Academic Year 2018-19 Graduate School of Integrated Science and Technology Department of Science Master's Degree Program

Application Guidelines

Foreign Students Admission

National University Corporation Shizuoka University

Contents

⊚Shizuoka University Mission Statement · · · · · · 2
⊚Graduate School of Integrated Science and Technology Admissions
Policy··2
⊙Department of Science Admissions Policy · · · · · 3
■Foreign Students Admission · · · · · · · · · 6
□Information Regarding Entrance Examinations····16
☐ How We Handle Personal Information · · · · · · · 16
\square Students Who Need to Extend Their Years of Study \cdots 17
☐Special Consideration for Entrance Examination Provisions for
Applicants with Disabilities·····18
\square Outline of Departments (courses and research items) \cdots 19
\Box Introduction to Departments (courses and main research details) \cdots 21
□The Radioscience Program······26

Shizuoka University Vision

"Freedom and Enlightenment: Creating the Future"

Shizuoka University aims to be "A university with an established presence promoting high quality education and creative research, working and growing with society." (For more details, please visit this site:

http://www.shizuoka.ac.jp/outline/vision/mission/index.html)

Shizuoka University Mission Statement

Education

Shizuoka University cultivates well-rounded individuals who are endowed with a sense of responsibility for the future of the Earth, a global vision, a high level of specialized knowledge, the spirit to take on challenges without fear of failure, and a rich humanity.

Research

Shizuoka University strives toward scholarship that can contribute at all levels to worldwide peace and the prosperity of humankind through the pursuit of academic research imbued with creativity.

Services

Shizuoka University contributes to society by working hand-in-hand with local communities, earnestly addressing diverse real-life issues in society, and serving as a beacon for the promulgation of culture and science.

Graduate School of Integrated Science and Technology Admissions Policy

Educated Individuals

The Graduate School of Integrated Science and Technology aspires to educate students who, amidst the progress of globalization, are capable of acting flexibly and

surpass the boundaries of their field of specialization to solve societal, scientific and technological problems and are able to contribute towards research and development efforts and the international exchange necessary for companies to expand overseas. Further, the students should possess the skills necessary for engaging in higher level research activities at a graduate school.

Education Aspired To

The school offers education that provides the students with the ability to gain perspective into broad and integrated multidisciplinary fields, including determining the social value of related disciplines and the student's existing knowledge, based on the fundamentals of individual areas of specialization; the internationally needed ability to comprehend, publish and debate in a foreign language on topics within the student's specialization as well as related fields; and the fundamental abilities necessary to autonomously engage in higher level research activities at a graduate school.

The Type of Students We Are Looking For

We are looking for students who have a strong interest in current social, scientific and technological issues, and a strong desire to contribute to the society through research and advancement of science and technology. The students should also be internationally minded and able to study and conduct research and development activities in collaboration with students and researchers from other countries.

Qualities and Abilities Necessary for Admission

Students are required to possess the fundamental knowledge and skills relating to their field of specialization expected of undergraduate students. They are also required to possess the capacities of logical thinking, judgment and expression necessary to apply their knowledge and skills. Lastly, students are expected to be capable of international communication and eager to study in cooperation with diverse people.

Department of Science Admissions Policy

Educated Individuals

The Department of Science aims to cultivate students who, in this world of advanced science and technology, possess the ability to solve problems in a multitude of principal and applied fields by using basic scientific methods.

There is a demand today for scientific minds that pursue truth for the purpose of bettering mankind. To meet this demand, we engage in high-level research training in each of our fields of specialization and emphasize a broad perspective.

The purposes of science education and research are to develop one's ability to gain insight, to adjust oneself to given circumstances, and to take the action required to meet the needs of society and globalization. To accomplish these purposes, research training must be supported by both fundamental understanding and creative thinking. This is the type of education that achieves the goal of nurturing the profound learning skills required in international high-level technology and research.

Education Aspired To

- 1. We aim to develop a broad perspective, high-level specialist knowledge and creative research capabilities in all our students.
- 2. We emphasize the fact that theoretical activity, seminars, and specialized research are interconnected; our teams of teaching staff carefully guide students through both their education and their research.
- 3. By providing education that emphasizes basic theories, and by offering joint classes to students from all disciplines, English classes and more, we aim to cultivate the capacity for gaining perspective in multidisciplinary fields and act in an international environment while enhancing the students' abilities to solve problems in their own specialist fields.

The Type of Students We Are Looking For

We are looking for motivated students who have a strong interest in the problems presented by globalization and the modern society in all its diversity, and who are capable of considering issues from a wide range of perspectives without being biased towards their specialty. With regard to scientific phenomena in particular, we are looking for students who have a profound interest in the research that is based on the fundamental theories of such phenomena.

Qualities and Abilities Necessary for Admission

The entrance examinations used to select students for the Department of Science will be conducted to evaluate whether students have a fundamental understanding of science and the ability to think logically, as well as a profound interest in scientific phenomena based on the fundamental theories of such phenomena. For the general admission and foreign student's admission, a written examination in which students' basic knowledge of their major fields of study, logical thinking, and reading comprehension as well as expressive abilities in English are evaluated. There will also be an oral examination in which their attitudes towards academics and research are evaluated. Further, for the self-recommended admission, in addition to the evaluation of students' basic qualities and abilities upon examining their application documents, there will also be an interview examination in which they will be evaluated on their proactive attitudes towards academics and research, such as their deep interest and enthusiasm for their major field of study.

Foreign Students Admission

1. Application Eligibility

Persons not of Japanese nationality who fall into either of the following categories:

- (1) Those who have completed 16 years of school education overseas, or who expect to complete the sixteenth year of education by March 2018.
- (2) Those who have completed 15 years of school education overseas, or who expect to complete the fifteenth year of education by March 2018, and who are deemed by our Department of Science to have earned the required credits with excellent grades.
- (3) Those who have a obtained a degree equivalent to a Bachelor's degree, or who expect to do so by March 2018, through the completion at a university overseas or other school overseas (regarding the overall state of education and research activities etc., restricted to those facilities that has been evaluated by persons approved by the government or related body in the applicable country, or have received separately stipulated equivalency as such from the Minister of Education, Culture, Sports, Science and Technology) of a course that is 3 or more years in length (including cases in which the course will be completed in Japan via a correspondence course offered by an overseas school, and in which the course is completed in education facilities that comprise part of the school education system in an overseas country and have meet with the previous stipulations).

<**Note>>** There will be a preliminary examination <u>for applicants from category (2)</u>. Such applicants must follow the instructions in Section 5: <u>Preliminary Examination</u>.

2. Number of Admissions by Courses

Course	Division	Number of students to be admitted
Mathematics	Fundamental mathematics, mathematical analysis	Few
Physics	Fundamental physics, applied physics	Few
Chemistry	Structural chemistry, functional chemistry	Few

Biological Science	Environmental response biology, biological regulation biology, cellular and developmental biology	Few
Geosciences	Geodynamics, biogeosphere science	Few

3. Application Period

July 14, 2017 (Friday) - July 21, 2017 (Friday) *excludes Saturday, Sunday and national holidays

(The university office will accept applications from 09:00 to 12:30 and from 13:30 to 16:00.)

Applications sent by mail should be sent by registered mail and the words "Application for Graduate School (Foreign Student)" should be written in red ink on the front of the envelope. Applications by mail must arrive by 16:00 on July 21, 2017 (Friday).

4. Address for Submitting Applications

Administrative Office of the Faculty of Science, Shizuoka University 836 Ohya, Suruga-ku, Shizuoka-shi, 422-8529 TEL (054) 238-4717

5. Preliminary Examination

Those who wish to apply under category (2) of Section 1: <u>Application Eligibility</u> should submit the following documents to the address stated in Section 4: <u>Address for</u> Submitting Applications by June 16, 2017 (Friday).

Application form for preliminary examination	Complete the application form provided by the Department of Science.
Letter of recommendation	Form provided by our Department of Science, to be used for (1) recommendations by several teaching staff (including faculty advisers) of the applicant's university, and (2) recommendation by the department head. Form must be enclosed in a sealed envelope.
Transcript	Prepared by the dean or department head and enclosed in a sealed envelope.
Return address	Complete the form provided by the Department of Science.

Results of preliminary examinations will be mailed to applicants on June 30, 2017 (Friday). Those who pass the preliminary examinations must submit the application documents in accordance with Section 3: <u>Application Period</u> and Section 6: <u>Application Documents</u>.

6. Application Documents

Application form	Application form provided by the Department of Science (entrance application form)
Foreign students' application form	Form provided by the Department of Science by separate request; see Section 14: Important Matters.
Application fee 30, 000 yen	Use the enclosed payment slip to pay the fee at a post office. (For refund after payment, see Section 14: Important Matters.)
Certificate of payment for application fee	Completed form provided by our Department of Science with the certificate affixed.
Transcript	Prepared by the dean or department head of the applicant's university and sealed in an envelope.
Certificate of graduation or diploma	Please submit originals (copies will not be accepted).
Permission to take examinations	Issued by the dean or head of the student's graduate school (applies only to students currently attending another graduate school, unless the student expects to complete her/his studies in March 2018).
Return envelope	On envelope provided by our Department of Science write the name, address and postal/zip code of the applicant and affix an 82-yen stamp. (The envelope will be used to mail examination admission slips. Please confirm mailing fees with the Administrative Office of the Faculty of Science if you wish the admission slip to be mailed overseas.)
Return address	Please write the name, address and postal/zip code of the applicant on the form provided by the Department of Science (used to mail the acceptance form and information regarding registration procedures).
Other	For those who are applying for the physics, biological science or geosciences courses, please make an A4 size copy of the official certificate or score sheet of the TOEIC test and submit it. That TOEIC test must have been taken in April 2014 or later. The original will be checked at the time of the interview; be sure to bring it to the examination.

Other letters of recommendation prepared by faculty advisers at the applicant's university may also be enclosed.

7. Selection Policy

Course of Mathematics

Using basic mathematics knowledge, such as mathematical analysis, algebra,

geometry, and mathematical logic, this course trains students in the development of advanced mathematical skills. We educate students to be fully able to work creatively, whether their future mathematical activities involve research, teaching, or applied mathematics. Applicants' abilities, knowledge, and aptitudes – all necessary prerequisites for their training – will be comprehensively assessed through the following examinations:

(1) Written examinations

English: Reading comprehension and expressive abilities will be evaluated.

Specialized subject: Basic mathematics knowledge, as well as the ability to think logically and to describe matters clearly, will be evaluated.

(2) Oral examination

Basic mathematical knowledge and the ability to think logically and to describe matters clearly – factors not assessed in the written examination – will be evaluated. Reasons for applying, the students' future plans, and their attitudes towards learning and research (enthusiasm, ambitions, etc.) will also be judged.

Course of Physics

Using the fundamentals of physics, such as mechanics, electromagnetism, quantum mechanics, and statistical mechanics, this course trains students in the development of advanced physics skills and the ability to solve real physics problems. We educate students to be fully able to work creatively, whether their future engagement with physics involves research, teaching, or applied physics. Applicants' abilities, knowledge, and aptitudes – all necessary prerequisites for their training – will be assessed through the following examinations:

(1) Written examination

Specialized subject: Basic knowledge required for study and research in this course will be evaluated.

(2) The TOEIC test score is used for evaluation of English ability necessary for learning and research at the graduate school.

(3) Oral examination

The student's level of understanding of physics, together with the student's aptitude for research in this course (to the extent that those factors are not assessed in the specialized subject examination), will be comprehensively judged.

Course of Chemistry

This course aims to develop students' academic research abilities, along with their abilities to contribute to the solution of various problems in society. Applicants' abilities, knowledge, and aptitudes – all necessary prerequisites for their training – will be comprehensively assessed through the following examinations:

(1) Written examinations

English: Ability to read scientific theses, and to describe scientific events in English, will be evaluated.

Specialized subject: A basic knowledge of chemistry, along with specialized knowledge in research fields in which applicants intend to work, will be comprehensively evaluated.

(2) Oral examination

Reasons for applying, the students' future plans, attitudes towards learning and research (enthusiasm, ambitions, etc.), basic knowledge, and logical thinking and expressive abilities will be evaluated.

Course of Biological Science

This course aims to train students to apply their knowledge in many ways, enough to be able to handle various biological science issues from a macro perspective, and also to be able to deal professionally at the micro (cellular and gene) levels. Whether the applicants' interests and motivations, reasons for applying, basic knowledge, and research ability are sufficient to pursue research for the Master's degree, will be comprehensively assessed through the following examinations:

(1) Written examination

Specialized subject: Basic expertise and the ability to think logically, which is essential to research in this course, will be judged.

(2) The TOEIC test score is used for evaluation of English ability necessary for learning and research at the graduate school.

(3) Oral examination

Applicants will be asked about the research they have been doing as undergraduates and such. The applicants' basic knowledge and understanding of the research, along with their ability to think logically, to describe matters clearly, to deliberate and to discuss, will be judged. Applicants' future plans, as well as attitudes toward learning and research (enthusiasm, ambitions, etc.), will also be assessed.

Course of Geosciences

This course aims to educate students in dealing with various problems in geosciences and environmental science on a professional level. Whether the applicants' interests and motivations, reasons for applying, basic knowledge, and research ability are sufficient to pursue research for the Master's degree, will be comprehensively assessed through the following examinations:

(1) Written examinations

Specialized subject: Basic expertise and the ability to think logically, which is essential for research in this course, will be judged.

(2) TOEIC test scores will be used to evaluate English ability as required for learning and research in the graduate school.

(3) Oral examination

Applicants will be asked about the research they have been doing as undergraduates and such. The applicants' basic knowledge and understanding of the research, along with their ability to think logically, to describe matters clearly, to deliberate and to discuss, will be judged. Applicants' future plans, as well as attitudes toward learning and research (enthusiasm, ambitions, etc.), will also be assessed.

8. Selection Criteria

The results of the written and oral examinations together with transcripts will be used to determine successful applicants.

9. Information about Examinations

Date	Subject and allotment of points		Time
August 24, 2017 (Thursday)	Written Exams	English: 50 Points For the Courses of Physics, Biological Science and Geosciences, the TOEIC test score is used, converting it into points, with 50 points as a perfect score; a written exam won't be given. See (3) below.	10:00 - 11:30
		Specialized subject: 100 points	13:00 - 16:00
August 25, 2017 (Friday)	Oral Exams (individual)	100 points (200 points for the Course of Mathematics)	09:00 -

- (1) Examination venue: Shizuoka University Faculty of Science (836 Ohya, Suruga-ku, Shizuoka-shi)
- (2) Only applicants who have passed the written examinations will be permitted to take

the oral examinations (individual interviews). A list of applicants who have passed the written examinations will be posted at the entrance to the Faculty of Science Building A at 08:30 on August 25, 2017 (Friday).

(3) The English points (Y) are to be calculated from the TOEIC test score (X), using the formula below.

$$Y = {(X-250) \div 500} \times 50$$

A score of 750 or more is to be evaluated at 50 points, and a score of 250 or less is to be given 0 points. Decimals are to be rounded off to the nearest whole number.

At the time of the interview, the original of an official TOEIC certificate or a score sheet will be checked; be sure to bring it to the examination. The TOEIC test must have been taken in April 2014 or later.

- (4) Applicants for the Course of Biological Science are required to prepare a presentation on their undergraduate research, which they will be asked to give during the oral examination. Approximately seven minutes will be allotted for each presentation. Up to 5 pages of printouts in A4 size may be used for the purpose of explanation.
- (5) Applicants for the Course of Geosciences are required to prepare a presentation in Microsoft PowerPoint on their undergraduate research, which they will be asked to give during the oral examination. Ten minutes will be allotted for each presentation.

Explanation Regarding Examination Subject

Written Exams	English	Applicants who received their school education in English may be exempt from this examination.
	Specialized Subject	Questions from each course will be given in Japanese (with English translations upon request) and should be answered in either Japanese or English.
Oral Exams		Each course shall give its own exam (including an assessment of the applicant's Japanese language abilities).

10. <u>Selection of Research Guidance Teachers</u>

When making your application, refer to "Outline of the Department of Science" (pages 19, 20) and "Introduction to the Department of Science" (pages 21 - 25): decide on the division and academic research area that best match your desired research field. It is advisable to make inquiries beforehand with the academic adviser with whom you

wish to work.

11. Announcement of Successful Applicants

We plan to post the list of successful applicants at the entrance to the Faculty of Science Building A at noon on September 1, 2017 (Friday). Successful applicants will also be notified by mail; results will also be available via the Faculty of Science website (http://www.sci.shizuoka.ac.jp/).

12. <u>Admission Registration Procedures</u>

Registration is planned for mid-March 2018. Detailed information regarding registration (including application for exemptions from admission and tuition fees) will be mailed to successful applicants by early March 2018.

13. Admission and Tuition Fees

- ◆ Admission fee 282,000 yen (actual fee for 2017-18)
- ◆ Tuition 535,800 yen per year (267,900 yen per semester) (actual fee for 2017-18)

(Note)

- (1) The tuition fee for the first semester must be paid between April 1, 2018 and April 30, 2018.
- (2) The admission fee paid during admission procedures shall not be reimbursed for any reason whatsoever.
- (3) This University is in compliance with fee standards established by the Ministry of Education, Culture, Sports, Science and Technology.
- (4) In the event of a change in the tuition fee during the course of study, the new fee will be applied from the time of the change.

14. Important Matters

(1) Those who wish to apply for foreign student admission: please separately request a "Foreign Students' Application Form" as described in Section 6: <u>Application Documents</u>. When making such a request please enclose a self-addressed envelope. (Rectangular No. 3 size, 12 cm x 23.5 cm, affixed with an 82-yen stamp. Please confirm mailing fees with the Administrative Office of the Faculty of Science if you wish the admission slip to be mailed overseas.)

- (2) Applicants must bring their examination admission slips with them to examinations.
- (3) Changes on application documents will not be accepted once they have been submitted.
- (4) Once received, the application fee will not be refunded for any reason except for the cases mentioned below:
- 1) A refund of the application fee can be requested when
- (i) The application fee had been paid, but the application for our Department of Science was not made.
- (ii) The application fee was paid twice by accident.
- (iii) There were inadequacies in the application documents, and the application was not accepted.
- 2) Amount of the application fee to be refunded

At the applicant's request, the amount that was paid doubly, or the total amount, will be refunded.

3) How the refund of the application fee can be requested

If either of the above-mentioned (i) or (ii) applies: Use letter paper or its equivalent and make a request form for refund of the application fee. Items (1) to (8) mentioned below must be written clearly. Be sure to attach the postal transfer certificate of payment for application fee, or the payment receipt.

Mail to: Administrative Office of the Faculty of Science, Shizuoka University 836 Ohya, Suruga-ku, Shizuoka-shi, 422-8529

It must arrive by August 16, 2017 (Wednesday).

If the above-mentioned (iii) applies: When the application documents are returned, the request form for the refund of the application fee will be enclosed. After filling it in, send it by mail.

Any handling charges for the refund shall be the responsibility of the person requesting the refund.

Request for the refund of application fee for the Graduate School of Shizuoka University

- 1. Reason for requesting refund
- 2. Admission category (general admission, self-recommended admission, foreign student admission, etc.)
- 3. The Graduate School Course to which the applicant planned to apply
- 4. Name

- 5. Present address
- 6. Contact telephone number
- 7. Amount to be refunded
- 8. Account into which the refund is to be paid
- Name of the financial institution (Post office/Japan Post Bank are not applicable.);
 name of the branch
- Type of account (checking/ordinary); account number
- Owner of the account
- If the owner of the account is not the applicant: relationship to the applicant
- * Regarding application fee for the applicants who were victims of the Great East Japan Earthquake, the full amount will be refunded upon request from the applicant. For more details, please refer to the "Special measures for application fees" URL as follows: http://www.shizuoka.ac.jp/th_earthquake/eq_examin2014.html
- (5) Successful applicants who are currently employed or who will be employed after April 2018 must submit, at the time of registration, a "letter of permission to enter the school" from the head of their workplace.
- (6) Address all requests regarding application guidelines and questions regarding the entrance examinations to the office below. When application guidelines are requested by mail, write "Request for application guidelines for the Department of Science Master's Program" in red ink on the front of the envelope. Please enclose a self-addressed envelope (rectangular No. 2 size, 33 cm x 24 cm), with stamps in the amount of 250 yen affixed.

Inquiries:

Administrative Office of the Faculty of Science,
Shizuoka University
836 Ohya, Suruga-ku,
Shizuoka-shi, 422-8529
TEL (054) 238-4717

Information Regarding Entrance Examination Results

Information regarding entrance examinations is available as described below:

1) Internet

Application guidelines are posted on the Department of Science's website.

URL: http://www.sci.shizuoka.ac.jp/

2) Disclosure of information regarding entrance examination results

The Graduate Schools of Shizuoka University have a disclosure system for information regarding entrance examinations. Applicants who fail the 2016 examinations for entrance in 2017 may ask to see the results of their examinations between November 15, 2017 (Wednesday) and December 15, 2017 (Friday). More information may be requested from the Graduate School's Educational Affairs Team (for the Graduate Schools):

Graduate school's Educational Affairs Team (for the Graduate Schools)

Student Affairs Division

836 Ohya, Suruga-ku, Shizuoka-shi, 422-8529

TEL: 054-238-4332

3) Archived examinations

Previous Department of Science entrance examinations may be accessed in the entrance examination reading room of the Student Affairs Division or the Administrative Office of the Faculty of Science.

How We Handle Personal Information

Pursuant to the Act for the Protection of Personal Information Collected by Independent Administrative Institutions, and in conformity with the Shizuoka University Personal Information Management Regulations, we handle personal information as described below.

- 1) Personal information from application documents will be used (a) for the purpose of selecting students (i.e., application handling and selection), (b) in announcing results of examinations, and (c) during registration.
- 2) Results of entrance examinations used to select students will be used to draft up deliberation documents for reviewing student selection methods in the future.

3) Personal information about students who have entered the university will be used for (a) school affairs (school register, student counseling, etc.), (b) student support (health management, exemptions from tuition and scholarship applications, support in finding jobs, etc.), and (c) procedures for collecting tuition fees.

Students Who Need to Extend Their Years of Study

This extension system is for students who are unable - mainly because of employment - to complete the Graduate School program in the usual time allotted (2 years for the Master's programs). Students may be permitted, upon request, to submit a plan to extend their course of studies for up to 4 years for the Master's programs, and to have tuition adjusted during the extension period. Note that permission is not automatic and each case will be considered on its merits. Further information regarding this system may be requested from the Administrative Office of the Faculty of Science.

Special Consideration for Entrance Examination Provisions for Applicants with Disabilities

Disabled applicants who require special consideration when taking the entrance examination (or in any circumstances during the course of their studies) should request the Department of Science prior to submitting their application, using the procedure outlined in the chart below. Applicants will be contacted regarding the outcome of such consultation once a decision has been made.

It is recommended that such applicants visit the campus to observe the layout of facilities, terrain, etc. prior to submitting their application.

Contact Period	In principle, one month prior to applying	
Procedure	Please submit an "Application for Special Consideration for Graduate School Entrance Examination Provisions" and attach a copy of the Disabled Persons Booklet containing your physical disability certificate or doctor's certificate. When necessary, interviews may be held with the applicant or a person capable of speaking on behalf of the applicant (guardian, person from the applicant's undergraduate university, etc.).	
Contact Details	Administrative Office of the Faculty of Science, Shizuoka University 836 Ohya, Suruga-ku, Shizuoka-shi, 422-8529 TEL 054-238-4717 FAX 054-237-9895	

Note:

- 1. In the event of making inquiries to the above address or requesting copies of the "Application for Special Consideration for Graduate School Entrance Examination Provisions" by mail, please enclose a self-addressed (name, address, postcode) reply envelope (rectangular No. 3 size, 23.5 cm x 12 cm), affixed with stamps in the amount of 82 yen.
- 2. Please note that telephone inquiries and the hand delivering of "Application for Special Consideration for Graduate School Entrance Examination Provisions" forms will not be accepted on Saturdays, Sundays or non-working days.