit, to educate young people who will contribute to the development of innovative new technologies and who will reach out to the world.”

Engineering is a discipline founded on the principles of seeking truth, adding to the storehouse of knowledge, and advancing science and technology in harmony with the natural environment. While engineering can be considered a fusion of science and technology, it should also contribute to the development of a sustainable society and enrichment of culture.

We are building on these principles by educating engineers and researchers who will be contributing members of society and the science community. Our dedication to education and research entails training future leaders who can meet the challenges of a fast-paced, constantly evolving world with a broad base of knowledge and advanced research expertise as well as high ethical standards.

In an effort to implement the above educational and research principles, the Graduate School of Engineering invites ambitious students who would like to be active in the science and research community, as follows:

1. Students with the ambition to contribute to society as well as the global community as engineers and researchers.
2. Students with a strong sense of responsibility, morality and high awareness of technology's impact on individuals, society and the natural world.
3. Students with broad basic scholarship and the ambition to gain a deeper understanding of their chosen field of study.
4. Students with a positive attitude and enthusiasm to find creative solutions to existing problems as well as to develop innovative new materials, processes and systems which will benefit society and the environment.
5. Students who can thrive in a culturally diverse research environment and collaborate in international endeavors by respecting the interdependence of unity and diversity.

Based on the above, students who have acquired the following 1 to 3 abilities and aptitudes will be selected.

1. The student has basic knowledge and fundamental knowledge related to specialized fields through a broad study of basic science subjects taught at university and subjects in various specialized fields.
2. The student possesses basic skills that enable him/her to read and understand English texts written in specialized fields and to express themselves in written English.
3. The student possesses basic skills necessary to find and solve problems in the field of engineering.

Master's Degree Program

Due to the impact of COVID-19, the method of application, application period, and other factors such as the examination schedule are subject to change. In the event of any changes, these will be posted to the university's website, so please ensure that you check this page from time to time. (In Japanese only)

1. Admission Places: Allocation of available admission places

The total number of admission places available for each division is shown below.

Recommendation System will be considered as candidates for a limited number of these admission places.

Division	Department	Total Number of Admission Places Available by Division	
		April 2022 Admission	September 2021, October 2021 Admission
Mechanical Engineering	Mechanical Engineering	Few	Few
Aerospace and Marine System Engineering	Aerospace Engineering	Few	Few
	Marine System Engineering		
Electronics, Mathematics and Physics	Physics and Electronics	Few	Few
Electrical Engineering and Information Science	Electrical and Information Systems	Few	Few
	Computer Science and Intelligent Systems		
Materials Science and Engineering	Applied Chemistry	Few	Few
	Chemical Engineering		
	Materials Science		
Quantum and Radiation Engineering	Quantum and Radiation Engineering	Few	Few

Notes: As the number of instructors is limited in each of the departments that constitute the various divisions, decide on your department of choice at the time of application and state it on your application form.

For details on each individual department, please refer to the Outline of the Graduate School of Engineering provided in this document.

2. Admission Period

The admission periods covered by this screening test are either “April 2022 Admission” or “September 2021, October 2021 Admission”. At the time of application, please select the desired admission period between the following two options:

- a. April 2022 Admission
- b. September 2021, October 2021 Admission

However, note that “a.” is the only possible answer for “those who expect to complete their studies by March 2022.”

3. Recommendation Requirements & Applicant Qualifications

[Recommendation Requirements]

Division	Department	Recommendation Requirements
Mechanical Engineering	Mechanical Engineering	Individuals whose departmental results are in the top 10% for their <i>alma mater</i> university, and who have been recommended by a University President, Dean, Department Head, Academic Supervisor, or equivalent person.
Aerospace and Marine System Engineering	Aerospace Engineering	
	Marine System Engineering	
Materials Science and Engineering	Applied Chemistry	
	Chemical Engineering	
	Materials Science	
Electronics, Mathematics and Physics	Physics and Electronics	Individuals whose departmental results are generally within the top 20% for their <i>alma mater</i> university, and who have been recommended by a University President, Dean, Department Head, Academic Supervisor, or equivalent person.

Electrical Engineering and Information Science	Electrical and Information Systems	Individuals of outstanding academic or personal merit who have been recommended by a University President, Dean, Department Head, Academic Supervisor, or equivalent person at their <i>alma mater</i> .
	Computer Science and Intelligent Systems	
Quantum and Radiation Engineering	Quantum and Radiation Engineering	

[Applicant Qualifications]

In the case of a pass, individuals who can commit to enrolling, as well as individuals to whom any of the following items apply.

Note: for those who wish to enroll during the September 2021, October 2021 Admission period, please read “September 30, 2021” instead of “March 31, 2022” in (1) to (9) below.

- (1) Those who have graduated from a university in Japan or who is expected to graduate by March 31, 2022.
- (2) Those awarded a degree from the National Institute for Academic Degrees and Quality Enhancement of Higher Education and those who is expected to receive a degree by March 31, 2022.
- (3) Those who have completed 16 years of school education in foreign countries and those who are expected to complete their studies by March 31, 2022.
- (4) Those who have completed in Japan a 16-year course offered by a foreign school through correspondence in Japan and those who are expected to complete their studies by March 31, 2022.
- (5) Those who have completed in Japan relevant courses designated separately by the Minister of Education, Culture, Sports, Science and Technology at an educational institution that is positioned within the school education system of the relevant foreign country as one that provides university courses^(*1). This also includes those who are expected to complete their studies by March 31, 2022.
*1 This applies only to those who have completed 16 years of course work as part of school education in the relevant foreign country.
- (6) Those who were awarded a degree equivalent to a Bachelor’s degree by completing a course with a study period of at least 3 years at a foreign university or other foreign school^(*2) and those who are expected to be awarded the degree by March 31, 2022.
*2 The comprehensive situation regarding educational research activities shall be limited to those who have been evaluated by the foreign government or persons recognized by related organizations or those designated by the Minister of Education, Culture, Sports, Science and Technology.
This includes completing in Japan, according to the information given above, the correspondence course offered by the relevant foreign school which is part of the education system of that foreign country.
- (7) Those who have completed a course^(*3) after the date specially designated by the Minister of Education, Culture, Sports, Science and Technology in a specialized vocational school. This also includes those who are expected to complete their studies by March 31, 2022.
*3 Students must meet the standards specified by the Minister of Education, Culture, Sports, Science and Technology including the duration of the course of study being at least 4 years.
- (8) A person designated by the Minister of Education, Culture, Sports, Science and Technology (February 7, 1953 Notice No. 5 of the Ministry of Education)
- (9) Those who are recognized by the Graduate School as having graduated from a university through the qualification screening of applicants and those who have an academic ability equal to or beyond that of a university graduate and are also 22 years of age by March 31, 2022.
- (10) Those who are recognized by the Graduate School as having graduated from a university through the qualification screening of applicants and those who have an academic ability equal to or beyond that of a university graduate.

Notes:

- (a) Applicants should study the details of their intended area of study as detailed in the Outline of the Graduate School of Engineering before submitting their application.
- (b) Applicants who apply under Items (9) or (10) must undergo examinations specified in Section 4 of the “Qualification Screening of Applicants”.

4. Qualification Screening of Applicants

The applicant should carefully follow the instructions listed below.

Before submitting the documents, please consult with professors associated with the department you would like to study in and the faculty members you would like to be supervised by.

(1) Applicants who apply under Criteria (9) or (10) should prepare the following documents

a	Résumé	Written in Japanese or English on the form specified by the Graduate School of Engineering bearing the applicant's signature.
b	Certificate of graduation (completion), certificate of prospective graduation or certificate of enrollment	Issued by your most recent academic institution (original copy).
c	Academic transcript	Issued by your most recent academic institution (original copy).
d	Report summarizing the results of the applicant's studies	Use the form specified by the Graduate School of Engineering, or a summary of the applicant's graduation thesis (in about 1,000 Japanese characters or 500 English words) Note: However, if a student is enrolled in a university which has entered into an exchange relationship with this university and is submitting an application to earn a joint degree based on this agreement, the student is not required to submit such documents.
e	Letter of recommendation	Use the form specified by the Graduate School of Engineering

※The form specified by the Graduate School of Engineering can be downloaded from the university website.

[Osaka Prefecture University HOME > Admission > Graduate Admissions]

(2) Qualification screening deadlines

Application schedule	Submission address
<p>May, 20 – 28, 2021 (Deadline May 28, 2021)</p> <p>※Please send by registered post and before the deadline. Envelopes should be prepared by the applicant.</p>	<p>1-1, Gakuen-cho, Naka-ku, Sakai, Osaka, 599-8531, Japan OSAKA PREFECTURE UNIVERSITY, Admissions Office</p> <p>※Mailed documents must bear the following on the envelope in red ink: “Documents to apply for the qualification screening for admission into the Graduate School of Engineering.”</p>

Submissions may be made in person to the Admissions Office, 3rd floor, Block A3, Nakamozu Campus (Marked A on the map overleaf), within the application period indicated above and only between the hours of 10–17. (Monday to Friday). Even when dropping off forms in person, please make sure to use an envelope (240 mm × 332 mm) and ensure it is sealed.

(3) The results of the qualification screening

The results will be sent out on June 4, 2021.

We will send the Applicant's Qualification Certificate to the qualified applicant.

If you are applying from abroad, please contact either the Admissions Office or the faculty member you would like to be supervised by to receive the evaluation results.

Note: If you are asked to submit additional documents by the graduate school, please follow the instructions carefully.

5. Application Submission Deadlines

Application schedule	Submission address
<p>June 1 - 15, 2021 (Deadline June 15, 2021)</p> <p>※Please use the university's designated envelope for sending application forms (240 mm × 332 mm) and ensure they are sent before the application deadline and by registered post.</p>	<p>1-1, Gakuen-cho, Naka-ku, Sakai, Osaka, 599-8531, Japan OSAKA PREFECTURE UNIVERSITY, Admissions Office</p> <p>※Documents must be sent by registered mail and must bear the following on the envelope in red ink: “Documents to apply for admission into the Graduate School of Engineering”.</p>

Submissions may be made in person to the Admissions Office, 3rd floor, Block A3, Nakamozu Campus (Marked A on the map overleaf), within the application period indicated above and only between the hours of 10–17. (Monday to Friday). Even if submitting the forms directly, please use the envelope designated by the university for sending application forms (240 mm × 332 mm) and make sure it is sealed.

An “Entrance Examination Card” and “Exam Information” will be sent to all those who have completed the application process. More specifically, they are intended to be sent out around June 25, 2021 by registered post. Please contact the Admissions Office if nothing has arrived by July 1, 2021. (E-mail : opu_admission_eng@ao.osakafu-u.ac.jp)

6. Application Procedures

Before undertaking the application procedures, please consult with professors associated with the department you would like to study in and the faculty members you would like to be supervised by.

The application for the Graduate School of Engineering should be submitted along with the admission materials (1)-(11) listed below.

※ The form specified by the Graduate School of Engineering can be downloaded from the university website.

[Osaka Prefecture University HOME > Admission > Graduate Admissions]

Note: Items (4), (7) and (8) below are not required by those who have undergone qualification screening as part of their application.

1	Application for admission etc.	Application for admission	Use the form specified by the Graduate School of Engineering.
		Entrance Examination Card	Make sure all the items are filled in.
		Photo Card	Paste a photo (4 cm × 3 cm) taken within the past 3 months.
		Sheet to affix the postal transfer payment receipt of the examination fee	Affix the postal transfer payment receipt on the enclosed sheet to be submitted with the application. · Your application will be rejected if the examination fee has not been paid by the deadline or if the postal transfer payment receipt is not presented along with your application documents or if no post office date of payment is stamped on the receipt.
2		Osaka Metropolitan University (tentative name) Graduate School/ Division/ Program/ Department Confirmation Form	· Please confirm the transfer of your organization from Osaka Prefecture University to the Osaka Metropolitan University (tentative name) by referring to the “List of transfer destinations at the Osaka Metropolitan University (tentative name)” (hereafter, “transfer list”), and fill in the required information. · You can find the “transfer list” on the university’s website of Osaka Prefecture University (In Japanese only) ※ Please keep a copy of the completed confirmation form.
3		Examination fees	· The ¥30,000 fee should be paid at any local post office counter with the postal transfer payment slip provided by the Graduate School of Engineering. Payment should be made within one week before the deadline date of your written application. Notes: Post offices handle postal payments only on weekdays from 9:00 – 16:00. Please note that the payment cannot be made directly to the university by cash or with a postal money order or by ATM (automatic teller machine) remittance. Retain the receipt issued by the post office upon payment.
4		Résumé	Written in Japanese or English on the form specified by the Graduate School of Engineering bearing the applicant's signature.
5		Self-introduction	Use the form specified by the Graduate School of Engineering.

6	Certificate of graduation (completion) or prospective certificate of graduation (documents certifying eligibility for application)	<ul style="list-style-type: none"> • Documents certified by the last university attended by the applicant stating that the applicant has received the degree or expects to receive the degree (original copy). • Applicants who have qualified under 4. Qualification Screening of Applicants on p.5 must submit the Application Eligibility Certificate.
7	Academic transcript	Issued by your most recent academic institution (original copy).
8	Letter of recommendation	Issued by either the president, dean, department head or supervising professor of the university the applicant has or is expected to graduate. (Use the form specified by the Graduate School of Engineering)
9	Written Oath (Pledge)	Use the form specified by the Graduate School of Engineering.
10	Copy of residence card	<ul style="list-style-type: none"> • Please submit photocopies of both sides of the residence card. • Overseas residents must submit a photocopy of their passport (page with face photo).
11	Envelope for sending entrance examination card, etc. (Applicable only for applicants residing in Japan)	<ul style="list-style-type: none"> • Please use the university-designated envelope for sending in the exam admission certificate. • Please fill in the zip code, address, and name of the addressee, and affix stamps worth 404 yen.

Notes:

- (a) Changes to your application will not be accepted once it has been submitted.
- (b) Entrance examination card will be issued for those who completed application procedures.
- (c) If your name as shown on the application form is different from that on the certificate of graduation and transcript, submit the documentation attesting to your name (copy extract of family register etc.).
- (d) Examination fees will not be returned except under the following circumstances:
- (i) You wish to withdraw your application to Osaka Prefecture University.
 - (ii) Your application documents and other items are rejected because they are incomplete or insufficient.
 - (iii) You have inadvertently made a double payment of the entrance examination fee.

Note: Should any of the above applies, you should submit a refund request to the Admissions Office of Osaka Prefecture University no later than one month after the application deadline.

- (e) If the applicant is disabled, or if for any other reason the applicant wishes to request any consideration during the entrance examination or after enrollment, please contact the Admissions Office (Graduate School of Engineering).

E-mail: nyushi3@ao.osakafu-u.ac.jp

7. Applicant Selection Method

Applicants are subject to comprehensive selection criteria based on written and oral examinations, interviews and document screening.

8. Examination

(1) Examination Dates & Examination Course Subjects

Examination Date	July 22, 2021	
Examinations	Written examinations: Essay topic(s) ... The topic(s) will be specified at the beginning of the examination by each department.	Oral examination and interview
Examination schedule	9:30–12:00	13:00–

(Spare Day): July 23, 2021

Due to unexpected circumstances such as natural disasters, the above examination is postponed on the day that is designated.

(2) Examination locations: Osaka Prefecture University, Nakamozu Campus


The location of examination rooms will be posted at the Shirasagi Gate and Nakamozu Gate (location A & B on the map on the inside back cover) of Nakamozu Campus after 13:00 on July 22, 2021.

9. Announcement of Examination Results

The results will also be forwarded to the successful applicants.

The successful applicant ID numbers will be listed on the website of Osaka Prefecture University. (In Japanese only)

Note: If you are applying from abroad, please contact either the Admissions Office or the faculty member you would like to be supervised by to receive the evaluation results.

Time	Website URL
August 11, 2021 at 13:00	https://www.osakafu-u.ac.jp/admission/exam_result/results/ 

10. Enrollment Procedures

(1) Date of Enrollment

April 2022 Admission	September 2021, October 2021 Admission
April 1, 2022	September 26, 2021 Note: Date of enrollment of those who meet application qualification during September 26, 2021 to September 30, 2021: October 1, 2021

(2) Enrollment Procedures

April 2022 Admission	September 2021, October 2021 Admission
October 1 - 7, 2021 (Deadline October 7, 2021)	September 13 - 16, 2021 (Deadline September 16, 2021)

It must arrive on time by mail. However, it is possible to submit it in person directly to the Admissions Office, 3rd floor, Block A3, Nakamozu Campus (Marked A on the map overleaf), within the application period indicated above, and only between the hours of 10–17. (Monday to Friday).

For those who have not completed the admission procedures it will be considered that their admission has been cancelled.

11. Tuition (Enrollment Fees and Tuition)

(1) Enrollment fees

Enrollment fee (A) ¥282,000	April 2022 Admission	Either the enrolled student, his/her spouse or his/her immediate blood relative has been residing in Osaka Prefecture prior to April 1, 2021.
	September 2021, October 2021 Admission	Either the enrolled student, his/her spouse or his/her immediate blood relative has been residing in Osaka Prefecture prior to September 26, 2020. Note: For those who meet applicant qualification during September 26, 2021 to September 30, 2021: the enrolled student who has been residing in Osaka Prefecture prior to October 1, 2020.
Enrollment fee (B) ¥382,000	Enrollment fee (B) applies to all other circumstances.	

Both (A) and (B) are subject to change.

The enrollment fee (A) or (B) should be paid using the payment slip provided by the graduate school before the enrollment process begins.

The enrollment fees are non-refundable once the enrollment process is completed.

(2) Annual tuition fee

¥535,800 (To be paid in two installments after enrollment)
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When tuition fees change during the student's period of study, the new fees shall apply.

12. Regarding the Long-Term Study System

<April 2022 Admission>

Details about the long-term study system, including whether it will be implemented will be published and available on the university's website from April 2021.

<September 2021, October 2021 Admission>

(1) Purpose

This system is intended for students for whom it will be difficult to complete a curriculum with a standard term of study (2 years for master's degree program) owing to various circumstances such as holding down a job, and makes it possible for them to obtain a degree by taking longer than the standard term to study in a planned fashion and complete the course.

(2) Applicant qualification

Individuals who meet any of the following conditions may submit the prescribed documents by the designated deadline to apply for long-term study.

- 1) Applicants who have a job and anticipate difficulties in completing their studies within the standard term.
- 2) Applicants who anticipate difficulties in completing their studies within the standard term owing to children, caregiving, or other responsibilities.
- 3) Applicants with other circumstances beyond their control who anticipate difficulties in completing their studies within the standard term.

(3) Term of study

This System allows students to complete a master's program in a period longer than usual.

Master's program: The period can be extended from 2 years to 3 or 4 years.

(4) Tuition fees under the long-term study system (annual amount)

The fee shall be the figure obtained by multiplying the regular annual tuition fee by the number of years corresponding to the standard term of study, and dividing that by the number of years granted for long-term study. Additionally, if a reduction in the period of long-term study has been granted, the student must make up the difference from the original tuition fee. (Should tuition fees be revised while the student is enrolled at the university, the new tuition fees shall apply to enrolled students as well.)

(5) Period for submitting Request for Long-Term Study Permission

Please submit this together with the application. Permission for long-term study is determined after discussions among the faculty of the Graduate School.

(6) Permission for long-term study

Permission for long-term study and abbreviation of the period of long-term study are determined after discussions among the faculty of the Graduate School.

(7) Please direct all inquiries and submissions regarding long-term study to the Education Affairs Division at the Osaka Prefecture University

(School of Engineering desk, Tel.: 072-254-7511/Int'l call: +81-72-254-7511).

Note: Applicants who wish to apply for long-term study should consult beforehand with their prospective supervising professor.

13. Status of Residence (for those who are not Japanese nationals)

Status of Residence under the Immigration Control and Refugee Recognition Act (hereinafter “Status of Residence”). If a person without Study Abroad Status of Residence is permitted to enter the Graduate School, they must obtain such status without delay. In addition, those who have a Status of Residence other than Study Abroad status must change it to Study Abroad. However, those who have the following Status of Residence: Permanent Residency, Fixed-term Residency, Diplomatic Residency, Spouse of a Japanese National etc. do not need to take any further action. Only those who wish to change their Status of Residence to Study Abroad status because of scholarships etc. should follow the necessary procedures.

14. Notes

- (1) The second semester starts from September 26, 2021 and the classes are open for those admitted in October 1, 2021.
- (2) Personal or private information will not be used or revealed for any purpose other than screening. However, the examination results may be used for educational purposes or / and enhancement of student’s campus life.
- (3) Provision of Information on Entrance Examination results
The university will provide examinees with their personal Entrance Examination results. Examinees may request results for one year from day on which successful applicants are announced. For details, please contact Admissions Office.
- (4) If entrance examinations, interviews or related admission procedures cannot be held as scheduled due to a natural disaster or an unforeseen or unavoidable reason, an emergency notification will be posted on the following website:
<https://www.osakafu-u.ac.jp/> (In Japanese only)
- (5) OPU is in charge of Osaka Prefecture University Regulations for Security Export Control according to the Foreign Exchange and Foreign Trade Act and strictly screens all items and technology to be exported from the university. If your issue is in conflict with any regulation put forth by OPU, you may not be allowed to receive your desired education or conduct research.

Please direct all inquiries to the following address: kenkyu-suishin@ao.osakafu-u.ac.jp

Contact	OSAKA PREFECTURE UNIVERSITY Admissions Office 1-1 Gakuen-cho, Naka-ku, Sakai, Osaka 599-8531, Japan Tel : 072-252-1161 (Int'l calls: +81-72-252-1161)
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Osaka Prefecture University Website https://www.osakafu-u.ac.jp/en/admission/graduate/
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Outline of the Graduate School of Engineering

【Division of Mechanical Engineering】

The mission of the Division of Mechanical Engineering is to promote education and research in a broad field which covers both very large and nano-sized systems and technologies. Our goal is to train future leaders in industry, academia and government who will use their knowledge and skills to benefit mankind and be internationally active. We offer both basic training and advanced courses in mechanical engineering for highly intelligent and accurate systems that conserve energy and lessens any negative environmental impact. This Division covers the following research and education fields in mechanical engineering.

<Department of Mechanical Engineering>

Title	Name	Education and Research Fields
Professor	FUKUDA Hirokazu	Coupled Oscillator System, Synchronization Control, Pattern Formation, Complex Network Control, Plant Factory
Professor	ISHIHARA Masayuki	Mathematical Analysis of Elasticity, Hygrothermoelasticity, Electroelasticity, Solid Mechanics in Green Materials
Professor	KIKUTA Hisao	Measurement and Instrumentation Engineering, Optical Metrology, Optical Engineering, Nano-Fabrication Technology
Professor	KINOSHITA Shinichi	Environmental Engineering, Environmental Heat Transfer, Thermophysical Properties, Human Thermal Science, Urban Environmental System
Professor	MIMURA Koji	Strength of Materials, Plasticity and its Applications, Experimental Mechanics, Impact Engineering, Solid Mechanics
Professor	OKUBO Masaaki	Environmental Protection Engineering, Plasma for Environmental Improvement, Energy Conversions with Low Environmental Load, Plasma Material Processing
Professor	SEGAWA Daisuke	Combustion, Combustion Diagnostics, Internal Combustion Engines, Space Environment Experiments
Professor	SHINTANI Atsuhiko	Vibration Engineering, Seismic Engineering, Fluid-Structure Interaction, Active Vibration Control, Human Engineering, Application of Vibration
Professor	SUGA Kazuhiko	Heat Transfer Engineering, Turbulence Modeling, Energy Conversion Systems, Micro Scale Thermo-Fluid Systems
Professor	TAKAHIRA Hiroyuki	Fluid Mechanics, Cavitation, Bubble Dynamics, Gas-Liquid Two-Phase Flow, Micro-Nano Fluidics
Professor	YOKOYAMA Ryohei	Energy Systems Engineering, Optimization, Energy Management, Distributed Energy
Associate Professor	KANEDA Masayuki	Natural Convection, Computational Fluid Dynamics, Sessile Droplet, Magnetizing Convection, Magnetohydrodynamics
Associate Professor	KUROKI Tomoyuki	Environmental Protection Engineering, Application of Nonthermal Plasma Technology, Exhaust Gas Treatment, Waste Water Treatment
Associate Professor	KUWATA Yusuke	Turbulence Mechanics, Computational Fluid Dynamics, Wall Turbulence, Turbulent Scalar Transport
Associate Professor	NAKAGAWA Chihiro	Kinematics of Mechanical Systems, Mobile Vehicle System, Kinematics-related System
Associate Professor	OGASAWARA Toshiyuki	Fluid Mechanics, Gas-Liquid Two-Phase Flow, Bubble Dynamics, Flow Measurement
Associate Professor	RIKU Isamu	Computational Science, Biomedical Engineering, Biomaterials
Associate Professor	UMEDA Tsutomu	Mechanics of Materials, Solid Mechanics, Impact Engineering, Dynamic Analysis of Structure, Damage Mechanics
Associate Professor	WAKUI Tetsuya	Energy Systems Engineering, Performance Monitoring, Dynamic Behavior Analysis, Optimization, Distributed Energy, Renewable Energy
Lecturer	KATAOKA Hidefumi	Detonation, Combustion, Shock Wave, Internal Combustion Engines
Lecturer	KOBAYASHI Tomoaki	Systems and Control, Real-Time Control, Optimal Control, Control Theory and Applications, Mechatronics
Lecturer	MIZUTANI Akio	Measurement Engineering, Applied Optics, Nanophotonic Devices
Lecturer	NAKAJIMA Tomoya	Fluid Engineering, Wind Tunnel Test and Flow Visualization, etc.
Assistant Professor	YAMASAKI Haruhiko	Environmental Protection Engineering, Energy Conversions with Low Environmental Load, Magnetic Functional Fluid, Carbon Dioxide Cycle
Assistant Professor	YASUDA Ryusuke	Environmental Engineering, Atmospheric Diffusion, Air Pollution Control, Local Climate

(As of April 1, 2021)

【Division of Aerospace and Marine System Engineering】

Through the interdisciplinary linkage of the Aerospace Engineering and Marine System Engineering departments, we aim to carry out research into sustainable development for the preservation of a globally harmonious environment. Our mission is to educate future engineers and researchers who will pave the way for new and innovative fields of research as responsible and active members of the international community.

This academic major is composed of the two disciplines of Aerospace Engineering and Marine System Engineering.

<Department of Aerospace Engineering>

The Aerospace Engineering program trains future key players in both fundamental and cutting-edge aerospace engineering research while leading students on a path towards the development of innovative, advanced and useful technologies in harmony with a sustainable global environment.

Title	Name	Education and Research Fields
Professor	CHIBA Masakatsu ※	Aerospace Structural Engineering, Dynamics for Thin-Walled Flexible Structures, Non-Linear System Dynamics, Impact Absorption
Professor	KOGISO Nozomu	Systems Engineering, Reliability Engineering, Optimum Design, Space Structural Systems, Space Engineering, Laminated Composite, Morphing Wing
Professor	MORI Koichi	Aerospace Propulsion Engineering, Thermo-fluid Engineering, Space Transportation System, Beamed Propulsion, Plasma Propulsion, Space Debris
Professor	SHIMOMURA Takashi	Aerospace Control Engineering, Dynamics / Kinematics / Guidance / Control of Aircraft / Spacecraft, Vibration Control of Flexible Space Structures, Numerical Optimization
Professor	TSUJII Toshiaki	Aerospace Navigation Systems, Satellite Navigation and Positioning, Aerospace Information Technology, Optimal Estimation
Associate Professor	NAKAMURA Masao	Space Environment Technology, Space Plasma Simulation and Analysis, Space Weather
Associate Professor	SAKAUE Shoji	Aerodynamics, Laminar-Turbulent Transition, Turbulent Flow Control, Supersonic Mixing Enhancement, Computational Fluid Dynamics
Lecturer	HIEJIMA Toshihiko	Aerospace Propulsion System, Compressible Fluid Dynamics, Computational Fluid Dynamics, Instability of Vortices, Scramjet Engine
Lecturer	KANATA Sayaka	System Control Engineering, System Identification, Numerical Optimization, Multi-rotor Helicopters
Assistant Professor	OGAWA Shinichiro	Aerospace Propulsion Engineering, Supersonic Combustion, Combustion Engineering, Computational Fluid Dynamics
Assistant Professor	YAMANO Akio	Dynamics for Fluid-Structure Interaction, Dynamics for Thin-Walled Flexible Structures, Rovers for Small Planetary Bodies

(As of April 1, 2021)

The faculty staff members marked with ※ will retire on March 31, 2022.

< Department of Marine System Engineering >

The Department of Marine System Engineering aims to educate students who become active in the development of science and technology that is in harmony with nature through a depth understanding of both artificial systems related to naval architects and ocean engineering and the hydrosphere system of the sea.

Title	Name	Education and Research Fields
Professor	ARIMA Masakazu	Marine System Planning, Human Factors, Underwater Robotics, Ocean Policy Research
Professor	BABA Nobuhiro	Marine Environments, Ocean Fluid Dynamics, Marine Ecosystems, Ocean Circulation
Professor	HASHIMOTO Hirotada	Seabed resources, Marine energy, Autonomous ship/underwater vehicle, Computational fluid dynamics, Model experiment, Open-sea testing
Professor	KATAYAMA Toru	Seakeeping & Safety of High Speed Craft, Ship Stability in Wave, Instabilities of Planing Craft, Nonlinear Motions and Hydrodynamics of Floating Structures, Tank Test
Professor	NAKATANI Naoki	Marine Environmental Monitoring, Ocean Environmental Measurement, Marine Ecosystem Engineering, Ecosystem Modeling, Planning of Marine Resource Development
Associate Professor	ARAI Rei	Marine Environmental Measurement, Marine Acoustic Engineering, Marine Optics, Instrumentation Engineering
Associate Professor	IKUSHIMA Kazuki	Structural Engineering, Structural Analysis of Ships, Nonlinear Finite Element Analysis, Large Scale Numerical Simulation, Parallel Computation
Associate Professor	NIHEI Yasunori	Hydrodynamic Force acting on Offshore Structures, Vortex Induced Vibration, Design and Development of Sailboats, Floating Type Wind Power Generation Device
Associate Professor	SHIBAHARA Masakazu	Welding Mechanics, Thermal-Elastic-Plastic FEM, Measurement using Image Processing, Structural Strength of Ships and Offshore Structures, Structural Analysis for Ultra-Scale Problems
Associate Professor	TSUBOGO Takashi	Wave Resistance, Offshore Structure, Hydroelasticity, Very Large Floating Structures
Assistant Professor	HAN Jialin	System Control Engineering, Design and Development of Suspension Boats, Automated Operation System for Ships, Seabed Robots

(As of April 1, 2021)

【Division of Electronics, Mathematics and Physics】

This Division is comprised of one area: The Department of Physics and Electronics.

The Department of Physics and Electronics fosters human resources with comprehensive knowledge of nanoscience and nanotechnology to contribute actively to industrial and academic frontiers.

<Department of Physics and Electronics>

Title	Name	Education and Research Fields
Professor	AKITA Seiji	Nanoscale Solid State Physics, Nano-Material, Nano-Electronics
Professor	FUJIMURA Norifumi	Physics of Intelligent Devices, Ferroelectrics, Magnetic Semiconductors, Multiferroics, Spintronics Devices, Multifunctional-Semiconductor Devices
Professor	HIRAI Yoshihiko ※	Micro and Nano Fabrication, Nanoimprint, Micro-Nano Machine, Lithography
Professor	HORITA Takehiko	Nonlinear Dynamics, Chaos, Basin Structure, Stochastic Resonance
Professor	ISHIHARA Hajime	Nanostructure Photophysics, Theory of Nonlinear Optics, Theory of Quantum Optics, Photo-Function Design via Nanostructures, Optical Manipulation
Professor	IWAZUMI Toshiaki	X-Ray Spectroscopy, Photo-Induced Phase Transition
Professor	MIMURA Kojiro	Photoemission Spectroscopy, X-Ray Spectroscopy, Strongly Correlated Electron Systems
Professor	NAITO Hiroyoshi ※	Organic Semiconductors, Opto-electronic and Semiconducting Properties of Soft Materials (Liquid Crystals, Polymers)
Professor	OKAMOTO Koichi	Plazmonics, Nano-photonics
Professor	TAKEI Kuniharu	Nano material, Nano electronics, Flexible electronics, Interactive surfaces
Professor	TOGAWA Yoshihiko	Spin Electronics, Magnetism, Superconductivity, Electron Microscopy, Electron Physics, Manipulation and Control of Electromagnetic Response
Professor	UOZUMI Takayuki	Theoretical Solid State Physics, Theoretical Study of Optical Processes of Matter
Associate Professor	ANZAI Hiroaki	Strongly Correlated Electron Systems, Electronic States, Synchrotron Radiation
Associate Professor	ARIE Takayuki	Low Dimensional Devices and Materials, Phonon Engineering, Phononic Crystals, Nanoscale Thermophysics and Thermoelectronics
Associate Professor	KATO Masaru	Theory of Condensed Matter, Superconductivity and Strongly Correlated Electron Systems
Associate Professor	KIRIYA Daisuke	Assembled Materials, Nano Materials, Nanoelectronics, Organic-inorganic Hybrid Devices
Associate Professor	KOBAYASHI Takashi	Optical Properties of Semiconducting Polymers, Organic Solid State Physics, Nonlinear Spectroscopy
Associate Professor	NAGASE Takashi	Organic Semiconductors, Molecular Electronics, Nanoelectronics, Semiconductor Physics, Nanofabrication
Associate Professor	NOUCHI Ryo	Field-Effect Surface Science, Nanoscale Interface Engineering, Atomic Layer Devices, Molecular Devices
Associate Professor	OIKAWA Noriko	Nonlinear Physics, Reaction-Diffusion Systems, Softmatter Physics
Associate Professor	SHIM Yong-Gu	Optical Properties of Nano Materials and Bulk Crystals, Crystal Growth, Multinary Compound Semiconductors
Associate Professor	SHISHIDO Hiroaki	Superconductivity, Nanostructured Superconductors, Crystal Growth, Strongly Correlated Electron Systems
Associate Professor	TAGUCHI Yukihiro	Experimental Study of Bulk and Surface of Solids by Electron Spectroscopies
Associate Professor	TAKAHASHI Yasushi	Developing Silicon Laser, Photonic Crystal, Silicon Photonics, Nanofabrication, Micro-spectroscopy
Associate Professor	WADA Kenji	Quantum and Optical Device Engineering, Laser Application, Optical Metrology
Associate Professor	YASUDA Masaaki	Micro and Nano Fabrication, Electron Beam Technology
Associate Professor	YOKOSHI Nobuhiko	Nanostructure Photophysics, Nanostructured Semiconductors, Theory of Quantum Information
Associate Professor	YOSHIMURA Takeshi	Oxide Electronics, Functional Semiconductor Devices, Ferroelectrics
Assistant Professor	HAGA Taiki	Nonequilibrium statistical mechanics, Fundamental theory of condensed matter physics, Nonlinear dynamics
Assistant Professor	HARIKI Atsushi	Strongly correlated electron systems, First principles calculation, Theory of x-ray spectroscopy
Assistant Professor	KOSAKA Yusuke	Magnetism, crystal growth, synchrotron X-ray and neutron scattering
Assistant Professor	MATSUYAMA Tetsuya	Quantum and Optical Device Engineering, Optical Properties of Semiconductors, Laser Application

(As of April 1, 2021)

The faculty staff members marked with ※ will retire on March 31, 2022.

【Division of Electrical Engineering and Information Science】

The Division of Electrical Engineering and Information Science provides students with education in the design, planning and operation of systems in the fields of electricity, information, communication and manufacturing. We strive to educate future researchers and engineers who can meet the requirements of an advanced information society and play a leading role in international collaborative activities.

This Division consists of the Department of Electrical and Information Systems and the Department of Computer Science and Intelligent Systems.

<Department of Electrical and Information Systems>

The aim of the Department of Electrical and Information Systems is to train students who can overcome and solve the challenging problems involved in constructing a humane, resource-friendly, global network society based on their specialized knowledge of electrical, communication and information systems engineering as well as industrial systems engineering.

Title	Name	Education and Research Fields
Professor	ISHIGAME Atsushi	Power System Analysis and Control, Optimization Technique, Intelligent Control
Professor	KONISHI Keiji	Control Systems, Complex (Chaotic) Systems, System Dynamics
Professor	KUBOTA Hirokazu	Optical Fiber Communication Systems, Nonlinear Optics, Space Division Multiplexed Optical Communications
Professor	LIN Hai	Wireless Communication, Signal Processing
Professor	MORIMOTO Shigeo	Motor Drives, Electromagnetic Energy Conversion, Power Electronics
Professor	MORIZAWA Kazuko	System Optimization, Production Management Systems, Production Planning and Scheduling, Operations Research, Multi-objective Decision Support
Professor	YAMADA Makoto	Information & Communication Engineering, Optical Amplifiers and Next Generation Networks, Optical Sensing System
Associate Professor	HARA Naoyuki	Control Systems, Model Predictive Control, Control Applications
Associate Professor	INOUE Yukinori	Motor Drives, Power Electronics, Energy Conversion
Associate Professor	KOYAMA Osanori	IP over WDM Network, Optical Fiber Sensor, Web-based Data Processing System
Associate Professor	KUSUKAWA Etsuko	Supply Chain Management, Operations Research, Quality Management
Associate Professor	MIYOSHI Yuji	Optical Fiber Communication, Optical Signal Processing, Optical A/D Conversion
Associate Professor	SANADA Masayuki	Motor Drive, Motor Design, Electro-Magnetic Field Analysis
Associate Professor	SUSUKI Yoshihiko	Power and Energy Systems, Applied Nonlinear Dynamics, Control Systems Technology
Lecturer	TAKAYAMA Satoshi	Power System Operation and Control, Renewable Energy System Operation and Control
Assistant Professor	IKEDA Kanami	Information Photonics, Optical Signal Processing, Optical Functional System
Assistant Professor	CHIANG Yi-Han	Edge Computing, Energy-Efficient Networks, Age of Information

(As of April 1, 2021)

<Department of Computer Science and Intelligent Systems>

The Department of Computer Science and Intelligent Systems offers M. S. and PhD. programs for advanced knowledge in various computer science disciplines such as computer software, information networks and machine intelligence.

Our programs train students who wish to broaden and deepen their understanding of computer science through studies on advanced intelligent information technologies.

Title	Name	Education and Research Fields
Professor	FUJIMOTO Noriyuki	High Performance Computing, GPU Computing, Discrete Optimization, Grid Computing
Professor	HONDA Katsuhiro	Data Analysis, Cluster Analysis, Knowledge Discovery
Professor	KISE Koichi	Intelligent Media Processing, Document Information Processing, Document Image Analysis, Object Recognition, Activity Recognition, Learning Assistance
Professor	MORI Naoki	Machine Learning, Kansei Engineering, Software Engineering, Evolutionary Computation
Professor	NOJIMA Yusuke	Evolutionary Computation, Knowledge Extraction, Multiobjective Optimization
Professor	TODE Hideki	Intelligent Networking, Network Quality Control, Content Distribution Control, Broadband Network
Professor	UNO Yushi	Discrete Structures and Algorithms, Combinatorial Optimization, Computational Complexity, Data Structures, Network Analysis, System Modeling
Professor	YOSHIOKA Michifumi	Intelligent Signal Processing, Image Processing, Pattern Detection
Associate Professor	HAYASHI Toshiharu	Data Analysis and Data Assimilation, especially Reliability Engineering, Mathematical Finance and Statistical Inference for Stochastic Processes.
Associate Professor	HOHJO Hitoshi	Reliability Engineering, Game Theory, Operations Research, Stochastic Model, Decision-making
Associate Professor	INOUE Katsufumi	Image Sensing, Pattern Recognition, Machine Learning, Action Recognition, Gesture Recognition
Associate Professor	IWAMURA Masakazu	Intelligent Media Processing, Character and Object Recognition, Document Image Retrieval, Deep Learning, Visually Impaired Assistance
Associate Professor	IWATA Motoi	Intelligent Media Processing, Information Security, Digital Watermark, Steganography, Activity Recognition, Learning Assistance
Associate Professor	TANIGAWA Yosuke	Intelligent Networking, Wireless Network Quality Control, Wireless Media Access Control
Associate Professor	UBUKATA Seiki	Data Analysis, Rough Set Theory, Agent Simulation, Knowledge Discovery
Lecturer	KATSUMA Ryo	Sensing, Ad-hoc Network, Mobile Computing
Lecturer	UTSUMI Yuzuko	Intelligent Media Processing, Pattern Recognition, Plant Image Processing
Assistant Professor	KONDO Daishi	Network security, Privacy, Information Centric Network
Assistant Professor	MASUYAMA Naoki	Clustering, Machine Learning, Soft Computing, Robotics
Assistant Professor	OKADA Makoto	Natural Language Processing, Knowledge Management

(As of April 1, 2021)

【Division of Materials Science and Engineering】

The Division of Materials Science and Engineering offers studies in the development and application of new materials and processes through an understanding of the fundamental properties and characteristics of organic compounds, metals and ceramics at the atomic and molecular level. Our mission is to educate students who will have the broad-based knowledge and skills necessary to become leaders in their fields and be active in addressing global issues. This Division is comprised of three areas: Applied Chemistry, Chemical Engineering and Materials Science.

<Department of Applied Chemistry>

The Department of Applied Chemistry offers a broad-based program which emphasizes the acquisition of both fundamental and advanced knowledge in organic, inorganic and physical chemistry as well as bio-related, environmental and materials chemistry. The aim of our programs is to educate students who will become contributing members of society through their work in developing new and clean, environmentally-friendly chemical technologies.

Title	Name	Education and Research Fields
Professor	HARADA Atsushi	Polymer Biomaterials, Self-assembled Polymers, Nanomedicine, Drug Delivery System
Professor	HAYASHI Akitoshi	Glassy Materials, Solid Electrolyte, All-Solid-State Battery
Professor	HISAMOTO Hideaki	Micro Total Analysis Systems, Chemical Sensing, Optical Sensing, Molecular Recognition, Capillary Electrophoresis
Professor	IKEDA Hiroshi	Organic Photochemistry, Organic Electron-Transfer Chemistry, Main Group Element Chemistry, Luminescence Chemistry, Organic Light-emitting Diodes, Crystal Chemistry, Calculation Chemistry
Professor	INOUE Hiroshi	Electrochemical Energy Conversion, Rechargeable Devices, Electrocatalysts for Fuel Cells, Hydrogen Storage
Professor	MATSUMOTO Akikazu	Polymer Synthesis, Polymer Materials Chemistry, Controlled Radical Polymerization, Organic Crystals Chemistry, Polymer Composite Materials, High-Performance Polymer Materials
Professor	MATSUOKA Masaya	Environmentally-Harmonious Photocatalysis, Solar Energy Conversion, Catalysis, Inorganic-Organic Hybrid Materials
Professor	OGAWA Akiya	Organic Synthesis, Heteroatom Chemistry, Rare Earth Chemistry, Catalytic Reactions
Professor	SHIIGI Hiroshi	Bioanalysis, Biosensor, Molecular Recognition, Molecular Imprinting, Nano Biomaterials
Professor	YAGI Shigeyuki	Organic Functional Materials Chemistry, Functional Dyes, Organic Electronics, Organic Light-emitting Diodes, Fluorescent and Phosphorescent Materials
Associate Professor	CHIKU Masanobu	Electrochemical Energy Conversion, Rechargeable Devices
Associate Professor	ENDO Tatsuro	Biosensors, Nano-photonics, Micro Total Analysis Systems (μ TAS), Microfluidic device
Associate Professor	HIGUCHI Eiji	Electrocatalysts for Fuel Cells, Nickel-Metalhydride Battery, Hydrogen Storage Materials
Associate Professor	HORIUCHI Yu	Solar Energy Conversion, Photocatalytic Hydrogen Production, Visible Light-Responsive Photocatalysts, Metal-Organic Framework
Associate Professor	KAMEGAWA Takashi	Environmental Catalysts, Photocatalysts, Functional Thin Films, Nanospace Materials, High-Performance Adsorbents
Associate Professor	KOJIMA Chie	Polymer Materials, Photo-sensitive Materials, Biomaterials, Imaging and Drug Delivery System
Associate Professor	MAEDA Takeshi	Chemistry of Functional Dye, Supramolecular Chemistry, Organic Electronics Material, Molecular Sensor
Associate Professor	MATSUI Yasunori	Organic Photochemistry, Organic Electron-Transfer Chemistry, Laser Chemistry, Luminescence Chemistry, Chemical Kinetics
Associate Professor	NOMOTO Akihiro	Synthetic Organic Chemistry, Medical Coordination Complex, Organic Electrochemistry, Heteroatom Chemistry, π -Conjugated Systems, Nanomaterial Science
Associate Professor	OKAMURA Haruyuki	Polymer Synthesis, Photoreactive Polymer, Photoacid Generator, Crosslinking and Degradation of Polymers
Associate Professor	SADANAGA Yasuhiro	Atmospheric Chemistry, Long-Range Transport of Atmospheric Pollutants, Photochemical Oxidant and its Precursors
Associate Professor	SAKUDA Atsushi	Inorganic Materials Science (Sulfide), Electrode Active Materials, All-Solid-State Batteries
Associate Professor	SUEYOSHI Kenji	Analytical Chemistry, Separation Science, Microscale Electrophoresis
Associate Professor	TAKEUCHI Masato	Visible Light-Responsive Photocatalysts, Environmental Purification, Molecular Spectroscopy, Surface Wettability, Catalytic Reaction Mechanism
Associate Professor	TOKONAMI Shiho	Biosensor, Micro- and Nano- Architectures, Optical Analysis, Metal Nanoparticle
Associate Professor	YUBA Eiji	Nano medicine, Drug Delivery, Functional Polymer Chemistry, Biomaterials
Lecturer	OHTA Eisuke	Physical Organic Chemistry, Organic Photochemistry, Organic Electron-Transfer Chemistry, Synthetic Organic Chemistry, Functional π -Conjugated Systems
Assistant Professor	KITAYAMA Yukiya	Colloid and Interface Chemistry, Polymer Synthesis, Drug Delivery, Photo Reaction, Molecular Recognition
Assistant Professor	KODAMA Shintaro	Synthetic Organic Chemistry, Metal Complex Chemistry, Organometallic Chemistry, Oxidation Reactions, Metal Oxide Clusters
Assistant Professor	SUZUKI Naoya	Organic Functional Materials Chemistry, Functional Dyes, Functional π -Electron Systems, Organic Synthesis, Organic Photochemistry
Assistant Professor	SUZUKI Yasuhito	High-Performance Polymer Materials, Surface Functionalization, Composite Materials

(As of April 1, 2021)

<Department of Chemical Engineering>

The Department of Chemical Engineering provides students with education in a wide range of courses so that they can obtain the fundamental knowledge and practical skills necessary to develop innovative and systematic chemical processes and technologies for an environmentally sustainable society.

Title	Name	Education and Research Fields
Professor	IWASAKI Tomohiro	Resource Engineering, Powder Technology, Functional Nanoparticle, Mechanochemistry, Numerical Simulation
Professor	MUTO Akinori	Separation Process Engineering, Functional Carbon, Microreactor, Adsorption, Ion Exchange, Extraction, Photocatalyst
Professor	NOMURA Toshiyuki	Particle Science and Technology, Nano/Meso Materials, Biocolloids, Environmental Bioengineering
Professor	OGINO Hiroyasu	Chemical Reaction Engineering, Biochemical Engineering, Microbial Engineering, Protein Engineering, Enzyme Engineering
Professor	SAITO Takeyasu	Materials Process Engineering, Electrodeposition, Kinetics and Engineering of Chemical Vapor Deposition, Ferroelectric Materials, Wide Band Gap Materials, Metallization Processing for Semiconductor Devices
Professor	WATANO Satoru	Process Systems Engineering, Powder Technology, Fluidized Bed, Nano-Processing, Measurement and Control, Pharmaceutical Engineering
Professor	YASUDA Masahiro	Environment and Energy Process Engineering, Chemical Reaction Engineering, Biological Chemical Engineering, Polymerization Engineering, Tissue Engineering
Associate Professor	HORIE Takafumi	Environment and Energy Process Engineering, Transport Phenomena, Chemical Reaction Engineering, Process Intensification, Microreactor, Crystallization
Associate Professor	NAKAMURA Hideya	Process Systems Engineering, Powder Technology, All-solid-state battery, Computational Particle Engineering, Molecular Simulation
Associate Professor	OKAMOTO Naoki	Materials Process Engineering, Electrochemical Engineering, Micro Plating, Plating Process (Electrodeposition, Electorless Deposition), Materials Science and Engineering
Associate Professor	XU Yan	Nano Chemical Systems, Nanofluidics, Single-Molecule Chemistry, Single-Cell Omics, Biomaterials, Analytical Chemistry, Nanomedicine
Associate Professor	YAMADA Ryosuke	Chemical Reaction Engineering, Biochemical Engineering, Microbial Engineering, Protein Engineering, Enzyme Engineering
Assistant Professor	MATSUMOTO Takuya	Chemical Reaction Engineering, Biochemical Engineering, Microbial Engineering, Protein Engineering, Enzyme Engineering
Assistant Professor	OKITA Erika	Environment and Energy Process Engineering, Non-equilibrium science, Nano/micro-systems, Active soft matter
Assistant Professor	OHSAKI Shuji	Process Systems Engineering, Powder Technology, Computational Particle Engineering, Material Engineering

(As of April 1, 2021)

<Department of Materials Science>

The Department of Materials Science provides students with both basic and advanced education in the science and technology of materials such as metals, ceramics and polymers while encouraging the development of a highly aware and efficient recycling-oriented society.

Title	Name	Education and Research Fields
Professor	KANENO Yasuyuki	High Temperature Structural Materials, Intermetallic Alloys and Compounds, Alloy Design, Microstructural Control, Plastic Working
Professor	MORI Shigeo	Correlated Electron Materials, Dielectric Materials, Magnetic Materials, Ionic conductors, Electron Microscopy, Lorentz Electron Microscopy
Professor	NAKAHIRA Atsushi	Biomaterials, Apatite, Intercalation, Catalysts, Nanoceramics
Professor	NUMAKURA Hiroshi	Equilibrium and Nonequilibrium Thermodynamics of Materials, Crystal Defects, Diffusion in Solids, Mechanical Properties of Materials, Mechanical Spectroscopy
Professor	PRASSIDES Kosmas	Strongly Correlated Electron Systems, Quantum Magnetism, Superconductivity, Nanocarbon Molecular Materials, Photo- and Piezo-switchable Systems, Mixed Valence Materials
Professor	TAKAHASHI Masahide	Organic-Inorganic Hybrid, Self Organization, Nano Materials, Smart Materials, Solution processing, Soft Actuators, Optical and electronics Materials
Professor	TAKIGAWA Yorinobu	Nanocrystalline and Amorphous Materials Processing, Grain Boundary Plasticity, High-temperature Deformation
Professor	YAMADA Ikuya	High Pressure Synthesis, Catalysts, Transition Metal Oxides, Structure Analysis, Novel Materials
Associate Professor	IKENO Hidekazu	Computational Materials Science, First-principle Calculations, Materials Informatics, Electron Spectroscopy, Catalysts, Phosphors
Associate Professor	INOUE Hiroyuki	Corrosion and Protection of Metals, Electrochemical Measurement, Geological Disposal, Residual Life Prediction, Electrochemical Noise Method
Associate Professor	ISHII Yui	Ferroelectric Materials, Strongly Correlated Electron Systems, Crystal Structure Analysis, Transmission Electron Microscope
Associate Professor	MAKIURA Rie	Nanomaterials, Organic-Inorganic Hybrid Materials, Energy Materials, Thin Films, Coordination Chemistry, Electronic Devices, Porous Materials
Associate Professor	NAKAMURA Ryusuke	Diffusion in Solid Materials, Structural analysis of amorphous materials, Nanostructural Control
Associate Professor	OKADA Kenji	Nanomaterials, Porous Materials, Inorganic Materials, Organic-Inorganic Hybrid Materials
Associate Professor	TOKUDOME Yasuaki	Acid-Base Solid Catalysts, Liquid Phase Reaction, Interface and Colloidal Science, Bionanotechnology, Clay Minerals, Layered Materials
Assistant Professor	FUKATSU Arisa	Organic-Inorganic Hybrid Materials, Nanomaterials, Soft Actuators, DNA Materials, Self-Organization, Coordination Chemistry
Assistant Professor	MURATA Hidenobu	Biomaterials, Phosphate-Based Ceramics, High-Pressure Synthesis, Materials Informatics

(As of April 1, 2021)

【Division of Quantum and Radiation Engineering】

The Department of Quantum and Radiation is an engineering field that applies quantum beams such as radiation, ions and electrons to various fields. Through practical education programs using our large-scale radiation facility, we will develop engineers and researchers who will acquire advanced science and technology and research capabilities on quantum radiation, understand the culture of radiation safety and contribute to the development of modern society.

<Department of Quantum and Radiation Engineering>

Title	Name	Education and Research Fields
Professor	FURUTA Masakazu	Quantum Radiation Sterilization Technology, Microbial Control, Food Hygiene, Quantum Radiation Applied Biology, Radiation Biology
Professor	KAWAMATA Shuich	Superconductors, Magnetic Materials, Compound Semiconductors, Magnetic Measurements, Electric Transport Measurements, Nano-Fabrication
Professor	MATSUURA Hiroto	Plasma Science and Engineering, Nuclear Fusion, Nuclear Engineering, Plasma Application to Environment Problem, Radiation Safety Management
Professor	MIYAMARU Hiroyuki	Advanced Radiation Detector Development, Radiation Simulation, Radiation Metrology, Neutronics
Professor	UMEZAWA Kenji	Surface Science (Low energy ion/atom scattering spectroscopy, LEED/AES, STM, RBS/Ion beam channeling, Surface structural analysis(Top 1 st - 3 rd atoms), Development of surface analysis techniques, Ultrahigh Vacuum
Associate Professor	AKIYOSHI Masafumi	Radiation safety management, Radiological education, Radiometry, Divertor materials for fusion reactor, Space solar cell, Irradiation Damage, Thermal diffusivity, Positron annihilation lifetime
Associate Professor	HORI Fuminobu	Positron Physics, Lattice Defects, Radiation Effects, Hydrogen Storage, Metals, Semiconductors, Nano Materials, Amorphous Alloys, Functional Materials
Associate Professor	TANAKA Yoshiharu	Radiation Exposure-Effect , Radiation Protection, Molecular Genetics
Associate Professor	TSUKUI Shigeki	Quantum solid-state science engineering, Energy Conversion Materials (fuel cells, thermoelectric power generation devices, hydrogen absorbing alloy, solar cells, etc), Functional Thin Film Materials & Devices
Assistant Professor	ASADA Ryoko	Radiation Biology, Radiochemistry, Hyperthermia, Cellular Stress Response, Microbial Control
Assistant Professor	ITO Norio	Radiation Measurement, Environmental Radiation Science
Assistant Professor	KIYODA Shunji	Syntheses of poly nuclear complexes
Assistant Professor	KOJIMA Takao	Nuclear Plant Engineering, Radiation Process Engineering

(As of April 1, 2021)