Recommendation System

Graduate School of Engineering, Osaka Prefecture University

Master's Degree Program

Admission Guidelines on the Recommendation System

September 2019, October 2019 Admission: Master's Degree Program
April 2020 Admission: Master's Degree Program

April 2019

Graduate School of Engineering, Osaka Prefecture University

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

Contents

Notes: (a) Please complete all documents for submission carefully and in clear print or writing (PC cut & paste usage accepted.)
(b) Forms other than the admission card, photo card, the sheet to which the postal transfer payment slip is to be attached and the admission application can be also downloaded from the university website.
[Osaka Prefecture University HOME > Admission > Graduate Admissions]

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

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	
		September 2019, October 2019 Admission	April 2020 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 2020 Admission” or “September 2019, October 2019 Admission”. At the time of application, please select the desired admission period between the following two options:

a. April 2020 Admission
b. September 2019, October 2019 Admission

However, note that “a.” is the only possible answer for “those who expect to complete their studies by March 2020.”

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 *alma mater* 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 *alma mater* 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 *alma mater*.
	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 2019, October 2019 Admission period, please read "September 30, 2019" instead of “March 31, 2020" in (1) to (9) below.

(1) Those who have graduated from a university in Japan or who is expected to graduate by March 31, 2020.

(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, 2020.

(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, 2020.

(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, 2020.

(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, 2020.

*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, 2020.

*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, 2020.

*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, 2020.

(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 (use the form specified by the Graduate School of Engineering)

(b) Certificate of graduation (completion), certificate of prospective graduation or Certificate of enrollment (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

Qualification screening deadlines	**May 30 & 31, 2019 (Deadline May 31, 2019)** 10:00‐12:00, 13:00‐15:00
Submission venue	Admissions Office on the 3rd floor of Building A3 [location A on the map on the inside back cover]
	By mail: **Documents must be received by the application deadline.** 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.”

(3) The results of the qualification screening

The results will be sent out on June 7, 2019.
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	**June 14, 17 & 18, 2019 (Deadline June 18, 2019)** 10:00‐12:00, 13:00‐15:00
Submission venue	Room No.W103, Engineering Meeting Hall on the 1st floor of Building B4 [location B on the map on the inside back cover]
	By mail: **Documents must be received by the application deadline.** 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".
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)

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)-(10) 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 (3), (6) and (7) 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	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.
3	Résumé		Written in Japanese or English on the form specified by the Graduate School of Engineering bearing the applicant's signature.
4	Self-introduction		Use the form specified by the Graduate School of Engineering.
5	Certificate of graduation (completion) or prospective certificate of graduation (documents certifying eligibility for application)		・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.3 must submit the Application Eligibility Certificate.
6	Academic transcript		Issued by your most recent academic institution (original copy).
7	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)
8	Written Oath (Pledge)		Use the form specified by the Graduate School of Engineering.
9	Copy of residence card		・Please submit photocopies of both sides of the residence card. ・Overseas residents must submit a photocopy of their passport (page with face photo).
10	Return envelope (applicants by mail only)		If you are applying from Japan, please enclose a self-addressed envelope with JP¥404 postage attached.

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).

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 20, 2019**	
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 21, 2019
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 C & D on the map on the inside back cover) of Nakamozu Campus after 13:00 on July 19, 2019.

9. Announcement of Examination Results

Time	**July 26, 2019 at 13:00**
Location of announcement	The examination results will be posted at the entrance of Building A3 [location A on the map on the inside back cover].

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.

10. Enrollment Procedures

(1) Date of Enrollment

September 2019, October 2019 Admission	April 2020 Admission
September 26, 2019 **Note:** Date of enrollment of those who meet application qualification during September 26, 2019 to September 30, 2019: October 1, 2019	April 1, 2020

(2) Enrollment Procedures

September 2019, October 2019 Admission	April 2020 Admission
September 12 & 13, 2019 10:00-12:00, 13:00-15:00	October 8 & 9, 2019 10:00-12:00, 13:00-15:00

We will contact successful applicants with information on the date and location of registration for enrollment.
For those who have not completed the admission procedures it will be considered that their admission has been cancelled.
Please be sure to bring the admission procedure documents.
Documents sent by mail will not be accepted. Admission procedures can be done by proxy.

11. Tuition (Enrollment Fees and Tuition)

(1) Enrollment fees

Enrollment fee (A) ¥282,000	September 2019, October 2019 Admission	Either the enrolled student, his/her spouse or his/her immediate blood relative has been residing in Osaka Prefecture prior to September 26, 2018. **Note:** For those who meet applicant qualification during September 26, 2019 to September 30, 2019: the enrolled student who has been residing in Osaka Prefecture prior to October 1, 2018.
	April 2020 Admission	Either the enrolled student, his/her spouse or his/her immediate blood relative has been residing in Osaka Prefecture prior to April 1, 2019.
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)

When tuition fees change during the student's period of study, the new fees shall apply.

12. Regarding the Long-Term Study System

(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, 2019 and the classes are open for those admitted in October 1, 2019.
(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) 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 notice will be posted on the following website: **https://www.osakafu-u.ac.jp/** (In Japanese only)

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)

Osaka Prefecture University Website

https://www.osakafu-u.ac.jp/en/admission/graduate/

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

(As of April 1, 2019)

【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 technicians 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	Takakage ARAI	Aerodynamics related to Space Plane, Injection, Mixing and Combustion in Supersonic Flow, Boundary Layer Transition, Turbulent Property Measurements in Supersonic Flow, Supersonic Unmanned Plane (SUP)
Professor	Masakatsu CHIBA	Aerospace Structural Engineering, Dynamics for Thin-Walled Flexible Structures, Non-Linear System Dynamics
Professor	Nozomu KOGISO	Systems Engineering, Reliability Engineering, Optimum Design, Space Structural Systems, Space Engineering
Professor	Takashi SHIMOMURA	Aerospace Control Engineering, Dynamics / Kinematics / Guidance / Control of Aircraft / Spacecraft, Vibration Control of Flexible Space Structures, Numerical Optimization
Professor	Toshiaki TSUJII	Aerospace Navigation Systems, Satellite Navigation and Positioning, Aerospace Information Technology, Optimal Estimation
Associate Professor	Ryohei ISHIDA	Finite Element Analysis, Inverse Analysis, Inflatable Structure, Light-Weight Frame Structure
Associate Professor	Youichi MURAKAMI	Physics of Fluids, Theory of Stability, Nonlinear Dynamics, Numerical Fluid Dynamics
Associate Professor	Masao NAKAMURA	Space Environment Technology, Space Plasma Simulation and Analysis, Space Weather
Associate Professor	Shoji SAKAUE	Aerodynamics, Laminar-Turbulent Transition, Turbulent Flow Control, Supersonic Mixing Enhancement, Computational Fluid Dynamics
Lecturer	Toshihiko HIEJIMA	Aerospace Propulsion System, Compressible Fluid Dynamics, Computational Fluid Dynamics, Instability of Vortices, Scramjet Engine
Lecturer	Sayaka KANATA	System Control Engineering, System Identification, Numerical Optimization, Rovers for Small Planetary Bodies
Assistant Professor	Ken-ichi KANEKO ※	Jet Propulsion, Heat Transfer Device, Wind Turbine, Temperature Measurement
Assistant Professor	Akio YAMANO	Dynamics for Fluid-Structure Interaction, Dynamics for Thin-Walled Flexible Structures, Rovers for Small Planetary Bodies

(As of April 1, 2019)

The faculty staff members marked with ※ will retire on March 31, 2020.

＜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	Masakazu ARIMA	Marine System Planning, Human Factors, Underwater Robotics
Professor	Nobuhiro BABA	Marine Environments, Ocean Fluid Dynamics, Marine Ecosystems, Ocean Circulation
Professor	Toru KATAYAMA	Nonlinear Motions of Floating Structures, Seakeeping & Safety of High Speed Crafts, Instabilities of Planing Crafts, Ship Stability in Wave, Tank Test
Professor	Naoki NAKATANI	Marine Environmental Monitoring, Ocean Environmental Measurement, Marine Ecosystem Engineering, Ecosystem Modeling, Planning of Marine Resource Development
Associate Professor	Rei ARAI	Marine Environmental Measurement, Marine Acoustic Engineering, Marine Optics, Instrumentation Engineering
Associate Professor	Yasunori NIHEI	Hydrodynamic Force acting on Offshore Structures, Vortex Induced Vibration, Design and Development of Sailboats, Floating Type Wind Power Generation Device
Associate Professor	Masakazu SHIBAHARA	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	Takashi TSUBOGO	Wave Resistance, Offshore Structure, Hydroelasticity, Very Large Floating Structures
Assistant Professor	Jialin HAN	System Control Engineering, Design and Development of Suspension Boats, Automated Operation System for Ships, Seabed Robots
Assistant Professor	Kazuki IKUSHIMA	Structural Engineering, Structural Analysis of Ships, Nonlinear Finite Element Analysis, Large Scale Numerical Simulation, Parallel Computation

(As of April 1, 2019)

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

(As of April 1, 2019)

The faculty staff members marked with ※ will retire on March 31, 2020.

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

(As of April 1, 2019)

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

(As of April 1, 2019)

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

(As of April 1, 2019)

<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	Masashi IWATA ※	Resource Engineering, Environmental Engineering, Solid-Liquid Separation, Flocculation, Sedimentation, Filtration, Expression
Professor	Yasuhiro KONISHI ※	Particle Science and Technology, Nano/Meso Materials, Biocolloids, Environmental Biotechnology
Professor	Akinori MUTO	Separation Process Engineering, Functional Carbon, Microreactor, Adsorption, Ion Exchange, Extraction, Photocatalyst
Professor	Hiroyasu OGINO	Chemical Reaction Engineering, Biochemical Engineering, Microbial Engineering, Protein Engineering, Enzyme Engineering
Professor	Takeyasu SAITO	Materials Process Engineering, Electrodeposition, Kinetics and Engineering of Chemical Vapor Deposition, Ferroelectric Materials, Wide Band Gap Materials, Metallization Processing for Semiconductor Devices
Professor	Satoru WATANO	Process Systems Engineering, Powder Technology, Fluidized Bed, Nano-Processing, Measurement and Control, Pharmaceutical Engineering
Professor	Masahiro YASUDA	Environmental Process Engineering, Chemical Reaction Engineering, Biological Chemical Engineering, Polymerization Engineering, Tissue Engineering
Associate Professor	Tomohiro IWASAKI	Resource Engineering, Powder Technology, Functional Nanoparticle, Mechanochemistry, Numerical Simulation
Associate Professor	Hideya NAKAMURA	Process Systems Engineering, Powder Technology, Computational Particle Engineering, Molecular Simulation, Fluidization Engineering
Associate Professor	Toshiyuki NOMURA	Particle Science and Technology, Nano/Meso Materials, Biocolloids, Environmental Bioengineering
Associate Professor	Yan XU	Nano Chemical Systems, Nanofluidics, Single-Molecule Chemistry, Single-Cell Omics, Biomaterials, Analytical Chemistry, Nanomedicine
Associate Professor	Ryosuke YAMADA	Chemical Reaction Engineering, Biochemical Engineering, Microbial Engineering, Protein Engineering, Enzyme Engineering
Lecturer	Naoki OKAMOTO	Materials Process Engineering, Elecltrochemical Engineering, Micro Plating, Plating Process (Electrodeposition, Electoroless Deposition), Materials Science and Engineering
Assistant Professor	Takuya MATSUMOTO	Chemical Reaction Engineering, Biochemical Engineering, Microbial Engineering, Protein Engineering, Enzyme Engineering
Assistant Professor	Syuji OSAKI	Process Systems Engineering, Powder Technology, Computational Particle Engineering, Material Engineering

(As of April 1, 2019)

The faculty staff member marked with ※ will retire on March 31, 2020.

<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	Hirofumi INOUE	Texture Control, Plastic Anisotropy, Orientation Distribution Analysis, Light Materials, Laminated Metals
Professor	Yasuyuki KANENO	Intermetallic Compounds, Plastic Working, Microstructural Control
Professor	Shigeo MORI	Correlated Electron Materials, Dielectric Materials, Magnetic Materials, Ionic conductors, Electron Microscopy, Lorentz Electron Microscopy
Professor	Atsushi NAKAHIRA	Biomaterials, Apatite, Intercalation, Catalysts, Nanoceramics
Professor	Hiroshi NUMAKURA	Equilibrium and Nonequilibrium Thermodynamics of Materials, Crystal Defects, Diffusion in Solids, Mechanical Properties of Materials, Mechanical Spectroscopy
Professor	Kosmas PRASSIDES	Strongly Correlated Electron Systems, Quantum Magnetism, Superconductivity, Nanocarbon Molecular Materials, Photo- and Piezo-switchable Systems, Mixed Valence Materials
Professor	Masahide TAKAHASHI	Organic-Inorganic Hybrid, Self Organization, Smart Materials, Sol-Gel Chemistry, Lithography, Ceramics, Photonic Crystals, Optical Materials
Professor	Yorinobu TAKIGAWA	Nanocrystalline and Amorphous Materials Processing, Grain Boundary Plasticity, High-temperature Deformation
Associate Professor	Hidekazu IKENO	Computational Materials Science, First-principle Calculations, Materials Informatics, Electron Spectroscopy
Associate Professor	Hiroyuki INOUE	Corrosion and Protection of Metals, Electrochemical Measurement, Geological Disposal, Residual Life Prediction, Electrochemical Noise Method
Associate Professor	Yui ISHII	Ferroelectric Materials, Strongly Correlated Electron Systems, Crystal Structure Analysis, Transmission Electron Microscope
Associate Professor	Rie MAKIURA	Nanomaterials, Organic-Inorganic Hybrid Materials, Energy Materials, Thin Films, Coordination Chemistry, Electronic Devices, Porous Materials
Associate Professor	Ryusuke NAKAMURA	Diffusion in Solid Materials, Structural analysis of amorphous materials, Nanostructural Control
Associate Professor	Masaki NARISAWA	High Temperature Materials, Ceramics, Carbides, Nitrides, Silicides, Inorganic Polymers, Precursor Method, Thermal Decomposition Process, Composites
Associate Professor	Yasuaki TOKUDOME	Hierarchically Porous Material, Nanocatalyst, Liquid Phase Reaction, Interface and Colloidal Science, Bionanotechnology, Clay Minerals
Associate Professor	Ikuya YAMADA	High Pressure Synthesis, Catalysts, Transition Metal Oxides, Structure Analysis, Novel Materials
Assistant Professor	Hidenobu MURATA	Biomaterials, Phosphate-Based Ceramics, High-Pressure Synthesis, Materials Informatics
Assistant Professor	Kenji OKADA	Nanomaterials, Porous Materials, Inorganic Materials, _Organic-Inorganic Hybrid Materials

(As of April 1, 2019)

【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	Masakazu FURUTA	Quantum Radiation Sterilization Technology, Microbial Control, Food Hygiene, Quantum Radiation Applied Biology, Radiation Biology
Professor	Shuichi KAWAMATA	Superconductors, Magnetic Materials, Compound Semiconductors, Magnetic Measurements, Electric Transport Measurements, Nano-Fabrication
Professor	Hiroto MATSUURA	Plasma Science and Engineering, Nuclear Fusion, Nuclear Engineering, Plasma Application to Environment Problem, Radiation Safety Management
Professor	Hiroyuki MIYAMARU	Advanced Radiation Detector Development, Radiation Simulation, Radiation Metrology, Neutronics
Professor	Ryoichi TANIGUCHI ※	Space Radiation, Non-destructive Testing, Accelerator Beam Technology, Radiation Imaging, Radiation Damage
Professor	Kenji UMEZAWA	Surface Science (Low energy ion/atom scattering spectroscopy, LEED/AES, STM, RBS/Ion beam channeling, Surface structural analysis(Top 1st- 3rd atoms), Development of surface analysis techniques, Ultrahigh Vacuum
Associate Professor	Masafumi AKIYOSHI	Radiation safety management, Radiological education, Radiometry, Divertor materials for fusion reactor, Space solar cell, Irradiation Damage, Thermal diffusivity, Positron annihilation lifetime
Associate Professor	Fuminobu HORI	Positron Physics, Lattice Defects, Radiation Effects, Hydrogen Storage, Metals, Semiconductors, Nano Materials, Amorphous Alloys
Associate Professor	Yoshiharu TANAKA	Radiation Exposure-Effect , Radiation Protection, Molecular Genetics
Associate Professor	Shigeki TSUKUI	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	Ryoko ASADA	Radiation Biology, Radiochemistry, Hyperthermia, Cellular Stress Response, Microbial Control
Assistant Professor	Norio ITO	Radiation Measurement, Environmental Radiation Science
Assistant Professor	Shunji KIYODA	Syntheses of poly nuclear complexes
Assistant Professor	Takao KOJIMA	Nuclear Power Plant Technology, Radiation Processing

(As of April 1, 2019)

The faculty staff member marked with ※ will retire on March 31, 2020.