

**Graduate School of Science and Engineering  
Master's Program  
【Science Division】**

**Application Guide for International Students**

**October 2021 Enrollment**

※ The contents of the application guidelines may be subject to change under unforeseen circumstances. Please be sure to check the Faculty of Science website for the latest information. (<https://www.sci.u-toyama.ac.jp/>)

**May 2021  
University of Toyama**

## **Admission Policy**

The Master's program in Education at the Graduate School of Science and Engineering (Science Division) aims to instill advanced knowledge of the fundamental sciences in individuals who have a tenacious approach to research and who can actively engage in society in the future by making full use of their expertise and skills. The following individuals are candidates suitable for the Master's program:

- A person who has basic knowledge necessary to study science, ability to think logically, linguistic abilities, and the ability to express one's thoughts
- A person who has basic level of academic ability in his/her chosen field and enthusiasm for research
- A person who has strong inquiring mind with a desire to challenge unsolved problems and address front-line issues
- A person who has interest in science and eagerness to contribute to the local as well as the international community

### **Selection policy and method of assessment**

There is a special entrance examination for foreign students. The assessment is conducted on the basis of the total result of both the oral examination and the academic record.

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## Admission Examination for International Students

※ Please first consult the Admission Office (Educational Affairs Division) of the Faculty of Science, University of Toyama beforehand.

Contact address: Admission Office, Faculty of Science, University of Toyama

3190 Gofuku, Toyama 930-8555, Japan

FAX: +81-76-445-6550

E-mail: rikyoumu@adm.u-toyama.ac.jp

### 1. Admission quota

Department	Quota	Related research centers
	October 2021 enrollment	
Mathematics	A few	
Physics	A few	
Chemistry	A few	Hydrogen Isotope Research Center
Biology	A few	
Earth Sciences	A few	
Environmental Biology and Chemistry	A few	

Note Applicants who intend to study in the Hydrogen Isotope Research Center, select the Hydrogen Isotope Science of the Department of Chemistry as the first choice of the field of education in the application form.

### 2. Eligibility for application

**Applicants must not possess Japanese citizenship and must fulfill one of the following criteria:**

- ① A person who has graduated from a Japanese college, prior to admission to the Graduate School.
- ② A person who has received a bachelor degree in conformity with Article 104, Clause 7, of the School Education Law of Japan, prior to admission to the Graduate School.
- ③ A person who has completed a 16-year overseas school education course, prior to admission to the Graduate School.
- ④ A person who has completed a 16-year course of education in Japan through a correspondence course offered by an overseas educational institution, prior to admission to the Graduate School.
- ⑤ A person who has completed education at an institution in Japan that is recognized as equivalent to a university by a foreign country (limited to individuals who are recognized by a foreign educational system as having completed 16 years of education) and that is designated by the Minister of Education, Culture, Sports, Science, and Technology of Japan (MEXT), prior to admission to the Graduate School.
- ⑥ A person who has completed a program of a foreign university or a foreign educational institution (limited to which its comprehensive progress of education and research have been evaluated by an

external personnel certified by its government or its related agency, or an institution designated as equivalent by the Minister of MEXT) which requires more than three years to graduate and has been awarded a degree equivalent to a bachelor's degree, prior to admission to the Graduate School.

- ⑦ A person who completed a specialized course at a vocational school (limited to courses with a duration of four years or more and that satisfy the conditions set by MEXT) designated by the Ministry after the date set by the Ministry, prior to admission to the Graduate School.
- ⑧ A person who is designated by MEXT (February 7, 1953 Ministry of Education Notification No. 5)
- ⑨ A person who has spent three years studying at a college prior to admission to the Graduate School, and was recognized by the Graduate School as having completed the prescribed number of credits with an excellent academic record.
- ⑩ A person who has completed a 15-year overseas school education course prior to admission to the Graduate School, and was recognized by the Graduate School as having completed the prescribed number of credits with an excellent academic record.
- ⑪ A person who was recognized by the Graduate School as having reached an academic level equivalent to or higher than that of university graduates, as verified by individual admission qualification screening, and was at least age 22, prior to admission to the Graduate School.

※ Applicants who intend to apply in accordance with the criteria ⑨~⑪ must submit in advance to an individual evaluation of their academic ability as described on page 6.

### 3. Selection methods

- (1) Persons eligible to enroll are selected on the basis of the results of the oral examination and submitted documents. The examinees need not take a paper test.
- (2) Date and subject of examination

Date, time, subject Department	Date	Time	Subject of examination
Mathematics	August 25 (Wednesday), 2021	9:30~	Oral examination
Physics			
Chemistry			
Biology			
Earth Sciences			
Environmental Biology and Chemistry			

- (3) Site for examination      Faculty of Science, University of Toyama (3190 Gofuku, Toyama)

## Common Items

### 1. Application period and ways of submission of application documents

Application period
<b>July 15 (Thursday)~July 21(Wednesday), 2021</b>

◎Applicants are expected to consult the future supervisor about his/her educational and research policies.

- Application documents will be accepted at the campus during the application period (except for Saturdays, Sundays, and national holidays) from 9 am to 4 pm.
- If the applicant mails the application documents, enclose them in the designated envelope (出願用封筒 : Envelope for Application) and send by registered express mail during the period of application (as indicated by the postmark of a Japanese post office on the envelope).

The University provides consultation for applicants with a disability (specified by the Article 22-3, Enforcement Regulations for the School Education Law) that may require special arrangements for the entrance examination or in classes after enrollment. Please contact the Admission Office of the Faculty of Science, by one month before the beginning of the application period.

On the consultation, the Admission Office may require the submission of a document and a medical certificate with the following descriptions.

- The type and degree of disability of the applicant.
- The special arrangements for the entrance examination that the applicant needs.
- The special arrangements in classes that the applicant needs after enrollment.
- The state of daily life and other matters to be used as a reference.

### 2. Submission of application documents

Submit to: Admission Office, Faculty of Science, University of Toyama  
3190 Gofuku, Toyama 930-8555, Japan

### 3. Delivery of the examination admission ticket

The examination admission ticket will be mailed to the address written on the envelope (application document ⑤). If the applicant does not receive the examination admission ticket by a week before the date of examination, please contact the Admission Office of the Faculty of Science.

#### 4. Application documents

	Documents	Remarks
①	Application Form	Fill out the designated form.
②	Certificate of (Expected) Bachelor's Degree	Issued and enclosed in a sealed envelope by the institution from which you will graduate or graduated most recently. An applicant who is expected to graduate from the Faculty of Science of the University of Toyama is not required to submit this document.
③	Academic Record	Issued and enclosed in a sealed envelope by the institution from which you will graduate or graduated most recently. A document using forgery copy prevention paper is not required to be enclosed in a sealed envelope.
④	Examination Admission Ticket and Photo ID Card	Fill out the designated forms and attach a passport grade photo of the applicant (H 4 cm×W 3 cm, taken within the last three months before the application) to each form.
⑤	Designated envelope to issue the examination admission ticket	Please clearly write your postal code, address and name, and attach a 374-yen stamp on it.
⑥	※Examination Fee(30,000 JPY)	Please refer to “5. Remittance of the examination fee” on page 6. ※Japanese Government (MEXT) scholarship foreign students are not required to pay the examination fee.  The Entrance Examination Fee Payment Website <a href="https://e-apply.jp/n/toyama-gs-payment/">https://e-apply.jp/n/toyama-gs-payment/</a>
⑦	Mailing Label	Use the designated form and write on the form your zip code, address, and name.
⑧	Certificate of Residence	Issued by the municipal government of your place of residence. The status of residence should be specified in the document. The University also accepts a copy of one's passport (Copied page(s) must include the applicant's photograph and the status of residence.) or resident card (both sides).

※ Documents written in a foreign language other than English must be accompanied by documents translated into Japanese or English.

## 5. Remittance of the examination fee

### Payment Flow of Entrance Examination Fee

Prepare an Email address, a computer that is connected to the Internet, and printer.



Your application is NOT complete until you have registered your information in the entrance examination fee payment website.  
Send us the required documents and the examination fee payment certificate to University of Toyama.



#### STEP 1 Go to the Entrance Examination Fee Payment Website

The Entrance Examination Fee Payment Website

▶ <https://e-apply.jp/n/toyama-gs-payment/>  
or

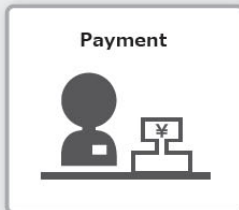
Official Website of University of Toyama

▶ <https://www.u-toyama.ac.jp/admission/graduate/index.html>



#### STEP 2 Register Personal Information

- 1) Make sure you follow the screen procedures and important notices.
- 2) Choose the payment method of entrance examination fee.
- 3) Enter the required information and record the payment processing number.



#### STEP 3 Pay Entrance Examination Fee

##### 【Pay at the Convenience Store, Pay-easy ATM banks, Internet banking】

Make a payment at the convenience stores (Seven Eleven, Lawson, Ministop, Family Mart, Daily Yamazaki, and Seico Mart), Pay-easy ATMs of Post offices or Banks, and internet banking.

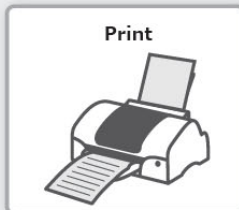
※Payment can not be made at stores outside Japan.

##### 【Pay with Credit Card】

Make sure the card number, expiration date, card holder name, and security code, to pay the fee.

(Accepted Credit Cards)

VISA, Master, JCB, AMERICAN EXPRESS, MUFG Card, DCCard, UFJCard, NICOS Card

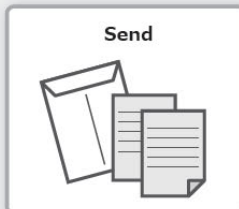


#### STEP 4 Print out the Certificate of Payment

The Entrance Examination Fee Payment Website

▶ <https://e-apply.jp/n/toyama-gs-payment/>

Click on "Review" button to download and print out the Certificate of Payment. Cut along the dotted lines to get your certificate of payment, then paste it on its designated location in the application form.



#### STEP 5 Send all application documents

Send the form with pasted certificate of payment and all other application documents, via registered express mail at the post office, within the application submission deadline.

※See the details of each school/graduate school for application guide.



● Make sure the information you enter is correct, as you will not be able to revise/change any of this information after registration is complete. However you may re-register the correct information and "revise" the information this way, as long as it is before you have made the payment.

※ Take notice that if you chose to pay with your credit card, the payment will be made as soon as you register your personal information.



The examination fee received by the University of Toyama cannot be refunded except for the following cases.

Refundable cases	Amount of refund
A person had remitted the examination fee but he/she did not submit the application documents or his/her application was not accepted.	30,000 JPY
An applicant made duplicate payments for the examination fee.	30,000 JPY
An applicant made an overpayment for the examination fee.	Amount of overpayment

※ When applying to the University of Toyama for an examination fee refund, affix the Certificate of payment to the designated Examination Fee Refund Request Form and mail it to the University of Toyama at:

Accounting Group, Financial Affairs Division, University of Toyama  
 3190 Gofuku, Toyama 930-8555, Japan  
 TEL: +81-76-445-6053

#### 6. Approval of the eligibility for application

The applicant who falls under the “Eligibility for Application ⑨～⑪” is subject to preliminary review of eligibility. Contact the Admission Office of the Faculty of Science, ask for the necessary documents for the application, and send them to the Admission Office by the deadline.

Deadlines for application
<b>4 PM, June 28 (Monday), 2021</b>

Contact address: Admission Office, Faculty of Science, University of Toyama  
 3190 Gofuku, Toyama 930-8555, Japan  
 FAX: +81-76-445-6550  
 E-mail: rikyoumu@adm.u-toyama.ac.jp

#### 7. Announcement of successful applicants

The ID numbers of successful applicants will be posted on the notice board in the entrance hall of the Faculty of Science Building and on the Faculty of Science website of the University of Toyama. The Graduate School will also send notification of acceptance to successful applicants.

Personal inquiries (by phone, fax, e-mail, etc.) will not be accepted.

Date and time for the announcements
<b>10AM, September 3 (Friday), 2021</b>

## 8. Admission procedures

Admission procedures are shown below. Enrollment forms and details will be sent to successful applicants.

(1) Procedure period: (October 2021 enrollment) Mid-September 2021 (scheduled)

(2) Submission of admission documents

Submit to: The Examination Section of the Admissions Office  
3190 Gofuku, Toyama, 930-8555 Japan

(3) Fees for admission procedure

Division	Amount	Remarks
① Enrollment Fee	282,000 JPY	Please use the “Request Form for Remittance” in the admission documents sent to successful applicants. The enrollment fee received by the University of Toyama cannot be refunded.
② Insurance Fee	2,430 JPY	Enrolled students are obliged to get the Personal Accident Insurance for Students Pursuing Education and Research for two years.

※ The above is the currently valid enrollment fee. Should the enrollment fee be revised, the new enrollment fee will go into effect as of the time of the revision.

Note 1: Tuition fee

**The tuition fee for the summer and winter semesters should be remitted in May and November, respectively.** Notification of the amount and method of payment will be provided during enrollment procedures. For reference, the tuition fee for FY 2021 was 535,800 JPY.

Note 2

Students who have difficulties paying the enrollment fee and/or tuition fee may be exempted from or granted a postponement for the payment upon screening.

Scholarships are available through the Japan Student Services Organization.

(4) The successful applicants who have not completed the admission procedures in the designated period will be considered to have declined enrollment.

## 9. Miscellaneous

(1) No change in the submitted application documents will be accepted.

(2) Those who are absent from the examination will be considered to have declined application. Do not forget to carry your “Examination Admission Ticket” to the oral examination.

(3) A false statement in the application documents may result in the cancellation of enrollment.

## 10. Privacy policy

The University of Toyama handles all personal information in accordance with the “Act on the Protection of Personal Information Held by Independent Administrative Agencies, etc.” and “The University of Toyama Policies on Personal Information Protection.”

- (1) Names, addresses, and other personal information that the University of Toyama obtains from applicants will be used for 1) the selection of students (accepting applications and providing examinations), 2) announcement of successful applicants, 3) admission procedures, 4) investigation and research for the selection process, and 5) other related operations.
- (2) Personal information obtain from the students who have completed the admission procedures will be used for preparatory education before admission and 1) matters related to instruction and administration (registration, instruction, etc.), 2) student assistance (health management, application for scholarships and tuition exemptions, employment assistance, etc.), 3) the collection of tuition after admission, and 4) statistical survey and data analysis.
- (3) ID numbers, the names and addresses of successful applicants may be used to facilitate contact by organizations related to after-school activities, the alumni association, the support association, and the student cooperative association of the University of Toyama.

Note: If you are a successful applicant and would not like to be contacted by the above-mentioned organizations, please notify the Admissions Office, Faculty of Science, University of Toyama.

- (4) The University of Toyama may partially outsource operations to commissioned companies (hereinafter referred to as “Contractors”). We may supply said Contractors with all or part of the personal information obtained through the application process as required for the execution of their contracted business. We supervise the use of information to ensure compliance with confidentiality.

## Overview of the Master's Program

### 1. Departments and fields of education

Department	Field of Education	
Mathematics	Mathematical Analysis	Number theory, Differential geometry, Topology, Complex analysis, Several complex variables, Real analysis, and so on.
	Mathematical Science of Information	Algebra, Theory of functional equations, Applied analysis, Numerical analysis, Probability theory, and so on.
Physics	Solid State Physics	Magnetic, electrical and thermal properties of condensed matter including strongly correlated electron systems at low temperatures.
	Nanophysics	Structures and properties of nanoparticles and disordered systems.
	Theoretical Physics	Theoretical elementary particle physics, cosmology and related topics.
	Microwave Physics	Microwave and laser spectroscopy of molecules; Control of molecular motion.
	Laser Physics	Development of coherent light sources and their application to precise optical measurements, spectroscopic works and gravitational wave detection.
Chemistry	Physical Chemistry	Photophysics and photochemistry of luminescent organic compounds or transition-metal complexes using ultrafast laser spectroscopy. Solution chemistry and thermodynamics for potential applications in medicine and optical devices.
	Coordination Chemistry	Coordination compounds, being composed of metal ions and organic/inorganic ligands, have huge diversity and potential. In this laboratory, coordination compounds with novel structures and properties are being prepared. Our interests are divided into three areas: 1. emissive coordination complexes; 2. multinuclear complexes that respond to external stimuli; and 3. functional complexes, inspired by renewable energy conversion in nature, which exhibit catalytic activity toward the reduction of CO <sub>2</sub> , O <sub>2</sub> , and N <sub>2</sub> .
	Organic Chemistry	We synthesize numerous compounds with new, hitherto unknown properties, and then investigate the intricacies of their structures. Some of the compounds we have created include fragrant compounds and emerald crystals. The nature of such compounds and their molecular structure are intimately related. Currently, we are developing compounds that are highly responsive to heat, light, and magnetic fields.
	Natural Products Chemistry	Numerous bioactive organic compounds occur in nature, many of which possess complex structures with large numbers of asymmetrical carbon atoms. We are developing useful reactions for the synthesis of such complex-structured organic compounds, and applying these compounds to the synthesis of bioactive natural products.

Chemistry	Biofunctional Chemistry	RNAs play versatile roles in biological systems because they not only serve as a genetic material but also act as functional molecules. We study the molecular basis of naturally occurring RNAs with catalytic and receptor functions. Another interest of our group lies in the artificial generation of RNAs with desirable functions through rational and evolutionary approaches.
	Hydrogen Isotope Science	We conduct education and research on the physicochemical properties of hydrogen isotopes and the development of functional materials for safe and efficient utilization of hydrogen isotopes as fuels of fusion reactors and hydrogen energy systems. Our research topics are in an interdisciplinary field that covers materials science, physical chemistry, nuclear fusion engineering, and hydrogen energy engineering.
Biology	Structural Biology	Morphology and phylogenetic systematics of spermatophyte, insects, and fishes; Population dynamics of fishes, birds, and mammals. Community structures and dynamics of insects and their symbiotic microorganisms.
	Cell Biology	Division and differentiation of plant cells; photo-morphogenesis; genome structure and functions; organ differentiation in higher plants.
	Regulatory Biology	Physiology and biochemistry of functional peptides and their receptor signaling in fishes, amphibians, and mammals; sleep regulations, circadian rhythms and photoperiodism in insects and mammals; genetic manipulation and mutagenesis.
Earth Sciences	Solid Earth Geophysics	Geoelectromagnetism and paleomagnetism; tectonophysics; geodesy; physical properties of rocks.
	Geophysical Fluid Dynamics	Meteorology; climate dynamics; atmospheric physics; ocean dynamics; glaciology; interaction of atmosphere, hydrosphere and lithosphere; cryosphere science; solid-state physics and environmental science of ice and snow; nucleation and growth of clathrate hydrates.
	Geological Science	Mineral sciences; tectonics and geochronology; sedimentary geology; paleontology; volcanology. Earth system history; seismogeology; hazard geology.
Environmental Biology and Chemistry	Environmental and Analytical Chemistry	Environmental/analytical chemistry; geochemical engineering; geochemistry; paleoceanography; marine chemistry; bio/chemical sensor
	Environmental Biology	Environmental biology; ecology; plant-animal interactions; microbiology; plant physiology; conservation biology

## 2. Fields of education and academic advisors

Department	Field of Education	Academic Advisor	
Mathematics	Mathematical Analysis	Professor	Masato Kikuchi
		Professor	Takashi Koda
		Professor	Setsuo Nagai
		Professor	Keiko Fujita
		Associate Professor	Tatsuya Kawabe
		Associate Professor	Iwao Kimura
	Mathematical Science of Information	Professor	Yasuhiro Fujita
		Professor	Hiroyuki Yamane
		Professor	Kei-ichi Ueda
		Associate Professor	Hideo Deguchi
Assistant Professor		Naoto Kouyama	
Physics	Solid State Physics	Professor	Tomohiko Kuwai
		Associate Professor	Takashi Tayama
		Assistant Professor	Yuji Matsumoto
	Nanophysics	Professor	Hiroyuki Ikemoto
		Associate Professor	Keisuke Hatada
	Theoretical Physics	Professor	Takeshi Kurimoto
		Associate Professor	Mitsuru Kakizaki
		Assistant Professor	Nagisa Hiroshima
	Microwave Physics	Professor	Kaori Kobayashi
		Associate Professor	Katsunari Enomoto
	Laser Physics	Professor	Yoshiki Moriwaki
		Associate Professor	Kazuhiro Yamamoto
Chemistry	Physical Chemistry	Professor	Koichi Nozaki
		Associate Professor	Honoh Suzuki
		Lecturer	Munetaka Iwamura
	Coordination Chemistry	Professor	Kiyoshi Tsuge
		Associate Professor	Hideki Ohtsu
	Organic Chemistry	Professor	Naoto Hayashi
		Assistant Professor	Junro Yoshino
	Natural Products Chemistry	Associate Professor	Masahiro Miyazawa
		Lecturer	Hajime Yokoyama
	Biofunctional Chemistry	Professor	Yoshiya Ikawa
		Lecturer	Shigeyoshi Matsumura
	Hydrogen Isotope Science	Professor	Takayuki Abe
		Professor	Yuji Hatano
		Associate Professor	Masanori Hara
		Associate Professor	Hidehisa Hagiwara
Lecturer		Akira Taguchi	
Assistant Professor	Satoshi Akamaru		
Biology	Structural Biology	Associate Professor	Yuji Yamazaki
		Associate Professor	Kiyoto Maekawa
		Associate Professor	Tsutomu Tsuchida
		Assistant Professor	Kyoko Sato
	Cell Biology	Professor	Tatsuya Wakasugi
		Professor	Ichirou Karahara
		Lecturer	Masayuki Yamamoto
		Assistant Professor	Daisuke Tamaoki

Biology	Regulatory Biology	Professor	Kouhei Matsuda
		Professor	Masayuki Ikeda
		Professor	Takatoshi Mochizuki
		Lecturer	Norifumi Konno
		Lecturer	Tomoya Nakamachi
		Assistant Professor	Eri Morioka
Earth Sciences	Solid Earth Physics	Professor	Tohru Watanabe
		Professor	Naoto Ishikawa
		Professor	Akio Katsumata
		Associate Professor	Kazuo Kawasaki
		Assistant Professor	Kohei Hotta
	Geophysical Fluid Dynamics	Professor	Kazuaki Yasunaga
		Professor	Kazuma Aoki
		Professor	Konosuke Sugiura
		Professor	Bunmei Taguchi
		Professor	Masahiro Hori
		Associate Professor	Wataru Shimada
		Associate Professor	Atsushi Hamada
	Geological Science	Professor	Kosei Komuro
		Professor	Shigeru Otoh
		Professor	Yasuo Ishizaki
		Professor	Shin-ichi Sano
		Associate Professor	Kenji Kashiwagi
		Associate Professor	Ken-ichi Yasue
Environmental Biology and Chemistry	Environmental and Analytical Chemistry	Professor	Jing Zhang
		Professor	Hideki Kuramitz
		Associate Professor	Keiji Horikawa
		Assistant Professor	Kazuto Sazawa
		Assistant Professor	Tamihisa Ohta
	Environmental Biology	Professor	Daisuke Tanaka
		Professor	Naoya Wada
		Professor	Yasushi Yokohata
		Professor	Hiroshi Ishii
		Associate Professor	Hiroyuki Kamachi
		Lecturer	Akihiro Sakatoku

### 3. Requirements for completion of the program

The requirements for the master's program in the Graduate School of Science and Engineering are enrollment for a period of two or more years, 30 or more credits in the designated subjects and successful completion of a screening of a master's dissertation and final examination.

4. List of subjects and credits (The class subjects listed in the table are held in academic year 2021)

**Science Division**

Department	Subject Name	Credits	Remarks
Mathematics	Advanced Study of Algebra A	2	○denotes a required subject.
	Advanced Study of Algebra B	2	
	Advanced Study of Geometry A	2	
	Advanced Study of Geometry B	2	
	Advanced Study of Analysis A	2	
	Advanced Study of Analysis B	2	
	Advanced Study of Analysis C	2	
	Advanced Study of Analysis D	2	
	Advanced Study of Applied Mathematics A	2	
	Advanced Study of Applied Mathematics B	2	
	Common Core for Advanced Mathematics A	2	
	Common Core for Advanced Mathematics B	2	
	Common Core for Advanced Mathematics C	2	
	Common Core for Advanced Mathematics D	2	
	Common Core for Advanced Mathematics E	2	
	Common Core for Advanced Mathematics F	2	
	Advanced Study of Mathematics	*	
	Science Outreach Practice I	1	
	Science Outreach Practice II	1	
	Career Development for Science Students	1	
○Seminar	6		
○Master's Research in Mathematics	14		
Physics	Condensed Matter Physics I	2	○denotes a required subject.
	Condensed Matter Physics II	2	
	Low Temperature Physics I	2	
	Low Temperature Physics II	2	
	Elementary Particle Physics I	2	
	Elementary Particle Physics II	2	
	Quantum Theory of Field I	2	
	Quantum Theory of Field II	2	
	Physics of Disordered System	2	
	Nanoparticle Physics	2	
	Synchrotron Radiation Physics	2	
	Many-Body Physics	2	
	Spectroscopy I	2	
	Spectroscopy II	2	
	Quantum Electronics I	2	
	Quantum Electronics II	2	
	Atomic and Molecular Physics	2	
	Optical Physics	2	
	Gravitational Wave Physics I	2	
	Gravitational Wave Physics II	2	
	Frontiers in Physics	2	
	Special Topics in Physics	*	* Credits of “Special Topics in Physics” will be decided when the instruction of the subject begins.
	Science Outreach Practice I	1	
	Science Outreach Practice II	1	
Career Development for Science Students	1		
○Seminar	6		
○Master's Research in Physics	14		



Department	Subject Name	Credits	Remarks
Chemistry	Photochemistry	2	○denotes a required subject.
	Chemical Spectroscopy	2	
	Advanced Solution Chemistry	2	
	Structural Inorganic Chemistry	2	
	Bioinorganic Chemistry	2	
	Solid-State Organic Chemistry	2	
	Synthetic Organic Chemistry	2	
	Organometallic Chemistry	2	
	Biofunctional Chemistry	2	
	Advanced Biomolecular Engineering	2	
	Physical Chemistry of Solids	2	
	Advanced Radiation Chemistry	2	
	Functional Materials	2	
	Advanced Energy Conversion	2	
	Chemistry of Isotopes	2	
	Frontier Chemistry	2	
	Special Topics in Inorganic and Physical Chemistry	1	
	Special Topics in Synthetic Organic Chemistry	1	
	Special Topics in Hydrogen Isotope Science	1	
	Advanced Laboratory Chemistry	2	
	Science Outreach Practice I	1	
	Science Outreach Practice II	1	
Career Development for Science Students	1		
○Seminar	6		
○Master's Research in Chemistry	14		
Biology	Advanced Cell Biology	2	○denotes a required subject.
	Advanced Animal Physiology	2	
	Advanced Comparative Endocrinology	2	
	Chronobiology	2	
	Advanced Functional Biology of Symbiosis	2	
	Advanced Regulation Biology	2	
	Advanced Seminar on Regulation of Organisms	2	
	Advanced Biochemistry for Signal Transmitters	2	
	Advanced Molecular Breeding	2	
	Advanced Evolutionary Genetics	2	
	Advanced Ecological Developmental Biology	2	
	Advanced Animal Pathophysiology	2	
	Advanced Botanical Sciences	2	
	Advanced Zoological Sciences	2	
	Advanced Experiments in Biology	2	
	Science Outreach Practice I	1	
	Science Outreach Practice II	1	
	Career Development for Science Students	1	
	○Seminar	6	
	○Master's Research in Biology	14	

Department	Subject Name	Credits	Remarks
Earth Sciences	Advanced Tectonophysics	2	○denotes a required subject.
	Advanced Seismology	2	
	Geoelectromagnetism	2	
	Climate Dynamics	2	
	Advanced Dynamic Meteorology	2	
	Atmospheric Physics	2	
	Advanced Climate Informatics	2	
	Ocean Dynamics	2	
	Advanced Glaciology	2	
	Cryospheric Change	2	
	Advanced Paleontology	2	
	Paleobiology	2	
	Advanced Volcanology	2	
	Structural Geology	2	
	Advanced Economic Geology	2	
	Earth's Evolution	2	
	Advanced Geoinformatics	2	
	Geology Excursion I	3	
	Geology Excursion II	1	
	Advanced Earth Science	2	
	Special Topics in Earth Sciences I	2	
	Special Topics in Earth Sciences II	2	
	Science Outreach Practice I	1	
Science Outreach Practice II	1		
Career Development for Science Students	1		
○Seminar	6		
○Master's Research in Earth Sciences	14		
Environmental Biology and Chemistry	Advanced Environmental Chemistry	2	○denotes a required subject.
	Advanced Environmental Analytical Chemistry	2	
	Advanced Environmental Inorganic Chemistry	2	
	Advanced Environmental Aquatic Chemistry	2	
	Advanced Hydrosphere Geochemistry	2	
	Advanced Isotope Geochemistry	2	
	Advanced Environmental Biology	2	
	Environmental Microbiology Advanced	2	
	Advanced Plant Ecology	2	
	Advanced Environmental Plant Physiology	2	
	Advanced Ecology	2	
	Advanced Evolutionary Biology	2	
	Advanced Microbial Ecology	2	
	Biostatistics	2	
	Current Topics of Environmental Science I	1	
	Current Topics of Environmental Science II	1	
	Laboratory Works of Advanced Environments	2	
	Science Outreach Practice I	1	
	Science Outreach Practice II	1	
	Career Development for Science Students	1	
	○Seminar	6	
○Master's Research in Environmental Biology and Chemistry	14		

## **Instructions for filling out the application documents**

### **1. Overall**

- (1) Use a black ballpoint pen. Write characters in block style. Please leave the sections with \*(asterisk mark) blank.
- (2) Circle the appropriate item for multiple-choice questionnaires.
- (3) Indicate numbers in Arabic numerals.
- (4) The descriptions on the application documents cannot be changed after submission.
- (5) If any fact that is different from the description in the submitted documents is found, the admission of the successful applicant may be cancelled even after the acceptance of admission.

### **2. Application form, examination admission ticket, and photo ID card**

#### **(1) Names of applicant**

Write exactly the same names as those on the “Certificate of Residence (foreigner residents only)” or “Passport.”

#### **(2) Department and field of education**

Please enter the preferred department and field of education on pages 10 to 11.

You can fill in the column of the second-choice field of education in the same department. If you do not have a second-choice field of education, draw a diagonal stroke in the column.

#### **(3) Graduating educational institution**

Please enter the names of the department (school) and faculty of the graduating university or other educational institution as well as the month and year of (expected) graduation / (expected) completion.

#### **(4) Curriculum vitae**

Please write the academic and work history of the applicant. As for the academic background, please enter the names of all the schools attended, including elementary school, in chronological order. As for university or equivalent educational institute, please enter the names of the graduate course (department and faculty).

#### **(5) Contact address**

Please enter the address, telephone number, and e-mail address where the applicant can receive the documents for the admission exam without fail from the time of application to the time of determination of admission. If any change occurs after submitting the application, please immediately notify the Admission office of the change.