

# **Overseas Selection for International Students**

## **Application Guidelines for Enrollment in October 2021 / April 2022**

**Graduate School of Natural Science and Technology**

**(Doctor's Course)**

**OKAYAMA UNIVERSITY**

## Policy for acceptance of admitted students

The Doctor's program is looking for students who wish to harmoniously make use of specialized field-related leading-edge knowledge, techniques and foundational knowledge beyond the students' specialized fields; students who, by means of a rich creativity, the ability to set up original solutions to issues, deep insight, and superior communicative abilities, wish to participate in the rapid development of science and technology, and exploration of unknown academic and technical fields. The Doctor's program selects and accepts both domestic and international candidates based on an examination, which measures their problem-identification/solution abilities.

### I. Admission Quota

#### (1) Time of Enrollment ; October 2021

Division	Quota
Mathematics and Physics	A Few
Earth, Life, and Molecular Sciences	
Interdisciplinary Science	
Industrial Innovation Sciences	
Applied Chemistry	

#### (2) Time of Enrollment ; April 2022

Division	Quota
Mathematics and Physics	A Few
Earth, Life, and Molecular Sciences	
Interdisciplinary Science	
Industrial Innovation Sciences	
Applied Chemistry	

### II. Eligibility for Application

Those to whom all the following provisions are applicable:

1 Those to whom the following items are applicable, or are expected to be applicable by September 2021 (or in case of April 2022 enrollment, by March 2022) .

- (1) Have a master's or professional degree.
- (2) Have been awarded a degree equivalent to a master's degree or professional degree abroad.
- (3) Have completed the program at United Nations University and have been awarded a degree equivalent to a master's degree.
- (4) Are deemed to have academic ability equal to or greater than that of a master's degree holder by the Graduate School and who have reached the age of 24.

2 Those who are foreign citizens who live outside Japan and who are unable to come to Japan to take their entrance examinations (except citizens and permanent residents of Japan).

3 Those who are expected to obtain a visa status of "Student" stipulated in the Immigration Control and Refugee Recognition Act after being enrolled in the Graduate School.

4 Those who were recommended by the schools from which they graduated as being particularly excellent in both personality and academic ability.

Note 1: Those who "Are deemed to have academic ability equal to or greater than that of a master's degree holder by the

Graduate School” specified in item 4 of Provision 1 refers to applicants who passed the document screening that the Graduate School provides as the screening of the eligibility for application. (See III Individual Screening of Eligibility for Admission in Eligibility for Application.)

Note 2: We withdraw permission for admission for those who applied as a prospective degree holder but who failed to be awarded the degree by September 2021 (or in case of April 2022 enrollment, by March 2022) .

Note 3: Those “who live outside Japan and are unable to come to Japan to take their entrance examinations” specified in Provision 2 include people who are staying in Japan at the time of application but depart from Japan because their duration of stay expires by the end of July, 2021 (or in case of April 2022 enrollment, by January 2022) .

For more details, please contact Graduate School Section, Academic Affairs Division, Graduate School of Natural Science (E-mail: [agf8576@adm.okayama-u.ac.jp](mailto:agf8576@adm.okayama-u.ac.jp)).

### III. Individual Admission Eligibility Screening in Eligibility for Application

For those applicants for admission who fall under item 4 of Provision 1 specified in the previously described II Eligibility for Application, we conduct individual admission eligibility screenings for the approval of admission eligibility before application. The applicants must submit the documents required for the admission eligibility screening specified in Provision 2 to the Graduate School Section, Academic Affairs Division, Graduate School of Natural Sciences by each deadline stated in Provision 1.

#### 1. Submission Period of Documents for Admission Eligibility Screening

<b>October 2021 Enrollment</b>	<b>First Submission Period</b>	May 7, 2021 to May10, 2021
	<b>Second Submission Period</b>	May 26, 2021 to May 27, 2021
<b>April 2022 Enrollment</b>		October 26,2021 to October 27,2021

#### 2. Documents Required for Admission Eligibility Screening

Documents Required for Application	Remarks
〈1〉 Form of Eligibility for Application	Use the forms prescribed by the Graduate School of Natural Science and Technology.
〈2〉 Record of Academic Performance	Use the form prescribed by the Graduate School of Natural Science and Technology. (Briefly describe objective findings from research results relevant to the field of major.) With regard to academic papers, attach an offprint or a copy and attach a summary or abstract for research presentations.
〈3〉 Certificate of Research Participation	Use the form prescribed by the Graduate School of Natural Science and Technology. (The form must be completed by the institution with which the applicant is affiliated.)
〈4〉 Academic Transcript (of last completed education)	Submit a transcript issued by the president of the final school from which the applicant graduated.
〈5〉 Graduation Certificate (of last completed education)	Submit a graduation certificate issued by the president of the final school from which the applicant graduated.

Note: All of the documents mentioned above must be prepared in English, in principle. (When English is not your native language, attach English translations.)

#### IV. Application Procedures

##### 1. How to Apply

Applicants must complete all the procedures described in items 1 through 3 below:

- (1) Before preparing documents for application, applicants must directly contact a prospective supervisor at Graduate School of Natural Science and Technology by such as email, consult about research and education after enrollment, obtain approval to take the examination, and receive a copy of “Letter of Informal Acceptance by Prospective Supervisor”. With regard to prospective supervisors at Graduate School of Natural Science and Technology, please visit the Website of the Graduate School of Natural Science and Technology below:

<https://www.gnst.okayama-u.ac.jp/en/major/divisions/>

- (2) Pay the entrance examination fee after having obtained the approval by the prospective supervisor. (Except those who are exempted from the payment.)
- (3) Send all the documents for application by mail to arrive no later than each date stated in “2 Application Period”.

##### 2. Application Periods

<b>October 2021 Enrollment</b>	<b>First Application Period</b>	May 27, 2021 to June 7, 2021
	<b>Second Application Period</b>	June 24, 2021 to July 7, 2021
<b>April 2022 Enrollment</b>		November 25,2021 to December 15,2021

##### 3. Address for Submission of Documents

Graduate School Section  
 Academic Affairs Division  
 Graduate School of Natural Science and Technology  
 Okayama University  
 3-1-1, Tsushima-naka, Kita-ku, Okayama 700-8530, Japan

##### 4. Notes on Application

- (1) No change shall be permitted after submission in terms of the contents of the documents submitted.
- (2) No document shall be returned for any reason after the application documents are accepted.
- (3) Application with incomplete application documents or shortage of examination fee shall not be accepted.
- (4) Please note carefully that admission might be withdrawn even after enrollment if the contents of the submitted documents are found to include false entries.
- (5) Certificates issued under the former name, which differs from the name written on the application form are useful. However, in such cases, attach a document (in any form) with the date of name change and the new and the former name are written personally by the applicant.

##### 5. Documents Required for Application

Documents Required for Application	Remarks
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<p>〈1〉 Application for admission Curriculum Vitae (CV) Photograph</p>	<p>Use the forms prescribed by Graduate School of Natural Science and Technology. Affix a photograph (4 cm long × 3 cm wide, upper body, no headwear, facing forward, taken within the three months before application) on the prescribed space on the “Application for admission”.</p>			
<p>〈2〉 Entrance Examination Fee</p>	<p>30,000yen (handling fees will be charged separately)</p> <p>Please refer to “Paying for Entrance Examination Fees” below and pay the entrance examination fee by 17:00 (Japan time) on the last day of the application period on “Payment for Entrance Examination Fee website”. In addition, please be sure to choose "Credit Card" for payment method. Other payment methods cannot use from overseas. After confirming the payment of the entrance examination fee, print "Certificate of Entrance Examination Fee Payment" and attach it to the prescribed section of the prescribed form.</p> <p>Paying for Entrance Examination Fees <a href="http://www.gels.okayama-u.ac.jp/up_load_files/freetext/kenteiryu/oversea_eng.pdf">http://www.gels.okayama-u.ac.jp/up_load_files/freetext/kenteiryu/oversea_eng.pdf</a></p> <p>Payment for Entrance Examination Fee website <a href="https://e-apply.jp/n/okayama-payment-eng">https://e-apply.jp/n/okayama-payment-eng</a></p> <p>If you could not pay by the payment method above, contact Graduate School Section, Academic Affairs Division, Graduate School of Natural Sciences.</p> <p>Refund of Entrance Examination Fee The entrance examination fee paid is not refundable for any reason, except in the following cases: a) Entrance examination fee was paid, but application was not made (application documents were not submitted or not accepted.) b) Entrance examination fee was accidentally transferred twice. c) Those applicants who are Japanese-government sponsored students need not pay the entrance examination fee, in principle. However, in the case in which the period of their scholarship ends by September 30, 2021 (or in case of April 2022 enrollment, by March 31, 2022) , the payment of the entrance examination fee is required. When the extension of the scholarship period is approved, the entrance examination fee will be refunded.</p>			
<p>〈3〉 University</p>	<table border="1"> <tr> <td data-bbox="507 1966 821 2016">Graduation Certificate</td> <td data-bbox="821 1966 1455 2016" rowspan="2">Submit certificates issued by the university from which you graduated.</td> </tr> <tr> <td data-bbox="507 2016 821 2060">Transcript</td> </tr> </table>	Graduation Certificate	Submit certificates issued by the university from which you graduated.	Transcript
Graduation Certificate	Submit certificates issued by the university from which you graduated.			
Transcript				

〈4〉 Graduate School (Prospective)	Completion Certificate	Submit a certificates issued by the graduate school which you graduated (or will graduate).
	Transcript	
〈5〉 Papers Submitted (Copy)		a) Master's thesis or an equivalent research paper (in English or Japanese) b) List of research achievements after earning the Master's degree and one or two representative papers of them. (If applicable)
〈6〉 Research Plan Document		Use the form prescribed by Graduate School of Natural Science and Technology.
〈7〉 Document Certifying English Language Ability (TOEFL <sup>®</sup> , TOEFL iBT <sup>®</sup> , etc.)		When you have not taken TOEFL <sup>®</sup> , TOEFL iBT <sup>®</sup> or other tests, submit a certificate of English ability issued by the graduate school, etc. from which you graduated.
〈8〉 Copy of Passport or Copy of Family Registry or Certificate of Citizenship in Home Country		Submit a copy of the page of passport which can confirm the name, the date of birth, etc.. If not possessing the passport, please submit the certificate which is acquired copy of the family register or citizen membership, etc. in your home country.
〈9〉 (Two kinds of) Letters of Recommendation Addressed to the President		Use the form1 and form2 prescribed by Graduate School of Natural Science and Technology.
〈10〉 Letter of Acceptance by Prospective Supervisor		Use the form prescribed by Graduate School of Natural Science and Technology, and submit a copy of the letter written by a prospective supervisor at Graduate School of Natural Science and Technology.

Note 1: All documents to be submitted must be prepared in the same size (preferably A4 size) and be typewritten.

Note 2: We do not accept documents that are incomplete, not written completely and accurately, or which are received after the deadline for submission.

Note 3: The previously described documents **must be prepared in English**, except 〈10〉. (When English is not your native language, attach English translations.)

## 6. Purpose of Use of Personal Information

Application documents submitted and personal information written on them are used for affairs related the selection of entrants.

However, regarding entrants, we use their personal information written on the application form, including name, gender, date of birth, current address, and schools graduated from, as registry data for basic student information in the academic affairs system at Okayama University.

In addition, successful applicants' personal information, examinee number and name (kanji/ kana), are used for the clerical systems for tuition fee debt management and tuition fee waiver at Okayama University.

When application for admission fee waiver, postponement of admission fee collection, tuition fee waiver, or various scholarships was made, the applicant's entrance examination results and academic transcript might be used to handle academic ability judgment related to affairs such as postponement of admission fee collection.

## V. Methods for Selection of Entrants

Selection of entrants shall be made based on document screening and pass or failure is determined.

## VI. Announcement of Successful Applicants

<b>October 2021 Enrollment</b>	<b>For the First Application Period</b>	June 25, 2021
	<b>For the Second Application Period</b>	July 30, 2021
<b>April 2022 Enrollment</b>		January 28, 2022

A letter of acceptance and others will be sent to successful applicants themselves dated on the day of the announcement described above.

## VII. Admission Procedures

### 1. Method of Admission Procedures

Details will be informed separately by your supervisor with a letter of acceptance.

### 2. Period of Admission Procedures

The period of admission procedures has been scheduled as follows:

**October 2021 Enrollment** ; September 17, 2021 to September 21, 2021

**April 2022 Enrollment** ; March 14, 2022 to March 15, 2022

## VIII. Other

### 1. Admission Fee and Tuition Fee (Applicable only for self-supporting international students. Foreign-government sponsored students need not to pay.)

Admission fee: 282,000 yen (expected amount)

Tuition fee: 267, 900 yen (for half a year); 535,800 yen (for a year)

※ When the amount was revised at the time of admission or while at school, the new amount will be applied from the time of the revision.

### 2. Study Assistance

For self-supporting international students, we have systems as part of study assistance: admission fee waiver, postponement of admission fee collection, tuition fee waiver, and various scholarships.

If your academic achievement, income, etc. meet the requirements, then you may apply for admission fee waiver, postponement of admission fee collection, and tuition fee waiver and have a full or half waiver.

When your academic achievement, income, etc. meet the requirements, you may apply for various scholarships and receive scholarship benefits.

### 3. Notes

It is recommended that international students have sufficient knowledge of the climate, weather, and customs of Japan as well as the situation of the university in advance before coming to Japan.

Education and research activities will be conducted mainly in Japanese language. Consult with your desired supervisor in advance if you wish to have guidance in English.

In everyday life, you will need Japanese language skills. It is also desired that candidates have studied Japanese language.

Okayama University has a Japanese language course for international students. Please take the course if you like.

4. Okayama University has established the “Security Export Control Regulations of Okayama University” under the Security Export Control System based on the “Foreign Exchange and Foreign Trade Act (FEFTA)”, and conducts strict screening when accepting foreign students.

If you are subjected to this regulation or FEFTA, you may not be accepted or your desired research activities may be restricted.

For details concerning the Security Export Control System in Japan, please refer to the following website.

URL; <https://www.meti.go.jp/policy/anpo/englishpage.html>

**5. For more details about the application, please contact the following offices by e-mail.**

(1) Inquiry about application, major field, and supervisor, etc.:

Graduate School Section  
Academic Affairs Division  
Graduate School of Natural Science and Technology,  
Okayama University  
3-1-1, Tsushima-naka, kita-ku Okayama 700-8530, Japan  
E-mail: [agf8576@adm.okayama-u.ac.jp](mailto:agf8576@adm.okayama-u.ac.jp)

(2) Inquiry about scholarship, accommodation, etc.:

International Affairs Department  
Okayama University  
2-1-1, Tsushima-naka kita-ku, Okayama 700-8530, Japan  
Fax: +81-86-252-5022 (from overseas)  
Fax: 086-252-5022 (from inside Japan)  
E-mail: [housing@cc.okayama-u.ac.jp](mailto:housing@cc.okayama-u.ac.jp) (Dormitory)  
[istudent@cc.okayama-u.ac.jp](mailto:istudent@cc.okayama-u.ac.jp) (Scholarship)



## Guide to Divisions (As of April 1, 2021)

### [1] Division of Mathematics and Physics

#### 1. Department of Mathematics

Research Areas	Subjects	Instructors
Algebra	Theory of Representations	ISHIKAWA Masao, Professor
	Commutative Algebra	TERAI Naoki, Professor
	Model Theory	TANAKA Katsumi, Professor
	Rings and Categories of Modules	SUZUKI Takeshi, Associate Professor
	Algebraic Geometry	ITO Atsushi, Associate Professor
	Seminar in Algebra	Faculty Members in the Research Area
Geometry	Geometric Structures	KONDO Kei, Professor
	Geometry and Mathematical Physics	JINZENJI Masao, Professor
	Advanced Topics in Topology	MONDEN Naoyuki, Associate Professor
	Stable Homotopy Theory	TORII Takeshi, Professor
	Seminar in Geometry	Faculty Members in the Research Area
Analysis	Applied Analysis	UEHARA Takato, Associate Professor
	Nonlinear Partial Differential Equation	OSHITA Yoshihito, Professor
	Seminar in Analysis	Faculty Members in the Research Area

#### 2. Department of Physics

Research Areas	Subjects	Instructors
Quantum Structural Physics in Correlated Matter	Quantum Structural Physics in Correlated Matter	NOGAMI Yoshio, Professor
	Quantum Structural Physics in low Dimensional Materials	KONDO Ryusuke, Associate Professor
	Seminar in Quantum Structural Physics in Correlated Matter	Faculty Members in the Research Area
Quantum Physics in Correlated Matter	Magnetism in Correlated Matter	MINO Michinobu, Professor
	Seminar in Quantum Physics in Correlated Matter	Faculty Members in the Research Area
Physics in Advanced Functional Materials	Functional Correlated Electron System	IKEDA Naoshi, Professor
	Advanced Solid State Spectroscopy	KAMBE Takashi, Associate Professor
	Physics of Antienvironmental Materials	MATSUSHIMA Yasushi, Senior Assistant Professor ☆
	Seminar in Physics in Advanced Functional Materials	Faculty Members in the Research Area
Materials Physics in Extreme Environments	Physics Under Extreme Environment	KOBAYASHI Tatsuo, Professor
	Low Temperature Physics in Strongly Correlated Matter	INADA Yoshihiko, Professor
	Low Temperature Magnetism	ARAKI Shingo, Associate Professor
	Seminar in Materials Physics in Extreme Environments	Faculty Members in the Research Area
Low Temperature Condensed Matter Physics	Superconductivity	ZHENG Guo-Qing, Professor
	Physical Properties of Solids in High Magnetic Fields	KAWASAKI Shinji, Associate Professor
	Seminar in Low Temperature Condensed Matter Physics	Faculty Members in the Research Area
Physics of Condensed Matter	Quantum Theory for Solid-State Spectroscopy	OKADA Kozo, Professor
	Seminar in Physics of Condensed Matter	Faculty Members in the Research Area
Astroparticle Physics	Cosmology	ISHINO Hirokazu, Professor
	Seminar in Astroparticle Physics	Faculty Members in the Research Area
High Energy Physics	High Energy Particle Physics	KOSHIO Yusuke, Associate Professor
	Seminar in High Energy Physics	Faculty Members in the Research Area

A name marked with a star (☆) is scheduled for retirement as of March 31, 2022

#### 3. Cooperative Course (Department of X-ray Frontier Physics)

Research Areas	Subjects	Instructors
Advance Synchrotron Radiation Physics	Condensed Matter Physics using Synchrotron Radiation	MIZUMAKI Masaitiro, Guest Professor
	Instrumentation for Synchrotron Radiation Physics	TAMENORI Yusuke, Guest Professor
	Application of Condensed Matter Physics Using Synchrotron Radiation	SATO Masugu, Guest Professor
	Structural Physics using Synchrotron Radiation	ISHII Kenji, Guest Professor
	Seminar in Advance Synchrotron Radiation Physics	Faculty Members in the Research Area

## [2] Division of Earth, Life, and Molecular Sciences

### 1. Department of Chemistry

Research Areas	Subjects	Instructors
Structural Chemistry	Solid Structural Chemistry	ISHIDA Hiroyuki, Professor ☆ GOTOH Kazuma, Associate Professor
	Seminar in Structural Chemistry	Faculty Members in the Research Area
Spectrochemistry	Laser Spectroscopy	TANG Jian, Professor
	Seminar in Spectrochemistry	Faculty Members in the Research Area
Synthetic and Physical Organic Chemistry	Organic Photochemistry	OKAMOTO Hideki, Associate Professor
	Seminar in Synthetic and Physical Organic Chemistry	Faculty Members in the Research Area
Inorganic Chemistry	Surface Inorganic Chemistry	OHKUBO Takahiro, Associate Professor
	Functional Coordination Chemistry	SUNATSUKI Yukinari, Assistant Professor
	Seminar in Inorganic Chemistry	Faculty Members in the Research Area
Organic Chemistry	Natural Products Chemistry	KADOTA Isao, Professor TAKAMURA Hiroyoshi, Associate Professor
	Seminar in Organic Chemistry	Faculty Members in the Research Area
Analytical Chemistry	Analytical Chemistry	KANETA Takashi, Professor TAKEYASU Nobuyuki, Associate Professor
	Seminar in Analytical Chemistry	Faculty Members in the Research Area
Organic Synthetic Chemistry	Synthetic Carbohydrate Chemistry	HANAYA Tadashi, Professor
	Seminar in Organic Synthetic Chemistry	Faculty Members in the Research Area
Nanochemistry	Advanced Nanoscience	FUJIWARA Masazumi, Associate Professor
	Seminar in Nanochemistry	Faculty Members in the Research Area

A name marked with a star (☆) is scheduled for retirement as of March 31, 2022

### 2. Department of Biological Sciences

Research Areas	Class Subjects	Instructors
Molecular Genetics	Molecular and Developmental Genetics	NAKAGOSHI Hideki, Professor
	Biological Chemistry of Gene Regulation	ABO Tatsuhiko, Professor
	Seminar in Molecular Genetics	Faculty Members in the Research Area
Plant Ecology and Evolution	Evolutionary Ecology	MIMURA Makiko, Associate Professor
	Seminar in Plant Ecology and Evolution	Faculty Members in the Research Area
Neural Control of Behavior	Behavioral Neurobiology	SAKAMOTO Hirotaka, Associate Professor
	Neural Information Processing	MATSUI Teppei, Associate Professor
	Seminar in Neural Control of Behavior	Faculty Members in the Research Area
Environmental Biology and Chronobiology	Marine Genomics	HAMADA Mayuko, Associate Professor
	Chronoecology	YOSHII Taishi, Associate Professor
	Seminar in Environmental Biology and Chronobiology	Faculty Members in the Research Area
Chemical Correlation and Control	Adaptational Zoology	SAKAMOTO Tatsuya, Professor
	Humoral Regulation of Cell Function	TAKEUCHI Sakae, Professor
	Endocrinology	AIZAWA Sayaka, Associate Professor
	Seminar in Chemical Correlation and Control	Faculty Members in the Research Area
Developmental Biology	Developmental Genetics	UEDA Hitoshi, Professor
	Plant Developmental Genetics	TAKAHASHI Taku, Professor
	Regeneration Biology	SATO Akira, Associate Professor
	Plant Cell Biology	MOTOSE Hiroyasu, Associate Professor
	Seminar in Developmental Biology	Faculty Members in the Research Area

### 3. Department of Earth System Science

Research Areas	Subjects	Instructors
Dynamic Geology	Material Science of Earth and Planetary Deep Interiors	TERASAKI Hidenori, Professor
	Crustal Evolution	NAKAMURA Daisuke, Associate Professor
	Petrology of Fluid-Rock Interaction	NOZAKA Toshio, Associate Professor
	Seminar in Dynamic Geology	Faculty Members in the Research Area
Physics of the Earth and Planetary Interior	Earthquake Physics	TAKENAKA Hiroshi, Professor
	Mineral Physics	URAKAWA Satoru, Professor
	Seismotectonics	KUMAMOTO Takashi, Professor
	Paleomagnetism and Rock Magnetism	UNO Koji, Professor
	Active Tectonics	MATSUTA Nobuhisa, Professor
	Seminar in Physics of the Earth and Planetary Interior	Faculty Members in the Research Area
	Solar System Chemistry	YAMASHITA Katsuyuki, Associate Professor
Geochemistry and Cosmochemistry	Carbonate Geochemistry	INOUE Mayuri, Professor
	Seminar in Geochemistry and Cosmochemistry	Faculty Members in the Research Area
Atmospheric Sciences	Physical Climatology	NOZAWA Toru, Professor
	Atmospheric Water Cycle and Climate Systems	KATO Kuranoshin, Professor
	Science of Planetary Surface Environment	HASHIMOTO George L, Professor
	Earth System Dynamics and Environment	MICHIBATA Takuro, Associate Professor
	Seminar in Atmospheric Sciences	Faculty Members in the Research Area

**【3】 Division of Interdisciplinary Science**

**1. Department of Interdisciplinary Science**

Research Areas	Subjects	Instructors
Mathematical Analysis	Mathematical Theory on Traveling Waves	TANIGUCHI Masaharu, Professor
	Stochastic Differential Equations	TAGUCHI Dai, Associate Professor
	Seminar in Mathematical Analysis	Faculty Members in the Research Area
Extreme Quantum Physics	Experimental Quantum Physics	YOSHIMURA Koji, Professor
	Fundamental Atomic Physics	YOSHIMI Akihiro, Associate Professor
	Seminar in Extreme Quantum Physics	Faculty Members in the Research Area
Physics of Quantum Universe	Atomic, Molecular, and Optical Physics	UETAKE Satoshi, Associate Professor
	Seminar in Physics of Quantum Universe	Faculty Members in the Research Area
Molecular Physiology	Light Energy Metabolism	TAKAHASHI Yuichiro, Professor ☆
	Seminar in Molecular Physiology	Faculty Members in the Research Area
Structural Biology	Structural Biology	SHEN Jian-Ren, Professor SUGA Michihiro, Associate Professor AKITA Fusamichi, Associate Professor
	Seminar in Structural Biology	Faculty Members in the Research Area
Coordination Chemistry	Advanced Coordination Chemistry	SUZUKI Takayoshi, Professor
	Seminar in Coordination Chemistry	Faculty Members in the Research Area
Quantum Physics in Condensed Matter	Advanced Quantum Condensed Matter Physics	KASAHARA Shigeru, Professor
	Seminar in Quantum Physics in Condensed Matter	Faculty Members in the Research Area
Physics of Solid Surfaces and Interfaces	Photoemission Spectroscopy of Solid Interfaces	YOKOYA Takayoshi, Professor
	Physical Properties of Thin Films	MURAOKA Yuji, Associate Professor
	Physics of Quantum Electronics	KOBAYASHI Kaya, Associate Professor
	Seminar in Physics of Solid Surfaces and Interfaces	Faculty Members in the Research Area
Quantum Many-Body Physics	Quantum Many-Body Physics	ICHIOKA Masanori, Professor
	Physics in Strongly Correlated Electron Systems	JESCHKE Harald Olaf, Special Contract Personnel Professor (Special Appointment) OTSUKI Junya, Associate Professor
	Quantum Transport Physics	ADACHI Hiroto, Associate Professor
	Seminar in Quantum Many-Body Physics	Faculty Members in the Research Area
Physical Chemistry of Surface and Interface	Physical Chemistry of Interface	KUBOZONO Yoshihiro, Professor EGUCHI Ritsuko, Assistant Professor
	Solid Material Science	GOTO Hidenori, Associate Professor
	Seminar in Physical Chemistry of Surface and Interface	Faculty Members in the Research Area
Theoretical Physical Chemistry	Statistical Mechanics	KOGA Kenichiro, Professor SUMI Tomonari, Associate Professor
	Seminar in Theoretical Physical Chemistry	Faculty Members in the Research Area
	Theoretical Chemistry of Condensed Matter	MATSUMOTO Masakazu, Associate Professor
Theoretical Chemistry	Seminar in Theoretical Chemistry	Faculty Members in the Research Area
	Synthetic Organic Chemistry	NISHIHARA Yasushi, Professor MORI Hiroki, Assistant Professor
Functional Organic Chemistry	Seminar in Functional Organic Chemistry	Faculty Members in the Research Area

A name marked with a star (☆) is scheduled for retirement as of March 31, 2022

## 【4】 Division of Industrial Innovation Sciences

### 1. Department of Computer Science

Research Areas	Subjects	Instructors
Computer Engineering	Advanced Research in Computer Software	YAMAUCHI Toshihiro, Professor
	Advanced Research in Computer Hardware	WATANABE Minoru, Professor
	Software Design	NOMURA Yoshinari, Associate Professor
	Seminar in Computer Engineering	Faculty Members in the Research Area
Pattern Information Processing	Intelligent Image Information Processing	MOROOKA Ken'ichi, Professor
	Natural Language Processing	TAKEUCHI Koichi, Associate Professor
	Seminar in Pattern Information Processing	Faculty Members in the Research Area
Intelligent Design	Information Retrieval and Data Mining	OHTA Manabu, Professor
	Advanced Research in Applied Information System	GOTOH Yusuke, Associate Professor
	Seminar in Intelligent Design	Faculty Members in the Research Area
Theory of Programming and Artificial Intelligence	Network Computation Theory	TAKAHASHI Norikazu, Professor
	Software Analytics	MONDEN Akito, Professor
	Human Behavior Analysis	YÜCEL Zeynep, Associate Professor
	Seminar in Theory of Programming and Artificial Intelligence	Faculty Members in the Research Area

### 2. Department of Information and Communication Systems

Research Areas	Subjects	Instructors
Information Transmission	Theory of Statistical Signal Processing	YAMANE Nobumoto, Associate Professor ☆
	Seminar in Information Transmission	Faculty Members in the Research Area
Mobile Communications	Mobile Communications	UEHARA Kazuhiro, Professor
	Mobile Radio Transmission	TOMISATO Shigeru, Associate Professor
	Seminar in Mobile Communications	Faculty Members in the Research Area
Multimedia Radio Systems	Multimedia Radio Systems	DENNO Satoshi, Professor
	Seminar in Multimedia Radio Systems	Faculty Members in the Research Area
Distributed System Design	Theory of Distributed Algorithms	FUNABIKI Nobuo, Professor
	Advanced Information Hiding Techniques	KURIBAYASHI Minoru, Associate Professor
	Seminar in Distributed System Design	Faculty Members in the Research Area
Optical and Electromagnetic Waves	Optical and Electromagnetic Waves and Circuits	TOYOTA Yoshitaka, Professor
	Digital EMC Design	TOYOTA Yoshitaka, Professor
	Seminar in Optical and Electromagnetic Waves	Faculty Members in the Research Area
Information Security	Cryptography Design	NOGAMI Yasuyuki, Professor
	High Reliable Communication	KUSAKA Takuya, Senior Assistant Professor
	Seminar in Information Security	Faculty Members in the Research Area
Network Systems	Network Systems	FUKUSHIMA Yukinobu, Associate Professor
	Seminar in Network Systems	Faculty Members in the Research Area
Power System and Energy Network Engineering	Advanced Energy Network Engineering	TAKAHASHI Akiko, Associate Professor
	Seminar in Power System and Energy Network Engineering	Faculty Members in the Research Area

A name marked with a star (☆) is scheduled for retirement as of March 31, 2022

### 3. Department of Electrical and Electronic Engineering

Research Areas	Subjects	Instructors
Applied Superconductivity Engineering	High Tc Superconductor Engineering	KIM Seok Beom, Professor
	Applied Superconductivity Machinery	UEDA Hiroshi, Associate Professor
	Seminar in Applied Superconductivity Engineering	Faculty Members in the Research Area
Electric Power Conversion System Engineering	Power Quality	HIRAKI Eiji, Professor
	Modern Power Electronics	UMETANI Kazuhiro, Associate Professor
	Seminar in Electric Power Conversion System Engineering	Faculty Members in the Research Area
Motor System Engineering	Motor Design Engineering	TAKEMOTO Masatsugu, Professor
	Seminar in Motor System Engineering	Faculty Members in the Research Area
Electronic Control Engineering	Distributed Parameter Systems	IMAI Jun, Associate Professor
	Seminar in Electronic Control Engineering	Faculty Members in the Research Area
Microwave Circuits	Microwave Circuit Analysis	SANAGI Minoru, Associate Professor
	Microwave Circuit Design	SANAGI Minoru, Associate Professor
	Seminar in Microwave Circuits	Faculty Members in the Research Area
Nanodevice and Materials Engineering	Introduction to Nanotechnology for Energy Research	HAYASHI Yasuhiko, Professor
	Materials Properties	YAMASHITA Yoshifumi, Associate Professor
	Seminar in Nanodevice and Materials Engineering	Faculty Members in the Research Area
Multiscale Device Design	Multiscale Numerical Analysis	TSURUTA Kenji, Professor
	Functional Materials and Devices	TSURUTA Kenji, Professor
	Seminar in Multiscale Device Design	Faculty Members in the Research Area
Optoelectronic and Electromagnetic Wave Engineering	Photonics Device Engineering	FUKANO Hideki, Professor
	Wireless Power Transmission Systems	FUJIMORI Kazuhiro, Associate Professor
	Seminar in Optoelectronic and Electromagnetic Wave Engineering	Faculty Members in the Research Area

#### 4. Department of Intelligent Mechanical Systems

Research Areas	Subjects	Instructors
Intelligent Systems Optimization	Advanced Course on Intelligent Systems Optimization	NISHI Tatsushi, Professor
	Environmental Safety System Engineering	SATO Haruo, Associate Professor
	Seminar in Intelligent Systems Optimization	Faculty Members in the Research Area
Intelligent Adaptive and Learning System	Motion Control of Robotic Manipulator	MINAMI Mamoru, Professor ☆
	Construction Methodology of Robot System	MATSUNO Takayuki, Associate Professor
	Seminar in Intelligent Adaptive and Learning System	Faculty Members in the Research Area
Intelligent System Organization and Management	Intelligent Human Interface Engineering	MURATA Atsuo, Professor
	Seminar in Intelligent System Organization and Management	Faculty Members in the Research Area
Production Intelligence	Selected Topics in Systems Management	ARIZONO Ikuo, Professor
	Decision Making for Production	YANAGAWA Yoshinari, Associate Professor
	Seminar in Production Intelligence	Faculty Members in the Research Area
Intelligent Mechanical Control	Intelligent Mechanical Control System	HIRATA Kentaro, Professor
	Intelligent Mechanical Control Elements	NAKAMURA Yukinori, Senior Assistant Professor
	Seminar in Intelligent Mechanical Control	Faculty Members in the Research Area
System Integration	Micro Sensors and Actuators	KANDA Takefumi, Professor
	Actuator Engineering	WAKIMOTO Shuichi, Associate Professor
	Seminar in System Integration	Faculty Members in the Research Area
Mechatronic Systems	Mechatronic Systems	WATANABE Keigo, Special Contract Personnel Professor (Special Appointment)
	Biological Information Systems	SHIBANOKI Taro, Associate Professor
	Seminar in Mechatronic Systems	Faculty Members in the Research Area

A name marked with a star (☆) is scheduled for retirement as of March 31, 2022

#### 5. Department of Advanced Mechanics

Research Areas	Subjects	Instructors
Structural Materials Engineering	Prediction and Control of Microstructure and Mechanical Properties of Metals	OKAYASU Mitsuhiro, Professor
	Materials Analysis	TAKEMOTO Yoshito, Associate Professor
	Seminar in Structural Materials Engineering	Faculty Members in the Research Area
Applied Solid Mechanics	Solid Engineering	TADA Naoya, Professor
	Materials Design	UEMORI Takeshi, Associate Professor
	Seminar in Applied Solid Mechanics	Faculty Members in the Research Area
Machine Design and Tribology	Advanced Machine Design	FUJII Masahiro, Professor
	Applied Surface Engineering	SHIOTA Tadashi, Associate Professor
	Seminar in Machine Design and Tribology	Faculty Members in the Research Area
Nontraditional Machining	High Energy Beam Machining	OKADA Akira, Professor
	Nontraditional Micro-machining	OKAMOTO Yasuhiro, Associate Professor
	Seminar in Nontraditional Machining	Faculty Members in the Research Area
Manufacturing Engineering	Advanced Precision Machining Technology	OHASHI Kazuhito, Professor
	Advanced Manufacturing System Design Engineering	KODAMA Hiroyuki, Senior Assistant Professor
	Seminar in Manufacturing Engineering	Faculty Members in the Research Area
Fluid Dynamics	Aerospace Propulsion Engineering	KOUCHI Toshinori, Professor
		SUZUKI Hiroki, Associate Professor
	Seminar in Fluid Dynamics	Faculty Members in the Research Area
Heat Transfer Engineering	Heat Transfer of Multi-phase Flow	HORIBE Akihiko, Professor
	Utilization of Phase-change Phenomena	YAMADA Yutaka, Senior Assistant Professor
	Seminar in Heat Transfer Engineering	Faculty Members in the Research Area
Heat Power Engineering	Laser-aided Diagnostics	KAWAHARA Nobuyuki, Professor
	Seminar in Heat Power Engineering	Faculty Members in the Research Area

**【5】 Division of Applied Chemistry**

**1. Department of Applied Chemistry**

Research Areas	Subjects	Instructors
Inorganic Materials	Thin Films of Inorganic Materials	FUJII Tatsuo, Professor
	Chemistry of Functional Inorganic Materials	KANO Jun, Associate Professor
	Seminar in Inorganic Materials	Faculty Members in the Research Area
Solid State Chemistry	Ceramics Materials	KISHIMOTO Akira, Professor
	Energy Materials Chemistry	TERANISHI Takashi, Associate Professor
	Seminar in Solid State Chemistry	Faculty Members in the Research Area
Interface Process Engineering	Advanced Interface Design	ONO Tsutomu, Professor
	Seminar in Interface Process Engineering	Faculty Members in the Research Area
Fluid and Particle Process Engineering	Advance in Particle Characteristics	GOTOH Kuniaki, Professor
	Thermal Transport Phenomena	NAKASO Koichi, Associate Professor
	Seminar in Fluid and Particle Process Engineering	Faculty Members in the Research Area
Bioprocess Engineering	Design of Biocatalysts and Bioprocesses	IMAMURA Koreyoshi, Professor
	Interface Science and Technology for Biomaterials	ISHIDA Naoyuki, Associate Professor
	Seminar in Bioprocess Engineering	Faculty Members in the Research Area
Synthetic Process Chemistry	Green Process Chemistry	SUGA Seiji, Professor
	Synthetic Processes of Organic Materials	MITSUO Koichi, Associate Professor
	Seminar in Synthetic Process Chemistry	Faculty Members in the Research Area
Organometallic Chemistry	Organometallic Chemistry	MIURA Tomoya, Professor
	Seminar in Organometallic Chemistry	Faculty Members in the Research Area
Synthetic Organic Chemistry	The Logic for Organic Synthesis	EMA Tadashi, Professor
	Mechanisms of Organic Reactions	TAKAISHI Kazuto, Associate Professor
	Seminar in Synthetic Organic Chemistry	Faculty Members in the Research Area
Bioorganic Chemistry	Chemistry of Biological Reactions	SAKAKURA Akira, Professor
	Chemistry of Natural Product Synthesis	MIZOGUCHI Haruki, Associate Professor
	Seminar in Bioorganic Chemistry	Faculty Members in the Research Area
Heteroatom Chemistry	Organic Electron Transfer Chemistry	KUROBOSHI Manabu, Associate Professor
	Seminar in Heteroatom Chemistry	Faculty Members in the Research Area
Industrial Catalysis	Chemistry of Homogeneous Catalysts	OSHIKI Toshiyuki, Senior Assistant Professor
	Seminar in Industrial Catalysis	Faculty Members in the Research Area
Polymeric Materials	Physical Properties of Polymers	UCHIDA Tetsuya, Associate Professor
	Fundamentals of Polymer Solid Materials	OKIHARA Takumi, Senior Assistant Professor
	Seminar in Polymeric Materials	Faculty Members in the Research Area
Functional Molecular Engineering	Molecular Technology	NISHINA Yuta, Associate Professor
	Seminar in Functional Molecular Engineering	Faculty Members in the Research Area